

Louvain School of Management

**Logistical and strategic challenges
of international humanitarian aid
distribution in conflict zones: focus
on Mali and Gaza.**

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During the preparation of this master's thesis, the authors utilized ChatGPT by OpenAI for the following purpose:

1. Content and structural support: ChatGPT was used throughout the thesis to enhance the clarity of written English, assist in organizing the structure of the work and suggest logical separations between sections.
2. After using ChatGPT by OpenAI, the authors diligently reviewed and edited the content produced by the tool. We take full responsibility for the final content presented in this thesis.

By signing this declaration, we affirm that the content of this master's thesis reflects our original work, augmented by the responsible use of AI.

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Abstract: This thesis explores how and when humanitarian logistics can adapt to extreme challenges in conflict zones, focusing on the cases of Gaza (2023–2025) and Mali (2012–2015). Drawing from case studies, institutional reports and interviews with field professionals, we examine how aid delivery is shaped by political barriers, security risks, coordination breakdowns and access constraints. We highlight the importance of local networks, ethical decision-making and flexibility under pressure. Our analysis reveals that logistics in crisis settings is not just technical but is deeply human, requiring judgment, trust and improvisation. We propose a shift away from rigid systems and volume-based metrics toward more adaptive, people-centered approaches. While our findings are context-specific, they aim to inspire reflection and offer practical suggestions for more resilient and ethical humanitarian logistics.

Keywords: Humanitarian logistics, aid delivery, conflict zone, access constraint, local network, field adaptation

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1. Introduction

1.1. General context

Over the past decade, humanitarian intervention has been facing growing global complexity. Humanitarian needs have increased to record levels, driven by a combination of prolonged armed conflicts, environmental disasters and mass displacement. As of late 2024, an estimated 123,2 million people were forcibly displaced worldwide due to conflict, violence, persecution, or human rights crises. These figures represent nearly twice those from ten years ago. Of these, about 73,5 million were displaced internally and 42,7 million were registered refugees. This represents 1 in every 67 people on Earth that has been forced to flee (United Nations High Commissioner for Refugees [UNHCR], 2025).

A total of nearly 300 million people required humanitarian assistance globally in 2024 and the majority of them resided in zones with both violent conflict as well as environmental disruptions (United Nations Office for the Coordination of Humanitarian Affairs [OCHA], 2023ah). Of particular concern, over 60% of the acutely food-insecure resided in protracted conflict environments. This indicates the deadly relationship between insecurity, displacement and the collapse of food systems (World Food Programme [WFP], n.d.).

Meanwhile, humanitarian operations are becoming ever more constrained. Aid organizations face increasing bureaucratic obstacles, such as restrictive counter-terrorism measures, heavy registration protocols and complex customs procedures that delay or prevent aid deliveries. These constraints are compounded by access restrictions, including government-imposed limitations, militarized borders and obstruction by armed groups (Kurtzer, 2019).

In 2022, the UN confirmed 3,931 cases of denied humanitarian access, primarily by government forces, with the largest numbers in the Occupied Palestinian Territory, Yemen, Afghanistan, and Mali. Preliminary 2024 data indicate a likely “shocking increase” in such incidents worldwide (United Nations [UN], 2024).

In parallel, the security risks for humanitarian workers have intensified with 593 aid workers affected in 2023 compared to 459 the previous year which represent a 29,19% rise (Humanitarian Outcomes, 2024). Violence against aid workers, looting of convoys and destruction of humanitarian infrastructure are common in many conflict zones. This makes logistics a matter of safety and survival and not only just a technical challenge.

Within this uncertain and high-stakes context, logistics plays a central, though often overlooked, role in determining whether and how aid reaches affected populations. Humanitarian needs are rising and operational conditions are becoming increasingly constrained and dangerous. It is thus more relevant than ever to understand how logistics can adapt.

1.2. Importance of logistics in humanitarian response

In emergency response efforts, humanitarian logistics is essential for effective operations. As a specialized branch of logistics, it focuses on the preparedness and response phases within disaster management systems. Zanjirani Farahani et al. (2011) define it as “[...] the process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods

and materials, as well as related information, from the point of origin to the point of consumption for the purpose of alleviating the suffering of vulnerable people”.

The scope of humanitarian logistics includes preparedness, planning, procurement, transportation, warehousing, tracking and tracing, and customs clearance (Zanjirani Farahani et al., 2011). Far from being no more than just support function, logistics is a key determinant of operational success. Effective logistical systems enhance humanitarian access and ensure timely delivery of aid (DG ECHO, 2022). Without an adaptable and reliable logistics system, even the best-resourced and most committed humanitarian responses may fail to reach those in need.

In humanitarian operations, logistics often accounts for 60 to 80 percent of the total cost, (Lacourt & Radosta, 2019). It underscores its critical role in strategic planning and resource allocation and also reflects the risks of logistical inefficiencies where delays, mismanagement, or limited access can directly result in loss of life, especially in high-risk contexts such as active conflict zones. As noted by the Directorate General for European Civil Protection and Humanitarian Aid Operations: “logistics should be treated as a key priority in all humanitarian projects” (DG ECHO, 2022).

Humanitarian logistics extends beyond technical dimensions of transport and warehousing. It involves decision-making under uncertainty, inter-agency coordination and continuous adaptation to evolving conditions including unstable security environments and restricted access. In such contexts, logistics becomes a dynamic and strategic activity that requires not only technical skills but also operational flexibility, negotiation ability and real-time responsiveness. Particularly in conflict-affected areas, where infrastructure is often degraded and needs are unpredictable. Logistics management often relies more on improvisation and a combination of formal and informal coordination rather than on rigid models or standardized procedures (Zanjirani Farahani et al., 2011).

1.3. Motivations

The choice of this subject is both personal and academic. Throughout our studies in business and management, we were consistently introduced to supply chain models centered on efficiency, profit and competition. While these frameworks are valuable in their own sector, they seemed insufficient for understanding the complexities of logistics in humanitarian crises.

This curiosity led us to investigate systems that operate under extreme constraints and where the goal is not profit, but human survival and dignity. In today’s world, driven by conflict, climate disasters and political instability, humanitarian logistics has become a subject of immediate relevance but also a critical area for the future. For us, this research is an opportunity to apply academic tools toward real-world challenges with tangible social impact. We believe this research contributes to both scholarly knowledge and practical understanding of logistics systems designed for human-centered missions.

1.4. Problematic

Despite being crucial to the success or failure of humanitarian interventions, logistics is still not given enough attention to humanitarian studies, especially in conflict zones. Much of the

existing literature builds on commercial supply chain models that prioritize efficiency and standardization. Literature often adapts commercial supply chain models with lean principles by adding humanitarian constraints as external limitations rather than as central features of the problem. These frameworks often used the assumptions of stable environments with predictable demand, stable infrastructure and linear operations, but those assumptions rarely hold in volatile, high-risk conflict zones.

In high-risk contexts, logistics is shaped by damaged infrastructure, political instability and shifting access conditions. Field realities are dynamic and human centered, requiring constant adaptation. Success depends less on optimization and more on responsiveness, local knowledge, and human improvisation. These operational realities reveal a disconnect between theoretical models and field practices.

This gap between theoretical models and operational practice led us to adopt a comparative approach that focused on the lived experiences of humanitarian logisticians. Humanitarian logisticians develop practical, experience-based strategies that are rarely documented but critical to success. This study aims to bridge this gap to better understand how logistics adapts in conflict zones by first examining two cases: Mali (2012–2015) and Gaza (2023–2025). These distinct contexts allow us to explore how strategies evolve across different geographies, time and escalating constraints. It also allows us to see how organizations respond to the growing complexity of humanitarian delivery in war zones within a ten-year gap between these cases.

1.5. Research question

To develop our initial research question, we applied the GQM (Goal-Question-Metric) model, a structured approach to define and measure objectives within projects. The GQM model consists of three levels: the conceptual level (= goal), the operational level (= question) and the quantitative level (= metric). It enables clear definition of objectives, links them to relevant data and provides a framework for interpreting results.

Figure 1. Application of the GQM approach to the initial research question formulation

Goal	Purpose	Understand the conditions and mechanisms
	Issue	Extreme access and security constraints
	Object	Adaptation of humanitarian logistics strategies
	Viewpoint	From the perspective of operational NGOs (like MSF) and IGOs (like UN agencies) in two contrasting conflict contexts (Mali and Gaza)
Question		How do humanitarian organizations adapt their logistics strategies in practice?
Metrics		Range of adaptation strategies applied Degree of structured planning vs improvisation Level of digital/logistical tool integration Extent of scalability and replicability of logistics strategies
Question		How do adaptation strategies differ between contexts (Mali vs Gaza) and actors (NGOs vs UN agencies)?
Metrics		Degree of enabling vs. constraining conditions in context Organizational autonomy, speed and flexibility Degree of strategic vs. reactive adaptation Level of inter-agency coordination Field-level perceived performance and constraints
Initial research question		How do humanitarian organizations, including NGOs like MSF and the ICRC, and selected UN agencies, adapt their logistical strategies to overcome security threats, infrastructure limitations and access restrictions in conflict zones, comparing approaches from Mali (2012-2015) to those from the ongoing conflict in Gaza (2023-2025)?

1.6. Methodology

This study adopts a mixed approach that combines two complementary perspectives. On one hand, literature and operational reports that document logistics practices in theory and in structured settings. On the other hand, real-world insights drawn from the field experience of professionals working in humanitarian operations. This combination allows us to link documented frameworks and institutional narratives with the lived realities and adaptive strategies developed on the ground.

Data collection started with a document analysis, focusing on institutional and academic sources. The literature review is based on humanitarian response plans, situation reports, logistics strategies published by UN agencies and international NGOs, as well as relevant academic literature. The goal was to establish a fundamental understanding of each case study context, Mali (2012-2015) and Gaza (2023-2025), in terms of institutional frameworks, operational constraints and strategic objectives.

Following the literature review, a comparative analysis was developed across the two cases. This involved creating a qualitative table around several key dimensions of logistics performance. To complement this qualitative comparison, a quantitative component was introduced using a rating scale. Each dimension was evaluated based on a qualitative analysis of defined criteria and assigned a score on the scale through a consensus between the two authors of this thesis. This scoring helped highlight key differences and similarities across contexts in a more structured and measurable way while remaining rooted in the qualitative depth of each context.

In parallel, a series of semi-structured interviews were conducted with humanitarian professionals who have experience in logistics operations, coordination and/or strategy. The participants were selected based on their field expertise and relevance to the studied sector. Also to conduct these interviews, we prepared an interview guide in advance to cover both technical and relational aspects of logistics.

Before each interview, participants were informed about the objectives of the study and asked to provide verbal consent for recording. We also explicitly stated the option to remain anonymous and to withdraw at any time. The interviews were conducted remotely to ensure feasibility due to geographic distance and to offer greater flexibility for participant availability.

Once the interviews were collected, we transcribed them to enable detailed qualitative analysis. The transcripts were analyzed to identify recurring themes, points of convergence or divergence and context-specific insights that can add to the analysis of the literature. We gave particular attention to how logistics systems are shaped by on-the-ground realities and how field actors navigate constraints that may not be visible in institutional planning documents.

Following this, we conducted a critical analysis that combines the comparative insights from the two case studies with the field-based findings from the interviews. This integrated analysis serves to answer the research question as comprehensively as possible by drawing on multiple layers of evidence.

The study then moves into a discussion on emerging innovations in humanitarian logistics and explores future perspectives for the sector considering evolving global crises and operational challenges. Afterwards, the research reflects on the main limitations faced throughout the study. This includes acknowledging potential biases that may influence conceptual, scope-related and contextual challenges.

Finally, the research concludes by offering practical managerial recommendations. It restates the answer to the research question in a synthesized and actionable form in order to bring together the key insights developed throughout the study.

These methods have been used because they offer a comprehensive view of humanitarian logistics in conflict zones. It balances technical, strategic and human-centered perspectives. By combining documented sources with field experience, the study apprehends both structured institutional approaches and the lived realities of practitioners. This mixed approach is particularly suited to environments where logistical systems are shaped not only by infrastructure and planning, but also by human relationships, improvisation and shifting political dynamics.

1.7. Methodological limitations

Several methodological limitations should be acknowledged. While this study does not follow an experimental design, we draw from the threats-to-validity framework from Ohlund & Yu to critically assess the methodological limitations that may impact both internal and external validity of our findings. Using this framework allows the thesis to go beyond vague acknowledgements of limitations and engage in a more systematic, academically grounded evaluation of methodological rigor.

1.7.1. Internal validity

a. Selection bias

The selection of interviewees was based on availability and access, as interviews had to be conducted one-on-one and in a limited time frame. Because of this, we were not able to gather a large or diverse panel. As a result, the experts interviewed may not represent the full diversity of humanitarian logisticians in terms of geographic location, organizational affiliation or operational context. This small panel size and limited variation in profiles can affect the internal validity of our interpretations, as certain perspectives may be overrepresented while others are absent.

b. Instrumentation bias

The study uses institutional and academic documents, a rating scale and a semi-structured interview guide. They are helpful in organizing the research but have limitations:

Documents: the documents analysis relies on institutional and academic sources that may change over time or reflect dominant narratives rather than operational realities. As institutional documents are written for different audiences (donors, coordination forums, etc.), their framing may bias the background information used to support case study development.

Rating framework: the rating system helps organize complex information, but it can oversimplify realities that don't fit neatly into fixed categories. Moreover, the internal consensus method used for rating lacks external objectivity which could come from independent expert validation or the involvement of a neutral third-party judge. The absence of external oversight increases the risk of confirmation bias or groupthink, where subjective interpretations of qualitative data may influence how ratings are assigned.

Interview guide: although the guide is used to give consistency, interviews naturally vary. Responses depend on how questions are understood and how each conversation evolves, which can affect the focus and quality of the data.

Translation: some interviews were conducted in French and later translated into English for analysis. While care was taken to preserve meaning, certain nuances, tone, or phrasing may have been altered. Non-verbal cues and spoken tone, important for interpreting meaning, are also difficult to fully capture in written transcripts.

Language: This thesis was written in English to reach a global audience and align with most sources. As it is not the authors' native language, this may have affected how some ideas were expressed or understood.

c. Researchers bias/positionality

Our academic and cultural background, as European and business-oriented education, may shape our approach to the topic, from case selection to data interpretation. Though we made efforts to remain reflexive and transparent in our analysis, full neutrality is not possible, particularly in politically and emotionally sensitive environments such as Gaza. Our positionality may have influenced how we framed questions, interpreted insights and defined relevance.

1.7.2. External validity

These affect how much the findings can be generalized to other humanitarian crises or actors.

a. Case selection and generalizability

This research focuses on two specific cases: Mali (2012-2015) and Gaza (2023-2025). While they offer valuable contrasts in terms of geography, infrastructure, and conflict type, their unique characteristics may limit the generalizability of findings to other humanitarian contexts. The results may not reflect dynamics present in other conflicts, natural disasters, migration crises or more stable political environments.

b. Temporal constraints

The case studies are taken in specific time periods. However, the situation (especially in Gaza) is changing rapidly with conflict escalation, constant political development and evolving humanitarian responses. Some insights from this study may quickly become outdated, which limits how applicable the findings will be over time.

c. Interaction with the research context

In a study based on interviews, participants may tailor their responses based on what they believe the researcher wants to hear, especially if the topic is sensitive or political. This introduces a risk of social desirability bias, which can compromise the authenticity and reliability of the responses gathered.

2. Literature review: Case studies

2.1. Case study: Mali (2012-2015)

2.1.1. The outbreak of the Malian conflict

Since 2010, the insecurity in the northern regions of Mali has steadily increased with foreign presence becoming nearly impossible and interventions by NGOs severely limited (Balique, 2016). This growing instability was intensified by the collapse of the Libyan regime in 2011. This led to the dispersal of armed jihadist groups and weapons throughout the Sahel, including Mali. The influx of fighters, many of whom were returning from Libya, further heightened ethnic tensions within the country (Le Houérou, 2016).

On 17 January 2012, the National Movement for the Liberation of Azawad (MNLA), a Tuareg separatist group, launched an armed rebellion against the Malian government (Diallo, 2020). The movement was strengthened by fighters returning from Libya and deserting soldiers from the Malian army (Le Houérou, 2016). The MNLA soon allied with radical Islamist groups, including Ansar Dine, Al-Qaeda in the Islamic Maghreb (AQIM), and the Movement for Oneness and Jihad in West Africa (MOJWA), in their push to control northern Mali and seek independence for the Azawad region (Ataullahjan et al., 2020).

On 22 March 2012, a military mutiny in Bamako led to a coup d'état which overthrew the sitting president just one month before the elections (Balique, 2016). This coup destabilized the central government, making it unable to effectively respond to the growing conflict in the north. In the midst of the chaos in the capital, the MNLA and other rebel groups seized key cities in northern Mali. On 6 April 2012, the MNLA declared the independence of the Azawad region, though this declaration was quickly complicated by internal divisions between the MNLA and jihadist factions who had different visions for the future of the region (Balique, 2016).

As the rebel forces solidified their control over the region, violence erupted. The new occupants imposed a harsh Salafi interpretation of Sharia law on 1,4 million people, with widespread human rights abuses, including murders, rapes and destruction (Balique, 2016). Hospitals and community health centers were looted and destroyed, with critical equipment, plumbing and materials stolen (Balique, 2016). The humanitarian situation deteriorated rapidly, and nearly all state representatives withdrew to the southern part of the country.

The situation escalated further in the second half of 2012. By then, the Malian government, unable to restore order, and the rebel forces, now joined by jihadist groups, were in open conflict. By mid-2012, the jihadist-nationalist conflict had broadened and several groups comprising the MNLA, AQIM, MOJWA, and Ansar Dine were fighting for control over the northern region (Le Houérou, 2016).

2.1.2. Context and specific challenges of humanitarian aid

2.1.2.1. Evolution of the humanitarian situation in Mali from the March 2012 Coup d'État to the 2015 Peace Agreement

The military coup in March 2012 that ousted President Amadou Toumani Touré created a political vacuum that allowed Tuareg separatist groups and Islamist militants to seize control of northern Mali (Mills et al., 2013). These groups took over key cities such as Timbuktu, Gao,

and Kidal (see Appendix A1), imposing strict Sharia law. Civilians faced severe repression, including amputations, executions and the destruction of cultural heritage sites (Balique, 2016). The deteriorating security situation, due to this power shift and the enforcement of Sharia law in the north, led to the displacement of approximately 300,000 people, with the United Nations report officially documenting 200,000 internally displaced persons (IDPs) (Balique, 2016; Mills et al., 2013).

The majority of the IDPs relocated to the southern regions of Mali and particularly in cities along the Mopti-Bamako corridor. However, the response infrastructure was limited with only two camps established: one in Mopti-Sévaré for 600 people, even though 40,000 were displaced in the region by March 2013, and another near the capital.

Most displaced people sought refuge with family members, friends or rented accommodations which led to increased financial strain and tensions within host families. In response, NGOs, such as the Red Cross and the Agency for Technical Cooperation and Development (ACTED), focused on assisting these host families by distributing food or food vouchers and implementing "work-for-subsistence" programs (Balique, 2016). Those kinds of programs mainly involve sanitation and environmental protection work in exchange for the possibility of receiving food or remuneration and are mainly supported by the World Food Program (WFP, 2025a).

Approximately 210,000 refugees found shelter in neighboring countries like Niger, Burkina Faso, Mauritania, and Algeria. Those refugees were accommodated in camps supported by UN agencies such as the UN High Commissioner for Refugees (UNHCR) and the European Commission's Humanitarian Aid Office (ECHO), as well as NGOs like Médecins Sans Frontières (MSF), Médecins du Monde (MDM), and the Red Cross (Balique, 2016; Mills et al., 2013).

Humanitarian organizations faced significant challenges in accessing areas affected by the conflict. The occupation of northern Mali by jihadist groups severely restricted aid delivery. The International Committee of the Red Cross (ICRC) and MSF struggled to provide medical and food relief due to insecurity and logistical obstacles (Balique, 2016). Additionally, reports of human rights abuses committed by both rebel groups and Malian forces, including summary executions, torture, and ethnic-based reprisals, particularly targeting Tuareg and Arab communities accused of supporting the insurgents, further complicated humanitarian efforts (Le Houérou, 2016).

In response to the humanitarian disaster in areas under jihadist control, both national and international NGOs mobilized to provide aid, especially medical care, to the approximately 900,000 people located in the north, cut off from the rest of the country. Organizations such as MSF, MDM, The Alliance for International Medical Action (ALIMA), Action Against Hunger, Save the Children, the Red Cross and CARE (an American-based international NGO) quickly demonstrated their commitment (Balique, 2016).

Given the high risk of hostage-taking, which prohibited the presence of European volunteers, many NGOs recruited local and other African medical professionals. Within weeks, some regional hospitals, district health centers and community health centers partially resumed operations, providing free medical care and pharmaceuticals with supplies from the NGOs.

Some organizations, leveraging their recognized neutrality, negotiated agreements with occupying forces to ensure their continued operations (Balique, 2016).

In 2013, humanitarian aid in Mali operated within a shifting landscape marked by armed conflict, international intervention and fragile political transition. The launch of Operation Serval in January, at the request of the Malian government, was framed by French authorities as a dual effort to restore state sovereignty and halt the advance of Islamist insurgents (Salignon, 2013). French military successes in retaking key cities located in the north like Gao and Timbuktu improved access for aid actors but also led to retaliatory violence and infrastructure destruction which deepened humanitarian needs (Goya, 2013).

The deteriorating security situation complicated humanitarian operations, particularly as NGOs were increasingly perceived by jihadist groups as instruments of international agendas, compromising their neutrality and access (Salignon, 2013). The perception of aid workers as politically aligned also limited access and heightened threats to staff in volatile regions (Lamarche, 2019).

At the same time, logistical and institutional support from international partners played an important role. On 12 January 2013, the UK government responded to a French request by committing 2 transport aircrafts to assist in the deployment of French personnel and equipment. A technical team was also dispatched to Bamako to support aircraft reception, with further surveillance support (Sentinel aircraft) added later that month from a base in Dakar, Senegal. These logistical contributions were essential to enabling military operations and indirectly facilitated humanitarian access to previously inaccessible regions (Mills et al., 2013).

In July 2013, the deployment of MINUSMA further reinforced international efforts. Although some improvements in humanitarian access followed, insecurity persisted, particularly with the reappearance of armed group activity and a breakdown of the ceasefire in September (Ataullahjan et al., 2020). Humanitarian actors continued to face operational risks, with their perceived alignment to foreign powers undermining local trust, especially in newly liberated areas (Salignon, 2013). This perception contributed to operational barriers and suspicion from communities in need (Lamarche, 2019).

The Malian government and its partners attempted to stabilize the country's humanitarian situation through political processes. A roadmap for political transition adopted in January (Balique, 2016) and the renunciation of territorial claims by Tuareg factions in February laid the foundation for renewed engagement (Le Houérou, 2016). This culminated in the "Together for a New Mali" donor conference in Brussels in May where €3.25 billion in financial pledges were made, including significant commitments from France and the European Union. Those donations supported emergency relief, reconstruction and the rebuilding of logistical capacity (Balique, 2016). However, despite this momentum, the humanitarian response remained hindered by fragmented coordination, weak local involvement, and short-term international commitments (Lamarche, 2019).

While the ICRC regained access to detention sites through an agreement with the Malian government and the International Criminal Court with UNHCR help to enable refugee to vote during the presidential election, structural vulnerabilities persisted (Dembélé, 2020). The

increasing incorporation of humanitarian efforts into military frameworks has raised concerns across multiple contexts (Salignon, 2013).

In Iraq (2003) and Afghanistan (2001), NGOs were pressured to align with Western political and security objectives (Salignon, 2013). A similar trend appeared in Mali, where humanitarian narratives were used to justify military intervention, often downplaying civilian harm and long-term impacts on sovereignty (Salignon, 2013). Recent studies highlight that integrating humanitarian activities into military frameworks creates operational complexities, with inadequate civil-military coordination undermining aid impartiality and effectiveness (International Crisis Group, 2019). Institutionally, France's intervention governance lacked rigorous democratic oversight, as troop deployments were decided primarily by the President, with only subsequent parliamentary review, raising transparency and accountability concerns (Salignon, 2013).

In 2014, the humanitarian crisis persisted due to ongoing armed conflict, political instability and the residual effects of the 2012-2013 crisis, which led to widespread displacement, infrastructure collapse, and restricted access to basic services (United Nations Security Council [UNSC], 2014c). Efforts to stabilize the country were undermined by violence, particularly the May 2014 clashes in Kidal during the Prime Minister's visit, which left multiple casualties and led to the seizure of administrative buildings by armed groups (UNSC, 2014a). These incidents significantly reduced humanitarian access in parts of Kidal, Gao and Timbuktu, where armed groups controlled large areas, posing protection risks such as forced recruitment of children, abductions, arbitrary detentions and explosive remnants of war (Dembélé, 2020).

By mid-2014, over 300,000 Malians remained internally displaced and more than 137,000 were registered as refugees in neighboring countries (OCHA, 2014b). Food insecurity was severe, an estimated 1.5 million people were at risk between June and August, particularly in the north (OCHA, 2014b).

Humanitarian organizations, supported by the government, responded through targeted aid efforts. The Ministry of Education, with United Nations Children's Fund's (UNICEF) assistance launched the "Back-to-School" campaign leading to the reopening of 983 schools nationwide. However, renewed insecurity led to new closures in Kidal, preventing 772 children from completing the school year (UNSC, 2014c). In health, the World Health Organization funded the return of 70% of health workers to conflict-affected areas, while UNICEF supported 105 health facilities with essential supplies (UNSC, 2014c).

Despite these efforts, MINUSMA's humanitarian mandate was constrained by persistent insecurity and logistical limits, reducing its operations to urban areas (UNSC, 2014b). MINUSMA helped broker a fragile ceasefire in June but it failed to address root causes like governance gaps and ethnic marginalization. Humanitarian actors, including OCHA and NGOs, expanded operations with mobile clinics and food distributions. However, the 2014 Consolidated Appeal for Mali was only 32% funded on end of June 2014, leading to major shortfalls in shelter, sanitation, and water services (OCHA, 2014b).

Logistical and operational challenges were intensified by the growing militarization of aid. France's Operation Serval was replaced in 2014 by Operation Barkhane, a regional

counterterrorism mission, alongside the EU Training Mission and the G5 Sahel Joint Force (Lamarche, 2019).

MSF noted that the presence of armed actors alongside humanitarian agencies in the field blurred distinctions between military and humanitarian work. This blurred line puts aid workers at risk and diminishes the perceived neutrality of international assistance. As a result, humanitarian actors struggled to reach populations in need and faced hostility in areas where communities were suspicious of foreign intentions (Pozo Marín, 2017).

Organizations like UNHCR and the ICRC continued to play essential roles in displacement monitoring and legal protection. The ICRC promoted international humanitarian law (IHL) through education programs for over 3,500 Malian soldiers and 500 fighters from armed and self-defense groups (Dembélé, 2020). These efforts aimed to foster adherence to IHL and reduce harm to civilians. Nevertheless, human rights violations by both armed groups and state forces remained widespread (UNSC, 2014a), underscoring the fragility of the humanitarian space.

In 2015, humanitarian aid in Mali remained both a critical lifeline for vulnerable populations and a complex logistical challenge, especially in conflict-affected northern regions. The volatile security environment severely obstructed aid delivery, particularly due to inter-factional clashes between the Coordination of Azawad Movements (CMA) and the Platform armed groups. This instability, marked by ceasefire violations and territorial disputes, particularly in regions such as Ménaka and Gao, resulted in displacement, limited access to basic services and raised humanitarian needs (UNSC, 2015a).

MINUSMA played a central role in facilitating humanitarian efforts. Despite rising risks, including attacks on UN personnel, aid workers, and convoys, MINUSMA worked to protect civilians, de-escalate violence, and ensure safe humanitarian access (UNSC, 2015b). To illustrate, following the seizure of Ménaka by GATIA and MAA-Platform elements in April, MINUSMA rapidly deployed joint investigation and verification teams, facilitated medical evacuations, and intensified patrols to secure humanitarian corridors (UNSC, 2015b).

Meanwhile, international humanitarian actors continued to deliver critical assistance in camps and remote areas, often under difficult conditions. Mali's Ministry of Solidarity and Humanitarian Action undertook outreach missions to refugee camps in Niger and Mauritania to explain the impending peace agreement and encourage voluntary returns (UNSC, 2015b). These missions emphasized the link between humanitarian relief and the political process, illustrating how stability was a prerequisite for sustainable return and development.

The humanitarian crisis was intricately bonded to the broader peace process. On May 15, 2015, the Malian government, the Platform coalition and factions of the CMA signed the "Accord pour la paix et la réconciliation au Mali issu du processus d'Alger," with the remaining CMA groups joining on June 20 (Nyirabikali, 2015).

The agreement acknowledged the need for socioeconomic reconstruction and pledged reforms to ensure greater inclusivity and decentralization. Specifically, Article 31 of the Accord committed to enabling local governance systems and a "specific development strategy" for the

northern regions, to be financed through both national and international resources (Government of the Republic of Mali & Signatory Movements, 2015).

Despite the accord's aspirational framework, challenges remained. The agreement did not clearly define mechanisms for ensuring representation of marginalized communities in governance or for guaranteeing accountability in aid delivery. This omission risked undermining trust in state institutions and could impede humanitarian access if communities felt excluded (Nyirabikali, 2015). Furthermore, although the Accord proposed an 18-24 month interim period to implement reforms, insecurity persisted during this time, complicating the good functioning of development and humanitarian initiatives (UNSC, 2015b).

2.1.2.2. On the short-term: post-peace agreement transition and reconstruction

After the agreement was signed, humanitarian access remained highly restricted due to ongoing insecurity and escalation of asymmetric threats. Despite ceasefire compliance among signatory groups, non-signatory actors and extremist organizations continued to attack, especially within the Gao, Timbuktu and Mopti regions. These threats significantly constrained both mobility and logistics for aid workers. MINUSMA reported more than 80% of humanitarian incidents, particularly vehicle hijackings and armed robberies, occurred in these regions with the Ménaka Cercle singled out as particularly volatile (UNSC, 2015d).

Operational risks also led to the temporary suspension of operations and complicated the delivery of essential supplies. The use of improvised explosive devices (IEDs) along main routes forced aid organizations to rely on air transport, especially in areas where road conditions were exacerbated by seasonal rains (UNSC, 2015c). MINUSMA's logistical support and mine clearance operations, particularly in airfields like Kidal, were essential to re-establishing main humanitarian corridors. However, the mission's security demands often consumed a large share of its logistical capacity which tended to reduce flexibility for aid convoys and protection units (UNSC, 2015d).

Along with logistical challenges, the re-establishment of basic public services in northern Mali was uneven and delayed. For instance, education services had only been partially restored in Kidal with just 15 out of 62 schools reopening in October 2015 after a closure of 3 years. This reopening, supported by UNICEF and MINUSMA, depended heavily on recruiting volunteer teachers and community sensitization (UNSC, 2015d).

While the peace accord envisioned decentralized governance and local development (Article 6), the absence of fully operational interim administrations impeded the coordination of humanitarian strategies with local authorities. Slow civil service redeployment and the incomplete formation of interim governance bodies prevented humanitarian actors from aligning assistance with evolving state structures (UNSC, 2015d).

Despite these challenges, the government and the international actors both launched public information campaigns to promote the peace agreement and build support for its implementation. The "Caravan for Peace and Reconciliation" and MINUSMA-sponsored outreach efforts reflected a recognition that humanitarian logistics required not only physical access but also local legitimacy and trust as well (UNSC, 2015d).

2.1.2.3. Understanding the global repercussions and the importance of helping

The conflict quickly escalated from a national crisis into an international concern, mostly due to its implications for regional and international security. After the collapse of state authority in northern Mali, jihadist groups such as Al-Qaeda in the Islamic Maghreb and affiliated militias exploited the power vacuum to establish themselves, transforming the area into a hub for transnational arms trafficking, illicit trade and extremist recruitment (Klobucista & Bussemaker, 2020). These developments alarmed international actors who feared that unchecked violence in Mali could destabilize the wider Sahel and pose a direct threat to European and global security interests (Baudais, 2020).

In response, international institutions and foreign powers mobilized rapidly. France launched Operation Serval in 2013 to halt the advance of the jihadists towards Bamako, followed by the broader Operation Barkhane on 1 August 2014 to support and strengthen the national security forces across the G5 Sahel countries (Baudais, 2020). At the same time, the United Nations established the MINUSMA peacekeeping mission to support state reconstruction and humanitarian access. However, these responses often privileged military stabilization over civilian protection.

The internationalization of the conflict transformed Mali into a battlefield for competing international and regional interests. According to the Clingendael Institute, foreign involvement was not purely altruistic, it also reflected strategic motivations including counterterrorism, migration control and geopolitical influence (Chauzal & van Damme, 2015).

International humanitarian operations in Mali also exemplified the challenges of applying the “Triple Nexus” approach which is an integrated framework linking humanitarian, development and peacebuilding agendas. Officially designed to improve coordination, this strategy often resulted in blurred operational mandates and reduced the clarity of humanitarian action (Steinke, 2021). As Steinke explains, international NGOs were sometimes perceived as extensions of foreign military missions, leading to local distrust and weakening the protective function of aid neutrality. This blurred line was further compounded by difficult terrain and volatile security which led to limited ability of organizations to implement long-term recovery programs (OCHA, 2015a).

Despite these difficulties, targeted humanitarian initiatives, such as cash-based transfers in regions affected by the conflict, demonstrated that aid could be delivered effectively even in unstable contexts. In northern Mali, such programs helped address food insecurity and displacement but those required extensive risk management and adaptive strategies to avoid escalating tensions (Key Aid Consulting & The Cash Learning Partnership, 2018). However, humanitarian actors remained highly dependent on international funding and military protection which raised concerns about sustainability and local ownership (Lamarche, 2019).

The international implications of the Malian conflict extended far beyond the humanitarian aspect. Martín Elvira argues that the conflict forced international organizations to confront the limitations of externally imposed stabilization models, especially when local governance structures were weak or contested (Martín Elvira, 2021).

The prolonged crisis in Mali highlighted the importance of aligning aid with inclusive political solutions. Furthermore, it highlighted the need for international responses that balance security imperatives with principled humanitarian engagement. Without those, international involvement risks entrenching dependency and reinforcing the very fragility processes that foreign intervention tries to resolve (Baudais, 2020).

2.1.3. Logistical and strategic challenges of the conflict

2.1.3.1. Humanitarian logistics and supply chain strategies in Mali: access, coordination and modal challenges

a. Entry points and international access

Mali is a landlocked Sahelian country heavily reliant on neighboring coastal ports and regional corridors for humanitarian logistics. The main entry point for international aid is the port of Dakar, Senegal or via rail/road corridors from Côte d'Ivoire and Benin (Wulf & Mesko, 2014). As of 2013, the Dakar-Bamako corridor was the most utilized, yet the Dakar-Bamako railway, a critical sea-rail link, handled only about 20% of freight due to deterioration and poor maintenance, compelling the majority of cargo to move by road (Wulf & Mesko, 2014).

When NGOs are forced to import materials, the usual transportation method is by road with transportation times varying significantly but typically ranging from one to two months depending on the destination location (Wulf & Mesko, 2014). For example, official reports highlighted the unreliability of the Dakar-Bamako railway, resulting in shifts toward trucking and river barges to ensure delivery. Mali's complete dependence on sub-regional ports for supplies, particularly Dakar, necessitates continuous monitoring of corridor viability by humanitarian planners (WFP, 2013b; Wulf & Mesko, 2014).

Import costs via West African ports surged post-2012 conflict, partly due to the necessity of armed escorts on convoys and higher fuel prices. This prompted NGOs to increase local and regional procurement to mitigate delays and expenses. One NGO explicitly noted that, "most international NGOs prefer to buy supplies locally" whenever feasible to avoid unpredictable transport costs (Wulf & Mesko, 2014). Key constraints and accessible routes are visualized in the Mali cargo access map in Appendix A2, while international corridors are detailed further in Appendix A3.

b. National distribution hubs

Bamako, Mali's capital alongside Koulikoro, a nearby strategic river port on the Niger River, acts as primary hubs for national distribution. UN agencies and the ICRC have large distribution facilities in Mopti which serve as the main logistics hub where humanitarian supplies are staged for further distribution to northern Mali (Wulf & Mesko, 2014). Mopti hosts significant warehousing capacity managed by UN agencies and the ICRC, functioning as the staging ground for relief flows into Gao, Timbuktu, and Kidal (Wulf & Mesko, 2014).

The WFP and partners re-established logistics infrastructure in the north as security conditions improved, with key routes including "road transport from Mopti to Gao, Timbuktu, and Kidal, as well as river transport from Mopti to Timbuktu" (WFP, 2013b).

The Logistics Cluster and WFP planned to strategically pre-positioned Mobile Storage Units (MSUs) and contingency stocks in Mopti to enhance storage capacity and operational readiness (WFP, 2013c). Additional warehouse space was also planned for the WFP logistics hubs in Bamako and Mopti, enabling the reception of food assistance and providing transit storage to support the expected increase in operational activities (WFP, 2013c). Internal transport infrastructures in both northern and southern Mali, including key highways and river navigability, are depicted in Appendix A4.

c. Regional supply chains

Gao: Supplies primarily arrived by road from Mopti (WFP, 2013b). Many supplies were imported from Niamey while fuel was sourced from Algeria due to lower costs. Furthermore, large amounts of food were delivered in Gao via river transportation (Wulf & Mesko, 2014). Early 2013 saw river transport playing a critical role when road access was disrupted. WFP bulletins reported “large amounts of food delivered to Gao via river transportation,” emphasizing the multimodal nature of logistics into Gao. The city of Gao and the town of Ménaka have been primary targets of jihadist groups, making access difficult due to growing insecurity, at times turning the area into “a place without law” (Wulf & Mesko, 2014).

Timbuktu: Supply chains into Timbuktu relied mainly on road transport from either Bamako, Mopti, or Gao, complemented seasonally by river barges from Mopti (Wulf & Mesko, 2014). Supplies were transported from Bamako to Mopti and then forward to Timbuktu via the Niger River, with the journey from Mopti to Timbuktu taking two to three days. Security challenges such as banditry and unexploded ordnance in the Timbuktu countryside constrained NGO movements, often limiting vehicle access to safer corridors (Wulf & Mesko, 2014). By late 2013, reopening of key river and road routes, supported by military escorts, restored and increased delivery capacity (Food and Agriculture Organization of the United Nations [FAO], 2013).

Kidal: Kidal remains the most dangerous region in northern Mali due to persistent conflict and insecurity. A major NGOs security director described it as “completely off limits” for humanitarian and development actors, highlighting the severe operational constraints in the area. Kidal represents a unique challenge due to its isolation and the minimal presence of humanitarian workers. Almost all relief aid is procured locally through Kidal-based businessmen with supplies primarily sourced from Algeria through Tamanrasset and Tinzouatène (Wulf & Mesko, 2014). The Logistics Cluster’s contingency planning involved pre-positioning MSUs and stockpiles in Mopti to support future operations in Kidal (WFP, 2013c).

d. Transport modes

Road: Road transport dominates humanitarian logistics in Mali despite their poor maintenance. Only approximately 13% of Mali’s road network is paved and many roads become impassable during seasonal rains (Wulf & Mesko, 2014). Armed escorts were mandatory due to security threats, leading to increased transportation costs. According to a recent WAEMU transport study by Borderless and USAID, Mali remains the worst-performing country for vehicle and goods movement, with frequent checkpoints, widespread bribery and long travel times (Wulf & Mesko, 2014).

River: The Niger River is vital for transporting bulk goods like agricultural products from southern Mali to the North with boats returning south carrying Algerian goods from Gao. However, it is only navigable from July to December by large boats and depending on the amount of rainfall. River transport from Koulikoro to Gao takes about one week, while the journey from Mopti to Timbuktu lasts two to three days. The state-owned Compagnie Malienne de Navigation (COMANAV) which is Mali's sole river transport operator, halted operations for the first time in over 50 years during the 2012 northern Mali conflict which caused inflation and job losses. It resumed service in July 2013 but the aging fleet remains unsafe, highlighted by a deadly boat capsizing near Konna in October 2013 that killed 68 passengers (Wulf & Mesko, 2014).

Air: The UN Humanitarian Air Service (UNHAS) resumed flights by February 2013 (WFP, 2013b). UNHAS offers regular flights from Bamako to key northern cities, with French military forces securing the airports in Timbuktu, Gao and Kidal. For recognized humanitarian organizations, UNHAS is the most efficient method for transporting small cargo. Many NGOs prefer carrying supplies in passenger luggage due to high air freight costs and poor road conditions. MINUSMA also provides air transport in certain cases (Wulf & Mesko, 2014). However, due to security and technical limitations, flights to Kidal remained suspended for extended periods (Nesto, 2015).

e. Fuel and infrastructures challenges

Mali imports all petroleum products, sourcing fuel from Algeria, Ghana, Senegal, Benin, and Togo, as it lacks domestic refineries or production capacity (Wulf & Mesko, 2014). The extended supply chains and security risks drive up fuel prices. During the 2012 occupation, convoys transporting fuel and food required armed security, increasing delivery costs by roughly 80% (Wulf & Mesko, 2014). Agencies mitigated these challenges by stockpiling fuel and coordinating with the Logistics Cluster to establish a distribution system with at least 10,000-litre capacity, ensuring uninterrupted operations for vehicles and generators (WFP, 2013c).

f. Coordination and cluster support

Activated in April 2012, the WFP-led Logistics Cluster played a pivotal role in coordinating humanitarian logistics in Mali. By 2013, the Cluster said it could manage a minimum of 2,000 metric tons of cargo in 2013 and could provide storage capacities of about 550 mt/month in Bamako, 1,100 mt in Mopti, and 2,200 mt in northern Mali, often in partnership with other agencies (WFP, 2013c). It would deploy MSUs, rented warehouses and rehabilitated shared assets such as a 10-ton truck for common use to facilitate resource sharing and address bottlenecks when agencies' own logistics were disrupted. At the same time, the Emergency Telecommunications Cluster said it would address critical communication gaps by deploying VSAT terminals, radios and portable networks across regions affected by the conflict (WFP, 2013c).

g. Adaptive strategies

Faced with logistical and security challenges, humanitarian actors increasingly adopted local procurement and cash-based programming to reduce dependence on unstable corridors and

lengthy supply chains (Wulf & Mesko, 2014). While such strategies carry risks including misappropriation and armed theft, they provided greater flexibility and cost-efficiency. A review by Key Aid Consulting & The Cash Learning Partnership (2018) identified insecurity and potential misuse among the top concerns for cash programming in northern Mali.

Nevertheless, cash and voucher programs expanded, and aid groups leveraged informal local trading networks (Key Aid Consulting & The Cash Learning Partnership, 2018). One logistics coordinator humorously remarked that he could “get a truck full of gas from Libya to Timbuktu without ever passing a single checkpoint,” illustrating the ingenuity and complexity of local supply dynamics (Wulf & Mesko, 2014).

2.1.3.2. Humanitarian restrictions: data on access, protection and displacement

Figure 2. Data on humanitarian restrictions in Mali between 2012 and 2015.

	Total number of conflict IDPs	Number of people protected and/or assisted by UNHCR	Access-constrained zones	Total number of access-constraints	Main causes of constraints
2012	230 000 (IDMC, 2012)	227 958 (UNHCR, 2012)	Northern Mali: Kidal, Gao & Timbuktu (OCHA, 2012a)	N/A	Access restricted due to armed group occupation (OCHA, 2012a). "Timbuktu, Gao and the Kidal region are at UNDSS Security Level 5 (where UN presence is not permitted)" (WFP, 2013b)
2013	218 000 (IDMC, 2013)	311 353 (UNHCR, 2013)	Kidal, Ségou, Gao & Timbuktu (OCHA, 2013d)	N/A	Ongoing hostilities → Executions, abuses, abductions (Human Rights Watch, 2014)
2014	62 000 (IDMC, 2014)	275 781 (UNHCR, 2014)	Kidal, northern Gao, Timbuktu (OCHA, 2015a)	October-December: 12 (OCHA, 2015a)	Ongoing hostilities → Attacks on Malian soldiers, neutral peacekeepers, aid workers and other civilians. Abduction and execution of aid workers. (Human Rights Watch, 2015)
2015	50 000 (IDMC, 2015)	119 559 (UNHCR, 2015)	Kidal, Gao & Timbuktu (OCHA, 2016)	78 (OCHA, 2016)	61% violence against personnel, humanitarian goods and infrastructure & 29% continuation of hostilities and military operations. (OCHA, 2016)

Between 2012 and 2015, Mali experienced significant internal conflict primarily driven by armed insurgencies, military operations, and insecurity in the northern regions. The humanitarian impact of this conflict is cleared out by the number of IDPs (Evolution graph in Appendix A5) and the need for UNHCR protection.

In 2012 the conflict led to 230,000 IDPs, a very high number reflecting widespread displacement due to armed group occupation. Protection numbers reached its peak in 2013 which suggested increased humanitarian response despite ongoing hostilities worsening security in the north (Human Rights Watch, 2014). In 2014 and 2015, we observed a decline in IDPs with a significant drop in IDPs to 50,000 by 2015 which is due to returns and resettlement amid access constraints (OCHA, 2016). However, the need for protection remained relatively high and violence was more targeted against humanitarian personnel in 2014 and 2015 which indicated ongoing vulnerabilities even after the peace agreement.

We can note that access constraints were consistently reported in northern Mali, particularly Kidal, Gao, and Timbuktu, across all years, indicating persistent insecurity in these areas. Initially, access was restricted due to territorial control by armed groups in 2012. This evolved into more direct threats to personnel between 2013 and 2015 with targeted attacks on aid workers and infrastructure. By 2015, 61% of access constraints were due to violence against personnel and assets (OCHA, 2016). This represented a shift from territorial denial to direct aggression against humanitarian actors.

The period from 2012 to 2015 in Mali reflects a complex situation between different conflict dynamics, humanitarian needs and operational challenges. While the number of displaced persons declined, the escalation in access constraints and violence against humanitarian actors underscores a shift in the conflict's character from territorial control to a protracted crisis with sustained insecurity.

2.1.3.3. Fundings and clusters

Figure 3. Detail on humanitarian fundings in Mali between 2012 and 2015

Year	Total needs (M\$US)	Funding received (M\$US)	Coverage rate
2012	214,3	107,15	50%
2013	476	144	30%
2014	568	100	18%
2015	377	125	33%

Sources: OCHA, 2012b; 2013b; 2014a; 2015b

All information from points a to c is derived from the same sources used for Figure 3.

a. Focus on fundings

From 2012 to 2015, the humanitarian funding landscape for the Malian conflict underwent notable shifts, both in the scale of needs and in the international response. In 2012, total funding needs were relatively modest at \$214.3 million with \$107.15 million actually received which resulted in a coverage rate of 50%. This initial year marked the highest proportion of needs met during the conflict period. However, 2013 saw a dramatic escalation in requirements, more than doubling to \$476 million. Despite this surge, the funding only increased to \$144 million. As a result, the coverage rate dropped sharply to 30%, highlighting a growing gap between needs and available resources.

The situation worsened in 2014, when needs reached their peak at \$568 million, yet actual funding fell to \$100 million. This mismatch led to the lowest coverage rate of the period, just 18%, indicating a severe shortfall in humanitarian support at a time of greatest demand. In 2015, the overall needs decreased significantly to \$377 million, while funding rebounded to \$125 million. This partial recovery in funding, combined with reduced needs, improved the coverage rate to 33%.

The data reveals a dynamic and volatile funding environment, where increases in needs were not matched by proportional increases in funding. The coverage rate consistently declined from 2012 to 2014 as needs outpaced resources before partially recovering in 2015 due to both a reduction in needs and a modest increase in funding. This trend highlights the persistent challenge of mobilizing sufficient resources in response to escalating humanitarian crises.

b. Focus on donors

Between 2013 and 2015 (as detailed data for 2012 are unavailable), the main donors remained consistent: Japan, the European Union (through ECHO by 2014) and the United States. In 2013 and 2014, Japan and ECHO alternated as the leading contributors, with the U.S. maintaining a

stable share. By 2015, the U.S. took the lead in funding, followed closely by ECHO, while Japan's contribution declined significantly. In each of these years, these three donors collectively provided over half of the total humanitarian funding.

c. Focus on clusters

Between 2012 and 2015, Mali's cluster-based humanitarian response faced high needs across all sectors but suffered from inconsistent and often inadequate funding. The food security cluster had the largest funding requests by reaching 255 million \$ in 2014 but never received more than half of what it needed through the years. Other critical areas like nutrition, protection, and WASH were even more underfunded with receiving even less than 10% of their appeals during 2014 and 2015. Health and education also struggled. While health funding typically covered only a quarter to a third of needs, education support was especially unstable and frequently overlooked especially in 2014 with only 2% of funding.

Each year, donors tended to prioritize immediate food aid over sectors like protection or schooling which reveal a broader imbalance in how humanitarian funds are perceived and allocated. These trends highlight the need for more equitable and reliable funding to ensure all essential services are sustained in crisis settings.

2.1.3.4. Technological and logistical innovations

a. Technological innovations

Unmanned aerial vehicles (UAVs): One of the key technological developments during the Mali conflict was the use of modern surveillance drones. In late 2013 the French government announced plans to introduce U.S.-built MQ-9 Reaper drones in the Sahel to support Opération Serval (Reuters, 2013). These advanced UAV provided persistent intelligence, surveillance and reconnaissance (ISR) over vast desert areas which greatly improved situational awareness on the battlefield. However, France's intervention exposed a shortage of ISR assets and forced reliance on U.S. drone support from Niger (Reuters, 2013). Drones quickly became a central element in counter-insurgency efforts, allowing French and Malian forces to operate more effectively across difficult terrain.

Ground sensors and communications: In addition to aerial tech, forces integrated advanced field communications and sensors. French and allied troops relied on lightweight, mobile vehicles and modern radios to adapt to both the terrain and tight budgets. The U.S. and EU also shared lessons on logistics digitization by sending logisticians to universities to improve supply-chain management (Finabel, 2018). On the humanitarian side, agencies improved communication by installing shared VHF radio repeaters and extending UN HF radio channels, helping NGOs and local actors stay connected across remote areas in the north (WFP, 2013c). These upgrades replaced the fragmented systems of past crises, allowing for quicker coordination on both military and humanitarian fronts.

Geospatial and mapping technology: Another innovation was the use of digital mapping and Geographic Information System (GIS). In early 2013, UNOCHA-Mali activated the Humanitarian OpenStreetMap Team (HOT) to crowd-map parts of the country and geolocate

basic services to support humanitarian coordination (Waldman & al., 2013). These open-source maps greatly improved the baseline data available to aid workers and military planners.

Building on this, UN agencies like WFP's Logistics Cluster used GIS to combine field reports, satellite images, and transport data, enabling more accurate route planning and warehouse placement (WFP, 2013c). Together, crowdsourced and professional mapping tools became essential for coordinating relief efforts across the Sahel.

b. Logistical innovations

Strategic airlift and transport: The Mali crisis saw an unprecedented use of strategic air transport to move troops and supplies. From January to March 2013, Canada deployed a C-17 Globemaster III which flew 48 missions and delivered over 1,6 million kg of cargo including vehicles, supplies and aid into Bamako (Department of National Defence Canada, 2014). This heavy-lift capability far surpassed earlier reliance on commercial or smaller aircraft allowing the transport of armored vehicles and large groups of refugees for the French-led intervention (Department of National Defence Canada, 2014).

Other allies also contributed, with U.S. tankers refueling French jets (Associated Press, 2013) and the UK later sending Chinooks. These air assets became key components of the intervention's logistics strategy.

Warehouse and storage solutions: The crisis also led to more flexible storage strategies. The WFP-led Logistics Cluster quickly deployed MSUs near key areas allowing expanding capacity by about 1,000 metric tons in Bamako and Mopti to pre-position relief supplies (WFP, 2013c). These MSUs could be set up in a day or two and served as mobile warehouses or transit hubs, especially useful in insecure zones like Gao and Kidal where permanent facilities weren't viable (WFP, 2013c). This modular approach made the supply chain more agile and adaptable to shifting needs.

Fuel and transport coordination: Anticipating fuel shortages in early 2013, planners set up emergency reserves, renting equipment to store 10,000 liters at key sites like Gao and Mopti (WFP, 2013c). These depots acted as backups to keep trucks and generators running when regular supplies were disrupted. At the same time, the Logistics Cluster repaired and shared vehicles for NGO's convoys (WFP, 2013c). These efforts to coordinate fuel and transport helped keep humanitarian operations moving despite challenging conditions.

Common coordination systems: A broader innovation was the formation of joint coordination bodies. In early 2013, both the Logistics and Emergency Telecommunications Clusters were activated in Mali, bringing together NGOs, UN agencies and Red Cross actors to share planning and resources (WFP, 2013c). Regular meetings and a shared information platform allowed partners to track transport and warehouse stocks in real time. By using tools like GIS maps and GPS data (WFP, 2013c), it avoided duplication and ensured efficient delivery.

2.1.4. National and international actors in the Malian conflict: a multilevel analysis of aid intervention

2.1.4.1. Main international state and institutional actors involved in the Malian conflict

France played a central role through military and diplomatic engagement. In 2012, it drafted UN Security Council Resolution 2071 and provided logistical and training support (Human Rights Watch, 2013). In January 2013, France launched Operation Serval to halt jihadist advances toward Bamako. It co-hosted a donor conference with the EU and condemned Islamist abuses (Human Rights Watch, 2014). In August 2014, Serval was replaced by Operation Barkhane by expanding the mission regionally focusing on counterterrorism and supporting Sahelian militaries in coordination with MINUSMA (Ministère des Armées, n.d.).

Algeria acted as a key mediator. In 2012, it engaged in negotiations with Mali and ECOWAS to address the northern insurgency (Human Rights Watch, 2013). It hosted and co-mediated peace talks in 2013 in Algiers with the African Union and led peace negotiations through 2015 (Human Rights Watch, 2014; 2016).

The United Nations condemned human rights violations (Human Rights Watch, 2013) and abuses perpetrated by Islamist groups (Human Rights Watch, 2014). The UN Security Council authorized AFISMA and later MINUSMA in 2012, renewing MINUSMA in subsequent years (Human Rights Watch, 2013-2016). The OHCHR deployed fact-finding missions in 2012 and 2013, and the Human Rights Council appointed an independent expert on Mali, whose mandate continued through 2015 (Human Rights Watch, 2013-2015). Furthermore, in 2014, the Human Rights Council adopted a resolution acknowledging progress (Human Rights Watch, 2015).

The UN Development Programme (UNDP) supported judicial rehabilitation in 2014 and promoted justice reform and anti-corruption efforts in 2015 (Human Rights Watch, 2015, 2016). The UN Peacebuilding Fund backed reconciliation, justice initiatives and the Algerian-led peace process (Human Rights Watch, 2016).

The European Union and the United States provided logistical and training support in 2012 (Human Rights Watch, 2013). In 2013, the EU co-hosted a donor conference with France and launched the EU Training Mission (EUTM) in Mali, which continued in 2014 (Human Rights Watch, 2014; 2015). EUCAP Sahel Mali trained internal security forces, and justice reform was co-led by the EU and the Netherlands, with the US providing forensic expertise to the Ministry of Justice (Human Rights Watch, 2014). These efforts continued in 2015, with ongoing EU support for justice reform and military training. The US also provided logistical support to Operation Barkhane (Human Rights Watch, 2016).

United Nations Office for the Coordination of Humanitarian Affairs coordinated humanitarian efforts, focusing on information management and planning. Its Bamako office, opened in April 2012, led multi-sector coordination via the Humanitarian Country Team and cluster system, issued regular situation reports and managed the Consolidated Appeals Process (OCHA, 2012b; 2013b; 2014a; 2015b).

OCHA supported operations especially in the northern regions and displacement-affected areas in the south (Mopti, Ségou, Bamako). It co-led a Logistics Working Group with WFP to assist

NGOs with importation and transport, enabling aid delivery through Mopti and UNHAS flights despite road insecurity (OCHA, 2012). UNHAS also augmented air services to humanitarian actors (OCHA, 2013c). United Nations Mine Action Service (UNMAS) and partners like DanChurchAid cleared unexploded ordnance and improved road access in the north (OCHA, 2013c).

UNICEF focused on children and basic services by delivering water/sanitation (WASH), health, nutrition, education, and child protection support in Mali. In 2013, it distributed hygiene kits, supported nearly 50,000 schoolchildren, trained 1,700 teachers and ensured medicine supply and treatment of cholera and malaria. It funded SMART surveys in collaboration with WFP, treated malnutrition, deployed psychosocial support and trained armed forces in child protection (United Nations Children's Fund [UNICEF], 2013).

To sustain health outreach, donors later financed specialized cold-chain vehicles. A Canada-UNICEF project in 2017 provided solar vaccine refrigerators and refrigerated trucks so that vaccines and drugs could reach remote clinics (Global Affairs Canada, 2019).

Canada and the Netherlands also supported justice and anti-corruption reforms in later years (Human Rights Watch, 2016).

World Food Programme, in 2012, assisted over 1,2 million people, including 648,000, through emergency operations between February and August (WFP, 2013a; OCHA, 2012a). With partners like OXFAM, Norwegian Church Aid, and ACTED, it distributed food to IDPs across Mali including over 64,131 in the southern regions, around 50,000 in Gao, and 29,460 in Kidal (OCHA, 2012a). In January 2013, WFP launched a new emergency operation targeting 564,000 people (WFP, 2013a). It combined in-kind food aid in central regions with cash transfers in the north, later expanding this approach to rural areas. From 2013 to 2017, both number of cash-transfer recipients and total value of assistance increased significantly (Executive Board, 2018).

WFP also ensured access by road and air. With commercial flights suspended in March 2012, WFP ensured access to remote areas by operating UNHAS flights to key northern cities and occasionally secondary towns. WFP addressed the emergency in northern and central Mali through emergency operation 200525, while the 2008 country programme was extended through 2014 for the south and west. Due to limited access in parts of the north and center, WFP increasingly relied on NGOs for delivery and monitoring (Executive Board, 2018).

2.1.4.2. Regional organizations

The Economic Community of West African States (ECOWAS) was involved in diplomacy and military planning. In 2012, it initiated talks with northern groups, developed a military intervention plan and contributed to preparation for the deployment of an international military force (Human Rights Watch, 2013). It led Tuareg-government talks in 2013 and supported Algerian peace efforts in 2015 (Human Rights Watch, 2014; 2016).

The African Union supported ECOWAS's military plan in 2012 and helped prepare for international intervention (Human Rights Watch, 2013). In 2013, it took the lead in supporting Tuareg-government talks and mandated human rights observers (Human Rights Watch, 2014). In 2014, it brokered a ceasefire enabling Algerian-led negotiations between the Malian

government and several armed groups and it continued to support the Algerian-led peace talks in 2015 (Human Rights Watch, 2015; 2016).

2.1.4.3. International NGO's

Médecins Sans Frontières deployed emergency teams across conflict zones as soon as access was possible. By early 2013, they were active in Mopti, Gao, Ansongo, Konna, Douentza, and Timbuktu to offer urgent care and to reopen abandoned facilities (Médecins Sans Frontières [MSF], 2013). Their strategy focused on field hospitals, fixed posts, and mobile clinics. When insecurity rose, they often forced a shift to static hospitals and emergency wards rather than risk mobile outreach (MSF, 2013).

MSF teams relied on local staff and delivered medical supplies by road and air but faced significant challenges securing safe air transport. They avoided using MINUSMA helicopters due to low local acceptance in Kidal and instead used their own aircraft despite high costs. When Kidal's airport closed, they resorted to road transport by negotiating access with armed groups. To reach remote areas, they also partnered with a local NGO to support health centers outside the town (Pozo Marín, 2017).

Médecins du Monde focused on nutrition and basic healthcare in northern Mali. By early 2013, the main hospital in Kidal was operating on approximately 20 health posts across the northern regions. Between September and December 2012, 2,050 malnourished children received treatment (The New Humanitarian, 2013).

MDM relied on mobile teams for screening and referrals, with a strong focus on acute malnutrition. Facing security constraints, MDM worked through local partners and negotiated access to maintain operations in Kidal and Gao. It also pushed for the removal of user fees to ensure free care for vulnerable communities (Médecins du Monde, 2012).

International Committee of the Red Cross and Mali Red Cross opened a delegation in Mali in 2013 and scaled up relief operations for conflict-affected populations, working closely with the Mali Red Cross to strengthen its operational capacity. It also promoted international humanitarian law among armed forces and pushed for its enforcement by national authorities (International Committee of the Red Cross [ICRC], 2015). By the end of 2013, the ICRC had provided food aid to over 800,000 people, often alongside hygiene and household items, and supported water access by supplying fuel to treatment plants and building emergency latrines at IDP sites (ICRC, 2014).

In late 2014 the ICRC doubled its food assistance for displaced people as planned, particularly following renewed fighting in Kidal, where it also quickly restored local water systems within days. Its medical teams offered trauma care, and evacuations to wounded combatants and civilians to a regional hospital in Gao fully supported by ICRC staff and supplies (ICRC, 2015).

The ICRC's logistical strategy emphasized neutrality and partnerships, often operating through the Mali Red Cross and local networks. In 2013, the two organizations formalized a tripartite framework with the International Federation of Red Cross (IFRC). With ICRC support, the Mali Red Cross expanded first-aid volunteer teams and scaled up cash distributions, especially in the north (ICRC, 2014). Red Cross convoys typically used unmarked vehicles and negotiated safe

passage with armed groups Although security constraints limited ICRC movement in rural areas, aid continued to reach vulnerable populations through the National Society which helped deliver aid to areas where international staff were restricted (ICRC, 2015).

Norwegian Refugee Council (NRC) began its operations in Mali in late 2012, initially coordinating from Burkina Faso as refugees fled the north (Norwegian Refugee Council [NRC], 2012). It provided multi-sector aid, combining emergency relief with long-term support in shelter, education, legal assistance (ICLA), WASH, protection, and livelihoods (NRC, 2025a). By mid-2014, NRC was delivering food, shelter, education, and legal aid to displaced and vulnerable populations (Weir, 2014).

Its teams distributed emergency kits, rehabilitated homes and schools, and ran accelerated learning programs while supporting teacher training and education governance. Protection efforts focused on helping IDPs secure civil documentation and resolve property claims (NRC, 2025a).

Geographically, NRC focused on northern and central Mali, with its Bamako office overseeing projects in Gao, Timbuktu, Menaka, and Mopti (NRC, 2025a). Persistent violence, displacement, and rising threats like banditry and IEDs along key routes severely hampered operations (Weir, 2014). NRC also worked with state authorities to ensure safer transport for children attending school (Hall, 2022).

Save the Children (Plan Mali) & Action contre la Faim (ACF) were key child-focused NGOs active during the conflict However their operations were severely disrupted by the escalating violence, particularly in the increasingly isolated northern regions (Hirsch, 2013). Both organizations, along with Christian Aid, withdrew staff from conflict zones due to rising insecurity and the risk of being mistaken for armed groups. It forced travel restrictions and, at times, reliance on mopeds or walking. Furthermore, ACF announced the temporary cessation of its programs in the Gao region (Hirsch, 2013).

Despite these challenges, ACF continued to prioritize nutrition, WASH, and livelihoods in northern Mali (Action Against Hunger, n.d.). Since 2012, it deployed mobile teams and ran community-based programs (IRIN News, 2013). In early 2013, ACF treated malnutrition in Gao, Bourem, and Ansongo, while also supporting local markets by sourcing goods from local vendors (IRIN News, 2013). Additionally, it invested in rehabilitating water infrastructure, building and restoring water points, and promoting hygiene and sanitation practices (Action Against Hunger, n.d.).

2.1.4.4. Media influence

After the conflict broke out, Islamist insurgents quickly took control of northern Mali and shut down or attacked local media. Reports from media-development groups note that “about 57 radio stations and many newspapers” were forced to close or suffered brutal attacks from the rebel groups during 2012-2013, particularly in Gao, Timbuktu and Kidal (International Media Support, 2013). These groups tightly controlled information, cutting off communities from independent news and isolating the north from the rest of the country. As a result, most Malians, especially in the south, had little reliable information about events in the north (International Media Support, 2013).

a. International media coverage and awareness

As the war spread, international news outlets did carry the events but its coverage was episodic. By early 2013, international attention peaked, the UN humanitarian chief John Ging observed that Mali had become “a center of global media and political attention” (OCHA, 2013a). However, this visibility was often tied to dramatic events such as the fall of towns, atrocities, or the French intervention and it tended to focus on security and terrorism angles.

