

Real Time Monitoring for the Most Vulnerable: Yemen Social Protection Monitoring Survey 2011–2012

Tammy Smith

Abstract Yemen has confronted multiple emergencies prompted, in part, by a protracted political crisis but the impacts of these emergencies on household wellbeing were not well understood. This UNICEF monitoring project sought to fill the information gap by providing panel data, taken at biweekly intervals, from beneficiaries of the government of Yemen's Social Welfare Fund (SWF). With the use of iPads from the second phase of the pilot, data collectors entered household responses directly into data files, which were then uploaded into a common dataset. The analytic report, along with several tables of key indicators was distributed to a list of approximately 100 recipients via email. Despite interesting results with important humanitarian implications, use of the monitoring results has been inconsistent. Opportunities to respond pre-emptively to emerging problems have been missed. As the project scales up, an important revision will be to better integrate and strengthen data analysis and programmatic response.

1 Country context and justification¹

Yemen was pushed to the breaking point in 2011 by multiple emergencies prompted, in part, by a protracted political crisis that developed in connection with the Arab Spring protest cycles. Civil unrest occurred against a backdrop of chronic underdevelopment, with Yemen posting some of the worst indicators for children both regionally and globally. Even before the crisis, poverty ran deep and reflected entrenched social inequalities, with rural poverty estimated at 47.6 per cent versus urban poverty at 29.9 per cent in 2009.² Political unrest also exacerbated pre-existing political and tribal tensions, which sparked heightened levels of violence in at least seven of Yemen's 21 governorates, including Abyan, Aden, Amran, Hajjah, Al-Jawf, Sana'a, and Taiz.

The crisis triggered dramatically higher food, water and fuel prices that hit Yemen's most vulnerable households hardest.³ By mid-2011, programme colleagues had begun reporting anecdotal evidence suggesting that many Yemeni families were responding to the shocks by resorting to negative coping strategies, including: removing their children from school;

sending young boys to work while young girls were married off; as well as decreasing the number of meals, reducing protein intake, and increasing *qat* chewing. With respect to nutrition, families' inability to absorb food price shocks led to a rapid deterioration in under-five nutrition, especially in high-risk pockets of the country. In Al-Hodeidah governorate, for example, findings from a nutrition survey conducted in October 2011 showed a GAM⁴ rate of 31.7 per cent, far exceeding the emergency threshold of 15 per cent.⁵ The breakdown of social services as a result of the unrest created conditions whereby addressing the intensifying problems connected to children's health, nutrition and protection became even more challenging.

While humanitarian needs assessments of internally displaced people (IDPs) and their host communities provided some information about how the above challenges were affecting a segment of the vulnerable population, no data existed on how non-displaced poor households' coping mechanisms were holding up in the face of rapidly deteriorating conditions. Despite clear indications that poverty was worsening since 2000, Yemen lacked a coherent poverty monitoring system at any

level.⁶ The last national-level household surveys, the Household Budget Survey and the Multiple Indicator Cluster Survey, moreover, were conducted in 2005/06, while projections about population demographics are based on estimations from the 2004 census. Routine data collection by key ministries such as Health and Education, where it exists at all, is chronically unreliable and untimely. In addition to these underlying weaknesses, the offices and warehouses of the Ministry of Health and the General Authority on Rural Water and Sanitation were heavily shelled and subsequently looted throughout the summer of 2011, further constraining the ability of the government of Yemen to identify and respond to humanitarian needs. Thus, at a time when the health and wellbeing of households living on the margins was most threatened, humanitarian actors and national counterparts lacked the most basic information that could be used to trigger a response.

Motivation for the monitoring project, then, derived from concern over the negative impact the above challenges were having on vulnerable families. The sense among UNICEF programme staff was that the rapid increase in prices of food, fuel and water, coupled with the breakdown of social services and a lack of resilience among vulnerable Yemeni households would produce a large-scale ‘silent’ emergency. In a data-scarce environment, the clear challenge was how to anticipate answers to the four ‘W’s:

- for *Whom* were coping mechanisms failing (among marginalised ethnic groups, female-headed households, or throughout the universe of the at-risk population);
- *Where* were coping mechanisms failing (in specific geographic locations, urban versus rural areas, or more uniformly across the country);
- *What* specific ways were coping mechanisms failing (were certain deprivations more prevalent than others); and
- *When* were coping mechanisms failing (required setting benchmarks as a trigger for humanitarian response)?

