

# Web-based monitoring in an insecure environment

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**UNHCR has developed Project Tracking and IDP databases for its work in Iraq in order to facilitate its operations at a lower risk to all stakeholders and to improve financial accountability, oversight and transparency.**

A major challenge for agencies operating in many conflict and post-conflict environments is the lack of regular access to displaced communities and project sites due to insecurity. In environments where the level of risk limits the ability to monitor, the options for humanitarian actors are normally either to reduce operations or accept the consequences of minimal oversight.

The objectives behind the development of the databases for Iraq included raising the visibility of the needs of the displaced in often remote and insecure locations through a tool that simultaneously improved planning, targetting and coordination of interventions and addressed donor and audit concerns about agencies' ability to monitor and evaluate in high-risk and often inaccessible locations. In effect, the Project Tracking Database reduces the amount of time that national and international staff need to spend on high-risk field visits while providing a live tool to run projects and assess their status.

From the outset we realised that the systems should be simple and relatively cheap and have an interactive interface to 'live' data over the internet. They should also be 'owned' as much as possible by the users so that dependence on consultants or software development companies was minimised (as well as cost) through in-house capacity building. On the technical side the security of data was a priority, so the web-based applications had multiple built-in safeguards for individual data. The software was developed in-house, with much of it pioneered by Iraqi colleagues, some of whom had themselves been displaced; the total for other costs was less than US\$50,000, most of which was for purchasing servers, cameras and other hardware.

The databases were designed to cover everything from initial needs assessment of groups of concern, justification, cost and expected time-frame for the intervention through to completion of the project. They not only collate a wealth of information and data but also provide a user-friendly platform where partners and staff can easily view the status of programme activity. Staff and partners can now proudly provide 'evidence' of their achievements in the most challenging locations, with the ultimate objective to permit donors and other stakeholders access to the non-sensitive aspects of the database.

Since its inception the system has progressed from a reporting platform to a tool which encompasses assessment information, implementation progress and a range of reports, for use by partners as well as UNHCR. It is also an archive for all relevant project documentation and as such has become an A-Z resource for all projects carried out in Iraq. The latest version now includes the capacity to track and verify the condition of assets and, by changing location data, it can easily be exported to other operations.

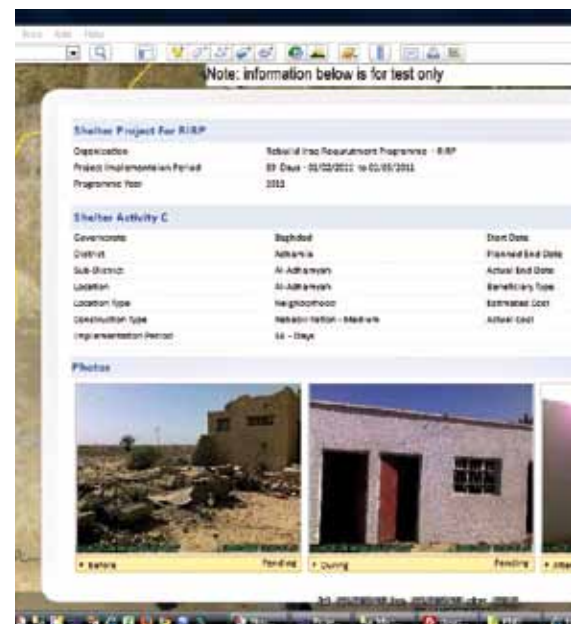
## Database contents

Given that much of the work in Iraq was being undertaken in areas that were still extremely insecure but where the needs remained great, the intention was to provide a degree of confidence that the commissioned activity had been undertaken by registering data on each and every shelter rehabilitated or constructed by UNHCR and its partners. Thus the Project Tracking Database requires the following information to be uploaded for all shelter assistance in Iraq:

- criteria for selection for assistance and demographics of beneficiary families

- scheduled and actual start and completion dates
- photos taken before start of work, during work, and on completion, with GPS (global positioning system) location embedded
- land title deed to resolve any future land disputes and/or to protect those who have benefitted from the intervention
- Bill of Quantities (BoQ) that supports financial verification, allows checking and comparison of input costs between contractors and locations, and automates searches for the cheapest and most reliable supplier by activity, sector and geographical location.