Scholarly analyses of media “effects”, the so-called CNN effect, suggest that while the press can “bring knowledge of the tragedy” to global audiences (Henke, 2017), this alone rarely compels action. In Mali’s case, widespread images of jihadists did raise awareness of a security crisis but systematic foreign intervention and aid followed more from political and military strategy than from public pressure.

Notably, French authorities managed the narrative carefully. One military analyst reports that President Hollande accelerated the military campaign in January 2013 explicitly because he knew the French media might soon brand the war a “quagmire” if progress stopped (Spet, 2015). Likewise, France’s defense minister Jean-Yves Le Drian regularly “played a key role by explaining the military operations to the media and aggressively labelling jihadists as France’s worst enemy”, helping to maintain public support (Spet, 2015). These details show that media messaging was used to shape opinion nationally.

b. Media and humanitarian assistance

Media attention did not automatically translate into aid. In February, UN officials expressed frustration that, although Mali had captured global political and media attention, donor response was falling short. John Ging reported that of the \$373 million requested for that year, only \$17 million had been received even though “Mali had been a center of global media and political attention” (OCHA, 2013a). Moreover, as media interest faded, so did political urgency, and humanitarian experts noted that underfunding became a persistent issue as global attention shifted elsewhere.

By 2020, Mali was explicitly listed among the world’s most “neglected displacement crises”, largely due to lack of media coverage and a focus on security concerns over humanitarian needs (NRC, 2021). Within Mali, the lack of reliable media in the north left many communities unaware of aid efforts or ongoing abuses, weakening any potential for public pressure or accountability.

2.1.5. On the long term: the post-peace agreement situation

Since the Algiers Peace Agreement was signed in 2025, the humanitarian crisis in Mali has continued to deteriorate rather than improve. Although the accord aimed to promote greater decentralization and stimulate investment in the northern regions, it has, to date, failed to deliver on a significant portion of its core commitments (Lamarche, 2019). Moreover, the central government is now under the control of military authorities following the 2021 coup and faces escalating threats from a range of non-state armed groups (IRC, 2024).

The fragile peace framework established in 2015 effectively collapsed in September 2023 after the withdrawal of the United Nations peacekeeping mission (IRC, 2024). As a result, humanitarian needs have surged across the country. As of 2025, an estimated 6,4 million people (27,7% of Mali's population) are in need of humanitarian assistance and protection. The situation is particularly critical in the conflict-affected regions of northern and central Mali where ongoing displacement and limited humanitarian access further intensify pre-existing vulnerabilities. (OCHA, 2025a)

At the same time, the financial requirements outlined by humanitarian partners have continued to rise, while actual funding commitments have remained insufficient. This resulted in an increasingly pronounced gap between humanitarian needs and available resources (Appendix A6).

2.1.5.1. Logistical constraints and insecurity

Humanitarian logistics in Mali are increasingly constrained by high security risks and persistent access limitations. Attacks on aid convoys and humanitarian personnel have become frequent. A 2020 report by a UN Security Council emphasized that “access to humanitarian aid remains dire”, highlighting frequent abductions of aid workers and the looting of both organizational property and aid intended for vulnerable populations (UNSC, 2020). According to the same report, all humanitarian trucks were forced to operate at night, well beyond curfew hours and without the protection of customs escorts. By mid-2020, NGOs had reported over 100 incidents involving ambushes, kidnappings or looting of humanitarian convoys (UNSC, 2020).

According to an OCHA report of May 2025, 78 humanitarian access incidents were recorded across multiple regions, with central Mali being the most affected (OCHA, 2025c). This figure represents a 32% increase compared to May 2024 and a 52% increase relative to May 2023 (see Appendix A7). The reported access constraints included both direct violence such as attacks against humanitarian staff, facilities and assets, but also indirect operational disruptions, including the destruction of communication infrastructure and interference with humanitarian activities. (OCHA, 2025c).

Logistical operations are further complicated by the vast and poorly connected terrain in Mali, especially in the northern and central regions. Physical constraints such as seasonal flooding, impassable desert tracks and inadequate road infrastructure severely limit ground access. In many areas, the only viable alternatives are rivers and limited air transport. Security actors on the ground confirm the extent of the risk: “There are areas where we simply cannot take the risk of sending a vehicle,” noted one local expert (Handicap International, 2024).

As a result, convoy movements must be closely coordinated with real-time security intelligence. A driver interviewed by Handicap International explained that “our security teams notify us overnight of any developments on the roads, so we can assess whether to proceed or suspend the convoy” (Handicap International, 2024). The use of unmarked vehicles and occasional armed escorts, necessary for safety, contributes to delays in aid delivery.

One of the most common challenges to humanitarian logistics is the extensive presence of landmines and explosive devices (EDs) (See Appendix A8). Data from May 2025 indicate that

83% of reported access incidents were linked to the intensification of armed clashes and the presence of explosive devices (OCHA, 2025c).

Northern and central Mali remain heavily contaminated by explosive remnants of war. Since 2013, over 1,600 mines and IEDs have been emplaced by armed groups, with a sharp increase in incidents observed between 2017 and 2023 (United Nations Mine Action Service [UNMAS], 2023). According to the UN Mine Action Service, these devices “limit access to livelihoods and basic services” and “hamper the delivery of humanitarian assistance” (UNMAS, 2023).

2.1.5.2. Strategic and coordination challenges

Several strategic factors continue to compound the challenges that humanitarian logistics face. The military coups of 2020 and 2021 and the withdrawal of critical international forces, namely the French Barkhane mission in 2022 and the final remaining UN peacekeepers in 2023, have caused significant political instability and policy discontinuity. These shifts have undermined both state authority and the implementation of the 2015 Algiers Peace Agreement of which “very few” of its commitments have been implemented, according to international observers (Lamarche, 2019).

In the absence of effective governance, the state’s ability to guarantee service delivery and security beyond Bamako remains severely limited. Humanitarian actors are therefore often left without a reliable government to navigate fragmented and volatile contexts. Access negotiations must instead be undertaken on a highly localized basis, often through informal arrangements with community leaders, armed groups or self-defense militias. While this approach sometimes enables pragmatic field-level solutions, it also increases operational complexity and vulnerability. As one analyst notes, although humanitarian access can be brokered at local levels, it is continually threatened by insecurity and underfunding (Lamarche, 2019).

At the same time, shortfalls in funding are a major constraint on humanitarian action. The Acting Humanitarian Coordinator, Khassim Diagne, has highlighted the urgent need for renewed donor commitment and broader partnerships with development actors: “We should also explore innovative and sustainable solutions [...] to strengthen the resilience of communities facing the impacts of climate shocks and protracted displacement” (OCHA, 2025b). His statement reflects a growing consensus that emergency aid must be coupled with long-term strategies to address underlying vulnerabilities.

Furthermore, coordination between operational actors remains problematic. In fact, the overlapping presence of various stakeholders, including UN peacekeepers, EU missions, Malian security forces and numerous humanitarian convoys, has often blurred operational boundaries and created confusion in the field. Refugee advocacy groups have noted that some peacekeeping quick-impact projects were mistaken for humanitarian interventions, thereby compromising the neutrality of NGOs and complicating access in sensitive zones (Lamarche, 2019).

2.2. Case study: Gaza (2023-2025)

2.2.1. A brutal war and a major humanitarian emergency

The Gaza war, relaunched on 7 October 2023, has become one of the deadliest and most complex conflicts of the 21st century with catastrophic humanitarian repercussions. Its peak, longevity, and mode of operations place it at the core of a study of humanitarian aid logistical challenges in operational conflicts. Since its onset, over 55,000 Palestinians have lost their lives and over 129,000 have been injured, reported local healthcare authorities and international agencies (see appendix B1 for evolution 2023-2025 and Israelis numbers). The vast majority of Gaza's population of over 2.2 million has been displaced at least once, if not several times due to repeated Israeli offensives that have extended to all corners of this territory. Access to water, electricity, food distribution networks, and healthcare has been disrupted or destroyed, while humanitarian aid has been severely restricted due to the siege situation, insecurity risks, and breakdowns in coordination (OCHA, 2025j; MSF, 2024; NRC, 2024).

From a humanitarian perspective, Gaza has become a place in which operational principles of neutrality, safe access, and protection of civilians are consistently compromised. Convoys of humanitarian assistance have been withheld, blocked, or attacked. Shelters and hospitals, including reserved UN installations that have international protection under international law, have been bombed. Entire populations have been forcibly evacuated under military decree with minimal shelter, portable water, and medical care. These conditions highlight limitations of humanitarian intervention in situations when parties disrespect international humanitarian law and subject international legal protection to being frail in high-intensity combat environments (United Nations Human Rights Council [UNHRC], 2024; MSF, 2025a).

In order to understand the extent of the present crisis, it must be set against the larger history of Israeli Palestinian conflict. Its origins lie in 1948 with the formation of the State of Israel when it caused the displacement of an estimated 750,000 Palestinians in a year which came to be named as the Nakba, or 'catastrophe.' Most of these refugees and their descendants continue to live in the Gaza Strip. Gaza fell under Egyptian administration until it was occupied in 1967 in the Six-Day War that Israel waged against its Arab neighbors. It began an extended history of colonization and military occupation. The Oslo Accords of the 1990s sought to establish a framework for peace but ultimately failed to resolve major issues of border, refugees, and Jerusalem's status. Gaza was still under Israeli occupation even with the establishment of the Palestinian Authority (Le Monde, 2024).

In 2005, Israel evacuated its settlements and military presence from Gaza but maintained authority over its borders, sea lanes, and airspace. The situation worsened in 2006 when Hamas won in the legislative elections in Palestine. In 2007, Hamas seized complete control of the Gaza Strip after physical confrontations with Fatah (main rival political party previously in power). Israel and Egypt responded with a blockade to curtail movement of people and goods, which has persisted to date. Gaza has since been through various Israeli military operations in 2008-2009, 2012, 2014, and 2021, with each leaving heavy civilian casualties and damage to structures. Yet none of these equalled in scale and longevity the size and time of the 2023-2025 war (Le Monde, 2024; The Editors of Encyclopedia Britannica, 2025).

The war erupted when Hamas attacked southern Israel in a coordinated and unprecedented manner on October 7, 2023, killing about 1,200 people and taking over 250 hostages (Le Monde 2024). The Israeli government responded with a declaration of war and launched a massive military operation in Gaza. The stated objectives were to destroy Hamas' military capabilities, dismantle its governing structures, and secure the release of hostages. The offensive grew quickly with massive aerial bombings, ground occupation of all areas of Gaza, and an all-out cutoff of fuel, food, and humanitarian aid (UNHRC, 2024).

Such military targets have been sought at catastrophic civilian cost and with disastrous humanitarian impact. Whole quarters have been devastated. Hospitals, water treatment plants, bakeries, and shelters have come under attack. Humanitarian corridors have frequently been closed down or refused. Famine conditions have arisen as a direct result of siege, and child malnutrition has become an emergency situation by early 2025 (Integrated Food Security Phase Classification [IPC], 2025). In terms of aid agencies, this Gaza war constitutes an extreme situation in which principles of humanitarian access, logistical viability, and civilian protection come directly under assault (MSF, 2025a).

This case study uses a chronological framework divided into six phases. Each phase highlights how military tactics, humanitarian access, displacement, and aid operations evolved over time. Rather than treating the war as one continuous crisis, this structure shows how humanitarian space changed with each shift in violence. After this overview, we examine in more detail the logistical challenges of delivering aid in Gaza.

This analysis focuses on 7 October 2023 as a major turning point in the region's history. It aims to highlight both the scale of humanitarian failure and the structural limits of the aid system under siege conditions. The goal is to understand how aid agencies operate under extreme constraints and what this case reveals for future responses in high-intensity conflict zones.

2.2.1.1. Initial attack and siege announcement (7 October – 26 October 2023)

a. Conflict development

On 7 October 2023, Hamas began an unprecedented attack against southern Israel from the Gaza Strip. The assault started with a 20-minute rocket barrage of over 2,200 missiles before being supplemented with simultaneous ground, sea, and air infiltrations. Over 1,500 Hamas and Palestinian Islamic Jihad militants crossed Israel's heavily fortified border in bulldozers, explosives, and motorized paragliders. The assault caught Israeli military outposts off guard and attacked civilian targets, including towns, kibbutzim and a large public music festival. The Israeli Iron Dome missile defense was not able to intercept all missiles, and communications in the border area were closed to enable infiltration (The Editors of Encyclopedia Britannica, 2025; OCHA, 2023a-d).

The attack took place during the Jewish holiday of Shemini Atzeret and was the deadliest day of any for Israelis since Israel's founding. More than 1,200 people died and over 240 were taken hostage. There was especially heavy damage in specific places. 364 died and an estimated 40 were taken captive at the Tribe of Nova music festival. 10% of the 1,100 inhabitants were killed and 34 taken from the kibbutz of Be'eri. About 100 persons from Nir Oz were killed or taken

hostage, including 83 taken into Gaza (Le Monde 2024). According to various reports, the attacks affected civilians and did not have discernible military targets. Human rights groups described events as mass terrorism efforts to cause maximum casualties among civilians (UNHRC, 2024; MSF, 2024; OCHA, 2023b).

On 8 October, Israel's government officially announced a state of war and activated over 300,000 reservists (The Editors of Encyclopedia Britannica, 2025). Retaliation airstrikes intensified throughout the Gaza Strip, with a complete siege being enforced on 9 October to isolate water, electricity, food supplies, fuel supplies, and humanitarian assistance (OCHA, 2023c,d; UNICEF, 2023b,c).

b. Humanitarian crisis development

Gaza's civilian infrastructure disintegrated. By 10 October, major hospitals reported desperate levels of fuel, electricity and medicine shortages with several of them stopping operations. Al Shifa Hospital and others became overwhelmed with patients being treated on the ground with a lack of anesthesia or sterilized equipment (OCHA, 2023f). According to MSF, triage systems were absent which resulted in wounded civilians being refused treatment and amputations conducted under unsanitary conditions (MSF, 2024).

By 9 October, Israel had suspended drinking water supply to Gaza, creating a critical shortage for over 650,000 people (OCHA 2023f). Desalination plants shut down due to lack of fuel, amplifying the problem. Wastewater treatment also stopped which led to the discharge of raw sewage into residential areas. By the end of the month, water production had dropped to less than 5% of pre-war levels (OCHA, 2023o-r).

By 13 October, over 400,000 people were displaced (OCHA,2023g). That number exceeded 1.4 million by 26 October and included over 630,000 people sheltering in crowded schools of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) (OCHA, 2023t). Many of these classrooms, turned into shelters, were hosting up to 70 people (OCHA, 2023r). Sanitation conditions quickly deteriorated and created serious health and protection hazards.

Attacks on healthcare facilities and personnel escalated sharply. By 23 October, WHO had recorded 76 attacks in Gaza, resulting in 16 deaths and 30 injuries among health workers and affecting 35 facilities (including damage to 20 hospitals) and 24 ambulances (OCHA, 2023s).

After only three weeks, the Palestinian death toll had already reached over 7,000 with 66% of them being women or children. Civilian infrastructure, including schools, apartment buildings, and hospitals, had been widely destroyed (OCHA, 2023t).

c. Aid access and distribution challenges

For the first two weeks after 7 October, Gaza was completely cut off from humanitarian aid. Israel closed the Kerem Shalom and Erez crossings. On 21 October, the Rafah crossing opened for the first time since the 8 (see appendix B2 to see the crossings on a map). The first aid convoy of only 20 trucks entered Gaza on that day, a small fraction of the pre-war average of 500 trucks per day. By 26 October, a total of only 74 trucks had entered Gaza, which

humanitarian agencies considered extremely insufficient to meet urgent needs, noting that reaching a minimum of 100 trucks entering per day is imperative (OCHA, 2023o,t).

Fuel deliveries were entirely banned. This restriction paralyzed essential services including water pumping, food delivery, and hospital operations. Multiple UN agencies issued appeals, warning that without fuel, humanitarian aid could not be distributed, but the blockade remained in place (OCHA, 2023t).

Food insecurity worsened rapidly. As early as 8 October 2023, Israel officially declared its intention to cut off food, water, and energy to Gaza, marking a deliberate strategy to weaponize basic necessities and induce food insecurity (Hassoun et al., 2024). Most bakeries shut down due to fuel and wheat flour shortages. Basic goods became scarce and the prices spiked. The WFP reacted quickly by launching an emergency operation, together with UNRWA, to distribute ready-to-eat food to displaced people in Gaza shelters, already reaching 73,000 individuals on 9 October and setting its goal to provide critical food assistance to over 800,000 people. WFP also called for humanitarian corridors, safe passage for staff and goods, and urgent funding of US\$17.3 million to sustain the response. The organization warned of famine if access and supplies were not restored rapidly (WFP, 2023).

In parallel, UNICEF supported the temporary restoration of water access for around 1 million people in Deir al Balah, Khan Younis, and Rafah through the provision of fuel and water treatment supplies, including for over 560,000 children (UNICEF, 2023d). However, these efforts remained limited and could not offset the broader collapse of essential services.

By the end of October, Gaza's humanitarian conditions had reached catastrophic levels. Water, food, and electricity systems had collapsed and hospitals were overloaded. Humanitarian agencies were heavily obstructed by access restrictions and lack of fuel. Displacement and malnutrition continued to rise quickly.

2.2.1.2. Ground invasion of northern Gaza (27 October - 23 November 2023)

a. Conflict development

On 27 October 2023, the Israeli military launched a complete ground invasion of northern Gaza. The operation followed weeks of aerial bombardment and was characterized by heavy urban combat, particularly in Gaza City, Beit Hanoun, and Jabalia. Infantry units, tanks, and armored vehicles advanced from the east and north under air cover, destroying neighborhoods and any local services that were still working on its way (UNHRC, 2024; The Editors of Encyclopedia Britannica, 2025).

Communications and internet services were deliberately shut down during the first days of the invasion, paralyzing both internal coordination in Gaza and external humanitarian support. Residents were unable to call ambulances or receive alerts. According to the UN, this blackout was a serious obstacle for emergency services and evacuations. It obstructed efforts to locate civilians, medical facilities, and safe routes (UNHRC, 2024).

Israeli authorities issued repeated evacuation orders for civilians to leave the north and move to the south. No protected humanitarian corridors were established. All areas north of Wadi Gaza

were designated for evacuation, with civilians instructed to cross into the southern part of the Strip (see appendix B2). MSF reported cases of civilians, including children and the elderly, being killed while attempting to flee across active combat zones (MSF, 2024).

Airstrikes and bombardments continued during the ground assault. In Jabalia refugee camp, multiple Israeli strikes between 31 October and 2 November destroyed residential blocks, killing at least 195 people (OCHA, 2023). Many of those killed were sheltering in areas designated as safe, raising serious concerns under international humanitarian law (UNHRC, 2024). On 23 November, a temporary pause in hostilities was agreed through international mediation (OCHA, 2023ad).

b. Humanitarian crisis development

The ground invasion intensified the failure of Gaza's already struggling health systems. Al Quds Hospital (second largest of Gaza) was surrounded by tanks and repeatedly shelled. The hospital was damaged and 14 people including two patients were injured. The Israeli military stated that armed groups had been firing from there. Israeli forces ordered the hospital's evacuation despite hundreds of patients and thousands of civilians sheltering inside. By 5 November, the facility had run out of anesthesia, surgical supplies, and fuel. Ambulances were unable to enter combat zones, and wounded patients were often left untreated for days. (MSF, 2024; Al Jazeera, 2023b,c; OCHA, 2023w).

The destruction of roads and essential infrastructure left neighbourhoods in the north without access to clean water, electricity, or sanitation. Fuel shortages and constant bombardments disabled Gaza City's water and sewage systems. By mid-November, at least 50% of households had no access to safe water (UNICEF, 2023g).

As of 2 November, the number of IDP was more than 1.5 million. Over 600,000 took shelter in the south in around 150 UNRWA schools and public buildings. Conditions were alarming. Some classrooms were hosting over 100 individuals, with no access to clean toilets, showers, or privacy (NRC, 2024; OCHA, 2023v,ab). Protection risks increased, especially for children and women. UNICEF reported growing incidents of psychological trauma, separation of families, and unaccompanied minors (UNICEF, 2023h).

The educational system collapsed entirely. Over 61% of Gaza's schools were damaged by the end of November and other schools had to be used as shelter by the end of November. Several were directly hit by the attacks while hosting displaced civilians, causing mass casualties (OCHA, 2023ac).

c. Aid access and distribution challenges

Humanitarian access to Gaza remained highly restricted in November. The Rafah crossing partially reopened on 1 November, allowing the evacuation of some foreign nationals and the entry of aid trucks. However, the flow remained insufficient. By 11 November only 914 trucks had entered Gaza since 21 October, around 40 trucks per day, far below the quantities needed to deliver adequate aid (OCHA, 2023u,aa).

By mid-November, hundreds of thousands of civilians remained trapped in northern Gaza without access to aid or minimum amounts of food or water (OCHA, 2023ab). While the Israeli

military announced a “humanitarian corridor” along the Salah ad-Din road for evacuations (see appendix B2), it was one-way (north to south), heavily militarized, and frequently under fire, making it unsafe for both civilians and aid workers that could not rely on it for sustained aid delivery (OCHA, 2023y,z).

Efforts to deliver aid to the north of Gaza failed repeatedly. Trucks were blocked at military checkpoints or turned back due to fighting. For instance, MSF documented several attacks on staff and convoys in November 2023 with 8 incidents between the 14 and the 24 of that month (MSF, 2024). Safe passage agreements were not honored, and no structure existed for aid coordination on the ground. Aid workers operated at high risk, with more than 100 humanitarian staff killed in less than two months (UNHRC, 2024).

Until 18 November, fuel was entirely banned from entering Gaza despite repeated UN appeals. This forced agencies to suspend or reduce key operations, including water pumping, medical sterilization, and food distribution. UNRWA halted food deliveries in parts of Gaza City. Following a limited Israeli decision on 18 November, 75,000 litres of fuel entered on 23 November to support critical services such as hospitals, shelters, and WASH facilities (OCHA, 2023ab,ad).

By the end of November, the humanitarian system in northern Gaza fully broke down. Medical services were no longer functioning. Food, clean water, and basic supplies had disappeared. Displaced populations in the south were surviving in overcrowded, unsanitary shelters, while hundreds of thousands remained trapped in the north without assistance.

2.2.1.3. Southern offensive: Khan Younis and Rafah are under attack (24 November 2023 - 30 March 2024)

a. Conflict development

The humanitarian pause of 23 November facilitated limited exchanges of prisoners and hostages. It also allowed the entry of additional humanitarian aid and temporary evacuations. Although the truce provided brief relief in parts of Gaza, it did not lead to sustained improvements in access or the restoration of essential infrastructure. Many residents reported feeling little or no change in their daily hardships, with continued shortages of water, electricity, and basic necessities. In Khan Younis, people queued for hours at muddy water stations, and families returned to destroyed homes only to recover clothes from the rubble. Hostilities resumed on 1 December 2023 after that the truce failed to be extended (Barbakh & Mustafa, 2023; OCHA, 2023ae,af).

Following the end of the pause, Israeli military operations expanded into central and southern Gaza. Ground offensives and airstrikes targeted Khan Younis and by February 2024, Rafah. Both cities had become overpopulated with displaced civilians. On 3 December, the Israeli army informed that several districts, about 20% of Khan Younis city, should evacuate the area immediately, but there were no secure corridors and few viable routes to safety. In multiple cases documented by the UN, civilians were killed while attempting to evacuate hospitals under threat of siege or while sheltering in supposedly safe zones (OCHA, 2023ag; UNHRC, 2024).

MSF reported shelling near its trauma stabilization point in Khan Younis, where medical teams operated under constant artillery and drone fire throughout December and January (MSF, 2024).

By early 2024, the scale of destruction in Gaza was shocking. Around 62% of all homes were damaged or destroyed, mostly in Khan Younis, Gaza City, Jabalya, Beit Lahiya, and Rafah. Over 1 million people were left without a fixed place to live. The health system was also in pieces with 84% of health facilities, including 29 hospitals that were hit. Many of those still standing lacked basic supplies, electricity and fuel to operate correctly. Basic infrastructure, including water, roads, schools and agriculture were heavily affected, especially in the north and Khan Younis, where 80% of all damage was concentrated. Public services in many areas were out or barely functioning. By March, satellite imagery showed that many districts of Khan Younis were demolished, and military operations were advancing toward the perimeter of Rafah (World Bank, European Union, & United Nations, 2024).

Rafah, initially seen as the last refuge, became the primary target of Israeli airstrikes by February. WeWorld reported that hundreds of thousands of displaced people were living in tents, open spaces, or partially destroyed homes with little to no infrastructure support (WeWorld, 2023).

b. Humanitarian crisis development

By mid-January, 1.9 million people, over 90% of Gaza's population, had been displaced, many of them multiple times. Nearly 1.4 million were sheltering in UNRWA facilities, with hundreds of thousands relying on informal arrangements. Rafah became the main destination for those fleeing violence, pushing shelters' capacity far beyond their limits (United Nations Relief and Works Agency for Palestine Refugees in the Near East [UNRWA], 2024b).

Water access in Gaza deteriorated sharply by early 2024. Only one of the three main desalination plants remained partially operational due to repeated damage and lack of fuel. A rapid assessment of WASH conditions in IDP shelters found that people had access to only two to three litres of water per person per day for all needs, with severe shortages of soap, menstrual hygiene materials, and functional sanitation. Sanitation facilities were dangerously overcrowded, with a median of 341 people sharing a single toilet and 1,292 people per shower, most of which were not adapted for vulnerable groups (UNICEF, 2024b,c). With every school closed, no child in Gaza had access to education, leaving an entire generation at risk of falling behind (United Nations Population Fund [UNFPA], 2024a).

The healthcare system in southern Gaza was swamped. Al Nasser Hospital was surrounded by Israeli forces, and MSF reported performing surgeries without anesthesia and treating children with severe injuries without proper equipment (MSF, 2024). Medical evacuations were difficult, and ambulances were unable to move safely. In Rafah and Deir al Balah, hospitals and shelters were overcrowded with displaced people. UNICEF supported cleaning and waste management in shelters housing over 90,000 people (UNICEF, 2024b), while the World Health Organization and the United Nations Population Fund (UNFPA) helped expand hospital capacity and delivered urgent medical supplies to keep essential services running (OCHA, 2024c).

By March 2024, food insecurity in Gaza had reached emergency levels. The Integrated Food Security Phase Classification (IPC) reported that 1.11 million people were in Phase 4

(emergency) and over 300,000 in Phase 5 (catastrophe), primarily in Rafah and central Gaza (IPC, 2024a). MSF documented a sharp increase in children showing signs of acute malnutrition, including wasting, lethargy, and micronutrient deficiencies (MSF, 2024). On March 18, the IPC warned that if these conditions persisted, famine would become imminent, with northern Gaza already showing a doubling of malnutrition rates since January and signs of starvation-related deaths. Meanwhile, the International Court of Justice (ICJ) acknowledged the risk of famine and ordered Israel to allow humanitarian aid “at scale and without delay” as a legal obligation under the Genocide Convention. Refugees International described Israel’s use of starvation as a weapon of war, citing systematic obstruction of food and fuel (Refugees International, 2024a). In this context, humanitarian agencies warned that the situation in southern Gaza had surpassed the threshold of a manageable emergency, as essential systems for food, water, and healthcare continued to collapse under unrelenting hostilities and access restrictions.

c. Aid access and distribution challenges

While the Rafah crossing reopened occasionally after November, access remained limited. In February, on average less than 100 trucks entered in Gaza per day, almost half the volume from January and still far below the required number of trucks daily (OCHA, 2024a). Kerem Shalom remained closed for long periods, and efforts to establish reliable humanitarian corridors into central and southern Gaza consistently failed (UNRWA, 2024c). Only 25% of planned aid missions to northern Gaza were facilitated in February and just 48% between 1 and 29 March (OCHA, 2024b,e). Inside Gaza, road conditions, insecurity, and access denials further disrupted aid delivery, especially to the north. MSF reported being unable to rotate staff or deliver critical surgical supplies for over two months due to blocked entry and movement restrictions (MSF, 2024).

To better understand the operational environment during this period, the maps of concept of operations from the logistics cluster show the configuration inside Gaza in February and March 2024 (see Appendices B3 and B4). They help visualize the corridor used for aid delivery, which extended beyond Deir al Balah and connected to key storage points in the center and south of the Strip. This corridor entered via the Rafah Transshipment Point, with no functional route shown through the still-blocked Kerem Shalom crossing. Over 2,400 m² of storage capacity is visible in the southern area, particularly around Rafah. Comparing both maps also highlights a shift in storage availability. A 170 m² warehouse near Khan Younis disappears by March, while an additional 1,000 m² is added to an existing warehouse in the far south. These visualizations underscore both the limits of corridor access and the gradual, improvised adjustments in logistics planning under siege conditions.

2.2.1.4. Extended siege and famine & Legal and diplomatic growth (1 April 2024 - 17 January 2025)

a. Conflict development

Between April 2024 and mid-January 2025, Israeli military operations continued in Gaza, with a focus on southern and central areas. Despite a reduction in the intensity of bombardments compared to the earlier phases, drone strikes, artillery fire, and incursions into civilian zones

continued. Rafah, hosting over 1.4 million internally displaced persons by mid-year, became the target of repeated air and ground assaults.

The protection of children in Gaza drew new international attention. In June 2024, UN Secretary-General António Guterres officially listed both Israel's military and Palestinian armed groups, including Hamas and Palestinian Islamic Jihad, for serious violations against children in armed conflict (Nichols, 2024). These included killing and injuring children, attacking schools and hospitals, blocking humanitarian aid, and using children in military activities. While the report did not confirm cases of forced recruitment, concerns about the involvement of children in Hamas's operations are long-standing. The group had already drawn attention for running training camps in Gaza, where thousands of minors have been taught how to fight, carry out kidnappings, and use weapons (Pérez-García, 2022). These actions violate international humanitarian law and point out some concerns about child recruitment and exploitation in Gaza.

At the same time, international legal scrutiny intensified. The International Court of Justice held additional hearings in the genocide case filed by South Africa and expanded its provisional measures in April 2024. The court reaffirmed Israel's obligation to allow humanitarian access without obstruction (The International Court of Justice [ICJ], 2024). The United Nations Human Rights Council (UNHRC) documented systematic targeting of civilian infrastructure, denial of aid, and breaches of international humanitarian law (UNHRC, 2024).

b. Humanitarian crisis development

Between April 2024 and January 2025, humanitarian conditions in Gaza deteriorated once again. By late 2024, the IPC reported that the entire population of Gaza was facing crisis-level food insecurity or worse (IPC Phase 3+). Among them, 133,546 people (6%) were classified in IPC Phase 5 (Catastrophe), and 1.1 million in Phase 4 (Emergency), with the highest concentrations in the north of Gaza (IPC, 2025).

UNICEF reported that rates of acute malnutrition were nearly ten times higher than pre-conflict levels. By December, over 36,000 children had been diagnosed with acute malnutrition, including 6,872 with severe acute malnutrition requiring life-saving treatment. Malnutrition-related complications also affected nearly 18% of pregnant and breastfeeding women, especially in central Gaza. The health system was almost fully down during this period. Only 18 of Gaza's 36 hospitals remained even partially functional, with most lacking fuel, supplies, or staff. Newborn and maternal care was especially affected: natal care capacity dropped by 64%, and most trauma services and vaccination campaigns were suspended. Routine immunization coverage fell below 90%, contributing to the resurgence of preventable diseases such as polio and hepatitis A (UNICEF, 2025a).

Humanitarian and health workers in Gaza continued to operate under extreme risk. At least 377 health workers had been killed and 262 detained so far, many while carrying out duties in marked medical facilities. The World Health Organization reported 261 attacks on Gaza's health sector since late January, putting the healthcare services at high risk. Out of Gaza's 36 main hospitals, only 18 remained partially functional, and most were operating without adequate supplies. At least 116 UN staff were killed between the International Court of Justice's

provisional order in January 2024 and the ceasefire a year later, making this the deadliest conflict for UN personnel since the organization's founding. The direct targeting of humanitarian staff and the destruction of vital infrastructure kept making things worse. By December, 88% of schools had been damaged or destroyed, and food was very diminished, with 70% of crops and 72% of fishing assets destroyed. Basic services did not improve either. Water production fell down to 16% compared to 2023, 70% of sewage pumps were destroyed, and all wastewater treatment plants were out of service (OCHA & Partner Organizations, 2025a).

c. Aid access and distribution challenges

Access constraints persisted throughout these months. Although the Kerem Shalom and especially the Rafah crossings reopened intermittently, aid deliveries remained inconsistent and fell far below the level required to sustain humanitarian operations (OCHA, 2024g,h). Fuel restrictions continued to paralyze basic services.

Compared to the earlier months, the operational map from the logistics cluster from April 2024 (see Appendix B5) shows a further deterioration. While the corridor still enters Gaza via the Rafah Transshipment Point, it now stops in the far south and no longer extends to Khan Younis or Deir al Balah. As a result, the central storage facilities visible in February and March are no longer accessible or functional, marking a significant diminution in the internal delivery capacity and geographic reach of humanitarian operations.

Aid convoys were frequently looted or diverted due to security threats. The NRC's April response plan stated that planned food and hygiene distributions to over 500,000 people were never implemented due to access refusals and active combat along designated routes (NRC, 2024). The absence of safe passage agreements forced many humanitarian organizations to suspend operations or limit them to less affected areas, leaving entire heavily exposed districts cut off.

Deconfliction measures failed. Aid agencies kept reporting direct attacks on marked UN facilities and warehouses. The Independent Commission for Aid Impact similarly noted that coordination failures and lack of effective deconfliction had severely compromised humanitarian operations (Independent Commission for Aid Impact, 2024).

In sum, the period from April 2024 to January 2025 was defined by continued hostilities, expanded legal investigations, and a full breakdown of basic living conditions in Gaza. Famine critical thresholds were crossed in multiple areas and civilian survival increasingly relied on irregular and dangerous humanitarian operations.

2.2.1.5. Ceasefire agreement: temporary decrease in hostilities and increase in aid (18 January - 18 March 2025)

a. Conflict development

Through intensive mediation with Egypt, Qatar, and the United States, Israel and Hamas reached a ceasefire agreement on January 18, 2025, which went into effect on January 19. This deal marked the first lasting pause in hostilities since the war began in October 2023 and greatly changed the operational environment in Gaza (International Crisis Group, 2025a). The agreement

included a gradual Israeli withdrawal from most areas of the Gaza Strip, the release of hostages and prisoners and a commitment to restore humanitarian access and reconstruction efforts.

In June 2024, the UN Security Council adopted Resolution 2735, which outlined a three-phase ceasefire framework involving the same principles (United Nations Security Council, 2024). Although it was not put into effect at the time, this proposal influenced later discussions and served as the framework for the deal that was ultimately reached in January 2025.

During the first phase of the deal, 33 Israeli hostages were released by Hamas in several groups. In return, Israel freed nearly 1,900 Palestinian detainees, including many held without trial under administrative detention. The International Committee of the Red Cross played a key role in safely facilitating these exchanges. Two of the largest operations took place on 8 February and 15 February, when the ICRC coordinated the release of 3 hostages and, respectively, 174 and 343 Palestinian detainees (ICRC, 2025a,b).

Israel continued to conduct routine operations in the West Bank and kept its forces along important military routes like the Netzarim and Philadelphi corridors despite the decrease of hostilities. The International Crisis Group claims that although the truce reduced direct fighting, the government was unable to proceed with the second phase of the agreement, which would have included the release of the remaining hostages and an end to all fighting, due to internal political tensions, including pressure from far-right coalition members (International Crisis Group, 2025b).

The ceasefire also failed to fully stop the violence on the ground. Between 19 January and early March, Israeli forces reportedly violated the truce at least 962 times, according to data presented to the UN Security Council by the Palestinian delegation. These violations, including drone strikes, sniper fire, and shelling in Gaza's buffer zones, caused the deaths of at least 116 civilians and injured nearly 500 more, showing that even during the official pause, the humanitarian situation remained unstable and highly volatile (Zhang, 2025).

During this time, diplomatic efforts grew more intense. While Arab states supported by European powers like France, Germany, and the UK presented a governance plan for Gaza, the recently inaugurated U.S. administration re-engaged with regional stakeholders. However, the shift to a more stable political solution was impeded by significant problems with Gaza's postwar governance, Hamas' disarmament, and Israel's reluctance to completely leave some regions (International Crisis Group, 2025b).

b. Humanitarian crisis development

Despite the ceasefire, aid access improved slightly but remained far below humanitarian needs. Although incidents of looting temporarily decreased, significant quantities of aid including food, hygiene items, and medical supplies remained blocked outside Gaza due to arbitrary delays, denials, and a lack of coordination. More than 8,800 pallets were reported stuck in Jordan, Egypt, Israel, and the West Bank, despite urgent needs on the ground. Humanitarian organizations also reported severe disruptions in water provision. Following the electricity cut to Gaza's main desalination plant and the loss of the Mekorot water line, agencies were unable

to meet the minimum emergency threshold of 15 liters of water per person per day, putting lives at risk (OCHA & Partner Organizations, 2025b).

Malnutrition was still common. Over 37,000 children had been diagnosed with acute malnutrition by the end of February, 6,100 of whom required urgent care due to severe acute malnutrition. Anemia and undernutrition rates among pregnant and lactating women were on the rise, and antenatal care was extremely scarce. Mental health services reported an increase in trauma, especially among children exhibiting symptoms of grief, anxiety, and distress (UNICEF, 2025d; UNFPA, 2025).

Hospital capacity continued to decline. As of February, only 11 out of Gaza's 36 hospitals were partially functioning, and vaccination campaigns had failed, raising fears of outbreaks such as measles and polio. Field hospitals in Rafah and Deir al-Balah operated on and off and under high pressure, with shortages in medical supplies and staff (UNICEF, 2025b).

Despite explicit warnings by UNRWA about unexploded ordnance and the destruction of 90% of infrastructure in northern Gaza, hundreds of thousands of civilians began returning. Most found only rubble and no access to basic services (PressTV, 2025).

c. Aid access and distribution challenges

The ceasefire led to a temporary increase in humanitarian access. Daily truck entries rose to an average of 150 to 200 trucks, primarily through Rafah and Kerem Shalom crossings. However, the volume was still half the one from before the conflict and insufficient to meet the urgent needs of over two million people. Access to northern Gaza remained extremely limited. Convoys attempting to reach Gaza City and surrounding areas were frequently denied or delayed. Agencies reported looting of aid trucks, lack of coordination with Israeli forces, and threats to staff safety. The absence of a functioning deconfliction mechanism contributed to the insecurity. OCHA reported at least 18 attacks on humanitarian facilities during the ceasefire period, including several on clearly marked UN warehouses (OCHA & Partner Organizations, 2025b).

Fuel restrictions remained a major bottleneck. Only small, irregular shipments were permitted, mostly for UN operations. The limited fuel supply was inadequate to power water desalination, medical cold chains (for vaccination), or generators at critical facilities. So waterborne disease risk stayed alarmingly high (UNICEF, 2025b).

Some improvements were still noticeable. UNFPA reported the reactivation of mobile health units and safe spaces for women and girls in parts of the south. UNICEF resumed malnutrition screenings and psychosocial services in shelters in Rafah and Khan Younis. Agencies, however, consistently underlined that the humanitarian response was still far short of what was required to stabilize the situation in Gaza (UNICEF, 2025c; UNFPA, 2025).

2.2.1.6. Break of the ceasefire broken and return to full war (18 March - June 2025)

a. Conflict development

On 18 March 2025, the ceasefire agreement between Israel and Hamas broke when Israeli forces launched surprise airstrikes across Gaza. The UN Security Council reported that more

than 400 Palestinians were killed in a single night, making it one of the deadliest assaults since the war began (UNSC, 2025). Prime Minister Netanyahu announced a full return of combat operations, citing national security concerns and growing pressure from hardline coalition members opposed to any lasting truce (International Crisis Group, 2025b).

In the weeks leading up to the assault, Israel had reimposed siege conditions across the Strip. On 2 March, it closed back all crossings into Gaza, halting the entry of food, fuel, and medical supplies. On 9 March, electricity was cut entirely and paralyzed essential services (OCHA, 2025i). Legal and humanitarian experts described these moves as deliberate deprivation tactics and violations of international humanitarian law, aimed at weakening Gaza's resilience ahead of renewed conflict (Dannenbaum, 2025).

The decision to return to full combat was shaped not only by stalled hostage negotiations but also by internal political dynamics. Analysts noted that the offensive launched on 18 March was driven more by political calculation than immediate military necessity, aimed at reasserting Israeli control through force (International Crisis Group 2025b).

As of June 2025, the hostilities that resumed on 18 March remain ongoing and even more intense than before. No new ceasefire or meaningful de-escalation has been established. The humanitarian and security conditions in Gaza have deteriorated further with each passing week, and this sixth phase marks the ongoing and unresolved endpoint of the current study period. With negotiations stalled and diplomatic channels under strain, the situation remains highly volatile. We are far from a resolution, but rather at a critical juncture. Securing a durable ceasefire, restoring humanitarian access, and advancing a political framework for long-term stability are urgently needed.

As of 17 June 2025, the humanitarian toll of the war in Gaza was catastrophic. The World Health Organization reported 55,432 fatalities and 128,923 injuries in the Gaza Strip since the start of hostilities in October 2023. Following the collapse of the ceasefire in March, at least 4,924 people were killed and 15,780 injured in just three months (between 18 March and 11 June). These numbers highlight the intensity of the conflict and the full return of military operations. Among these, 224 were killed and 1,858 injured while seeking food or aid, highlighting the deadly consequences of breakdowns in safe distribution (World Health Organization [WHO], 2025a).

b. Humanitarian crisis development

Health infrastructure was severely degraded with all hospitals and primary care centers in North Gaza and Rafah non-functional. Only 34 of 36 hospitals in the Strip were damaged and only 17 of them remain partially operational. Attacks on the healthcare system had reached 735 verified incidents, resulting in 917 deaths, 1,411 injuries, and damage to 125 health facilities and 188 ambulances. Shortages of fuel, medicines, and supplies compounded the crisis, with nearly 50% of essential medications and consumables out of stock. The healthcare system is under heavy strain. An immediate ceasefire and sustained humanitarian access for food, water and medicines is imperative (WHO, 2025a).

Displacement increased once more. By late May, nearly 600,000 people had been newly displaced, including 161,000 in the week of 15 to 21 May alone. This number kept growing with over 680,000 newly displaced persons by 20 June. Over 81% of Gaza was declared an active combat zone or placed under evacuation orders (see appendix B6), leaving civilians with few safe shelter options. Many were forced into overcrowded, unsafe areas without basic services (UNRWA, 2025e,f).

Designated "safe zones" failed to offer protection. Between 28 May and 4 June, in only 7 days, OCHA reported 14 deadly incidents on the Strip. For instance, On 30 May 2025, an Israeli airstrike killed 14 people (including 3 children and 5 women) in an IDP tent camp in Al-Mawasi in Khan Younis. Just four days later, on 4 June, a shell hit a UNRWA school shelter in the same area, killing 18 people, including 13 women. These incidents reinforced that no area in Gaza was reliably safe (OCHA, 2025f).

Repeated attacks on medical infrastructure, supply shortages, and the death of first responders degraded all levels of care. On 23 March, 15 emergency responders were killed by Israeli forces in Rafah while responding to emergencies in clearly marked vehicles. Their bodies and their ambulances were recovered from a mass grave a week later, on 30 March. The ICRC reported mass casualty into its field hospital and noted that staff and patients were exposed to gunfire near medical tents. For instance, bullets passed through its field hospital in Gaza, injuring a patient in May. MSF referred to Gaza as a "mass grave," warning that civilians and humanitarian workers were being targeted, and aid routes blocked (MSF, 2025b; ICRC, 2025d).

Famine conditions also intensified. According to the 12 May IPC report, 470,000 people, one in five Gazans, were facing IPC Phase 5 (Catastrophe/Famine), and the entire population was acutely food insecure (IPC, 2025). By late April, the World Food Programme had exhausted its food stocks for hot meal kitchens, and all 25 WFP-supported bakeries had closed weeks earlier due to a lack of wheat flour and cooking fuel. WFP food parcels, which provided two-week rations, also ran out. At the same time, more than 116,000 metric tons of food assistance, enough to feed one million people for four months, was positioned in aid corridors and ready for delivery, but unable to enter due to prolonged border closures. UNICEF continued delivering limited water and nutrition services, but its supplies were too low to prevent and treat malnutrition. Both agencies urged for immediate and full access to meet urgent civilian needs. UNICEF Executive Director Catherine Russell said that "the risk of famine does not arrive suddenly. It unfolds in places where access to food is blocked, where health systems are decimated, and where children are left without the bare minimum to survive. Hunger and acute malnutrition are a daily reality for children across the Gaza Strip. We have repeatedly warned of this trajectory and call again on all parties to prevent a catastrophe." This statement shows once again the severity of needs and the implications of the political blockades in place (WFP, 2025b).

Local food production was also destroyed. A joint analysis by the Food and Agriculture Organization and The United Nations Satellite Centre (UNOSAT) revealed that over 80% of cropland was damaged, nearly all greenhouses were destroyed, and less than one out of five agricultural wells were still operable. Food production ceased entirely, leaving over half a million people who depended on farming and fishing without any provisions (FAO, 2025b).

By March 2025, the closure of Gaza's crossings had triggered a severe energy crisis. Diesel prices more than doubled, and cooking gas became three times more expensive compared to February. Gas was no longer available through official channels, making it nearly impossible for families to prepare food and forcing many bakeries and community kitchens to shut down (OCHA, 2025i). As gas remained unavailable, families were forced to use unsafe and unhealthy cooking methods, including burning waste materials. In northern Gaza, the share of households relying on burning waste for fuel rose from 50% in April to 66% in May and in the south, it increased from 49% to 51% in the same period. WFP also warned that diets had become critically imbalanced and lacking in nutrients, with over 90% of families facing severe financial hardship and two-thirds unable to afford basic necessities. Just one percent of families used cooking gas in April, and none did in May, marking the total end of household energy access (OCHA, 2025f).

c. Aid access and distribution challenges

From 2 March to 18 May 2025, no humanitarian aid entered Gaza due to an Israeli-imposed siege, resulting in the complete suspension of food, fuel, and medical deliveries. UNRWA described this 11-week blockade as a total halt in humanitarian operations, with critical supplies running out and aid distributions forced to stop even before the ceasefire officially broke down on 18 March. On 18 May, Israel announced it would allow limited aid entry, but by that point the humanitarian situation had already deteriorated beyond immediate recovery (UNRWA, 2025e).

On 27 May 2025, the U.S. Gaza Humanitarian Foundation (GHF) began food distributions at two militarized sites in Rafah and Deir al Balah, under Israeli security oversight and without UN agency support. Thousands of Palestinians, desperate for food, walked long distances to reach them, but the sites quickly became scenes of violence. Between 27 May and 5 June, at least 82 people were killed and over 500 injured while trying to access aid, according to the UN Human Rights Office. MSF teams treated mass casualty influxes and reported that patients had been shot from all directions, with hospitals so overflowed that medical staff donated blood. UN officials condemned the situation, calling for an independent investigation and holding perpetrators accountable. UNRWA Commissioner-General Philippe Lazzarini described the conditions as a "death trap" and "humiliating system" for civilians attempting to survive. They described the distribution system as dangerous and inconsistent with international humanitarian law. The UN reiterated that Israel is legally obliged to ensure full cooperation with the UN in delivering aid across Gaza (OCHA, 2025f).

The ICRC pointed out that even 100 aid trucks per day would be insufficient. Following a field visit, the ICRC described the destruction and suffering in Gaza as "beyond catastrophic," citing severe access restrictions and constant hostilities that endanger both patients and medical staff. It called for the immediate full restoration of humanitarian access. The ICRC noted that they had the capacity to help and that existing humanitarian systems in place were efficient when they could function without restrictions (ICRC, 2025d).

2.2.2. Logistics under siege and barriers to aid delivery in Gaza

In this next section, we move beyond the chronological review to analyze the broader humanitarian operating environment in Gaza and the logistical systems that supported (or failed to support) aid delivery under siege. We focus on structural constraints, coordination breakdowns, and systemic challenges that shaped logistics throughout the conflict. We aim to extract general insights from our sources rather than cite isolated events.

The delivery of humanitarian aid to Gaza between October 2023 and June 2025 was heavily restricted and consisted of temporary solutions and persistent insecurity. It showed the limitations of humanitarian logistics under strict siege. Throughout the conflict, the volume of humanitarian convoys remained way below operational needs. Even at its peak, aid delivery never came close to the pre-war daily average of 500 trucks, and at many points fell below 20%. Only a fraction of planned convoys reached their destinations in 2025, more than half were blocked or aborted due to denial of passage or lack of coordination agreements (OCHA, 2025j). Fuel, essential to transport, food systems, and healthcare, was banned for weeks and later rationed in quantities far below actual needs. These restrictions systematically reduced the functionality of all humanitarian services. Attempts to diversify delivery channels revealed additional constraints. No air operations were conducted, as Israel retained full control over airspace.

Temporary fixes and pauses pointed out structural deficiencies rather than actually solving supply chain issues. Aid deliveries were reactive and disconnected from stable logistics planning. The result was not just a shortage of goods but the collapse of aid delivery systems.

2.2.2.1. Humanitarian access, blockades and IDP

Humanitarian access in Gaza was shaped less by logistical capacity than by political and military control. From the first days of the war, Israeli authorities imposed a blockade that tightly regulated what could enter, when, and through which channels. Rafah and Kerem Shalom, the two main access points, were repeatedly closed or subject to unpredictable restrictions. Rafah, primarily designed for pedestrian traffic, lacked the infrastructure to handle large truck convoys. Even when open, multilayered inspections and authorization procedures slowed operations, limiting the volume and frequency of aid delivery.

Despite occasional ceasefires and diplomatic interventions, Israel retained full authority over all movements. Within Gaza, exclusion zones and buffer areas divided the territory, especially isolating the north. By mid-2025, over 80% of the Strip was classified as militarized or under evacuation orders (see appendix B6), making large areas inaccessible. (OCHA, 2025j). Access to Gaza was not simply constrained by war, but actively controlled through political and military mechanisms. This case illustrates that access in high-intensity conflict is not only a matter of logistics, but of negotiation, power, and strategic calculation.

By the end of June 2025, over 1.9 million people (+90% of Gaza's population) had been displaced, many multiple times with some fleeing more than ten times (UNRWA, 2025g). The logistical burden of shelter provision was immense. Just 100 households required two full trucks of materials, showing the complex logistics behind minimal shelter assistance. (OCHA, 2025h). Locations initially declared safe were later targeted, forcing further movement. This constant

movement created extreme instability for both civilians and humanitarian actors. Aid operations were repeatedly disrupted, the needs of displaced populations changed rapidly, and no area offered long-term security. Conditions in displacement sites were often catastrophic. UNRWA shelters became overcrowded, hosting thousands of people but lacking minimal infrastructure. When capacity ran out, families sought refuge in damaged buildings, open streets, or informal camps without protection or access to services. Israeli restrictions on tents and construction materials since early 2024 blocked any expansion of shelter capacity. Israeli restrictions on tents and materials blocked shelter expansion, leaving more than a million people without protection by mid-2025 (OCHA, 2025h).

Access restrictions meant that even populations in greatest need remained cut off. Even during ceasefires, aid deliveries were largely confined to southern corridors, while many areas in the north were unreachable. For instance, nearly 60% of planned missions in June 2025 were either obstructed by Israeli authorities or cancelled by organizers for operational and safety reasons (OCHA, 2025h). These constraints forced agencies to operate far below capacity and prevented consistent distribution.

Repeated strikes on shelters and tent camps demonstrated that even clearly marked civilian sites could be attacked without warning. As UNRWA described, Gaza became a “death trap” where no place remained safe. Forced displacement, with access restrictions and the absence of safe shelter, turned mobility into a source of additional vulnerability rather than safety. For humanitarian actors, this created a volatile operating environment where populations could not be consistently located, reached, or protected. In this setting, humanitarian logistics were obstructed and also strongly constrained by military and political decisions that were placed above humanitarian needs.

2.2.2.2. Infrastructure destruction

The targeted destruction of Gaza’s infrastructure heavily disrupted all phases of humanitarian aid delivery. It complexified both the supply of aid and the local capacity to receive, manage, or distribute it effectively (WHO, 2025a).

From the first phase of the war, Israel’s airstrikes destroyed access routes and cut off key transport corridors like the Salah ad-Din road (from Rafah crossing in the south to Erez crossing in the north), isolating populations and slowing convoys. Simultaneously, a complete fuel ban on 11 October 2023 shut down Gaza’s only power plant. Essential service infrastructure was left to rely on backup generators, which were quickly constrained by fuel scarcity (OCHA, 2023u). Despite the later authorization of limited fuel for UN use, the quantities remained far below operational needs. By mid 2025, humanitarian vehicles could only operate along Israeli-designated corridors and faced unpredictable checkpoint delays and route changes (OCHA, 2025g).

The healthcare system could not work because of sustained attacks and supply cuts. By late 2024, half of Gaza’s hospitals had stopped functioning, and by June 2025, none remained operational in North Gaza or Rafah (WHO, 2025a). Repeated strikes on ambulances, clinics, and supply chains made emergency care impossible. Similarly, water and sanitation services disintegrated after the shutdown of desalination plants and wells in November 2023, pushing

over a million people below minimum water access standards (WeWorld, 2023; Human Rights Watch, 2024).

Gaza's food systems collapsed early in the conflict, removing both local supply and centralized preparation as logistical options. Bakeries, once central to daily caloric intake, closed rapidly due to fuel shortages and infrastructure damage. Local food production also stopped as farmland, wells, and greenhouses were destroyed, and fishing was restricted (FAO, 2025b; OCHA, 2025j). Humanitarian actors attempted several initiatives to redress the collapse of food systems, but most were short-lived. For example, temporary UN support allowed five bakeries to reopen briefly in May 2025, but they closed again after just three days due to insecurity, including crowd violence and desperation driven by hunger (OCHA, 2025f). This breakdown forced humanitarian actors to shift toward distributing ready-to-eat rations, as flour-based or cooked meal solutions became unviable.

Storage was equally precarious: warehouses were looted or bombed, and aid was often stripped before reaching distribution points. As of February 2025, 70 out of 79 warehouses were operational but it accounts only 49% of Gaza's total warehouse capacity (76,142 m² out of 155,782 m²). The remaining 51% was rendered non-operational due to infrastructure damage, though 6 out of the 9 sites were deemed potentially repairable. The infographic of Gaza humanitarian storage capacity of the logistics cluster of February 2025 shows that while Deir al Balah retained the largest share of operational storage (25,532 m²), it also had 15,000 m² of destroyed capacity. Rafah had the highest concentration of non-operational storage (62,240 m²), reducing its logistical usefulness despite its proximity to the border. Operational warehouses were more evenly spread in Gaza City (14,170 m²), Khan Younis (23,170 m²), and North Gaza (11,280 m²) but insecurity and limited willingness to share space further constrained their utility. In total, 20 organizations were operating 70 active warehouses, while nine sites were unusable (see Appendix B7). The situation reflects not just physical destruction but also a fractured and overloaded logistics environment.

As previously noted, over 85% of Gaza's schools were damaged or destroyed by mid-2024. From a logistical standpoint, this loss extended beyond education. Many schools served as shelters, registration points, and food distribution hubs. Their destruction removed not only education services but also critical shelter space and logistical anchors needed to plan, store, and coordinate delivery efforts.

By mid-2025, Gaza's essential infrastructures were almost all destroyed. This destruction not only limited the entry and delivery of aid but made sustained humanitarian operations nearly impossible. Logistics could no longer rely on fixed assets or planned networks. Instead, agencies operated without coordination and in constant insecurity defined by destruction and deep resource scarcity.

2.2.2.3. Main operational actors

Humanitarian operations in Gaza were coordinated by a mix of UN agencies, international NGOs, and local actors. These organizations carried out lifesaving interventions under extreme conditions and escalating military risk.

The United Nations Office for the Coordination of Humanitarian Affairs coordinated the overall humanitarian response in Gaza, serving as the central hub for information, cluster coordination, and access facilitation. Its role was essential in harmonizing operations across UN agencies, NGOs, and local actors under extraordinary constraints and constant changes on the ground.

The United Nations Relief and Works Agency for Palestine Refugees in the Near East was the central actor, managing over 150 shelter sites and conducting nearly 9 million medical consultations by mid-2025 (UNRWA, 2025g). UNRWA is Gaza's largest humanitarian employer. By April 2025, it had lost over 290 staff and seen most of its infrastructure damaged or destroyed (UNRWA, 2025h). UNRWA took care of garbage collection, water trucking, food parcel distribution, and hygiene campaigns, often in collaboration with WFP and UNICEF. As noted earlier, fuel shortages and other blockades severely restricted its operations and by early 2024 they were urgently needing funding to keep operating under such conditions (Reuters, 2024b).

The International Committee of the Red Cross played a key neutral role, especially during ceasefires, advocating for access and civilian protection under IHL. The ICRC facilitated the release of 148 hostages and 1,709 Palestinian detainees and processed over 15,000 family tracing requests. Its medical operations included more than 3,500 surgeries at the European Gaza Hospital and over 2,500 at the Red Cross Field Hospital in Rafah. It also supplied 1,877 metric tons of medical materials and provided thousands of physical rehabilitation sessions across Gaza. In support of displaced civilians, the ICRC distributed essential household items to nearly 2 million people and supported the production of 37 million loaves of bread across 314 communal ovens. It maintained water and sanitation access for over 1.5 million people thanks to repairs, desalination units, and equipment delivery. It provided emergency energy support to hospitals and water networks (ICRC, 2025c).

Médecins Sans Frontières adapted to shifting frontlines by relocating south and delivering trauma, burn, maternity, and pediatric care and supporting hospitals capacities with field hospitals. Between October 2023 and June 2025, MSF teams in Gaza provided over 1 million outpatient consultations, 23,000 surgeries, 13,000 deliveries, and nearly 56,000 mental health consultations. These operations continued despite frequent attacks on and around MSF sites and multiple staff fatalities (MSF, 2024; MSF, 2025c).

The Palestine Red Crescent Society (PRCS) functioned as Gaza's primary ambulance and emergency responder. Its Al-Quds Hospital was forced to shut on 12 November 2023, leaving thousands of sheltering civilians without care (Al Jazeera, 2023c). Its operations suffered heavily from lack of fuel and attacks. By May 2025, only one-third of its ambulance fleet remained operational. Despite these constraints, PRCS maintained trauma care and mobile clinics in the south. Its gasoline-powered ambulances had stopped, but some continued to run on solar power provided by the United Nations (Reuters, 2025).

The World Health Organization led the Health Cluster and coordinated trauma kit deliveries, fuel support for hospitals, and the deployment of Emergency Medical Teams. Less than half of its hospitals remained partially functional by mid-2025 (WHO, 2025a). WHO also helped coordinate disease surveillance and malnutrition response.

The World Food Programme organized emergency food assistance and led the logistics cluster. WFP also led the Food Security Cluster and partnered with UNRWA on bread distribution to shelter populations. As the crisis worsened in 2025, most convoys were intercepted before reaching distribution points, and less than 30% of food needs were met between May and June. Despite this, WFP and its partners maintained communal kitchens, serving up to 188,000 meals per day in June 2025 via 42 kitchens across Gaza (WFP, 2025c).

UNICEF co-led the WASH, Nutrition, Education and Child Protection clusters, focusing on the most vulnerable children. It provided desalination units, hygiene kits, vaccines, and therapeutic food. UNICEF and partners (Education cluster) supported the reopening of over 200 Temporary Learning Spaces by April 2025, reaching around 117,000 children. However, new displacement orders disrupted access for over 36,000 learners, highlighting the fragility of education support under ongoing conflict conditions. By April 2025, acute malnutrition rates in children under 5 had worsened again after temporary improvements, with projections reaching crisis or emergency levels across all governorates. Over 92,000 children received nutritional supplements, but supply shortages and access constraints limited further intervention from the Nutrition cluster led by UNICEF (UNICEF, 2025e).

The Food and Agriculture Organization played a secondary role, co-leading the Food Security Cluster with WFP and monitoring agricultural damage. It distributed emergency fodder and seeds to farmers and drafted recovery plans for food systems restoration post-conflict (FAO, 2025a,b).

The United Nations Population Fund focused on safeguarding sexual and reproductive health (SRH), preventing gender-based violence (GBV), and supporting youth in Gaza. UNFPA reached thousands of people per month across Palestine with SRH, GBV, and youth services, including safe deliveries, psychosocial support, cash assistance and dignity kits. It supported women and girls' safe spaces and distributed essential medical equipment, postpartum kits, and high-performance tents to take some loads off from strained health facilities (UNFPA, 2025).

Numerous NGOs contributed essential services across sectors, though nearly all were eventually forced to scale down or suspend operations due to insecurity. By spring 2025, 95% of humanitarian NGOs had cut down activities. Organizations such as NRC, Oxfam, Save the Children, Islamic Relief, and WeWorld provided shelter kits, WASH support, education, and protection services, especially for women and children (NRC, 2025b; ChildFund Alliance, 2024a,b).

Despite mass casualties, restricted access, and diminishing resources, these actors among others were the motor of the humanitarian response in Gaza. They provided essential relief under some of the most dangerous conditions for aid work in modern history.

2.2.2.4. Security threats to humanitarian workers

Between October 2023 and June 2025, Gaza became one of the most dangerous environments for humanitarian personnel, with over 400 aid workers killed, including at least 317 from UNRWA and 30 from the Palestine Red Crescent Society. Most were local staff like teachers, medics, engineers that were killed at home, in shelters, or while on duty (Amnesty International,

2025a; UNRWA, 2025f; International Federation of Red Cross and Red Crescent Societies, 2025). The intensity of the bombardment and the blockade from the earliest weeks of the war severely compromised humanitarian conditions turning the crisis into a catastrophe in a month (WeWorld, 2023). Even with brief fluctuations, there was never a consistent or trusted protection framework for aid workers. Both operational capability and public trust in the humanitarian response were undermined by the absence of deconfliction procedures and the growing number of casualties.

Medical infrastructure and staff were frequently attacked and even targeted. As of June 2025, WHO had verified 735 attacks on health infrastructure. These included 609 attacks on health facilities, 188 on health transport, and resulted in 917 fatalities, 1,000 injuries, and 300 health workers detained. Despite sharing GPS coordinates with Israeli forces, marked facilities, shelters, and ambulances continued to be hit (Human Rights Watch, 2024; WHO, 2025a).

2023 became the deadliest year for humanitarian workers globally, reflecting a sharp deterioration in humanitarian space worldwide. In just three months, from October to December 2023, Gaza accounted for more than half of global aid workers fatalities of that record year (OCHA, 2024i). This sinister record did not stand for long, as 2024 saw an even higher toll, with 344 aid worker deaths, surpassing the already devastating figure of 280 in 2023. (Walker, 2025). In June 2025, following fatal incidents at food distribution points ruled by Israel (through the GHF), both the UN Secretary-General and the Emergency Relief Coordinator called for immediate investigations and an end to attacks on aid seekers and providers (Al Jazeera, 2025b; OCHA, 2025f).

These losses significantly weakened aid operations and its credibility. With over a third of agencies reporting their facilities were hit and staff injured or killed, many scaled back activities or withdrew altogether (OCHA, 2025j). Many local staff faced the dual burden of family displacement and professional duty. In such a context, affected populations could no longer rely on aid as a stable or protected lifeline, and workers operated without the basic assurances that international humanitarian law is meant to provide. In April 2025, twelve NGOs, including NRC, publicly warned that Gaza's humanitarian system was at risk of total breakdown (NRC, 2025b). The humanitarian system was pushed to its limits, operating reactively and unable to plan beyond immediate lifesaving needs.

2.2.2.5. Coordination structures and failures

The humanitarian response in Gaza relied on the activation of the UN Cluster System and coordination between international agencies, local authorities, and donor states. However, these structures faced repeated breakdowns due to security risks and political interference.

The UN Cluster System was activated after 7 October to manage the scale of needs. Nine clusters operated in Gaza, each co-led by a UN agency and a local partner. For instance, WFP is the agency in charge of the logistics cluster. These clusters coordinated needs assessments, mapped service gaps, and attempted to avoid duplication. Due to insecurity, most cluster teams coordinated remotely from Amman, Jerusalem, or Cairo. These cities also served as key hubs and information centers for logistics and planning from the log cluster. Main international humanitarian corridors originate or pass through these cities, highlighting their pivotal role for international actors (see Appendix B8).

