

Humanitarian supply chains during COVID-19: systems failures, recovery and emerging alternatives

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Executive summary: The disruption caused by the COVID-19 pandemic has been acutely felt in the humanitarian aid sector. Through a series of qualitative interviews, this case study investigates systemic failures in humanitarian supply chains including a) unavailability of items, b) price volatility, c) delays in delivery and d) quality assurance issues. The results offer humanitarian organisations, donors, and academic researchers next steps in improving humanitarian supply chains and future avenues of research.

Tags: humanitarian logistics, emergency logistics, COVID-19, supply chain management, disaster logistics, qualitative, atlas TI, humanitarian supply chains, humanitarian aid, globalised networks

Section 1: Background and introduction

At the time COVID-19 was conferred with pandemic-status¹, 57 pre-existing humanitarian crises were receiving aid provision, affecting 118million people and with an estimated funding requirement of approx. \$30B (UNOCHA, 2019). Early estimates indicated an additional \$2.01B and 1.3B units of personal protective equipment (PPE) for personnel was required to continue the provision of humanitarian aid, and to accommodate for new or amended programmes to address COVID-19. Getting these items would prove to be impossible in the immediate wake of COVID-19 due to social measures required to mitigate the spread. On 13th February, the Chinese Government issued an extension of order to shut down all non-essential companies, including manufacturing plants, in Hubei Province which remained in effect until 8th April impacting manufacturing and exportation of key goods. Globally, 100% of

national governments responded to the pandemic with social measures aimed at mitigating the spread of COVID-19, such as restricting movement of citizens, suspending the conducting of business, and closing borders, ports and points of entry, impacting supply chains essential for humanitarian response. When land, air and sea points of entry (POE) begun operating, it was with reduced capacity of up to 66%. The provision of aircraft belly capacity usually made available for humanitarian goods due to decreased to 89%. These supply chains disruptions heavily impacted the provision of humanitarian aid, with 80% of programmes reported refocusing activities (ACAPS, 2020), and interview analysis indicating a slowing or suspension of non-COVID-19 activities. The coverage of need by the end of the case study period (Oct 2020) had decrease to 28%, and the humanitarian funding requirement had increased by \$10.59B².

A model for complex system failure produced by Engineering X and York University, depicted in **Figure 1**, categorises systems failure as a product of exacerbating factor on a complex system, compounded by a failure of design-time and operation-time

controls. This case study uses the framework in a qualitative analysis of 17 semistructured interviews with humanitarian personnel to characterise the experience of supply chain failure between February to October 2020.

This case study positions itself as a source of reflection for the humanitarian sector on the experience of global pandemics; and identifies ways to amend the systemic controls to better respond to future pandemics.

Section 2: Analysis and insights

What was the systemic failure?

During the analysis of the interviews, supply chain disruptions were characterised under the York Framework as a 'systems failure' and was described in the following four ways.

Price instability

Prices of PPE, non-COVID items and transportation fluctuated throughout the case study period and affected all geographic reasons. To an extent price instability was due to an initial surge in demand for both products and transportation handling outstripping capacity. 70.5% of interviewed participants reported experiences with both