The monitoring project sought to fill the information gap by providing panel data, taken at biweekly intervals, among beneficiaries of the government of Yemen’s Social Welfare Fund (SWF). Begun as a pilot in late June 2011, the

project queried 120 households in three governorates using a standard questionnaire that included questions on food security, nutrition, child protection, and WASH. Education was not included within the survey since the academic year had ended just as the monitoring project was launched.

2 From conceptualisation to implementation

In order to test the viability of the project and the utility of various data collection tools, UNICEF Yemen planned the survey project in phases: a six-month pilot phase in 2011, followed by scaling up to the national level in 2012. The pilot phase was further divided into two three-month implementation cycles that began with a paper-based intake system and segued into an electronic-based system.

For the pilot, data collection from 120 households in three targeted governorates (Sana’a, Amran and Al-Hodeidah) was conducted in coordination with a national NGO, The Democracy School, which had close partnerships with smaller local NGOs in the three locations. The Democracy School was selected based on its past experience conducting field research for other organisations, its broad network of sister-NGOs throughout the country, and its relative political neutrality, an important factor in the polarised climate of 2011.

In each governorate, data collection was coordinated by a field supervisor and two female enumerators, while a main focal point in the national NGO oversaw the work of the three governorate teams. Data collection was done on a biweekly basis for a period of six months.⁷ The main data collection tool is a structured interviewer-assisted questionnaire. In all cases, respondents are the main female care-providers within the identified households. The questionnaire is divided into five main parts:

- Section one – intake questions on housing and household members’ characteristics, school enrolment, exam attendance, as well as child protection questions related to FGM/C,⁸ and birth registration. Intake questions were administered only once, at the first round of collection;
- Section two – food security and nutrition;
- Section three – child protection;
- Section four – water and sanitation; and
- Section five – child health.

Box 1 Going the extra mile: data collection in rural Amran

Descriptions of project implementation processes – meetings, sampling, pre-testing of survey instruments, and various rounds of data collection – provide certain kinds of information about how to establish a vulnerability monitoring project. Reality on the ground, however, brings into sharp relief what it means to the data collector who must access remote households with few connections to basic infrastructure.

In rural Amran governorate, for example, the young women hired as data collectors faced substantial physical challenges in reaching their target households. Located in a difficult-to-reach mountainous area, the local communities selected for the survey are not accessible by road. As a result, data collectors, in full *nikhab* in compliance with local religious/cultural custom, walked approximately 7km, up steep mountain paths, to reach the respondents in this survey. Remarkably, they accomplished this every two weeks, on time, and without fail.

Dedication such as this exemplified the spirit of commitment that drove the project's overall success, but also points to the inherent challenges of implementing a survey that seeks to reach the most vulnerable in a state with weak infrastructure penetration and which ranks toward the bottom of the Human Development Index.

2.1 Sampling methodology

In cooperation with The Democracy School, UNICEF identified three governorates, Sana'a, Amran and Al-Hodeidah, from which to pull households for the pilot phase. The three governorates are not necessarily representative of all Yemen, but it was crucial, given the time limitations for preparations, and given the very difficult security situation around the country, to start the pilot in relatively accessible areas. In each governorate, poor sub-districts (*uzla*) were selected per the poverty mapping based on the Household Budget Survey 2005/06. Within these selected sub-districts, 40 households were identified among those that are enrolled in the SWF cash transfer programme.

From the outset, UNICEF Yemen took the decision to exclude IDPs and refugees from the sample. In fact, the sample design by itself excludes this group, since the targeted households in the pilot survey were selected from the SWF beneficiary database. This decision was based on a number of factors. First, refugees and IDPs typically have already had their needs assessed and receive some level of assistance based on those needs. The survey, on the other hand, aimed to assess how a typical, poor Yemeni family with less access to outside assistance was coping with the price shocks and other challenges. Since the SWF had recently undergone a means-test to determine the eligibility of its beneficiaries, UNICEF Yemen

felt relatively confident that by including only the worst-off categories among the beneficiary list, it was capturing some of Yemen's most vulnerable families. Refugees and IDPs, on the other hand, come from varying backgrounds and may or may not be poor or otherwise unable to access necessary goods and services. Second, for reasons of comparability, UNICEF Yemen was concerned to purposively sample from a population with similar characteristics. Third, to respond to time pressure to begin implementation as soon as possible, UNICEF Yemen sought to piggyback off SWF's list, which not only included basic data about the relative deprivations of the household, but provided addresses and other information that facilitated fieldworkers' contact with the families.