OCHA led the overall response through the Inter-Cluster Coordination Group, which worked with Israeli, Egyptian, and Palestinian authorities and issued regular updates. Despite this structure, access remained limited with aid delivery frequently obstructed by insecurity and political constraints. Bombardments, blackouts, and mass displacement disrupted operations repeatedly. Some clusters such as Education and Shelter were almost entirely frozen at some points, with no educational activities in northern Gaza and shelter partners unable to deliver assistance due to insecurity, destruction, and access constraints (OCHA, 2024c,h). Core clusters like Health, WASH, and Food Security operated under extreme pressure, particularly in response to epidemics and malnutrition.

Coordination with local authorities inside Gaza followed sensitive protocols. Most UN agencies engaged with Hamas-run ministries through technical channels or intermediaries to comply with donor restrictions. For instance, agencies like WHO or UNRWA coordinated health logistics with the Gaza Ministry of Health and relied on them for data and service delivery (WHO, 2025a; UNRWA, 2025f). Community leaders and civil defense volunteers also supported coordination at shelter and camp level, especially in the south. At the same time, tensions between UN agencies and the Israeli government further complicated coordination. UNRWA reported that despite repeated requests, Israel had not shared evidence to support serious accusations made against the agency, undermining trust and limiting cooperation (UNRWA, 2025a).

In the first phase of this conflict, early cross-border coordination was marked by a complete blockade. The Tripartite mechanism between Israel, Egypt, and the UN allowed limited aid entry but gave Israel full control over approvals (Arab News, 2023). Many items were blocked, including fuel and water pipes, and aid was confined to southern Gaza, forcing agencies to adjust geographically.

One of the most serious issues was the failure of the humanitarian deconfliction system. Organizations shared the GPS coordinates of shelters, hospitals, and convoys with Israeli authorities through OCHA or ICRC, yet many of these sites were still hit. MSF stopped trusting the system after its facilities were struck despite coordination (MSF, 2024). By early 2024, humanitarian workers had largely lost faith in the process, as even clearly marked sites continued to be targeted (Refugees International, 2024a).

By late October 2023, damage to telecommunications infrastructure and severe fuel shortages had crippled connectivity across Gaza. This breakdown in communications disrupted information flow, delayed medical evacuations, and undermined coordination at a critical moment (OCHA, 2023q). Humanitarian actors struggled to track displacement in real time due to movement restrictions, disrupted communications, and repeated relocation of site committees, which complicated service delivery and targeting efforts (OCHA, 2025k).

As we have seen in the last phase of our study period, the United States and Israel launched a parallel aid delivery system through the Gaza Humanitarian Foundation in May, operating outside the UN coordination framework. It is managed by private U.S. logistics and security firms and under Israeli military oversight. The initiative was broadly condemned by humanitarian actors. Amnesty International described the GHF as “illegitimate and inhumane

under international law,” warning that it violated core humanitarian principles and politicized aid (Amnesty International, 2025b). The UN and other humanitarian groups refused to cooperate, criticizing the plan for putting the military in charge of aid. They said the plan would divide the response and put lives at risk. These concerns were quickly validated. Within days of opening, GHF sites in Rafah saw deadly shootings and disorderly crowds, leading to a temporary suspension of operations (Al-Mughrabi & Cornwell, 2025). This showcased the dangers of bypassing established coordination systems and disjointing aid delivery. It reinforced the need for impartial and centralized coordination.

Even when convoys were approved, they were often delayed or attacked. By June 2025, northern Gaza was still largely out of reach. Coordination structures on paper did not ensure operational safety or equitable distribution, resulting in duplicated aid efforts, especially in southern areas, where some locations received overlapping services and supplies while others were left with nothing.

2.2.2.6. Funding and resource management

Despite significant promises of aid for Gaza, there were major logistical and political obstacles to the actual use and delivery of resources. This assistance frequently failed to reach those in need due to border closures, delays in money transfers, and restrictions on the entry of goods into Gaza.

One of the biggest contributors was the United States, which committed \$100 million in emergency aid for the 1 million IDPs in October 2023 (Murray & Fischler, 2023). A further \$300 million aid package for food assistance, healthcare, and nutrition was later provided by the United States to Gaza and the West Bank in October 2024 (Psaedakis, 2024). An additional \$135 million was then allocated to address water and health needs (Ching, 2024). However, these were subject to end-use monitoring and delays. For instance, in the beginning of 2024, funding to UNRWA was frozen due to allegations that some of its staff were linked to Hamas, leading to a major budget crisis and the suspension of essential services (Reuters, 2024b; Pamuk & Lewis, 2024).

The European Commission initially tripled its Gaza allocation from €25 million to €75 million in October 2023 and raised the total to over €100 million by the end of the year (Lynch, 2023; Bilquin & Kowald, 2023). Gulf countries also played a key role. Saudi Arabia, the UAE, and Qatar offered a combined \$100 million in October 2023 (Cengiz & Akkas, 2023), with Saudi Arabia contributing an additional \$40 million to UNRWA in March 2024 (Reuters, 2024c). These states also mobilized logistics and humanitarian supplies. Qatar and the UAE dispatched planes loaded with food and medical aid to Egypt’s El-Arish airport for onward transfer to Rafah, while Saudi Arabia provided continued support through King Salman Humanitarian Aid and Relief Centre (KSRelief) and private donations. However, the Israeli blockade and repeated airstrikes on the Rafah crossing severely restricted the physical delivery of this assistance, limiting its operational impact (Proctor, 2023).

UN appeals continued to receive far too little funding in spite of these pledges. Long into 2025, both the \$1.2 billion Humanitarian Response Plan for 2024 (UN, 2024a) and the \$294 million Flash Appeal in October 2023 (OCHA, 2023g) remained underfunded. Just 12% of the \$648

million the Health Cluster had requested for its "2025 Operational Response and Early Recovery Plan" had been granted by June (WHO, 2025a). An estimated 1.1 million people required emergency shelter and household supplies at the same time, but the Shelter and WASH response had significant gaps due to a lack of resources (OCHA, 2025j).

Even when funding was available, using it effectively was extremely difficult due to access and coordination problems. Border restrictions and fuel bans delayed or blocked the delivery of supplies, leaving warehouses in Egypt and Jordan full but unable to access hospitals and water stations in Gaza that lacked essentials (OCHA & Partner Organizations, 2025b). Many donations were earmarked for specific uses, limiting flexibility. Individual countries sending aid on their own, without coordination with the others, also led to duplication. Some medical items were oversupplied, while other urgent needs, like protection services or early recovery efforts, remained poorly supported. To improve transparency and prevent diversion, the UN and humanitarian partners introduced a tracking system in which each aid consignment is assigned a unique barcode or QR code, verified at multiple checkpoints. However, these efforts remain constrained by operational risks, including blackouts, looting, and limited connectivity (OCHA, 2025l).

In short, a combination of insufficient funding and challenging resource management due to heavy restrictions on the field, made it extremely difficult to sustain effective humanitarian operations during the conflict.

2.2.2.7. Diplomatic and media influence

International diplomacy and media visibility significantly restricted humanitarian access in Gaza. Operational limitations dominated the field, but political negotiations and the publicity surrounding them often made or prevented moments of relief.

The United States, Israel's main ally and biggest humanitarian donor, was instrumental in enabling humanitarian access in Gaza. The first aid convoys were able to enter in October 2023 after the Rafah crossing was reopened thanks to diplomatic pressure from the United States (Proctor, 2023). Later, in November, the U.S. also pushed for the humanitarian pause that allowed a temporary increase in aid deliveries during this period (OCHA, 2023ae). According to official statements, the U.S. applied continued pressure to extend this pause and support humanitarian access (U.S. Embassy Tbilisi, 2023). In 2024, the United States' military assistance to Israel was dependent on meeting certain humanitarian goals like permitting sufficient aid to enter and protect civilians (Refugees International, 2024c; Nichols & Rose, 2024). The Trump administration also played a central role in the negotiation of the January 2025 ceasefire (International Crisis Group, 2025a).

At the same time, the United States frequently used its veto power at the UN to protect Israel from outside pressure. The United States has obstructed 46 resolutions that were detrimental to Israel since its establishment in the UN Security Council following World War II. It vetoed three resolutions between 2023 and 2024 that aimed to end the siege and to obtain a complete ceasefire (Le Monde, 2024). The most recent example of this was the Trump administration's veto of a resolution calling for an immediate end to hostilities and full humanitarian access on June 4, 2025. With 14 votes in favor and only the United States against, the resolution was

rejected (France 24, 2025). The position of the U.S. often plays an important part in the humanitarian outcomes in Gaza. Sometimes it helps improve conditions, while other times it protects its allies and blocks efforts to restore humanitarian access.

Egypt provided helpful assistance in managing aid deliveries through the Egyptian Red Crescent, despite its refusal to open its border to large refugee flows and its push to keep displaced Palestinians inside Gaza. Egypt also coordinated cross-border flows and mediated truce arrangements while publicly denouncing Israeli strikes that threatened convoy safety (Arab News, 2023). During the 2025 ceasefire, the log cluster facilitated the entry of at least 863 trucks in Gaza. A limited increase that remained well below operational needs but still significantly better than before. This highlights that political shifts are key to open logistical windows (OCHA, 2025i).

The humanitarian crisis received huge attention from international media coverage. Public sentiment and donor sympathy were strongly influenced by the widespread circulation of horrifying images and testimonies of starvation, mass displacement, and bombed hospitals. Numerous humanitarian organizations issued urgent reports and appeals, often accompanied by graphic visual material, which were widely relayed by international media across various platforms and formats. Prominent voices contributed to the crisis's awareness-raising. For example, the media extensively reported on UN Secretary-General António Guterres' claim that Israel was only permitting "a teaspoon of aid when a flood of assistance is required" (Nichols, 2025b). It demonstrated the importance of public figures and press coverage in creating international awareness and drawing attention where it is required.

On the other hand, media narratives also contributed to mistrust. In early 2024, unverified allegations that some UNRWA staff were involved in the 7 October attacks led to the suspension of U.S. and U.K. funding (Reuters, 2024a,b; Pamuk & Lewis, 2024). As a precaution, UNRWA immediately terminated the contracts of 12 staff members after Israeli officials first made these allegations informally. Additionally, it collaborated with a UN investigation that found little to no evidence in the majority of cases. Broader accusations of Hamas infiltration and aid diversion became popular despite repeated denials and no supporting proof. UNRWA stated that less than 1% of its staff had breached neutrality rules, mostly for minor issues like social media posts. Additionally, it denounced any abuse of its facilities and reaffirmed its robust oversight mechanisms. Still, the controversy had a lasting impact on donor confidence and exposed how easily humanitarian institutions can become targets of political pressure (UNRWA, 2025a).

Humanitarian agencies responded by increasing their media outreach and transparency, publishing public appeals and field updates daily or weekly to counter misinformation and maintain attention. These efforts kept donor and international diplomacy engagement alive.

2.2.2.8. Diplomatic and media influence

Between October 2023 and June 2025, humanitarian operations in Gaza were forced to adapt continuously to moving frontlines, siege conditions, and occasional ceasefires. As analyzed chronologically in the beginning of this case study, each stage of the war changed aid priorities and delivery methods. It started with basic life-saving support during the full blockade, and later turned to more localized, mobile, and even underground operations as access worsened

and displacement grew. By mid-2025, the aid system was barely functioning. Agencies had to improvise, work with local partners, and manage operations remotely just to keep basic services going. (MSF, 2025a,d; UNRWA, 2025g; UNRWA, n.d., *test table*)

Several key trends defined how aid delivery evolved. First, operations moved from centralized systems to more local setups, especially in southern Gaza. Second, as needs grew more urgent, agencies focused on essentials like trauma care, maternal health, and malnutrition. Third, constant shortages of fuel, staff, and coordination forced a shift toward only the most vital and scalable services. These changes show how the extreme conditions on the ground, including heavy combat, access restrictions and constant displacement, can quickly derail humanitarian plans. It exposes the limits of theory when faced with operational reality. In such unstable settings, organizations must adapt fast and rely on practical, often improvised, ways to keep helping people.

2.2.2.9. Technological and logistical innovations

The delivery of humanitarian aid in Gaza required urgent logistical innovation in response to extreme access restrictions and active hostilities. Aid agencies combined traditional humanitarian approaches with unconventional military logistics, new technologies and updated coordination frameworks. Some of these innovations improved delivery for a time, but most were limited by security risks and wider coordination failures.

One of the most notable innovations was the Joint Logistics Over-the-Shore (JLOTS) operation led by the United States military, also known as the “Trident Pier.” Built in May 2024 to bypass land border restrictions, the floating dock delivered about 9,000 metric tons of aid before being dismantled three weeks later due to weather damage, looting, and insecurity (Harake, 2024; Reuters, 2024d). While the concept of sea-based aid delivery represented a creative logistical workaround, its failure highlighted the limits of technical solutions in insecure and politically contested environments.

In response to ongoing fuel shortages and electricity blackouts, humanitarian organizations turned to renewable energy solutions. During the 2025 polio vaccination campaigns, UNICEF and WHO deployed 20 solar-powered refrigerators across Gaza to maintain the cold chain, as conventional systems had collapsed. These units were critical for ensuring vaccine storage in displacement areas and primary health centers where fuel was no longer available (Habib, 2025). In parallel, UNRWA began installing solar-powered water desalination units at its schools, many of which also serve as emergency shelters. These systems provided safe drinking water on-site while reducing dependence on trucked water, cutting costs, and ensuring continued access despite Gaza’s frequent power cuts (UNRWA USA, n.d.).

However, the scale of these systems remained small compared to the population needs. As previously discussed when we talked about the fundings, WFP and UNICEF also used QR or barcode tracking and digital registration for aid registration, ensuring better targeting and accountability (OCHA, 2025l). These tools helped reduce duplication and better manage scarce resources but were sometimes inoperative due to connectivity failures during Israeli bombardments.

In response to the blockade and chronic delays at border crossings, UN agencies established prepositioned aid hubs near Gaza's borders to enable faster delivery once access was granted. The town of El-Arish in Egypt became a key logistics base (see appendix B8), with hundreds of aid trucks loaded and waiting for clearance (OCHA, 2025k). By May 2025, United Nations agencies had established extensive remote supply chains with large stockpiles of food and essential supplies strategically positioned for rapid deployment. WFP had over 116,000 metric tons of food assistance prepositioned in regional aid corridors (WFP, 2025b). In total, more than 171,000 metric tons of food had been assembled across the region, enough to support Gaza's entire population of 2.1 million for three to four months (OCHA, 2025m). According to OCHA, this was part of a coordinated UN plan involving over 160,000 pallets (equivalent to approximately 8,900 trucks) of humanitarian aid, ready for immediate delivery as soon as access was granted (OCHA, 2025l). However, these efforts were frequently stalled by border bottlenecks, screening delays, and unpredictable authorizations, leaving thousands of pallets stranded for weeks, particularly in Egypt (NRC, 2025b).

On the ground, local actors became key to navigating blocked routes and constant displacement. PRCS, MSF, and community groups delivered aid by foot, cart, or motorcycle when vehicles couldn't enter (Al Jazeera, 2025a). In areas where formal hospitals were damaged or unsafe, MSF and partner organizations set up field hospitals and mobile surgical units to continue lifesaving care. Some surgeries were conducted in improvised settings such as hallways and makeshift structures near hospital compounds (MSF, 2024; Palestine Red Crescent Society, 2025). These low-tech, decentralized methods proved crucial to reaching cut-off populations and adapting to fast-changing conditions.

Despite creative adaptations, no innovation could replace the fundamental need for safe and consistent access. Even the most advanced logistical tools could not overcome the absence of safe humanitarian corridors and predictable access clearances. Most of these innovations were quick fixes, created to work around restrictions and reach a part of the needs. While they helped sustain some operations under extreme constraints, they remained limited in scale and unfit to meet the massive humanitarian needs across Gaza. In the end, they helped in the short term but they were not sustainable solutions.

2.2.2.10. Future of the conflict

As of mid-2025, the humanitarian situation in Gaza remains alarming. Despite brief ceasefires, conditions on the ground continue to deteriorate due to persistent insecurity, infrastructure damage, and diplomatic inefficiency. OCHA and other agencies warn that mass displacement, food insecurity, and public health emergencies are likely to persist into 2026 unless access and safety conditions improve substantially.

Humanitarian access remains tied to political decisions. Despite international pressure, Israel continues to restrict entry points and limit aid to southern areas of Gaza. The absence of deconfliction protocols, ongoing denial of convoy permissions, and fuel import bans show no indication of change. Without a lasting ceasefire and clear coordination between all actors, the operating environment is expected to remain dismantled.

Reconstruction faces similar barriers. Approximately 290,820 housing units, or 62% of all homes in Gaza, had been damaged or destroyed by March 2024. Of these, 76% were fully destroyed and 24% partially damaged, underscoring the scale of reconstruction needed (World Bank, European Union, & United Nations, 2024). Yet almost no rebuilding has occurred. The blockade on construction materials and the lack of civil infrastructure in Gaza, prevents reconstruction even where funding exists. A meaningful reconstruction process depends not only on access to materials, but also on a clear political agreement about who will manage and oversee the rebuilding. So far, neither condition has been met.

Humanitarian agencies continue to warn of prolonged famine and worsening displacement in Gaza. By May 2025, the entire population faced food insecurity, with the IPC projecting that famine risk will persist through at least September, especially in northern areas. If access does not improve, over one million people could remain in Emergency (Phase 4) and up to 495,000 in Catastrophe (Phase 5). Malnutrition is expected to rise sharply, with 71,000 children under five at risk, including 14,100 in severe condition (IPC, 2025). Sustained aid access is primordial to prevent mass starvation and irreversible health outcomes, particularly for children. At the same time, over 1.9 million people remain displaced, with no indication that this number will decline soon. In the absence of safe corridors and given the destruction of homes, infrastructure, and basic services, return is not a viable option for most. Temporary shelters and encampments are likely to remain the default solution for the near future (UNRWA, 2025g).

Several changes in humanitarian operations are already visible. One is the localization of aid delivery. One key shift is the increased reliance on local responders. With many international agencies scaling down due to insecurity, actors like the Palestine Red Crescent and local municipalities have taken a more central role, supported remotely by UN agencies and NGOs. OCHA and NRC have noted that Gaza's humanitarian future may rely more on collaborating with these actors through flexible funding.

Building on this trend, another development is the expanded use of remote management from outside the borders. As direct access to Gaza remains heavily restricted, humanitarian agencies increasingly depend on logistics hubs in places like in Egypt and are exploring limited maritime or air routes. These alternatives are essential given the border controls and the unpredictable nature of land access. Looking forward, if local markets recover, multipurpose cash-based assistance (MPCA) could offer a more flexible way to meet needs. People would receive money from international funding to purchase goods directly, going around physical blockades. Combined with digital tracking systems that help monitor aid distribution and avoid duplication, already piloted by WFP and UNICEF, such tools could strengthen coordination and accountability in future operations.

Long-term humanitarian logistics in Gaza will depend on several key conditions outside of their scope such as political and diplomatic agreements on a lasting ceasefire and reconstruction plan, the reopening of access routes, and continued donor commitment to funding. Without significant structural changes, the response is likely to remain in emergency mode characterized by instability, remote management, low volume of aid and limited reach.

2.2.3. Conclusion

Delivering humanitarian aid during a major conflict with intense hostilities is a challenging task, as demonstrated by the war in Gaza from October 7 2023, to June 2025. Aid organizations faced significant obstacles in spite of substantial international support. Food and medicine were blocked, hospitals, schools, and water systems failed, and IDP numbers impossible to handle. Blockades and frequent attacks on civilian areas and aid workers were the primary causes, not a lack of aid or inadequate planning.

Humanitarian organizations had to make constant adjustments during the conflict. Many switched to smaller, more localized operations from larger, more coordinated aid deliveries. Some people used motorcycles or even carried supplies on foot when roads were blocked. Sea-based deliveries and digital tools provided some assistance, but without open and safe access, none of these solutions could be implemented on a large scale.

The boundaries of international humanitarian law have also been demonstrated by this conflict. When rules were disregarded or flagrantly broken, they frequently failed to protect civilians, hospitals, and aid workers. Legal safeguards by themselves are insufficient if they are not upheld or enforced in practice. For upcoming humanitarian operations in high-risk conflict areas, this is a major worry.

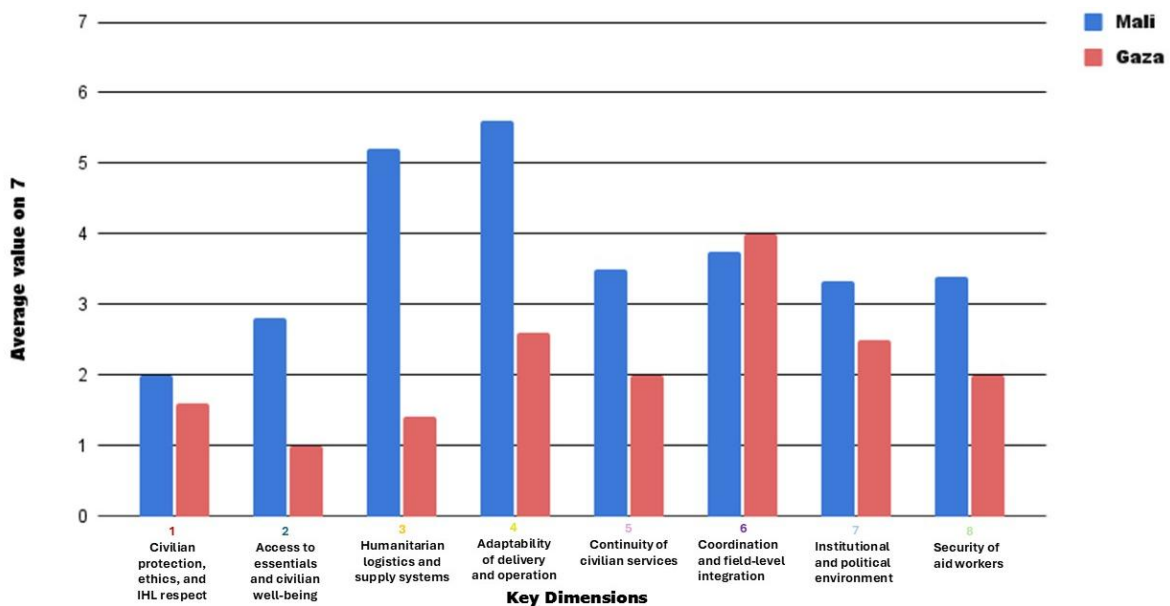
Lastly, this case study demonstrates how political choices and real-world difficulties are just as important to humanitarian assistance as technical and logistics planning. Aid will continue to be scarce and inconsistent in the absence of a clear ceasefire, operational access points, and a common reconstruction strategy. The situation in Gaza serves as a warning: even the most well-planned aid programs are useless if access is blocked by outside factors and the safety of aid workers is not ensured.

3. Comparative analysis: case studies

We conducted a comparative analysis of the Mali (2012-2015) and Gaza (2023-2025) case studies, using a set of analytical dimensions divided into specific criteria. This comparison was carried out using a rating scale ranging from 1 to 7, where 1 represents the least favorable outcome and 7 the most favorable. The results of the analysis are presented in tabular form with full details available in the Appendix C.

To enhance the clarity of the analysis and provide a more impactful visual representation, the comparative table was transformed into a bar chart and a radar chart.

Figure 4. Comparative analysis of humanitarian systems in Mali vs. Gaza



The bar chart compares the performance of humanitarian systems in Mali and Gaza across eight analytical dimensions by providing exact numerical values. Each dimension is assessed using 4-5 specific criteria, with scores assigned to both contexts. The scoring reflects our shared interpretation of the cases. These scores were determined by consensus decision making by a collaborative process aimed at reaching an agreement all members can support. In situations of disagreement, we engaged in discussion to reach a consensus grounded in evidence from the case studies. The average score for each dimension was then calculated, allowing for a comparative analysis that highlights key similarities and differences between Mali and Gaza.

1. Civilian protection, ethics, and IHL respect

In both Mali and Gaza, civilian protection has been severely compromised, though Gaza faces a more critical situation across most sub-criteria. Mali saw repression and violence under jihadist control, while in Gaza, over 55,000 were killed, including in designated safe zones. Forced child recruitment is active in Mali, whereas Gaza showed no widespread evidence, despite concerns over child military exposure. Gaza's infrastructure destruction was far greater, with over 90% non-functional by 2025. Both contexts involve major IHL violations, but Gaza scored lower due to systematic starvation tactics and attacks on neutral aid agencies.

2. Access to essentials and civilian well-being

Access to essentials is worse in Gaza across all indicators. In some areas, civilians have only 2/3 liters of clean water daily for all needs, far below survival standards, while Mali faced partial service collapse mainly in the north. Gaza's food insecurity is catastrophic, affecting the whole population with nearly 500,000 people in extreme famine conditions. Comparatively, Mali's situation is also severe, with many unmet needs due to access challenges and underfunding, but where aid operations could still function. Gaza's economy is non-functional under siege, while Mali retained limited market activity. Shelter conditions in Gaza are overcrowded and unsafe, whereas Mali, though under strain, benefited from host family support.

3. Humanitarian logistics and supply systems

Mali demonstrated significantly stronger logistical performance than Gaza, with an average score of 5.2/7 compared to Gaza's 1.4/7. Despite challenges such as road damage and seasonal disruptions, Mali maintained functional aid routes through international support and adaptive coordination. Fragile but operational infrastructure allowed for relatively consistent supply flows and effective prepositioning. In contrast, Gaza's logistics were severely impaired by blocked and unreliable crossings, damaged infrastructure, and minimal local storage capacity. The main problems in Gaza are the access constraints, paralyzing the humanitarian activities and leaving vast needs unmet. Delivery was often delayed or entirely halted, resulting in systemic failures and a near-total breakdown of logistical capabilities during the conflict.

4. Adaptability of delivery and operation

Mali also scored higher in adaptability than Gaza. In Mali, humanitarian actors flexibly rerouted aid, used diverse delivery methods and scaled operations efficiently following security improvements but remained limited during renewed violence. Innovation was more structured, combining technologies like GPS and cross-border supply systems to maintain access. Gaza, by contrast, had limited options for rerouting or scaling with last mile delivery often failing. Adaptation efforts were often reactive and temporary, constrained by siege conditions and a lack of reliable delivery modes. While some improvisation existed, it fell short of addressing operational challenges at scale. Gaza efforts relied more on improvisation than structured innovation, and no workaround could overcome the fundamental barrier of denied access.

5. Continuity of civilian services

Both Mali and Gaza faced major disruptions to civilian services but the situation was more critical in Gaza. In Mali, some health facilities were restored with NGO support despite limited equipment and infrastructure, while in Gaza, over half of the hospitals remained non-functional, and field units could not fully compensate. Education in Mali briefly resumed before closing again, whereas in Gaza it stopped entirely. Child protection was weak in both cases. Mali faced forced recruitment and abuse, while Gaza dealt with severe malnutrition and trauma. Psychosocial and legal support in Gaza was extremely limited, while Mali offered a more balanced mix, though coverage remained insufficient. Overall, Mali showed slightly better continuity of services than Gaza.

6. Coordination and field-level integration

Gaza showed slightly stronger coordination than Mali, largely due to the active role of local NGOs in service delivery. While coordination in Gaza weakened over time due to communication gaps, it still maintained more regular and structured data collection. This helped with assessing needs and sharing information, which was less consistent in Mali. In contrast, Mali demonstrated stronger agency coordination through clusters and shared tools but local NGOs had limited strategic influence. Coordination with authorities in Mali was centralized but inconsistent, while Gaza faced indirect and politically complex communication with its authorities. Overall, despite serious challenges, Gaza had a slight advantage in coordination and field-level implementation.

7. Institutional and political environment

Both Mali and Gaza faced delayed and insufficient humanitarian funding, but Gaza experienced more severe restrictions with funds often frozen. Diplomatic efforts had little positive impact in either context. In Mali, talks rarely translated into changes on the ground. In Gaza, occasional breakthroughs occurred but failed to secure lasting access. Foreign actors played a mixed role in both cases, though their presence in Mali supported de-escalation more effectively. In Gaza, the U.S. played a dual role, at times enabling aid and ceasefire talks but also vetoing them sometimes. Media coverage was stronger in Gaza, generating support despite also spreading misinformation. Mali received sporadic and focused coverage mainly on major security events, limiting its influence on humanitarian action. Mali's government was weak but somewhat supportive, while Gaza's authorities actively obstructed humanitarian operations through blockades and access restrictions. Although both had formal decision-making structures, implementation remained weak. Overall, Mali provided a slightly more supportive institutional environment, though still limited.

8. Security of aid workers

Aid workers faced serious risks in both contexts, but conditions were more dangerous in Gaza, where repeated deadly attacks targeted marked UN and health sites, resulting in the highest casualties among aid workers in a single conflict in UN history. In Mali, threats were also significant, especially in jihadist-controlled areas but direct attacks on staff were less frequent. Community trust was higher in Gaza, with more cooperation, while in Mali, perceptions were mixed and sometimes hostile. Movement in Gaza was extremely dangerous with no reliably safe zones, whereas in Mali, limited access was possible via air transport despite IED threats. Negotiation with armed groups was more feasible in Mali through direct dialogue, while in Gaza, access relied on intermediaries, making it less predictable. Deconfliction occasionally worked in Mali but was largely ineffective in Gaza, where even marked sites were repeatedly hit. Overall, Gaza was more restrictive and deadly for aid operations.

To finalize the comparative analysis, we chose to present the results using a radar chart (see Figure 5) and to calculate the overall score for each context using three different methods. Each score is based on the values attributed across the selected dimensions which reflect both logistics performance and the conditions shaping the humanitarian space.

The radar chart provides a clear and visual summary of the analysis which illustrate effectively the comparative performance of Mali and Gaza across all eight key dimensions. By overlaying the two profiles on a single chart, it allows for an immediate and intuitive understanding of the similarities and differences between the two contexts. This format highlights overall trends rather than isolated data points, making it easier to identify which dimensions are relatively stronger or weaker in each setting. The visual contrast between the two shapes helps emphasize gaps in capacity and response, while also revealing areas of relative convergence. As such, the radar chart supports a more holistic and accessible interpretation of complex, multidimensional data.

Figure 5. Comparative analysis of humanitarian dimension based on average scores: Mali vs. Gaza



Mali and Gaza's total scores under the equally weighted average are respectively 3.7/7 and 2.1/7. To test the robustness of this result, we calculated both a weighted average and a weighted median to compare the outcomes using different aggregation methods. Our weighting scheme reflects efforts to focus more on the dimension impacting directly the logistical aspects and capacity. Giving priority to dimensions with direct operational impact, such as adaptability, systems and coordination while still accounting for contextual factors like security and governance that impact it more indirectly but still plays an important role. Therefore, outcome and needs indicators like civilian protection and well-being and service continuity have been given slightly less weight in general for the purpose of our analysis.

We saw that the weighted average was slightly higher for both: 3.93/7 for Mali and 2.29/7 for Gaza. We see that the increase is somewhat proportional with in both cases less than a 10% increase. This can be explained by the fact that both contexts performed slightly better on criteria linked to direct, technical aspects of logistics. However, those efforts are clearly undermined by the contextual situation on the ground and the severity of humanitarian needs that can't be omitted. This highlights the gap between logistics efforts that exist but are not sufficient when challenged by the broader realities and constraints the other criteria reveal.

The weighted median shows again a proportional shift but this time downwards: 3.5/7 for Mali, 2/7 for Gaza. With this method, we observe a decrease of around 5% for both cases. This is likely due to the fact that the average score is pulled upward by high values in coordination, adaptability and the systems in place to carry logistics efforts, especially for the case of Mali.

However, these strengths are counterbalanced by very low scores in other dimensions, inducing a lower median.

The simple average, weighted average and weighted median all yield similar results with only 5 to 10% variation between Mali and Gaza. In addition, these variations remain proportional and evolve in the same direction across methods. This demonstrates a certain robustness of our analysis and our dimension selection and separation. Mali consistently scores higher across nearly all dimensions, often with a proportional gap of nearly 2:1, reflecting a stable relative advantage. This is clearly visible in the radar chart with Mali showing a broader and more stable coverage across dimensions. In contrast, Gaza's shape is more uneven, revealing deep weaknesses in key operational areas.

This visual contrast highlights not only the difference in intensity between the two contexts, but also the nature of the constraints they face. All these dimensions interact and influence each other, and we suggest that the heavier the conflict, the more critical the situation becomes in certain dimensions, reducing coverage and pulling down the overall score. On the other hand, when the conflict is somewhat less intense and allows for greater humanitarian space, this tends to create positive synergies across dimensions, resulting in a more even and consistent coverage.

The results also confirm that the different dimensions are not isolated. They interact and depend on each other. For example, having a good logistics system on the ground enables more adaptability. It's hard to be flexible when you have no infrastructure, vehicles, or supplies to work with in the first place. In the same way, weak political or institutional conditions can limit the effectiveness of coordination efforts, even if they exist on paper. Each dimension creates the conditions for the others to function. This interdependence is central to how humanitarian logistics operate in practice.

With this in mind, we chose not to assign extremely high or low weights to any one criterion. Some dimensions may have a more direct impact, but none can be fully effective without the others. It wouldn't make sense to treat any of them as irrelevant, nor to isolate one as clearly more important than the rest. The balance in our weighting reflects the logic that humanitarian logistics rely on multiple factors working together and removing one would distort the picture rather than sharpen it.

Both Mali and Gaza have experienced extreme humanitarian crises marked by broad civilian suffering, broken services and challenging operational conditions. Overall, Mali showed stronger performance in key areas like more functional humanitarian logistics with more flexible aid delivery, somewhat better continuity of basic services and a more supportive institutional environment. Aid workers also operated under comparatively safer conditions in Mali due to more feasible negotiations and movement options.

In contrast, Gaza presented one of the most extreme humanitarian situations ever seen. The scale of civilian harm, collapse of basic services, and denial of humanitarian access was far more severe. Gaza scored significantly lower across most indicators often because of the restrictions imposed by the context and siege conditions. These structural barriers left little space for logistics to function or for aid to reach those in need.

However, despite Gaza's far worse situation, it demonstrated a slight edge in coordination and field-level integration. This is largely due to local NGOs in Gaza playing a more active role in service delivery and maintaining better structured data collection, which helped sustain some operational cohesion under extremely restrictive and hostile conditions.

While Mali managed a more effective overall humanitarian response given the circumstances, Gaza's stronger local coordination efforts stand out as a relatively positive point in a crisis marked by extreme access denial, legal violations, and mass civilian suffering.

4. Field insights

4.1. Introduction

To complement the case studies with real world experience, this chapter presents operational insights based on six interviews with humanitarian professionals who have worked in conflict and emergency settings. While the primary goal was to collect detailed observations on logistics and supply chain management in challenging environments, the interviews also captured the experiences of those operating in the field. Beyond technical planning and delivery, the conversations showed how individuals deal with the constraints of violence, unpredictability, and limited access in their daily work. This human dimension was essential for understanding the realities of the sector, insights that written reports alone cannot transmit.

The interviewees include staff mainly from Médecins Sans Frontières, with some having past experience at the World Food Programme or the Canadian Red Cross and one person currently working for the UN security agency. Some respondents asked to remain anonymous and have been assigned a number that corresponds to their transcript in the appendices.

Securing relevant and qualified interviewees was challenging given the sensitivity of the topic. Despite efforts to diversify profiles, we were unable to include more staff from key organizations like the ICRC or WFP which coordinates the logistics cluster. Access to professionals with direct experience is limited, especially if they are on mission. Most contacts were made through MSF networks, resulting in a sample largely composed of MSF staff. This may introduce some bias related to MSF's organizational culture and focus on medical supply chains. However, many respondents brought long sector experience, enabling broader reflection.

MSF's strong internal supply systems and its medical mandate also brought specific logistical challenges and insights. While the definition of "emergency" was discussed, most agreed that the early stages of conflict and volatile contexts clearly fall into this category. In these situations, logistics teams often operate without stable infrastructure or reliable baseline data, facing severe access and security constraints in highly unpredictable conditions. These realities made the testimonies particularly relevant for our research.

All interviews were conducted remotely by video call and lasted between one hour and one hour and a half. Some were conducted in English, others in French; to ensure cohesion and readability, all quotes cited below have been translated into English where necessary. A semi-structured interview guide was used to frame each discussion, covering topics such as access constraints, delivery organization, field-level challenges, coordination practices, and adaptation strategies. This structure is followed in the analysis below.

For the sake of clarity and fluidity, this chapter presents only the main takeaways and cross-cutting insights derived from the interviews. A full version of this report including detailed findings, illustrative examples, and direct quotations, is available in Appendix E

4.2. Background and experience

The six interviewees brought diverse professional backgrounds in logistics coordination, emergency response and security. Most had extensive field experience with MSF, particularly through high-intensity missions in conflict zones. Two respondents were deployed in Gaza during 2023-2025 and a third had worked there previously. While no respondent had direct experience in Mali, one had contributed to UNMAS operations in the region.

The group also included experience from WFP, the Canadian Red Cross and UNDSS. Roles ranged from field logistics to HQ-level coordination, with several alternating between the two. This mix allowed for both tactical and strategic insights. Although the sample leaned heavily on MSF profiles, perspectives from the UN system and other NGOs added comparative depth. The strong MSF presence also offered detailed understanding of a well-resourced, decentralized emergency response model with specific challenges in supply, coordination and field-level autonomy.

4.3. Access constraints

All respondents identified humanitarian access as one of the most difficult and unpredictable challenges in logistics today. Two main trends emerged: the shrinking of humanitarian space and the growing politicization of access.

a. Gaza as a case of extreme obstruction

Gaza was described as the most extreme access environment. Respondents highlighted frequent aid denials, coordination failures between Israeli authorities (COGAT and CLA), and unpredictable permit systems. Shipments could be approved then blocked without explanation.

Aid entry was also constrained on the Egyptian side, where organizations relied on intermediaries like the Egyptian Red Crescent. Obstruction was often political, not bureaucratic. Respondents agreed that humanitarian access in Gaza was increasingly weaponized, with restrictions used strategically to exert pressure.

b. Security and negotiation

Access negotiation remains essential, particularly where territorial control is fragmented. Understanding who controls each checkpoint and engaging with them or trusted intermediaries, is key to safe passage. However, negotiation power has declined. Respondents noted that humanitarians are no longer automatically granted access based on neutrality, and in some contexts, they are outright rejected. Relationships and informal trust remain useful, but are not sufficient in increasingly hostile settings.

c. Physical barriers vs. Political obstruction

A core distinction emerged between physical and political barriers. Physical challenges, such as rough terrain or infrastructure damage, could often be managed through technical means. Political obstructions, however, were volatile, opaque, and harder to overcome. Respondents described unpredictable decision-making, denial of seemingly innocuous items, and shifting customs and entry procedures even in non-conflict zones.

d. Imperatives to handle access nowadays

Security at checkpoints remains a key concern. Understanding who controls access and negotiating with them directly or via intermediaries, was considered essential. However, negotiation power has declined. Neutrality no longer guarantees passage. Access is often determined by low-level actors with discretionary power. Respondents noted that MSF's reputation and professionalism could help but are increasingly insufficient. Negotiation skills remain vital, but are not always enough.

All six emphasized localization as the only sustainable access strategy in highly obstructed contexts. This includes relying on national staff, prepositioned supplies and local procurement. In Gaza, working from within was seen as the only viable option. Humanitarian norms offer less protection than before, and operational space is shrinking. Access must now be actively negotiated, constantly adapted and internally resourced.

4.4. Organization of humanitarian delivery

a. Gaza delivery issues

In Gaza, humanitarian delivery operated under extreme constraints. Respondents described systemic clearance delays, fuel shortages, infrastructure damage and widespread looting. MSF responded with strategies like decentralizing storage, separating convoys and adopting real-time convoy redirection via local staff. "Self-distribution" became a last-resort tactic. Delivery success was measured not by completeness, but by continuity. Flexibility, redundancy, and risk acceptance were essential. Getting even part of a shipment through was considered a win in a context where obstruction and loss were inevitable.

b. Logistics structures and planning

Respondents emphasized the need to separate supply functions from strategic planning. MSF logisticians manage everything from vehicle operations to medical waste and compound security. Delivery is planned months in advance in stable contexts, with buffer stock and seasonal margins built in. In emergencies, systems rely on central hubs, flexible protocols and air transport. Unlike commercial models, humanitarian logistics prioritizes resilience and overplanning. The goal is not efficiency, but ensuring impact through excess capacity and readiness to absorb delays.

c. Reconditioning and transport modes

Reconditioning allows bulk goods to be assembled into ready-to-use kits tailored to needs. This streamlines last-mile delivery and improves recipient experience. Transport varies by terrain and urgency: trucks, motorbikes, canoes, animals, helicopters. Geographic information systems, maps and local knowledge are essential for planning. Respondents emphasized that delivery must be adapted to the environment and informed by seasonal and geographic constraints. Local sourcing is often preferred for speed, sustainability and reducing dependency on constrained cross-border supply chains.

d. End-user distribution

Final-site distribution requires strong crowd management, clear communication and adaptive setup. Registration and targeting systems reduce tension. Flexible layouts and shade are key to safe delivery. Vaccine campaigns demand strict cold chain logistics, while food and NFI kits vary in weight and tracking needs. In extreme conditions, informal distribution is accepted if it ensures access. As one respondent noted, even imperfect aid can save lives. Well-designed sites shape both the success of delivery and the dignity of its reception.

4.5. Field and human constraints

a. Field realities and threats on the ground

Respondents described daily exposure to looting, insecurity and violence. In Gaza, aid convoys were attacked and drivers injured. Airstrikes struck near hospitals and convoys, eroding prior protections. Entering Gaza required exhausting security procedures before operations even began. National staff, especially in Gaza, faced the highest risks. In this environment, delivery required not just planning, but constant adaptation under pressure. Fear, exhaustion, and unpredictability shaped all field operations and placed staff under constant psychological and physical strain.

b. The psychological weight of insecurity

All six respondents highlighted the mental toll of insecure missions. Pre-departure preparation was essential to avoid breakdowns in the field. Even after missions, stress could linger. Emotional control was critical, especially for international staff expected to lead by example. Only experienced professionals were deployed to volatile settings like Gaza. While calmer missions provided more breathing room, mobility restrictions, risk exposure and pressure of their role still accumulated over time. Psychological stress was constant, even when the shooting stopped.

c. Teams dynamics and rotation

Close living quarters, long hours and minimal privacy led to tension and emotional fatigue. Trust, communication and proper handovers were essential for operational continuity. Rotation systems helped balance continuity with recovery, reducing burnout. Mission lengths varied by phase, short for emergencies, longer for stabilization. Leadership quality was crucial, poor leadership increased risks while strong team dynamics were often the key to mission success. National staff carried the heaviest burden, often operating without the option of stepping back.

d. What keeps operation going

AShared routines, humor and debriefs (to know what is happening) helped teams manage stress. Coping strategies varied, some were healthy (exercise, meditation), others were less so (alcohol, medication, smoking). Small comforts were seen as essential. Compartmentalization was a common psychological tool, field staff focused during missions and processed emotions later. Team composition mattered as calm, emotionally intelligent staff made the difference. Ultimately, operations succeeded because of people, not systems. Trust, adaptability, and mutual support were what kept missions functioning in even the harshest conditions.

4.6. Coordination and institutional structures

Interviewees provided contrasting insights into how coordination is structured and experienced across humanitarian organizations.

a. MSF model

MSF operates outside the UN cluster system, relying on internal coordination, emergency pools and private funding to respond rapidly. While it does engage with ministries and other actors, coordination remains pragmatic and field-driven. Respondents highlighted strong autonomy in emergencies, but noted structural tensions and internal delays in routine missions. Differences between MSF sections sometimes create friction. While MSF values independence, organizational rigidity and slow decision-making can hinder adaptation. Field staff emphasized the need to prioritize delivery over identity debates and improve internal alignment for smoother operations.

b. Cluster systems and the UN

Respondents described UN coordination structures as useful but bureaucratic. WFP, while powerful in logistics, operates like a public agency, constrained by earmarked funding and government protocols. Cluster systems help organize large-scale responses, share resources, and support smaller NGOs. Tools like maps and chat groups improve operational flow. However, effective use requires proactive engagement. The system can be slow and fragmented, especially during budget cuts or political shifts. Respondents valued the logistical support clusters offer, especially in complex emergencies like Gaza, but warned that rigid procedures and uneven power dynamics can limit real collaboration.

c. The central role of local actors

All respondents stressed that local actors are essential for coordination and delivery in high-risk areas. National staff, civil society and informal leaders enable access, maintain operations, and provide critical feedback. In Gaza, MSF's local teams sustained operations when expatriates were blocked. Local NGOs extend reach and improve contextual adaptation. Respondents emphasized listening to communities and adapting aid accordingly. However, bureaucratic standards often exclude small actors. Real localization, they argued, requires training, trust-building, and simpler procedures. Without reform, localization risks remaining superficial and performative rather than transformative.

d. Coordination in practice

Coordination success depends on context and people. In major emergencies like Gaza, collaboration improves due to urgency. Tools like WhatsApp groups and real-time contact lists enhance information flow.

However, personal attitudes and ego can still undermine cooperation. Some actors resist engagement, leading to duplication or coverage gaps. Respondents stressed the need for shared, updated information and flexibility over rigid protocols. Militarized structures and parallel initiatives, like the Gaza Humanitarian Foundation, were seen as harmful. Neutral, inclusive

coordination remains essential. When properly supported, coordination amplifies impact. When ignored or politicized, it fragments response and undermines trust.

4.7. Adaptation and evolution

a. Improvising on the field under pressure

Improvisation was central to field operations across all interviews. Respondents emphasized that rigid systems rarely survive first contact with emergencies. Teams regularly bypassed procedures, used local markets, or repurposed available materials to keep operations running. In volatile contexts, flexibility outweighed formal compliance. Improvised solutions ranged from adapting transport modes to reconstructing essential infrastructure. Respondents agreed that improvisation is not a failure of planning, but a necessary survival mechanism when standard tools or pathways are blocked.

b. Adapting organizational systems to unstable environments

Adaptation also occurred at the system level. Prepositioned emergency kits, phased deployment, and adjusted mission lengths were key tools. Respondents stressed the value of low-tech resilience, remote technical support, and localization, both for procurement and implementation. Organizations adapted procedures, stock management, and coordination mechanisms to fit field realities. Dynamic planning, basic fallback tools, and context-driven flexibility were seen as essential. Respondents highlighted that real adaptation is proactive, not reactive, it requires both strategic readiness and operational creativity.

c. Evolution of humanitarian logistics

Respondents described a slow but ongoing shift toward decentralized, faster, and more professional systems. Field teams now have greater decision-making power, enabling faster response. However, logistics still lags behind the private sector in terms of digital tools and efficiency. While MSF and others have expanded hubs and forecasting systems, hierarchical structures persist. The sector is becoming more specialized, but this can create silos and rigidity. A cultural shift toward contextual relevance, responsiveness, and localized needs assessments was seen as key to future improvement.

d. Innovations and future of aid delivery

Innovation was viewed as promising but uneven. Emergencies remain difficult places to test new tools. GIS, solar power, mobile payments and digital mapping were highlighted as impactful field technologies. AI and drones show potential, but limitations in real-time data and regulation persist. Interoperability across agencies is still lacking. Cash-based aid was praised for its efficiency and dignity. Ultimately, respondents agreed that technology is useful but only when rooted in operational needs and managed by capable people. Logistics, they reminded, remains grounded in the physical and human.

4.8. Closing reflections

Success in humanitarian logistics was consistently attributed not to technical tools, but to clarity, adaptability and people. What appear to be bureaucratic systems are driven by human relationships, negotiation and judgment. Logistics, respondents stressed, is as much about trust

as it is about transport. Accurate, up-to-date information and simple coordination tools were seen as more valuable than complex systems that fail under pressure. Sharing information effectively enables faster decisions and reduces risk.

Preparedness and flexibility were essential. Buffer stocks, phased deployments and prepositioned kits allowed teams to adapt quickly. When systems failed, improvisation became key. Strong team leadership mattered. Emotional intelligence, trust and communication were seen as more important than technical expertise. “You can train logistics, not resilience,” one respondent noted.

Localization was considered a necessity. Local teams ensured access, insight and continuity, especially in Gaza, where national staff kept operations running when expatriates were blocked. Innovation was welcomed, but not a solution in itself. Technology like AI or GIS could support planning, but could not replace people. The message across interviews was clear: prepare, simplify, adapt and invest in human capacity.

4.9. Field insights vs. Case study assessments

a. Overall comparison

Field insights confirmed many of the logistical and structural challenges described in the case studies, but offered a more grounded, experience view of what keeps humanitarian logistics running in crisis settings. While the written analysis focused on systems, procedures and technology, respondents consistently highlighted the human factor (negotiation, trust, local knowledge and coordination) as the real foundation of operational resilience.

In interviews, humanitarian supply chains were described as driven by adaptability, diplomacy, and improvisation rather than relying on high-tech tools or optimized models. Unlike private-sector logistics, which prioritize efficiency, humanitarian logistics deliberately accept certain inefficiencies, such as overstocking/oversupplying, wide error margins and slower processes, as necessary trade-offs to ensure delivery in volatile, high-risk environments. The goal is more about maximizing aid impact under constraint rather than speed or cost-effectiveness.

Both the case studies and interviews acknowledged the importance of coordination and localization, but interviewees offered a more practical view of how these function in the field. Respondents saw coordination not as formal mechanisms or joint planning but more as the ability to share real-time information and maintain trusted relationships. In many cases, this relied on basic tools like WhatsApp rather than complex and sophisticated systems. Localization was not just a supporting element but a core operational strategy highlighted by all respondents. Effective operations required close collaboration with local actors for both understanding the context and carrying out work on the ground.

Several respondents described the system as fundamentally “old school”, often relying on radios, paper logs, and physical networks instead of digital tools, especially in emergencies where digital tools are often inaccessible or unreliable. While innovation is often seen as a solution in the literature, interviewees stressed that new technologies should be trialed in stable contexts first. The idea of using emergencies as labs for innovation was broadly rejected.

Both the case studies and respondents agreed on the importance of flexibility. But the interviews went further, describing a constant state of readiness where logisticians must react immediately to changing conditions, find workarounds and create backup plans on the spot. In such volatile settings, manuals or procedures often offer limited guidance. What matters most is the ability to improvise under pressure and navigate outside the standards. This creative problem-solving is essential to humanitarian logistics but difficult to reflect in formal evaluations or written reports.

b. Reflections on Mali

Few interviewees had direct operational experience in Mali, limiting the depth of comparative field insights. Only one respondent (Respondent 2) had some involvement in Mali, though in a highly specialized area outside the humanitarian logistics core. However, her comments on the scale and logistical role of the MINUSMA peacekeeping mission supported the case study's point that international support was a key enabler of aid delivery. More broadly, several respondents noted improvements in assessment tools, data availability and operational tracking over the past decade which reinforces the observation that the 2012-2015 Mali context lacked the level of structured monitoring and data collection seen in more recent crises, such as Gaza.

c. Reflections on Gaza

Gaza was the most extensively discussed context in the interviews, with Respondents 1 and 3 directly involved during the study period. Their testimonies largely confirmed the case study's findings of severe access restrictions, infrastructure collapse and high operational risk. However, they also portrayed conditions as even more extreme than written reports suggest. Access was not only constrained but politically weaponized, and the space for humanitarian action was shrinking fast, with arbitrary rules changes, safe zones disappearance and increasingly unreliable deconfliction mechanisms. These accounts personalized what the case study described more structurally.

From a human perspective, respondents described the situation in Gaza as beyond what is typically conveyed in reports. One respondent explicitly referred to the context as a genocide, and both Respondents 1 and 3 stated they had never worked in such an extreme environment. They also described how safe zones never truly existed and are now officially no longer recognized. Airstrikes have come increasingly close to humanitarian facilities, reflecting a collapse of even the minimal protections that were previously observed. This reinforces the case study's classification of Gaza as a uniquely difficult and dangerous setting for humanitarian operations.

The role of national staff highlighted in the case study, was reinforced and deepened in the interviews. Local actors were not just facilitators but the core of operational continuity, responsible for navigating terrain, managing last-mile delivery and recovering looted items. Localization was not a strategy, it was a necessity.

One point of nuance came from MSF staff, who noted that, unlike in many other contexts, funding was not their primary constraint in Gaza. While the literature highlighted financial shortages as a key operational barrier, MSF emphasized that the core problem was access and

implementation, not resources. This perspective, though insightful, reflects MSF's unique funding model and should be interpreted with that context in mind.

Coordination, described as fragmented in the case study, was viewed more positively by respondents, especially within the Logistics Cluster, where real-time information sharing (often through informal tools like WhatsApp) helped sustain operations. The constraint was not poor cooperation, but collective paralysis under external constraints. Coordination was driven less by formal mechanisms than by personal networks and tools. Real-time information exchange, not joint planning, sustained response. All actors, including MSF, relied on the UN system for movement validation, recognizing its stronger advocacy leverage with Israeli authorities.

Looting was a major issue highlighted in the interviews. A graph shared by Respondent 3, included in the annex, shows that the majority of aid trucks failed to reach their destination. While the case study mentioned it, respondents described it as a central obstacle to aid delivery. It wasn't just widespread, it was often organized. Desperate civilians and criminal groups both looted supplies, even though they said there was still some respect for the medical cargo. Still, field teams constantly risked losing their cargo in transit. This looting mirrored broader economic collapse, respondents described flour selling for \$900 per 25 kg and soap for \$50. The criminal resale of looted aid reflected both desperation and the absence of functioning markets.

For many people, the Gaza Humanitarian Foundation (GHF) was the only option left to access basic goods, despite its dangers. According to Respondent 1, this included even MSF staff, who were sometimes forced to queue there for food. Interviews made clear how market collapse, looting and desperation left people with no alternatives, turning GHF sites into dangerous gathering points. Respondents were far more critical of GHF than the case study. While briefly mentioned in the literature, they described it as uncoordinated, high-risk and politically imposed, forcing civilians into unsafe situations. Its presence underscored the militarization of aid space and the loss of humanitarian principles.

Contrary to the case study's portrayal of ongoing restrictions during the ceasefire, interviews showed that aid operations briefly scaled up. Respondent 3 explained that in January-February 2025, MSF was able to send over 70 trucks thanks to faster clearance through Jordan and pre-positioned stock in Brussels. This allowed them to restock and continue medical activities for several weeks. However, the visible increase in aid triggered backlash. Images of hostage exchanges were politicized, fueling accusations that humanitarian cargo was helping Hamas. While the case study noted these claims, the interviews revealed their concrete impact, noting stricter controls were imposed afterward and that hospital equipment and any non-basic medical supplies were blocked.

Lastly, while the case study acknowledged the shift toward informal and improvised delivery systems, respondents stressed just how total this shift had become. Conventional logistics models were seen as almost irrelevant. Field logistics depended on continuous improvisation, decentralized warehousing and creative workarounds to avoid looting, fuel shortages and arbitrary blockages. As one respondent put it, "In Gaza, whatever gets delivered is already a win."

In sum, the interviews largely confirmed the case study's analysis and scores for Gaza. Civilian protection and access to essentials were rated 1/7, which respondents fully supported. In fact, some suggested the situation was so extreme that a 0/7 score could be justified. Logistics and delivery were also accurately rated, with problems linked to external constraints rather than organizational failure. Flexibility and innovation scores seemed fair, teams adapted constantly, though large-scale changes weren't possible.

Coordination may have been slightly underrated. Interviewees described stronger inter-agency and local collaboration than the case study suggested. On the other hand, the political environment may have been scored too generously, with interviews highlighting deliberate and systematic obstruction. The 5/7 score for community acceptance also appeared too high, given the widespread looting and aid resale reported in the field. Aid worker security, already rated low, could arguably be even lower due to extreme risks.

Overall, the interviews support the existing assessment, with only minor score adjustments. These would be small and localized, without changing the overall rating for Gaza or disrupting the comparative framework. Gaza emerged not only as a case of logistical complexity, but as a site of humanitarian chaos, where classical systems failed and survival relied on human flexibility, trust, and constant adaptation.

5. Critical analysis and research-based input

5.1. Reframing the research question

This research initially set out to answer a core question: How do humanitarian organizations, including NGOs like MSF and intergovernmental agencies like those of the UN, adapt their logistical strategies to overcome security threats, infrastructure limitations, and access restrictions in conflict zones, comparing approaches from Mali war (2012-2015) to those from the ongoing conflict in Gaza (2023-2025)?

At first glance, the question assumes that adaptation is possible and that logistical responses can be planned, adjusted and compared across settings. It suggests that with the right level of tools, coordination and planning, aid operations systems can continue even under extreme conditions. But this assumption doesn't hold in every situation. What we found, through both case studies and interviews, is that adaptation is not always available and when it is, it takes very different forms depending on the context.

In theory, adapting a logistical strategy might mean adjusting transport routes, scaling supply chains, coordinating with new partners or switching to mobile and localized solutions. These responses imply flexibility, continuity and a certain degree of control. But in practice, particularly in active conflict zones, this operational space often disappears. In some environments, strategy gives way to improvisation. In others, logistics break down entirely.

By comparing Gaza and Mali, we are not simply asking what works. We are testing the limits of what is even possible. The two cases offer a stress test of humanitarian logistics under extreme constraints. One where adaptation, while difficult, remained viable, the other where it was often blocked entirely.

In light of these findings, we realized that the research question needed to be reframed. This shift seemed essential to understand the real dynamics of humanitarian logistics in conflict zones. Therefore, we returned to the Goal-Question-Metric approach we did earlier.

While our initial framework helped define how organizations adapt their logistics strategies, we realized it needed to be expanded to include a new dimension. Asking how organizations adapt is not sufficient, we also need to ask when adaptation is possible and what conditions make it feasible or cause it to fail. We preserved the original goals and questions while adding this new layer with an additional question. The revised GQM table below captures this addition and leads us to the final version of our research question.

Figure 6. Extension of the GQM approach to reach the final research question

Question	Under what conditions is adaptation of humanitarian logistics possible in conflict zones?
Metrics	Degree of physical access Level of political/operational space Field autonomy level Redundancy level National staff presence and involvements level Degree of flexibility of funding
Final research question	How and under what conditions do humanitarian organizations, including NGOs like MSF and UN agencies, adapt their logistical strategies to overcome security threats, infrastructure limitations, and access restrictions in conflict zones, comparing approaches from Mali to those from the ongoing conflict in Gaza?

This section is where we step back and critically examine what our findings really say. Drawing on the literature, case studies and interviews, we move beyond describing what happened to reflect on what makes adaptation possible, or not, and how it takes shape in practice. Based on our perspective and analysis, and within the limits of the material collected, we now attempt to answer the final research question introduced above.

5.2. When adaptation become possible, Gaza as a limit case

Gaza pushes our research question to its limit. From late 2023 to mid-2025, conditions on the ground made adaptation not just difficult but almost entirely impossible. The combination of almost total access denial, direct political obstruction and the destruction of infrastructure left humanitarian actors without the space, tools, or margin to operate. In this context, logistics could not function and no degree of strategic planning could compensate. It became reactive, improvised and survival-driven.

Unlike in other conflict zones, where partial access or negotiated corridors allow at least some degree of planning, Gaza experienced an unprecedented level of blockade. There are no real safe zones which makes the application of any standard humanitarian framework nearly impossible. Land crossings were heavily restricted, arbitrarily closed, or attacked. Infrastructure like roads, warehouses, schools, hospitals, power grids, was not just degraded by the conflict, it was targeted and incapacitated. Fuel, essential for transport, hospitals, and water systems, was chronically blocked or used as a political tool. Aid convoys faced weeks-long delays or total denial. We have clearly seen that planned responses break down when there is no stable ground to operate from.

Even attempts at alternative delivery methods like the maritime pier proved mostly symbolic and ineffective. Airdrops were not a viable option either, as the Iron Dome defense system made them technically impossible, further limiting any alternative to the restrictions faced by delivery on the ground. Under these conditions, humanitarian actors lost all margin for adaptation. The idea of rerouting, prepositioning, or scaling delivery was meaningless in an environment where movement itself was not guaranteed.

Coordination worked only through direct personal connections between humanitarian actors and local NGOs but not with the authorities. No model, tool, or reform could overcome the fact

that the political architecture was built to block aid. As a result, operations in Gaza became entirely dependent on national staff and informal networks. If help couldn't come from outside, it had to be built from within. Aid was carried by hand, distributed without structure and improvised in unstable conditions. Even basic tasks, like getting supplies to hospitals, required risk-taking and personal negotiation. There was no margin, no scalability, and no real protection. Local actors became the only possible operators, not by choice but by necessity, and they worked without any predictability or safety. Operations were reduced to "survival logistics" with improvised distribution under fire.

The Gaza Humanitarian Foundation illustrates that not all adaptations are good. Backed by the Trump administration and the Netanyahu government, it was presented as an alternative mechanism to bypass international channels and deliver aid directly. But rather than compensating for gaps in humanitarian access, it amplified the crisis. Its operations were militarized and disconnected from the established humanitarian system. It failed to respect core principles like neutrality, independence and coordination. Rather than adapting to fill a void, it deepened mistrust and insecurity, becoming a case study of how not to respond. In this instance, "finding a solution" outside of UN and INGO coordination made things worse, clearly violating the humanitarian principle of "do no harm."

Gaza must be understood not just as an extreme example but as a limit case. It marks the point where adaptation no longer works and where strategy and planning gives way to on-the-spot improvisation. Innovation simply has no space to exist in Gaza. It is not a place to test solutions and the implementation of ideas is very restricted on the ground.

In contrast, it is also where the need for new thinking and inventive strategies become most urgent. If no standard strategy works, and even the best systems collapse, then we are forced to rethink not just how we deliver aid, but what we assume logistics can do. In this case, no amount of technical refinement could overcome the blockade. The core problem was political, not logistical and this shows the limit of adaptation from a technical perspective within logistics alone. When access is defined by diplomacy, military decisions and political agendas, then adaptation must also come from those domains.

That said, some aid did get through. Local actors managed to operate from within the strip and maintain some aid flow even under extreme pressure. While no logistics system could fully succeed, our interviews and field data suggest that there is room for improvement. New tools or ideas might not solve the blockade but they can help reduce suffering where access exists, however small. The failure in Gaza doesn't mean we stop seeking new ways to adapt. It means we must understand where the real obstacles lie and how logistics can make a difference.

5.3. Imperfect but viable systems, lessons from Mali

In contrast to Gaza, Mali between 2012 and 2015 offered a setting where adaptation was difficult but possible. Despite high levels of insecurity, damaged infrastructure and complex local dynamics, humanitarian actors were still able to operate. The key difference was the existence of some political space, access routes and functional coordination allowing logistics to remain a strategic tool.

Humanitarian operations in Mali faced serious constraints like violent clashes, regular attacks on convoys, road insecurity and large remote areas with poor infrastructure. Landmines, explosive devices and seasonal flooding further limited mobility. However, aid organizations managed to adjust. They used multimodal transport combining road, air and river barges to reach difficult zones like Gao and Timbuktu. Supply chains were supported by regional hubs, particularly in Bamako and Mopti, where reconditioning and storage allowed for flexibility. Prepositioning and route adjustments were common, often based on seasonal or security updates.

Coordination mechanisms also played a role. The Logistics Cluster, led by WFP, provided shared tools, field-level communication and mapping systems. UNHAS allowed humanitarian aid to reach remote areas. MINUSMA contributed to re-establish main humanitarian corridors and supported state reconstruction but NGOs like MSF and ICRC avoided using MINUSMA helicopters due to low local acceptance and kept using their own aircrafts even at high costs.

These structures were not seamless, state institutions were weak, and humanitarian actors often had to bypass them to reach affected populations. Access still required constant negotiation, often on a region by region basis. However, unlike Gaza, logistics could still be planned, adjusted, and scaled to some extent.

Mali's case shows what adaptation looks like when the system is under strain but not fully blocked. Logistics was not easy and operations were far from smooth but there was room to plan, adjust and coordinate. Humanitarian actors could move, deliver and reconfigure their strategies over time. The contrast with Gaza is that Mali offered no guarantees, but it did offer possibilities. That made logistics difficult but viable.

5.4. What practitioners brought to the reflection

The six interviews conducted for this research brought the human dimension of humanitarian logistics into sharp focus. While the Gaza and Mali case studies showed how systems function or fail, the interviews revealed what actually keeps operations going on the ground. They confirmed some findings, challenged others and deepened our understanding of what adaptation really means in practice. Across very different roles and contexts, one message came through clearly: logistics in crisis settings is not driven by technical prowess, but by people.

