

C-ADAPT



Climate Resilience
for Food Security



The 72-hour emergency assessment approach

IMPROVING THE SPEED AND EFFICIENCY
OF WFP'S RESPONSE



**World Food
Programme**

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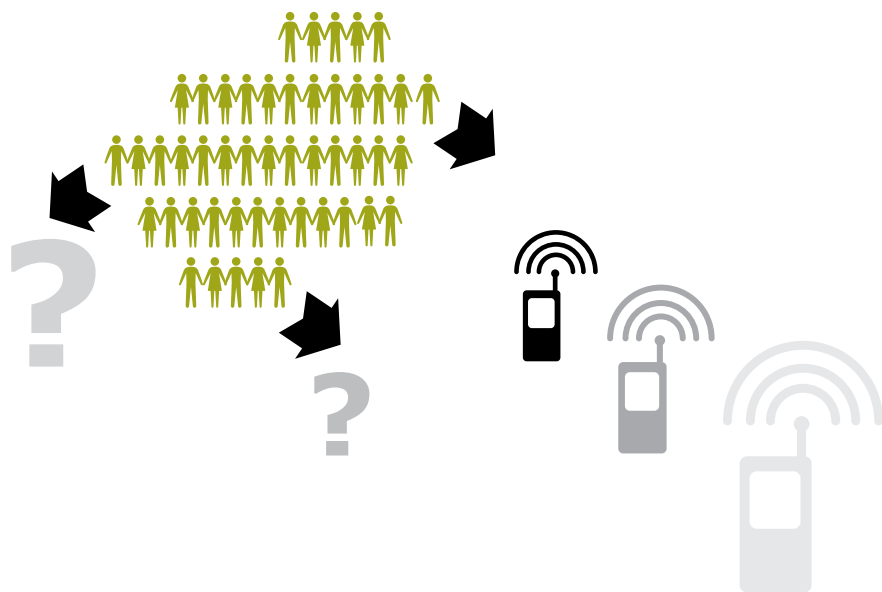
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Table of Contents

Executive Summary	5
1. Preparing for a changing climate.	
Equipping WFP to respond to larger and more frequent sudden-onset disasters	7
2. The 72-hour approach. An educated analysis trumps an educated guess	11
3. The components of the 72-hour approach	13
Step 1: Data preparedness	13
Step 2: The initial 72-hour emergency assessment	14
Step 3: Updating and adjusting the initial analysis in the following days and weeks, based on data from the field	16
4. The 72-hour approach in action. Nepal earthquake case study	19
5. What next?	21



Executive Summary



One of the biggest problems faced by WFP after a **disaster** is **lack of information** on its impacts: **how many people** need assistance, and **where**. Current emergency assessments – which are often released weeks (sometimes months) after a disaster – simply do not provide information quickly enough to guide critical operational decisions in the first few hours and days. The “72-hour assessment approach” aims to **quickly get information to WFP and government decision-makers** when they really need it – not weeks later. It provides a “good enough” snapshot to fill the initial information vacuum, **followed by continuous updates** over the following weeks as more information from the ground comes in. This document provides an overview of the aims, applications and general method behind the 72 hour assessment method.





WFP emergency food distribution in Cox's Bazar, Bangladesh, following massive flash floods in 2015. Many of the most affected areas were very hard to access, requiring WFP to use dozens of boats and trucks to deliver 100 metric tons of food.

1. Preparing for a changing climate

Equipping WFP to respond to larger and more frequent sudden-onset disasters

One of the most direct humanitarian impacts of climate change will be more frequent and intense sudden-onset climate disasters such as floods and cyclones – exposing both governments and communities to increasing losses and damages. In 2013, for example, 90 percent of disasters were climate related (INFORM, 2014). For governments

and humanitarian agencies such as WFP, this means that climate adaptation is not just about helping people address climate risks at the community level. Adaptation must also occur at the institutional level – by equipping humanitarian organizations and national departments of disaster management to respond faster and more frequently to disasters.

Floods in Pakistan's Sindh province, 2012. Millions of people throughout the country were affected, many of whom were already struggling to recover from the floods in 2010 and 2011. With many roads completely submerged, WFP's logistics team had to use a combination of boats, tractors and trucks to deliver emergency food assistance.