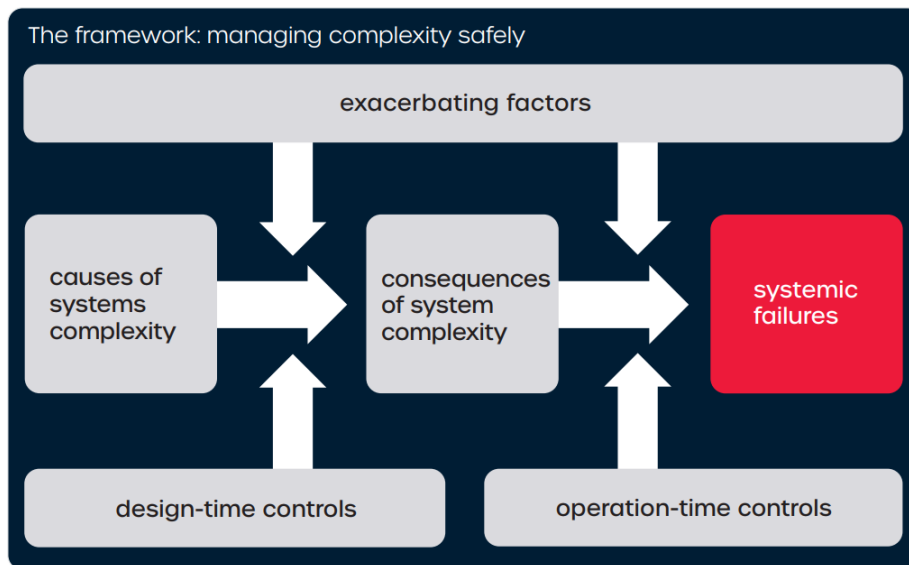


Figure 1: The York Framework

unpredictable pricing. Interviewees commonly reported prices changing at a rate that made it hard or impossible to budget, procure and deliver items. At a local level – national and regional – the price instability was more pronounced than reported from HQ participants. Experiences of price volatility were exacerbated by the slow administrative processes of consolidation and purchasing. When budgeting and assessing needs for PPE, practitioners found the price would change between finalising the purchase order for items and services, approval and submitting the order to vendor and supplier. Even when items or transport were made available free of charge through in-kind offers with the private sector, the lengthy procedures did not allow these benefits to trickle down to speedy supply and delivery of items.

Items unavailable

70.5% of interviewees mentioned scarcity or an inability to source, purchase or receive items. In local/national markets the scramble for items meant that individuals did not have the necessary items to safely continue to deliver aid. Some participants reported that this was a reason for halting programmes that required close interpersonal

contact, including the medical and sanitation interventions, as well as protection activities such as conducting child-friendly spaces or gender-based violence activities. Other participants mentioned there were experiences of theft from their PPE inventory during times when items were not available in markets. At a global level, manufacturing delays and a surge in demand for PPE, prompted suppliers to issue minimum order quantities (MOQ). Interviewees commonly reported the pooling of demands and purchase orders in order to qualify for these suppliers.

Delivery delays

Where items could be procured, there were commonly delays in the delivery of those items. 64.7% of interviewees reported lead times increased, on average by 3 months. Interviewees ascribed delays in delivery to a lack of capacity for transport. With decreased commercial flights, the demand for cargo flights pushed prices up. In addition, interviewees mentioned bottlenecks at POE including government-mandated closures, staff shortages due to social distancing and illness/death, or changes in importation requirements. Where organisations used WFP-operated flights, these

delays were less acutely felt. Some participants noted that delivery delays prompted diversifying suppliers, including local suppliers.

Quality concerns of items

70.5% of interviewees experienced quality concerns when the items were delivered, specifically in new products (such as PPE). These concerns were reported in both the items procured locally or globally, but more frequently from deliveries from new suppliers. Participants reported PPE not fit-for-purpose as it did not include a complete set of items (e.g. Masks without strings to attach them). A minority of interviewees spoke of their experience of “false promises” – where a sample batch was of sufficient quality but on delivery, the full order was not of comparable quality. On the occasion that sub-quality goods were delivered practitioners did not use them for activities involving affected populations including in programme activities.

How did this situation come about?

Supply chain disruption during February to October was not unique to the humanitarian sector. Humanitarian supply chains, however, faced specific barriers in procuring, transporting, and delivering these items to frontline personnel and affected populations.

System inflexibility

Humanitarian supplies are procured in humanitarian response using funds provided by donor states. Ordinarily thresholds are used to control how this process is conducted, with purchase orders over a threshold requiring public tendering, and the evaluation of at least three bids by an independent panel with the organisation to ensure quality, fair price, and to offset the risk of corruption or conflicts of interest. The use of stockpiled supplies is also common in a

humanitarian crisis, with regional stockpiles for long-life items (such as tarps, soaps, sanitary items). Pre-approved suppliers are also typically preferred, but these suppliers can only supply already known inventory and cannot pivot for new items. The process of vetting, approving, and listing suppliers is a lengthy and administratively difficult process, typically meaning that new suppliers cannot access these systems.