In Gaza, two MSF respondents who worked there between 2023 and 2025 described an environment where no standard logistics model applied. Access was used as a tactical weapon. Crossings became political levers, convoys were blocked without warning and basic supplies like food or fuel were held back to exert pressure. Delivery depended almost entirely on national staff and volunteers, who took immense personal risks to sustain operations. No plan or system can work without space to act and Gaza is a clear example of it. There is no room for adaptation, only coping under siege. This perspective reinforces our case study analysis by showing how efficient adaptation was not possible on the ground. No external logistics team, plan, or innovation could compensate for the lack of operational space.

Beyond Gaza, respondents described adaptation not as a technical shift but as a constant balancing act between preparedness and improvisation. All agreed that planning mattered with prepositioned stocks, multiple transport modes and backup systems helping teams to stay

operational when things fall apart. But the goal of these systems is not efficiency, it is to maximize humanitarian output and get help where needed ‘at all cost’. In fact, many strategies went against classical logistics thinking focused on leniency. In humanitarian logistics, redundant warehouses, buffer stock, extra personnel and parallel delivery routes are key strategies to build resilience and keep aid flowing rather than to minimize costs.

A key insight from the interviews was that operational flexibility depends on who holds the decision-making power. Several respondents criticized the top-down logic of many humanitarian organizations, where field teams are expected to follow structures and expectations defined far from the crisis.

In volatile environments, success relies more on individual initiative and fast, pragmatic decisions than on technical perfection. Effective adaptation requires shifting autonomy downward. It is the people closest to the problem who best understand how to respond. The role of Headquarters should be to empower those on the ground. Field responders must be at the center of the system with the central team supporting them rather than constraining the very people who are best placed to act.

This need for less rigidity is not just bureaucratic, it is also cultural. As Stéphanie noted, humanitarian work has become more professionalized over the past 15 years, with increased reliance on standards and formal training. While this has improved technical quality, it has also led to a loss of generalist skills and operational flexibility. “I have seen logisticians who cannot even change a lightbulb without a formal request,” she explained, highlighting how overspecialization and rigid role compartmentalization can undermine adaptability in the field.

Localization emerged as both a strategy and a necessity. In restricted or dangerous settings, national staff and local partners were not just helpful, they were essential. Local actors brought knowledge of the terrain, the culture, the risks and the people. They enabled delivery, built trust and kept operations running when international access was blocked. Interviewees noted that localization is not a policy trend but a real-world response to the limits of international presence. In Gaza, in Mali and beyond, national staff are often the ones holding everything together.

Technology and innovation were seen with cautious optimism. Tools like GIS, solar power, mobile banking and better communication, have supported adaptation in some settings. But interviewees warned that emergencies are not test labs. New tools must be simple, reliable and already familiar to field teams before being implemented in emergencies and conflict zones. When systems break down, it’s pen and paper, stock cards, and radios that keep operations running. The human and physical nature of logistics remains irreplaceable. Innovation supports logistics and creates new opportunities to adapt better on the ground but it cannot overcome structural barriers to access.

In sum, the interviews reveal that adaptation in humanitarian logistics is not a mechanical process of shifting plans but a situational response rooted in human relationships, access margins and real-time decisions. The field holds together not because of protocols, but thanks to people who can read a situation, react quickly and stay calm under pressure. The case studies described these dynamics and the interviews made them tangible. In the end, what allows

humanitarian logistics to function is not optimization, but resilience. Not precision, but flexibility. Not systems, but people.

5.5. Adaptation in practice

Adaptation in humanitarian logistics is often seen as a technical exercise in planning and routing. In practice, it is deeply shaped by human judgment and political context. Based on our case studies and interviews, we find that adaptation is not a guaranteed outcome but a conditional process. It depends on access to space, trust in local actors and systems built for resilience over efficiency. Humanitarian logistics does not follow one universal model of adaptation. We observed a range of responses: some flexible, some improvised, others collapsing entirely.

The first and clearest insight is that adaptation only works when there is minimum operational space. In Mali, despite insecurity, humanitarian actors could still reroute, delay or negotiate access. Agencies prepositioned stock, used different transport modes and built slack into their systems. Gaza offered no such margin. Access was systematically blocked, crossings were shut or attacked, and even alternatives like the Trident pier or airdrops failed. Under siege, logistics lost its strategic value and became a matter of survival.

Adaptation does not fail due to insecurity or bad practice alone. It collapses when political obstruction removes all room to act. This shows that humanitarian logistics cannot be understood purely in technical terms and needs to be contextualized.

When operational space does exist, adaptation depends on autonomy and flexibility at the field level. Across both case studies, effective responses came not from central plans, but from local teams making pragmatic, real-time decisions. Prepositioned stocks, alternate routes and fallback hubs only make a difference when field staff can reallocate them quickly. Successful adaptation is driven by people on the ground, not distant offices. Centralized command structures often lag behind fast-moving crises, while agencies that delegate authority downward are better able to adjust. In other words, successful adaptation is driven by people on the ground, not distant offices.

Localization is not just a strategy, it is a condition for operationality. National staff and local volunteers were essential in both cases that we studied, but in Gaza they became the only viable operators. When international personnel are unable to move or coordinate, logistics depend entirely on local knowledge, relationships and personal credibility. Knowing side roads, understanding community dynamics and acting quickly matter more than formal procedures. In such contexts, localization is not a policy choice but the only way aid delivery can continue.

Relying on local actors becomes a form of forced adaptation, organizations adjust by necessity, shifting responsibility and decision-making to those still able to act. This shift also enables further adaptation, as local knowledge becomes essential to adjust aid delivery to immediate constraints and the actual needs of affected communities.

Another key factor is the scale at which adaptation can operate. In some crises, logistics can still be organized across large areas, allowing for planned, replicable responses. In Mali,

regional hubs, air corridors and river routes made it possible to deliver at scale, even under strain. Platforms like the Logistics Cluster supported structured planning and coordination.

In Gaza, by contrast, logistics fragmented into hyper-local efforts. Distribution was often managed neighborhood by neighborhood, led by informal networks or individual initiative. Without scale, solutions cannot be replicated or refined. Each response is isolated, improvised and shaped by immediate context. Scalability enables not only broader reach but the ability to learn, coordinate and plan by drawing from what worked elsewhere to adapt more effectively over time. When that is lost, as in Gaza, adaptation becomes reactive and short-lived, with little ground for sustained or strategic adjustment.

Another insight is that not all adaptations are effective. Some may appear innovative but fail in practice. In Gaza, projects like the Trident pier and the Gaza Humanitarian Foundation aimed to bypass access constraints but were disconnected from existing coordination, compromised neutrality, and delivered little impact at high costs.

By contrast, small context-aware adjustments like changing delivery times to avoid targeted bombardments or transporting medical supplies separately from food (as they were less likely to be looted) proved far more effective. These examples show that adaptation in logistics does not necessarily mean complex innovation. Sometimes simple, ground-level decisions can have a greater impact than top-down or high-tech solutions. Adaptation works when it is grounded in local realities and driven by need, not by optics or external agendas.

Another key point is the gap between supply chain modeling and field realities. Much of the literature emphasizes efficiency through cost minimization, lean operations and optimized routing. While these models offer useful perspectives for stable contexts, especially for prioritizing needs or maximizing coverage, they remain poorly suited to active conflict zones. They typically assume that access is constrained but negotiable and that logistics can be optimized around predictable variables. In warzones like Gaza, this logic breaks down. The objective is not to reduce excess but to plan for it.

Agencies must build redundancy into their systems by sending multiple trucks, stockpiling fuel, allowing for wide margins of error and preparing fallback options. This is not a luxury but a necessity. This level of redundancy cannot be captured in models focused on optimal throughput. Even more advanced models, which integrate risk scores or urgency-weighted demand, still assume a degree of operational control that simply does not exist in environments where access is politically blocked. No algorithm can reroute a truck when the border is sealed. The lesson is not to reject modeling entirely but to recognize its limits. In heavy conflict, what matters is not what's optimal on paper, but what gets through the chaos.

Information systems and technology can support adaptation but only when the context allows it. In Mali, tools like GIS mapping, satellite imagery and route tracking supported planning and coordination. In Gaza, these tools became largely unusable due to power cuts, network blackouts and infrastructure collapse. Technology is not useless in conflict, it is often critical even but it must be adapted to local conditions and prepared in advance. Tools that rely on stable networks or remote management often break. Resilient logistics systems rely on hybrid models

with digital tools when possible and manual ones when necessary. In emergencies, the best tool is the one that still works in the dark.

Coordination also plays a crucial role in adaptation. In Mali, formal mechanisms like the cluster system helped align operations and share critical information. In Gaza, it was especially useful for real-time updates and advocacy, despite extreme constraints. Its main value is to connect logistical actors together and maintain a shared flow of information, even when joint planning was not always feasible. At the same time, informal tools such as WhatsApp groups from the log cluster became essential for reactive, day-to-day coordination. These channels allowed faster decisions, local targeting, and direct problem-solving. The key lesson is that coordination mechanisms themselves can and must adapt.

In high-intensity crises, effective logistics depends on combining structured platforms with flexible and real-time communication. Coordination, especially through information and data sharing, helps humanitarian actors adapt more quickly to changing conditions. When organizations share experiences, others can learn from both mistakes and successes, improving their own responses and avoiding repeated errors. This creates a shared pool of knowledge that strengthens collective adaptation over time.

Finally, adaptation also depends on financial agility. Access to flexible funding, rapid procurement and reliable supplier networks directly shapes the capacity to respond. In Mali, pooled UN funds allowed agencies to act quickly when access opened. In Gaza, by contrast, financial systems collapsed alongside physical ones. For many UN agencies, blocked procurement, frozen bank transfers, and delayed or conditional donor funding created critical bottlenecks. The experience of NGOs like MSF, however, tells a different story. With independent funding and dedicated emergency reserves, MSF operated with far greater autonomy. Interviewees stressed that the budget was not a constraint in Gaza. If an emergency requires urgent airlift or expensive routing, it is approved immediately. This contrast reveals a structural difference in responsiveness between agencies dependent on donor cycles and those with discretionary funds.

One adaptation increasingly used when physical access is limited is multipurpose cash assistance (MPCA), which empowers beneficiaries to buy what they need, provided local markets are still functioning. As seen in Gaza, this is not always possible, but where feasible, cash transfers offer a flexible alternative to in-kind aid. Mobile banking can further enable this approach, giving organizations a remote, scalable way to support populations when delivery routes are blocked.

No organization can defy material limits but the ability to spend quickly, without waiting for political or administrative clearance, is a powerful enabler of adaptation. While innovation through emerging technologies is not yet widely used in emergency logistics, it is seen as promising for the future, especially information technologies. But this shift requires investment now. Transitioning from traditional, rigid models to more agile and adaptive systems will not happen without dedicated funding and long-term commitment. Building this capacity today is essential to adapt better in the crises of tomorrow.

In sum, adaptation in humanitarian logistics is neither automatic nor uniform. It depends on several conditions including access, local autonomy, operational redundancy and the ability to act in real time. When these are in place, even extreme crises can be met with flexible and field-driven responses. When they are absent, logistics break down and rely on field reactivity rather than structured response. The contrast between Mali and Gaza illustrates a range from strategic adaptation to improvised survival. Understanding what enables that shift is essential for building more responsive and resilient humanitarian systems.

5.6. Our answer to the research question

This research asked: *How and under what conditions do humanitarian organizations, including NGOs like MSF and intergovernmental agencies like those of the UN, adapt their logistical strategies to overcome security threats, infrastructure limitations, and access restrictions in conflict zones, comparing approaches from Mali war (2012-2015) to those from the ongoing conflict in Gaza (2023-2025)?*

The answer is not universal. It depends entirely on the conditions in which actors operate.

In partial-access contexts like Mali, adaptation is possible. Agencies rerouted convoys to avoid insecurity, combined river, road and air transport, and prepositioned stock in hubs like Mopti. Local teams adjusted routes based on real-time risk and coordination platforms supported shared planning and communication. With enough space to maneuver, logistics could bend without breaking. Adaptation here was strategic, systemic and designed to manage disruption, not just endure it.

In fully obstructed settings like Gaza, this space disappears. When crossings are sealed, infrastructure is targeted, and movement is politicized, logistics cannot function as a system. Delivery depends entirely on national staff, informal networks and day-to-day improvisation. Operations shrink to the neighborhood level. There is no scale, no redundancy and no room for structured planning. In such contexts, adaptation does not evolve, it is stripped down to survival.

Across both cases, we find that adaptation is not driven by tools or models. It relies on human capacity, field autonomy and the flexibility to adjust under pressure. Organizations adapt by building slack into operations with fallback hubs, buffer stocks, delegated authority and alternative delivery modes. In some cases, like Gaza, aid teams shifted delivery times to avoid airstrikes or separated medical from food cargo to reduce looting. For instance, another interesting solution when physical access is blocked is on multipurpose cash transfers via mobile banking. These responses are not necessarily high-tech or innovative but they are practical, grounded in necessity and made possible by people on the ground.

A key distinction also emerged between agencies. MSF, with independent funding and rapid procurement capacity, could respond swiftly when windows of access opened. UN agencies, bound by donor cycles and procurement delays, faced tighter constraints. This structural gap shaped the speed and scope of adaptation even within the same crisis.

Innovation, while promising for the future, remains secondary to access. No technology can negotiate passage through a sealed checkpoint. What matters is not what looks good on paper, but what moves in practice. That said, building agile logistics systems for the future, ones that

integrate reliable digital tools, flexible financing, and local capacities, will depend on sustained investment starting now.

Ultimately, we suggest that humanitarian logistics is not a technical system but a human practice shaped by power, risk and trust. It adapts when local actors are empowered, when decisions are made close to the field and when systems are designed for resilience rather than efficiency. There is no universal model for adaptation but when the right conditions align, when access exists, autonomy is granted, and flexibility is in place, even fragile systems can respond. Understanding what enables that shift is key to building more resilient and responsive aid delivery in conflict zones.

6. Innovation and future perspectives in humanitarian logistics

6.1. Why innovation matters

Humanitarian logistics today faces constant and growing constraints. Conflicts, denied access, collapsing infrastructure and climate-related disasters are no longer isolated events. They define the operating environment. Field teams in Gaza and Mali had to improvise daily and source fuel on black markets, use scrap materials, or reroute around destroyed roads. These are not exceptions but the reality of the field. Innovation, in this context, is not a bonus for stable times. It is key for keeping aid moving at all.

Global needs have surged. In 2024, over 300 million people required humanitarian assistance, with displacement figures doubling in a decade (Salem & Winter, 2025). Supply chains are stretched thin and traditional systems cannot keep up. As the DG ECHO thematic policy document (2022) states: “the need for evolution in the humanitarian sector’s approach to logistics is pressing and widely recognised.” Without creative adaptations, sustaining operations under today’s pressures becomes impossible.

But innovation cannot wait for the perfect moment. Emergencies rarely give space for slow testing. One field expert (Respondent 3) explained: “I don’t like to use an emergency as a lab.” Instead, new solutions must be prepared during quieter periods, allowing some margins of try and error, or developed in parallel, ready to deploy when crises erupt. In practice, though, logisticians are often forced to ‘innovate’ on the spot because they have no other option.

Rather than aiming only for speed or cost-efficiency in ideal conditions, humanitarian logistics is increasingly about staying functional under stress. The most valuable innovations are those shaped by real constraints in the field but they only become transformative when supported by strong research and development behind them. In today’s reality, disruption is no longer the exception. It’s the new norm and innovation must be ready for it.

6.2. Going towards more adaptive systems

What would humanitarian logistics systems need to be truly adaptive? Insights from the field, supported by reports and interviews, point to key features like decentralization, institutional memory or hybrid systems with built-in resilience, seen as essentials to improve adaptation. Together, they sketch a system that can stay functional under pressure without abandoning the basics.

To adapt effectively, field teams need both permission and power to act. This means more than allowing improvisation, it requires structural decentralization. When decision-making and resources are closer to the ground, teams can respond faster and adjust in real time based on context. MSF’s model illustrates this well with regional hubs, prepositioned kits and empowered logistics staff. Operations can launch quickly without waiting for distant approval. “The ones who see what’s happening are empowered to act,” explained one logistics lead (Respondent 1). Controlled flexibility, when paired with trust and preparation, turns improvisation into a strategic asset not a last resort.

Institutional memory is another critical need. Better systems to store and share present and past operational knowledge is essential to avoid repeating mistakes. AI as a tool could greatly help to gather and retrieve “institutional memory” and help teams avoid trial-and-error by learning from past responses. Centralizing field data and using digital archives can help logisticians access information faster, plan better, adapt in real time, and build on others’ successes or failures.

Equally important is redundancy and that can be achieved by using hybrid systems. High-tech systems like GPS tracking or electronic inventories must be paired with low-tech backups. Field workers need fallback options when power cuts, internet loss, or damaged equipment make digital tools unusable. They should maintain or be ready to use manual systems (paper records, stock cards) to replace the failing one in those cases.

Basic tools and human know-how can carry the mission when fancy platforms go down. An adaptive supply chain would be redundant by design, for instance by using both GPS maps and hand-drawn maps or by combining global supply networks with local procurement and stockpiling. This hybrid approach builds resilience through diversity. If one mode is disrupted, another can fill the gap.

These features are not new. Sector surveys show wide agreement on the value of localization, digital tools and preparedness. They anticipate increased use of GIS mapping and analytics in coming years. Yet, implementation still lags behind. Joint agency planning and resource pooling are still not widely seen despite praising coordination as key for all humanitarian efforts. In 2024, only 48% of respondents to a global survey said they promoted local staff into senior logistics roles, despite calling localization essential. Similarly, while 80% see digital tools as transformative, most organizations rarely use AI or advanced tech due to funding, training, or infrastructure gaps (Salem & Winter, 2025).

Rigid structures and financial aspects remain a major obstacle. In 2024, 61% of humanitarian supply chain professionals identified underfunding as the main barrier to digital progress (Salem & Winter, 2025). But the problem runs deeper than money. Donor funding rules often restrict how money can be used, making it hard to test new tools or approaches. At the same time, internal decision-making is too slow to respond to the fast-changing realities on the ground. As Kelsie said, “By the time a new solution is validated, the situation may already have changed.” Decision-making delays and outdated procedures mean frontline ideas often stall before being taken into account and tested.

If adaptive systems are to become the norm, governance and funding must evolve towards it together. Innovation requires both resources and permission. Field teams need more autonomy, faster internal processes, and the space and resources to try new solutions before it’s too late.

6.3. Improvisation as a motor of innovation

As seen in Section 5, field teams often rely on improvisation when formal systems fail. This is not a sign of disorganization but a form of innovation under constraint. Improvisation is how aid continues when official channels are blocked, materials are missing, or time is short. These improvised solutions are grounded in local knowledge, speed and a clear sense of priorities.

Throughout the interviews, we have observed the importance of these kinds of on the spot solutions. It could be building a field hospital using greenhouse frames when official imports were denied or using cloth to filter fuel and keep generators working. These are not exceptions, they are examples of how logistics is sustained in emergencies.

What makes this kind of innovation different is that it rarely follows formal protocols. It is built through trial and error, shaped by experience and often supported by smart thinking of local staff. The problem is that these solutions are rarely recorded or shared. They disappear once the emergency ends. That is a missed opportunity for institutional memory. What works in the field should not be forgotten or dismissed. It should be captured, shared, and where possible reapplied.

Improvisation needs to be recognized as part of innovation strategy. Not just tolerated, but supported. Organizations should create simple ways to collect, document, and share field solutions. They should give teams the trust and space to adapt when needed. They should also treat field experience as a key source of learning, not just backup relying on the autonomy of first responders when systems fail.

In the future, the most effective innovations may not come from technological breakthroughs developed in labs or headquarters, but from the skills and adaptability of first responders. Their knowledge is already keeping operations running under constraint. We just need to value it.

6.4. Technological innovations

New technologies offer valuable tools for humanitarian logistics, but their adoption depends on context. Many of these tools were first developed for military or commercial purposes and then adapted for humanitarian use. A prime example is drone technology (UAVs). Drones, for example, were initially designed for military operations but are now being explored for last-mile aid delivery. In theory, they can bypass destroyed roads and reach remote or dangerous areas with small packages or medicines. This is especially promising in natural disasters or hard-to-reach regions.

However, drones face major limitations in conflict zones with restricted airspace with tight regulatory controls where a drone flight might be seen as a military threat by combatants and taken down. They are also challenged by their low payload capacity, weather sensitivity, limited battery range and high operational costs. Drones are promising but remain difficult to scale in militarized settings like Gaza.

Going forward, drones may play a niche role like transporting medical samples or small packages to hard-to-access locations, especially as costs come down and technology improves. But their wide-scale humanitarian deployment will depend on overcoming logistical and political hurdles, something likely only feasible in certain contexts like natural disaster response or stable humanitarian corridors rather than in highly militarized crises.

Another area of growing interest is artificial intelligence. AI can support humanitarian logistics through route planning, demand forecasting, or predictive analysis. Respondent 3 imagined systems where “you input a cargo and it tells you the best route, best provider, best cost” instantly. AI and machine learning are already being tested for scenario simulations and

predictive analysis. It can serve for real-time mapping or to anticipate supply needs based on weather or conflict data.

However, in practice, the adoption of AI is limited. A major reason is that most organizations lack the real-time, reliable data that AI systems require. An emergency supply chain officer (Respondent 3) noted that in emergencies, “you are always one step behind.” Current surveys confirm this. Over 80% of aid organizations reported never or only occasionally using AI tools for tasks like routing, inventory or procurement. Even by the end of 2025, only 19% expected to adopt them. The enthusiasm is there on paper and AI is seen as having a positive impact in theory, but on the ground there is caution. For now, AI is seen as a useful assistant for mapping or crunching numbers but not as a replacement for human judgment in volatile settings.

That said, some progress is happening with AI mapping tools (like Live UA Map) used to improve situational awareness in conflict zones. The potential for AI to serve as a smart decision support and an institutional memory which uses past data to improve future planning is real. Investments in these areas could pay off as data infrastructures improve.

Beyond AI, digital systems more broadly are also being introduced to modernize logistics. These include Enterprise Resource Planning (ERP) systems for end-to-end supply chain management, blockchain for supply transparency and cloud-based platforms for coordinating shipments. When working well, they improve tracking, cut down audit times and improve transparency. Digital tracking and data management allow them to know exactly where stocks are and share information across regions instantly. Blockchain systems have been used to ensure traceability of aid adding transparency and trust in how funds and goods flow. Data analytics can also help to achieve greener operation by measuring and reducing carbon footprint or optimize energy usage.

However, the reality for most organizations is far less advanced. Many agencies operate with incompatible systems leading to rework and delays. Respondent 2 observed that within the UN, different agencies work independently and their platforms don’t communicate with one another. “Interoperability is essential, but still far off”. This lack of common systems means information often must be re-entered or passed over manually, slowing down the response.

Moreover, going digital is hard and failed ERP rollouts are a known issue, their implementation can fail due to poor planning or lack of staff training to use them. In emergencies, logisticians often return to basic tools like paper forms and improvised methods, as advanced systems tend to arrive too late to be useful. For these technologies to help in the field, it must be simple and quick to deploy.

On the other end, not all smart tools are high-tech. Some of the most impactful innovations in humanitarian logistics over the past decade have been relatively low-tech but yet transformative. Take the widespread adoption of mobile communications. Field teams today benefit from mobile phone networks and satellite communication everywhere. This connectivity enables real-time coordination, even via simple means like WhatsApp groups, that was previously impossible. Another game-changer is the use of solar power. Stéphanie noted that “Today, some hospitals run entirely on solar. Ten years ago, that was unthinkable.” Portable

solar units and generators alone can now keep isolated clinics and supply warehouses running, reducing dependency on fuel convoys.

Similarly, the rise of mobile money and electronic cash transfer programs has revolutionized how aid reaches people. Organizations can distribute assistance via SMS or digital wallets, allowing families affected by crisis to buy what they need locally. This not only speeds up delivery since no physical shipment is needed but it also reduces security risks associated with transporting and storing supplies or cash. As Stéphanie explained, cash-based aid is cheaper, faster and “less paternalistic.” It empowers beneficiaries to make their own choices as they are the ones that know what they need the most.

Other basic tools like GIS mapping have become essential in the field. From community “mappathons” to GPS devices guiding drivers, geospatial technology helps teams plan better and stay safe in unfamiliar or insecure areas. Live maps showing roadblocks or conflict hotspots, like Live UA Map, can prevent dangerous delays. These examples show that simple and appropriate technology, not necessarily cutting-edge, can also achieve great results.

Despite all these opportunities, many innovations remain limited in scale or impact. Technologies cited above like drones, AI and others are often tested in pilots but rarely scaled. Most of these technologies come with preconditions such as reliable electricity and internet, technical expertise, regulatory approval, maintenance capacity. These conditions are not always easy to achieve in conflict zones. Scale and cost are other barriers since a tech solution that works in a small pilot setting might fail to scale-up to emergencies or be too expensive to be sustained.

Furthermore, technology cannot overcome certain fundamental issues. As Federico said, “You can’t digitalize food.” This means that no technology can eliminate the need to physically move tons of supplies through challenging environments. Likewise, no innovation can substitute for humanitarian access when it is denied by armed actors.

Thus, to be effective, new technologies must match the realities of the field. They must support, rather than replace, the human knowledge, relationships, and decisions that drive logistics. The future lies in using technology wisely, without forgetting that people keep the system running.

7. Limits of the thesis

This thesis offers insights into humanitarian logistics in conflict zones but remains subject to several non-methodological limitations, including conceptual, scope-related and contextual challenges.

a. Scope and thematic focus

Humanitarian logistics in conflict zones is a vast and multidimensional domain. To keep the thesis focused and coherent, we made the choice to concentrate on certain aspects like ethical dilemmas, human factors, and operational challenges while giving less space to more technical or model-based approaches. This allowed us to go deeper into the areas we found most meaningful, but it may limit how well our findings connect with studies based on quantitative data or systems optimization.

At the same time, the richness of materials sometimes made it difficult to maintain a clear and adequate focus. The thesis gradually became longer and denser than expected, reflecting the complexity of the topic but also making it harder to keep consistency across all parts. Some dimensions may be overdeveloped, while others had to be simplified or left in appendices. These trade-offs were necessary but may limit how broadly the findings can be applied.

b. Information environment

The study is mostly based on public reports, academic sources, and trusted media. While useful, these official documents can reflect dominant narratives and may overlook informal practices, failures, or local knowledge.

In Gaza especially, some information was changing quickly or couldn't be verified at the time. We occasionally referred to recent media coverage. While these sources are not peer-reviewed, we ensured they came from trusted outlets and were corroborated by multiple sources before including them. They were used only to follow the conflict's evolution, not as a basis for central analysis or conclusions. New developments after our research may also affect the validity of some conclusions.

c. Inherent complexity of the domain

Humanitarian logistics in conflict zones is complex and often political. Many actors are involved, operations are fragmented, and conditions change quickly which makes analysis difficult. We also lacked access to internal or confidential reports that could reveal informal practices or failures. It was also difficult to track all developments and fully grasp the interplay between political, operational and logistical factors throughout the different crises.

d. Conceptual shift

The research began with a focus on traditional supply chain models. But as we gathered insights from the field, we shifted toward a more practical and socially grounded approach that better fits the realities of conflict settings. This shift helped us stay relevant, but it makes our findings less comparable with studies based on strict or technical logistics models.

e. Adjustment of the research question during analysis

We revised our research question during the analysis phase because we realized the original version didn't fully reflect the complexity of what we were seeing. This helped us better match the question to our findings, but it also created some tension with the initial research design. As a result, parts of the data or case structure may feel slightly misaligned or not fully explored.

f. Limits to generalization from adaptive strategies

As outlined in the methodological limits, basing our analysis on two case studies helped us explore humanitarian logistics in depth but it also limits how broadly our findings can be applied. Many of the insights and recommendations in this thesis are shaped by the specific political, operational, and organizational realities of Gaza and Mali. What worked in these settings may not work the same elsewhere without adaptation, since success depends on local conditions, actor dynamics and the nature of the crisis. These findings should therefore be understood as mostly context-specific rather than universal solutions.

g. Balance between critique and feasibility

In Sections 5 and 6, we put a strong focus on the ethical side of logistics, the value of human judgment and the importance of more adaptive, localized systems. These ideas felt essential based on what we observed. However, we recognize that some of the recommendations we offer, especially those calling for structural or cultural shifts, may be difficult to put into practice. Our research did not cover how such changes could realistically happen within current humanitarian systems, which are often shaped by institutional constraints and complex coordination structures. This means that while our proposals point to meaningful directions and areas we believe deserve more attention, their feasibility in real-world settings remains uncertain.

8. Conclusion: managerial recommendations

This thesis began with the idea that humanitarian logistics is not only technical, but also strategic and deeply human. The Gaza and Mali case studies allowed us to observe how different conflict contexts shape aid delivery in practice. They revealed recurring obstacles, such as access denial and coordination failures, but also context-specific patterns of adaptation.

The comparative analysis helped us identify structural gaps and common challenges across both crises. Field interviews added a critical layer, offering grounded perspectives that questioned assumptions found in reports and highlighted the importance of human judgment, local networks, and improvisation. Together, these elements deepened our understanding of what enables or hinders humanitarian logistics under pressure.

Building on this empirical base, the heart of our work lay in the analytical effort to interpret these data points coherently. We aimed at understanding what breaks, what holds, and what adapts in humanitarian logistics when crises are prolonged, access is challenged, and systems face repeated shocks. We do not claim to offer definitive answers, but rather a synthesis shaped by observation, reflection, and engagement with both theory and field realities. Yet within these bounds, we have aimed to offer a vision that is both grounded and honest.

In the final stage of the thesis, we turned toward the future, outlining the emerging challenges and opportunities that will shape humanitarian logistics in the years to come. This reflection on the horizon ahead reinforced our key finding that adaptation is not a luxury, but a necessity and that it must be understood not only as a reactive measure but as a core strategic mindset.

Based on all of this, we now offer a series of open managerial recommendations. These do not claim universality, but reflect our interpretation of the evidence gathered throughout the thesis. They are intended as practical suggestions for humanitarian actors seeking to strengthen the responsiveness, integrity, and resilience of aid logistics in high-risk conflict zones.

We suggest designing logistics systems that are flexible enough to let field teams make decisions when central coordination is delayed or impossible. This means setting clear limits for when local teams can take over and giving them the tools to act quickly and confidently. We also suggest relying more on local sourcing and giving national staff greater autonomy, not just as a short-term fix, but as a long-term strategy to make supply chains more resilient. In our understanding, chains of command remain largely hierarchical and top-down, but our study clearly shows the need to shift decision-making power toward those who know the field best... the people actually working on it.

We also encourage continuing to invest in redundancy by diversifying routes, suppliers, and storage options to avoid complete shutdowns when access is blocked. This need was clearly highlighted in the interviews, and in many cases, is already part of how operations are managed. Still, we believe it is crucial to maintain these safety margins. They may seem inefficient from a logistics perspective but they are essential to humanitarian outcomes. While more advanced planning tools and tracking systems may help reduce the need for oversupply in the future, conflict zones will likely remain unpredictable. What may seem like logistical excess is often vital to saving lives. Coordination systems, while necessary, should also stay simple and

inclusive. We suggest favoring tools that are clear and easy to use, and that make space for local actors to contribute meaningfully to decisions.

We believe it's important to put more focus on preparedness, rather than waiting to react once a crisis has already begun. This isn't a new idea, many teams already work this way, as we saw in the experiences from the field. Some interviewees, especially those in emergency response pools, described the need to be ready to act at any moment. But readiness isn't just about planning, it also depends on having access to acting power and flexible funding without delay. Particularly in large agencies, we noticed that operations might be slowed down because funding or project approval were delayed. This lost time can be critical in the first days of an emergency. From our perspective, speeding up processes and being prepared for any kind of emergency is essential for getting aid where it's needed right away.

Innovation can support this effort, especially in planning and information sharing. However, relying too much on complex technology in unstable settings is risky as it often doesn't work as intended. In many situations, simple and scalable tools are more effective because they allow teams to move quickly and adjust on the ground. At the same time, learning from past experience depends on strong institutional memory. That's why we see real value in investing in digital systems, like ERPs or automated databases, that help teams access past mission data easily and use it to improve future responses.

We also believe it's time to rethink how performance is measured in humanitarian logistics. Too often, success is judged by the volume of goods delivered. But delivering huge amounts means little if key needs are missed or if aid isn't distributed fairly or ethically. What matters is how aid is delivered, whether it meets real needs, whether teams can stay over time without causing harm and whether they can adapt in difficult conditions.

We think that humanitarian work should refocus on its core mission: helping people with dignity and respect. This needs to be done by listening to communities, understanding what they truly need, and working in ways that support but not replace their own capacities. It should never become a competition between organizations over who can deliver the most. Aid should not be about numbers or doing more but it should be about doing better.

Most importantly, we feel it's essential to remember that logistics in humanitarian crises is about people. Good judgment, negotiation skills, and ethical awareness matter just as much as infrastructure or supply chains. Field teams need strong support, not just in terms of logistics but also emotionally and institutionally. This is essential to keep operating in extremely tough conditions.

These suggestions are not exhaustive. They reflect what we have seen, heard, and analyzed over the course of this thesis. They are offered not as prescriptions but as contributions to an ongoing conversation, one that must remain attentive to both the complexity of crises and the courage of those who respond.

This thesis has been a deeply enriching experience for us, both intellectually and personally. We chose a topic that felt urgent and important, and we quickly realized how complex and wide it truly is. At times, it was difficult to keep a narrow focus, but this challenge also pushed us to

think critically, to learn from real experiences, and to reflect on the deeper meaning behind humanitarian action. We hope that readers can also take something from our research and that our work helps bring new perspectives to the field.

What we ultimately take from this journey is that logistics is not just about moving goods. It's about facing uncertainty with purpose, care, and integrity. It's about making hard choices under pressure, while always keeping in mind the people we aim to help. In the end, the real challenge of humanitarian logistics is not just to deliver but to deliver with humanity.

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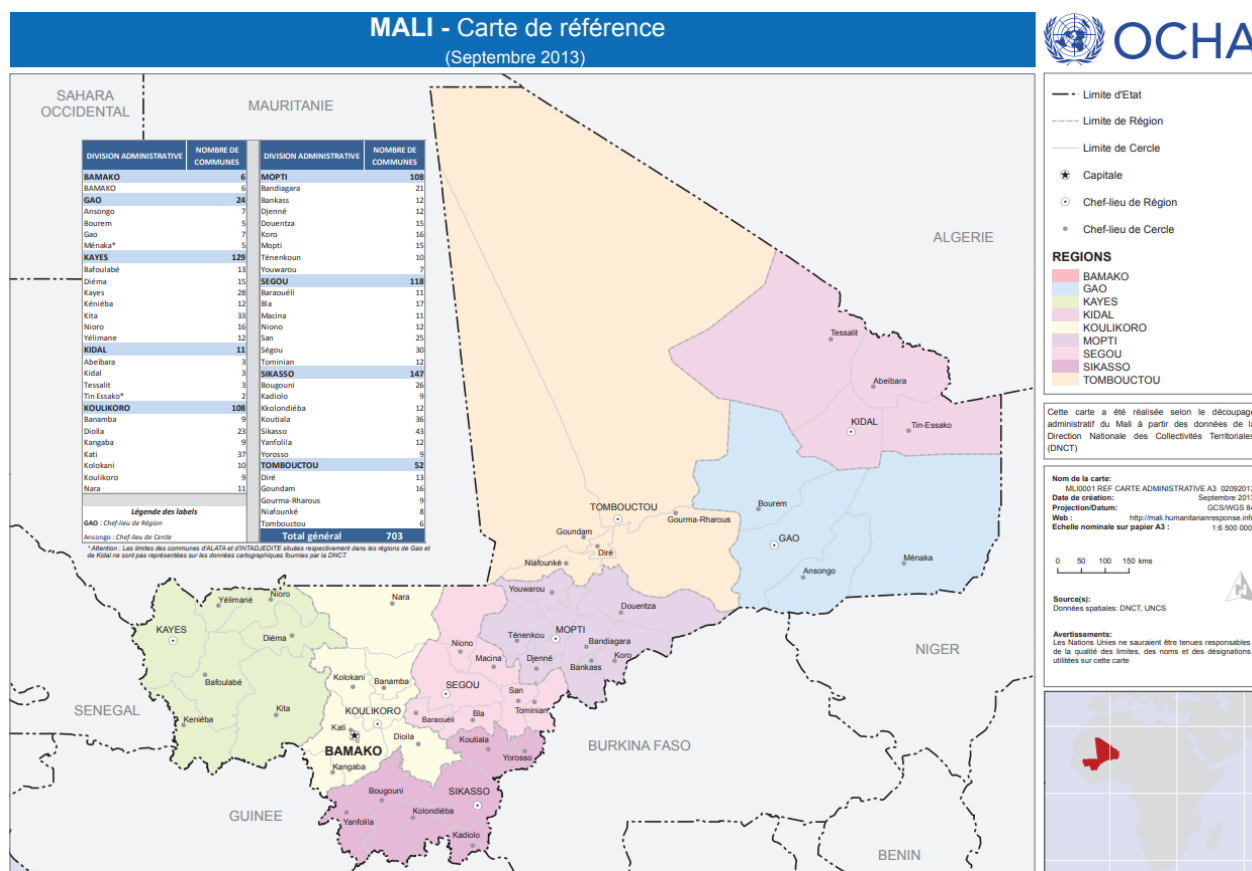
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10. Appendices

Appendix A - Mali case study

Appendix A1. Mali's reference map.

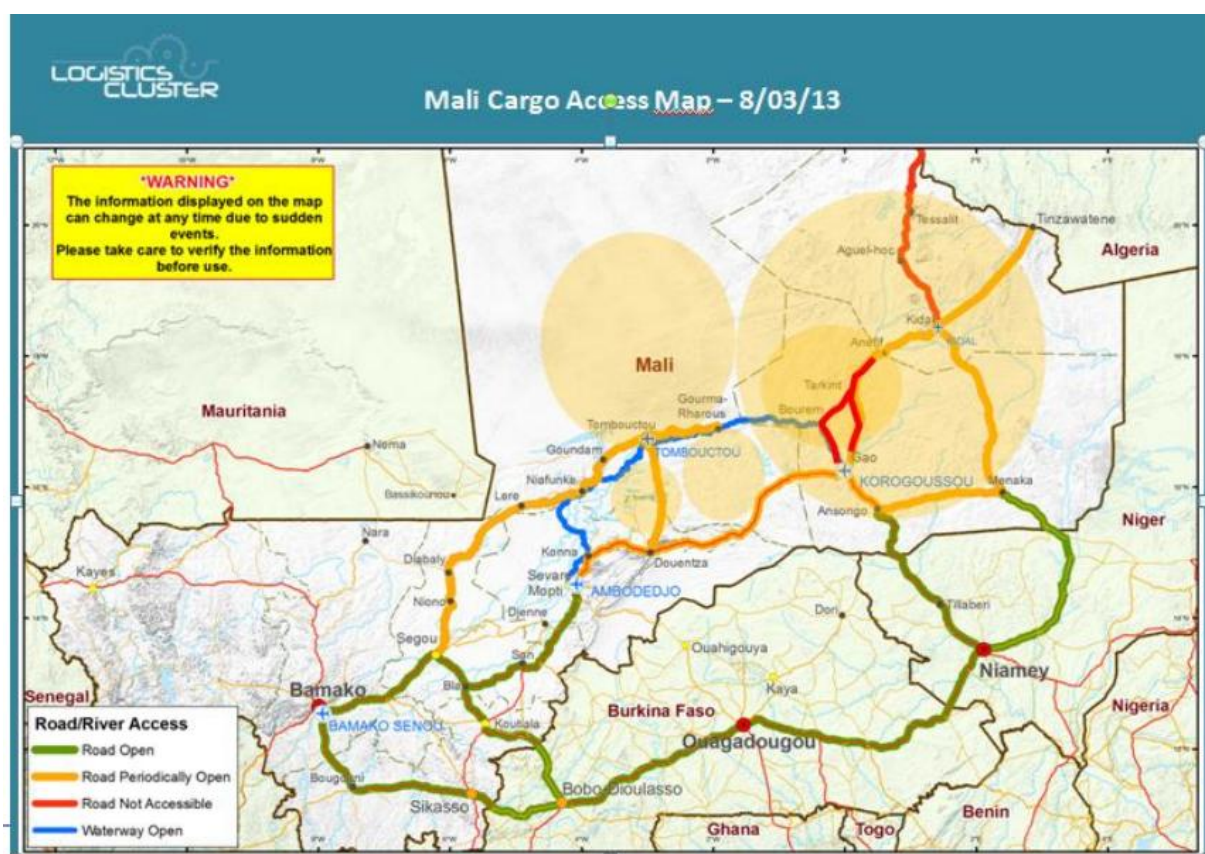


Source: United Nations Office for the Coordination of Humanitarian Affairs. (2013, September 6).

Mali – Carte de référence (Septembre 2013) [Map]. UNOCHA.

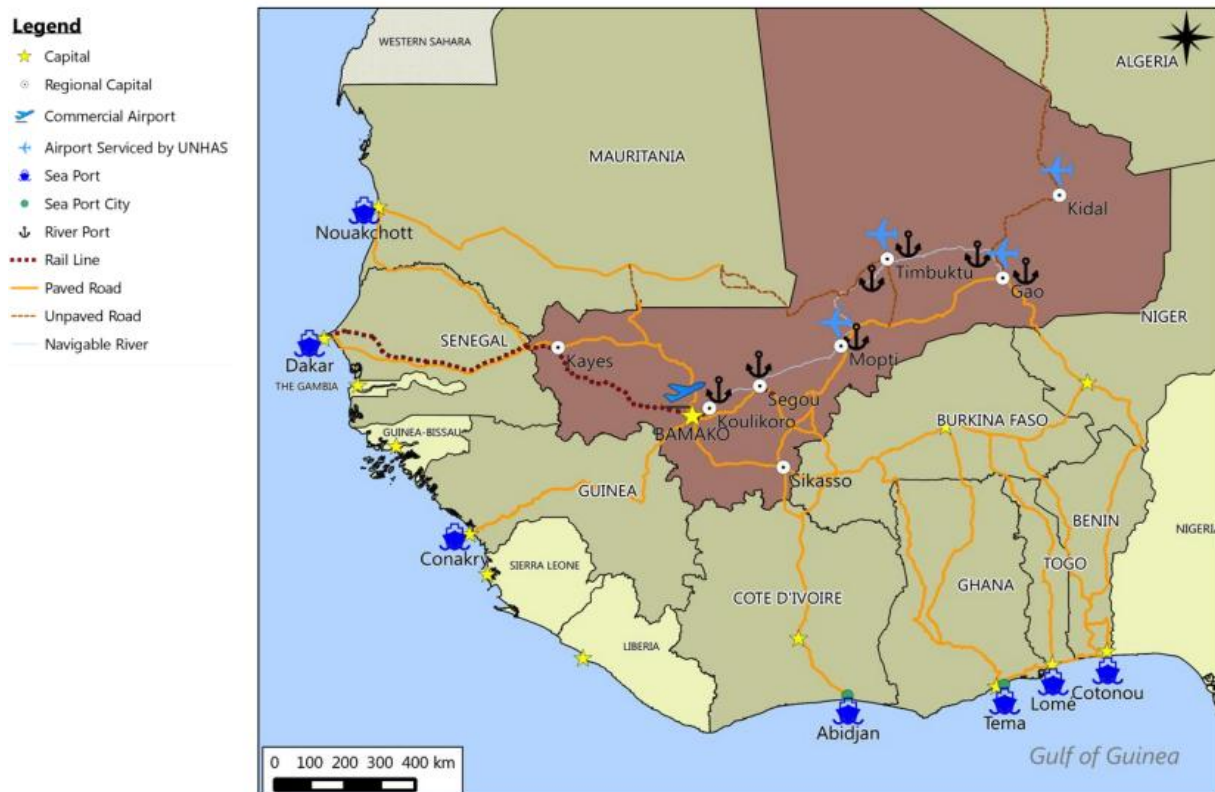
<https://www.unocha.org/publications/map/mali/mali-carte-de-r%C3%A9f%C3%A9rence-septembre-2013>

Appendix A2. Mali cargo access map.



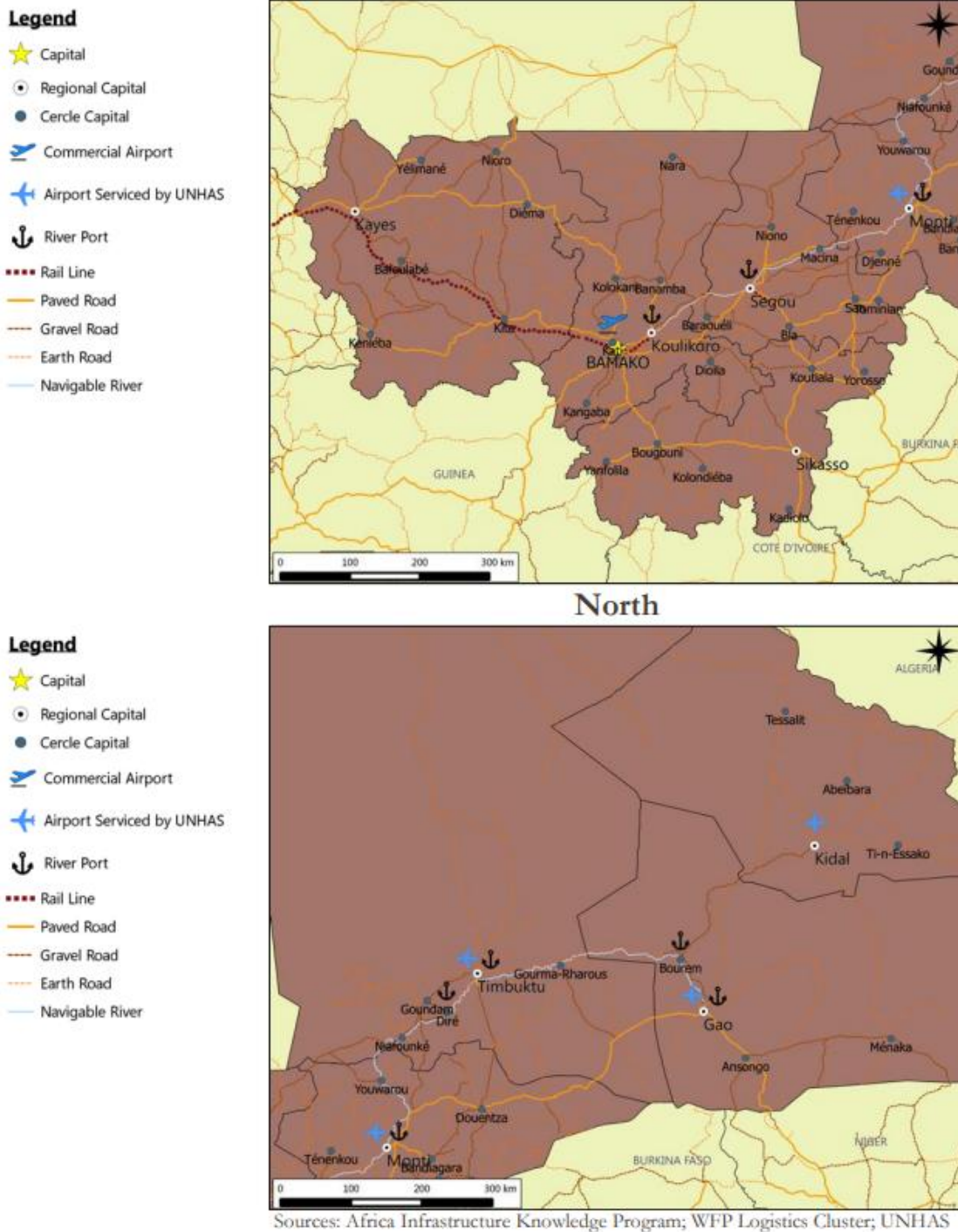
Source: World Food Programme. (2013b). *Mali regional operational update*. World Food Programme; https://executiveboard.wfp.org/document_download/WFP-0000050393

Appendix A3. Primary international corridors to Mali.



Source: Wulf, E., & Mesko, F. (2014, January). *A fragile recovery: Operations and logistics in post-conflict Mali*. Center for Advanced Defense Studies (C4ADS). <https://c4ads.org/wp-content/uploads/2014/01/AFragileRecovery.pdf>

Appendix A4. Primary domestic corridors South & North.



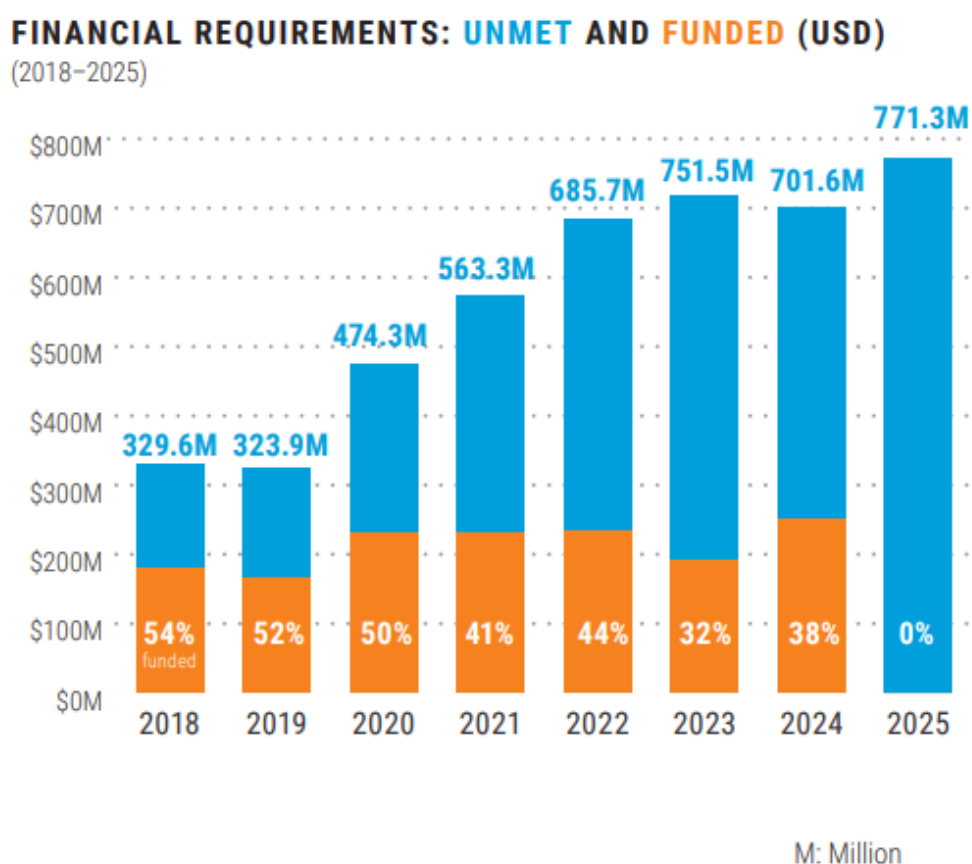
Source: Source: Wulf, E., & Mesko, F. (2014, January). *A fragile recovery: Operations and logistics in post-conflict Mali*. Center for Advanced Defense Studies (C4ADS). <https://c4ads.org/wp-content/uploads/2014/01/AFragileRecovery.pdf>

Appendix A5. Number of Internally Displaced Persons in Mali trend (2012–2014).



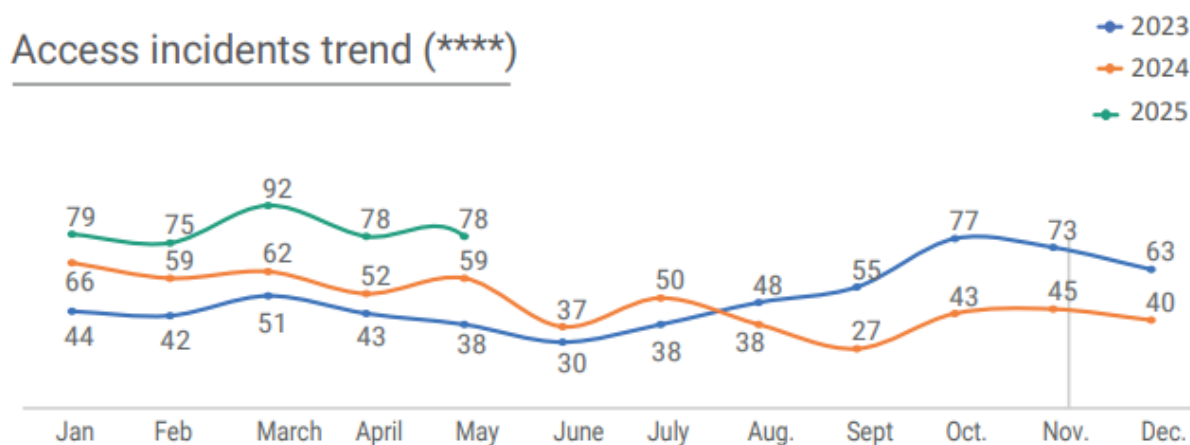
Source: Internal Displacement Monitoring Centre. (2012-2024). *Internally displaced people (IDPs)*. IDMC. <https://www.internal-displacement.org/database/displacement-data/>

Appendix A6. Humanitarian financial requirements: Funded vs. Unmet in USD (2018-2025)



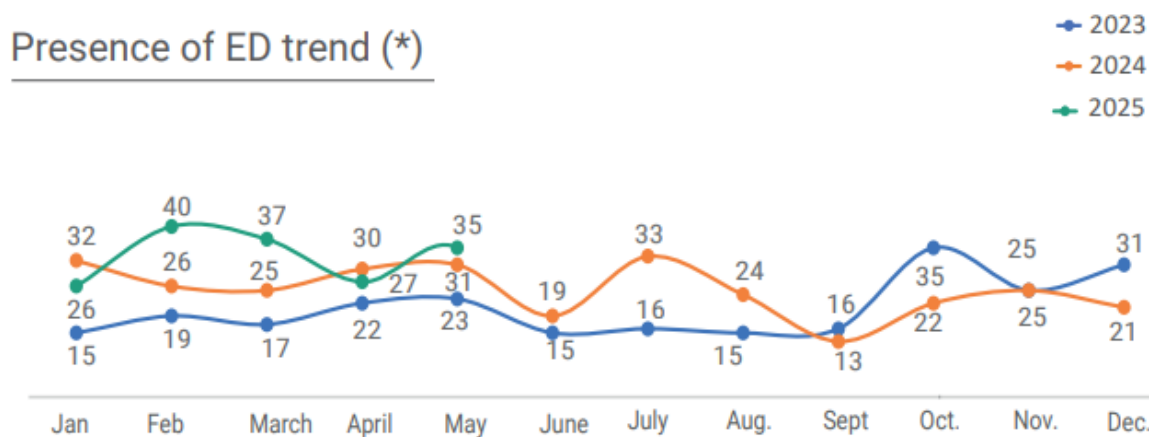
Source: United Nations Office for the Coordination of Humanitarian Affairs. (2025a, January). *Sommaire - Mali 2025 : Besoins humanitaires et plan de réponse (HNRP)* [Report]. <https://www.unocha.org/publications/report/mali/sommaire-mali-2025-besoins-humanitaires-et-plan-de-reponse-hnrrp-fren>

Appendix A7. Number of access incidents trend (2023-2025)



Source: United Nations Office for the Coordination of Humanitarian Affairs. (2025c June 16). *Mali: Humanitarian access dashboard (May 2025)*. [Situation report].
<https://www.unocha.org/publications/report/mali/mali-humanitarian-access-dashboard-may-2025>

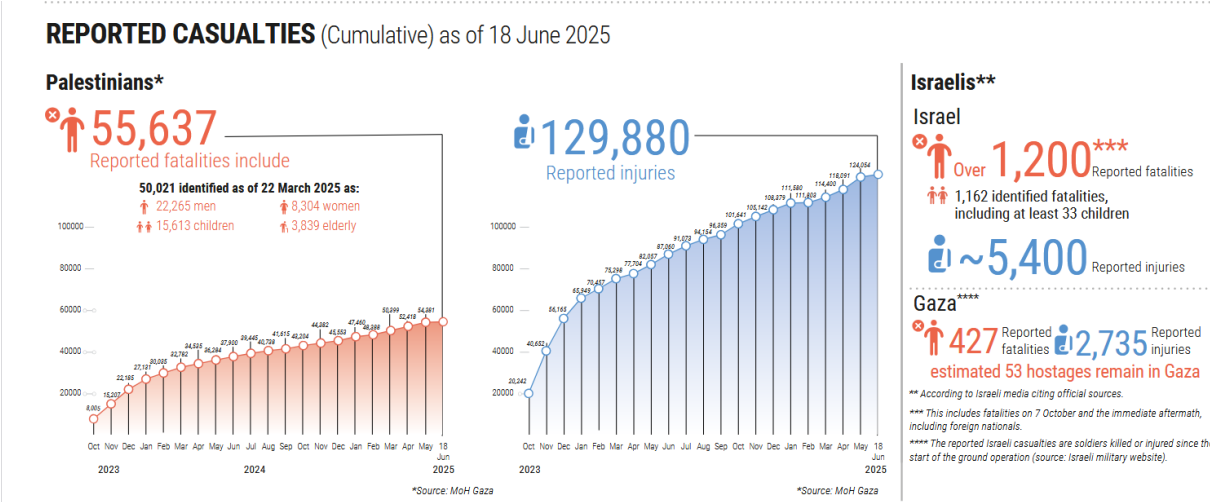
Appendix A8. Presence of ED trend (2023-2025)



Source: United Nations Office for the Coordination of Humanitarian Affairs. (2025c June 16). *Mali: Humanitarian access dashboard (May 2025)*. [Situation report].
<https://www.unocha.org/publications/report/mali/mali-humanitarian-access-dashboard-may-2025>

Appendix B - Gaza case study

Appendix B1. Reported casualties evolution (October 2023-18 June 2025)



Source: OCHA. (2025j) (using MoH Gaza data and Israel media citing official sources).
<https://www.ochaopt.org/content/reported-impact-snapshot-gaza-strip-18-june-2025>

Appendix B2. Map of Gaza showing the crossings and the evacuation road as of November 1, 2023.

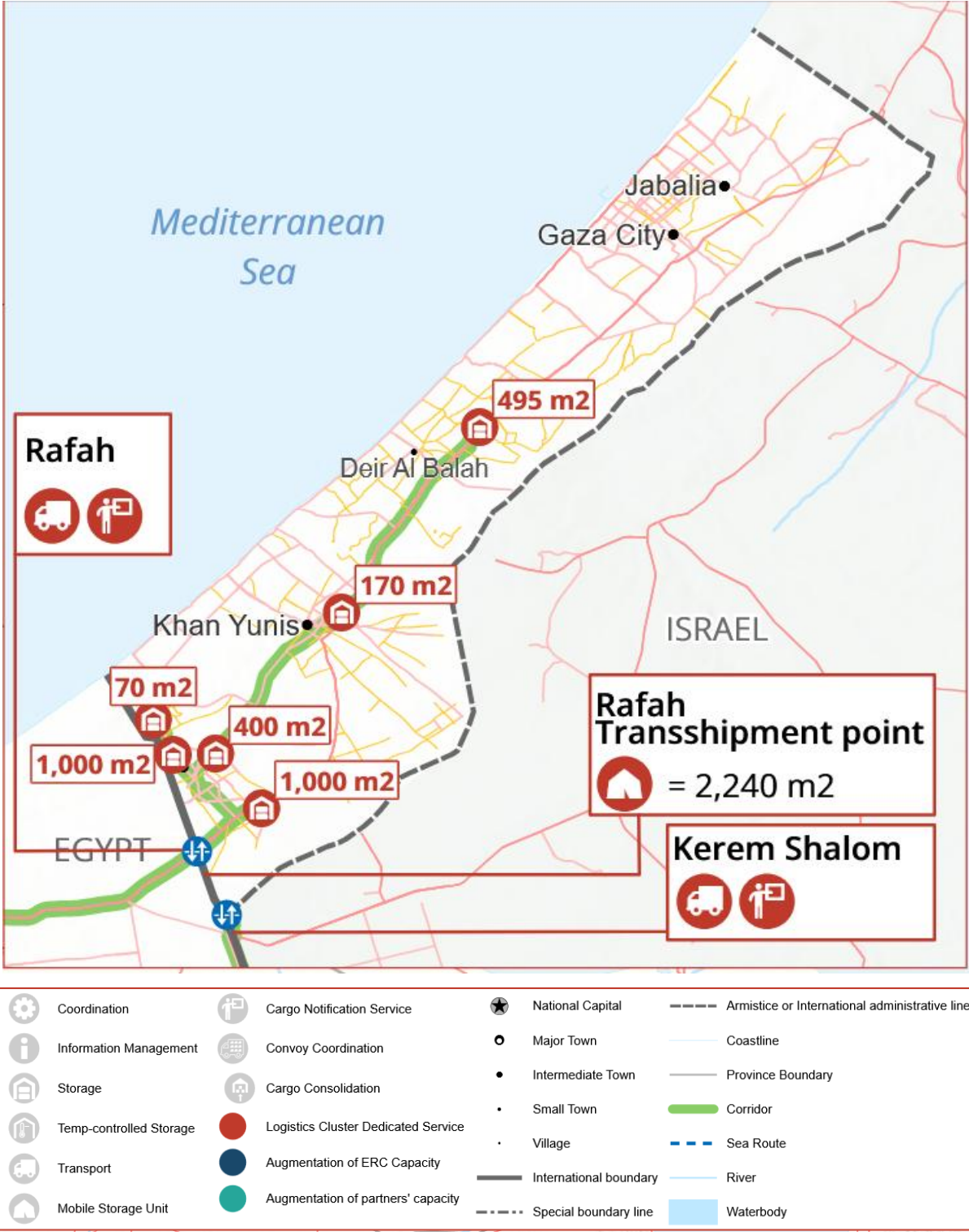


Source: UN Ocha, 2023, Israeli Defence Force

BBC

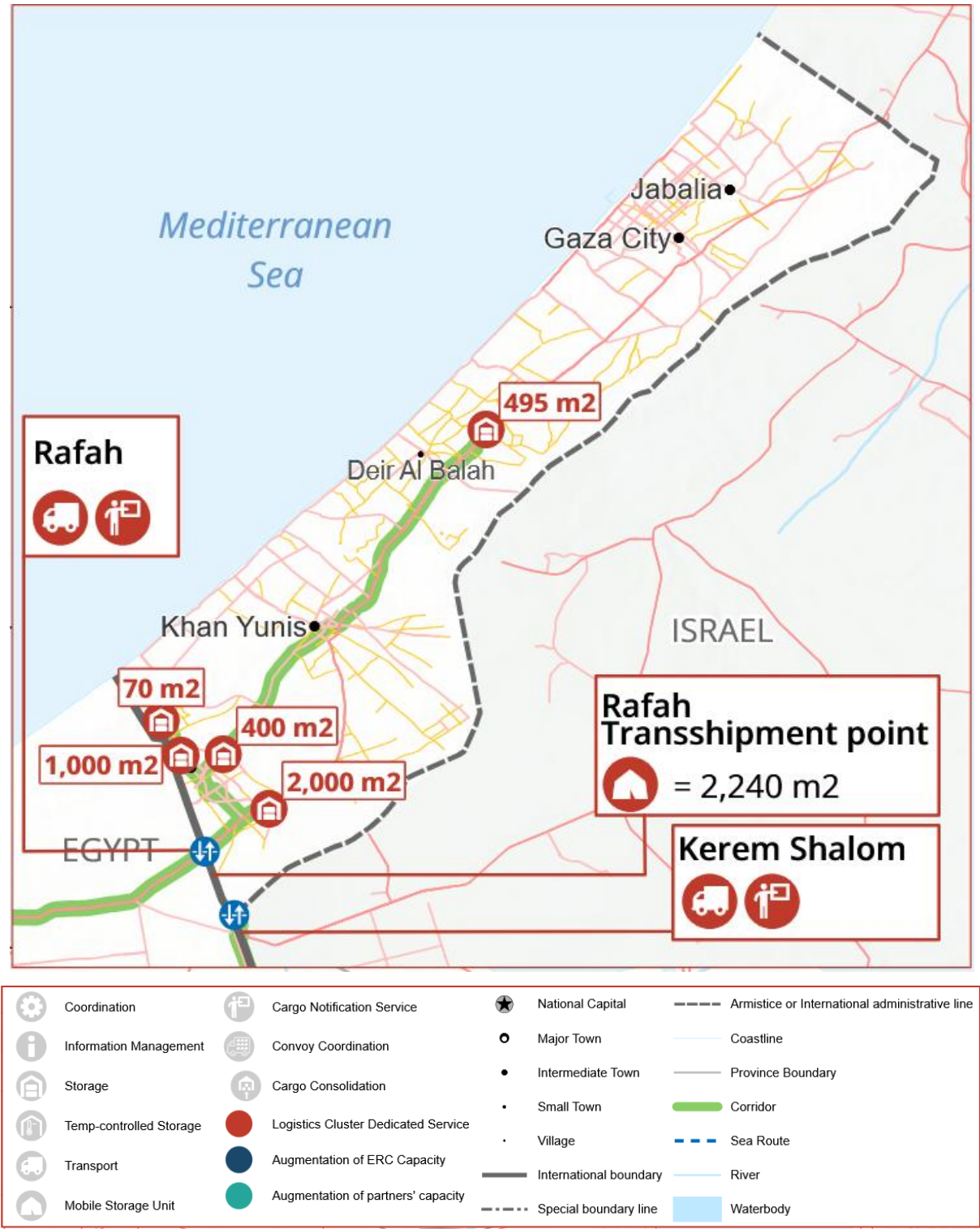
Source: BBC News. (2023, November 1). *What is the Rafah crossing and why is it Gaza's lifeline?*
<https://www.bbc.com/news/world-middle-east-67121372>

Appendix B3. Map of Gaza's concept of operations as of February 24, showing corridors, storage spaces and crossings used.