WFP trucks transporting food assistance to schools cut off by heavy snowfall in central Afghanistan, 2012



This is why emergency preparedness and response are a critical component of WFP's climate change strategy – including through [insurance](#), [climate services](#) and safety-net mechanisms such as [FoodSECuRE](#), [LEAP](#), and the [African Risk Capacity](#), which all allow WFP and governments to respond faster to climate disasters. These initiatives are all guided by the same basic premise: responding early to disasters saves both lives and money – and we cannot afford to forego these gains as climate disasters become more frequent and more severe.

At the same time, one of the biggest problems faced by governments and humanitarian organizations immediately after a natural disaster is the lack of information on the disaster's impact: which areas were hit hardest and how many people need food assistance. Most government and humanitarian

agencies have well-established procedures for carrying out emergency assessments to answer these questions. In practice, however, these assessments often do not provide information quickly enough to guide the tough decisions that need to be made in the first 72-hour:

How many people need life-saving food assistance in the first few days?

How much assistance is needed?

Where should resources be allocated as priority?

Are local markets functioning well enough to provide cash or vouchers instead of in-kind food assistance?

Recognizing this need to re-align the emergency assessment timeline to WFP's operational or distribution timeline, WFP's Food Security Analysis unit (known as VAM) – in collaboration with the UN's Office for Coordination of Humanitarian Affairs (OCHA) – has been developing and testing a new approach to post-disaster assessments. The method, informally known as the "72-hour approach", aims to provide decision-makers with information when they need it – not weeks later.

WFP developed the 72-hour assessment method in the Asia-Pacific region as a lesson-learned from having to respond to climate disasters year after year, often in several countries at the same time. The Asia-Pacific is one of the world's most climate disaster-prone regions, with thousands of people affected by major typhoons and floods every year: Cyclone Sidr in Bangladesh in 2007, Cyclone Nargis in Myanmar in 2008, the Pakistan floods in 2010-11, Typhoon Haiyan in the Philippines in 2014, and Typhoon Pam in Vanuatu in 2015, to name but a few.

This trend will only worsen due to climate change, as highlighted in a recent [WFP-UK Met Office report](#) on the impacts of climate change on food security and livelihoods in Asia. Population growth alone means that casualties from cyclones in Asia's coastal areas will increase. It is clear that WFP and others must prepare for larger and more frequent climate-related humanitarian crises in Asia-Pacific and elsewhere.

The 72-hour approach is fast expanding beyond its initial scope: while it was initially developed with a focus on climate disasters, it is now also used for non-climate hazards such as earthquakes; similarly, although its main testing ground has so far been Asia Pacific countries, the aim is to expand its use globally. Ultimately, the aim is to improve – in a systematic way – how WFP targets its assistance after disasters, in order to deliver food or cash faster, and to the right people. This article provides humanitarian workers and government disaster management staff with an overview of how the 72-hour approach works.

Flooding in Manila city following Typhoon Ketsana, which hit the Philippines in September 2009, killing over 700 people and leaving more than half a million people displaced.





WFP assessment staff in the field during the data collection exercise for the in-depth household survey, two weeks after the earthquake. Dolakha district, Nepal, 2015

2. The 72-hour approach

An educated analysis trumps an educated guess

The 72-hour approach does not aim to produce a perfect, comprehensive assessment, as that is simply not feasible right after a disaster. Instead, it seeks to give a “best estimate” snapshot in the first few hours to inform initial budgeting and logistical decisions. This might not seem revolutionary. Emergency assessments – by WFP and others – are indeed standard practice after disasters.

Yet, in practice these emergency assessments are often released weeks – sometimes months – after a disaster hits: it usually takes weeks for humanitarian actors and governments to agree on assessment tools and methods, collect household data, analyze the data, write up the report and get it endorsed. By that time, critical decisions have already been made on where immediate assistance is needed, in what form, where and to whom – often based simply on educated guesses.

The 72-hour approach marks a deliberate shift away from this static and cumbersome approach to assessments – not because the assessment tools themselves are particularly new (most of them are not), but because of its emphasis on agility and speed. The approach is meant to provide a “good enough” snapshot to fill the information vacuum at the very start of a disaster, as well as provide continuous updates to this snapshot over the following days and weeks, as more information from the ground comes in. This updating process can be done either using secondary data not available during the initial 72-hour assessment (such as revised GIS layers or aerial photography), or newly collected field data (such as results from key informant checklists or from more in-depth household and market surveys). This process is described in more detail below (see section Step 3: Updating and adjusting the initial assessment in the weeks following the disaster).