Although the humanitarian sector has enjoyed a move to standardise programmes, the specifications for items vary between organisation and tend to be slightly different from those found in commercial markets. For example, tarps used in humanitarian response required in shelter response have subtly different requirements than commercial tarps; and non-food item kits vary in small ways between organisations. This has essentially led to siloed parts of the supply chain – including manufacturing and supplying these key goods.

During COVID-19 common standards for items specs were issued in May 2021. However, organisations and programmes that would not usually handle PPE items did not have suitable preapproved standards, item specifications or suppliers to make rapid purchase orders. Inventory codes, supplier approvals and market assessment (where done) were done rapidly, drawing on technical personnel which the sector has easy access to. Many interview participants felt that their organisation was well-equipped to rapidly understand and respond in these ways, given their prior experience in health emergency and epidemic responses. In the initial lag in supplies, regional stockpiles of PPE and other humanitarian items ran out and local markets were subject to spikes and dips in pricing of essential items including PPE.

The majority of those interviewed reported that they had to rapidly diversify suppliers to get the stocks required, and this is when reports of “false promises” or poor-quality items were introduced. The skills and resources for rapidly diversifying, localising or introducing new suppliers simply does not exist within a system that has been built inflexibly and with a reliance on a few, with inflexible elements

Reliance on global supply chains

Global transport of humanitarian goods relies in part on the same supply routes as commercial shipping. During a humanitarian response, national governments may apply their own importation restrictions to prioritise supplies for humanitarian response, or export bans/restrictions on items they require. During COVID-19, shutdowns of ports, air borders and points of entry (POE) was swift and establishing alternative routes was time consuming. In some cases, the interviewees noted that they set up their own supply chains, but without the necessary organisational knowledge or resourcing. Even when reopened, many POE were operating at a reduced capacity due to new health and safety measures (social distancing and quarantining goods) as well as staff shortages and illness. Delays are witnessed particularly at border crossings throughout East Africa (east at the Kenya/Uganda Malaba border, Uganda/South Sudan border) and West Africa (Central African Republic/Cameroon border).

Lack of local market awareness

The knowledge of market assessment, process and compliance information was markedly different between national and HQ level. This was particularly difficult during COVID-19 as many expatriate staff were given the option to repatriate, taking organisational knowledge with them and brain draining

national offices. Although the desk review found good guidance has been issued since 2020, it also found a lack of market assessment methodology that was clear and tested for non-food items. At national level, the lack of market awareness hampered the ability of country programmes to quickly diversify supply chains or set up new suppliers, quality test items, and complete required compliance and custom paperwork. National-level interviewees noted the systemic separation between procurement and programmes staff and “siloing” of HQ and national knowledge, which contributes to this knowledge gap.

Information sharing about suppliers, vendors and manufacturers was done by national staff through informal channels, including WhatsApp, Facebook, and door-to-door networking. Some participants reported that this work was not compliant with donor requirements, leaving lingering concerns over their performance in an audit. On some occasion, a backdating of documents was confirmed as a common practice for mitigating this risk.

A lack of pandemic planning

While epidemic response at a regional level is commonplace in humanitarian sector, participants reported their organisation had previously prepared a pandemic. Whilst some respondents had emergency procurement and logistics procedures on hand, others did not. Interviewees from HQ and Regional level seemed to be more familiar with the procedures, indicating that where there was effort for contingency planning, the findings and lessons were not communicated to national offices. Those interviews which mentioned the use of emergency procedures and business continuity documentation, noted they were out-of-date and/or hard to find.