2.2 Data collection, entry and analysis

As noted, the survey instrument consists of questions relevant to UNICEF programming concerns, which are grouped into five sections. Questions were developed in close consultation with Programme Sections and field tested by the NGO partner in a poor neighbourhood in Sana'a during a four-day training workshop prior to the survey's launch. The workshop, held two weeks before the first round of data collection, included sessions on:

- describing the overall purpose of the project and the specific contribution of the data collectors;

- delineating the roles, relationships and means of communication among the various actors within the project;
- agreeing upon a timeline for collection and analysis;
- reviewing all questions to ensure a common understanding of what was intended;
- agreeing upon the means of entry into the community and gaining informed consent of the targeted household; and
- pre-testing and refining the instrument.

The first round of data collection began on 29 June 2011. Each data collector was assigned 20 households, which were interviewed over the course of four days and included in every subsequent round. Responses were recorded on a paper-based questionnaire by the data collectors and later entered into an Excel file. Immediately following the completion of the first round of data collection, data collectors and their supervisors were brought together again in Sana'a for a debrief about implementation of the survey instrument, and refinements where necessary, as well as communication, logistics and support.

From the outset, UNICEF Yemen had considered deploying SMS technology and distributing cell phones to the targeted families from the beginning of the project, but sporadic cell phone coverage⁹ and high rates of female illiteracy – especially in rural areas and among the lowest wealth quintiles – ruled out this strategy. While UNICEF Yemen was interested in exploring various electronic-based data entry systems, it opted to begin the survey with a paper-based system to get the project up and running as quickly as possible. By dividing the pilot into two phases, UNICEF Yemen was able to start publishing valuable data and analysis while it continued researching and developing the best electronic data entry solution.

Once fieldwork was completed, data entry, cleaning and analysis took, on average, two weeks from completion of the fieldwork until delivery of the analytic reports to UNICEF. The first reports, moreover, required significant editing and further data cleaning. While the investment of time made by UNICEF to work with the NGO to improve the reports contributed to strengthening national capacity for such analysis, it proved to be a heavy burden

on the section's staff. As a result, after the first four rounds of data collection, UNICEF hired a dedicated project manager, a former manager within the Yemeni government's Central Statistical Organisation, to support the NGO and expand their analytic capacity.

The second phase of the pilot began with round seven of the data collection, with the introduction of iPad technology to replace the paper-based system.¹⁰ During the first phase of the pilot, UNICEF Yemen identified a local commercial business, Prodigy Solutions, with strong experience supporting development partners' implementation of national surveys. Prodigy Solutions was responsible for programming the questionnaire into an electronic format, which was uploaded onto six iPads, which the company rented to UNICEF. Prodigy provided training to the data collectors through a five-day course in early September and offered 24/7 technical support throughout the duration of their six-month contract. With the iPads, data collectors were able to enter household responses directly into data files, which were uploaded into a common dataset within SPSS every evening during the collection phase. After the four-day fieldwork, Prodigy sent the consolidated SPSS file to The Democracy School for preparation of the analytic report. Overall, the introduction of the iPads reduced the amount of time from data collection to submission of the report from three weeks to one and improved rates of data entry error.

A field visit by UNICEF staff to one of the sites in Amran governorate in January 2012 provided valuable information on project implementation, including reactions to the survey of responding households' family members and community leaders, as well as challenges to implementation not recognised earlier. Significantly, through the visit, UNICEF learned that local tribal sheiks who control the settlements where the respondents live viewed the project with suspicion, particularly the introduction of the iPads (which were seen as potential tools for covert surveillance/spying). In addition to this finding, UNICEF also gathered critical information for other areas of programmatic response, including child protection and education, which have formed the basis for follow-up action by Programme Sections.

3 Results of the survey and its use

3.1 Overview of select survey results

Survey results both confirmed expectations about how the 2011 crisis was affecting vulnerable Yemeni households, as well as offered a few surprises.

