

## Humanitarian Supply Chain Resilience in Conflict Zones

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**Abstract:** The topic for the present paper has been humanitarian supply chain resilience in conflict zones, with special emphasis on the Yemen crisis. The research undertaken has emphasized on the significance of efficient coordination among humanitarian organizations, capacity building initiatives, and innovative solutions to ensure timely aid delivery. As the study has delved deep into the challenges faced in humanitarian crisis in Yemen, such as food insecurity and acute malnutrition, it has been possible to highlight the significant operational presence of organizations like the United Nations World Food Program (WFP) and the Food and Agriculture Organization (FAO). The efforts given by these organizations across the different levels of logistics have been appreciable. The findings underscore the urgency of addressing these problems through strategic planning as well as resource allocation for increasing resilience in humanitarian supply chains.

**Keywords:** Humanitarian, Supply Chain, Resilience, United Nations, Conflict.

### INTRODUCTION

The humanitarian supply chain in conflict zones is a crucial aspect for research and policy implementation, with special regards to the need of it being resilient. The purpose of humanitarian supply chain serves the purpose of delivering, in an effective manner, aid to the target population who are vulnerable on socio-economic grounds. The strength of these supply chains rests on strategic planning, coordination among stakeholders, and the ability of adapting rapidly to shifting situations. The resilience of humanitarian supply chains in conflict zones is necessary for safeguarding well-timed and efficient delivery of aid. The present project paper is on the topic of humanitarian supply chain resilience in conflict zones, with focus on Yemen.

### HUMANITARIAN LOGISTICS LITERATURE

Humanitarian logistics refers to the branch of logistics that is accountable for the preparedness and response phases of a disaster management system. In simple terms, it is defined as the process of planning, implementing, and monitoring the cost-effective and efficient flow of materials and services from the point of origin to the point of consumption. The purpose of such logistics is to alleviate the suffering of the vulnerable population who are in need of these materials and goods and relevant services. The function is known to be encompassing a wide array of activities, including preparedness, planning, procurement, transport, warehousing, tracking, tracing, and customs clearance (Nikbakhsh & Farahani, 2011).

As opined by Paciarotti, *et al.*, (2021) strong logistics is central to the effective delivery of emergency relief and is thus a crucial aspect.

Logistics can be attributed as a chief element of the supply chain for the delivery of the right supplies in good condition and in the right quantities in the right place at the right time. Humanitarian logistics, specifically, is a part of the supply chain that involves process and systems having mobilization of resources, people, knowledge, and skills for the delivery of humanitarian assistance to people in need. In this regard Yáñez-Sandivari, *et al.*, (2021) also said that humanitarian logistics has the involvement of assessment, procurement, tracking, local transportation, warehousing, and final distribution of supplies.

Security and communications have been given immense attention in relation to humanitarian logistics programs. These are often to be managed by other specialists because of the need of special skills and expertise. There is no doubt that resource allocation in an effective way is fundamental to the achievement of the set goals of the humanitarian logistics system. Humanitarian logistics can be perceived as an exceptionally complex and confronting field. In addition to the logistical challenges posed by natural disasters, one also needs to consider political, financial, and legal challenges. Because of rapid advances in technology the future of humanitarian logistics is bright (Kovács & Falagara Sigala, 2021).

### BACKGROUND OF THE YEMEN CRISIS AND PROBLEM

The Yemen Crisis has garnered global attention in the past few years, with the country continuing to experience a longstanding humanitarian, development, and political crisis. According to the United Nations Office of the Coordination of

Humanitarian Affairs (UNOCHA), Yemen has witnessed severe decline in economic conditions along with massive damage to infrastructure. This has led to a collapse of essential services on Yemen, with a large number of people being vulnerable in 2024. Some of these drivers are causing major risks, like conflict, floods, drought, water scarcity and disease outbreaks. Further, years of conflict clubbed with natural hazards have exhausted Yemen's healthcare system and infrastructure to a significant extent.