This was compounded by the lack of general funding available

for updating, maintaining and modernising logistics procedures. Ordinarily only 7-15% of budgets for humanitarian response can be allocated to the core costs, which includes not just logistics, but communications, fixed costs etc. As such, very few participants felt their systems and procedures were equipped to handle the pandemic, even if the procedures were available. In organisations where injections of funds had recently been made to update systems, technology or personnel, the experience of the systems failure was markedly different. Interviews with individuals from those organisations more frequently mentioned positive experiences during this time – feeling supported, confident in the decisions being made. Reactive funding also complicated the ability to procure items quickly. In interviews where crisis modifiers were mentioned, respondents felt this enabled them to more quickly procure emergency stock, allowing them to continue humanitarian response activities.

Section 3: Discussion and transferable learnings

How can the system cope? Dynamic re-design from COVID-19

Funding mechanisms redesigned

This included WHO through the Immediate Response Account (IRA), which was complemented by The Global Fund (who reprogrammed funding to release early finance streams), the Gates Foundation (who provided bridge-funding to enable rapid deployment of supplies), and The Solidarity Fund (which launched in March). On the 6th April UNOCHA issued guidance on the CBPF which allowed for critical injections of finance into existing programmes. Importantly, temporary or time-limited flexibility protocols such as remote audit and financial monitoring, issuing a blanket no-cost extension (NCE) to existing programmes, authorising the use of e-signature on documentation,

issuing a 15% then 20% budget line flexibility, and removing the traditional caveat for ‘triggers’ for funds. This effectively freed up funds usually allocated to one type of emergency for use in COVID-19 response, including to logistics and supply chain management costs. Although logistics and supply chain management are not specifically mentioned, the above serve to allow for flexible financing of costs ascribed to these areas of operations.

Organisational and donor commitment to streamlining purchasing

Nearly all respondents confirmed that during the time period in question they experienced the benefits of a change in standard operating procedures or invoking emergency procedures. These essentially temporarily lifted the thresholds required to undergo a lengthy bidding process. In addition, where crisis modifiers were available respondents felt able to more quickly secure items already in the supply chain and build out stockpiles. Including crisis modifiers in all humanitarian and resilience building activities in the future would be a clear and simple way for donors to enable rapid pivoting of activities and activation of local supply chains in future pandemics, global port closures, or bottlenecks in shipping lanes (e.g Panama).

Virtual supply chain coordination

Early April the SCTF convened the Covid-19 Supply Chain System (CSCS). This system was designed with three components; 1) a control tower is erected in Geneva, dedicated to consolidating demands, allocating inventory and administrating the delivery of products, 2) three purchasing consortia for biomedical, PPE and diagnostic products respectively, and 3) a suite of planning tools which is launched on the WHO Partners Platform. Designed to provide real-time tracking of

goods to support the planning, implementation and resourcing of nation states; to help governments access the Essential Supplies Forecast (ESFT); and the Supply Portal to consolidate demand per National Action Plans alongside the Emergency Service Marketplace (ESM). Delivery Hubs were erected in eight countries: Global Hubs in Guangzhou (China), Dubai (United Arab Emirates), and Liege (Belgium). Regional Hubs in Kuala Lumpur (Malaysia), Addis Ababa (Ethiopia), Panama City (Panama), Accra (Ghana) and Johannesburg (South Africa). The CSCS accounted for approximately 50% of the essential supplies secured by partners in 2020. The report suggests that including national and regional purchasers could increase access and ownership of a centralised supply chain system, and that a country-facing platform would be beneficial to connect to partner platforms and engage national government and regional institutions. (The Yellow House & WFP, 2021)

Local market initiatives for local production

Participants reported that looking for humanitarian supplies in new vendors, suppliers or local markets. In some interviews the use of non-traditional suppliers was mentioned – specifically the collaboration with existing programme beneficiaries or local manufacturing groups to make PPE. On 12th May the Tech Access Partnership was launched by the United Nations Technology Bank, together with the UNDP, UN Conference on Trade and Development (UNCTAD) and the WHO. The Tech Access Partnership was created to address critical shortages of essential health technologies and equipment by connecting manufacturers with critical expertise and emerging manufacturers in developing countries, to share the information, technical advice and resources necessary to scale up production of essential items. This represents

the explicit inclusion of local production capacity to meet shortages and delays in key items, however the initiative is not heavily resourced and does not appear in the Supply Chain Task Force or the WHO COVID-19 Strategic Preparedness and Response plan (SPRP). Future pandemics would benefit from a diversified and localised supply chain, to help cope for breaks in global supply.