When panel data were aggregated over the course of the six months of 2011, as expected, conflict and food security were closely correlated for the total sample as well as for each governorate subsample, based on analysis done by IFPRI.¹¹ The correlation is highest in the sample from urban Al-Hodeidah and lowest from rural Amran. Furthermore, when dividing the total sample into households affected by conflict and non-affected households and showing the trends in food insecurity of the two household groups separately, the data reveals that the food situation among affected households is much more volatile.

The food security situation appears to have drastically deteriorated, also in areas that are not directly subjected to violent clashes. Indirect transmission mechanisms likely are the influx of IDPs, conflict-generated price surges, and severe fuel shortages. IFPRI's econometric estimation¹² results suggest that expanding conflict clearly increases food insecurity, while the general risk of conflict in one's neighbourhood seem to matter more for the individual household than the direct exposure to conflict. In addition, the household food security level seems to respond instantaneously for the most part, as insignificant or relatively weak coefficients of the lagged variables imply.

Despite fluctuations such as these, some constant trends were evident throughout 2011: most notably, almost none of the rural households reported any protein intake (red meat, fish or chicken) among children aged less than five years during the six-month reporting period, while only 8.8 per cent of urban households enjoyed protein intake. In addition, 60 per cent of rural households reported decreased meals among children less than age five compared to those in urban areas at 40.8 per cent. Furthermore, the survey was extremely sensitive to small changes in household food intake, demonstrating sharp increases in food availability in the rounds occurring during Ramadan, when charitable giving to poor

families often includes the donation of food for ritualised meals such as *iftar*, as well as after the quarterly distribution of cash transfers from the SWF.

With respect to health indicators, the monitoring project very early on captured an increase in the prevalence of coughs, fevers and rashes among children that signal possible measles outbreak. Other data, such as prevalence of reported diarrhoea among children, did not correlate as expected with a household's access to water – with urban households reporting higher incidences of diarrhoea than rural areas despite greater access to water. Results such as this indicate that while quantities of water may be less in rural areas, other mitigating factors such as better water safety or safer cooking or food storage may be higher than in urban centres.

Finally, while some kinds of data require observation over time to note trends, other questions yielded interesting results even from the first round of collection. For example, within the first round in late June 2011, 76 per cent of respondents reported sufficient amounts of drinking water in the two weeks leading up to the survey. When queried about the amount of water (for all purposes – drinking, personal hygiene, house cleaning, etc.) households used, however, responses indicated that most families in the survey subsist on 16 litres/person/day, an amount that barely meets the emergency threshold of 15 litres/person/day. Results like this illustrate the need for caution when employing humanitarian needs assessments that rely on perceptions, such as WHO's newly developed Humanitarian Emergency Settings Perception of Needs Scale (HESPER). Assessments such as this must take into account that vulnerable households' pre-crisis starting point may very well be below emergency standards, with corresponding negative implications for other areas such as health and nutrition, regardless of whether the affected household perceives an unmet need.

3.2 Survey use by colleagues and partners

The analytic report, along with several tables of key indicators (disaggregated per governorate over time) is distributed to a list of approximately 100 recipients via email within 24 hours of being finalised. The list includes UNICEF staff in the Yemen Country Office (YCO), MENA Regional

Office, and New York Headquarters, as well as government and UN partners, bilateral and multilateral donors, embassies, local and international NGOs, think tanks and journalists. Results from the survey are occasionally posted on Yemen Country Office's Facebook page, and have contributed to descriptions of the situation of vulnerable households in a number of key documents, including YCO's Monthly Situation Report, OCHA's Consolidated Appeal 2012, and the UN/WB/EU's *Joint Socio-Economic Assessment of the impact of the 2011 crisis*.

Despite interesting results with important implications for humanitarian response and programming, use of the monitoring results has been inconsistent across actors. UNICEF staff and other humanitarian actors, for example, have been slow to utilise the analytic report as a monitoring tool for programmatic adjustments, even though sector experts from UNICEF were integral members of the team that designed the initial survey questionnaire. As a result, opportunities to respond pre-emptively to emerging problems – such as a measles outbreak – were missed.