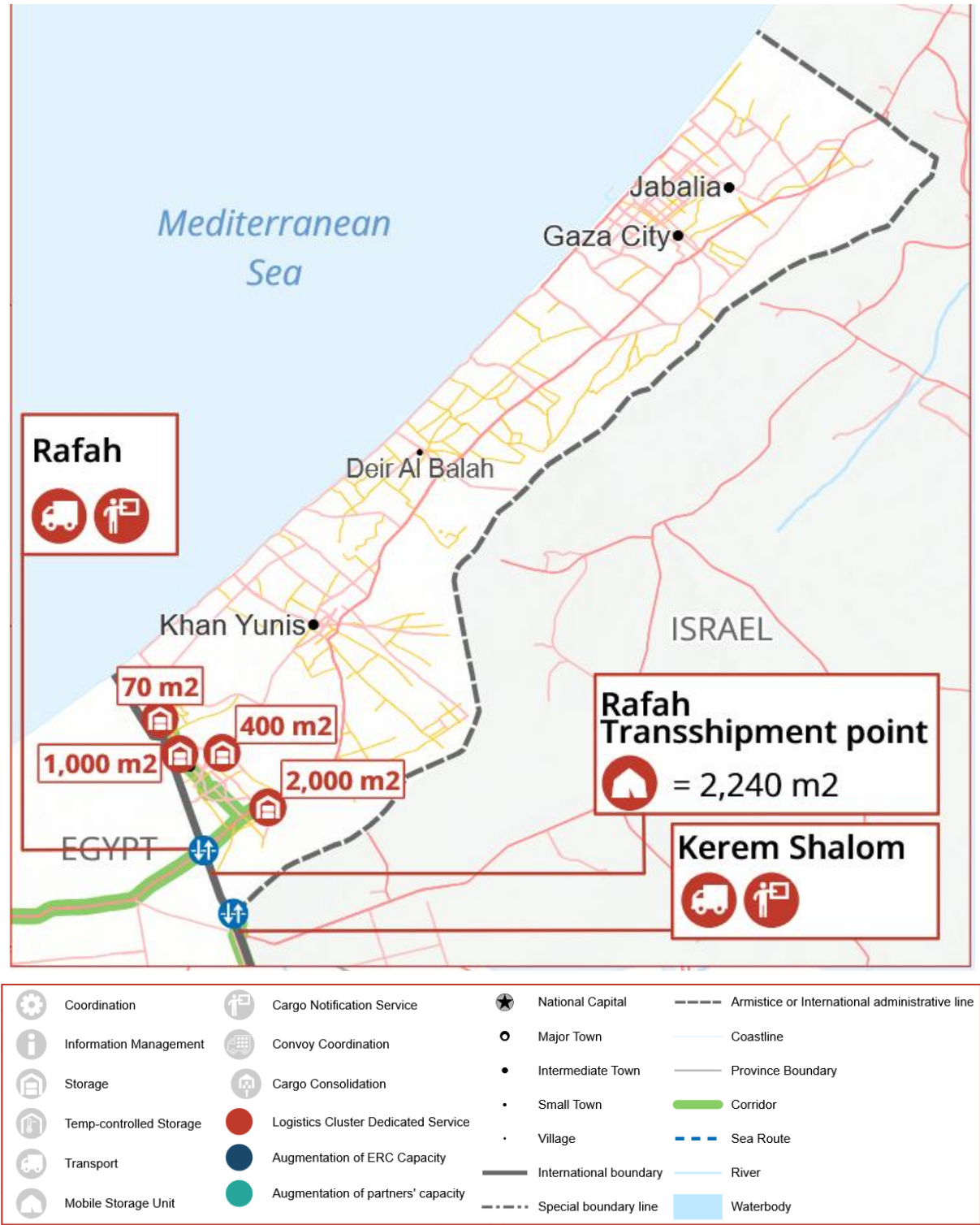
Source: Logistics cluster. (2024, February 26). *Palestine - Concept of Operations (CONOPS) Map February, 2024*. Logistics Cluster website. <https://logcluster.org/en/document/palestine-concept-operations-conops-map-february-2024>

Appendix B4. Map of Gaza’s concept of operations as of March 24, showing corridors, storage spaces and crossings used.



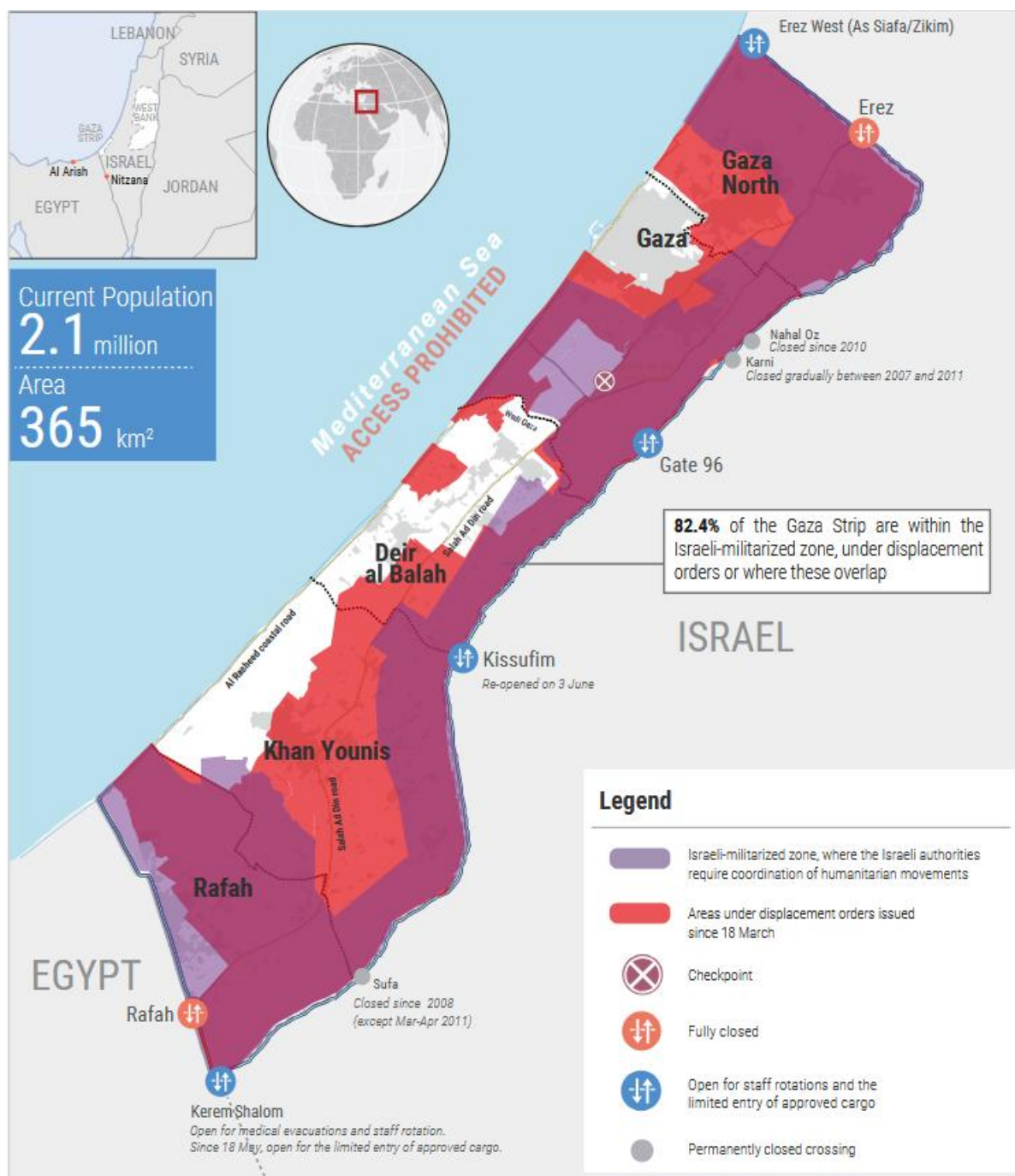
Source: Logistics cluster. (2024, March 26). *Palestine - Concept of Operations (CONOPS) Map March, 2024*. Logistics Cluster website. <https://logcluster.org/en/document/palestine-concept-operations-conops-map-march-2024>

Appendix B5. Map of Gaza’s concept of operations as of April 2024, showing corridors, storage spaces and crossings used.



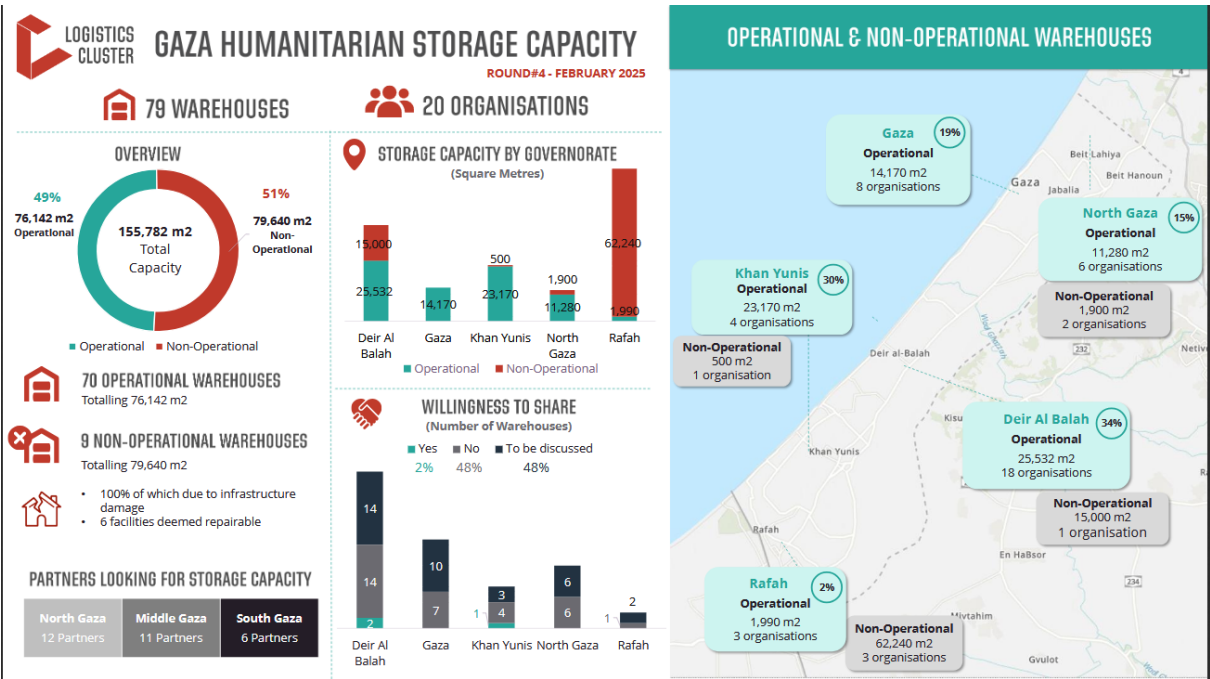
Source: Logistics cluster. (2024, April 5). *Palestine - Concept of Operations (CONOPS) Map April, 2024*. Logistics Cluster website. <https://logcluster.org/en/document/palestine-concept-operations-conops-map-april-2024>

Appendix B6. Map of Gaza as of June 2025, showing Israel-militarized and/or under displacement zones.



Source: OCHA. (2025j) <https://www.ochaopt.org/content/reported-impact-snapshot-gaza-strip-18-june-2025>

Appendix B7. Infographic from the logistics cluster about Gaza humanitarian storage capacity as of February 2025.



Source: Logistics cluster. (2025, April 17). *Gaza Humanitarian Storage Capacity, February 2025*. Logistics Cluster website. <https://logcluster.org/en/document/palestine-gaza-humanitarian-storage-capacity-february-2025>

Appendix C - Detailed table of the comparative analysis

Comparative Analysis				
Key Dimensions	Comparison Criteria	Likert Scale from 1 (worse case) to 7 (best case)	Mali score	Mali Justification
1. Civilian protection, ethics, and IHL compliance <i>International humanitarian law & neutrality principles respect and civilians safety.</i>	Civilian safety and protection from attacks	1 = Civilians deliberately targeted, mass harm, no protective measures 7 = Civilians actively avoided in hostilities, low harm	2	Civilians in northern Mali suffered severe repression under jihadist control. The imposition of Sharia law led to executions, amputations and sexual violence.
	Protection from forced recruitment of civilians	1 = Widespread forced recruitment 7 = No evidence of forced recruitment, civilian protection from conscription	1	Forced recruitment of children reported in Kidal, Gao, and Timbuktu. Although some prevention efforts existed, recruitment persisted throughout the conflict, especially in 2014-2015.
	Protection of civilian infrastructure from attacks	1 = Frequent, deliberate strikes on schools, hospitals, markets, or utilities 7 = Civilian sites consistently respected and avoided in attacks	3	Schools and hospitals looted/destroyed + equipment and plumbing stolen. Armed groups occupied administrative buildings, especially during clashes in Kidal in 2014.
	Respect for international humanitarian law (IHL)	1 = Constant violations of IHL 7 = Consistent compliance with IHL	1	IHL was widely violated throughout 2012-2015. Both rebels and government forces committed abuses: executions, torture, and ethnic targeting. The UN condemned human rights violations and those abuses.
	Acceptance of humanitarian neutrality by conflict actors	1 = Humanitarian actors frequently rejected or attacked 7 = Neutrality respected and humanitarian actors protected from conflict	3	Access heavily restricted, NGOs somewhat attacked, perceived as aligned with foreign military. The blurring of military and humanitarian roles further undermined neutrality.
2. Access to essentials and civilian well-being <i>Population's access to basic needs and essential services.</i>	Access to essential services (water, electricity, sanitation)	1 = Services cut off, no safe water, power, or sanitation 7 = Reliable access to core services for civilians	3	Services collapsed in the north, only partially restored in some areas. Clean water, electricity and sanitation were critically impacted in northern regions.
	Food assistance coverage	1 = Minimal coverage, vast unmet food needs 7 = Food aid fulfill population needs	3	Food insecurity affected up to 1.5 million people in 2014. The WFP implemented both in-kind food distributions as well as MDM and UNICEF, and cash-based transfers. Despite these efforts, many needs remained unmet due to access challenges and underfunding.
	Functioning of local economy and markets	1 = Markets non-functional; goods unavailable or unaffordable 7 = Local economy stable; markets open and accessible	3	Markets and trade were heavily disrupted due to insecurity. Inflation, closed borders, and lack of goods limited access. Fuel prices rose by 80% in jihadist-held zones. Local procurement was preferred but still limited by violence.
	Habitability and dignity of civilian living conditions	1 = Confined, unsanitary, degrading conditions, no privacy 7 = Clean, secure space with privacy and basic comfort	3	While NGOs supported host families with vouchers and work-for-subsistence programs, living conditions remained precarious and lacked comfort, especially in northern conflict zones. Shelters had poor sanitation, limited privacy and a lack of essential infrastructure like clean water and latrines.
	Shelter adequacy, support and protection for displaced populations	1 = IDPs unsheltered or in unsafe conditions, disorganized support 7 = Safe shelter space available, IDPs assisted and housed quickly	2	IDPs mostly hosted by families with financial strain, only two official camps were established despite over 200,000 people displaced which represent around 1.4% of the population. In Mopti, for instance, 600 camp slots were made available for over 40,000 displaced. Shelters were often improvised or temporary.

Analysis				
Gaza Score	Gaza Justification	Comparison	Dimension Average Mali	Dimension Average Gaza
1	Over 55,000 Palestinians killed, and 129,000 injured by mid-June 2025. Densely populated area and designated "safe zones" were struck and targeted.	Both contexts show serious violations but Gaza is worse in terms of mortality. In Mali, violence was regionally concentrated. While in Gaza, it is widespread, urban and systematic, with mass civilian casualties and bombed safe zones.	2/7	1.6/7
4	No evidence of forced recruitment. Concerns remain from child exposure to military training and activities (especially from Hamas).	Mali has a worse record due to active child recruitment. Gaza has concerns but no confirmed widespread practice.		
1	Schools, hospitals, shelters targeted. Over 90% infrastructure non-functional by 2025.	Gaza is worse with extensive infrastructure destruction. In Mali, infrastructures were destroyed mostly during clashes.		
1	Constant IHL violations with prolonged siege tactics, starvation as a weapon, denial of humanitarian access, attacks on protected sites. ICJ and UNHRC repeatedly condemned actions, especially by Israel.	Both show major IHL violations, condemned by UN bodies.		
1	Neutral aid agencies attacked and targeted. Neutrality principle weakened by GHF and Israeli accusations of agencies collaboration with Hamas.	In Gaza, neutral aid agencies were directly attacked and accused of bias. While in Mali, NGOs were restricted due to the blurring neutrality but not systematically targeted.		
1	Civilians have in some case only 2-3 liters of clean water per day for all needs, far below humanitarian standards of 15L. Prolonged siege, fuel bans, and repeated power cuts make hospitals and water systems nearly impossible to function.	Gaza show a full failure of basic services with critical water need while in Mali there was a partial collapse with a strong impact in northern areas.	2.8/7	1/7
1	Food insecurity reached catastrophic levels. By May 2025, 470,000 people were in IPC Phase 5 and the entire population faced food insecurity. Food aid was blocked at borders, bakeries shut down and WFP stocks ran out. 71,000 children forecasted to be at risk if there is no sustained aid access urgently.	Gaza's situation is significantly more critical, facing full blockade, famine and breakdown in food supply. While in Mali, they were major gaps but WFP, MDM and UNICEF could operate.		
1	Markets broke under siege, goods unavailable or unaffordable. Farming and fishing halt left over 500,000 without income. No cash flow due to bank closures.	Gaza's economy has collapsed with no access to cash or goods, while Mali retained some limited market activity.		
1	Living conditions were unsafe and degrading. Shelters were overcrowded, with over 100 people per classroom, 100 per toilet, and 1,000 per shower. Most lived in tents or ruins, without hygiene, light, safety, or privacy, many burned waste to cook.	Living conditions were poor in both, but far worse in Gaza. Mali had basic support for host families, though infrastructure was lacking. In Gaza, extreme overcrowding, no sanitation and unsafe shelters made conditions degrading and almost unlivable.		
1	Over 90% of Gaza's population has been displaced, many multiple times as conflict areas keep expanding. Humanitarian actors couldn't keep up with the scale and speed of displacement. Shelters capacity are not sufficient. No large evacuation possible. Many had to sleep in tents or ruins, with no protection.	Gaza's shelter capacity was quickly outpaced by massive displacement. Mali was slightly less overwhelmed thanks to host families but formal shelter support was also very limited and capacity lacking.		

3. Humanitarian logistics and supply systems <i>Physical, technical, and operational logistics performance.</i>	Reliability of transport and delivery routes	1 = Routes blocked or unsafe, aid rarely reaches destination 7 = Delivery routes open, safe, and used consistently	5	Humanitarian access relied on road corridors from Dakar and Mopti but insecurity limited reliability. River and air transport were used as alternatives. MINUSMA helped secure corridors.
	Functionality of logistical infrastructure (roads, warehouses, crossings...)	1 = Key infrastructure unusable or destroyed 7 = Key infrastructure fully functional and accessible	4	Main entry points like Dakar-Bamako remained functional, though fragile. UN and ICRC logistics hubs in Mopti supported operations in the north. Key corridors stayed operational but only 13% of roads were paved and those were severely damaged due to seasonal rains. In this context, multimodal transport solutions proved valuable.
	Speed and efficiency of aid deployment	1 = Aid delayed, deployment slow and disorganized 7 = Aid deployed rapidly and efficiently to priority areas	5	Delays due to insecurity but joint logistics efforts improved response. Rapid deployment of food and medical supplies occurred in key cities like Gao and Timbuktu after French intervention.
	Continuity of supply flow (stockouts, corridor blockages...)	1 = Frequent stockouts, blocked corridors, or major custom disruptions 7 = Supplies move consistently without major interruptions	6	Aid flow was maintained through multimodal transport. The WFP deployed MSUs and increased warehouse space to avoid stockouts. Armed escorts and route monitoring helped ensure continuity despite security risks.
	Prepositioning and storage of relief goods	1 = No prepositioned stock and limited or unsafe storage 7 = Supplies prepositioned and ready to be delivered and sufficient secure local storage	6	Prepositioned stocks and warehouse upgrades, such as MSUs and contingency supplies in Mopti, boosted resilience despite infrastructure damage, enabling access to high constraints zones. Storage and fuel reserves helped prevent shortages.
4. Adaptability of delivery and operational strategies <i>Ability to adapt logistics to constraints and deliver effectively.</i>	Flexibility in routing and last-mile delivery	1 = Inflexible delivery path, unable to adapt to obstacles 7 = Routes adapt dynamically to maintain delivery	6	Humanitarian actors adapted to insecurity by rerouting through Mopti. Delivery paths changed dynamically based on access conditions.
	Adaptation through alternative delivery methods (e.g. air, sea, informal networks)	1 = No alternatives used or possible when standard delivery modes fail 7 = Diverse delivery methods (air, sea, drones...) used flexibly and creatively	7	NGOs used creative routing switching between air, river and land. They used also local vendors and informal cross-border supply (Algeria). They adjusted routes based on safety and terrain conditions.
	System responsiveness to shifting access conditions	1 = Aid system strategy slow to react, plans unchanged despite new constraints 7 = Access changes tracked and delivery plans adjusted quickly and aid levels slow to adjust when needs rise/drop or access improves	4	Although adaptation occurred, especially after the French military opened routes, responsiveness was uneven. The system adjust but often reactively and some areas remained unreachable for weeks due to direct attacks on aid workers or convoys.
	Capacity to scale operations based on evolving needs and access	1 = Operations scaled slowly and effectively as needs grow/drop or access improves 7 = Operations scaled quickly and effectively as needs grow/drop or access improves	5	Aid actors like MSF, ICRC, and WFP rapidly scaled operations after security improved. But scaling often depended on military stabilization and remained limited during renewed violence.
	Innovation and field improvisation in delivery and distribution	1 = No adaptation in the field, delivery stops fully when plans fail 7 = Quick, creative workarounds used to keep aid flowing in tough conditions	6	Aid actors used GPS, satellite imagery, and GIS mapping. OpenStreetMap improved planning. Fuel stockpiling, local supply chains, cash-based transfers and radio networks ensured continued operations in difficult terrain.

1	Aid delivery routes were blocked, unsafe, and unreliable. Convoys are denied, delayed, rerouted, looted, with many areas (especially in the north) unreachable. Routes relied on crossings like Kerem Shalom or Rafah that were often closed. No safe passage was guaranteed.	Gaza's operational context reflects systemic access denial, with aid rarely reaching its destination. In contrast, Mali maintained delivery route reliability through adaptive routing and aid usually arrived, though sometimes delayed.		
1	Roads are destroyed, warehouses looted and bombed, cold storage impossible to maintain. Rafah and Kerem Shalom crossings operated irregularly and are too small for the needs, infrastructure can't be looked after because essential materials like spare parts are often blocked from entry.	Mali's partially operational infrastructure contrasts sharply with Gaza's near-total degradation of logistical assets.		
1	Aid deployment was blocked from the start, with weeks of total closure at all crossings. Even after partial openings, permit delays, security threats, and looting made fast or targeted delivery impossible. Priority areas remained largely inaccessible.	Mali demonstrated increasing logistical agility over time, whereas Gaza faced important restriction preventing effective response.	5.2/7	1.4/7
1	No supplies entered in the first weeks, and crossings opened and closed unpredictably. Convoys were often turned back. Food, fuel, water, and medicine often ran out. Even during the ceasefire, aid was irregular, especially in the north. Humanitarians couldn't plan or resupply consistently.	Mali's contingency planning enabled greater supply consistency compared to Gaza's unstable and highly constrained flow.		
3	Prepositioning of large medical and food reserves in Egypt. By April 2025, over 171,000 tons of food ready. Inside Gaza, storage was extremely limited. Warehouses were unsafe and buffer stocks couldn't be maintained. While external prepositioning was in place, internal storage capacity couldn't follow.	Mali effectively used local warehousing to preposition aid while Gaza lacked local capacity, relying mostly on external stockpiles.		
2	Lack of routes alternatives, forced to use the few available crossings, last-mile delivery often failed, especially in high-risk zones. No dynamic rerouting possible. Flexibility to reach cut-off areas like the north was absent.	In Mali, flexible and dynamic adaptation contrasts with Gaza's lacking alternatives with few access points and last-mile delivery often failing in high-risk zones.		
3	Trident Pier briefly opened for sea delivery but was unreliable. Some local actors used informal delivery by foot or cart, but no broad alternative system emerged. No air drops possible or scalable substitutes used. We saw initiatives but with limited success.	In Mali diverse and adaptive delivery modes were used to overcome obstacles. In Gaza, few alternative methods existed and most were temporary or insufficient to meet needs.		
2	Permit delays and sudden closures not met with quick strategy shifts. Ceasefire saw limited adaptation. Access shifts tracked, but system slow to react. Little evidence of operational responsiveness but the unpredictable and restricted environment makes it challenging and don't allow much flexibility.	Both faced challenges, response in Mali was more reactive and effective. It showed moderate real-time adaptation while in Gaza, they tracked conditions and tried to adapt strategy but had little room to act on them.	5.6/7	2.6/7
2	Operations couldn't keep up with rising needs. Prepositioned supplies blocked at crossings. Even during ceasefire, scale-up was limited. Logistical and access restrictions on the field prevented any major expansion of response capacity.	In Mali, operations were scaled up efficiently after outside security intervention while in Gaza they couldn't scale according to need due to crossing limits, resource gaps and field restrictions.		
4	MPCA initiatives to use fundings. Improvised local delivery by cart or foot, underground clinics put in place and digital tracking tools introduced. Some creativity shown, but not widespread or scalable. Limited effect on improving delivery conditions.	Mali showed more effective innovation mixing tech tools, local supply, and multimodal delivery. In Gaza, efforts relied more on improvisation than structured innovation. They had limited impact on overall aid delivery.		

5. Continuity of civilian services <i>Access to healthcare, education, and social infrastructure.</i>	Availability of functional health facilities and critical services	1 = Health centers destroyed or closed, critical services unavailable 7 = Facilities open and staffed, trauma, maternal, and chronic care accessible	4	Partial reopening of health centers in the north with support from NGOs. WHO helped restore 70% of staff in conflict areas by 2014. However, many facilities lacked equipment and infrastructure.
	Access to education for children and youth	1 = No education, schools closed or destroyed 7 = Learning spaces active and accessible to most children	3	Education was heavily disrupted. Although UNICEF and NRC supported the reopening of schools and education for displaced children, many reopened schools later reclosed due to insecurity.
	Child protection services during conflict and displacement	1 = No protection, children exposed to abuse, recruitment, or violence 7 = Protection systems in place, children monitored and supported	2	UNICEF and NRC provided child protection. However, threats like recruitment and abuse persisted, especially in rural areas.
	Access to psychosocial, legal and civilian support services	1 = No access to mental health, legal aid, or protection services 7 = Support services accessible and functional (MHPSS, legal aid, family tracing...)	5	Legal aid, psychosocial support, mental health support and civil documentation services were provided by NRC and UNICEF, though coverage was limited.
6. Coordination and field-level integration <i>Effectiveness of inter-agency coordination and local actor involvement.</i>	Inter-agency coordination and information sharing	1 = Agencies operate in silos, little or no info shared/coordination 7 = Agencies coordinate closely and share data regularly, effective clusters	5	The Logistics and Emergency Telecom Clusters, led by WFP, were activated early in the crisis. They enabled coordination among UN agencies, NGOs, and the Red Cross, with regular meetings, shared tools (GIS, GPS) and joint planning. These systems improved delivery efficiency and avoided duplication.
	Involvement of local NGOs and community actors	1 = Local actors excluded or used symbolically, no real role 7 = Local NGOs actively lead or co-manage operations	4	Local NGOs were involved as partners in the implementation of aid but their strategic influence remained limited. The humanitarian system was largely driven by international organizations, especially during the emergency phase.
	Coordination with public authorities and local services	1 = No coordination, aid actors disconnected from local systems 7 = Aid efforts aligned and coordinated with local authorities and public services	3	Coordination with Malian state actors existed at central level, particularly with ministries in Bamako. However, in northern regions, collaboration was weak due to limited state presence. Humanitarian actors often operated independently in insecure areas.
	Quality and consistency of needs assessments and data collection	1 = No reliable data collection, needs poorly assessed or outdated 7 = Regular accurate data collection, frequent reporting and precise forecast of needs	3	Actors used tools like OpenStreetMap, SMART surveys and GIS mapping to assess needs. However, data collection was uneven due to insecurity and lack of access limiting the full coverage of assessments. Data from 2012-2013 is particularly limited and poorly structured.

2	Over half of hospitals non functional. All health sites in North Gaza and Rafah closed. Trauma/maternal care continued as much as possible notably with field units to support remaining hospitals but overall capacity is far below needs.	Health services were disrupted and equipment was lacking in both, but Gaza faced far greater damage with most hospitals shut and field units not enough to compensate.	3.5/7	2/7
1	Education completely ceased. All schools closed or were used as shelters. Over 80% of schools damaged, no structured learning. Education less prioritized, focus on survival needs like food, health, and protection.	Mali had brief school reopenings before closures resumed, while in Gaza education stopped entirely.		
2	Acute malnutrition for many children, but therapeutic food hard to access. Child protection failed under repeated displacement, trauma, and unaccompanied minors. Child-friendly spaces initiative reached 40,000 children but suspended in 2025. Some support existed, but efforts were temporary.	Child protection was weak in both. Mali struggled with forced recruitment, while Gaza faced trauma, displacement, and malnutrition. Support existed in both but fell short of addressing the scale of harm.		
3	Important psychological trauma, prolonged exposure to extreme violence. Many families were separated, the ICRC supported over 15,000 family tracing cases. UNICEF ran psychosocial services and UNFPA operated safe spaces for women. Broader legal and civilian support couldn't operate in this context.	Both had limited access. Mali offered a more balanced mix of legal and psychosocial aid, while Gaza focused more on trauma care and tracing, with legal services mostly absent under extreme conditions.		
3	Clusters were activated and UN agencies coordinated planning and data. But communication often failed in Gaza, some clusters stopped function by 2025, and GHF bypassed the system, weakening joint delivery on the ground.	Mali showed stronger coordination with active clusters and shared tools. In Gaza, planning worked but field coordination weakened as some clusters became inactive and parallel systems emerged.	3.75/7	4/7
6	Local groups were very useful in last-mile delivery, endpoint distribution and care under siege. PRCS and volunteers ensured access where others couldn't. They played a key role but weren't part of leadership or funding decisions.	Local actors supported delivery in both settings with local NGOs playing a secondary role in leadership but a key one for implementation. Gaza relied even more on them due to siege conditions.		
2	Coordination with public authorities was very limited. UN agencies could only work through indirect channels with Hamas, mostly for health. Israel controlled borders but did not coordinate much on the field for protection and access. Accusations against aid groups worsened mistrust.	Mali had weak but structured coordination centrally. Gaza had even less, relying on indirect channels and facing deeper mistrust and barriers on the ground.		
5	OCHA and other agencies maintained frequent and structured reporting despite intense conflict. However, access constraints, especially in North Gaza, prevented real-time tracking and limited data coverage. Monitoring gaps reduced the precision and operational impact of needs assessments.	Gaza showed stronger and more regular data collection and reporting despite active conflict while Mali's assessments were less structured and limited in time and scope, partly reflecting the less rigorous standards and means in 2012–2015 than now.		

7. Institutional and political environment for humanitarian response Institutions and political actors mobilization, funding, and decision-making.	Sufficiency and speed of humanitarian funding	1 = Funding delayed or insufficient to meet basic needs 7 = Timely and sufficient funding meeting humanitarian priorities and needs	3	Funding levels were low overall, with 2012 reaching the highest coverage at 50%. In 2014, support fell to just 18% despite peak needs. The 2013 Brussels conference pledged funds but most went to state rebuilding, not humanitarian aid.
	Diplomatic efforts to improve humanitarian condition and access	1 = No diplomatic effort to support access, humanitarian issues neglected 7 = Strong, sustained diplomacy focused on securing humanitarian	3	The Brussels donor conference and Algiers peace talks aimed to stabilize the situation and supported aid coordination frameworks. However, diplomatic efforts had limited operational impact on securing consistent access in conflict zones.
	Influence of foreign powers on conflict de-escalation and humanitarian situation	1 = Foreign actors escalate conflict or obstruct aid for political or military motives 7 = Foreign influence helps de-escalate conflict and improve aid conditions	5	Foreign actors like France (Serval), MINUSMA, Algeria and the EU heavily contributed to restoring partial access and security. But their presence also blurred humanitarian neutrality, making some NGOs appear politically aligned.
	Influence of media and information on humanitarian and conflict dynamics	1 = Media spreads misinformation or ignores humanitarian needs, worsening conflict. 7 = Accurate, balanced coverage raising awareness, supporting aid efforts.	3	In Mali, media was suppressed locally and episodic internationally, focusing on security over aid. It briefly raised awareness but failed to sustain support or influence humanitarian action.
	Supportive role of domestic authorities toward humanitarian response	1 = Authorities obstructed aid through restrictive policies and inaction 7 = Authorities mobilized aid through proactive policies and institutional	3	The Malian state was largely absent in the north. Deployment of interim authorities was delayed and under-resourced. National ministries had limited capacity to coordinate directly with humanitarian operations on the ground.
	Efficiency of bureaucracy, institutional decision-making, and implementation	1 = Slow, disorganized processes and decisions poorly carried out 7 = Quick, well-coordinated decisions with strong follow-through	3	At central level, state actors contributed to strategic discussions. However, implementation was slow and fragmented, particularly outside Bamako. Coordination and follow-through remained weak due to institutional limitations.
8. Security of aid workers Safety of aid workers and secure humanitarian access.	Immunity of aid workers from violence and attacks	1 = Aid workers frequently attacked and under fire 7 = Aid workers safe and protected from incidents	3	Over 60% of humanitarian access constraints in 2015 involved direct attacks on staff or aid convoys. NGOs were targets of threats, hijackings and violent incidents, especially in the north. These conditions made the environment highly unsafe.
	Community acceptance and cooperation with humanitarian actors	1 = Communities obstruct aid (e.g. looting, theft, mobbing), no local support 7 = Communities cooperate and allow safe delivery of aid	4	There is a mixed perception of aid workers: some communities cooperated but others saw NGOs as aligned with foreign interventions. Hostility and suspicion were present in parts of the north, especially under jihadist control.
	Freedom of movement and safe operational zones for humanitarian staff	1 = Movement highly restricted and no secure areas for operations 7 = Humanitarians can move freely and operate safely in designated zones	3	Movement was restricted due to IEDs, armed checkpoints and road insecurity. UNHAS flights were used because road travel was too dangerous and entire regions (like parts of Kidal) were inaccessible to most organizations.
	Ability to negotiate aid conditions with armed actors	1 = No communication possible 7 = Armed actors engage constructively to coordinate and facilitate humanitarian operations	4	Some organizations (MSF, MDM, ICRC) successfully negotiated access in certain areas, including Kidal. However, not all NGOs had the networks or neutrality to do so and negotiations often failed or were impossible in jihadist zones.
	Effectiveness of deconfliction in reducing violence and protecting aid staff from military operations	1 = No meaningful deconfliction, staff and sites remain exposed to attacks 7 = Effective deconfliction actively preventing incidents and protecting staff	3	MINUSMA provided armed escorts and corridor patrols, and humanitarian convoys were sometimes protected. However, deconfliction was limited and not fully effective: insecurity persisted and staff remained at risk, especially outside secured urban centers.

2	Large sums were pledged, but funding was delayed, restricted, or frozen. UN appeals remained underfunded, with critical clusters like Health receiving only 4% by 2025. Even when funds were available, field access and coordination issues blocked effective use. Aid often didn't reach those in need.	Both crises saw underfunding and delays. In Mali, pledges fell short during key periods. In Gaza, funding was blocked, delayed, or poorly matched to urgent needs.	3.33/7	2.5/7
3	Diplomacy irregularly improved access, like opening Rafah and the January 2025 ceasefire. Yet it failed to establish safe corridors or sustained delivery. U.S. vetoes blocked resolutions for full humanitarian access restoration.	Diplomacy helped at moments in both, but didn't secure lasting access. Mali had talks with little impact on the ground and Gaza had brief breakthroughs, but no safe corridors or consistent delivery.		
3	Egypt, Qatar, and especially the U.S. influenced conflict dynamics. The U.S. drove key ceasefire talks, hostage deals and aid pledges. But they also backed Israeli operations and vetoed ceasefire resolutions. Foreign powers helped at times but also prolonged siege conditions and compromised neutrality.	Foreign powers supported de-escalation more effectively in Mali. In Gaza, their role was mixed, enabling some aid and truces, but also blocking it or even fueling conflict and weakening coordination.		
5	Media coverage raised global awareness, engaged donors, and pressured some governments. Public figures (like UN Secretary-General) amplified calls for aid but misinformation like alleged aid diversion led to funding cuts and mistrust, partly undermining coordination and credibility.	Media had mixed impact in both but Gaza saw greater global attention and advocacy. Mali's coverage was irregular and had limited impact for aid, Gaza's visibility helped pressure donors and mobilize aid despite some damaging misinformation.		
1	Domestic authorities imposed severe restrictions on aid. Israel blocked fuel, permits and convoys while targeting marked sites. Hamas-run bodies offered only limited, informal cooperation. No public institution actively enabled humanitarian response.	Mali's state offered weak support, but Gaza's authorities actively hindered aid, creating a far more obstructive environment.		
2	Planning structures were in place but often failed to deliver. Field decisions were slowed by permits, fuel bans, and blackouts. Some aid sectors fell to pieces under pressure, and parallel systems caused confusion. Planning did not translate into effective action.	Both contexts had functioning decision structures but weak and slow implementation, with hard follow-through on the ground, particularly in Gaza.		
1	Aid workers faced repeated deadly attacks, including on marked UN and health sites. WHO verified over 700 attacks on health infrastructure and 300 staff detained. Casualties on a single conflict were the highest in UN history. No meaningful protection for aid personnel.	Aid workers faced threats in both, but Gaza saw unprecedented casualties and direct attacks on marked sites.	3.4/7	2/7
5	Communities cooperated with aid workers and helped some operations, especially where international staff couldn't reach. Lootings were frequent, but it's unclear who was responsible, whether civilians or other actors. No general hostility was reported, and acceptance remained strong.	Community trust was stronger in Gaza, while in Mali, perceptions were mixed and at times hostile.		
1	Movement was extremely dangerous due to ongoing strikes, even in marked or supposedly safe zones. Staff had no guaranteed protection and bombardments affected all areas. Crossings, hostilities and fuel shortages further restricted movement. Nowhere in Gaza was reliably safe for aid operations.	Ground movement was restricted in jihadist zones but air travel allowed limited access in Mali. Gaza had no safe zones or secure movement options at all.		
2	Some humanitarian access was negotiated through intermediaries, but no consistent dialogue with armed actors existed. Agreements were temporary and often not respected. There was little to no structured negotiation over safety or access and delivery remained at constant risk.	Negotiation was more feasible in Mali, where some actors secured access through direct dialogue. In Gaza, access relied on intermediaries, with no stable negotiation channels, making delivery riskier and less predictable.		
1	Deconfliction mechanisms were non-functional. Marked sites and convoys were hit despite GPS coordination. No effective system reduced violence on the ground or prevented strikes, leaving aid workers exposed, operations under constant threat, and humanitarian needs rising.	MINUSMA and deconfliction provided some protection in Mali but failed entirely in Gaza where even marked sites were repeatedly struck.		

Appendix D - Interview transcripts

Some respondents asked to remain anonymous, and certain details were removed from the transcripts to protect their identity. Some also asked to remove some details off the record. Some interviews were done in French and transcribed in their original language to keep the integrity of the respondents' words.

Respondent 1 - MSF emergency logistics coordinator 15/07/2025

Charles & Maurine: I think the first part, the easy part, is just to tell us about yourself, your role, where you work, where you've been, which countries you've worked in, and so on.

Respondent 1: OK, this might take a little bit of time. I work for MSF Belgium. MSF is made up of six sections now, and I work as one of the logistics coordinators for the emergency unit.

Within the MSF umbrella, there are operational centres, five of them, and within each centre, you have operational cells that cover different areas and countries around the world. The emergency unit, which we call the e-pool, sits as an external cell that steps in when a regular mission cell can no longer operate under its agreed framework. This could be due to a natural disaster, conflict, or a sudden change in context that creates the need for a short-term intervention, whether it's mass vaccinations or, as in the case of Gaza, a massive emergency.

We step in either by invitation from a regular cell or, if we identify a catastrophic humanitarian situation unfolding, the emergency unit can impose itself on a country mission to take over operations.

I'm part of the team that responds in the first or second wave. We also support missions that have been ongoing for some time, helping reshape the dynamics to prepare a transition back to a regular operating model.

Charles & Maurine: OK, so I think that's very good for our analysis, because it's exactly what our thesis covers. May I ask you a bit more about your background? Specifically, how did you get into the humanitarian field, and what is your educational background?

Respondent 1: I have a paramedical background. The simplest way to explain it is that around 2015, I was working in eastern Ukraine and I burned out. I wanted to do something different with my career and didn't want to continue working in the paramedical field.

I applied for different options with the idea of joining MSF short term, just to take a break. I told MSF that I wanted to do something unrelated to the medical field. I was open to HR, project management, or logistics. I ended up in logistics starting with MSF Spain, working for a year in their emergency unit as a logistics manager. That included several missions in Ethiopia and then Cameroon.

After Cameroon, I joined the OCB (Operational Centre Brussels, MSF Belgium) emergency mission in Mozambique. Then I went back to Ethiopia, followed by a year in Pakistan. After Pakistan, I worked in Tigray, Ethiopia again. Then came the Ukraine war, and after that, Afghanistan.

In Afghanistan, I initially joined for an emergency earthquake intervention. They offered me a position as a project coordinator in Kabul, and I stayed for almost two years.

In April last year, I returned from Afghanistan. I went into the office to say I was back, and two weeks later I was sent to Gaza. I signed a new contract with the emergency unit and returned to full-time deployment.

Since then, I have done three deployments in Gaza. I also spent time in Israel for coordination and representation, and three months in Lebanon. My last time in Gaza ended exactly one month ago. Since

then, I've been back in the office after a short break. I'm heading to Nairobi on Saturday, and about a month later, I'm scheduled to go to Port Sudan in Khartoum.

Charles & Maurine: You've worked in many countries, and your deployments vary in length. For example, when you were working in Afghanistan, were you fully based there, or did you also work remotely at times? Did you manage logistics from outside or were you always on the ground?

Respondent 1: For the Afghanistan mission, I had what's called a rotational contract. I was three months in Afghanistan and three months out. During the time I was out, I worked part-time remotely to support the mission.

In those periods, I focused less on the finer points of logistics and more on security documentation, security management, and analysis. In MSF, logistics is a broad role. It's not as specialised as, for example, the logistics teams at WFP. We have to be quite versatile in what we do.

Security management and applied security are major components of the logistics role. It goes well beyond making sure vehicles run or generators power the medical facilities.

Charles & Maurine: In general, for conflicts, is the rotation system you mentioned, being in and out, the same everywhere?

Respondent 1: No, it depends on the position or the profile. Some roles come with rotational contracts, but there are many different setups. You can have a multi-assignment long-term agreement where you sign for five years and move every six months between different countries. Then there are long-term assignments, usually for senior positions like head of mission or logistics coordinator, where you agree to stay for one or two years in a mission.

For example, when I went to Pakistan, I was there for around 14 months. During that time, you still get your holidays, and every six months you're entitled to a flight home for some time off. But you're fully based there. Mission lengths can vary. Some people go for three months, while the longest I've seen was five years in Afghanistan, which I think is probably a bit too long.

Charles & Maurine: One major theme in our case study is the difficulty of managing access constraints in the field. When trying to deliver aid, especially by truck, there are blockades, checkpoints, permit issues, and security risks like being targeted. What are the most difficult obstacles to manage on the ground, or the most frequent ones?

Respondent 1: If I think about this last deployment in Gaza, when I arrived, we were still under a total blockade. Eventually, through political pressure, the Israeli state agreed to allow a small amount of aid to enter. But even then, we experienced 90 to 100 percent looting on top of the trucks. Some of that looting was due to sheer desperation from the population.

Starting from the inside and working outwards: if a truck managed to reach areas where there was still some freedom of movement or safety, thousands of desperate people would try to loot it before it reached the centre. On top of that, there were families aligned with criminal motives trying to control local market prices, or groups like Abu Shabab, which are reportedly trained and supported by the Israeli Defense Forces. These groups were very efficient, and I suspect there were others involved too, though I cannot be entirely sure.

Most of the looting took place in evacuation or "red" zones, before the trucks reached areas where civilians had been directed. These trucks were often targeted violently, quickly, and with a high degree of efficiency. Looters came prepared, sometimes even with forklifts. Drivers were injured or worse, and all aid was lost.

Between mid-April and mid-June, we only managed to get three trucks through. One of those was looted. That shipment contained medical supplies we had ordered nine months earlier.

For me, the biggest issue was liaising with the Israeli authorities, particularly COGAT and the CLA. Are you familiar with those?

COGAT is the Coordination of Government Activities in the Territories. Under it, there is a subdivision called the Civil Liaison Authority, or CLA. COGAT is the authority of the Israeli State that controls what is allowed to enter Gaza. This system, as I understand, was put in place in 2018 when restrictions on equipment and materials were tightened. After October 7, the restrictions increased significantly. The stated concern is over “dual-use” items.

For example, if I need an oxygen cylinder, I must request approval from COGAT. They often deny it, saying it could be turned into a rocket. If I request solar systems to power water pumps, including UPS batteries and solar panels, they say no, again because of dual-use concerns. If I ask for an explanation, I’m told it is none of my business.

We built a hospital that now serves as a trauma facility with 110 beds. A year ago, we submitted a request for a 250 KVA generator, which would cover all energy needs. COGAT rejected it because of dual-use, saying the maximum allowed is 33 KVA, barely enough for essential services, not the whole hospital.

COGAT was extremely restrictive, even with medical items. For instance, glycerin in any quantity was banned because it could be used to make nitroglycerin. X-ray equipment was another problem. Given the extensive damage the quality of the equipment was severely damaged. We never managed to import our own X-ray machine. Presumably, the concern was about radioactive components. Instead, we relied on salvaged machines from destroyed facilities, one of ours dates back to 1985. Maintaining such equipment is difficult, and importing spare parts is also a huge challenge.

Even if COGAT approves an item, we must then deal with the CLA to bring it across the border. Although the CLA is technically part of COGAT, they do not communicate effectively. And one thing that is very disappointing, especially from such an advanced military power that is Israel, is that it is almost impossible to get written confirmation of anything. So even if COGAT approves an item, when the truck reaches the border at Kerem Shalom, the CLA might refuse it. And then we go back in a circle trying to get someone in the CLA to speak with someone in COGAT to get the approval.

This happened frequently. I would estimate that 50 percent of the trucks we sent to Kerem Shalom were rejected. If there is a single item the CLA disagrees with, they reject the entire truck. We then have to remove the item and try again.

A good example was solar panels. COGAT approved them. They arrived on a truck. But the CLA rejected them at the border and sent the truck back. This system is clearly under-resourced, especially given the scale of requests from INGOs and UN agencies. That is likely by design: the CLA officers I dealt with were handling hundreds of similar requests from various actors. The whole process became increasingly difficult.

Then, for a while, we moved goods through Egypt via the Egyptian Red Crescent. This allowed us to avoid import taxes and formal Egyptian customs procedures. We brought goods to El Arish and from there to the Rafah crossing. But smuggling became a problem on the Egyptian side too.

Cigarettes were banned from importation since October 8. There was heavy smuggling of cigarettes, nicotine products, and even “luxury” items, so to say, like Nutella. The smuggling interfered with our

shipments, the biggest problem being cigarettes. People hollowed out pallets to hide cigarettes or replaced items from our cargo with cartons of cigarettes.

As a result, when trucks arrived at Kerem Shalom, they were sometimes rejected or completely unpacked for inspection. We never received 100 percent of the cargo as we had packed it. There were always losses.

The whole process had multiple layers of complications, and we had to account for that in our planning. If we managed to get even half of what we requested, it was already considered a victory.

That said, as a medical actor, MSF was still relatively lucky. Other sectors, like shelter, had no chance. Items like plastic sheeting or tents rarely made it even 20 meters past the Kerem Shalom gate.

It was extremely difficult.

Charles & Maurine: When reading about Gaza, it's certainly one of the most challenging crises in terms of humanitarian restrictions so far. In other cases, do you have other restrictions that come into play more often?

Respondent 1: I've never worked in an environment like Gaza before. The closest was during the Tigray War. After the TPLF retook Mekelle, the Ethiopian government effectively put the region under siege. Nothing came in or out, no internet, no banking systems. That was the closest, but Tigray is a large territory. To a certain extent, it was able to function autonomously. They had space, farmland. It was nothing like Gaza.

The politics surrounding Gaza are incredibly complicated, and I think intentionally so to make operations inside more difficult. The space for us to operate has been shrinking continuously.

I avoid using the term "safe zones" because they don't exist and Officially, they don't exist since 18 March. But one thing I did feel was that the change in the US administration removed some of the guardrails that previously made the IDF and Israeli government more mindful of international humanitarian law and to at least some minimal adherence to basic principles.

The Trump administration equipped the Israeli armed forces with smart weapons. There had been a ban under the Biden administration at one point of guided munitions, but Trump reversed it early in his presidency. I believe five or six thousand of these smart munitions were delivered in his first months to Israel. You could feel the impact of that on the ground.

I've always thought, even though it's not perfect, that the IDF operated within certain principles. They would push the limits of what is acceptable, navigating the grey zone between what is acceptable and what is not. But I felt there was still sincerity in trying to reduce collateral damage involving NGOs, especially to avoid harming international staff.

After the ceasefire, those guardrails that maybe the Americans were enforcing, seemed to vanish. The Israeli Air Force began operating with greater risk tolerance. They were willing to strike targets in much closer proximity to NGOs and humanitarian actors. When it comes to national staff, Gazans and Palestinians, I don't think they ever cared and were ever protected. But previously, I do think Israel wanted to avoid the international backlash of harming foreign aid workers.

The introduction of smart munitions made it easier to strike more precisely. Some munitions were low calibre, they could hit a target, and if you were 20 metres away, you'd be stunned or concussed but not killed. We started seeing strikes occurring very close to us.

The closest I experienced was 50 meters from the hospital where we were based. It became common to see strikes landing 300 or 400 meters ahead during movement. The environment became far more unpredictable.

Targeting and killing of Hamas elements underneath the European Gaza Hospital in the south marked a turning point. It eliminated any remaining illusion that medical facilities were neutral spaces. Hospitals had been struck before, but in recent months, after EGH, it became clear that Israel was intent on taking all hospitals offline. The goal seems to be to force reliance on field hospitals.

Field hospitals are useful in certain contexts, but they cannot replace the capacity of permanent hospitals. Removing pressure from functioning hospitals is one thing, but we cannot replace them. The last two standing hospitals, Nasser Hospital and Al-Aqsa in Deir al-Balah, are at risk. Nasser will likely go offline soon. Al-Aqsa has already been hit three times in the past three or four months.

I believe this is a deliberate political decision. Field hospitals are easier to control than those run by the Ministry of Health. We, as humanitarian organizations, rely entirely on what we are allowed to bring inside.

Charles & Maurine: It's challenging to get supplies in. But as you said, you went in and out. Is it challenging also to bring humanitarian workers and people through in Gaza?

Respondent 1: It's difficult. To enter Gaza, the journey starts in Amman in Jordan. Previously, we used to be able to fly into Cairo, then drive through Sinai and cross at the Rafah crossing. But after last year in May, once the Rafah invasion started, the Rafah crossing was taken by the IDF. That was it. There was no more movement of passengers via that route.

In May, we were all stuck for about three weeks while they tried to work out how to allow international staff in and out. In the end, they found a solution. We enter by arriving in Amman, then take a bus from Amman to the border, to King Hussein Bridge, Allenby crossing. We go through processing there, enter into Israel, get loaded onto a bus, and under armed escort, we're transported to Kerem Shalom.

If we're lucky, it's not Kerem Shalom and they just let us go through a hole in the wall in Kisufim, and we get picked up by armoured vehicles there. If we're unlucky, we arrive at Kerem Shalom and go through a screening process again before we're picked up by the armoured vehicles and enter Gaza.

From Kerem Shalom, it has to be by coordinated movement, which means we have to wait. A route that would normally take 15 minutes can take anything from one and a half hours to six hours. It depends on the military activity ongoing on the ground.

We might request to move from A to B at 2 p.m., and we'll get a validation, but they'll tell us that your movement A to B is broken down into sections A, B, C, D, and E. For each section of road, you have to request a green light to move forward.

It takes time. They have to communicate with the units on the ground to ensure they're aware that we're passing through. We've seen instances where vehicles were targeted when moving without validation, and questions are asked afterwards.

It was the same for internal movements when we were able to move north-south. In recent months, we've had to start communicating for movements of materials north-south and south-north within the Gaza Strip as well.

After the ceasefire, there was probably about a month where we didn't have restrictions to move on the coastal road between Gaza City and the south. But those restrictions are falling back into place now as well.

Charles & Maurine: So it's still challenging and it takes time, but maybe it's easier than the supplies. You can kind of get in and out easier, let's say?

Respondent 1: Yeah. To eventually leave, you're looking at between 12 and 15 hours one way.

Charles & Maurine: When we talk about distribution in conflict zones, maybe in Gaza it's hard because everything is falling apart. What are the kinds of processes that you see and have to follow for the distribution?

Respondent 1: Okay. So for the emergency unit, we retain a centralised stock, well, I say centralised stock. We have three hubs in the world that we use. One is in Dubai, one is here in Brussels, and one is in Bordeaux. That's a section we call MSF Supply.

We have e-prep kits that, depending on what emergency happens, we can push a button and within 24 hours those items can be loaded on a ship or a plane and sent. If I look at Mozambique, we responded to cholera and had enough equipment to manage a mission plus three cholera treatment centres, which arrived within two weeks. We just flew that into the country.

For Gaza, we still have a modular field hospital pre-positioned in Amman, hoping to make use of the land bridge there. But we still haven't had a validation to move the modular field hospital into Gaza.

Within Israel, we pre-position, but it's local supply, consumables that will be used, which we purchase locally. When we have validation, we try to move that to the border, to Kerem Shalom as well.

For the most part, we have our e-preps already prepared and stationed centrally in our hubs. Then we draw on those resources as and when we need them.

Thankfully, MSF is an organisation, not as big as the UN, but we do have the luxury that when the emergency button is pushed, we kind of look the other way on the budget. If it costs 800,000 to fly the materials in, often we're willing to stomach that.

Also, in emergencies, we often rely quite heavily on the WHO initially as well. If we're going to step in for a surgical intervention, the WHO often has e-prep kits positioned in-country, and we can draw on what they have to start our activities even sooner.

Charles & Maurine: How does collaboration work in practice between MSF and other NGOs or agencies? Coordination is often described as essential for mission success. But in reality, are you closely working and communicating with others, or is it sometimes more difficult?

Respondent 1: Context dependent. It can be hit and miss. I've had mission deployments where there's no collaboration and no appetite to talk.

But the larger the emergency, the bigger the UN profiles deployed to manage it. In large-scale emergencies, we tend to have open lines of communication with OCHA and WHO. Gaza is a good example.

The OCHA team inside Gaza now, I've known them for the last three or four years. There's familiarity and a clear understanding of MSF's impartiality and neutrality. What I appreciate is that they're often happy to mobilise support or resources to help us move quickly.

People recognise that MSF, in emergencies, is one of the fastest responders. So overall, I'd say collaboration is good.

That said, in Ethiopia, for example, I've gone to meetings with WHO where they simply weren't interested in talking. It's not perfect everywhere, but especially when needed, we've managed to collaborate quite well.

And when I say collaboration, it's often about information sharing and discussions, not so much joint operations or planning our activities together.

For instance, inside Gaza, I needed to quickly increase bed space in a hospital. I was trying to find a Rubb Hall to create 40 extra beds. I asked OCHA, and they contacted the right person at WFP. Within 72 hours, we had a Rubb Hall.

So overall, there's a good dynamic, for the most part.

Charles & Maurine: So usually when the case is large, coordination works, but when it's less urgent, it's harder?

Respondent 1: Yeah. The individuality of people always plays a part. Within MSF, across the five operational sections, we also face those challenges. Ego can be a big factor.

Even MSF France and MSF Belgium often have trouble working alongside each other and sometimes end up competing in the field.

Charles & Maurine: What about coordination with local authorities? In Gaza or in general, you probably need to rely on them, especially for last-mile delivery or field distribution. How does that work?

Respondent 1: Yes, both national and local. I've often found that working with local authorities is a lot easier than with national ones. It can be hit or miss.

Ethiopia is a good example of a country that manages INGOs in a way that micromanages us. At the local level, authorities are welcoming, asking how they can support. But at the national level, we face restrictions, for example, in bringing materials into the country or moving them to the field.

It becomes a power play. Sometimes it's about someone trying to advance their career or expecting something for themselves, put in their pocket.

In Gaza, MSF became the second-largest medical provider. That wasn't by design, it happened as a result of the situation after the Ministry of Health. We had to work closely with them, and they accepted that it was a crisis. They were willing to engage and very supportive, especially in mobilising national staff with medical profiles.

So it depends. Even during COVID, in the first wave, I was working in East London in an MSF-NHS collaboration. I had to send countless emails explaining that MSF doesn't just deploy medical staff, we also bring a logistician.

Trying to explain that to the NHS was difficult. They subcontract almost everything, so it was hard for them to grasp that MSF comes with a whole team of different profiles. There's always some complication involved.

Charles & Maurine: In theory, we read how it works or how it should work, but it's hard to really grasp what it means to be a humanitarian worker in a conflict zone, with all the risks and safety concerns. The

work you do is amazing, but it must also be very stressful. In your experience, how do you deal with that? How do you and your team manage to keep operating under stress, pressure, and safety risks?

Respondent 1: A couple of points on that. On a personal level, we brief and prepare. Before stepping into a high-risk context, you have a conversation, we call them “HIC” calls or something like that.

Basically, you speak with a senior team member about the risks you might face and what could happen if things go wrong. The point is to make you think carefully before accepting the mission.

You don’t want someone arriving in Gaza and then saying 24 hours later, I don’t want to be here. It’s very hard to extract someone from that context. That actually happened last year, a doctor arrived, and 24 hours later he said it was way worse than expected. It took two weeks to get the validations to get him out.

So we’re forced to confront the realities of a context before entering. In my case, I often manage the security components. I have access to our documentation and analysis, and I understand how the mission is going, in what state we are in and how the mission would manage different situations.

But once you’re in it, you start triaging your emotions. If something feels overwhelming, you box that feeling and save it for when you’re back home.

We compartmentalise a lot. That’s a big strength. And the internal team dynamics are essential. The team needs space to disconnect from the reality around them, to have a sense of humor, to joke.

Sometimes that means a few rounds of cards or at least one good meal a day. That helps keep the team in a good headspace.

What I’ve learned over the years is that when you have a bad day, it’s important the team feels comfortable talking about it. Often we debrief after a tough day. Everyone has a chance to share how they feel. Then we say, OK, pack it away, put it aside, have some food, and move on.

Rest, rest, rest, food, and a sense of humor are probably the most important things.

Charles & Maurine: In restricted environments like Gaza, we’ve seen creative workarounds, like field hospitals or other methods to bypass access constraints. But often, these solutions seem low-scale and can’t meet the needs of the broader population.

From your experience, where distribution and logistics are often very difficult, how do you find solutions on the spot? Are you open to improvisation or innovation when starting a new response? Do you have any insights on that?

Respondent 1: Most of what I do with the e-pool involves working outside the standard framework. I’m not only encouraged to do that, I encourage the teams I work with to do the same. The rules of a regular mission don’t apply, and often that includes the budget. We don’t care. This is what we’re going to do.

In Gaza, we couldn’t bring in our modular field hospital, so we decided to build one. We didn’t know how, but we were going to do it. We started drawing out ideas. The initial plan was to use wooden framing and plastic sheeting. In the end, we found a supplier in the south who still had a warehouse full of corrugated iron sheeting. We found a farmer, or maybe a businessman, who had greenhouse frames on his land. I bought loads of those, and we used them to build the hospital structures.

Cement was almost impossible to find, but we engaged with the black market. It wasn’t cheap, but it was available.

In Ukraine, same thing. I had a team in eastern Ukraine that tripled in size. I needed more personal protective equipment, but there was huge competition for bulletproof vests and helmets. Waiting for Brussels to supply them was impossible, so we found what we needed on the black market, from the back of someone's van, in a shopping center in Dnipropetrovsk.

You just have to be flexible in your approach. The key is that everyone, especially the hierarchy, understands: we're going to build a hospital, and we'll do it by any means possible. If that message is clear, people usually support it.

But yes, we often break all our internal rules. The challenge comes when we have to put those rules back in place before handing things back to a regular mission. While we're there, though, we don't follow standards.

For example, in Gaza, fuel, fuel filters, oil filters for generators, almost impossible to find. We've been bringing small quantities of items in the personal luggage of international staff.

At one point, for a large generator I had bought on the black market a year ago, we ran out of fuel filters. In that situation, most people would say, no fuel filter, shut it down. But we didn't have the option. At some point, it became more harmful to leave the clogged filter attached, so I asked the guys to bypass it. You break rules to keep operations running. That's just how it works.

Charles & Maurine: Over the years, have you seen improvements or new strategies, tools, or methods that help with adaptability and operations in the field?

Also, with recent advancements like AI, tracking systems, and high-resolution imagery, are these kinds of technologies being used in your work?

Respondent 1: Emergencies can still be a bit old school. You go back to basics. Tracking systems, for example, usually come in long after we've already left. In regular mission settings, yes, we have TMS, Track My Stuff. There have been innovations, but the fundamentals stay the same.

One of the biggest institutional changes was the shift to decentralized decision making. That has been one of the greatest benefits for MSF. It loosened the hierarchy, so we're no longer waiting for someone in Brussels to validate everything. Now, we make decisions on the ground, the ones who see what's happening are empowered to act.

If someone expects me to make major security decisions every day in Gaza, they also need to trust my judgment on how to apply the budget. I'll have a better idea of what's possible than someone 3,000 kilometers away.

That shift in decision making has made a real difference, and we still benefit from it.

AI is starting to creep in, but mostly through GIS and mapping. We now have tools that update maps using open-source data. For example, Live UA Map marks incidents, and we can translate that into our own mapping systems to better understand what's happening locally over time.

I still think we have a long way to go with GIS, but the progress so far is encouraging.

Charles & Maurine: You mentioned that things can still be quite old school. Are there specific areas where you think the organization could benefit from more innovation or improvement?

Respondent 1: The biggest challenge MSF struggles with is institutional memory. That's where the AI work the organization is doing now could start to help.

We're operating in countries where we've had similar missions over the past 30 years. But, for example, if we're responding to conflict in Darfur, I can't find the reports from the MSF teams that worked there in the 1990s or early 2000s.

We don't have easy access to past knowledge, things like seasonal challenges, illness patterns, or even when baby season is in Darfur. These are things our teams have dealt with before, but we're missing that accumulated insight.