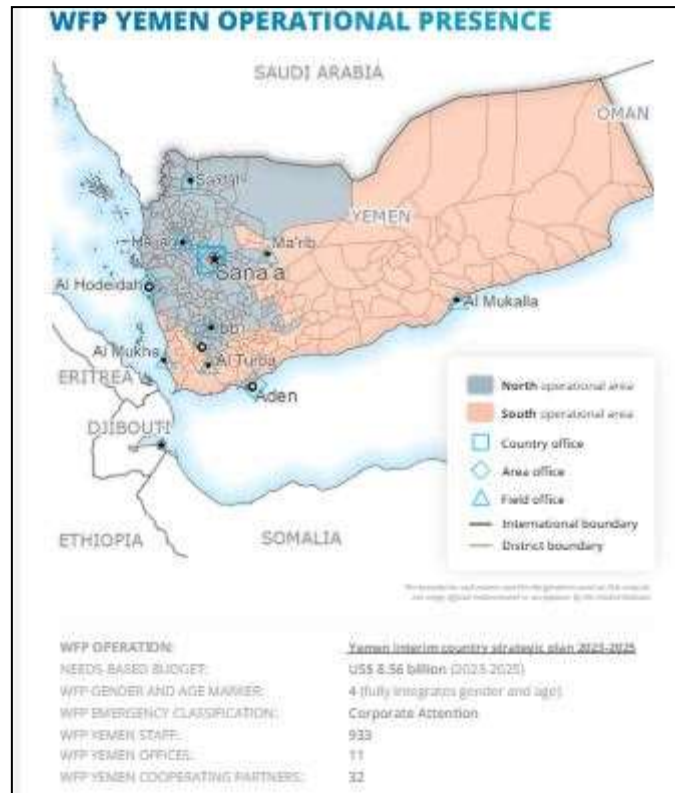
In 2024, more than 55% of the population, that 18.2 million people, in Yemen are in need of humanitarian assistance and protection services. Further, 17 million people are noted to be enduring food insecurity because of which they have been included in Integrated Food Security Phase Classification (IPC) Phases 3-4. It is alarming that 2.2 million children in Yemen are malnourished, and the food security situation might be deteriorating in 2024 in most areas. It has been recorded that Yemen is one of the most contaminated countries globally by landmines and explosive remnants of war (ERW). Also, the International Organization for Migration (IOM) in 2023 tracked around 60,000 people in Yemen experiencing displacement at least once (disasterphilanthropy.org, 2024).

## METHOD

The present project paper involves a qualitative research methodology for the investigation of humanitarian supply chain resilience in conflict zones, with emphasis on Yemen. Secondary resources have been considered for this paper that involves a comprehensive literature review of academic journal articles and organizational publications. The rich pool of information gathered has been organized and synthesized for the identification of recurring themes and empirical evidence related to supply chain resilience in Yemen. The idea has been to highlight the best practices in humanitarian logistics and what future possibilities can be explored. The research undertaken looks into the underlying ideologies, and discourses shaping humanitarian supply chain resilience narratives. Ethical considerations are adequate citation for acknowledgment of sources and transparent reporting of findings.

## RESULTS

The United Nations World Food Program (2024) highlights that in January this year as many as 1.5 million people have been assisted by WFP in Yemen. The figures indicate that 17 million people experience food insecurity in Yemen while 3.5 million people suffer from acute malnutrition. The operational presence of WFP in Yemen is prominent, with substantial support being provided to those in need.



WFP Operational Presence in Yemen (api.godocs.wfp.org, 2024)

According to the data published by the WFP, there was a deterioration of food security situation in Yemen in December last year. In January 2024, WFP considered distributing General Food

Assistance to 217,200 people. The distribution was carried out across assistance cycles, but January GFA distribution figures were lower than the earlier months.

**GFA DISTRIBUTIONS JANUARY 2024**

	Food (PPL)	Cash (PPL)	Total
North Operational area	-	-	-
South Operational area	24,017	193,147	217,164
<b>Total</b>	<b>24,017</b>	<b>193,147</b>	<b>217,164</b>

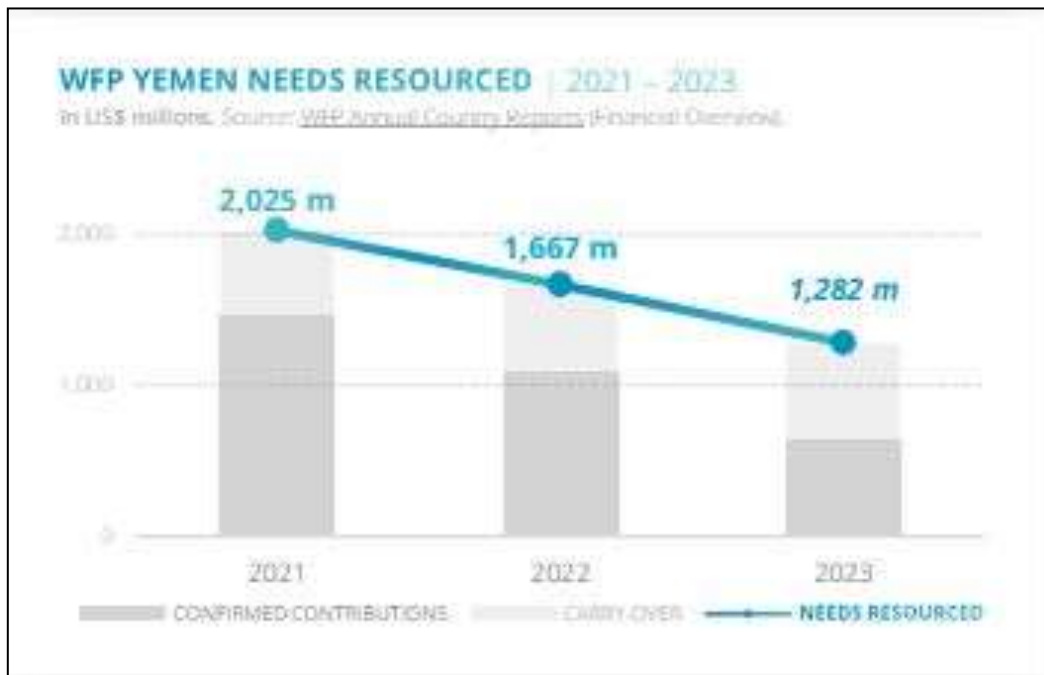
GFA distributions in January in Yemen (api.godocs.wfp.org, 2024)