Concern over the lack of utilisation by humanitarian actors on the ground prompted the implementation team to administer a quick, informal survey of recipients on the distribution list in late November, as UNICEF began planning for scaling up the initiative to the national level. The UNICEF team assumed that the data was useful, but if utilisation was as tepid throughout the distribution list as it was within the YCO, the team was prepared to reconsider moving forward with the scaling-up effort. The survey included only five questions pertaining mostly to whether and how the data and analysis were used. An overwhelming number of respondents indicated that they indeed found the data and analysis either useful or very useful, with donors and embassies that had been evacuated from Sana'a especially keen. Most respondents reportedly used the information from the survey to keep abreast of the rapidly deteriorating situation on the ground, and used the analysis as an advocacy tool to argue for increased emergency response and funding. Donors and aid organisations such as DFID, USAID and GIZ incorporated the data into situation analyses that informed their country programme planning for 2012.

4 Lessons learned

4.1 Frequency

The monitoring project began in a country context of rapidly worsening conditions, including prices of food, fuel, transportation, and water that were doubling and tripling within weeks. While such situations may call for frequent, biweekly surveys at the height of the crisis, once the situation stabilises (even if it stabilises under conditions that are arguably devastating for vulnerable households) less frequent monitoring is likely to be sufficient. Patterns showing lack of movement among indicators are a signal to shift to less frequent data collection.

4.2 Relationship with respondents

Related to frequency, data collectors reported rising tensions with respondents as weeks became months of implementation. Although respondents were expressly and clearly informed at the outset of the project that data would be collected every two weeks and that respondents would not receive cash or other compensation, respondent fatigue and frustration nonetheless set in. Particularly with vulnerability monitoring, where respondents are chosen precisely because they are most likely to be in need or are most rapidly affected by shocks, such misplaced hope of assistance is not only understandable, but also predictable. Monitoring projects face a dilemma, however, of how to provide some support to clearly struggling families while not affecting the outcome of the survey. The project team sought to offset respondents' irritation by providing one-off donations of back-to-school bags for children in the targeted households; since the survey began at a time when school was not in session, it did not include school-related questions and so the donations were not seen to directly tamper with survey results. The design of the survey – where the same households were repeatedly queried, lent itself to this kind of fatigue. This lesson has been taken into account for the scale-up, and a new sampling strategy has been devised to mitigate respondents' frustration (for more on the scale-up, see Section 5, below).

4.3 Utility

While the usefulness of the data appears to be recognised by donors and embassies, the monitoring project team must work harder within UNICEF and among its cluster partners to encourage staff to use data to monitor the

situation and to mount proactive responses. Missed opportunities around measles in particular highlight that UNICEF and clusters need to be drawn into a culture of ongoing evidence-based planning for both programmatic and emergency response. Part-and-parcel of a stronger culture of evidence-based management, the uptake of results would likely be encouraged by the pre-identification of agreed-upon, sector-specific triggers or benchmarks that can signal when humanitarians should segue from situation monitoring to mounting a response in order to stave off an emergent crisis.

4.4 Sustainability

Begun as a response to an evolving emergency situation, UNICEF's vulnerability monitoring project was not conceived of as a long-term endeavour. Nonetheless, in recognition of the data gap such monitoring fills, UNICEF has transformed the survey in several ways that help it speak better to the political, security, economic, and social transitions likely to occur over the next two years. These transformations better situate the survey to be an instrument not only for gathering data on vulnerable households generally, but also, due to the revised sampling strategy, to support monitoring of the efficacy of social protection initiatives such as the SWF's cash transfer programme. By linking the survey in this way to SFW programming, and working more closely with SWF on strengthening its monitoring and evaluation function, the project team expects improved chances for project sustainability.

4.5 Local capacity

At the outset, the project team assumed that its local partners would have the capacity to not only collect the data but also analyse it in a timely and meaningful way. This assumption proved too ambitious, which resulted in a significant burden on the UNICEF staff member who was managing the project, as well as delays in issuing the reports in the first months. Initially UNICEF had hoped to address this shortcoming by bringing in a project manager who could be fully dedicated to managing the process as well as guaranteeing the quality of the analytic reports and building the capacity of The Democracy School for data management and analysis. Although the team selected a consultant with decades of experience within the Central Statistical Organisation and a strong background in managing nationwide surveys, this addition, too, only slightly reduced

the burden on UNICEF staff. Local capacity for the adoption of the electronic iPad system, on the other hand, far exceeded expectations. The lesson learned for project staff was to capitalise on each organisation's strengths (e.g. The Democracy School was an excellent partner in the data collection effort) and not to expect a 'one-stop-shop' for all services.