Cash and Voucher Assistance (CVA)

The G-HRP July update noted the use of multi-purpose cash assistance to support local markets being used by multiple humanitarian actors. (UNOCHA, 2020). This is supported in our primary data collection as well, with participants noting the rapid scale up on CVA in three key ways – the increase in number of registered recipients of an existing programmes, removing the conditional or work requirements for the cash programming, or setting up new cash programmes to complement or replace NFI and food programmes. In the interviews this was a modality that allowed humanitarian activities to continue quicker than waiting for items would have. This was reported across sectors – in protection, medical or health programmes, food security activities and in sanitation projects.

Standardising of item specifications

13th March, the European Commission Recommendation (EU 2020/403) on conformity assessment and market surveillance procedures within the context of the COVID-19 threat, included the requirements for the design, manufacturing and placing on the market of Personal Protective Equipment (PPE) for COVID-19. This made procurement of items easier as clear standards were the same across organisations and donor bodies. Doing so for other items, or offering

a reflexive specification dependent on local markets and available manufacturers, could prove very valuable for future response. Some interviews mentioned that during this time items were available that would not have been ordinarily – including items made by affected populations who were temporarily inducted into the supply chain. Once the temporary measures were lifted, however, these items could not be procured any longer.

Investment in supply chain visibility

For rapid response personnel and infrastructure must be updated to allow organisations to better oversight of inventory and to conduct, access and understand market assessments efficiently. Interviewees from organisations in which investment in technology and logistics infrastructure had been made recently were better positioned for response to system failures. Personnel with appropriate qualifications within the organisational structure were key, and technological enablers including digital inventory tracking and e-compliance products were mentioned as key to safe, swift and ongoing operations.

Appendix 1: Methodology

In this section, the search methodology for desk review and data collection is explained. Data collection was conducted for this case study, through 20 semistructured interviews of humanitarian programme and logistics staff from UN agencies, the IFRC, INGOs, and CSOs. The interviews were transcribed and anonymised and then analysed using the York Framework. As such this section also describes the York Framework and discusses the amendments made to it for the purposes of this analysis.

Desk review

The desk review included both peer-reviewed and grey literature

relevant to the topic. This was used to describe the system complexity discussed below (section 3), and to construct the timeline above (section 1). The desk review was also used to inform the semi-structured interview guide which was used throughout the data collection stage.

In order to identify the peer-reviewed literature relevant to the topic, a set of keywords used for an initial search was developed. Searching for papers was done through a combination of keywords: where at least one from set 1 and one from set 2 was present. This search sourced papers from Google Scholar, Scopus, and the IEEE Xplore Library for Global Humanitarian Technology Conference. A search for peer-reviewed literature produced XX papers. Specifically, the keywords in Set 1 were used to locate studies in the humanitarian logistics, or disaster management field, and those in Set 2 were used to identify subject specific papers.

Keywords (Set 1)	Keywords (Set 2)
humanitarian supply chain	COVID-19
humanitarian logistics	covid19
	nov-cov19

Grey literature was collected from primary sources including: UNOCHA, Relief Web, IASC, UNDOS, WHO, WFP, and INGO policy statements and reports. To be relevant to this study the grey literature was also exposed to the same inclusion criteria: it had to be published during or about this time period. and include a mention of “supply chains” and/or “logistics”.

Semi-structured interview development

Within the remit of this case study was to develop new data via a series of semistructured interviews (SSI) with humanitarian

sector professionals. Conducting SSIs supports an exploratory approach (Van Korgh et al., 2012), in that it gives the opportunity to collect a rich quality of data. The objective of these interviews was to capture experiences of aid sector professionals during the period from February to October 2020.