The 72-hour method does not necessarily preclude carrying out more in-depth field assessments (e.g. household or trader market surveys). But it explicitly recognizes that such in-depth assessments – while they may in some cases be needed at a later stage to guide the second phase of the operation – cannot guide decisions in the first few days. The 72-hour method therefore advocates for a sequenced approach, with an initial rough assessment (based mostly on secondary data) in

the first 24 to 72-hour, followed by a series of revisions and more in-depth assessments over the next few weeks (including – if necessary – using a household survey).

The timeline on the following page shows how the 72-hour approach performed in practice during the earthquake in Nepal in 2015, compared to the more conventional assessment process used during typhoon Haiyan in the Philippines in 2013. The Nepal diagram shows how the various assessment reports and data collection exercises were sequenced – starting with the initial rough assessment less than 24 hours after the earthquake (72-hour assessment - release 1), which was then revised twice in the following days using updated secondary data (72-hour assessment - releases 2 and 3), followed by a series of rapid checklist-based field assessments (rapid validation assessment - releases 1 to 3), and finally followed by an in-depth survey-based household and trader field assessment (food security and market assessment).

The aim of the 72-hour approach is simple: to give managers some analytical basis – no matter how rough – on which to base initial decisions. The underlying assumption behind this new approach is that an analysis based on the best available data, even if imperfect, is usually better than a “guesstimate”. Put simply, an educated analysis trumps an educated guess.

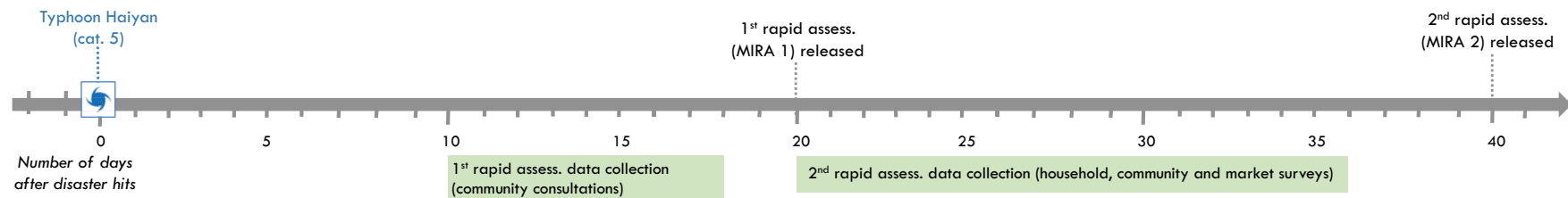


Community members help transport WFP food assistance to villages cut off by floods in eastern Sri Lanka, 2011. Over one million people were affected by the flooding, caused by torrential rains over several days.