The information exists. It's sitting in storage devices, backup drives, it's even on the cloud. But we haven't been good at centralizing or making it accessible.

What I appreciate now is that they're working on building a larger knowledge database. The idea is that we'll be able to search and pull out key information more easily in the future.

Charles & Maurine: I think that's true not only for MSF, but for other organisations too. Even for us, just trying to find data on Gaza from the past two years, there's a huge amount available, detailed, specific, and well presented.

But when we looked for data on Mali from just 10 years ago, it was chaotic and hard to find. So I think there's been a shift, both internally and externally. Reports are now more frequent and better documented.

Respondent 1: Yeah, surely.

Charles & Maurine: From your perspective, what do you and your team in Gaza really need to carry out the mission successfully? What do you often lack? It could be supply, staffing, protection, or even funding.

Respondent 1: For Gaza, I've never had an issue with the budget.

We're very lucky in Gaza, the level of education among Palestinians is incredibly high. The quality of individuals we can call on for technical roles often surpasses that of many international staff.

So we benefit from very strong national staff. That's helped because each section of MSF working in Gaza is only allowed to move three to four personnel in or out per week. Rotation is limited, and internal staffing caps make it difficult. But again, our national staff has filled that gap.

Supply is our greatest challenge, not just medical supplies, but equipment, fuel, everything. We could do much more if supplies were coming in.

We already do a lot. For example, the hospital fuel allocation wasn't being fully used, so we built a stockpile to weather the recent months. We also used some of that fuel for water trucking.

OCB alone was delivering about 400,000 liters of water per week. Add in the other two or three MSF sections, and the total was even higher.

We were lucky to do that much with what we had. But if there were no restrictions, it would completely change things, and it would save lives directly.

We struggle to feed patients. We fight to keep the lights on. We have to break rules to find solutions that wouldn't exist in any other context.

And on top of that, the destruction is beyond what I've seen before. When I arrived in Gaza on my last mission, it was dark because we crossed late after all the checks, so I didn't see much entering Derebella.

But on the way out, we drove along the coastal road, then cut through Rafah to Kerem Shalom. In Talo Sultan, what used to be a city was now just desert. It wasn't just damaged, the buildings had been demolished, scraped away and taken away. It was just sand. It was such a shock. There was literally nothing left.

Talo Sultan in particular stood out to me because I had spent a lot of time there. It used to be a built-up neighbourhood. Now there's nothing, not even rubble. Just the footprint. I've never seen that before.

Charles & Maurine: Is there anything you think we didn't cover, something important that could help our analysis?

Respondent 1: First of all, thank you for your time. And sorry that I talk a lot, especially about Gaza, it's something I'm quite passionate about.

I had a quick look at your Gaza case study. I didn't read the Mali one yet, but I will.

One thing to definitely keep in mind is the complexity of the dynamics. It's not black and white. It's not just getting a commission, bringing aid in, and that's it. There are many layers, looting, smuggling and internal factors. For example, with shelter items, some organisations feel more pressure from the de facto authority in Gaza. There are many internal dynamics at play.

Also, just to flag something on local markets. Very little is coming in. Some vegetables are still grown inside Gaza, but cash liquidity has almost disappeared. Mobile banking isn't widely used, even though there were efforts to promote it. People still rely on cash, but there is no cash.

If you want cash, you have to go to a broker and pay 40 to 50 percent more just to get it. These local market dynamics have a huge impact. That's a big challenge for us too. We're almost entirely reliant on what we can find inside Gaza, which often means working with people we wouldn't normally engage with, just to find materials or equipment, sometimes pulled from rubble. But if we can keep a lifesaving intervention going, then we have to engage. We don't have a choice.

Charles & Maurine: I think I read that they were trying to implement a system in Gaza where, since supplies couldn't enter, they would just transfer cash directly to people so they could buy goods locally.

But that doesn't seem to work because, as you said, the market has collapsed and local production is extremely limited. There's no real solution there.

Respondent 1: It's an interesting idea. But there are two parts that people from the outside don't realise.

Right now in Gaza, you might pay 900 dollars for a 25-kilo bag of flour, or 40 dollars for a kilo of onions or tomatoes. The costs are so excessive and that's why people are forced to go to the Gaza Humanitarian Foundation and risk their lives because, even if they can afford it, it's still incredibly difficult.

Also, there's been a lot of hesitancy among the local population around using phone banking or paying online. People are concerned that they don't have control over that money, the system could be shut off from one day to the next. If you lose access to the internet, you lose your only lifeline. There's also a deeper suspicion that the Israeli state could control that access rather than the individual. That plays a huge role in the mistrust.

Charles & Maurine: Did you notice anything else? Either about internal restrictions or something in the document that seemed incorrect?

Respondent 1: Related to the part about safe zones. Before the January ceasefire, we had the humanitarian notification system. That allowed us to notify the military about vehicle movements inside the designated safe zone.

If we needed to move outside the safe zone, we had to coordinate it. There was a mechanism to communicate with the CLA and the IDF. It wasn't a good system, you'd often be talking to conscripts replying through a Gmail account. But at least it existed, and you could escalate if something went wrong.

After the ceasefire, that system disappeared. They said it wouldn't be used anymore. A new mechanism was later introduced, but only to coordinate movements into buffer zones or evacuation areas. It's slower and designed to reject requests, nine times out of ten, you'll be denied.

And about the safe zones, I'd need to double-check, but I'm quite sure that the last effective humanitarian or safe zone officially ended on 18 March. There's no safe zone in Gaza. There never really was, but now, officially, there is none.

The safe zones, as we knew them, were never truly safe. There were strikes inside them, and even ground forces would operate within those areas, they'd go in and then withdraw. The zones existed more as a notion. They required a higher level of validation within the IDF to strike there. The military had to justify it to a senior officer.

That whole mechanism was removed. That's why our field hospital is located in the middle area, on the coastal belt. But if there's a target they want, there's nothing that would stop them.

And one last point, maybe not very technical, but the Gaza Humanitarian Foundation, as an implementer of aid through the IDF, is probably the best way to describe it. There are no more than two distribution sites, I think three, including one in Netzarim when I left. Those distribution sites alone overwhelm the health system.

Shortly before I left, in Netzarim, 54 people were killed trying to access aid. When that happens, we apply a basic rule of thumb, multiply that number by three to estimate the injured. So 54 killed means more than 150 wounded. These are ballistic or explosive trauma cases, not light injuries.

You can't send all those people to one hospital. The ERs can't handle that many yellow and red cases. So patients are spread across all field hospitals and whatever other structures are still standing. No one can keep up.

The ICRC in the south is very close to one of the Rafah distribution sites. They are dealing exclusively with wounded from these mass casualty events. It's insane.

Charles & Maurine: Maybe we'll try to elaborate more on the Gaza Humanitarian Foundation, because it really illustrates the depth of the challenge.

Respondent 1: I have staff who are going there to try and access food. These are people who are paid, and by Gaza standards, they receive a very reasonable salary. But the lack of accessible goods in the local market, plus the cost of accessing cash, if you can access it at all, means even they are taking that risk.

It's a classic example of: don't try to fix something that wasn't broken. The humanitarian system isn't perfect. The way we distribute aid or how the UN agencies operate can be bloated at times. But look at what happens when you try to replace a model that worked, maybe imperfectly, but still functioned for the better part of 25 years.

Respondent 2 - Nations Unies 16/07/2025

Profil et Parcours :

La personne interviewée travaille depuis plus de 20 ans au sein des Nations Unies, après un passage dans des ONG de peacebuilding (pas d'humanitaire à proprement parlé). Elle précise qu'elle n'a pas fait « énormément d'humanitaire » à proprement parler, mais a longuement travaillé en contexte d'urgence.

Elle a commencé à la FAO, dans la section urgence au siège, puis a été déployée en Palestine, notamment lors de la crise de la grippe aviaire. Elle a ensuite travaillé pour l'OMS, également en Palestine, au moment de la prise de pouvoir du Hamas à Gaza (2006-2007), période durant laquelle les donateurs ne pouvaient plus financer directement les médicaments vers Gaza. Elle a participé à la mise en place de circuits alternatifs pour l'approvisionnement.

Elle a ensuite rejoint le PAM pendant la guerre de Gaza de 2008-2009, toujours en tant que Program Management Officer, et non logisticien. En 2009, elle intègre le UNMAS (Service de lutte antimines de l'ONU), où elle travaille jusqu'en 2014, principalement en Palestine et en Cisjordanie. Elle est ensuite affectée en Côte d'Ivoire, puis au siège à New York.

De 2014 à 2022, elle est restée au siège d'UNMAS, où elle devient cheffe d'équipe pour les opérations en Afrique de l'Ouest, en Afrique centrale et en Colombie. Depuis un an et demi, elle a été transférée à UNDSS, le service de sécurité du personnel, des bâtiments et des opérations de l'ONU, au sein d'une unité qui vise à moderniser le fonctionnement interne.

Jusqu'en 2014, l'interlocutrice a été principalement sur le terrain (surtout Palestine, Côte d'Ivoire). Depuis, elle effectue des missions en tant que personne du siège.

Elle précise avoir suivi de très près la mission au Mali, la peacekeeping mission qui était énorme, avec un programme de 50 millions USD/an dédié à la protection contre la menace explosive. Il s'agissait d'un des plus gros financements de l'organisation. Elle insiste sur le fait que la mission de maintien de la paix de l'ONU au Mali (MINUSMA) a joué un rôle fondamental dans la logistique de toutes les autres entités onusiennes présentes dans le pays. Son départ a laissé un vide important.

Le programme UNMAS au Mali portait sur :

- Le soutien aux opérations de maintien de la paix (préparation et formation des troupes face aux menaces explosives).
- Le travail avec les institutions maliennes (armée, police, gendarmerie) et les ONG locales pour renforcer les capacités nationales.
- Une composante humanitaire axée sur la sensibilisation et l'appui aux populations dans les zones les plus touchées.

Elle mentionne également un travail important en République centrafricaine, au Nigeria, au Burkina Faso, ainsi qu'un programme en Colombie, dans le cadre des accords de paix avec les FARC. Un projet innovant y a vu le jour, où d'anciens combattants FARC sont devenus démineurs, notamment pour neutraliser des engins explosifs improvisés qu'ils avaient eux-mêmes posés.

Défis logistiques rencontrés, opérations spécialisées et contexte extrême :

La personne interviewée confirme qu'en dépit de son rôle non-logistique à proprement parler, elle a été confrontée à des défis logistiques majeurs dans le cadre de ses missions, notamment à Gaza.

Elle insiste sur le caractère absolument particulier et complexe du contexte logistique à Gaza, qu'elle qualifie d'"impossible". Elle évoque en particulier la période suivant l'opération Cast Lead (2007-2009), où l'entrée de matériel humanitaire était fortement restreinte par l'armée israélienne (IDF). À cette époque, même des produits de première nécessité comme les chaussures ou les pâtes alimentaires étaient bloqués.

Malgré cela, son équipe a obtenu, après une année de négociations très intenses avec le Hamas et les autorités israéliennes, la permission exceptionnelle de faire entrer des explosifs à Gaza dans le cadre des opérations de neutralisation d'engins non explosés. Elle précise avoir été directement impliquée dans ces négociations, en lien avec le Hamas, l'armée israélienne et la coordination militaire (COGAT).

Elle raconte avoir participé à des convois d'entrée de ces explosifs, dans un cadre extrêmement codifié et surveillé (communication constante, enregistrement vidéo, suivi en temps réel). Elle souligne le contraste avec l'interdiction parallèle de biens de base, ce qui illustre selon elle l'absurdité et la complexité de certaines situations logistiques.

Elle rappelle que dans son champ d'action (déminage et sécurité), le matériel à acheminer est très spécifique, lourd, et sensible : véhicules blindés (MPV), radars, robots, anti-jammers, et même des tanks. Elle mentionne avoir acheminé des dizaines de tanks au Mali. Ce matériel, qualifié de "fou", est très éloigné des standards habituels de l'aide humanitaire.

Elle conclut que ce type de logistique est extrêmement spécialisé, "hyper niche", et ne s'applique pas au reste du système humanitaire classique. Seuls quelques ONG partenaires ou opérant dans ce même secteur sont concernés.

Même sans décrire de manière détaillée des "méthodes" de contournement, elle insiste sur deux éléments clés :

- L'importance des négociations directes et de la relation diplomatique étroite avec les autorités militaires pour faire valider l'entrée du matériel.
- Le niveau extrême de contrôle et de codification requis pour certains convois, notamment ceux transportant des explosifs.

Le propos montre que la capacité à opérer dans des environnements bureaucratiques très rigides (validations multiples, surveillance permanente) est centrale dans son expérience logistique.

La personne interviewée identifie trois types de solutions face aux obstacles logistiques :

- Solutions impossibles à contourner : notamment les exigences réglementaires strictes (certificats d'utilisateur final, normes de traçabilité).
- Solutions systémiques : mise en place de systèmes informatiques de contrôle qualité, de lutte contre la fraude et de conformité administrative, nécessitant une forte formation du personnel et un monitoring réaliste.
- Solutions relationnelles : gestion des parties prenantes ("stakeholder management") considérée comme le facteur le plus déterminant. L'interlocutrice insiste sur le pouvoir décisif des "petits administrateurs", ceux qui tamponnent les documents.

Elle souligne également que la localisation (s'approvisionner, sous-traiter et former localement) est souvent la meilleure solution, bien qu'elle dépende fortement de la disponibilité des ressources et des capacités locales.

Exemples de solutions créatives en contexte extrême :

À Gaza (2009-2012)

Face à l'interdiction d'acheminer du matériel de déminage et de former la police locale, l'équipe a mis en œuvre des solutions locales :

- Stockage sécurisé des engins non explosés : après des mois de négociation avec les autorités locales, israéliennes et la mairie, l'équipe a obtenu l'autorisation de déplacer les engins entreposés au centre-ville de Gaza City vers un site plus isolé, identifié, sécurisé, et construit avec des moyens locaux.
- Transport artisanal sécurisé : sans matériel spécialisé, ils ont utilisé des bacs remplis de sable, normalement destinés à des opérations sous-marines, placés à l'arrière de pickups pour transporter lentement les engins hors des zones densément peuplées. Cela a permis de réduire les risques pour les civils.
- L'ensemble de ces pratiques respectait la politique du "do no harm", en évitant d'aggraver la situation humanitaire.

En Côte d'Ivoire et au Mali

Dans le cadre du soutien aux programmes de désarmement, démobilisation et réinsertion (DDR) :

- L'équipe a développé localement des machines pour marquer et détruire les armes collectées auprès des anciens combattants, lorsque l'importation de matériel était impossible. Il s'agissait de constructions artisanales mais fonctionnelles.
- Trouver des solutions aux contraintes sur le terrain implique énormément de tentatives et d'échecs, mais aussi des adaptations progressives et ça évolue.

L'interlocutrice insiste à plusieurs reprises sur le rôle crucial des relations avec les acteurs locaux :

- Cela concerne aussi bien les autorités administratives que les collaborateurs nationaux.
- Elle estime que la réussite des opérations passe par la connaissance fine du contexte local et la capacité à engager le dialogue de manière crédible et durable.

Coordination inter-agences au sein des Nations Unies :

L'interlocutrice reconnaît que la coordination au sein du système des Nations Unies est complexe. Elle confirme que dans les situations d'urgence humanitaire, le Cluster Approach est activé. Le PAM (WFP) assure généralement le leadership du cluster logistique, tandis qu'OCHA coordonne l'ensemble des clusters.

Elle souligne que, bien qu'on parle souvent de "One UN", la réalité reste souvent celle d'une fragmentation entre entités, avec des dynamiques de fonctionnement indépendantes. La crise financière actuelle accentue cette tendance, avec des coupes budgétaires massives (20 à 30 % du personnel), des fermetures de bureaux et la priorisation de certaines urgences au détriment d'autres.

Elle évoque également la réforme "UN 2.0", censée renforcer la cohérence et la collaboration entre agences, rationaliser la prolifération institutionnelle, et remettre la localisation au cœur de l'agenda opérationnel et budgétaire.

Relations avec les ONG et acteurs locaux :

La personne interviewée explique que son organisation travaille étroitement avec des ONG locales et des organisations civiles locale, notamment :

- Pour la sensibilisation communautaire aux risques liés aux explosifs (dans les écoles, les groupes de femmes, les organisations communautaires, etc.).
- Par le biais de contrats formels, dans le cadre d’actions de formation, de communication ou de mise en œuvre de terrain.

Elle précise que le système de recrutement et de contractualisation de l’ONU est extrêmement rigide et complexe, ce qui freine souvent la participation des ONG locales, qui ne connaissent pas les procédures ou n’y ont pas accès.

L’interlocutrice insiste sur un point central : “si l’on veut vraiment faire du local, il faut s’assurer que les acteurs locaux savent comment faire”.

Elle identifie plusieurs besoins clés pour favoriser la localisation :

- Former les ONG locales à identifier les opportunités de financement, soumettre une candidature, et répondre aux exigences de reporting et de monitoring.
- Aider ces structures à démontrer leur fiabilité, condition indispensable pour que l’ONU puisse les sélectionner et justifier leurs choix devant ses propres organes de contrôle. Parce que ce n’est pas de la paranoïa, il y a énormément d’argent détourné.
- Adapter et simplifier les règles de procurement, qui sont aujourd’hui trop lourdes, surtout pour des entités locales peu dotées.

Elle conclut que la localisation exige un investissement réel en renforcement de capacités, sans quoi elle restera un objectif déclaratif.

Évolution des processus et apport des technologies :

Interrogée sur l’évolution des processus administratifs, de validation et de coordination, l’interlocutrice souligne que ces aspects ne relèvent pas directement de son domaine, mais partage plusieurs observations utiles issues de son expérience :

- Il existe une ligne très fine entre rigueur administrative et immobilisme bureaucratique. Trouver l’équilibre entre exigence de redevabilité et nécessaire agilité opérationnelle reste un défi central.
- Avec la raréfaction des financements humanitaires, les organisations doivent prouver davantage leur efficacité et transparence, tout en étant plus rapides et adaptables sur le terrain.
- Elle estime que les technologies numériques peuvent aider à résoudre cette tension, notamment via :
 - l’automatisation de processus,
 - l’amélioration des flux d’information,
 - la gestion harmonisée des données inter-agences.

Cependant, elle avertit que chaque entité onusienne développe encore ses propres outils et systèmes. La compatibilité des plateformes entre agences est donc un enjeu majeur mais encore non résolu. Selon

elle, une interopérabilité systémique entre entités est incontournable à terme, mais difficile à atteindre dans l'état actuel des pratiques.

Respondent 3 - MSF Emergency supply chain officer 18/07/2025

Charles & Maurine: So we'll start with your background and experience. Could you tell us about it?

Respondent 3: I've worked with MSF since 2017. My background is in logistics and supply chain. Before working in the humanitarian sector, I spent nine years in the private sector in my home country. I studied international relations with a specialization in international logistics.

For MSF, I've worked in Sierra Leone, Haiti, DRC, South Sudan, Ethiopia, Pakistan, Afghanistan, Mozambique, Palestine, Sudan, and Ukraine.

My role is in the humanitarian supply chain, even though I'm not a fan of that term. I handle everything from toilet paper to X-ray machines. Everything goes through the supply chain department, providing the material resources the medical team needs to deliver care.

Charles & Maurine: And are your missions more short-term or long-term?

Respondent 3: Usually long-term. The shortest mission I did was nine months. I'm based in Brussels now, so it's more permanent, I'm at headquarters. For Palestine, it's my daily job, not even a mission. Same for Sudan since April 15, 2023, we've been following the conflict there. For Ukraine, I've been involved since July 2022.

In the field, my shortest missions were nine months (Haiti, Afghanistan). Others lasted 10, 11, or 14 months depending on the country, like in DRC.

Charles & Maurine: And do you mostly work in emergency situations?

Respondent 3: Yes, exclusively. I'm a Supply Chain Officer for the E-pool, MSF's emergency unit, part of the Operations Department. Respondent 1, who contacted me, is also part of this emergency unit. He's in the mobile team, flying between locations, while I'm based at headquarters.

MSF is structured into eight operational cells. Each one is responsible for a region. For example, West Africa includes Mali, Nigeria, Sierra Leone, Guinea. Eastern Africa includes Sudan, South Sudan, Kenya, etc. Our cell is the emergency cell with a global scope. We only deal with emergencies.

For example, Sudan was managed by the Eastern Africa cell until the war in Khartoum began then we took over. Same for Ukraine when the war started.

Some emergencies are short, like a cholera outbreak in Angola where we stayed for three months. Others are long-term, complex emergencies. We also respond to epidemics and natural disasters, the Turkish earthquake, Pakistan flooding, Ebola in Uganda in 2022.

"Emergency" is a blurry concept in the humanitarian sector. A place like rural South Sudan is in a permanent humanitarian emergency. But we define emergencies as sudden changes in context, usually with high lethality: war, epidemics, or natural disasters that disrupt the status quo and cause many deaths. Not all disasters do that, some earthquakes don't justify our presence as a medical organization if there's no significant lethality.

Charles & Maurine: Now we'd like to talk about access constraints, which are a major issue in Gaza. When delivering aid, what obstacles typically arise, both in Gaza where we think it's a big point and generally?

Respondent 3: There are many obstacles. You mentioned last-mile issues, but I'll start from the origin. Okay, so first of all you have the access and all the administrative and bureaucratic constraints on making your items reach Gaza.

First, Gaza is completely confined. The borders are closed, and there's total control over what enters. Right now, the only physical access is through Kerem Shalom. Before the war, there was Erez (north), which is now closed, and Karem Abu Salem, which was rarely used.

I was in Gaza a year ago. My colleagues there had never even been to Rafah, it was like the countryside to them. After the war, it became the only exit point. But my point is: the first thing is how to enter.

On October 7, when hostilities started, all borders were closed. They only reopened on October 21, meaning two weeks with no trucks, commercial or humanitarian. Before the war, about 500 trucks entered daily. Suddenly, zero. No food, no medicine. People with chronic illnesses like diabetes, hypertension, cancer, were left without treatment. A lot of people die from diseases in conflicts not only from the bombs.

So, the first constraint is shipping items from Europe, the US, or Dubai into Gaza. There's a complex administrative process. Customs is handled by Israel's Ministry of Finance, one of the most conservative, pro Netanyahu, ultra-right ministries, making it very difficult to get clearance for anything going to Gaza or even the West Bank.

Next constraint is physical access. Gaza has no functioning infrastructure, no trucks due to a lack of spare parts, no proper roads, and a high risk of looting. Medical supplies are safer, but food and hygiene items are often 100% looted or "self-distributed," as WFP puts it.

In October, we started building coordination in Cairo, realizing the team inside Gaza would be evacuated through Rafah. Erez was blocked, and you couldn't cross Gaza City due to ground troops and bombings. So we planned to bring supplies through Rafah therefore we started establishing a base in Cairo.

The main constraint in Egypt is the Sinai. It's a militarized zone. Foreigners can't enter, and not all Egyptians can either, it requires a special visa. Only certain transport companies are authorized to cross.

So we need clearance for the Sinai, and we began accumulating trucks there. Today, I think we have around 5,000-6,000 trucks in El-Arish waiting to enter Gaza.

Anyways, The Rafah border opened on October 21, and trucks began to enter. But Egyptian trucks don't go all the way in. At the time, Kerem Shalom wasn't open yet, it opened in January 2024. Trucks offloaded at Rafah, like a transit zone and then returned to Egypt. Palestinian trucks picked up the cargo for last-mile distribution whether in a warehouse or in a camp.

At first, looting wasn't severe, some food lootings at the time but not severe. There were hundreds of organizations sending donations like shelter, food, and in our case, medical items. We were already operational in Al-Aqsa Hospital (middle area) and had activities in Rafah and Khan Younis. We identified a warehouse and we were sending medical supplies.

MSF doesn't have an import license in Egypt, even for transit. We relied on WHO and the Egyptian Red Crescent. The Ministry of Social Solidarity in Egypt appointed the Egyptian Red Crescent to handle all consignments into Gaza. All international organizations are still required to go through them. So they do this control of cargo, so once the customs agent knows it's the Egyptian Red Crescent, they know it's in transit for Gaza. So, this creates a bottleneck, another big impediment that we had, apart from the physical access.

And please, don't call it a "bureaucratic" constraint. That makes it sound like it's about missing paperwork or technicalities. It's not. These are deliberate political blockages. Not having a stamp or incorrect packing list isn't the issue, these are political decisions that block humanitarian access.

Charles & Maurine: Regarding last-mile distribution, you mentioned Palestinian trucks are involved. Do you have to coordinate with them directly? What kind of issues do you face?

Respondent 3: Yes, many issues. Today the biggest are the lack of infrastructure, fuel, and spare parts. Since March 2nd, not a single drop of fuel has entered Gaza. Truck maintenance is impossible and truck availability is declining.

Also, not every item is allowed to enter. There's an Israeli body called COGAT that authorizes or denies cargo entry. They block "dual-use" items, things that can be used for both civilian and military purposes. But there is no official list. The criteria are ambiguous and arbitrary. We've had items like elbow crutches, wheelchairs, razors (used in surgery), or calamine skin lotion blocked as dual-use. The process lacks transparency. It's slow because just a few people are validating hundreds or thousands of items.

So there is no clear list, there is no transparency, there is no process. It's ambiguous on purpose, the list of dual use it's insane. And so that there is also a material impediment in this sense, and the process is slow. For MSF, the complexity is higher because we run medical services, including surgical hospitals. We need many items, from the alcohol hand rub, to gloves, needles, surgical tools... A single truck might contain hundreds of different items, all requiring individual pre-approval. Other organizations, like the Norwegian Refugee Council, might send one item type, tents for example, which simplifies their process.

Some items we need are so technical that even I, with eight years in MSF supply chain, don't know them. Imagine a bureaucrat in an office in Tel Aviv trying to assess that, it's unrealistic.

Charles & Maurine: And about the last-mile, what happens with looting?

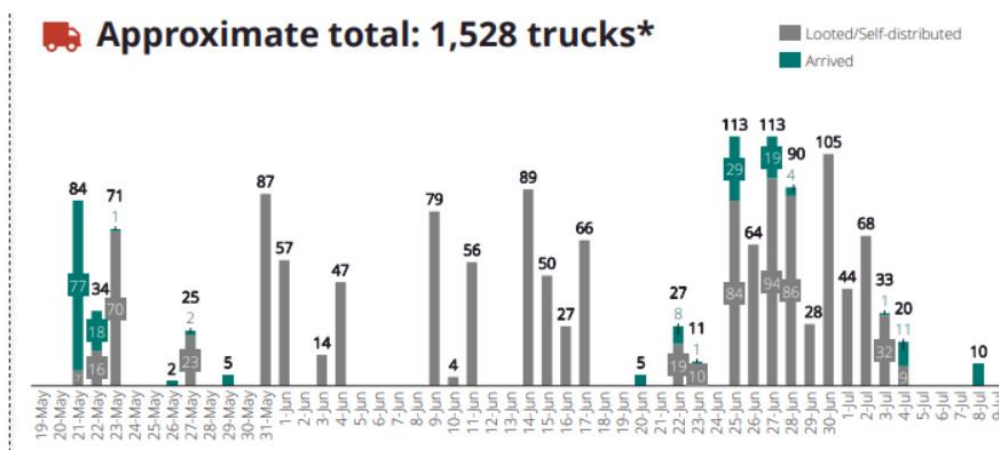
Respondent 3: Looting is a major issue. I entered Gaza through Rafah in February 2024. My first scene was a truck carrying mattresses being looted. My driver said, "Welcome to Gaza."

People are desperate, it's insane. Looting isn't just by individuals in need, it's also organized. And the fact is that it's not only poor Palestinians that are looting the cargo, there are gangs looting to resell items on the local market, where prices are absurd. A bottle of soap might cost \$50, flour \$300, cigarettes \$100. It's a criminal economy run by powerful families.

During the ceasefire from January 20th to March 2nd, there was a big influx of trucks. But after March 2nd, the borders closed again. That was the worst phase of the war in terms of bombardments in terms of lack of supply so there was no hygiene there was no food.

The borders reopened around May 19th, but trucks still can't reach their final destinations. I can share a graph showing truck activity between May 19th and July 9th, based on data from the Logistics Cluster.

Trucks collected from crossings (19 May – 9 Jul)



Respondent 3: So this is a graph showing trucks collected from the crossing from 19th of May to 9th of July. This information was shared by the Logistic Cluster. In the meeting one week ago on the 10th of July.

In green are trucks that reached their final destination. In grey are looted ones. The number of trucks is already inadequate, and looting is widespread. Many times, UN agencies and others paused activities due to security risks to cargo, drivers, and surrounding people.

MSF managed to send some trucks. We're spared from looting more often, as there's still some respect for medical missions. We use WHO banners on trucks saying, "*Medical Supplies for Hospital - Please Do Not Loot.*" It helps, but many of our trucks have still been looted over the past year and eight months.

Currently, we send only medical supplies, no hygiene items or food. We're not allowed to, even though we would if we could. But no dual-use so we're restricted to basic medications, infusions, lotions, pills, and consumables like sutures and compress gauze.

We can't send medical equipment or sterilization materials, only basic consumables. Even then, many trucks don't reach their destination. Some are looted; others are delayed.

But yes, so this data here is from all organizations from the log clusters combined. For us (MSF), since May 20th, we've sent about 15 trucks. I can get the precise number from my transport team. One truck went in yesterday, 18 pallets, now sitting at Kerem Shalom, waiting for last-mile distribution.

Only seven organizations have been allowed to send trucks since May 20th. Three are under UN umbrellas (UNICEF, WFP, WHO). Four INGOs: MSF, ICRC, UK-Med, and International Medical Corps. Only NGOs running field hospitals inside Gaza are permitted to send items.

That means no hygiene kits, no shelter materials. It's summer now, so blankets aren't needed but in three months, they will be. There's a lot of mosquitoes but no mosquito net or repellent or vector control.

It's a disaster. I've worked in Palestine for a long time, and it's emotional. I try to be rational, but it's very hard. My mental health is already a bit jeopardized.

Charles & Maurine: The data you gave us, are we allowed to use it in our documents?

Respondent 3: Yes, this data is public. It comes from the Logistics Cluster, which is the cluster of NGOs coordinated under the WFP as part of the cluster system for Palestine. I received it by email, but it's published on their official website.

Let me give you the link, it's available under "State of Palestine" on the Logistics Cluster website. You'll find useful information there.

Actually, I strongly recommend reaching out to the Logistics Cluster Coordinator for Palestine or the Deputy Coordinator, Sarah. They'll be happy to provide you with data, it's all public. All member organizations feed their numbers into the cluster. They help coordinate convoys, common facilities, and storage inside Gaza. They don't operate trucks, but they offer logistical assistance.

If you go to the site, you'll find meeting minutes, like the one from July 3rd. We have weekly meetings with them, and they publish everything. It's a great source of operational insight.

I can also forward the last email I received. You're free to use that data. I suggest you contact them, though they're overwhelmed and may take a few days to reply, they're good people and reliable. You could even ask to attend one of their meetings. They're operational, not academic, we don't discuss concepts, just logistics but you might extract useful information.

Charles & Maurine: Yeah, maybe we can follow up on all the constraints you talked about. How do you react in this situation where you face important issues to get supplies through, what do you put in place to work around and try to get things in?

Respondent 3: Well the first thing is we try not to move our cargo with food trucks. That's the first mitigation measure because food is the first target. So we try to separate the movements whenever possible.

Second, all the movements inside have to be coordinated by COGAT, the organization I mentioned earlier. They coordinate everything. They are the liaison office between civilians and IDF forces. Everything we do, even building a house or an office, we have to give them the coordinates and say, look, we are present here. So we deconflict that facility by informing them.

If I want to move from Kerem Shalom to another point, I have to ask when I can do it and which road to use. Sometimes they say, don't do it tomorrow because tanks will be there. Or they say, okay, green light, go ahead. But you have to coordinate everything with Israelis before you move. We are not getting direct coordination, but the log cluster gets it. So we follow them for every convoy.

We use their coordination and validation because they are the UN, they have stronger advocacy power than us. Everyone uses that coordination nowadays. Still, we try to do our own paths because we have a lot of experienced Palestinian staff. Many have worked for MSF in Gaza for years. They know the local transport companies and the people. It's 2 million people but still Gaza is a small area, and MSF has a strong network thanks to our employees there.

So once our truck goes in, our supply manager inside Gaza stays in touch, guiding the route. Take this road, avoid that one, try another. Maybe also the log cluster convoys also change their timing to avoid predictability. One day at 7 a.m., another day at 7 p.m., then 3 p.m., then 6 a.m. They do this to reduce the risk of looting.

When looting happens, there are different scenarios. No truck arrives fully intact. People are curious, they take the boxes, open them just to see what's inside. Once they see it's medicine, they usually leave it.

But when we shipped hygiene kits six months ago, we lost many items. Since we have connections, we try to identify the looters, figure out the family or group from that neighborhood. We build a network to recover items when possible.

If looting happens, our main priority is the life and safety of the driver and yes take the items. In the end, if it's hygiene items, they end up reaching people in need, it's unfortunate, especially if middlemen sell them, but at least they're used. That's why people call it "self-distribution."

Still, the first priority is the driver's safety. We know and accept that every shipment might lose 25 to 30 percent. There's no way around it. Our priority is physical flow: get whatever we can inside. Then we assess what arrives. Our goal is to reach the patient as soon as we can.

Unfortunately, a lot could be improved, but there are many impediments. The rules are ambiguous, especially for the last mile, and they keep changing. The coordination process is slow. Sometimes cargo waits two days for COGAT's green light to move.

It's a pain. They do everything they can to demotivate you from sending and moving items. There's not much we can do. No insurance company accepts this kind of risk. The situation qualifies as force majeure.

Charles & Maurine: So you basically just have to kind of accept it and try to account with losses.

Respondent 3: Yes, exactly. It's a setup where whatever you manage to deliver is already a win. It's a very unique context. I've never worked in a situation like this before, so we're learning by doing.

We try to mitigate issues wherever possible, like with the use of banners. We don't use armed escorts, in the past, many organisations used them and when people come they shoot in the air or in the legs. We don't it because it goes against our principles at MSF.

So we face the reality and try to manage it through connections, advocacy, banners and whatever small protections we can put in place. That's all we can do.

Charles & Maurine: One specific aspect we've observed in our research on Gaza is the volatility in how the rules and conditions evolve. For example, there was a ceasefire in January, but it later broke and the situation worsened. Throughout the conflict, we've seen border crossings open, partially open, close completely, and face shifting regulations.

How does the organisation manage these constant changes? How do you deal with sudden closures? And when a ceasefire occurs, are you able to immediately scale up operations, or do restrictions still remain in place? How do you handle the logistics of scaling up when the opportunity arises?

Respondent 3: When the ceasefire happened at the end of January and into February, yes, we scaled up very quickly. We already had a lot of items waiting in Brussels ready to ship. The process moved fast because the transit through Jordan is relatively simple.

The challenge starts at the border, where you need to coordinate. Just getting to the border isn't difficult. The issue lies within Israeli territory. If you're importing via the Tel Aviv port, then it gets complicated. But in Jordan in Amman, you can receive items in a few days, same for El-Arish.

When hostilities escalate with bombings and ground troops, we rely on our stock. Our first strategy is to keep shipments going continuously, since we never know what the next day will bring. We try to maintain regular replenishment. Of course, we may run out of a few items here and there, because with over a thousand products, it's impossible to forecast every single demand precisely. But overall, we're in a good position and still sustaining medical activities. That's thanks to the ceasefire period, during

which we were able to send more than 70 trucks during that month. We're still operating based on those supplies.

Another key strategy we learned the hard way is decentralizing storage. We don't keep all the stock in one location. Now we have six small warehouses scattered across different areas because we had to evacuate so many times. This came after a major setback in December 2023. We had a warehouse near our hospital in Rafah. Our team evacuated for several reasons, and we lost the entire stock. It took five weeks to rebuild capacity and resume activities. Eventually, we were able to retrieve some items, but the lesson was clear: never again in one place.

When bombings intensify, there's not much to do. We try to continue sending supplies inside as much as we can. When the border closes due to military activity, there is not much you can do. These are external factors we cannot control.

What I can control is to be dynamic and prepared. I try to keep everything flexible and ready to respond when an opportunity arises. Part of my job is to remain on standby 24/7 with items ready to ship. We have a distribution center in Brussels close to the channel with a lot of items prepositioned there but right now, nothing is entering, so we are not shipping anything. Now I have 25 trucks in Cairo waiting. Once I can put trucks inside I'll try to send more but right now it makes no sense. If tomorrow we get the green light, and I can put 10 trucks inside, I'll ship 10 more trucks from Brussels to Egypt again.

We work through three corridors: Egypt, Israel, and Jordan. It's the same logic as decentralized warehousing. If one corridor is blocked, we still have backups. In a context like this, redundancy is essential. You never know which option will remain open.

We were already in Egypt in October 2023. In January 2024, we opened our office here in Jerusalem. In February, the log cluster started doing convoys with WFP from Amman, and we followed. We even sent a team, well one person, to Cyprus to assess the new corridor Biden launched in mid-2024 (Trident Pier). They did like two shipments. It looked promising, with capacity to receive 300 pallets at Gaza Beach. But it shut down quickly and was heavily militarized by the UK and US armies sending stuff.

We had staff there, ready to use the corridor if it became used for humanitarian purposes. But we didn't want to be associated with military operations. If our cargo arrives with military US shipments, that's the worst scenario for us. So we never used the Cyprus corridor, though we were close to doing so.

Another major constraint is the central rupture in the middle of Gaza, Wadi Gaza. It's a big avenue that Israel build in the middle which acts like a barrier. You cannot move easily items from north to south. Even during the ceasefire, we sent some items to the north via Erez and some to the south separately. The ability to move across the strip simply doesn't exist. You can maybe carry a few parcels in a car, but moving three trucks? Impossible. There's a big checkpoint and internal movement is highly restricted. And it keeps getting worse.

I have a map here and that's the part where people are (showing the very south of the strip, a small area)

Charles & Maurine: Even during the ceasefire, the movement inside, we're still heavily restricted?

Respondent 3: During the ceasefire, you might recall images of people moving from the south to the north, along the beach avenue, hundreds of thousands returning to Gaza City. Later, when bombing resumed in Gaza City, many refused to go back south. They were afraid of getting stuck there and never returning, and that's exactly what happened.

So, a lot of people are still in Gaza City. They refuse to move. Some have already been displaced nine or ten times. They are exhausted, and there is nowhere left to go. Now they're by the sea, but they can't swim or fish, so even that doesn't offer relief.

But yes to come back on your question, during the ceasefire we could ship a lot of things

But, you know, that was actually bad. I mean, of course it was good for us in terms of logistics, but it was bad because it built a narrative from the Israelis that humanitarian cargo is equipping Hamas. You saw during the ceasefire, when they were releasing hostages, they had a stage, with the people with the masks and the guns. And then they started asking, how come they have this gear if dual-use items are restricted?

That became the argument. The Israelis started saying that NGOs are naive, that they're equipping Hamas. The claim is that every cargo being sent is diverted to support Hamas. I can't speak to that. I know MSF's cargo is not being diverted, but I can't speak for others.

Still, the narrative is very strong. That's why now we can only send very basic items. Nothing that isn't strictly medical, no hospital equipment, no pipes, no infrastructure materials, all of that is blocked because of this narrative.

Charles & Maurine: You mentioned how emotional it can be. How do you manage to stay operational and keep working with your team when conditions are that bad?

Respondent 3: Yeah. Like I said, I was inside Gaza a year ago, and things have changed a lot. It's gotten much worse now. I have deep respect for the Palestinians working for MSF who are still there. Some have lost family members in the bombings, and yet they continue working with patients. You should ask them how they cope. I honestly don't know. I think they want to stay relevant, to keep saving lives.

For me, I was there. Of course, it's hard. You don't sleep well, but you want to be strong, even for them. If you're the one shaking, imagine how they feel. They're not there to take care of you. They're there to take care of the people. You cannot become another patient.

Usually, you never go to Gaza as a first mission. Only experienced staff go. Like you would not go to Palestine if you haven't been in other conflicts before like in South Sudan. There are also nationalities that cannot enter for obvious political reasons. Syrians, Lebanese, many Arabs can't go, they are denied access.

Honestly, I don't know how to fully answer that. It's hard. But in terms of personal experience, I can tell you this: when you work in headquarters, it's a different kind of difficulty. I live in Belgium, I have a normal life, but the work never stops. When you're on a field mission, like I was for a year in South Sudan, once you leave, your job there is done and you leave it behind. Now, my job is permanent. I go on holiday and come back to the same tasks. In the field, you can disconnect after. Here, it's constant. But there are many coping mechanisms of coping, like Belgian beers (jokingly).

Charles & Maurine: You arrived yesterday in Jerusalem. And how long will you stay?

Respondent 3: Until the end of August. There's a gap in the supply chain department, so I'm here to support the team. I'll continue with my regular responsibilities plus help with day-to-day operations.

It's my second time here. I was also in Jerusalem last year. We have a coordination office here. We have the three corridors in Amman, Cairo, and Jerusalem. The main coordination is based here in Jerusalem. The supply teams in Jordan and Egypt report to this hub here.

I entered through Amman on Tuesday, spent Wednesday there, and then crossed by road into Israel yesterday. It's never easy to enter. Every international staff member faces heavy questioning from Israeli security. I did too. But I received a three-month visa, which is good. So I'll stay until the end of August, then return to Brussels.

Charles & Maurine: You mentioned a lot of humanitarian actors, agencies, NGOs involved. How do you manage coordination? How is communication handled? Is everyone aligned?

Respondent 3: Yes, through the logistics cluster. The cluster system includes several groups: the logistics cluster, the health cluster, the nutrition cluster, and even a telecommunications cluster. It started in 2005 after the Pakistani earthquake. That was when OCHA, the UN Office for the Coordination of Humanitarian Affairs, created this system.

The idea is that coordination saves lives. Clusters are meant to prevent overlap between organisations and to improve communication. Their main roles are to share information, coordinate efforts, and offer support services.

For example, the logistics cluster provides storage inside Gaza, free of charge, for small NGOs that don't have a local team or warehouse. They also help organise convoys and serve as a hub for updates and operational planning.

Each cluster has a lead agency. For the health cluster, it's WHO. For logistics, it's the World Food Programme. So even though the logistics cluster is not a formal organisation, it's not registered, it's under WFP. You'll see emails like name@wfp.org because WFP leads the operations.

It's a joint effort. When something new happens, like the shift in government policy in Syria last December, the logistics cluster quickly called a meeting. Everyone shares what they know, asks questions, and discusses how to move forward.

During the early days of the Gaza war in October 2023, the cluster played a key role. I joined their mailing list and attended their meetings like many others from other organisations. It was extremely helpful to see who was involved and to see what the others were planning and doing. They share what they know. For example in this big first meeting, it was useful for me to look who was in the meeting and I started launching emails to WHO, IRC, NRC, and others, saying I wanted to set up an office in Egypt and asked for help with importation.

WHO replied and said I could use their registration to import items. That's how we built the network. I do via this cluster. That's why I recommend it. If you get the chance, drop them a message.

Charles & Maurine: We tried to contact people from WFP. We don't have much response but we will try.

Respondent 3: They are annoying (jokingly). But they are bureaucratic, you know.

Charles & Maurine: Based on your experience, what are the factors that facilitate or hinder coordination between the different actors?

Respondent 3: What facilitates coordination? I think it's the need. We unite because we are stronger together. Alone, you can't do much, especially in emergencies where information is blurry and rumours spread everywhere. You don't know what's true or false, and it's harder to operate.

The good thing is that, in the end, we don't compete. There's no "this is my patient, not yours" attitude like in other private sectors. We're not here for profit. We're here for the people. So we collaborate and support each other.

Of course, sometimes there are obstacles. For example, we might not partner with certain actors due to political reasons that go beyond logistics. Those are higher-level decisions. But on a daily operational level, we collaborate a lot.

If you check my WhatsApp, I'm constantly exchanging messages with people from WHO, WFP, and other organisations. Even NGOs like Oxfam sometimes reach out. Someone might say, "I'm not allowed to send my cargo, can I use your truck?" Now of course I say no because I can't even send my stuff but if I can, I help. It depends on the moment. Everything is very contextual.

The logistics cluster is this platform. And for me, its biggest strength is information sharing and the ability to build a network. When you join a cluster meeting, you see a hundred people on the list. You can copy the names, build your contact list, and start sending emails to connect with them.

Charles & Maurine: And you communicate through WhatsApp as well?

Respondent 3: Yes, we start with email, of course, but then we also use WhatsApp. Let me show you something. The logistics cluster also has WhatsApp groups. Here, for example, is the Palestine Logistics Cluster group. It has around a hundred people.

People share information constantly. Someone from ACTED might ask, "Do you have a contact for a supplier of X?" So we help each other. The global logistics cluster is based in Rome, but in every emergency, they create a regional cluster. This group here is the Palestine Logistics Cluster.

Charles & Maurine: It's interesting because everything looks very procedural and official. But in reality, it seems much more informal and human.

Respondent 3: Yes, exactly. In an emergency, especially in Gaza, you can't be too procedural. Things change too quickly. If you spend a lot of time on heavy documentation, it might already be outdated a week later.

Personally, as a manager, I believe more in human interaction than in exhaustive paperwork. We gain more time and agility that way. I'm not an engineer, as you can see. I'm more of a people person than someone who just follows the SOPs.

Charles & Maurine: Talking about agility, I was wondering if you had an example of creative or innovative solutions to obstacles. We've noticed that humanitarian operations still feel a bit old school in some ways, even though there are improvements. How do you perceive that?

Respondent 3: Yes, I agree with your sentence, the humanitarian field is old school. As I said at the beginning, I worked nine years in the private sector before moving into the humanitarian world. When I talk to my former colleagues, I see a huge gap.

There's not really a priority to invest in new technologies in the humanitarian sector, especially in supply chain and logistics. You don't see solid ERPs, warehouse management systems, or transport management systems. The ones leading innovation are WFP. They have the biggest funding and huge logistics infrastructure. In South Sudan, for example, they do food distribution by drones and other advanced methods.

They have the means. It's very hard for smaller organisations. MSF is very big, and logistically we're at the top of the humanitarian sector, but smaller NGOs don't invest. MSF we have our own systems, but true innovation is difficult. We're still a step behind the private sector.

For medical activities, we are very innovative in emergencies. In Ukraine, we had a ICU train and truck. We were referring patients from Dnipro to Lviv by train, that was very innovative and recognized by

many medical organisations. It's a logistics approach applied to medical activities, like a hospital train. But that was Ukraine. In Europe, you have decent medical infrastructure.

When it comes to logistics, we are not a logistics organisation, so the resources to invest are limited. The priority is the medical and the patient. Personally, I don't like to use an emergency as a lab. We have to be pragmatic and assertive during emergencies. It's not the time to test new things. It could go well, but it could also go really wrong, and that would compromise the entire operation.

If I want to test something new, I would do it in a stable mission and context like Maputo or Conakry for example. If it works well there, maybe it's worth scaling. In an emergency, I would only innovate if I had no other choice, if nothing I have works. Then I would think differently. But usually, I'm pragmatic. I don't say conservative, but I prefer to go with what I know I can manage. Trying something completely unknown during an emergency could waste time and resources.

Charles & Maurine: And over time did you see improvements in logistics?

Respondent 3: Yes, a lot. It's completely different. When I started, it was just an Excel file. Now we have proper systems. We have better forecasting methods, better ERPs, and even some artificial intelligence initiatives here and there to give us real-time information. We also have more end-to-end visibility.

At MSF, we've made big improvements. We now have global networks that are much more solid than when I started nine years ago. We're decentralizing our supply chains, building regional hubs, getting closer to the patients. That helps us reduce both lead times and our carbon footprint.

Procurement has also improved, we've made better agreements with regional suppliers. So, yes, there's been a lot of evolution and investment in the supply chain. Of course, compared to the big players in the private sector, we're still a step behind. But the progress is real.

Charles & Maurine: And you mentioned the AI initiatives. Do you think emerging technologies like AI, satellite imaging, and tracking systems will make a big difference in the coming years?

Respondent 3: Absolutely, I'm sure of it. One great improvement is GIS, geographic information systems. These give us real-time data on roads, borders, and infrastructure. Originally, they were used for tracking epidemics or population movements. Because we are MSF, we focus mostly on health data, but this tech helps on many fronts.

AI for supply chain management is definitely the topic of the moment. If you listen to any podcast about supply chains, even on Spotify, they're talking about AI as the big trend for the next years. Nobody really knows yet how to fully use it, but everyone's trying.

Personally, I would love to automate many of my daily tasks. Right now, we are still filling in forms manually. With machine learning, we could delegate some repetitive tasks and save a lot of time. AI could also challenge our strategies by offering alternative routes or decisions.

But the main challenge in emergencies is that you don't get reliable, real-time data which you need to feed AI and machine learning. For example, customs processes are a big unknown. When a disaster hits, customs are the last thing governments think about. So we're always one step behind.

Ideally, I would love to use AI like ChatGPT. You input a cargo and it tells you the best route, best provider, best cost. We're not there yet, but maybe in a few years.

Charles & Maurine: Just a few last questions to hear your personal view. These can be shorter answers. If you had to pinpoint one or two main factors that make or break logistics in an emergency context, what would they be? Is it the staff, political access, or something else?

Respondent 3: For humanitarian logistics, yes, definitely. I'll go along the line you mentioned. It's the capacity of building and forming the people. They need to understand what they are doing and how to do it.

Then, humanitarian access, especially in complex emergencies like Gaza, are increasingly being used as weapons. Supplies are weaponized. They are used to put pressure on the other side, which ends up affecting the civilian population. Humanitarian access is becoming more difficult. And with trends like protectionism and Trump, it will only get worse.

So we need to be ready. We need visibility, capacity building, and real-time information. That's essential.

The problem is, humanitarian supply chains are not like shipping a container from Shanghai to Los Angeles. There, everything is predictable with solid data, and you have solid legislation. In emergencies, you deal with countries where things change instantly and with no accountability. Disruptions are impossible to predict.

That's why we need to build redundancy. Decentralize. Prepare the staff. And we need good negotiators to secure political access. Because more and more, supply chain is not about bureaucracy. It's about access. That is key.

Also, I don't really like the term "humanitarian supply chain." For me, supply chain is supply chain. There is only one. The vessel that transports humanitarian cargo is the same vessel private companies use. The air freight, the airport, the customs, it's all the same.

There is no exclusive humanitarian infrastructure. The drug we buy is the same drug bought by a private hospital. The phone I use is the same phone sold in a shop in Brussels. So for me, the supply chain is one. What changes is the purpose, but the system is shared.

Charles & Maurine: And I think we spoke a lot about possible improvements coming. What do you think is the area or aspect of aid organization in the field or in the supply chain that needs the most improvement or is still the most behind?

Respondent 3: I think technologies and systems that give you end-to-end visibility and real-time tracking data for your cargo would make a huge difference. Personally, I would invest in systems and new technologies. But at the same time, you can never forget capacity building. You always need someone to operate those systems, so the human factor remains essential.

Once we really understand how much better we could be with the right tools, I think we would invest more. That's my personal opinion. But you know, we can still do a good job with just fuel and paper. There's the old-school stock card system from the 1960s, you just write in and out on paper. You can't use the lack of technology as an excuse not to perform.

In the end, the contexts we work in are full of constraints. Sometimes you don't even have electricity, or you have a generator but no fuel, or the internet isn't strong enough for a cloud-based system. So we have to be prepared to work without all of that. Knowing how to operate without technology is really important.

In some places, the system goes down and people freeze, waiting for it to come back. That doesn't work. In humanitarian settings, you always have to be creative. That often means going back to basics.

I've used stock cards in many projects. You just track: I receive four chairs, I give out two batteries, and the inventory is in a binder. That's it. So it's a mixed feeling. We should learn new tools, but we can't forget the basics or rely only on the latest systems.

Charles & Maurine: Thank you very much for the detail and complete answers. It was very insightful for us.

Respondent 3: You're very welcome. It was my pleasure. If you can share your thesis afterwards, I'd love to read it. I'd be curious to see what the other interviewees are saying too. For me, it's also a learning opportunity. I really like the topic, as you can tell, I speak about it with a lot of passion.

Charles & Maurine: Thanks, thank you so much, and best of luck.

Respondent 3: Thank you, guys, ciao.

Stéphanie Goublomme - MSF 16/07/2025

Charles : Et si tu veux bien, on peut commencer directement avec les questions. Pour commencer, tu pourrais te présenter et expliquer ton rôle et tes fonctions chez MSF ?

Stéphanie : Je m'appelle Stéphanie. Je travaille pour Médecins Sans Frontières depuis fin 2011. Depuis, j'ai fait plus d'une quinzaine de missions humanitaires, surtout dans des contextes d'urgence, parfois en zones de conflit, mais aussi dans des zones touchées par des catastrophes naturelles ou des épidémies.

Ça fait deux ans que je ne travaille plus, car j'accompagnais mon compagnon en Malaisie. Je viens de rentrer en Belgique il y a un mois, mais je garde des contacts avec MSF, notamment via lui.

J'ai aussi travaillé quelques années comme coordinatrice RH pour le pôle d'urgence. J'étais chargée d'envoyer les ressources humaines sur toutes les urgences suivies par MSF Belgique à travers le monde.

Charles : Tu pourrais nous dire dans quels pays ou zones tu as été en mission ?

Stéphanie : Oui, et j'ai oublié de préciser qu'en mission, ma fonction était chef de projet. Ce n'était pas moi qui gérais directement la logistique, mais je supervisais le responsable logistique. Ça faisait donc aussi partie de mes responsabilités.

Ma mission la plus longue, c'était la première, au Burundi, pendant neuf mois. Je m'occupais de la logistique, de l'approvisionnement, des ressources humaines et des finances. J'étais dans une petite ville, et c'était un rôle très complet.

Ensuite, je suis partie en République centrafricaine pendant la guerre civile. J'étais basée à Bangui, pendant que tout le monde se tirait dessus. Là, je faisais surtout des RH, mais on vivait tous très proches les uns des autres, car on ne pouvait pas beaucoup bouger.

Après ça, j'ai été plusieurs fois en mission Ebola en Guinée. Puis en Turquie, pour ouvrir un projet de support à un hôpital en Syrie, pendant la guerre civile syrienne. Ensuite, j'ai été en Haïti plusieurs fois après l'ouragan Matthew, puis au Mozambique après une inondation, et en Inde, aussi après un ouragan. J'ai aussi travaillé au Venezuela et en Bosnie pour des missions liées aux réfugiés.

J'ai été au Congo, puis au Yémen pendant la guerre civile, au Liban pendant le COVID, et aussi en Équateur et en Belgique pendant le COVID. Et j'en oublie sûrement quelques-unes à gauche et à droite.

Lors de ma première mission, j'étais responsable logistique du projet. C'était à moi de garantir que tout roulait au niveau logistique. Ce qui était intéressant, c'est que la logistique et l'approvisionnement étaient séparés : j'avais un assistant pour chaque. Un s'occupait de la supply, l'autre de la logistique.

La logistique, c'était parfois très terrain : j'ai dû creuser des tranchées pour comprendre pourquoi un geyser sortait d'un chemin en pleine brousse. Ce geyser avait vidé tout le système d'eau de l'hôpital.

Chez MSF, soit on monte des structures sous tente, où il faut tout créer de A à Z, soit on construit ou rénove des hôpitaux. Dans tous les cas, on vise des standards assez élevés, même au milieu de nulle part. On ne fait pas de la médecine de fortune : les standards médicaux restent ceux de MSF, donc on doit mettre en place les moyens logistiques pour les respecter.

Par exemple, assurer des standards d'hygiène, garantir la stérilité du matériel médical, tout ça demande beaucoup de logistique. Il faut que les générateurs tournent. J'ai déjà dû allumer d'énormes générateurs sans vraiment savoir comment ils fonctionnaient. On me disait juste lequel allumer parce que l'autre devait se reposer.

Dans ce projet, j'ai un peu tout touché. J'ai aussi découvert la gestion des déchets hospitaliers, à laquelle on ne pense pas forcément, mais qui est très importante et complexe en contexte humanitaire.

Charles : Tout ce qu'on me dit me paraît logique : les médicaments, l'eau, les trucs nécessaires. Mais c'est vrai que dans les rapports, la gestion des déchets revient tout le temps. Je pensais que c'était secondaire, mais c'est mis très en avant.

Stéphanie : C'est hyper mis en avant. C'est aussi un des endroits où il y a le plus d'accidents. Et c'est un des aspects les plus glauques, surtout à Gaza, je pense. La gestion des déchets dans un hôpital, c'est aussi la gestion des déchets humains. Ce ne sont pas les corps, mais quand tout va bien c'est les placentas, les restes d'accouchement, et en zone de conflit c'est aussi, beaucoup d'amputations. Donc des membres à gauche et à droite, dont il faut aussi se débarrasser correctement. Ça fait partie du rôle des équipes logistiques.

Mais à un tout autre niveau, la logistique, c'est aussi la gestion de la sécurité et des véhicules, de la flotte. Le responsable final de la sécurité, c'est le chef de projet, mais la mise à disposition des moyens, c'est le rôle du logisticien. S'assurer qu'on a assez de voitures pour évacuer, que les chauffeurs sont formés, qu'ils savent réagir en cas de problème sécu à un checkpoint avec des gardes armés ou en cas de tirs croisés, ça revient au log qui doit s'assurer que toute son équipe savent quoi faire. Le chef de projet doit s'assurer que le log maîtrise ça, mais l'application concrète, c'est le log.

Souvent, ce sont les logs qui font les briefings sécurité aux expatriés : expliquer comment utiliser la radio, quel canal utiliser, ce que signifient certains messages, si c'est confidentiel ou pas, comment suivre les instructions, quels sont les protocoles sur WhatsApp, etc.

Il y a aussi tout ce qui est préparation des lieux de vie : où est l'endroit sécurisé dans la maison, qu'il y ait ce qu'on appelle le "bunker" qui est l'endroit le mieux protégé, comment sont protégées les habitations contre les balles perdues ou les explosions. C'est encore le rôle du log. Les rôles sécu et log sont très variés en fonction des conflits.

C'est un champ très varié, qui dépend beaucoup du contexte. Le rôle sécurité d'un logisticien en Ukraine est totalement différent de celui en Centrafrique. Parce que le type de combat, d'exposition et de menace est complètement différent.

Charles : Du coup, on voit que ça dépend énormément des missions et des types de conflits autour. Et toi, de ton expérience, au niveau de la distribution, tu parlais des checkpoints, des tirs croisés... Pour toi, quel est l'objet principal de blocage dans le transport ou la distribution ? Ce qui est le plus dur à gérer, ou le plus fréquent ?

Stéphanie : J'ai fait un projet dans lequel on a organisé des distributions dans le nord-est du Nigéria, à Boko Haram. On y a distribué de la nourriture dans plusieurs endroits. Et le problème principal, c'est toujours d'arriver à distribuer dans le calme.

Parce que souvent, si on distribue de la nourriture, ou même des affaires, du savon, des bâches, c'est que les gens en ont vraiment besoin et n'ont pas d'alternative. Il faut donc s'assurer qu'on a prévu assez, que ça va aux bonnes personnes, et surtout, rassurer les gens : "ça va arriver chez vous, ne vous inquiétez pas, un à la fois".

Il y a un vrai travail de communication. Par exemple, on était dans une ville avec un million d'habitants et un million de réfugiés. On ne pouvait pas distribuer à deux millions de personnes. Il faut cibler sa population et décider comment tu cibles. Et ensuite délimiter géographiquement la population à qui on allait distribuer. On travaillait avec les autorités locales pour définir ça, puis on organisait le circuit

logistique : un point d'entrée, des indications claires aux bénéficiaires pour venir avec une brouette ou un sac, ou alors on mettait ça à disposition. Ce flux est essentiel. C'est un truc tout bête, mais ça a un impact énorme.

On veut éviter que les gens attendent trop qu'il parte ou qu'ils doivent revenir. Il faut que ce soit fluide, rapide, sans créer de tensions. Sinon, tu peux vite te retrouver avec des attroupements et des tensions, faut éviter de faire ça à midi en pleine chaleur.

Beaucoup se disent que ce n'est pas compliqué de distribuer 250 sacs de riz. Mais si c'est mal organisé, tu te retrouves comme les Américains à Gaza en ce moment, où c'est le chaos total. Le contraire de ce qu'on essaie de faire. Il faut multiplier les points de distribution au lieu de créer un énorme point qui attire trop de monde. C'est plus dangereux.

J'ai aussi fait des distributions en hélico au Mozambique, dans des villages de pêcheurs isolés après un ouragan. On ne pouvait pas atteindre ces villages autrement. Là, il n'y avait pas de problème d'équité, parce que les populations étaient toutes petites, donc tout le monde recevait. Mais il fallait surtout éviter l'effet de masse. Avec un hélico, tu ne veux pas que tout le monde se précipite sur le point de distribution. Ça met tout le monde en danger.

Et il faut aussi éviter les frustrations. Tu arrives avec ton hélico, c'est impressionnant, mais s'il y a une tension, quelqu'un qui est mécontent, qui estime qu'il y a pas assez, tu dois pouvoir remonter dans l'appareil rapidement et repartir. Donc c'était des mini-distributions, mais c'est celles où j'étais le plus stressée. On devait être suffisamment loin pour distribuer, mais pas trop loin non plus, je ne sais plus ce qu'on distribuait, mais c'était lourd.

L'hélico limitait aussi le nombre de personnes qu'on pouvait embarquer pour distribuer. Il y avait les deux pilotes, et on pouvait être quatre à l'arrière. Donc tout le monde mettait la main à la pâte. Et il fallait aussi embarquer tout le stock... Donc en réalité, on était encore moins que ça.

Et ça, c'est quand on trouve et on a pu acheter tout ce qu'on voulait sur place, ou qu'on a pu l'apporter. Mais ce n'est pas toujours possible. On travaille avec une centrale d'approvisionnement en Belgique, une à Nairobi, il y en avait une à Dubaï, peut-être ailleurs aussi.

L'objectif, c'est d'assurer l'importation, mais à Gaza, par exemple, on ne peut rien faire entrer. On est bloqués, comme tout le monde. Il y a aussi un côté très politique à la distribution, tous les pays du monde normalement nous laissent importer de l'aide humanitaire, ça fait partie du droit international, donc ici Gaza c'est tout à fait particulier. Par exemple, les expats peuvent entrer, mais leurs sacs sont fouillés. Ils ne peuvent rien amener à l'intérieur. Ils ne peuvent rien sortir même pas de souvenirs ou quoi dans ce cas.

Parfois il y a des choses qu'on ne trouve pas dans le pays et qui sont dur à importer. Par exemple, des médicaments anti-malaria. Moi, je suis déjà partie avec un stock dans mon sac à dos pour les collègues, pas pour les bénéficiaires. Mais même ça, c'est très réglementé. Donc l'approvisionnement et justement la gestion des douanes c'est beaucoup plus professionnalisé, la gestion des substances contrôlées.

L'approvisionnement médical, c'est extrêmement compliqué. Très encadré. On ne peut pas importer tout ce qu'on veut comme médicament, chaque pays a ses règles. Certains prévoient des exceptions pour l'aide humanitaire, d'autres non. C'est un boulot énorme, fait par des équipes à Bruxelles, Paris, Nairobi, qui doivent vérifier à chaque fois pour chaque mission et chaque événement. Parce qu'en période de conflit, les règles peuvent être encore plus strictes. Si un gouvernement doute que l'aide arrive à "la bonne population", il va être plus strict. S'il pense que ça va bien à ceux qu'il souhaite soutenir, il sera

plus souple. Mais nous, on base nos opérations sur les besoins, pas sur la population. Et ça, c'est difficile à faire valoir. C'est un facteur qu'on ne contrôle pas, mais qui a un impact énorme.

Charles : Quand tu fais face à des restrictions politiques ou à des blocages physiques, tu parlais tout à l'heure d'une route coupée dans le désert, comment réagis-tu dans ces situations où il faut sortir des solutions classiques et improviser ? Comment ça se passe dans ces moments-là ?

Stéphanie : Il y a beaucoup de négociation. C'est un travail de fond constant, avec beaucoup de discussions et de lobbying à différents niveaux : sur le terrain, dans la capitale, et jusqu'au siège. Chez MSF, c'est facilité par notre réputation. On est reconnus comme une organisation sérieuse, professionnelle, respectueuse de la loi. MSF est trop grand et trop publique donc les autorités savent qu'on ne fait pas n'importe quoi.