Further, WFP considered dispatching nutrition assistance addressing the needs of 451,600 children and pregnant and breastfeeding women and girls in January. Under its Treatment of Moderate Acute Malnutrition (MAM) program, WFP was successful in dispatching specialized nutritious food for 432,200 people. Among them were 216,000 children aged 6-59 months aged and 216,200 pregnant and breastfeeding women and

girls. It is concerning that WFP’s Prevention of Acute Malnutrition program had to be completely suspended in January, while only 19,400 PBWG received cash assistance. In case of the school feeding program it was recorded that WFP provided assistance to 1.1 million schoolchildren in January. With respect to resilience, WFP gave support to 37,300 people under the Resilience and Livelihoods activity in January and for this a

transfer of US\$1 million was done to project participants ([api.godocs.wfp.org](http://api.godocs.wfp.org), 2024). In the realm of humanitarian supply chain, the efforts of WFP in helping Yemen underscore the critical role

of supply chain resilience. The suspension of important programs highlights the need of having better logistical planning as well as flexibility to adapt to changing conditions on the ground.



Resources needed in Yemen ([api.godocs.wfp.org](http://api.godocs.wfp.org), 2024)

The WPS-led Logistics Cluster was capable of supporting 79 partners in January because of strong coordination, management of information, and capacity building. For effective logistics functioning it was necessary to point out priority districts, and with the use of IFRR Geographic Combined Severity methodology the WFP identified 24 priority districts with high combined severity scores. The WFP-led Emergency Telecommunication Cluster provided support to 49 partner organizations and provided data connectivity to 1300 humanitarian services ([api.godocs.wfp.org](http://api.godocs.wfp.org), 2024). The support provided by the WFP-led Logistics Cluster and Emergency Telecommunication Cluster is a demonstration of the significance of coordination and information management in strengthening supply chain resilience.

As highlighted by Gadain, (2022) the reputed UN organization Food and Agriculture Organization has worked consistently for alleviating the problems faced by people in Yemen. As Yemen is one of the worst humanitarian crises in the world, FAO has been working tenaciously for rebuilding and restoring agricultural productivity. Logistics is being built for creating livelihood opportunities in the face of nutrition insecurity and food scarcity in Yemen. FAO is also implementing cash-based

transfers so that the rehabilitation of on-farm and community-level rural infrastructure and plantations can be made possible. The FAO's initiatives aimed at rebuilding agricultural productivity and creating livelihood opportunities pinpoint the connection of logistics and resilience in humanitarian efforts.

It is appreciated that FAO has an involvement in projects aiming to strengthen the role of women in resolution of water conflict and mitigation of climate change. Showing support to livestock fattening, coffee value chains, and irrigation systems is also a part of FAO's logistics management. Interventions are considered that can be improving the efficiency and productivity of these value chains through training, infrastructure development, and other support measures (Elayah, *et al.*, 2022).

## DISCUSSION

The humanitarian community is uniquely positioned to enhance the resilience of supply chains in Yemen through effective strategies. There is an urgent need of ensuring more effective and sustainable support to the millions of people in Yemen. More robust coordination among humanitarian organizations like the United Nations World Food Program (WFP) and partners would



be pivotal in the near future. Regular meetings and information sharing platforms hold the potential for improving collaboration and thereby ensuring timely and efficient delivery of aid. Further, investments in capacity building initiatives would prove to be beneficial for local communities and organizations, thereby bolstering resilience in humanitarian supply chain (Coppi, 2018).

It is necessary to embrace innovative solution when delivering aid to a country faced with substantial crisis like Yemen (Sowers & Weinthal, 2021). Cash-based transfers and mobile technology can be improving the efficacy and tractability of humanitarian supply chains. It is also vital to note that if the concerned organizations identify the significance of gender equality in providing interventions, then women would be empowered to have an active involvement in decision making processes. There are several projects going on for the reduction of people's sufferings in Yemen, and when there would be provision of promoting inclusivity and resilience the outcomes would be better.

## CONCLUSION

The situation in Yemen, as highlighted by the operations of the United Nations World Food Program (WFP) and the efforts of the Food and Agriculture Organization (FAO), is dire. Millions of people are experiencing food insecurity and millions of others are suffering from acute malnutrition. The requirement for assistance is evident, holding immense implications for humanitarian supply chain resilience. Challenges would be persisting in the future, as expected because of the decline in food security situation as well as the suspension of some of the humanitarian programs. For increasing resilience of the humanitarian supply chains a meticulous planning is needed for systemic allocation of resources.

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