4.6 Impact of deteriorating country context on implementation

The need for this project arose from the dire conditions facing the country in 2011. Those same conditions, however, also created enormous challenges to those implementing the project. Beginning in May and lasting until December 2011, electricity typically was available for only two hours a day. Lack of electricity presented challenges in recharging laptops and iPads, entering data and drafting reports by candlelight, and guaranteeing internet connectivity for transmitting reports. To mitigate these problems, UNICEF authorised The Democracy School to purchase a small generator, but fuel scarcity made this solution problematic as well. (At the height of the crisis, queues for petrol in Sana'a extended for up to 5km, requiring three days for citizens to reach the front of the line; diesel was only available on the black market for six times the normal price.) Fuel scarcity also contributed to higher costs for the transportation needed for data collectors to reach respondents. Over and above all of these challenges, all staff related to the project – from The Democracy School, to Prodigy, to UNICEF – endured months of living in a conflict zone, with periodic bouts of shelling in their residential neighbourhoods, gun battles and numerous checkpoints by state and non-state actors on key access roads.¹³

Needless to say, such conditions put additional strain on project-related staff and contribute to delays and occasionally heightened tension or pessimism within and among the teams. At the same time, however, the project also provided an opportunity for team building and boosted UNICEF staff members' feeling of purpose in an environment that appeared otherwise out of control. By managing to implement despite the above challenges, team members were buoyed by a sense of conviction that they were delivering results that would benefit highly vulnerable families at a time of crisis.

5 Future directions

The pilot described above ended on 31 March 2012. Based on the experience of the pilot, as well as important changes in the context that affect the purpose of the project, the survey has been scaled up in 2012 with some important modifications. All 21 governorates in Yemen will be covered in the monthly data collection, and will include 7,560 households from all 21 governorates.

5.1 Coordination

Work processes to implement the national social protection monitoring will be distributed between two organisations, a national and an international institution. Data collection will be conducted by a national Yemeni research institution, which will work closely with the International Policy Centre for Inclusive Growth (IPC-IG), a UNDP research centre based in Brazil. The IPC-IG will be responsible for sampling, finalising the questionnaire, training the enumerators, conducting data analysis, and report writing. The national institution and the IPC-IG will be working in close coordination with a technical advisory group, which includes representation from the Central Statistical Organisation (CSO), the Social Welfare Fund (SWF), the Social Fund for Development (SFD), and the Ministry of Social Affairs and Labour.

5.2 Methodology and sampling

Household data collection will be done on a monthly basis, using a structured interviewer-assisted questionnaire, which is based on the pilot phase, but which has been revised through a wide consultation process that included national and international counterparts. As in the pilot, in each household, the main female care provider is identified as the key respondent. The questionnaire includes questions that will be asked at the beginning and at the end of the survey, and others that will be repeated on a monthly basis. It will include questions on household (HH) characteristics, HH income, risks and vulnerabilities facing children, characteristics of family members, as well as questions on specific sectors mainly on food security, child protection, water and sanitation, child health and education, and child nutrition, including anthropometric measurement for children 0–59 months.

The sample will be a random sample that will include both SWF and non-SWF beneficiaries.

This will provide enough data to monitor the difference in the coping mechanism of those enrolled and not enrolled in the SWF. It will also provide necessary data for possible referral of struggling households to the SWF for inclusion in one of the conditional/non-conditional cash transfer programmes. In addition, efforts will be made to ensure the access of poor HHs to basic social services. As a result, the monitoring project will provide data not only for more timely and improved humanitarian interventions, but will increase the overall evaluability of projects related to the SWF as well as UNICEF.

5.3 Risks/constraints

The cost of the national social protection monitoring is still under negotiation with the implementing partners. The cost of fuel, and the difficult geographic and security situation, in addition to cultural aspects preventing female data collectors in some areas from travelling without '*Mahram*' (a male relative/husband), will add a huge burden to the overall budget. There are continuous discussions on the best modalities to get quality data while keeping the budget reasonable.