The provision of location-tagged photos not only enables recognition of the achievements of agencies working in difficult-to-access locations but also mitigates the potential for inflated claims in relation to the status or delivery time-line for an activity. Stakeholders can verify the GPS coordinates embedded in the photos against the location agreed to be assisted. Likewise, the date encrypted on the photos should be consistent with the agreed



time-frame for implementation and reduces the possibility of photos being taken of activities which are not consistent with what has been agreed, such as a contractor taking 100 photos of five different houses and stating that 100 houses were built. To enhance the accountability and ownership of the activity, the beneficiary would ultimately sign to confirm that the BoQ was consistent with what has been delivered.

As it is in the interests of the relevant staff or agency to demonstrate to other agencies, donors, authorities or their respective managers progress or improvements in the status of the project or activity, there is an incentive for reporting to be 'live', with stakeholders uploading new data rapidly. Stakeholders also have an incentive to upload 'evidence' of their activity as quickly as possible in order to facilitate the release of payments.

As soon as photos and related information are uploaded, the database extracts the GPS coordinates, registering these against each shelter, IDP camp or other location with a Google Earth interface. UNHCR provided GPS-enabled camera phones to partners – although sometimes the technology proved insufficiently robust for conditions in Iraq and in some areas GPS simply does not work well enough. As data is uploaded, the database automatically generates Google Earth views, summary reports with demographic and

geographic breakdowns, average prices based on BoQs, etc. Maps can also be generated, using almost any number of variables.

Following the successful roll-out of the Project Tracking Database, UNHCR developed an IDP camp database that details the number and location of settlements, the needs, the type of assistance required, and the date when assistance was provided. The database clearly demonstrates not only what has been delivered but also

the conditions of the settlements and the remaining needs.

#### Value added?

The roll-out of the system across Iraq has permitted UNHCR to have a high level of confidence in the location, time, date and cost of almost all activities undertaken, and has reduced the need for monitoring missions. The tracking systems do not, however, replace existing systems but aim to enhance and supplement existing monitoring and evaluation procedures. They were therefore initially viewed by partners as an additional reporting requirement, rather than as a replacement monitoring and reporting tool. Partners questioned its need – and the additional reporting burden – but as the system has developed, partners have come to better understand its value for them as well as for UNHCR and others.

The potential improvements in relation to mitigating fraud, limiting risk to staff undertaking field visits and enabling greater programme efficiency and effectiveness more than offset the limited additional costs, such as for data-inputting, which may be required.

At first it was a relatively cumbersome tool that was difficult to use with unreliable internet access. Partners struggled to input data into the system, in particular land deeds and photographs. As internet connectivity and staff skills improved, data uploading also improved. UNHCR field staff and programme staff also initially found it a difficult tool to work with. With the earlier version, for example, the onus was on the user to update their version of the database when changes were made to it centrally. The later version addresses such issues; updates are done automatically and the technology is more user-friendly and fairly self-explanatory.

Providing a visual image of the needs (such as in IDP camps) linked to Google Earth enhances community-based responses and allows stakeholders to review key information and determine priorities and responsibilities. A visual review via Google Earth of where agencies are working can also often illustrate geographical gaps

and any failure to connect what should be mutually reinforcing or coordinated programmes.

With access to a comprehensive overview of all the displaced sites, with supporting geo-tagged photographs, the previous anonymity of much of the humanitarian suffering in difficult-to-reach locations disappears. Having readily available data also greatly supports advocacy with donors, other agencies and concerned authorities. Such advocacy, based on 'proof' of conditions, has led to increased government support for settlements and in a number of cases has prevented the eviction of vulnerable populations. The system has also recently been recognised by the UN's Board of Auditors as a tool that enables "the verification and tracking of individual activities in insecure environments... and to use this case work to summarise progress, trends and variations within a programme."

This particular system grew up from the field and from an operation in which increased accountability for larger sums of funding and most importantly the beneficiaries was needed. These applications were developed based on the unique needs of the operation and in consultation with the end-users (field staff, implementing partner staff, programme staff, management, etc) which has certainly aided delivery of the product. Nevertheless, as it is a new technology, staff needed to be trained in its use; the very steep learning curve involved certainly had an impact on the time taken for development.

In developing these systems for Iraq we have incrementally addressed all the major issues arising but these initiatives will only truly be successful if and when they are replicated in other operations and implemented voluntarily by other agencies.

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