C'est un travail global, peu importe la situation. On ne sait jamais où une urgence peut surgir. Et puis on a des techniques. On reçoit des formations, on est coachés pour négocier avec des groupes armés : si un camion est arrêté, si une ambulance est bloquée. Ce sont des cas qu'on nous prépare à gérer. Comment réagir si quelqu'un rentre avec une kalachnikov dans ta pharmacie et veut tout prendre, dans ce cas là tu lui donnes évidemment.

Si un groupe armé arrête ton camion, le but c'est de pas à chaque fois leur donné. C'est de pouvoir expliquer qu'on a déjà informé les acteurs en amont, qu'on a dit où le camion allait, et pourquoi c'est important qu'il arrive à destination. Ce qu'il transporte va aider tout le monde et peut-être même leurs proches, ça pourrait être votre frère, femme, soeur... On soigne tout le monde, sans distinction. C'est un énorme travail de fond.

Il y a aussi le côté pratique : privilégier l'approvisionnement local dès que c'est possible. C'est plus rapide, moins cher, et ça profite à la communauté aussi. Ça crée de l'emploi, ça soutient l'économie locale. Un projet hospitalier ne bénéficie pas seulement aux patients : il a un énorme impact sur toute la communauté. Ça apporte de la sécurité aussi.

Normalement, un hôpital doit rester un espace neutre et respecté par tous les combattants. Mais dans les zones de conflit c'est plus dur à mettre en place, il faut souvent réexpliquer les règles. Les gens ne peuvent pas entrer armés, même pour voir un proche blessé. Il faut mettre en place des casiers à l'entrée, leur donner un ticket de vestiaire pour qu'ils récupèrent leurs armes en sortant. C'est le rôle du log.

Et j'ai déjà eu un cas où quelqu'un n'a pas repris sa kalachnikov, et une autre personne est partie avec. Ça a créé une situation très compliquée...

Charles : Pour les missions, en général, ça se passe comment au niveau du temps et de la présence ? Parce que tu as parlé aussi à un moment de cet aspect, on va dire, planning et logistique, que tu peux faire même de Bruxelles, où tu gères tout globalement. Mais toi, dans les missions, est-ce que tu vas sur place à temps plein ? Tu y restes longtemps ? Comment ça marche ?

Stéphanie : Ça dépend vraiment des gens, et ça dépend vraiment des missions. Ma première mission, c'était une longue mission de neuf mois. C'était un projet normal, pas une mission d'urgence. Et dans les missions non urgentes, plus on reste longtemps, mieux c'est. MSF recherche des gens qui peuvent rester un an, voire deux, parce que ce sont des projets inscrits dans la durée, donc c'est bien d'avoir une certaine stabilité.

Dans ces missions-là, tu habites sur place, tu bosses du lundi au vendredi. Ce n'est pas du 9h-16h, c'est plutôt 8h-18h voire 20h, c'est flexible, mais tu as quand même une certaine qualité de vie. Les horaires de travail sont respectés, tu as des vacances, tes week-ends, tu peux sortir, dans certains pays tu peux

conduire, randonner, aller skier. Moi je suis restée sept mois en Turquie, c'était génial. Tous les mardis après la réunion de coordination, on allait boire un verre. La vie était belle, je pouvais marcher partout.

À partir de ma deuxième mission, j'ai fait beaucoup de missions d'urgence, et là c'est très intense. Quand j'étais à Bangui, je suis restée trois mois. Je travaillais tout le temps, j'avais six heures de sommeil. On avait monté un hôpital sous tente juste à côté d'un ascenseur. Je passais la moitié de mes journées couchée par terre parce que ça tirait dans tous les sens. Je me suis fait braquer à la kalachnikov, j'ai été évacuée vers l'aéroport plusieurs fois, parce que ça devenait trop intense. C'était notre lieu de repli, l'aéroport.

J'étais censée rester deux mois, j'ai prolongé d'un mois, le temps qu'ils me trouvent un remplaçant. Mais trois mois, c'est un maximum aussi même pour eux aussi, après il faut sortir. À un moment, il faut retrouver un peu de calme. Quand je suis rentrée, les premières semaines, j'étais tendue au moindre bruit. Je crois que je suis rentrée mi-juillet, les feux d'artifice c'était mort, j'étais couchée au sol. Je me disais, c'est bon, c'est juste un feu d'artifice, on va se calmer.

C'est pour ça que les missions d'urgence sont souvent plus courtes, en fonction de ce qu'on peut supporter. À Bangui, on vivait à 35 dans un compound d'où on ne pouvait jamais sortir. On ne sortait que pour aller bosser à l'hôpital, puis on rentrait.

Quand j'étais au Mozambique, on était cent expats, mais il n'y avait pas trop de problème de sécurité. On pouvait sortir un peu, mais on bossait tout le temps. Tout était dévasté à cause d'un cyclone, il fallait tout mettre en place, les besoins étaient énormes. Tu travailles beaucoup, dans des conditions difficiles. Tu partages ta chambre avec quelqu'un, ta maison avec 25 personnes. Tu n'as pas beaucoup d'espace personnel, donc tu ne tiens pas six mois comme ça.

Maintenant, il y a beaucoup de missions d'urgence très intenses, où les gens font trois mois, puis trois mois chez eux, puis ils repartent. Ça permet de garder un équilibre. On garde des gens qui connaissent le contexte et les équipes. Le staff national, lui, reste tout le temps, même en situation de conflit. Ils n'ont nulle part où aller. Donc ça permet de garder une certaine stabilité et de renforcer les relations.

Le temps que tu prends entre les missions dépend de chacun. Il y a plein de types de contrats. Moi, j'ai souvent eu des contrats par mission. Tu rentres, tu es au chômage, puis au bout d'un moment tu te dis que tu as envie de repartir bosser. Ce n'est pas le chômage qui te pousse, c'est l'envie de repartir.

J'ai enchaîné comme ça pas mal jusqu'à intégrer un pôle d'urgence. Là, c'est un contrat d'un an, payé tout le temps, mais tu dois être prêt à partir du jour au lendemain. Tu enchaînes les missions d'urgence, et j'ai fait ça pendant trois ans.

Charles : Et toi, dans ton expérience en contexte d'urgence, comme tu disais, quand tu es à l'aéroport, réfugiée, ce genre de choses, comment tu gères, toi, trois mois de pressions et de tensions constantes ? Et comment tu fais avec les équipes pour continuer à être opérationnelle dans ces conditions-là ?

Stéphanie : Moi, la RCA, c'était ma deuxième mission, donc je m'occupais simplement des RH et de la finance. Ce n'était pas moi qui devais gérer tout le monde, et heureusement. Mais j'ai beaucoup appris de là pour mes missions suivantes.

Beaucoup de communication, en fait. C'est un des trucs qui m'aide beaucoup, de savoir ce qui se passe. On avait des réunions sécu tous les soirs, avec tous les expats et avec les staffs nationaux clés qui pouvaient nous donner des informations fiables : ce qui se passe dans le conflit, où sont les gens, ce qui s'est passé aujourd'hui, les tirs qu'on a entendus, qui sont les blessés qu'on a reçus. Voilà ce qu'on sait

de ces groupes-là, etc. Ça, c'est déjà un élément essentiel. Tu restes dans l'inconnu, mais au moins tu comprends un petit peu ce qui se passe.

Après, on a des procédures hyper claires. Chez MSF, sur la sécurité, c'est des ordres. Il n'y a pas de négociation au moment d'un incident. On ne discute pas. On sait très clairement qui donne les instructions, et on suit ces instructions. Après ou avant, on peut en discuter, mais sur le moment, non.

Et ça dépend aussi vraiment des gens. Moi, sur cette mission en RCA, j'avais un chef de projet et un log super. Je leur faisais totalement confiance. Donc même quand il y a eu des incidents sécu, ça allait. Puis, mon chef de projet a été remplacée par un gars complètement con, complètement borné. Il avait juste l'air de kiffer que ce soit insécure. Là, moi, j'ai pété un plomb. Je me suis dit : je ne vais pas pouvoir rester, ce n'est pas possible. Parce qu'il faut pouvoir travailler avec des gens en qui tu as confiance.

Donc oui, on a plein de formations, mais si les gens avec qui tu bosses sont cons, tu n'es pas à l'abri malheureusement.

Charles : On parlait de la confiance dans l'équipe, dans tes chefs et tes collègues. Et au niveau personnel, est-ce qu'il y a des habitudes ou des compétences que ça développe ? Des choses importantes pour gérer ce genre de situations de crise, tu dirais ?

Stéphanie : Je pense que j'ai un peu trop bu pendant des années, notamment. Après, je me suis mise au yoga pendant un temps, pendant une mission. Je trouvais que ça, ça aidait bien. Je crois que ça dépend vraiment des gens, parce que j'ai déjà vu des personnes qui n'allaient pas très bien du tout et qui étaient un peu sous Xanax la moitié du temps. Quand ils n'étaient pas dans le rush de l'adrénaline, le reste du temps, c'était vraiment très difficile.

Moi, c'était plutôt le fait de faire des missions courtes. Ça ne me dérangeait pas d'avoir de la très haute intensité. Donc personnellement, je pouvais tout donner pendant trois mois, mais le moment où je monte dans l'avion, c'est fini. De toute façon, il n'y a plus rien que je puisse faire maintenant, donc on ne va pas continuer à porter tout ça. Je passe à autre chose. Je ne sais pas si c'est très sain ça, mais c'est un truc qui aide vraiment à enchaîner. Ce n'est pas que j'oublie mes collègues ou les patients, ou quoi que ce soit. Mais c'est vraiment : OK, si je veux pouvoir avancer, je ne peux pas continuer à penser à tout le monde tout le temps. Avec le nombre de missions, c'est juste impossible.

Charles : Pour revenir un peu plus sur les aspects logistiques, tu avais mentionné les points d'approvisionnement. Quels sont les processus logistiques, du point d'approvisionnement à la zone d'intervention ? Comment ça se passe en général chez MSF ?

Stéphanie : Ah, c'est hyper process.

OK, tu veux sortir une boîte de paracétamol. Il y a une infirmière qui doit remplir un papier pour dire "il me faut une boîte de paracétamol dans mon stock." Ça va aller chez le pharmacien du projet, qui va vérifier si c'était prévu. Si on avait estimé qu'elle sortait une boîte par semaine, alors oui, il peut lui en donner une.

Mais tout ça repose sur un travail en amont. Si on prévoit qu'elle va sortir une boîte par semaine, ça fait 52 boîtes par an. Il faut ajouter une marge, disons 10 %, donc il faut commander en fonction du nombre de fois par an où je peux recevoir une commande médicale. Faut que je commande 30 boîtes six mois à l'avance pour en avoir assez pour tenir la moitié de l'année.

Cette demande remonte ensuite : le projet A demande 30 boîtes, le projet B en veut 50 toutes les deux semaines... On fait le total pour le pays, et ça monte au siège qui doit valider. Parfois, le siège répond : "Attendez, vous voulez 4000 boîtes, il y a un souci ?"

Ensuite, il faut décider si on commande localement ou pas. Par exemple, en Inde, comme c'est un producteur de médicaments, on peut acheter sur place. Sinon, il faut importer. Et si on importe, combien de temps ça prend de Bruxelles à Tombouctou ? Si on l'a commandé à temps, on peut l'envoyer par bateau, c'est lent mais moins cher. Si c'est urgent, on l'envoie par avion. Et une fois arrivé, il faut voir si c'est à dédouaner, inspecter, taxer... Pour les projets réguliers, les commandes médicales sont faites très à l'avance.

En urgence, les centrales d'approvisionnement gardent des stocks tampons. Par exemple, si un projet régulier commande 4000 boîtes mais n'en utilise que 2000 dans les 6 mois, on peut utiliser les 2000 restantes ailleurs et refaire leur stock via le stock central.

Mais parfois, il y a une urgence avec un item qui n'est pas du tout en stock. Alors la centrale te dit "il faut que je vous l'achète." Et ça, ça peut prendre quatre semaines du coup qu'est-ce qu'on fait.

Donc dans les projets réguliers, la procédure supply est super stricte parce que les volumes sont énormes. Je rigole avec les 4000 boîtes de paracétamol, mais à mon avis on est plutôt à 4 millions. Il y a plein de projets, plein de missions, et énormément d'items différents.

En urgence, il y a aussi des procédures, mais elles sont simplifiées. On a un responsable médical qui dit "grosso modo, on va avoir besoin de ça," et il passe commande et il prend ça. Et là, tu peux commander 4000 boîtes de paracétamol et les recevoir une semaine ou même trois jours plus tard, si c'est possible. Ça dépend des besoins, des coûts aussi, mais en urgence, on a souvent plus de moyens et donc plus de flexibilité financière. Plus l'urgence se stabilise, plus les procédures classiques se mettent en place.

En mission régulière, le budget est plus serré et il faut le respecter. En urgence, tu peux dire "il y a des gens qui meurent du choléra, il nous faut de l'ORF maintenant." Tu ne peux pas attendre six semaines. Il faut le mettre dans un avion, même si ça coûte cher.

Charles : Si je prends l'exemple de ce qu'on nous a dit pour Gaza, c'est vrai que quand on a parlé de ça, le budget, c'est un truc dont ils ne vont jamais tenir compte. Ils ne vont jamais dire non à cause du budget à Gaza, par exemple. Mais du coup, dans les missions régulières, c'est une grosse contrainte, non ? Le budget, c'est quelque chose qu'il faut vraiment respecter.

Stéphanie : Oui, ils sont beaucoup plus stricts avec les budgets sur les missions régulières. Dans les missions régulières, il y a un budget, et si tu veux le dépasser, il te faut une très bonne raison. Parce que MSF, comme toutes les organisations et comme tout le monde dans le monde, fait face à des hausses de prix. Tout coûte plus cher. Et on est financé uniquement par des donations privées, on ne reçoit pas de fonds publics. Ce sont des dons de particuliers, parfois d'entreprises, mais il faut pouvoir expliquer ce qu'on fait avec cet argent.

On doit être transparents, tout doit être documenté. En revanche, en situation d'urgence, tu peux faire un appel de fonds. Par exemple : on réagit à la guerre en Ukraine, qu'on n'avait pas prévue. Surtout pour les conflits armés, c'est difficile à anticiper. Tu n'es pas souvent au courant à l'avance.

Quand tu travailles sur de grosses urgences comme à Gaza on est pas bloqué par le budget c'est vrai. Surtout parce qu'à Gaza, le problème, ce n'est pas tellement les thunes. C'est d'avoir les trucs.

Charles : Oui. En fait, dans mes recherches, je vois par exemple que l'ONU est à 5 % des fonds levés.

Stéphanie : Ils sont toujours à 5 %.

Charles : Oui. Je me dis que dans les chiffres, c'est sûr qu'ils sont en dessous, mais dans la réalité, quand il faut de l'argent pour un truc, ils trouvent toujours une priorité non?

Stéphanie : C'est hyper compliqué. Les Nations unies, par exemple, ont un mode de financement où les pays promettent de donner une certaine partie des fonds. C'est la même chose avec le Programme alimentaire mondial, le WFP. Il y a pas mal d'organisations comme ça. Mais ça dépend toujours de si les pays vont effectivement payer ou pas. Beaucoup promettent, puis ne donnent rien, ou changent d'avis. Les États-Unis, par exemple, peuvent se retirer à tout moment. Donc ils ont des budgets beaucoup plus stricts.

MSF est un cas à part. Comme on est financés par des fonds privés et pas institutionnels, on n'a pas besoin de demander l'argent avant d'agir. Alors, pour un projet régulier, on doit quand même expliquer ce qu'on fait, prévoir notre budget pour l'année suivante, et faire des bilans trimestriels. On doit montrer qu'on suit notre budget.

À l'inverse, l'ONU, si elle veut ouvrir une mission à Gaza, elle doit d'abord dire : « Qui veut financer ça ? » Ils ont un fonds de roulement, mais limité, et dépendent toujours du bon vouloir des bailleurs. Beaucoup d'autres organisations sont aussi liées à des fonds européens ou institutionnels, et ne peuvent agir que si elles respectent une liste de critères stricts. Tu dois remplir 50 pages de dossier, montrer que tu vas faire ceci et cela, pour pouvoir commencer le projet.

MSF a la chance d'avoir des fonds propres et des réserves d'urgence. Je ne sais plus exactement combien, mais je crois qu'environ 15 % du budget total est réservé aux urgences. Ce sont des fonds non attribués. Ça veut dire que s'il y a une urgence, on peut piocher dedans directement. On envoie une équipe, elle évalue les besoins à la louche, commence les opérations, et on ajuste ensuite.

Le niveau de suivi et les règles dépendent du contexte. Par exemple, l'Ukraine, aujourd'hui, est devenue un projet régulier. Même si c'est encore un conflit, il est géré par une cellule régulière. Il y a toujours une certaine flexibilité mais il y a un minimum de planification attendu. Cela fait trois ans que le conflit dure, donc on commence à attendre plus de prévisibilité.

À Gaza, même après un an et demi de guerre, ça reste complètement imprévisible. Tu ne sais pas ce que tu vas trouver ou non, ce que tu peux transporter, ou même si tu vas pouvoir travailler. Et il y a des coûts que tu ne peux pas anticiper. Le prix du fuel, par exemple, il y a un tel manque que s'il faut acheter au marché noir pour faire tourner les générateurs et l'hôpital, on le fait, peu importe le prix.

Stéphanie : Et c'est ça. Parfois, la question n'est pas simplement budgétaire. C'est aussi qu'il y a une quantité limitée de ressources disponibles. Oui, on a l'argent, mais ça ne veut pas dire qu'on va tout acheter. Ce ne serait pas efficace si c'est MSF qui accapare tout le fuel et que les autres n'en ont plus, même si on peut se permettre de payer des prix absurdes au marché noir.

Donc, c'est vraiment une tension : l'argent n'est pas une limite nette. Ce n'est pas noir ou blanc. Et souvent, les prix ne passent pas de 1 à 100 d'un coup. Un produit peut passer de 1 à 3 dollars, puis à 7, redescendre à 5, remonter à 12... Et au final, tu te rends compte que tu paies 100 dollars pour un truc qui en coûtait 1 au début, sans qu'il y ait eu une décision consciente à un moment de dire : « OK, on accepte de payer 100. » C'est juste monté petit à petit.

Et puis, le budget total de Gaza, je ne sais plus combien c'est, mais ce qui coûte le plus, ce n'est même pas l'approvisionnement ou la logistique. C'est le personnel. Il y a plus de 1 000 personnes qui travaillent à Gaza. On embauche beaucoup, aussi parce qu'on est parfois l'un des seuls employeurs possibles. Mais au final, la ressource la plus chère, c'est évidemment les gens, et c'est normal.

Charles : Dans les missions régulières, tu parlais de procédures très strictes, bien cadrées. Est-ce que, sur le terrain, il y a un gros écart entre la théorie et la réalité ? Par exemple, pour une boîte de paracétamol, une fois la demande faite, est-ce que tout suit son cours normalement ou est-ce que c'est souvent soumis à des imprévus ?

Stéphanie : Je ne sais pas trop. Je n'ai pas assez d'expérience récente en mission régulière. Je pourrais te dire oui ou non, mais en vérité, ça fait trop longtemps que je n'en ai pas fait, donc je ne saurais pas dire.

Charles : Et dans les urgences alors, j'imagine que si un produit manque, ce n'est pas à cause des procédures ?

Stéphanie : Non, c'est simplement qu'il n'est pas disponible.

Charles : Et qu'est-ce qui bloque le plus souvent ? C'est le transport ? Le carburant ? Ou les routes ?

Stéphanie : Le carburant, c'est un peu paradoxal. C'est un problème partout, mais en même temps, on a toujours trouvé des solutions. On a toujours eu des réserves. Ce n'est pas super rassurant de vivre à côté de 12 bidons d'essence, mais au moins on en a. Donc oui, c'est un stress, mais on s'en sort.

Et puis il y a les voitures. Importer un véhicule, c'est compliqué. MSF a ses Land Cruisers, bien équipés, mais dans une urgence dans un pays nouveau, tu commences par louer les voitures locales. Ce n'est pas la Fiat Punto, mais presque. Si tu trouves un 4x4, tant mieux. Sinon, tu fais avec ce qu'il y a.

Les routes, c'est souvent un cauchemar. Et si c'est pas la route en mauvais état, alors c'est la sécurité sur le trajet qui devient un problème. Par exemple, au Yémen, entre notre base et Aden où on atterrissait, ce n'était pas loin, une bonne route côtière, mais chaque déplacement devait être validé trois jours à l'avance. Il fallait contacter les chefs de groupes armés pour obtenir leur autorisation, avoir des laissez-passer, et passer des checkpoints où l'identité de chaque passager était vérifiée. Donc les trajets, c'est vraiment un des éléments les plus compliqués.

Charles : Au niveau du stockage, j'imagine qu'il y a les points d'approvisionnement principaux, mais l'idéal c'est d'avoir des hubs plus locaux, avec des zones de stockage efficaces sur place ?

Stéphanie : Oui, en principe, tous les projets ont un stock. Plus un projet est en place depuis longtemps, plus le stock est bien organisé. Sinon, on commence parfois avec une chambre dans une maison qui fait office de stock. Ensuite, si tout va bien, on a un espace à l'hôpital. Et à terme, on peut trouver un vrai hangar à louer pour stocker correctement.

Ça fait partie des priorités dès l'arrivée sur une mission. Quand on arrive dans un pays pour une urgence, parfois on a déjà des missions régulières sur place, donc des bases, des contacts, des véhicules, des équipes. Il ne reste plus qu'à augmenter l'intensité et la taille des opérations. C'est très différent de devoir tout monter de zéro.

Quand tu arrives dans un endroit inconnu, tu dois tout chercher toi-même. Un logement, un lieu de stockage. Tu demandes autour de toi, tu visites, tu fais avec les moyens du bord. Moi, ça m'est déjà arrivé de repérer une maison et de demander dans le village à qui elle appartenait, si elle était louable. Il faut être débrouillard.

Mais c'est aussi une question de contexte. Dans un village reculé du Congo, tu fais le tour et tu prends la seule maison avec quatre murs. Tu négocies le prix, même si le propriétaire sait que tu vas payer ce qu'il demande. Si t'es par exemple à Kiev, c'est différent. Tu vas d'abord à l'hôtel, puis tu cherches un

appartement assez sécurisé avec un minimum de conditions. J'ai dormi dans plein de guesthouses basiques. Comme pour les voitures, tu fais avec ce que tu trouves sur place.

Charles : Par exemple, à Gaza, il y a eu des problèmes avec la vaccination contre la polio et d'autres maladies. Est-ce que tu as déjà travaillé dans des contextes où tu devais gérer des vaccins ? J'imagine que c'est très compliqué à stocker, surtout avec la chaîne du froid ?

Stéphanie : Oui, c'est très compliqué. Heureusement, tous les vaccins ne nécessitent pas les mêmes conditions. Certains peuvent être conservés à température ambiante, mais d'autres doivent rester à -42 °C, et ça demande une grosse préparation.

Tu ne peux pas improviser ça en un jour. Il faut avoir des lieux de stockage avec température contrôlée, des systèmes de ventilation ou de climatisation fiables, et surtout une source électrique stable ou un groupe électrogène pour assurer le backup. Les pharmacies de projet, par exemple, doivent aussi respecter une température constante.

Quand on organise une campagne de vaccination, il faut penser à tout : congeler les blocs réfrigérants à l'avance, prévoir des frigos assez grands, et comprendre que tous les blocs ne vont pas geler en même temps si tu en mets 100 dans le même congélateur. Il y a des protocoles très précis à suivre, avec des boîtes isothermes bien conçues. On ne met pas les vaccins en contact direct avec les blocs, il y a des parois intermédiaires pour éviter les chocs thermiques.

Ensuite, tu dois estimer le nombre de vaccinations à faire dans la journée pour préparer la quantité exacte de vaccins. Ça dépend aussi si tu fais du porte-à-porte ou si tu demandes aux gens de se déplacer jusqu'à un centre. Dans les deux cas, c'est complexe.

Heureusement, on ne gère pas toujours l'ensemble du stock. Dans beaucoup de cas, ce sont d'autres grandes organisations qui assurent la conservation de long terme. Toi, tu gères juste la chaîne du froid de courte durée, le temps de faire ta campagne.

Cela dit, dans certains projets, surtout pour les vaccinations de routine (nouveau-nés, personnel), tu as un espace dédié dans la pharmacie, parfois juste un petit frigo, mais bien équipé, avec plusieurs thermomètres de secours et quelqu'un qui surveille régulièrement les températures. La chaîne du froid, c'est un vrai casse-tête.

Charles : Un autre point important, c'est la coordination. On en a parlé un peu en évoquant l'ONU, les acteurs locaux, le gouvernement, et même les groupes armés. Comment se passe la coordination, entre agences humanitaires et aussi avec les acteurs locaux, quand plusieurs organisations sont déployées sur une même zone ?

Stéphanie : En réalité, les contextes où tu as beaucoup d'agences humanitaires, ce ne sont pas forcément les conflits. Les conflits sont dangereux, donc il y a moins d'ONG qui s'y engagent. Là où tu as trop d'acteurs, ce sont les catastrophes naturelles. Les gens adorent y aller, car les besoins sont importants et les risques moindres vu que tu vas après la catastrophe.

Dans ces contextes, il y a normalement un organisme de coordination, l'OCHA, qui est censé organiser tout ça. Il gère notamment les vols humanitaires de l'UNHAS et organise des réunions régulières selon le degré d'urgence pour répartir les tâches : UNICEF pour les vaccins, le PAM pour la nourriture, etc.

Les grandes agences onusiennes sont bien structurées. Elles ont l'habitude, elles se réunissent, elles s'organisent. MSF, même si on refuse de dépendre de ce système, on participe souvent à certaines réunions, au moins comme observateurs. Car si tous les autres se coordonnent et que toi non, ce n'est pas efficace.

On y participe aussi parce que ça permet d'éviter les doublons. Si une autre agence fait déjà les vaccinations, on ne va pas les refaire. Cela permet d'économiser des ressources et d'être plus rapide. Mais évidemment, tout dépend des personnes, des egos, et ce n'est pas toujours fluide.

Chez MSF, on a le même problème car il y a plusieurs sections MSF à coordonner entre elles. Ensuite, il faut en plus se coordonner avec les autres organisations. Et ça se passe des fois mieux que d'autres. Cela se fait à différents niveaux. Au niveau des chefs de mission, responsables de tous les projets comme le chef de MSF dans le pays, lui va se coordonner avec les autres chefs de missions MSF et des autres organisations. Ils se réunissent entre eux, avec les autres agences et parfois avec les ministères etc.

Au niveau du projet, ce sont les chefs de projet qui doivent savoir ce que font les autres autour. Ça peut être formel ou informel mais tu vas essayer de rencontrer les autres chefs de projet. Dans les urgences, on se réunit souvent, par exemple au début de chaque semaine. En contexte de conflit, on échange régulièrement des infos de sécurité.

Concernant les acteurs locaux, c'est en principe le responsable locale qui fait le lien, notamment avec les autorités car l'information transmise depuis les ministères peut mettre du temps à arriver ou être incomplète. Il y a toujours différents niveaux de coordinations. Et c'est essentiel, même si ce n'est pas toujours bien fait.

Charles : Il y a quand même cette idée de répartir les tâches : un acteur couvre ce point, un autre un autre point, etc. Tu disais que la communication fonctionne plus ou moins bien selon les cas. D'après ton expérience, qu'est-ce qui fait que la coordination marche ou échoue ? Quels sont les principaux facteurs d'échec ?

Stéphanie : Un grand facteur, c'est l'ego. Certains pensent qu'ils savent tout faire, qu'ils n'ont pas besoin de parler avec les autres.

Charles : Tu veux dire l'ego des individus, comme un chef de projet, ou celui des organisations elles-mêmes ?

Stéphanie : Les deux. L'ego des organisations vient souvent de l'ego des personnes qui y travaillent. Et ça se renforce. Par exemple, MSF a la réputation d'être un peu arrogant, et ce n'est pas totalement faux. Certains se sentent au-dessus une fois qu'ils portent le logo MSF, alors que non. Mais c'est pareil ailleurs. J'ai rencontré des gens géniaux dans des agences de l'ONU, et aussi des gens incompetents qui se croient experts parce qu'ils sont là depuis 15 ans.

Charles : Tu as déjà vu des cas où la coordination s'est vraiment mal passée, avec des conséquences graves ?

Stéphanie : Je n'ai jamais vu de cas où ça a mené à des problèmes graves. Mais j'ai vu des situations complètement absurdes. Au Mozambique, après une catastrophe, une centaine d'organisations ont débarqué dans une petite ville. Tu ne pouvais pas faire 100 mètres sans croiser une voiture d'une organisation.

Même chose dans un grand camp de réfugiés au Bangladesh. Il y avait des drapeaux d'organisations partout, sans coordination réelle. Tu avais parfois deux cliniques presque identiques à cinq mètres l'une de l'autre, et puis, à quelques kilomètres, plus rien. Les deux étaient braquées sur leur activité, sans se concerter.

Ça ne cause pas toujours des problèmes graves, mais c'est du gaspillage de ressources.

Charles : Quand on distribue sur place, dans quelle mesure est-ce important de se coordonner avec les acteurs locaux ?

Stéphanie : C'est hyper important, surtout de se coordonner au niveau le plus proche possible des bénéficiaires. Le plus important, c'est de trouver les bons interlocuteurs pour chaque activité. Ce ne sont pas les mêmes si tu veux organiser une activité médicale dans un hôpital ou distribuer de la nourriture à 50 personnes.

Dans un hôpital, c'est assez formel : il faut passer par le ministère de la Santé, puis par le directeur de l'hôpital, le conseil d'administration, le médecin-chef. C'est hiérarchisé, les décisions sont généralement respectées.

Pour une distribution lambda, c'est beaucoup plus sensible. Tu dois expliquer pourquoi tu cibles certaines personnes, montrer que tu comprends les différences de besoins au sein de la population. Il faut des interlocuteurs respectés par la population. Parfois, c'est le chef du village mais parfois ça peut être des leaders religieux, des profs, selon le contexte.

Il faut bien analyser les dynamiques locales. Par exemple, si tu cibles les familles avec des enfants de moins de 5 ans, il faut expliquer pourquoi. Parce qu'en dessous de 5 ans, l'enfant est plus vulnérable, et un apport nutritionnel ciblé peut faire la différence. Mais forcément, les autres familles demandent aussi de l'aide, et elles n'ont pas tort et il faut bien savoir expliquer ta sélection.

C'est aussi important de bien expliquer aux mères que l'aide alimentaire est prioritaire pour leur enfant ciblé, même si ce n'est pas évident à faire respecter. Certaines vont dire : j'ai cinq enfants, tu dois aussi penser aux autres. Et elles ont raison. Du coup, tu ajustes : tu donnes de la nourriture thérapeutique et un complément pour la famille, sinon la ration spéciale ne servira pas à la bonne personne.

Cette coordination avec les acteurs de terrain permet aussi de remettre en question ce que tu avais prévu. Ce n'est pas parce que tu suis un manuel que ça colle aux besoins réels. Les gens peuvent te dire : ton produit ne m'aide pas, ce que je veux, c'est autre chose. Et ça, il faut l'écouter.

Charles : Dans les contextes d'urgence, il y a forcément une part d'improvisation. Mais est-ce qu'il existe des outils, des routines, ou ressources spécifiques qui aident à structurer l'action ? Ou est-ce que c'est vraiment juste de la pure improvisation ?

Stéphanie : On a des checklists pour les urgences. Par exemple, après un tremblement de terre, tu sais quels sont les risques sanitaires à surveiller, quoi faire dans les 48 premières heures, et ce qu'il faut prioriser si tu arrives plus tard. Pareil pour les camps de réfugiés : il y a des normes sur le nombre de latrines, de tentes, ou la quantité d'eau par personne.

Il existe des standards reconnus comme ceux du Projet Sphère, et MSF a ses propres protocoles internes, plus ou moins à jour. On a aussi des référents techniques dans chaque domaine. Il y a une unité spécialisée dans l'eau et l'assainissement, par exemple, qui peut te guider sur comment creuser, purifier, et distribuer l'eau. D'autres référents sont disponibles pour les équipements de protection, les maladies, ou les besoins nutritionnels.

Ce n'est pas aussi structuré que l'armée, mais ce sont des gens très compétents qui ont passé du temps à documenter et affiner ces pratiques. Plus tu fais des urgences, plus tu développes cette capacité à rapidement identifier ce qu'il faut regarder. Tu sais organiser ton équipe : untel va vérifier la nutrition, un autre les maladies, un autre les femmes enceintes, etc.

Tu as une base, mais tu dois adapter. Par exemple, après les deux ouragans au Mozambique et en Inde, on a fait des choses très différentes. Au Mozambique, on a vacciné contre le choléra, reconstruit des

centres de santé, distribué massivement. En Inde, on a aidé un bidonville à s'organiser pour nettoyer lui-même les déchets après l'ouragan.

L'idée, c'était de prévenir les épidémies. La municipalité ne serait jamais venue nettoyer là dans le bidonville en priorité, donc les habitants, déjà les plus vulnérables, devenaient encore plus exposés. On leur a fourni le matériel et le planning, on a négocié avec les autorités pour les sacs-poubelles. C'est ce genre d'adaptation qui fait la différence. Tu utilises ton cadre, tes outils, mais tu restes flexible selon le contexte.

Charles : Toi qui es dans l'humanitaire depuis presque 15 ans, est-ce que tu as vu évoluer les moyens, les outils ou les stratégies avec le temps ? Est-ce qu'il y a des choses qui se sont vraiment améliorées, que ce soit au niveau des processus ou du matériel ?

Stéphanie : Au niveau des processus, je dirais que c'est pire qu'avant. Il y en a de plus en plus et c'est de plus en plus lourd pour tout le monde. C'est un phénomène assez global. Après, oui, il y a eu des évolutions.

En urgence, surtout chez MSF Belgique, ça reste très centralisé autour du pôle d'urgence basé à Bruxelles. Cela dit, comme les urgences ont besoin de flexibilité, elles ont souvent moins de procédures que le reste.

Mais globalement, l'aide humanitaire s'est énormément professionnalisée ces 15 dernières années et même si tu remontes encore plus loin. Aujourd'hui, c'est devenu un secteur à part entière. Tu peux faire des études spécialisées en logistique humanitaire, en droit humanitaire, en finance de projets. Ce n'était pas le cas avant.

Quand j'ai commencé, il y avait encore beaucoup de profils aventuriers, débrouillards, qui partaient sans formation spécifique. Aujourd'hui, on insiste sur les standards, les bonnes pratiques, la rigueur professionnelle. C'est une bonne chose, mais ça a aussi mené à une forme de sur-spécialisation.

Par exemple, j'ai déjà vu un logisticien incapable de changer une ampoule. Il voulait que je fasse une demande de travaux, une demande de stock. À un moment, ça devient ridicule. Ça devient un peu comme un mec qui est spécialisé en construction, donc il ne sait pas gérer une flotte de véhicules. Mais gérer quatre chauffeurs, ce n'est pas non plus super compliqué.

On perd un peu le côté généraliste et débrouillard. Maintenant, chacun reste dans sa case : un fait la construction, un autre la flotte, un autre les commandes. Il y a une vraie compartimentalisation des savoirs et de leur mise en pratique.

Ce qui a vraiment progressé, c'est la manière dont on identifie les besoins. Il y a beaucoup plus de respect pour les personnes qu'on aide. On ne fonctionne plus en mode top-down, avec une équipe de Blancs qui arrive et décide ce dont les gens ont besoin. En tout cas, ça se voit beaucoup moins, et tant mieux.

Aujourd'hui, on se demande d'abord : est-ce qu'on doit être là ? Et si oui, quels sont les besoins réels, pas ceux qu'on imagine depuis l'extérieur ? Est-ce qu'on doit faire les choses nous-mêmes, ou est-ce qu'on peut former des gens sur place pour les faire ? Il y a une vraie recentralisation sur les besoins concrets. Et ça, c'est une avancée importante.

Charles : Et sur le plan du matériel ou de la technologie ? Tu vois des avancées concrètes qui ont un impact sur le terrain ?

Stéphanie : Ah oui, clairement. Il y a plein d'outils numériques qui sont arrivés ces dernières années, même si je ne les ai pas tous testés moi-même. Le solaire, le renouvelable, par exemple, c'est une énorme évolution. Aujourd'hui, des hôpitaux fonctionnent entièrement à l'énergie solaire. Il y a dix ans, c'était impensable.

Côté médical aussi, il y a eu pas mal de progrès. Et tout ce qui touche aux technologies de l'information et de la communication, c'est mille fois plus facile. Sur ma première mission, on n'avait pas Internet, uniquement sur l'ordinateur fixe au bureau. Chez soi, il n'y avait rien. Aujourd'hui, ne pas avoir de Wi-Fi paraît inconcevable.

Et puis il y a aussi les paiements par téléphone. Pas avec des QR codes, mais des transferts simples via numéro de téléphone. Avant, il fallait payer tout le monde en cash ou leur faire ouvrir un compte en banque, ce qui est impossible dans certaines zones. Maintenant, tant que tu as un téléphone, même basique, tu peux recevoir ton salaire. Ça change tout.

C'est plus sécurisé, plus simple à gérer, et ça réduit le besoin de transporter de grosses sommes d'argent sur place. Rien que ça, c'est un énorme pas en avant pour l'efficacité et la sécurité dans l'humanitaire.

Charles : Le transfert d'argent par virement en ligne, je pense même que c'est devenu une vraie solution pour envoyer directement de l'argent aux gens dans le besoin. Quand on n'arrive pas à leur acheminer les biens, on peut au moins leur envoyer un soutien financier.

Stéphanie : Oui, exactement. Ça a vraiment changé l'approche de certaines organisations, qui font maintenant des distributions de cash. Elles ont réalisé que, parfois, les gens savent mieux qu'elles ce dont ils ont besoin. Ça coûte aussi beaucoup moins cher de donner 500 euros à quelqu'un, qu'il utilise selon ses priorités, plutôt que de décider arbitrairement que tout le monde a besoin de savon et de couvertures. Surtout quand tu paies très cher ces biens-là, parce qu'ils sont en rupture ou qu'il faut les acheminer de loin. Tu finis par aider 20 personnes avec un budget qui aurait pu en aider 100 si tu avais simplement donné du cash.

C'est aussi un peu moins paternaliste. Il faut arrêter de croire que les gens vont gaspiller ou mal utiliser l'argent. En général, quand les biens de base sont disponibles sur place, les gens savent parfaitement ce dont ils ont besoin. Par contre, quand ils demandent de la nourriture, c'est souvent parce qu'il n'y en a pas du tout, même avec de l'argent. Dans ce cas-là, c'est à nous d'apporter des biens physiques. Mais sinon, s'ils peuvent acheter eux-mêmes, autant leur laisser ce choix. Les gens ne sont pas stupides, ils demandent ce qui leur est réellement utile.

Charles : Et qu'est-ce que tu penses des évolutions sur le mapping, tracking etc ?

Stéphanie : Oui, je pense. Personnellement, je ne travaille pas dessus directement, mais chez MSF, ils font tout le temps des mappathon. D'abord parce que ça les aide eux-mêmes. C'est super utile, même quand tu es perdu au fin fond du Congo à moto. Tu as Google Maps, tu vois où est la base, et même s'il n'y a pas de route, au moins tu sais à peu près où tu es. Et puis au niveau de la sécurité, c'est très utile aussi. Ça permet de savoir en temps réel où sont les équipes.

Charles : Est-ce qu'il y a un aspect dans l'organisation, ou plus généralement, quelque chose que toi tu aimerais voir évoluer ou qui devrait être amélioré, et qui, pour l'instant, pose encore problème ?

Stéphanie : Ouf. Ça fait deux ans que je ne travaille plus, donc c'est un peu facile à dire maintenant que je suis rentrée, mais moi, ce que j'aimerais voir, c'est une recentralisation sur les opérations. J'ai l'impression qu'on passe beaucoup de temps, qu'on consacre beaucoup d'efforts et d'argent à des

discussions internes sur l'identité de l'organisation, sur qui on est, sur ce qu'on accepte ou pas. Et parfois, ça se fait au détriment des moyens qu'on met directement sur le terrain.

MSF est une énorme organisation, vraiment très grosse si tu prends l'ensemble des entités MSF. Du coup, il y a énormément de points de vue différents sur ce qui est prioritaire. Certains estiment, à juste titre d'ailleurs, qu'il est essentiel de clarifier nos valeurs, notre positionnement, notre vision commune. Mais pour une organisation présente dans autant de pays, c'est très difficile de toujours s'aligner.

Ça prend beaucoup de temps, et ça consomme aussi beaucoup d'énergie et de ressources. Il faut se mettre d'accord sur tout, et parfois, on a l'impression que c'est encore plus compliqué que dans les Nations Unies. Pendant ce temps-là, sur le terrain, les équipes se fichent un peu de savoir si c'est MSF Belgique ou MSF France. Elles veulent juste savoir qui va leur amener du paracétamol ou des compresses. C'est ça que je veux dire par une recentralisation sur les opérations. Revenir à l'essentiel.

Charles : Et de ton expérience sur le terrain, si tu devais identifier un facteur qui fait qu'une mission se passe bien, qui fonctionne vraiment, et un autre qui fait qu'elle échoue en général, ce serait quoi ?

Stéphanie : C'est les gens. Oui, clairement. C'est le facteur humain. Tu peux être dans une situation catastrophique, si tu as une bonne équipe, ça passe. À l'inverse, tu peux avoir toutes les conditions idéales, si l'équipe est mauvaise ou que les gens sont désagréables, ça devient un enfer.

Si tu travailles avec des gens professionnels, respectueux, et idéalement sympas, alors même des conditions de travail très difficiles deviennent supportables. Si tu es dans un contexte sécuritaire tendu, mais que tu as confiance dans ton équipe, tu peux avancer. Il y a une forme de solidarité qui s'installe.

Mais si tu ne t'entends pas avec l'équipe, ou si ce sont des gens incompetents, alors même dans un contexte parfait, tu t'ennuies, tu es mal à l'aise, tu n'as pas envie d'être là. C'est vraiment ça qui fait toute la différence.

Charles : Et à part ce facteur humain, toi, quand tu es en mission, par exemple dans des contextes d'urgence, est-ce qu'il y a des choses qui t'ont manqué ? Que ce soit du matériel ou un soutien spécifique, que ce soit de la part du siège ou sur place, comme du soutien psychologique ?

Stéphanie : Non, parce que justement, en urgence, on a la chance d'avoir les moyens. Et ça change vraiment la donne. Par exemple, au Yémen, on ne pouvait pas sortir de la maison sauf pour aller à l'hôpital. Mon bureau était dans la maison, donc je ne sortais quasiment jamais.

J'avais théoriquement le droit de sortir pour faire des courses, mais seulement en étant accompagnée, en burqa, avec trois personnes autour de moi, et tout le monde te fixe. Donc, franchement, je n'avais pas très envie de sortir. Je passais mes journées à tourner entre ma chambre, la cuisine et le bureau.

À force, tu deviens dingue. Alors, ce qu'on faisait, c'est qu'on courait. Beaucoup. C'était la mission où j'ai vu le plus d'expats courir. Juste pour garder un semblant d'équilibre mental. Et on avait un tapis de course, parfois le générateur tournait juste pour ça. C'était absurde, mais nécessaire. C'était soit ça, soit on perdait pied.

Et on ne devait pas justifier ça pendant six mois avec des budgets. C'était juste : "OK, ils ne peuvent pas sortir, ils veulent un tapis de course, on leur achète un tapis." Ils veulent du chocolat dans le frigo, on met du chocolat.

La nourriture, ça joue énormément. Et c'est souvent dans les missions d'urgence que j'ai soit le mieux mangé, soit le pire.

Parce que là, tu mets les moyens. Tu te dis : "Bon, il n'y a rien d'autre de positif, alors autant qu'ils aient un bon repas." Et franchement, ça aide. Mais j'ai déjà eu des missions où il n'y avait presque rien à manger. Au Mozambique, par exemple, la nourriture était horrible et au début, il n'y avait rien. Tout le monde avait une demi-assiette de riz, et t'avais super faim.

Kelsie Meaden - Logistics Manager MSF 18/07/2025

Kelsie Meaden has been working as a Logistics Manager with Médecins Sans Frontières (MSF) for the past three years. She has completed two missions as a Logistic Manager in conflict-affected contexts, specifically in Yemen and Kenya. Prior to joining MSF, she worked as an Emergency Management Coordinator for the Canadian Red Cross, although her role did not involve deployment to active conflict zones.

Kelsie Meaden authorized the use of her name and professional title for the purposes of this research and had initially agreed to the recording of the interview for transcription. However, due to a technical failure during the screen recording, no audio was captured. This summary has therefore been reconstructed from memory and subsequently validated by Kelsie Meaden.

Although her missions with MSF have not involved emergency response in active conflict zones, she has operated in conflict-affected areas. She emphasized that, when dealing with field-level security concerns, the safety of humanitarian personnel is a critical consideration. All actions must be preceded by proper authorization, and feasibility is assessed based on a risk-benefit analysis, since safety can never be fully guaranteed.

To ensure continuity of humanitarian operations, MSF seeks to use locally available goods and supplies, provided they are pre-approved and listed by the organization and match the quality and brands used by MSF. This approach supports the local economy and also helps reduce operational costs.

In non-emergency conflict settings, personnel can travel home if they need or choose to, provided it is safe to do so. However, movement in and out of conflict zones is generally more challenging, so non-essential travel tends to be limited. The feasibility of travel depends on the specific context; in some locations MSF uses its own planes, while in others, commercial flights may be used.

During her mission in Yemen, Kelsie and her team faced fuel quality issues due to the presence of particles in the fuel. To address this, they used a multi-tiered filtration system. She also mentioned, more generally, that in some contexts, improvised methods like filtering through fabric can be used when proper systems are not available.

Kelsie also highlighted MSF's collaboration with local NGOs as an important component of their operations.

Within MSF, information is shared through a centralized system, although it is somewhat outdated. In practice, Kelsie typically relies on email to coordinate with other agencies or to communicate internally within MSF.

Regarding innovation, she noted that non-emergency conflict zones offer greater opportunities to test and adapt new logistical solutions. These environments allow teams to evaluate the effectiveness of innovations before scaling them to other contexts.

She also noted a positive evolution in the effectiveness of aid delivery in recent years, accompanied by various innovations, though she could not recall a specific example. When asked about artificial intelligence (AI), she mentioned that while she was not aware of specific current applications in humanitarian operations, it could potentially be used in the future.

One key area for improvement within MSF is the speed of internal communication and decision-making. The lengthy process required to approve and implement innovations often results in significant delays. By the time a new approach is officially adopted in one setting, different needs or alternative solutions may have already emerged elsewhere. Moreover, once teams have committed to a particular solution,

for example involving substantial investments over a five-year horizon, they are understandably reluctant to pivot or replace it entirely. This inertia is largely driven by the slow pace of organizational adaptation.

Another operational challenge she raised involves personnel turnover during missions. When one staff member replaces another, there is often a necessary period of adjustment for the incoming person to understand the local context. If the new staff member seeks to change existing systems too quickly, it can disrupt internal coordination. However, she also emphasized a positive aspect of this dynamic: new arrivals often bring a fresh and more objective perspective, which can be valuable for teams who, having been deeply immersed in the situation, may no longer see it clearly.

Federico Ubaldi - MSF (and WFP) 22/07/2025

Charles : Pour commencer, je pense que si tu pouvais te présenter brièvement dans tes fonctions dans l'humanitaire, tes rôles, ton travail aujourd'hui.

Federico : Moi c'est Federico Ubaldi. J'ai travaillé dans l'humanitaire à partir de 2010. La grosse partie de mon expérience, c'est avec Médecins Sans Frontières, mais j'ai aussi travaillé pour le Programme Alimentaire Mondial pendant trois ans, et dans l'administration publique, au niveau bruxellois surtout.

J'ai travaillé en logistique humanitaire, spécifiquement en logistique médicale, mais aussi alimentaire, et dans la gestion des crises au sens large. J'ai occupé plusieurs rôles : terrain, comme gestionnaire de logistique à niveau de projets, puis à mesure de l'évolution de ma carrière, en coordination centrale, coordination pays, toujours en logistique, et un peu au siège, plutôt dans le conseil, la gestion tactique, le déploiement, la génération de bases de connaissances, et les back-offices.

Sur le terrain, j'ai géré pas mal de distributions : alimentaires, vaccinations qui posent des enjeux logistiques très similaires. C'est même parfois plus compliqué avec les vaccinations, parce qu'il s'agit de bénéficiaires qui se massent en un seul endroit pour recevoir quelque chose. Il faut que tout soit fluide, car ces situations sont tendues par nature. Toute la chaîne logistique doit être prête pour que ça se passe au mieux.

Mon expérience en contexte de conflit n'est pas récente. J'ai commencé à Haïti, après la crise alimentaire de 2010, puis j'ai travaillé en Afghanistan, Côte d'Ivoire, Sud-Soudan, Burundi, Niger, Afrique du Sud, Bangladesh. Depuis deux ans, je suis coordinateur logistique au Mexique, sur un projet qui couvre les urgences en Amérique latine, toujours en logistique d'urgence.

Charles : On a fait pas mal d'interviews avec des gens de MSF. Mais tu as aussi travaillé trois ans au WFP. Plus tard, je pense que ça peut être intéressant sans trop forcer la comparaison de voir un peu les différences entre le PAM et MSF.

Et quand tu pars en mission sur le terrain, c'est plutôt pour des projets courts ou des missions longues ?

Federico : Moi, j'ai toujours fait plutôt des missions courtes. J'ai surtout travaillé dans les urgences. Mais j'ai aussi fait quelques missions longues, surtout quand j'étais avec les Nations Unies.

Au Mexique, par exemple, j'y suis resté deux ans. Mais le gros de mon expérience, c'est des missions courtes, parce que c'était des contextes d'urgence. En Afghanistan, j'étais six mois ; au Congo, neuf mois. Donc j'ai un peu fait les deux.

Après, c'est un débat ouvert : qu'est-ce qu'une urgence ? À partir de quand ce n'en est plus une ? Est-ce que l'Ukraine, aujourd'hui, c'est une urgence ? Est-ce que le Soudan en est une ? C'est ouvert à discussion.

Charles : Au final, l'Ukraine même s'il y a beaucoup de besoins, on est préparé avec le temps. Du coup, on n'est plus vraiment dans un contexte d'urgence.

Federico : Tout à fait. On pourra en reparler. Moi, je ne suis pas un vrai spécialiste de la gestion de la sécurité, j'en ai fait un peu. La gestion de la sécurité, c'est une question de prévisibilité.

Il s'agit toujours de prendre des décisions, d'une façon ou d'une autre. Je bouge, je fais ci, je fais ça, je reste, je m'en vais. Et à quel niveau d'information, de complexité de l'information, je peux prendre une décision ?

On parle alors de milieux incertains ou de milieux plus prévisibles. On peut être dans un conflit, comme tu le dis, très fortement établi, avec des acteurs clairs, sans trop de surprises, comme j'imagine que c'est le cas de l'Ukraine. Très bon point.

Charles : Dans la logistique et la distribution, le cas de Gaza a vraiment mis en lumière les contraintes d'accès. Dans tes missions ou projets, j'imagine que tu es souvent confronté à des obstacles sur le terrain pour la distribution. Quels sont les obstacles les plus fréquents ou les plus embêtants ? Checkpoints, blocages, état des routes, sécurité ?

Federico : On revient à un point fondamental. Si on parle de distribution, tout l'enjeu, pour moi, c'est que ce soit aussi rapide et fluide que possible, qu'il s'agisse d'alimentaire, de non-food ou de vaccination. Même quand la situation n'est pas tendue, elle l'est par définition, car il y a énormément de gens qui attendent quelque chose dont ils ont besoin ou pensent avoir besoin.

Plus c'est lent, plus ça devient complexe, plus il y a d'incertitudes. Et ça génère un effet multiplicateur, surtout avec la foule. Ça peut très vite dégénérer. Les gens se bousculent, s'agitent. C'est potentiellement une source de chaos.

Pour que ce soit fluide au moment de la distribution, il faut avoir tout anticipé : le supply, les ressources, les quantités, la planification, l'information aux bénéficiaires. Si tout est bien prévu, au moment du handover, il y a le moins d'incertitude possible. Tout se passe comme attendu. C'est ça, l'idéal.

Concernant les contraintes, bien sûr, il y a les contraintes physiques : l'état des routes, la passabilité, la saison des pluies. Approvisionner un endroit régulièrement en saison des pluies, c'est un vrai sujet. Mais c'est généralement prévisible. Tu dois t'assurer d'avoir assez d'informations avant de lancer quelque chose, même dans un endroit que tu ne connais pas. La planification réduit les risques.

Aujourd'hui, tu peux recueillir ces infos rapidement, via les agences onusiennes, les partenaires, les acteurs locaux, tu as tout un système de gestions d'informations. Dans les zones que tu connais bien, par exemple tu sais qu'une route est impraticable de mars à octobre. Soit tu stockes à l'avance, soit tu adaptes tes moyens : 4x4, autres véhicules. Tes moyens doivent s'ajuster aux défis connus.

Si ça devient très compliqué ou coûteux, le décisionnaire stratégique doit trancher : est-ce que ça vaut la peine ? En tant que logisticien, tu peux avoir une opinion, mais tu n'es pas celui qui décide. Ton rôle, c'est de dire : faire ça, de cette manière, coûtera tant, donnera tant, sur base de mes informations.

Il y a aussi la question sécuritaire. Les checkpoints, le contrôle territorial. Tu peux te retrouver face à la police, l'armée, un groupe paramilitaire, des bandits, un acteur gouvernemental ou non. Dans tous ces cas, ton objectif, c'est de réduire l'espace d'incertitude.

Normalement, tu sais où sont les checkpoints, qui les contrôle. Tu dois essayer de le savoir, et leur parler en amont. Dans la logique humanitaire classique, et on en parle surtout avec Gaza maintenant, parler à quelqu'un, ce n'est pas le soutenir. Ce n'est pas un appui idéologique, c'est une nécessité opérationnelle.

Si tu ne peux pas leur parler directement, tu trouves quelqu'un qui peut parler à quelqu'un, qui peut parler à quelqu'un. Parfois, tu passes par des intermédiaires, des prêtres, des figures communautaires. La personne qui gère le checkpoint souvent c'est le 'petit' soldat ou policier et il faut que la personne qui gère un checkpoint soit au courant, sinon tu es à la merci de son humeur, voire de la corruption. Idéalement, tu remontes sa hiérarchie et tu les préviens : tel jour, on passe avec tant de camions, est-ce qu'on est d'accord ?

Dans l'humanitaire, tu ne fais rien dans le dos de personnes simplement parce qu'ils ont des flingues et toi non. Personne ne veut être contourné. Ceux qui ont les armes veulent savoir ce qui se passe. Donc encore une fois, tout repose sur le fait que tout le monde ait la même information.

Je me souviens d'une opération à Acapulco, après l'ouragan de novembre 2023. Ce n'était pas une énorme catastrophe, mais assez sérieuse. On a essayé de lancer des opérations dans des quartiers contrôlés par la criminalité organisée. Il n'y avait pas de canaux de communication ouverts. Ils ne voulaient pas nous parler. On est passé par les prêtres de quartier. Des figures qui connaissaient les dynamiques locales. On leur a dit : on va faire ça à tel endroit. Est-ce que vous pouvez prévenir les gens concernés ? Et ça a marché. Téléphone arabe, comme on dit. Évidemment, tu sais que tu es surveillé. Tu sais qu'il y a des regards indiscrets. Mais c'est comme ça que tu avances.

Je ne connais pas Gaza techniquement, mais de ce que je vois, le plus gros défi aujourd'hui dans l'humanitaire, c'est ça, c'est l'accès. Historiquement, dans la dernière décennie, on avait un peu un passe-droit, un golden ticket, en vertu de notre mission. Aujourd'hui, ce droit est remis en question.

Depuis les conflits syriens, vers 2014, certains acteurs non gouvernementaux ont massivement refusé l'accès aux organisations humanitaires. Certains ont attaqué des convois. Pourtant, même avec des groupes classés comme terroristes, on a toujours pu discuter. Avec les talibans, par exemple, ou d'autres qui n'avaient pas nécessairement le bien de l'humanité dans leur principe ou selon des critères partagés, on a pu négocier, parce qu'il y avait un intérêt mutuel.

Mais maintenant, il y a des zones où les groupes ne veulent pas de toi. Et s'ils ne veulent pas, tu ne passes pas. C'est aussi simple que ça.

Charles : En humanitaire, un des grands challenges, c'est que la logistique est très tendue. Les délais sont très courts, les besoins sont constants, et la logistique doit suivre rapidement. Mais malgré une planification rigoureuse, il y a souvent des imprévus sur le terrain, que ce soit liés aux contraintes physiques ou humaines. Comment on fait, dans un contexte où les délais sont critiques, pour improviser une solution ? Comment réagit-t-on quand ça ne se passe pas comme prévu ?

Federico : Très bonne question. Ce qui génère souvent de la tension, c'est quand les gens commencent à douter qu'ils vont recevoir ce pourquoi ils sont venus. Ils ne voient pas assez les camions arriver, ils ne voient pas assez de marchandise. Ils voient que la file ne bouge pas, il y a des goulots d'étranglement. Peut-être que tu as mal planifié ton site de distribution, que tu n'as pas prévu suffisamment de lignes, ou bien qu'il y a plus de gens que prévu.

Encore une fois, le recensement, c'est capital. Les personnes présentes doivent être celles qui étaient prévues, sur la base de la planification. Mais il arrive que des gens se présentent sans avoir reçu l'information, ou qu'ils essayent quand même, même sans y avoir droit.

Ça peut paraître bisounours, mais l'idée, c'est la communication. Il faut être clair, ne pas promettre ce qu'on ne peut pas tenir, ne pas s'engager sur des choses incertaines. Sinon, ça se voit, et ça aggrave les problèmes.

Il faut pouvoir dire : vous n'êtes pas censés venir aujourd'hui, vous êtes prévus mardi prochain. Il faut expliquer la situation, dé conflictualiser.

Et si les ressources sont insuffisantes, l'idée, c'est de toujours avoir une marge. Normalement, on prévoit une marge d'erreur de 20 %. C'est énorme logistiquement, parce que tu transportes parfois 40 % de matériel en plus aller-retour, juste pour le ramener après si tout se passe bien. Ce n'est pas optimal du

point de vue logistique pur, mais stratégiquement, ça garantit que tout le monde reparte avec quelque chose. Ça fait partie de la prévision.

Si malgré tout ça, ça déraile, il faut identifier la cause. C'est souvent une question de communication. Il faut comprendre ce qui bloque et adapter en cours d'opération.

Par exemple, si la file ne s'écoule pas assez vite à cause d'un goulot dans la gestion des foules, tu dois pouvoir modifier ton site en direct. Est-ce qu'il est en plein soleil, à midi, en Afrique ? Les gens deviennent très impatients. Il faut pouvoir déplacer les files à l'ombre, mettre rapidement en place des abris.

Si des gens arrivent sans y avoir droit, il faut leur expliquer pourquoi et leur dire quand est-ce que ce sera leur tour.

Ce que je lis sur Gaza aujourd'hui, c'est un peu l'inverse total de ce que disent les guidelines. Il n'y a pas de recensement préalable, aucune prévisibilité. On dit aux gens : pointez-vous, premier arrivé, premier servi. Il y avait 400 points de distribution, il n'y en a plus que 4. C'est deux ordres de grandeur en moins. Les sites ouvrent du jour au lendemain, les gens reçoivent des messages de dernière minute.

Normalement, dans une distribution bien faite, je pense aux vaccinations parce que j'en ai fait beaucoup, tu distribues sur deux semaines minimum, même si l'opération dure deux mois. Avant d'ouvrir dans un endroit, il faut recenser les alentours, les routes, les données épidémiologiques, identifier les lieux, assurer la sécurité pour les équipes.

Tu fais un plan de distribution. Typiquement, en milieu rural africain, tu identifies un village central, et tous les villages autour viennent aux dates prévues, à pied. Tu dois avoir l'autorisation du chef de village et des autorités, informer les gens, prévoir ton site sous base de recensement et d'évaluation des besoins : combien de familles, combien d'enfants, quelles données de santé publique.

Tu fais ton calendrier, tu avertis les villages non concernés, et une fois que tout ça est prêt, tu commences à distribuer. Et tu réduis tes risques au maximum. C'est surtout ça.

Charles : Et donc, la planification est en place, on sait où on va. Mais concrètement, avec des vaccins, de la nourriture, du médical, j'imagine que ça varie. Si tu veux simplifier la chaîne logistique du point A au point B, c'est quoi les grandes étapes ? Et quelles sont les grandes différences entre, par exemple, les vaccins et la nourriture ?

Federico : Tu fais d'abord des calculs en logistique inverse. La première étape, c'est une décision stratégique, prise par les décideurs. C'est la stratégie de l'organisation : qu'est-ce qu'on distribue, et sous quelle forme.

Un vaccin, il n'y a qu'une manière de le distribuer. Tu piques l'enfant, c'est une livraison directe à un bénéficiaire. Pour la nourriture ou les NFI, c'est plus varié. Tu peux distribuer des tentes, des filtres, des biens. Tu peux distribuer par groupe, avec un niveau d'engagement variable. Tu peux poser la nourriture dans un village et partir en faisant confiance aux bénéficiaires. Logistiquement, c'est plus simple, mais plus risqué.

Le risque, c'est que la distribution ne soit pas alignée avec les besoins. Même avec de la confiance, tu perds la capacité de suivre les données. Par exemple, si tu distribues de la nourriture thérapeutique pour enfants mal nourris, tu dois avoir des données épidémiologiques. Et dans une distribution massive, cette remontée d'information ne se fait pas.

Cela dit, en cas de famine, les besoins sont tellement évidents que même si la nourriture est volée ou revendue, elle a un effet. C'est grossier, mais ça marche quand même.

Sur le plan logistique, ça change la structure du site de distribution. Un mois de nourriture pour une personne, c'est 10 à 15 kilos avec huile, riz, haricots. Une personne peut le porter. Pour de la nourriture thérapeutique, ce sera deux kilos. Ça change tout.

Tu as ensuite un point de reconditionnement dans ta base d'opérations. C'est valable aussi pour les vaccins. Tu reçois des colis, tu ouvres, tu reconditionnes dans des unités adaptées. Puis tu passes au last mile, de ce point de reconditionnement au point de distribution.

Par exemple, dans une distribution de NFI, tu as deux couvertures, trois filtres à eau, des tampons hygiéniques. Tu achètes tout en vrac, tu reconditionnes. Si c'est de la nourriture, tu as des normes d'hygiène, des conditions de stockage, de manutention spécifiques. Il faut des espaces suffisants et bien planifier ton site de reconditionnement.

Pour les médicaments, tu dois garantir une chaîne du froid. Active avec des réfrigérateurs ou congélateurs, ou passive avec des glacières. Les vaccins sont fascinants à ce niveau. Ce n'est pas très complexe, mais très poussé. Tu dois produire de la glace qui dure. Tu calcules combien tu peux produire en 24 heures et ce qu'il te faudra pour les trois jours suivants. Tout est dans la planification.

Plus tu montes en complexité, plus tu crées de points de défaillance. Chez MSF, la réponse classique à cette complexité, c'est la surdimension. On fait plus, on prévoit plus. C'est l'inverse de la logique corporate où on cherche l'efficacité.

Dans l'humanitaire, l'objectif, ce n'est pas le rendement financier, c'est de maximiser l'output humanitaire. Donc on prend des marges. Ce n'est pas une logique arithmétique.

Tu as un point de déconditionnement, puis toute la chaîne d'approvisionnement, qui peut être locale, internationale, ou mixte. Ça dépend de la disponibilité des produits sur place, de ta mission, de tes exigences qualité.

Et de plus en plus, il faut intégrer le cadre légal. Le secteur a changé. Avant, on avait plus de marge, plus de négociation face à l'État, même en zone de conflit. Aujourd'hui, les États sont plus structurés, avec des réglementations plus strictes. Tu dois en tenir compte dans ta planification.

Par exemple récemment, en Amérique du Sud, tu peux vouloir distribuer des moustiquaires imprégnées d'insecticides contre la malaria. Mais certaines formulations chimiques ne sont pas autorisées, ou soumises à des contraintes douanières. Donc tu dois intégrer ces facteurs dans ta planification.

Il faut connaître ton environnement, pas seulement logistique, mais aussi légal, administratif, douanier. Dès que tu franchis une frontière avec du matériel, c'est là que les questions douanières se posent. Il te faut du personnel compétent sur ces aspects. Sinon, tu externalises. C'est souvent ce qu'on fait. Et ça te permet de gagner en efficacité.