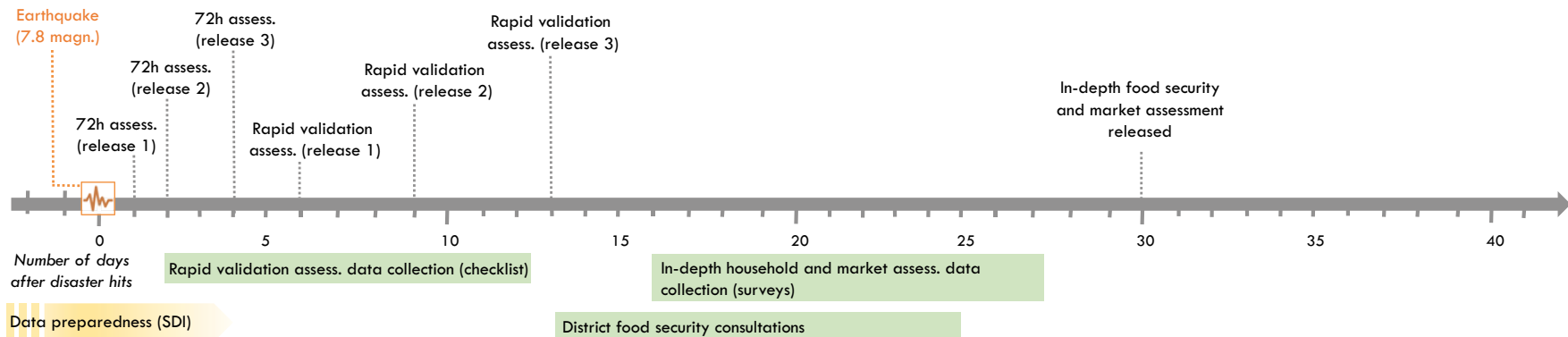
FIGURE 1

Comparison between the more conventional emergency assessment process used by WFP after typhoon Haiyan in the Philippines in 2013 (top), and the 72-hour approach used after the earthquake in Nepal in 2015 (bottom).

REGULAR ASSESSMENT PROCESS – Philippines, Typhoon Haiyan, November 2013



72-HOUR APPROACH – Nepal Earthquake, April 2015

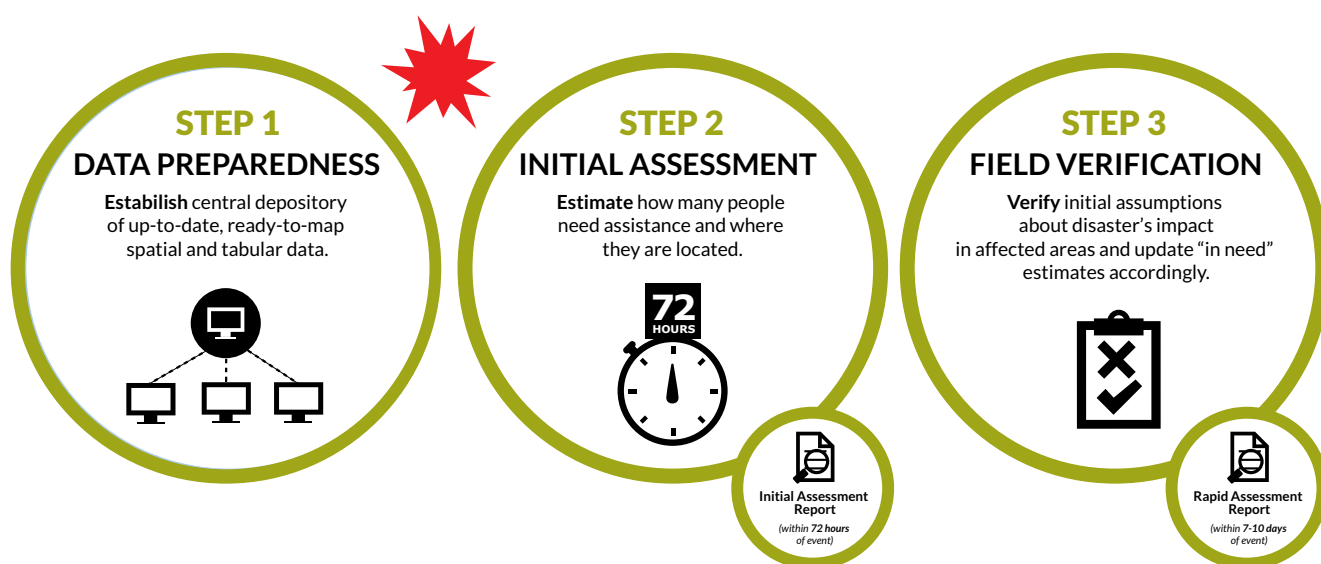


3. The components of the 72-hour approach

The benefits of producing an emergency assessment within the first few hours of a disaster are obvious. However, this initial assessment will only be possible if specific preparedness steps have been carried out before the disaster even hits and it will only be useful if it is continuously refined and updated over the following days and weeks as new information comes in. In other words, the 72-hour assessment process is

not just about the initial emergency assessment itself, but also encompasses the whole preparedness and follow-up activities which must come before and after it. This new approach can therefore be broken down into three steps: (1) data preparedness before the disaster, (2) immediate release of an initial assessment within the first 72-hour and (3) continuous updating of the initial assessment through field verifications.

