Sharing sensitive data on forced migrants

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Can a collaborative web-platform for sharing critical demographic information about displaced people improve delivery and response?

The development and relative accessibility of innovative software have led to the rapid growth over the last decade of a variety of tools to create, analyse, visualise and use real-time data for humanitarian response. The Italian NGO INTERSOS[1] has used web-based Geographic Information System (GIS) platforms to help profile and track population movements and needs, and began publishing geo-referenced[2] data on displaced populations in 2005. Data on affected populations in Darfur and, later, in neighbouring Chad was collected and published on a GIS platform.

As much information as possible was collected about the make-up of the refugee populations, including historical and current population estimates, ethnicity and movements; sectoral data on health, education, security, shelter, agriculture and land tenure; settlement types (e.g. inhabited, abandoned, destroyed); and specific information on vulnerable individuals.

The data gathered was made available to a broader audience through ad hoc semi-private web-platforms. Since web-based tools allow for 'real time' sharing of information, individuals working in different agencies were able to help update collected information in real time. However, not all NGOs availed themselves of these platforms to the same extent. Some used the data platform on occasion but did not share information or did not participate in the system. Others used the web-based platform frequently but their level of use varied over time, depending upon who was leading the effort in that agency at the time. Nevertheless, if these tools were to be adopted more widely in the field, such collaboration could improve inter-agency coordination and response by eliminating the risk of duplicated work and assessments.

Following the experience in Darfur and Chad, INTERSOS extended the use of web-GIS platforms to other programmes, customising the platforms according to the specific needs of the affected population, and offering categories and visualisations depending on the context. For instance, in Darfur and in Chad, the village was the unit of analysis, and the geographical scale was huge. By contrast, in Yemen individuals and households were the relevant unit of analysis and the geographical coverage was limited to a camp and two urban areas.

In all of INTERSOS's web-GIS platforms, data can be accessed by users in four different ways:

- as customised thematic maps, specified by the user (e.g. presence or absence of IDPs, water points, schools)
- as lists, statistics and tables created by the database, again on the basis of the user's request
- in a downloadable Excel table
- in a downloadable text report.

Differentiated access to sensitive data

In the context of widespread insecurity, the dissemination of sensitive information has the potential to harm the intended beneficiaries, and violate their privacy. In our experience, questions around disseminating sensitive data while simultaneously ensuring the safety and security of respondents greatly tested and challenged attempts to respect core humanitarian principles. An organisation can retain control over data gathering, storage and analysis because they can apply protocols to protect confidential information. However, in the dissemination phase, by virtue of the fact that agencies are sharing the data, there is the additional burden of ensuring confidentiality with other agencies over whom they have little or no control.

In an attempt to mitigate these privacy and security concerns, INTERSOS restricted access to some of the information on its web-based platforms and required all users to register for access to the site. Users were required to introduce themselves to the web-GIS manager and give information about their role as a precondition for being allowed to access the database or contribute to its content. The web-GIS manager approved applicants and provided passwords.

The registration process made it possible to grant differential access to types of data. Some core members had access to all of the information collected, including names and other sensitive data. INTERSOS staff holding critical managerial positions, some UNHCR personnel and selected managers of other critical organisations were granted access at this level. A second tier of access excluded personal information but still involved a great deal of detail, especially in relation to unmet needs and economic information. Most of the aid community who had personnel active in the area were granted access at this second level. Finally, a third tier was open to academics and other organisations that were not present. This tier provided general information about the context but restricted the level of detail about individual persons.

Differentiating levels of access allows one to protect the most sensitive data while still allowing the intended audiences crucial access to these files. INTERSOS felt it struck the right balance with this system. However, even with different levels of accesss questions remain: Who owns the data? And how can the organisation that collected the data ensure that consumers will not misuse the data?

INTERSOS found it extremely hard to accurately predict possible uses of the data and to classify data according to levels of sensitivity. The organisation is now considering requesting the users to accept more stringent legal conditions in order to access the site, as a way to restrict the potential uses of the data by the individuals who access the GIS platforms. But even then how can an organisation guarantee that all of the approved users will be able to ensure safe storage of their data? How much time and resources should be devoted to ensuring that certain security criteria are met? On the one hand, agencies need to control usage by minimising the number of allowed users. On the other hand, they recognise the need for collaboration and thus the need to promote widespread knowledge and use of the tool. One of the main challenges for the future is navigating such security concerns in difficult or politically sensitive operating environments.

Quality of the data

Inaccurate, contradictory or missing data can have unintended negative consequences both on affected populations and for humanitarian agencies. While it may be impossible to ensure that all the data presented is entirely reliable, it is however entirely within the capacity of an NGO to provide detailed information on how the reports were gathered, which can help shape our level of confidence in the data.

Organisations in the field need to make it clear how their data was collected and coded, and to detail the sometimes difficult choices they might have had to make. Creating a code-book, or at least a detailed explanation of the entire process of data gathering and coding, becomes particularly important – and challenging – in collaborative settings. While allowing information and updates, such as newly identified needs or the installation of a new water point, for example, to be uploaded into the system by registered users including from other agencies, INTERSOS endeavoured to increase the reliability of the information by publishing only information deemed reliable by its profiling team. Considerable attention should be paid in future to ensuring that anyone who posts an update provides information on their methodology, and is identified, for the purposes of being able to check the reliability of the information.

Effectiveness of the tool

We want to ensure that technology does not become an end in itself but rather a means to a wider goal. There are, however, two sets of challenges to the achievement of this objective.

A first set lies on the technical side. In order to ensure the broadest possible use of the tool, the level of IT proficiency of the intended users and the quality of internet connection need to be carefully considered at design stage. A constant effort is required to raise awareness and offer basic training in the use of the tool, both inside the organisation and across organisations. As in emergency settings there tends to be a high turn-over of humanitarian personnel, training needs to be provided periodically for newly arrived personnel.

One of the most useful features of a web-based tool is the fact that it embeds the capacity to monitor the number and the frequency of visits, the type of data downloaded and the type of users, which in turn allows the system itself to be helpfully updated. Knowledge of the most frequent queries in the system can be used to create new tools with better functionalities and update data collection methodologies. Monitoring the use of the new platform is a never-ending process and one that requires constant attention.

The other challenges, however, are structural, and belong to the sphere of inter-agency coordination. In Darfur, INTERSOS and the Danish Refugee Council reached a strong level of collaboration in collecting information on population movements through the web-GIS platform. Other agencies, while contributing some updates to the system, remained mostly passive users of the tool. Yet a third group of agencies developed independent tools, not integrated with INTERSOS platforms. This scenario is not unique to Darfur. Duplication and lack of integration are likely to continue to be an issue but so too will the pressing need to share data and tools. The time for conversations around such duplication of effort and waste is now.

Data collection by Intersos enumerators in Umkher province, Darfur.

After establishing need, sharing the information gathered by various agencies through a web-based GIS platform is increasingly becoming a next step for collaboration and response. We urge critical actors in this space to continue to explore this issue. We think they will discover that the kind of web-based GIS collaboration and data sharing described here demonstrably improves the lot of forced migrants through improving humanitarian assistance.

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1. www.intersos.org/en

2. Geo-referencing: specifying the location of something in terms of a map or coordinates.