Charles : Je pense qu'il y a un centre de distribution, de conditionnement, qui doit être assez proche du site. Pour le last mile, est-ce que c'est toujours avec des camions ? Ou alors il y a d'autres options ?

Federico : Non, ça dépend vraiment de ce que tu veux transporter. Comme dans toute logistique, il faut prendre en compte la quantité, le poids, le volume, et les contraintes du terrain.

Quand c'est de la nourriture, c'est souvent des camions, parce qu'on parle de grosses quantités. Mais ça peut aussi être des pick-up, voire même en moto, en âne ou à pied surtout pour ce qui est plus petit. C'est vraiment lié aux contraintes du terrain.

Une chose intéressante, c'est l'implication croissante des systèmes d'information géographique, le GIS. Ça peut être au sens large, une photo satellite, une carte dessinée à la main avec un villageois. Ça revient à la gestion de l'information.

Le déploiement des moyens est toujours adapté au terrain. Tu dois connaître ton terrain. Si quelque chose peut transporter du matériel, on l'a utilisé. Moi, je l'ai fait à moto, en canot. En vélo, pas spécialement. En âne, pas spécialement, mais je connais des gens qui l'ont fait, évidemment, ce sont des cas résiduels.

Dans la planification logistique, l'idée est de viser les gros centres de population le plus tôt possible. Ensuite, tu vas rattraper les endroits plus reculés. Tu dois concentrer ton dispositif là où c'est raisonnable, là où la population peut venir. Et ensuite, tu t'occupes des zones plus éloignées, de manière résiduelle.

Tu fais tout ce que tu peux faire avec des camions, parce que c'est beaucoup plus rentable. Ensuite, tu peux aller jusqu'à la marche à pied, avec des porteurs.

Charles : Je pense que tu as mentionné que, notamment chez MSF, l'une des grandes solutions au problème, c'était juste de prévoir des marges d'erreur plus grandes, pour être sûr que l'output arrive. Est-ce que tu as vu, au niveau purement de la gestion logistique et de l'organisation de la distribution, de grosses différences entre MSF et le PAM, ou est-ce plutôt similaire ?

Federico : Alors, au PAM, je n'ai pas travaillé dans d'autres conflits à proprement parler, donc c'est de ceux-là que je peux témoigner. C'est une gestion dans des contextes très compliqués. J'ai travaillé au Kenya, avec de gros camps de réfugiés, avec des gens venus de Somalie.

Mais c'est une gestion très prévisible, avec une population recensée, un fonctionnement très lourd en termes de volume. Vraiment assez impressionnant. On bougeait beaucoup. Si on revient aux moyens, on utilisait les trains. Il y avait toute une logistique portuaire derrière, parce que les aliments arrivaient par bateau. Et quand tu as de la chance, tu ne bouges même pas du bateau. Mais c'est très prévisible. Donc là, tu peux vraiment affiner ta planification.

Le PAM a une capacité et une force de frappe assez impressionnante. C'est une agence de l'ONU. Ils ont un navire de transport, ils déplacent des aliments, ils ont vraiment de grosses capacités logistiques. C'est toute une autre chaîne. Ils sont très puissants au niveau de la logistique portuaire et de la logistique en général.

Ils ont aussi une capacité de planifier beaucoup plus importante. Et ils travaillent sur des contextes à l'année. Même les urgences pour le PAM, c'est un fonctionnement régulier. Je ne connais pas très bien leur fonctionnement exact en urgence, mais ils ont un vrai savoir-faire dans le gros volume. C'est leur cœur de métier.

Ce qu'ils font de plus en plus, et MSF commence aussi à le faire pour des raisons d'accès, c'est que le last mile est souvent géré par des ONG locales. Le PAM a une compétence incroyable sur toute la partie jusqu'au last mile : entreposage, conditionnement, transport en gros, transport plus petit. Mais ensuite, la distribution est déléguée. C'est un autre modèle, une autre approche. Ils ont un autre mandat. Ce n'est pas une ONG, c'est une organisation intergouvernementale. Donc, ils ont aussi pour mandat de s'appuyer sur les capacités locales.

Quand on travaille avec les Nations Unies, un gros boulot d'alignement est nécessaire. Et c'est de plus en plus vrai avec la situation politique mondiale. MSF travaille avec des fonds propres, donc ils ont de l'argent à eux. Ils décident en conscience comment l'utiliser. S'ils veulent le jeter par la fenêtre ou allumer un feu avec, ils peuvent le faire.

Les agences des Nations Unies, et spécialement le PAM, sont financées par des États. Certains ont des fonds attribués, donc un peu plus de sécurité budgétaire. D'autres sont financés projet par projet, mission par mission, pays par pays. Et donc, selon les priorités de la politique internationale ou de la diplomatie, certaines actions peuvent être financées ou non.

C'est souvent le cas qu'il y ait des crises, comme la guerre en Ukraine ou la guerre en Syrie, qui ont causé, sans jugement de ma part, un désintérêt des donateurs institutionnels pour d'autres crises ou situations. Ce désintérêt a réduit leurs financements. C'est sûr.

Charles : Et, est-ce que tu ressens vraiment des grosses différences dans la gestion interne du travail, des affaires entre MSF et PAM?

Federico : L'ONU, c'est beaucoup plus structuré. Ce sont des organisations qui ont un mandat spécifique et qui le changent rarement. Elles ont des gouvernances qui sont, je le dis sans jugement, mais qui sont beaucoup plus lentes par rapport à d'autres intérêts. Les conseils d'administration, si je peux les appeler comme ça, du Programme Alimentaire Mondial, ce sont des diplomates, donc ils ramènent les intérêts de l'État qu'ils représentent dans l'organisation.

Au niveau de l'employé, tout bêtement, oui, c'est très autre de travailler quand on travaille pour les Nations Unies. C'est un secteur qui est très structuré, où tu as des rôles très précis, où tout est très compartimenté. C'est une logique, je le dis sans jugement, bureaucratique. Dans le sens où c'est une forme de bureaucratie qui s'installe pour faire fonctionner, pour mener des opérations, de la façon la plus similaire à celle d'un État.

C'est plus similaire à un État ou à un système de santé d'un État, qu'à une ONG.

Charles : Au PAM avec le cluster log, comment ça se passe, cette question de devoir coordonner un peu tout le monde ?

Federico : Le cluster logistique, en gros, ce qu'il fait, si on revient à l'essence, c'est de faire un pool de ressources et un pool d'informations. Le cluster logistique intermédie une capacité logistique existante, qui est souvent celle du PAM, le Programme Alimentaire Mondial. Ce qu'il fait, c'est un lien de direction entre des ONG, des acteurs sur le terrain qui n'ont pas une capacité logistique nécessairement super importante, et le service provider, qui est le PAM.

Il met à disposition des ressources, il met à disposition des informations, il rassemble des informations, et en cas de crise, il coordonne les besoins et les ressources à disposition. Je ne sais pas ce qu'ont dit mes collègues de MSF. C'est un mécanisme, peut-être qu'il est un peu, je ne dis pas méprisé, mais qu'il est vu avec un peu d'indifférence, parce que MSF a toujours beaucoup de capacité logistique interne et donc de déployer les choses.

Mais c'est un mécanisme qui demande, encore une fois, beaucoup de planification. Tout doit être partagé avec les autres acteurs, qui sont les autres ONG. Donc, participer à un cluster logistique, ça demande de planifier, d'avoir clair tes besoins, de savoir ce que tu veux, de savoir ce qu'il faut transporter, quand, comment, dans quel endroit, c'est quoi tes poids, c'est quoi tes volumes.

Et alors, faciliter l'accès aux ressources partagées. Si tu ne fais pas tes devoirs à l'avance, si tu te pointes et tu dis "ah oui, je dois transporter ça, mais je ne sais pas quand", peut-être qu'il n'est pas prêt. Encore une fois, c'est toujours complexe. Et donc, parce que ça peut se continuer, l'information doit être la plus précise, la plus streamlined et la plus disponible possible.

Moi, je suis très fan du mécanisme cluster, personnellement, parce que ça force un peu les gens à réfléchir. Et parce que ça permet de travailler avec des gens qui n'ont pas spécialement accès. Je dirais

que ça génère des externalités positives au niveau économique et des biens publics qui, après, sont disponibles à tout le monde. La connaissance, l'information, les informations géographiques, les informations sur la sécurité.

Une fois qu'elles sont disponibles, elles sont disponibles pour tout le monde. Elles ne sont pas des ressources rares. Elles font partie d'un travail qui n'est pas nécessairement de prendre des choses au point A et de les amener au point B. Parce que moi, je n'ai pas les camions loués. Mais aussi de rassembler, schématiser et générer de l'information.

Charles : Toi, de ton expérience, au niveau concret, comment ça se passe, la collaboration entre les différents organismes, d'un côté, les Nations Unies et les différentes organisations non gouvernementales ? Et si jamais ça se passe mal ou bien, qu'est-ce qui favorise la coordination ?

Federico : Alors, ce qui favorise, c'est la clarté sur les mandats. La réponse simple à ça, mais c'est vrai, j'ai trouvé, c'est que ça dépend des personnes. Vraiment des individus concernés et de la capacité, du périmètre d'action qu'il lui est octroyé par sa hiérarchie ou par un autre.

Souvent, les conflits se génèrent parce que quelqu'un qui a plus de pouvoir d'action discute avec quelqu'un qui n'en a pas, et donc ils n'arrivent pas à se mettre d'accord. L'autre personne va dire "je ne peux pas prendre cette décision, je dois demander à ma hiérarchie". Et moi, si j'ai plus de capacité à décider, je suis frustré, je dis "moi je veux avancer".

Il y a un côté personnel, lié aux personnes qui veulent s'aider. Ça se passe bien quand les gens veulent bien collaborer. Mais ça, c'est une vérité banale.

Si je dois aller un peu plus loin, une des choses qui font que les choses se passent bien, c'est encore une fois la clarté sur les mandats, sur les rôles de chacun, et sur ce que je peux attendre de cette personne-là. Et d'avoir des règles claires pour soi-même et pour les autres : qu'est-ce qu'on peut faire pour bien collaborer, jusqu'où je peux aller.

Si je travaille avec une entité de gouvernement qui a des procédures rigides à suivre, je ne peux pas m'attendre à ce que ça soit rapide. Normalement, je vais me frustrer. Si j'aime bien mener un conflit sur le terrain, essayer de faire que les choses bougent, ça sera difficilement le cas.

Pourquoi ? Ça revient à l'information. Si je sais que cette dynamique ne peut pas être changée, et que je peux réalistiquement la changer, alors j'ai peut-être quelque chose à faire. Mais si je me rends compte que cette dynamique ne peut pas être changée, tout ce que je peux faire comme acteur sur le terrain, comme logisticien, c'est de dire "ok". Soit je mets moi en place des choses pour aller autour, soit j'attends, soit je suis le flow.

Mais dans tout ce processus-là, surtout dans les conflits, pour moi ça revient à mon point initial : qu'est-ce qui complète m'information, qu'est-ce qui rend réaliste l'information, sur la base de laquelle je vais prendre ma décision. En logistique, en stratégie.

Et idéalement, quand je ne sais pas quelque chose, je sais que je ne le sais pas. Si je sais que cette route-là peut être ou pas praticable, mais que je ne sais pas, au moins j'ai une information.

On dit qu'il y a les known unknowns et les unknown unknowns. Dans la situation idéale, mais ça c'est rare, c'est de tout savoir. Le meilleur scénario réaliste, c'est d'avoir le plus de known unknowns que possible. Parce que ne pas savoir que tu ne sais pas quelque chose, c'est là qu'est l'erreur. Et ça te met beaucoup plus en difficulté dans tout ce qui est la prévision.

Parce que les moyens techniques sont là. Après, tu as des contraintes techniques que tu ne peux ou pas contourner, ou qui ont des coûts que tu peux ou pas soutenir. Mais tout l'enjeu, c'est d'avoir une représentation de ce que tu vas trouver sur le terrain, au niveau logistique, passage, des réactions des gens. Autant que possible, similaire à l'idée que tu te fais au niveau stratégique.

Charles : Quand on enchaîne plusieurs missions intenses de trois mois dans des contextes exigeants, stressants, imprévisibles... Comment on reste opérationnel ? Comment tu fais pour rester concentré sur le travail malgré tout ça ? Tu as des habitudes, des mécanismes particuliers ?

Federico : Il y a, classiquement, des mécanismes pas très sains ou peu recommandables. Fumer, boire, tous les recours typiques face au stress.

Mais dans le meilleur des cas, c'est une question de connaissance de soi. Tu apprends, avec l'expérience, ce que tu peux demander à ton corps, à toi-même. Pas tout le monde est fait pour travailler dans l'humanitaire, et encore moins dans les urgences. Honnêtement, ce n'est pas un métier compliqué techniquement. C'est plutôt une question de posture, de capacité à savoir faire. Il y a des gens bien plus brillants ailleurs, dans des contextes très différents.

L'essentiel, c'est de savoir ce que tu peux supporter, d'apprendre de tes erreurs. Toutes les personnes qui travaillent dans les urgences ont eu un ou plusieurs burn-out. Après, tu apprends à gérer, à poser des limites.

Et là, la différence, c'est l'organisation. Si tu travailles pour une organisation qui se soucie de ton bien-être, qui comprend que la gestion du stress et de l'usure fait partie du travail, alors elle met en place des stratégies de réduction des risques. Tout l'enjeu, c'est la protection de la personne, pendant l'opération mais aussi en dehors. Et ça, c'est un vrai défi humanitaire.

Charles : Quelle est pour toi l'importance du travail d'équipe ? Est-ce que ça se passe bien en général, ou il y a parfois des tensions sur le terrain ?

Federico : Le travail d'équipe est central. Ce sont les dynamiques humaines qui font tout. Honnêtement et je le dis même si ça va contre mon professionnalisme, la logistique en soi, ce n'est pas compliqué. Quand je travaille avec des médecins qui ouvrent le thorax d'un patient ou font des chirurgies vitales, ça c'est vraiment compliqué. Moi, ce que je fais, tu peux le faire sur Excel.

Ce qui fait la différence, c'est comment tu travailles avec les gens. Une mission réussie ou ratée dépend largement des relations que tu arrives à créer avec ton équipe. Et pour ça, il faut de vrais gestionnaires humains, capables de prévenir et de gérer les conflits.

Tout est amplifié sur le terrain. Tu ne quittes pas le bureau pour rentrer chez toi, tu vis avec les mêmes personnes, tu partages la maison, les repas. Les tensions, les amitiés, les histoires d'amour, tout est décuplé. Alors oui, tu dois connaître tes équipes, anticiper les réactions, faire un "casting" selon les personnalités et les contextes. Mais tu fais aussi avec les moyens du bord : parfois tu n'as personne d'autre à envoyer, ou tu composes avec le niveau de formation disponible localement.

Avec le temps, tu repères les profils. Quelqu'un de très direct, tu ne l'envoies pas dans un contexte où la culture valorise la retenue et la courtoisie. Et bien sûr, les questions de genre entrent en jeu.

Mais au final, les gens se sélectionnent eux-mêmes. Le terrain est exigeant. Si tu ne prends pas du plaisir à faire ce travail, si ce n'est pas profondément ton truc, ça s'arrête vite. Après deux missions, ce n'est plus du tout aussi attrayant que sur le papier.

Charles : Et qu'est-ce que tu penses de la durée des missions sur le terrain ? Tu me disais que, chez MSF, pour les urgences, ça peut être très court, max trois mois. Est-ce que tu trouves que c'est une bonne durée ? Ça devrait être moins ? Ou plus ?

Federico : Pour une première vague d'urgence, ça peut même être trois semaines. Et dans ces cas-là, au bout de trois semaines, tu es déjà rincé. Tu dors mal, tu ne sais pas où tu loges, c'est intense. Après, la durée s'adapte. Moi, je suis un peu biaisé, parce que c'est le système que je connais et dans lequel je me suis bien senti. Mais typiquement, tu as un mois pour la phase aiguë, trois mois pour la stabilisation, et jusqu'à six mois pour la suite.

Aujourd'hui, je fais plutôt des missions longues parce que j'ai des enfants. Et je travaille davantage en siège, pour pouvoir vivre avec ma famille.

Un autre modèle intéressant, notamment dans les contextes très durs comme Haïti ou certains endroits au Congo, c'est le système de rotation. Tu mets deux personnes sur un même poste, et elles se relaient tous les un, deux ou trois mois. Ça facilite le staffing : une fois que tu as identifié le bon binôme, c'est bon pour un an. Le contexte est connu, tu évites la phase de réapprentissage. Et les gens sont motivés, car ils sont payés en continu, même pendant leur temps de repos. Je trouve ce système très intéressant.

Charles : Après toutes ces années dans l'humanitaire, tu as sûrement vu évoluer les outils et les stratégies de distribution. Qu'est-ce qui t'a marqué comme changement ? Notamment sur les technologies comme le mapping, le tracking, etc. Est-ce qu'il y a eu une vraie transformation selon toi ?

Federico : Oui, clairement. Le GIS, tout ce qui touche à l'imagerie et à l'accès à l'information spatiale, a changé énormément de choses. Ça permet de visualiser les situations, d'avoir une spatialisation concrète, et ça aide énormément la réflexion.

Quand j'ai commencé, il y a 15 ans, ce n'était pas l'âge de pierre, mais on n'avait pas du tout la même accessibilité niveau com. Dans certaines zones, il n'y avait pas de réseau, donc on communiquait par radio. Il fallait parfois installer des antennes juste pour avoir un minimum de contact. Les protocoles de sécurité étaient conçus autour de cette absence de lien : que faire si on perd le contact ?

L'Internet satellitaire était disponible, mais très cher. On payait 8 dollars le mégabyte. Donc, on écrivait tous nos mails en texte brut, on les envoyait en une seule fois, et on recevait les réponses le jour suivant. Ça, c'était encore le cas en 2012. Aujourd'hui, la question ne se pose même plus. Tu as Internet quasiment partout, tu as des téléphones satellites si besoin. C'est un vrai changement dans les télécommunications.

Pour l'intelligence artificielle, honnêtement, je ne vois pas encore d'impact majeur sur les distributions humanitaires. Beaucoup de tâches sont techniquement automatisables, mais ce n'est pas encore un vrai tournant.

Par contre, les drones, ça oui. Pour l'accès, ça ouvre des perspectives. Mais leur usage reste très dépendant des acteurs étatiques ou non étatiques. S'ils décident que tu ne voles pas, tu ne voles pas. Et là, on touche à un point plus large : le militaire anticipe souvent les usages civils. La logistique militaire, les transports, les technologies développées dans les conflits à haute intensité nous montrent la voie. Et les drones en font clairement partie. C'est une technologie à suivre de près.

Charles : Le drone, c'est un vrai sujet. Mais pour l'intelligence artificielle est-ce que tu penses qu'elle peut vraiment jouer un rôle dans l'humanitaire dans le futur ?

Federico : Je pense que c'est générationnel aussi. J'ai 43 ans, et je commence à atteindre un âge où les innovations technologiques m'impressionnent moins. J'ai grandi avec la découverte d'Internet, j'ai toujours été branché sur la communication et l'information.

Mais pour moi, l'intelligence artificielle, c'est essentiellement accéder à une masse énorme d'informations en ligne et faire des calculs de probabilité très rapides pour donner des réponses statistiquement cohérentes.

Philosophiquement, c'est presque à l'opposé du terrain humanitaire. Parce que là, justement, on n'a pas assez d'informations. L'enjeu, c'est l'absence de données fiables. Donc, l'IA, qui fonctionne en exploitant des bases de données massives, se retrouve vite limitée.

Tu peux évidemment l'utiliser pour des tâches utiles : lui donner une carte, lui demander d'identifier les points d'accès les plus proches des zones densément peuplées, ou de prioriser certains envois. Mais pour moi, ce n'est pas une révolution copernicienne. C'est utile, mais ce n'est pas transformateur.

Charles : Est-ce que tu vois d'autres aspects de la logistique ou de la distribution humanitaire qui, selon toi, mériteraient vraiment d'évoluer, mais qui n'ont pas tellement changé avec le temps ?

Federico : Franchement, je ne sais pas. La distribution reste un domaine très physique. Il y a des choses incroyables dans d'autres secteurs, comme la télémédecine, où tu peux vraiment faire des choses de malade : des scans, des diagnostics à distance, tu atteins des patients à l'autre bout du monde sans te déplacer. Mais dans la logistique humanitaire, ce n'est pas le même monde. Moi, j'adore ça, c'est mon kiff, mais ça reste du tangible, du très matériel. Tu ne peux pas digitaliser de la bouffe.

C'est un noyau dur. Tu peux optimiser certains aspects : les vecteurs de transport, la capacité de charge, la consommation de carburant. Tu peux et tu dois te poser des questions sur l'impact environnemental, sur ce que tu peux améliorer. Mais à la base, ça reste physique.

Peut-être qu'un vrai changement pourrait venir de la technologie alimentaire elle-même. Plutôt que de distribuer des haricots ou de la farine, tu pourrais imaginer des barres de 2 000 calories, des « ready to use meals », des produits nutritionnels optimisés. Ce serait une évolution indirecte de la logistique, mais qui viendrait d'ailleurs.

Charles : Sur les processus structurels, comme les validations internes, est-ce que ça s'est amélioré avec le temps ? Ou est-ce toujours aussi long d'obtenir une validation ou une autorisation interne ?

Federico : Oui, ça dépend beaucoup de l'organisation, de ton niveau d'autonomie, de ton poste et du mode de gouvernance. Il y a un vrai changement culturel en cours dans l'humanitaire, avec une tendance à donner plus de pouvoir décisionnel aux gens sur le terrain. On passe de modèles très verticaux, à des approches plus plates, en réseau.

Moi, je suis fan des chaînes de communication courtes et des décisions décentralisées. Mais il faut reconnaître que, dans l'ensemble, l'humanitaire reste encore très hiérarchisé.

Ce n'est pas un milieu très démocratique en son interne. La gouvernance reste souvent de type militaire, très hiérarchiser : une chaîne de commandement claire, structurée, verticale. Ce n'est pas ce que je préfère, mais c'est encore la norme.

Charles : Selon toi, dans toute la logistique humanitaire au sens large, quel est le facteur le plus important pour faire réussir ou échouer une mission ?

Federico : C'est l'information. La clarté de l'information, le fait d'avoir ou pas l'information.

Appendix E - Detailed interviews analysis

A. Background experience of respondents

The six interviewees came from diverse professional backgrounds spanning logistics coordination, emergency response, program management, and security operations. Most had extensive field experience with MSF, often through short, high-intensity missions in conflict zones. This focus on MSF provided access to rich operational insights, particularly from its emergency response section (E-pool), where several respondents work(ed).

Some respondents brought additional organizational perspectives. Federico Ubaldi worked with the World Food Programme before joining MSF, holding roles ranging from field logistics to coordination and advisory functions. Kelsie Meaden, now a logistics manager at MSF, previously worked in emergency coordination with the Canadian Red Cross, though her role didn't involve deployment to conflict zones. Respondent 2 currently works at the UN Department of Safety and Security and had previously been involved in logistics-sensitive missions with UNMAS, Food and Agriculture Organization of the United Nations (FAO), World Health Organization (WHO), and WFP across Palestine and Côte d'Ivoire.

Crises and conflict zones covered by the group include Gaza, Yemen, Afghanistan, South Sudan, Haiti, DRC, Ethiopia, Mozambique, Côte d'Ivoire, Kenya, Syria, and others. Gaza was the most frequently referenced setting. Respondents 1 and 3 were directly deployed there during the study period (2023-2025), while Respondent 2 had worked in Gaza between 2006 and 2014, including involvement in complex negotiations around humanitarian access. Other respondents had not worked in Gaza but were familiar with current developments. None had detailed field logistics experience in Mali. One interviewee had contributed to demining operations under UNMAS but this was more focused on institutional processes.

The respondents held a range of roles and responsibilities. Some had coordinated large-scale logistics operations across countries like Respondent 1, others led or supported supply chain systems at project level. Some were also involved in broader planning, HR, and resource coordination like Stéphanie. Respondent 2 has worked for over 20 years within the United Nations system and is now mainly based at headquarters, bringing a good understanding of UN structures and institutional dynamics. Several had experience alternating between field and HQ positions, combining tactical and strategic views. Missions ranged from rapid emergency deployments to multiyear coordination roles.

Even if most of our respondents came from MSF, the group still offered a valuable mix of perspectives. The combination of field-based and headquarters professionals allowed for a nuanced view of both day-to-day operations and larger institutional systems. Having one respondent with a long UN career and another with experience in both WFP and MSF enriched the comparative understanding across different roles and organizational cultures. The strong MSF representation also allowed for deep insight into one of the most structured and experienced actors in emergency humanitarian response.

B. Access constraints

Access to affected populations was consistently described by respondents as one of the most difficult and unpredictable challenges in humanitarian logistics. Constraints took many forms such as damaged roads, flooded terrain, obstructive checkpoint procedures, and increasingly political decisions that deliberately blocked aid. Despite contextual differences, two key trends emerged: the shrinking of humanitarian space and the growing politicization of access.

a. Gaza as a case of extreme obstruction

Gaza was cited as the most extreme example. Respondent 1, who completed three deployments there between 2023 and 2025, stated: “I’ve never worked in an environment like Gaza before”. He described a total loss of predictability: convoys could be rejected without explanation, permission systems were opaque, and even basic tasks such as rotating staff or resupplying clinics were often blocked. He estimated that up to half of the trucks sent through Kerem Shalom crossing were turned away, often due to loosely defined “dual-use” concerns.

Coordination with Israeli authorities was seen as unclear and slow, especially during escalations. According to Respondent 1 “the biggest issue was liaising with the Israeli authorities, particularly COGAT and the CLA.” COGAT is the Israeli authority that approves what enters Gaza. CLA is a subdivision of it that, among other things, manages operations at the crossings. Despite being part of the same structure, the two often failed to coordinate. Even with COGAT approval, the CLA could still block shipments on site.

Respondent 3 confirmed that these were not bureaucratic delays but deliberate political obstructions. Access was blocked not by missing documents but by intentional decisions. He also highlighted the bottlenecks on the Egyptian side where MSF had no import license and had to rely on the Egyptian Red Crescent and WHO. All international organizations are still required to go through them, adding another layer of control and creating additional delays.

Respondent 2, drawing from experience in Gaza and the West Bank during earlier missions (between 2009-2012), provided some contrast. She recalled managing to secure the entry of demining explosives (with strict conditions and monitoring), after a year of negotiations with both Hamas and the Israeli authorities, while at the same time items like shoes or pasta were denied. This highlighted the inconsistencies of access and how it relied more on diplomatic leverage and case by case assessment than on fixed rules.

b. Security and negotiation

Federico emphasized that security is a major issue when dealing with territorial control and checkpoints. Humanitarians may face police, the army, militias, bandits, or other armed actors. The goal is to reduce uncertainty. He stressed the importance of identifying who controls each checkpoint and engaging with them in advance because, often, the person at the checkpoint is a low-ranking officer whose mood or corruption can affect access. In humanitarian logistics, you never bypass armed actors, they expect transparency and to be informed. Those are key elements to safety, it's a practical necessity.

Negotiation sometimes relies on local intermediaries to bridge trust gaps. Federico described a recent response in Acapulco, Mexico, where humanitarian teams had to work through community leaders, a priest in that case, to reach neighborhoods controlled by organized crime.

In his words: “You tell the priest or respected figure what you’re doing, and they pass the message through the local network.” He explained that building trust with local intermediaries is often the only way to move forward.

Federico also noted a decline in humanitarian negotiation power and status. “We used to have a sort of golden ticket because of our mission. Today, that right is being questioned. Since the Syrian conflict around 2014, humanitarian access has increasingly been denied and convoys attacked. Before that, even with groups like the Taliban or others labeled as terrorists, negotiations were still possible because mutual interest existed. Now, there are places where actors simply don’t want you and you don’t get through.”

Other respondents echoed this shift, noting that humanitarian access has become more politicized and tightly controlled. In Gaza, some went further, describing access as deliberately weaponized. Respondent 1 observed that: “the politics surrounding Gaza are incredibly complicated, and I think intentionally so to make operations inside more difficult”. Respondent 3 similarly stated that: “humanitarian access, especially in complex emergencies like Gaza, is increasingly being used as a weapon, with supplies used to put pressure on the other side, which ends up affecting the civilian population.”

c. Physical barriers vs. political obstruction

A recurring distinction made by respondents was between physical and political access constraints. Physical barriers like rough terrain or flooded roads could often be overcome with technical solutions, those were manageable. Stéphanie gave the example of using a helicopter to reach an isolated fishing village in Mozambique after a hurricane.

Political barriers, by contrast, required trust, negotiation, and constant situational awareness. These were volatile and so harder to predict and manage. Across interviews, one common point of frustration was the unpredictability and opacity of access decisions.

Even outside active conflict zones, access remained highly uncertain. Kelsie described repeated disrupted deliveries in Yemen due to fuel shortages and shifting customs permissions. Stéphanie recalled missions in Syria and the Central African Republic where frontline conditions changed hourly, forcing staff to remain confined for safety. In Gaza, she added that the restrictions were even tighter: “We’re blocked like everyone else. Expats can enter but their bags are searched. They can’t bring anything in. They can’t take anything out.”

d. Imperatives to handle access nowadays

Respondent 2 stressed the influence of lower-level gatekeepers: “The real decision-makers are often the small administrators who stamp the papers. They have the power.” Stéphanie added that MSF’s reputation as a professional and lawful actor often helped build trust and ease access. Respondent 3 agreed that access required skilled negotiation but warned that this was no longer sufficient on its own: “In emergencies... We need good negotiators to secure political access. Because more and more, supply chain is not about bureaucracy. It’s about access.”

All respondents agreed on one essential strategy: localization. Whether through local procurement, in-country stockpiling, or empowering national teams, most saw working from

the inside as the only viable response to extreme access constraints. This was especially true in Gaza, you have to work with what you have on the ground. There is no other choice.

In sum, humanitarian access is no longer reliably guaranteed by neutrality or international law. It must be constantly negotiated, sometimes with actors who do not respect humanitarian norms. While negotiation and relationships remain relevant in some cases, the space for compromise is shrinking. In Gaza and beyond, respondents described access not just as constrained, but increasingly instrumentalized.

C. Organization of humanitarian delivery

a. Gaza delivery issues

Between 2023 and 2025, humanitarian delivery in Gaza operated under uniquely volatile and politicized conditions. Respondents 1 and 3 described a distribution system built under extreme constraints, where delivery success was measured not by efficiency but by survival. Respondent 1 explained that MSF operates with emergency prepared kits (e-preps) stored in global hubs such as Brussels, Bordeaux, and Dubai, ready for shipment within 24 hours. For instance, a modular field hospital remained prepositioned in Amman, yet clearance to enter Gaza was rarely granted.

Respondent 3 detailed the chronic bottlenecks in Gaza's delivery system caused by "dual-use" concerns, where essential medical items like surgical gloves or compress gauze required individual clearance. The classification process was often so technical that even MSF logisticians themselves struggled to classify them which slowed the clearance process considerably. Meanwhile, local distribution faced increasing difficulties due to fuel shortages, damaged infrastructure, and lack of spare parts, making truck maintenance nearly impossible.

MSF leaned on its long-standing Palestinian staff to guide vehicles in real-time through risky corridors. After losing nearly their entire stock near Rafah during a forced evacuation in December 2023, MSF shifted strategy by decentralizing storage into six smaller warehouses to reduce future exposure and operational vulnerability.

Widespread looting due to the desperation of the population and a criminalized local economy added another layer of difficulty. According to Respondent 3, over 90% of trucks were looted or so called "self-distributed". MSF responded by separating medical shipments from food convoys, which were more frequently targeted and carried WHO banners on trucks reading "Medical Supplies for Hospital - Please Do Not Loot" to deter theft. Still, Respondent 3 emphasized that the priority remained the safety of drivers: "If looting happens, our main priority is the life and safety of the driver... at least the goods are used." While not ideal, this informal "self-distribution" was seen as preferable to total loss, as the goods still reached people in need even if through intermediaries.

Real-time guidance became essential. As convoys entered Gaza, supply managers inside the Strip directed drivers via phone or radio, adjusting routes dynamically based on the latest threat assessments. To reduce predictability and exposure, convoys adopted timing variation, moving at different hours each day. In this context, the goal is not to deliver perfect shipments, but to keep aid moving continuously across the border, getting as much in as possible, whenever

possible. As Respondent 3 emphasized, “if you get 70% of the shipment in, it’s already a win.” In Gaza, where there is no insurance and losses are to be expected, delivery strategies are built on redundancy, flexibility, and real-time adaptation.

b. Logistics structures and planning

Beyond Gaza, several respondents emphasized that humanitarian delivery requires a clear division between supply functions and planning. As Stéphanie explained, MSF separates roles between those managing physical operations such as vehicles, housing, and safety from those overseeing stock tracking and forecasting.

Logisticians are also responsible for security briefings and field protocols such as instructing teams on evacuation procedures, radio communication, and compound safety. Each mission adapts to local conditions and their role varies from one to another. Logisticians could manage electricity and supplies for field units or even enforce weapons-free hospital zones through check-in tickets and lockers. They are also responsible for the safe disposal of medical waste which in conflict zones may include amputated limbs and in the best-case scenario means placentas or delivery remains. Safe disposal is essential for hygiene and to prevent serious health risks in already fragile environments.

Both Stéphanie and Federico stressed that delivery planning begins far in advance. In regular missions, supply requests follow a strict forecast system. For example, requests such as paracetamol are traced back through pharmacists, project planners, country coordinators, and finally headquarters. These requests can be placed months in advance and usually follow yearly plannings with buffer margins (around 20%) built in to account for seasonal disruptions or access delays.

In emergencies, the process is more flexible. Central hubs rely on buffer stock and absorb higher airfreight costs to meet urgent needs. Federico underscored that humanitarian logistics is “not about efficiency but about output”. The priority is humanitarian impact, not minimizing logistical costs. This justifies strategic overplanning, carrying extra stock, paying for urgent transport, and planning for setbacks. Unlike corporate models focused on lean delivery, humanitarian systems require resilience through intentional surplus and flexibility.

c. Reconditioning and transport modes

Reconditioning, a key phase in humanitarian logistics, is the process of adapting and assembling bulk supplies into ready-to-distribute kits. Items are shipped to central hubs that serve as both reconditioning and distribution centers, located near the delivery zones where they are unpacked, sorted, and reassembled into standardized kits tailored to the operation’s needs. This approach streamlines last-mile delivery by allowing aid workers to hand out complete packages in a single step, rather than distributing each item separately. This improves both efficiency and recipient experience, avoiding complications arising when people have to wait too long in lines.

Transport modes vary by terrain, urgency and volume. For large-scale delivery, trucks are essential. In off-road or densely populated areas, MSF may rely on motorbikes, pick-ups or canoes. Where roads are impassable, delivery can depend on foot porters or animals like donkeys, particularly for smaller or urgent payloads. In extreme cases, helicopters can be used

as Stéphanie described in Mozambique. These methods, while costly and limited in payload and personnel capacity, allow direct delivery of life-saving materials to communities that are hard to reach.

Geographic information systems, from satellite maps to hand-drawn sketches, increasingly inform delivery strategies. Distribution planners must understand terrain, population density, road conditions, and seasonal changes. Federico insisted that accurate and timely information is essential for effective logistics and planning. In some regions, routes are impassable for half the year, requiring significant pre-positioning. Local sourcing, when possible, is preferred for speed and sustainability, supporting both community economies and operational independence.

d. End-user distribution

Final-site distribution is where logistical plans meet operational risk, and challenges vary depending on the type of aid delivered. Respondents stressed the importance of fluidity, crowd control and clear communication. As Federico noted, even calm distributions can become tense when delays or uncertainty arise: “You have crowds of people waiting for something they need. If it’s slow or unclear, things spiral.”

Accurate beneficiary data, fair targeting, and registration systems are essential to ensure aid reaches the right recipients and to avoid overcrowding or conflict. Miscommunication can quickly escalate, especially when individuals arrive unregistered or unaware. In such cases, teams must be able to explain clearly why someone is not receiving aid and when they might. Stéphanie added that flexible site design is crucial, explaining how heat or poor layout of the queues could cause tensions, requiring quick adjustments like moving queues to shaded areas or setting up shelters to protect people from the sun.

Vaccination campaigns present distinct logistical challenges, especially in cold chain management. Some vaccines require storage as low as -42°C , using passive (e.g.: ice-packed coolers) or active (e.g.: generator-powered freezers) systems. Field teams typically handle short-term storage; long-term storage falls to health ministries or large partner organizations. Unlike other aid, vaccines must be administered directly and individually, there’s little room for surplus or improvisation. As Federico noted, successful campaigns rely on early population surveys and epidemiological data. Planning must ensure accurate counts, rotating ice packs, thermal insulation, continuous temperature monitoring, and staggered delivery to prevent spoilage and overcrowding.

For other items, aid type and weight also influence delivery strategy. A standard monthly food kit weighs 10-15 kg, light enough for individuals to carry. In contrast, therapeutic food or hygiene supplies are lighter but require stricter tracking and are often distributed centrally. In extreme famine conditions, Federico noted that leaving supplies in a village for self-distribution may be used as a last resort. While this reduces oversight and risks unequal access, he observed that “even if food is stolen or resold, it still has an effect”. In such acute settings, imperfect distribution can still meet urgent needs. This aligns with Respondent 3’s account of Gaza, where similar self-distribution practices were seen as a practical way to reach those in need under severe constraints.

Strategic site setup is key for effective aid delivery. In northeast Nigeria, Stéphanie described how clear instructions and multiple small distribution points enabled calm, efficient delivery to over two million people. In contrast, poorly planned setups, like the recent Gaza Humanitarian Foundation distribution, resulted in chaotic crowds and safety risks. Ideally, sites should provide shade, ventilation, rest areas, and well-organized entry and exit flows. As Stéphanie and Federico stressed, success isn't just about delivering aid, it's about how people receive it.

D. Field and human constraints

a. Field realities and threats

Humanitarian work in conflict zones is shaped by constant exposure to violence, uncertainty, and tension. In Gaza, Respondents 1 and 3 described organized looting as a major threat to aid delivery. Trucks were frequently attacked before reaching their destination, sometimes by well-organized groups using forklifts. "Drivers were injured or worse, and all aid was lost," recalled Respondent 1. On his first day, Respondent 3 witnessed a looted truck and heard his driver say, "Welcome to Gaza."

Looting was not always driven by need. Respondents suggested it had become part of a criminalized economy. In such cases, humanitarian teams negotiated with armed actors by appealing to shared humanity. Stéphanie recounted telling fighters: "This could be for your brother, your wife, your sister." The message: humanitarian aid is neutral and life-saving.

As Gaza's legal and military context deteriorated, these threats escalated. According to Respondent 1, by March 2025, even the minimal precautions previously observed by the IDF had faded. Airstrikes became frequent around hospitals, roads and compounds. He described bombs landing just 50 meters from his hospital and seeing strikes 300 to 400 meters ahead during movements became routine. While international staff briefly benefited from some protection, local staff (Gazans and Palestinians) "were never really protected."

Entering Gaza itself added another layer of stress. Respondent 1 described days of coordination, long waits, multiple checkpoints and 12 to 15 hour convoys under escort. These delays and physical demands wore teams down before operations even began. In sum, the field environment was not just dangerous, it was exhausting, unpredictable and deeply human.

b. The psychological weight of insecurity

All six respondents underscored the psychological strain of working in high-risk environments like Gaza or the Central African Republic. The combination of insecurity, isolation and relentless work slowly eroded emotional resilience.

To mitigate this, organizations tried to mentally prepare staff before deployment. "You don't want someone saying 24 hours later, 'I don't want to be here'" said Respondent 1. Evacuations could take weeks. Pre-departure meetings and reflection were key to informed consent for high-risk missions.

The mental strain often extended beyond deployment. Stéphanie recalled her time in Bangui, sleeping next to a military base under constant gunfire and being evacuated to the airport multiple times. After returning home, fireworks would still trigger stress. She contrasted these

intense emergencies with calmer missions: “In Turkey I had weekends and a drink with the team after meetings on Tuesday”. Yet even in lower-risk settings, limitations on personal freedom, such as movement restrictions, created tension. Kelsie noted that while some staff could return home if needed in calmer conflict but this was rarely possible in warzones where mobility is tightly restricted.

Respondent 3 emphasized the pressure on international staff in high-risk missions to remain composed. He explained that maintaining emotional control is essential; “*You cannot become another patient,*” he said, noting that local colleagues look to them for strength. This is why only experienced staff are sent to Gaza, you never go there on your first mission.

c. Team dynamics and rotation

Living and working in the same confined space with little privacy or time off, creates emotional pressure over time. “Everything is amplified when you live constantly with your team,” said Federico, stressing how daily routines, emotions, and conflicts quickly intensify. Stéphanie added, “You can’t last six months when you share your house with 25 people.” Trust, communication, and emotional maturity are essential for operational stability.

Rotation systems and mission length help manage stress and preserve continuity. Stéphanie stressed the importance of proper handovers: “Sometimes they’re rushed or missing entirely. That leaves gaps.” Kelsie noted that personnel turnover often requires an adjustment period for newcomers to grasp the local context. While abrupt changes can disrupt coordination, fresh eyes also bring valuable perspective, especially when teams are overwhelmed or stuck in crisis mode.

At MSF, Federico described a rotation model where two people alternate in the same role every three months. This allows for rest without losing contextual knowledge or requiring constant retraining. Mission length typically aligns with the response phase: “Three weeks for acute emergencies, three months for stabilization, up to six months for follow-up,” said Federico. Short, intense missions followed by rest are common among international staff. He also pointed out that humanitarian work is not for everyone: “You learn over time what you can ask of yourself.”

Burnout was acknowledged as part of the job. “Everyone has a burnout at some point,” said Federico. Knowing your limits and stepping back when needed is part of the job, but organizations also carry responsibility for protecting staff during and after missions. For national staff, the pressure is even heavier as they cannot really step back. “They live it every day,” said Respondent 1. Respondent 3 expressed deep admiration for his Palestinian colleagues at MSF who continued to care for patients despite personal loss. “I honestly don’t know how they cope”, suggesting that for many, staying active and saving lives was a way to remain connected and hold onto purpose.

Poor leadership can worsen already difficult situations. Stéphanie’s trusted supervisor was replaced by someone who didn’t seem to care about the insecurity. She felt she couldn’t stay under that kind of leadership, observing that trust in the chain of command is essential in the

field. Federico pointed out that relationships often decide whether a mission succeeds or fails. “You need human managers who can prevent and handle team conflicts.”

d. What keeps operation going

Despite the stress and insecurity, field teams find ways to stay grounded. Small routines like shared meals, daily check-ins and humor help are essential to sustain morale. Daily updates and clear communication were especially important to help the team stay grounded. Even if the situation remained uncertain, knowing what had happened and what to expect helped reduce stress and confusion.

Coping strategies differ across people and missions. Some rely on simple routines like having one good meal a day. Others rely on more common but harmful mechanisms such as smoking, alcohol, or medication (Xanax). Healthier habits like yoga or indoor workouts were also cited. Stéphanie described running laps inside a compound during lockdown: “*It seemed absurd, but it kept us sane.*” Small comforts, like chocolate, were not questioned. They are seen as necessary to hold things together.

Compartmentalization was another strategy repeatedly mentioned. Respondent 1 said he often postponed emotional processing until after the mission. Stéphanie said that once she is on the plane, it’s over. Otherwise she wouldn’t be able to move forward. This mental closure was critical for professionals doing back-to-back deployments. Respondent 3 said it is harder for HQ staff, who don’t get the same release. “In the field, you give everything and move on. In HQ, the pressure’s still there when you get back”.

Team composition matters just as much as technical skill. “*You can train logistics. You can’t train being calm under fire,*” said Federico. Emotional intelligence, cultural awareness and personal resilience are essential. Effective leaders match personalities to contexts, manage tensions proactively and understand gender dynamics.

Across all interviews, one theme was clear: operations don’t succeed because of systems alone. They succeed or fail because of people. Trust, flexibility and emotional strength are what keep humanitarian missions going.

E. Coordination and institutional structures

Interviewees offered contrasting perspectives on how coordination is structured and experienced across humanitarian organizations. Most reflected on the differences between MSF’s internal systems and the broader UN coordination frameworks with their cluster approach. While institutional backgrounds and field contexts shaped these views, all respondents emphasized the importance of clearly defined roles, adaptable structures and meaningful local engagement. The interviews revealed persistent tensions between speed and bureaucracy, autonomy and alignment, and international frameworks and local realities.

a. MSF model

Several respondents highlighted how MSF operates somewhat outside the UN cluster system, relying instead on its own coordination and logistics structures. This does not mean that they don’t collaborate with others and the UN but it reflects MSF’s identity as a fast-moving,

independently funded emergency actor. *“When there’s an emergency, we can just go. We don’t wait for green lights from five agencies,”* said Respondent 1, noting the organization’s ability to act quickly via predefined protocols, regional hubs and specialized emergency response teams.

Respondents 1 and 3 described how MSF’s emergency pool (e-pool) temporarily takes over when crises overwhelm regular structures, as seen in Gaza. This mechanism works alongside MSF’s eight permanent operational cells, each covering a specific geographic region. When an emergency (sudden and high needs events) arises, the e-pool steps in and assumes control from the regional cell.

Stéphanie explained that MSF logisticians are trained to act autonomously without waiting for cluster-level validation. Coordination with other actors is pragmatic and driven by operational necessity: *“If someone is already doing vaccinations, we don’t redo it.”* Heads of mission engage with ministries and agencies, and field teams meet regularly to share updates and security information, although the quality of these exchanges can vary widely. Unlike UN agencies, MSF draws on private donations and emergency reserves, enabling it to bypass lengthy donor processes. *“If there’s an emergency, we send a team, they assess needs roughly, and we start. We will adjust later”* said Stéphanie. It shortens reaction time and minimizes bureaucratic delay.

However, MSF’s internal coordination is not always seamless. Respondent 1 noted tensions between MSF Belgium and France in shared contexts, driven by both organizational rivalry and identity politics. Stéphanie added that internal debates over values, identity, and positioning consume disproportionate energy. *“Teams in the field just want to know who’s bringing the supplies. Whether it’s MSF Belgium or France, I don’t care. I just want my box of paracetamol.”* She would like to see a renewed focus on practical operations and alignment across sections.

Kelsie, speaking from the perspective of regular missions, identified slow internal decision-making and outdated information systems as major barrier to adaptation. *“By the time a new solution is validated, the situation may already have changed.”* She attributed this inertia to structural rigidity and reluctance to abandon recent investments. Information is shared through a centralized but outdated system where in practice she often relies on email. She contrasted this with the more flexible emergency pool, where staff described greater autonomy and fewer validation steps. These differences illustrate how flexibility varies between emergency and routine missions.

Federico added that while MSF promotes decentralization, the organization like many others still operates largely through hierarchical, top-down models: *“There’s a shift happening, but we’re not there yet.”*

b. Clusters systems and the UN

Respondents highlighted key differences between MSF and UN agencies in terms of structure, mandate and coordination mechanisms. Federico, who previously worked with WFP, emphasized the agency’s intergovernmental nature and its role in strengthening local capacity. WFP typically manages bulk logistics like transport, storage, and packaging, while local NGOs

handle distribution. MSF, by contrast, stays engaged across the entire supply chain. In contexts like Gaza, MSF has relied on local partners more out of necessity, not design.

These structural differences extend to funding and governance. UN agencies rely on earmarked or government-contributed funds, making them vulnerable to delays and diplomatic shifts. “It works more like a government or national health system than an NGO,” Federico noted, describing the slow, bureaucratic processes shaped by member states. Still, he described WFP as a “logistics powerhouse,” capable of running large-scale supply chains with maritime and port infrastructure, even during emergencies: “Even emergencies, for WFP, function like routine operations”.

Despite these constraints, both Federico and Respondent 3 recognized the value of the UN cluster system, especially during large-scale emergencies. Federico described it as “imperfect but useful,” especially for standardizing practices, pooling information, and supporting smaller NGOs and national authorities. Respondent 3 explained that the cluster system, created in 2005, includes sectoral groups (e.g., health, nutrition, logistics), each led by a specific UN agency. In Gaza, WFP’s logistics cluster was key for coordinating convoys, avoiding duplication, and validating MSF’s movement requests, since MSF does not directly liaise with Israeli authorities.

He noted that in practice, all organizations were now following UN coordination for movement inside Gaza. Cluster meetings helped him build a wide network of useful contacts across different agencies. Real-time communication via a log cluster WhatsApp group with hundreds of actors further enabled agile response. Federico added that the logistics cluster facilitates access to WFP’s infrastructure, especially for smaller NGOs. It produces useful collective tools like logistics maps and security updates. However, the cluster system does not work on its own, it relies on proactive engagement and the sharing of precise operational information.

Respondent 2, with extensive UN experience, reinforced the view of internal complexity. She described the formal goal of “One UN” as often undermined by fragmentation, especially in emergencies. Although OCHA coordinates overall and WFP typically leads the logistics cluster, individual agencies still operate with considerable autonomy. She said that the current fragile situation of the UN with budget cuts of up to 30%, office closures, and shifting donor priorities have amplified these divisions. She pointed to the “UN 2.0” reform as an attempt to recentralize localization in both planning and budgets. She concluded that coordination with UN agencies remains essential but often difficult. “There is a fine line between administrative rigour and bureaucratic immobility,” she warned, underscoring the challenge of maintaining accountability without sacrificing operational agility.

c. The central role of local actors

All respondents emphasized that in high-risk environments, local actors are indispensable to both coordination and implementation. National staff, civil society groups, and community leaders often sustain operations when international teams face access restrictions. Respondent 1 and Stéphanie both observed the importance of coordinating as close as possible to the affected communities. For medical programs, this may involve formal health authorities, for distributions, more informal figures like village chiefs, teachers, or religious leaders. Stéphanie

explained that you need someone different for each activity, the closer to the beneficiaries the better.

In Gaza, Respondents 1 and 3 underlined the essential role of MSF's Palestinian staff. When expatriates were blocked or evacuated during escalations, national teams continued to operate clinics, guide convoys, and manage warehouses. With rotation limits allowing each MSF section to move only three to four personnel per week, local teams ensured continuity. Kelsie also noted that while MSF retains control over operations, these partnerships with local NGOs extend reach and improve contextual awareness, particularly in volatile settings. Stéphanie added that local staff usually handle coordination with authorities. Multiple coordination levels exist and while not always effective, they are essential. Local actors are also a vital source of feedback. "Just because something is in the manual doesn't mean it fits the real needs," Stéphanie warned. Communities may reject inappropriate items or request others, and effective coordination requires listening and adapting accordingly, even at the beneficiary level.

From a UN perspective, Respondent 2 underscored the need for real localization that sometimes remains more rhetorical. While the UN works with local NGOs on some activities, its rigid recruitment and procurement procedures often exclude smaller actors. She identified three priorities: training NGOs to meet donor standards, helping them demonstrate reliability in high-risk environments, and simplifying complex bureaucracy and rules that hinder participation. Without administrative reform and real investment localization risks becoming an "empty promise."

d. Coordination in practice

Interviewees generally agreed that coordination is useful, but its effectiveness depends on the context. In large-scale emergencies like Gaza, formal mechanisms such as the cluster system helped organize responses and pool resources. Respondent 1 noted that the scale of the crisis often pushes actors to collaborate. He recalled how OCHA quickly connected MSF with WFP to secure additional bed space, enabling the delivery of a Rubb Hall within 72 hours. Respondent 3 highlighted the cooperative mindset in emergencies: "We don't compete. We're here for the people."

Still, Respondent 1 and Stéphanie emphasized that coordination often depends on individuals. Some actors are collaborative and pragmatic, while others show little interest. In smaller crises, UN engagement is often limited, unlike in major emergencies where communication with WHO or OCHA is more common. Stéphanie noted that egos, not mandates, are often the main barrier. "Some people think they know everything and don't need to talk to others." She also described problems of overcrowding after natural disasters, citing cases in Mozambique and Bangladesh where uncoordinated NGOs set up overlapping clinics in the same area, leaving other zones without coverage. Similarly, Respondent 1 explained attending WHO meetings in Ethiopia where staff were simply unwilling to engage.

Federico emphasized that good coordination requires "precise shared information." He highlighted the importance of recognizing "known unknowns", warning that blind spots, not uncertainties, pose the greatest risks. Respondent 3 agreed that in volatile contexts like Gaza, excessive procedures and documentation can quickly become outdated. He advocated agility

and direct interaction over rigid SOPs. He favored agility and informal communication, such as the logistics cluster's WhatsApp group. This group offers a place to ask for support and get real-time updates on routes and suppliers. For him, the biggest strength lies in accessible, shared information. Federico similarly noted that coordination breaks down when decision-making power is uneven. If one actor can decide and act freely while the other must seek approval from superiors, collaboration stalls.

The militarization of coordination structures was another concern. Respondent 3 described MSF's initial involvement in the Trident Pier initiative, later abandoned due to the dominance of US and UK military actors. "If our cargo arrives with military US shipments, that's the worst scenario for us." For MSF, neutrality is essential, and association with military operations undermines both credibility and access. The Gaza Humanitarian Foundation drew similar criticism for operating outside the cluster system and being dangerously mismanaged and militarized. Respondent 1 saw it as a clear case showing that bypassing existing coordination mechanisms lead to chaos. "Don't try to fix something that wasn't broken."

F. Adaptation and evolution

a. Improvising on the field under pressure

Improvisation under pressure was a recurring theme in every interview. Respondent 1, speaking from e-pool deployments, said that emergency work often means "working outside the standard framework." His teams frequently bypass internal rules and budget lines to respond quickly. In Gaza, when MSF was blocked from importing its modular field hospital, they built one from scratch using greenhouse frames purchased from a local farm. In Gaza and Ukraine, he had to buy items like cement or bulletproof vests on the black market to keep operations going while he had no other alternatives. "You break rules to keep operations running," he said, describing how often technical standards take second place to urgent needs like bypassing a clogged generator filter simply to keep electricity flowing.

Other respondents shared similar strategies. In Yemen, Kelsie described using a multi-layered filters to filter contaminated fuel, or, in more basic setups, fabric filters to keep equipment running. Federico when terrain or conditions demand it, delivery methods become highly improvised: "If something can carry supplies, we've used it."

Improvisation also shaped sensitive operations. In Gaza (2009–2012), Respondent 2 recounted how, without formal demining tools or permission to train local police, the team negotiated for months to relocate unexploded ordnance from urban Gaza to a safer site built with local resources. For transport, they adapted containers meant for underwater use and loaded them onto pickup trucks with sand around, reducing civilian risk.

In Côte d'Ivoire and Mali, Respondent 2 gave another example when disarmament equipment couldn't be imported, the team developed basic but functional machines from scratch to mark and destroy collected weapons, often through trial and error.

Several respondents highlighted the need for flexibility in rapidly changing operational contexts. Stéphanie recall after cyclones in Mozambique and India, her teams used context-specific responses: in one case launching mass vaccination and rebuilding health facilities, in

another supporting community-led cleanup to prevent disease outbreaks. “You use your tools, but stay flexible depending on the context and the most urgent needs.”

This flexibility extended to logistics setups too. Stéphanie described how teams often begin with minimal infrastructure, converting a bedroom into a stockroom or identifying houses to rent by asking around in the village. Improvisation is a survival skill in the early phase of missions.

b. Adapting organizational systems to unstable environments

Respondents consistently emphasized the need for systems that could adapt to unstable and resource-constrained environments. Respondent 1 described MSF’s prepositioned emergency kits (e-preps) as a flexible foundation for rapid response. Stored in global hubs, these kits can be deployed within 24 hours and tailored to different types of crises, allowing teams to respond immediately while awaiting more specific supply lines.

Operational planning also required strategic adaptation as being shaped by terrain and seasonal constraints. Federico explained that in areas where roads become inaccessible for months, teams adapt by prepositioning stock or switching to terrain-appropriate vehicles like 4x4’s. He also described a phased deployment strategy, focusing first on large population centers before reaching more remote areas. Adapting the length of missions to exposure levels is another way to manage operational fatigue and tailor efforts to evolving conditions.

Staying flexible also means adjusting delivery mechanisms. Stéphanie highlighted MSF’s practice of modifying distribution setups based on the setting, using helicopters or redesigning layouts to avoid large crowds. She also stressed that local procurement is not only faster and cheaper, but supports the host community: “A hospital project doesn’t just help patients, it creates jobs, supports the economy, and brings security.” Most respondents backed this up, observing localization as key to adapting operations to field realities.

Institutional tools play an important role as well. MSF uses emergency checklists, Sphere standards, and internal protocols to guide first actions based on the type of crisis. Stéphanie explained how stock allocations are kept dynamic, unused supplies from long-term missions can be redirected to emergencies and later replenished. Field teams are also supported by remote technical referents in water, nutrition, or protective equipment, offering guidance based on documented practice.

Adaptation also includes strategic alertness to new opportunities. In Gaza, Respondent 3 described how MSF remained ready to test emerging access corridors like the Trident Pier, while ultimately withdrawing to preserve neutrality. Staying flexible means not only adjusting his own systems but also monitoring what others are doing to identify practical solutions.

Finally, adaptation often means returning to basics. When power, internet, or fuel are unavailable, Respondent 3 said teams rely on simple tools like stock cards: “We have to be prepared to work without all of that.” Such low-tech resilience ensures continuity when systems break down, reinforcing the need for hybrid preparedness.

c. Evolution of humanitarian logistics

Despite improved systems and tools, most agreed that emergency response often begins with “back to basics” methods. Innovations like tracking systems, ERPs and digital platforms often arrive later, after the initial chaos. What has evolved more meaningfully is decentralization. “Those who see what’s happening are empowered to act,” said Respondent 1, highlighting the redistribution of authority to field teams has improved responsiveness and operational speed in fast-changing contexts.

Others also saw this need for faster, more agile structures. Respondent 2 observed how funding pressures had pushed organizations to become leaner, more transparent, and more efficient. Federico noted a growing cultural shift away from rigid hierarchies toward flatter, more responsive models. He praised short decision-making chains and localized autonomy, even if he acknowledged that the sector remains largely hierarchical.

Respondent 3 described humanitarian logistics as “old school,” especially compared to the private sector. He noted the limited use of modern tools like ERPs and warehouse management systems and explained that innovation tends to be driven by large actors like WFP, which can afford to test methods like drone-based food delivery. While MSF leads in emergency medical logistics, he cited the example of an ICU train in Ukraine, he explained that “we are not a logistics organisation,” and investments in supply systems remain secondary to patient care. However, progress has been made. “When I started, it was just an Excel file,” said Respondent 3, explaining how MSF has since expanded forecasting systems, regional hubs, and procurement networks. Kelsie also noted a general improvement in aid delivery practices at MSF over recent years, though she struggled to name concrete innovations.

Stéphanie highlighted how professionalization via specialized training in law, finance, or logistics has made the sector more capable but also more procedural. She warned of over-specialization: “I’ve seen a logistician who couldn’t change a lightbulb.” she said, critiquing how rigid role divisions can undermine practical problem-solving.

She also observed a shift away from top-down delivery models and toward locally informed and conscious needs assessments. “Do we need to be here? And if yes, what do people really need?” This change, she noted, has improved the relevance and impact of interventions. Along these lines, she would like to see a renewed focus on operational priorities. She argued that humanitarian organizations too often spend time and energy debating internal identity and values. “On the ground, no one cares if it’s MSF Belgium or France, they just want someone to bring them their supplies.”

Federico pointed to key technical evolutions as well. The use of GIS and spatial imagery has become central to planning, allowing real-time mapping of terrain and access points. Communication has also been transformed, he recalled relying on radios and paying \$8 per megabyte for satellite internet in 2012. Today, universal connectivity and satellite phones have become standard. “That’s a real change,” he said.

d. Innovation and future of aid delivery

Most respondents agreed that innovation in humanitarian logistics is progressing, but slowly and unevenly. While technological tools offer potential, their integration into operations

remains limited, especially in emergency contexts where reliability, simplicity, and speed often outweigh experimentation.

Both Respondent 1 and Kelsie emphasized that active emergencies are not ideal settings to test new tools. “I don’t like to use an emergency as a lab,” said Respondent 1, preferring to pilot innovations in stable missions or only improvising when no other option exists. Kelsie also noted this, saying that more stable conflict zones allow time to evaluate and refine new logistics approaches before scaling.

AI and GIS tools were frequently mentioned as emerging areas. Respondent 1 pointed to early uses of AI-integrated mapping platforms like Live UA Map to support situational awareness. He viewed GIS progress as “encouraging” and welcomed new efforts to build searchable archives using AI to improve institutional memory and avoid repeating past mistakes. Federico agreed on GIS value for operational planning and saw drones as another promising tool, though access to their use remains tightly controlled by state and non-state actors.

Respondent 3 expressed strong interest in the future use of AI to optimize operation. “Ideally, you input a cargo and it tells you the best route, best provider, best cost.” However, he noted that AI needs reliable, real-time data, something rarely available in emergencies. Customs bottlenecks, for example, often leave operations “one step behind.” Federico warned against overstating AI’s immediate impact, calling it “useful, but not a revolution.”

Respondent 2 believed that digital tools could help address the pressure to be both transparent and fast, especially by automating routine tasks and improving data sharing across agencies. But she flagged the lack of platform compatibility across UN agencies as a key barrier. “Interoperability is essential, but still far off,” she said.

Stéphanie emphasized recent progress in practical field tools, especially renewable energy and communication. “Today, hospitals run entirely on solar. Ten years ago, that was unthinkable.” She described how mobile phone payments have replaced insecure cash handling in areas without banking access. “It changes everything, less cash, fewer risks.” She also supported cash-based aid models that allow recipients to choose what they need when local markets are functioning. “Cash is cheaper, more efficient, and less paternalistic.” She explained that beneficiaries know better than you what they need.

Mapping technologies also stood out. Stéphanie described how GPS tools and “mapproths” now support navigation and security in remote areas: “Even if there’s no road, at least you know roughly where you are.” These systems improve both logistics and team safety.

Respondent 3 underlined that even with technological advances, the basics remain essential. “We can still do a good job with just fuel and paper,” showing that lack of high-tech tools should never be used as an excuse for poor performance. The human factor remains central, technology only works if people know how to use it.

Finally, Federico pointed out the limits of digitalization in logistics: “You can’t digitalize food.” He argued that despite advances in AI or telemedicine, humanitarian logistics remains grounded in the physical movement of goods. However, he saw promise in food technology itself,

suggesting that high-calorie bars or optimized nutrition products could transform delivery methods indirectly by reducing volume, weight or perishability.

G. Closing reflections

Across all interviews, success in humanitarian logistics was not primarily attributed to technical sophistication, but to clarity, adaptability and the human factor. Respondents consistently emphasized that, in the end, it is people who make the supply chain work, through relationships, judgment, and negotiation. What may appear to be a technical or bureaucratic system is, in practice, driven by human interaction. In humanitarian aid, logistics is as much about trust and coordination as it is about trucks and warehouses.

Rather than complex systems that often fail under pressure, respondents valued clear, current information and simple coordination mechanisms. Information sharing was seen as a fundamental to operational success, enabling faster decisions, better coordination and reduced risk.

Another recurring theme was the need to overprepare and remain flexible. Plans, checklists, and margins weren't prized for their precision but for their ability to enable rapid adaptation and maximizing outcomes. Tools like prepositioned kits, phased deployment strategies and buffer stocks allowed teams to adapt without losing momentum. When systems broke down, improvisation filled the gap.

Team composition and leadership also stood up. Calm, emotionally intelligent managers were seen as more decisive than technical experts. Multiple respondents stressed that you can train logistics, but not emotional resilience. Trust, clear communication and psychological safety were seen as essential for sustaining field operations under pressure.

Matching operations to local realities was another strong insight. This included listening to community leaders, adapting to cultural norms and relying on local teams not just for continuity, but for access and insight. Localization was seen not as a policy trend but a practical necessity. All respondents, regardless of context, pointed to local staff and partners as essential to navigating constraints. In context like Gaza, where expatriate movement was tightly restricted, national teams ensured continuity, access to authorities, and effective delivery. Across contexts, respondents described localization as a concrete, field-level solution to growing constraints.

Finally, while no one saw innovation as a complete solution, most respondents believed that tools like AI, better GIS mapping, solar power and drones will play an important role in the future of humanitarian logistics. These were seen as useful for planning, coordination and speeding up delivery but not yet widely accessible, and certainly not a replacement for human skills or field knowledge. Many pointed out that basic tools like stock cards, paper maps and radios, remain essential when high-tech systems fail. In short, technology can support operations, but not replace, good judgment and adaptability. Across missions and contexts, the key takeaways remained remarkably consistent: prepare, simplify, adapt, and invest in people.