As such the unit of analysis was the community of humanitarian practitioners, which were clustered into programmes and logistics staff³.

Within the humanitarian sector the former and the latter areas of operations usually operate with different personnel, budget streams, and networks or clusters of coordination. In order to make an interview structure that would work for both types of personnel, an interview guide was developed with a total of 6 question set (see Annex Xi for question set, justification and coding).

This semi-structured interview guide was developed and piloted with three interviewees from different organisational samples. In doing so, another unit of analysis was identified: Organisations, which were clustered into: UN Agencies and IFRC; International NGOs, and National NGO or CSOs⁴.

Interviewee selection and interviews

The interviewees were mostly selected through professional networks. A call for participation was developed over and shared on LinkedIn humanitarian logistics groups, on the lead authors personal site, and distributed through email lists for the Local Procurement Learning Partnership (LPLP) and the Humanitarian Logistics Association (HLA). Candidates were also found over LinkedIn, and pre-screened for employment over the research period (non-continuous was allowable), within an identified organisation type. Finally, interviewees were asked to

suggest others suitable for participation in further interviews (snowball sampling) (Huberman & Matthew, 1994).

The lead author participated in 100% of the interviews, for the purpose of replication logic, and a sample of the interviews were observed either live or after the fact by a second author, to reduce the possibility of interviewer bias (Yin, 2003). Demographic data was collected during each interview (See Appendix 2 for demographic details). The interviews lasted between 70 and 90 mins, with a mean of 83 minutes.

Transcription

Approximately 25.5 hours of recorded material was collected and transcribed. The HIAT method was utilised (Ehlich, 1992). The transcription was done by a research assistant who was not present for the interviews. During this process the data was stored as coded word files, and the names, organisational name, and identifying information was redacted.

SSI analysis

Atlas TI was used to analyse the transcribed interviews. A total of 17 interviews were included in this case study. A mixture of inductive and deductive coding was used for this study (Fereday & Muir-Cochrane, 2006). Using these strategies iteratively allowed for flexibility in coding, and led to the development of theoretical categories in line with what we can source in the data.

A deductive code manual for this study was developed, serving as a data management tool for organizing segments of similar or related text to assist in interpretation (Crabtree & Miller, 1999). The code manual was tested against a sample of three interview transcripts (each from different organisations), and these were coded by authors, independently. Following the coding process of the

transcripts using the predefined codes, the results were compared, and a few modifications to the predetermined code template were required.

Inductive analysis was also conducted by both authors of an additional three interviews, using in-vivo coding for line-by-line descriptive codes (Charmaz, 2006). The descriptive code fragments were discussed considering the existing code manual and where required, modifications to code levels and concepts were made (see Limitations and Scope below). The remainder of the interviews were analysed in line with the revised code manual.

Limitations and scope

This case study is limited by timeframe: February 2020 to October 2020. This window represents the acute onset of COVID-19 and the period of time when the supply chains were most critically affected. After 3rd February there was policy on COVID-19 provided by the United Nations, and as such we would expect this to be a period of time within which humanitarian practitioners become aware of and able to prepare for and respond to COVID-19. Before this date, whilst there may well have been awareness, there was no remit or expectation on sector professionals to be briefed. This case study is interested exclusively in the activities, experiences, and awareness of individual practitioners. By capturing these experiences, the case study aims to catalogue and codify supply chain failures and coping mechanisms within this time period.

Appendix 2: SSI structure and code manual

Below is the semi-structured interview guide developed for this case study, including code tree devised with a deductive method.