5.4 Sustainability

Discussions have started with the CSO to take the responsibility of the National Social Protection Monitoring beyond 2013. CSO is in favour to take the leadership, while ensuring that the Ministry of Social Affairs and Labour and the SWF are part of the advisory group. UNICEF will continue providing technical support to CSO and other governmental partners.

6 Conclusion

Begun at the height of Yemen's 2011 crisis, UNICEF's biweekly household survey provided the only available data in the three targeted governorates on how rapidly deteriorating country conditions were affecting extremely vulnerable households. Its innovative use of electronic data entry systems, moreover, enabled UNICEF to capitalise on the frequent periodicity of the surveys by dramatically shortening the time from field visit to report finalisation. Despite the advantage that such timely data can provide to humanitarian actors in situations of extreme volatility, the survey's full potential – to mount early humanitarian action prior to the outbreak of a full-blown crisis – remained unrealised during the pilot phase.

The opportunities missed by humanitarian actors in Yemen point to a broader, more systemic need for a paradigm-shift among the humanitarian community about how it conceives of timely response. While various rapid needs assessment tools provide humanitarians with excellent resources to define the parameters of their response after an emergency strikes, the international community still struggles with pre-emptive action to reduce suffering and limit the scope of an emergent crisis. Numerous efforts to

develop early warning and early action systems in recent years among a wide array of UN and NGO partners points to an awareness among many that such a shift is necessary. Still, despite these systems, as evidenced in Yemen as well as in more visible crises such as the famine in the Horn of Africa and the cholera outbreak in Haiti, humanitarian actors have more work to do in order to translate robust situation monitoring into effective early action.

Notes

- 1 Each of the other six RTMMV country studies involved extensive fieldwork, such as stakeholder workshops and focus group discussions to assess the effectiveness of the real-time initiative. However, travel limitations due to the security situation prevented a field visit to Yemen. As a result, this RTM initiative was documented by the Yemen Country Office and does not incorporate findings from fieldwork as found in the other country reports.
- 2 World Bank, European Union and the United Nations, *Joint Socio-Economic Assessment 2012*: 40.
- 3 According to an informal periodic survey conducted by UNICEF from April–August 2011 in 15 neighbourhoods in Sana’a, the price of a tanker of water increased by 600 per cent from April to July 2011; the increase disproportionately affected poor urban households, which are nearly 100 per cent reliant upon trucked water. Meanwhile, prices of basic food items increased by 43 per cent from May to July, according to WFP Food Price Index reporting.
- 4 Global Acute Malnutrition (an indicator of population malnutrition informed by a weight for height-based estimate of malnutrition severity among young children).
- 5 Ministry of Public Health and Population, *Nutrition Survey among Under-5 in Al-Hodeidah Governorate, Yemen*, December 2011.
- 6 www.undp.org.ye/reports/Volume_I_Main_Report.pdf.
- 7 Despite the stress of frequent reporting, UNICEF Yemen chose to engage in biweekly data collection in response to rapidly changing conditions, which saw food and water prices quadrupling within a month. Since it was expected that the information from the survey would be used to signal humanitarian needs before they escalated into a full-blown emergency, UNICEF Yemen was concerned that a monthly survey would not be timely enough.
- 8 Female genital mutilation/cutting.
- 9 The selection of cell phone companies, moreover, would have presented possible political challenges for the project. Yemen possesses three cell phone carriers, with uneven coverage throughout the country. One of the main carriers is owned or otherwise controlled by the regime, while the other main carrier is owned by a group that aligned with the opposition, thus threatening to turn what should be a practical consideration of the best technical solution into a political choice.
- 10 Fieldworkers continued to use the paper-based system as well as the iPad system throughout October as a backup in case of unforeseen difficulties with the iPads.
- 11 World Bank, European Union and the United Nations, *Joint Socio-Economic Assessment 2012*: 124–25.
- 12 To detect causality in the data, IFPRI applied a simple fixed-effects logit model. Food insecurity was modelled as a function of conflict, controlling for fixed effects (between locations and over time) and a uniform trend in the data. Several specifications were tested, considering time lags in household food security response to conflict and spill-over effects of conflict occurring in the neighbourhood.
- 13 In September 2011, for example, the road from the centre of Sana’a to the airport was dotted with 19 checkpoints manned by three different official and unofficial groups, and incidents of carjacking were prevalent.