Set	Questions	Code
1	Tell me about when you first remember learning about COVID19?	Source of first information Month of first information Reaction to first information Month of organisational communication Organisation preparedness plan
2	How did your organisation prepare for COVID19? What operational guidance?	Causes of Organisational changes - Donor changes - Finance Unavailable - Government Restrictions Examples of Organisational - Deployment changes - HR changes - HQ Policies - Meta policies Positive Organisational coping mechanisms Negative organisational changes
3	What were some significant changes you noticed on your programmes during Feb-Oct 2020? Why did these changes happen?	Changes to programmes - Programmes Halting - Programmes Slowing - Programmes Altered Causes of changes to programmes - Changing Need - Changes in Staffing - Donor changes - Finance unavailable - Supply chain disruption - Government Restrictions Impact of changes in programmes - Beneficiary: Lose of life - Beneficiary: Lose of services - Delays to services/distribution Sectors of Programmes Effected
4	What were some significant changes in your supply chains during Feb-Oct 2020?	Supply Chains System Failure - Items not available - Delays in delivery - Price Instability - Quality concerns of items Causes of Supply Chains disruptions - External to the system (exacerbates factors) - Internal to the System (design time/operation time controls) - Redesign Controls - Latent Controls Key Goods
5	During the period of Feb-Oct 2020, what would you say were the critical moments/strain points for you?	Cause of Strain - External to the system - Internal to the system Impact of strain Month of strain
6	Was there anything that you wanted to do but couldn't - and why not? OR What would you do differently if you could?	- Prepositioning of goods - Enhanced SCM - Improved Market Awareness - Better coordination - Improved operational guidance

Appendix 3: Demographic data

I-CODE	Which best describes your gender?	Which best describes the organisation you were with during Feb-Oct 2020?	Which best describes your employment in the organisation you were with during Feb-Oct 2020?	Which best describes the level you were stationed at during Feb-Oct 2020?	Where were you deployed/stationed/ based during Feb-Oct 2020?
01-1505	M	UN Agency	Coordinator in logistics	National	SYR
02-2305	F	UN Agency or IFRC	Mid-management or coordinator in programmes	National	LLW – MAL
03-2505	M	National NGO	Mid-management or coordinator in programmes	National	CAL/KEOS
04-0306	M	INGO	Senior management in logistics	HQ	AMA
05-1606	M	Private partner	Senior management in logistics		LDN
06-0507	F	Private partner	Senior management in logistics	HQ	LDN
07-0907	M	INGO	Senior management in logistics	HQ/Regional	AMN
08-1207	F	CSO/National NGO	Senior management in logistics	Regional/ National	Fiji
09-2107	F	INGO	Mid-management or coordinator in programmes	HQ	Geneva
10-0908	F	IFRC	Coordinator in logistics	HQ	GVN
11-0908	M	INGO	Senior management in logistics	HQ/National	LDN/SAN
12-1208	M	IFRC	Senior management in logistics	Regional	KYA
13-1208	F	IFRC	Mid-management or coordinator in programmes	National	Damascus
14-1108	F	UN Agency	Mid-management or coordinator in programmes	HQ/HQ/Reg	ROM/GVN/CHI
15-1908	M	IFRC	Mid-management or coordinator in programmes	HQ	Geneva
16-3008	F	INGO	Senior management in logistics	Regional	Nairobi
17-0109	F	INGO	Senior management in logistic	Nat	Bogata

Endnotes

1. SARS-CoV-2, a novel coronavirus (2019-nCoV), was first detected in Wuhan Province, China, in December 2019. Within three weeks there were 118,000 cases of the virus (renamed COVID-19), in 114 countries and 4,291 people had died (WHO, 2020).
2. (UNOCHA, 2020) Financing requirement as 4 Dec 2019: \$28.8B to \$39.39B (31 Oct 2020). Percentage of needs covered in Oct 2019: 53% to only 38% (Oct 2020).
3. 'Logistics' is used here to describe professionals within the humanitarian sector engaged in any area of supply chain management, and the name for this position alters between organisations. For the purposes of these interviews, participants were asked to identify from the following options: A) Midmanagement or coordinator in programmes or Mid-management or coordinator logistics, Senior Management in Programmes or Senior manager in Logistics, or Senior Leadership/Director.
4. The participants were asked to identify their organisation from a list of options: UN Agency /IFRC/ INGO/ National NGO or CSO/ Private Stakeholder.

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