FIGURE 2
WFP new 3-phase approach to emergency assessments



Step 1: Data preparedness

The first phase aims to ensure that the necessary information needed to generate those first impact maps and figures (areas most affected, number of people needing food assistance etc.) are easily accessible as soon as a disaster hits. Known as “data preparedness”, this is an ongoing process which WFP has been investing in over the past two years, in collaboration with the Office for the Coordination of Humanitarian Affairs (OCHA).

The building block of this effort has been setting up a Spatial Data Infrastructure (SDI) system – a central

repository where ready-to-map information for each country can be stored and shared across WFP, from headquarters, to the regional bureaux, to country offices. The aim is to synchronize data across the organization, with the SDI becoming the single go-to place for the most up-to-date data – thereby reducing any confusion on data validity and redundancy. A regional SDI has already been set up by WFP in Asia Pacific and the plan is to do the same in other regions.

The SDI repository is being populated with socio-economic information (demographics, food security, poverty, etc.), which has been georeferenced (i.e. given geographic coordinates so that it can be mapped) and

is ready to be analyzed. Country office and regional bureau staff are responsible for obtaining this data (from open source repositories, governments, existing WFP data, other development or humanitarian organizations, etc.), uploading it to the SDI and continuously updating/replacing it with the most up-to-date information.

This data preparedness step is key to being able to produce an initial assessment in the first few hours of a disaster, as it means that precious time is not wasted in collecting, cleaning and preparing the data, and the analysis can be carried out immediately.

Step 2: The initial 72-hour emergency assessment

The method for carrying out the secondary data analysis for the initial 72-hour assessment was initially developed during two simulation exercises (a typhoon-scenario in the Philippines and an earthquake-scenario in Nepal), before being put to the test during three real-case emergencies: typhoon Hagupit in the Philippines in December 2014, typhoon Pam in Vanuatu in March 2015, and the earthquake in Nepal in April 2015.

Given the need to prioritize immediate assistance to those most in need, the method is designed to classify and rank affected areas based on impact, and provide an estimate of the numbers of people needing assistance

in each of these areas. This is done by overlaying three layers of information, all of them obtained remotely without on-the-ground data collection:

- Estimated geographic impact of the disaster.** Each area is classified by level of impact – from low to high – based on any available preliminary reports from national disaster agencies, media, satellite imagery, national and international weather monitoring agencies, etc.
- Number of people in each area.** Population numbers are derived from georeferenced census information, which should ideally already be stored in the SDI before the disaster (see section above, Step 1: data preparedness).
- Assumed “resilience” of the population to the given disaster.** The level of “resilience” in each area is classified from low to high, based on indicators such as poverty or housing quality (also georeferenced and stored in the SDI).

These three layers are then combined to provide a summary map of the priority areas for humanitarian assistance (classified from priority 1 to 3), and the number of people in need of assistance in each of these areas. This map is complemented with key contextual information on the affected areas: population profile (livelihoods, diet, food consumption levels), existing social protection systems and logistics, infrastructure and market characteristics.

FIGURE 3

Vanuatu 72-hour assessment: food assistance priority map and caseload (left) and contextual information (right).



WFP assessment staff helping community members respond to the SMS survey sent out by the government and the Food Security Cluster a week after Typhoon Pam hit. The survey, which asked households about their food security situation and how much their livelihoods had been impacted by the typhoon, was intended to provide a more refined picture of the situation, to update WFP's initial remote analysis released in the first 72-hour.



It is important to highlight that there is no fixed formula for determining the figures included in each of the three layers of the analysis. Those carrying out the analysis have to make informed assumptions based on the best available information and knowledge of the country context. Furthermore, while this has been the analytical method used in each of the disasters where the 72-hour assessment approach has so far been tested, it is neither perfect nor etched in stone. Depending on the country context, disaster type and information needs, analysts are encouraged to adjust the types of layers, how each layer is calculated and how the layers are weighed relative to each other when combined.

Finally, it is also worth noting that this type of spatial GIS analysis is not particularly new in itself. What is new is its deliberate and systematic use by WFP vulnerability analysis and mapping (VAM) officers to inform immediate response decisions, right after a disaster. The use of qualitative “resilience” criteria to determine the number of people in need of assistance is also quite new – and is arguably the trickiest part of the analysis. It has raised difficult questions about which criteria to use for a particular disaster. For example, in an earthquake, is income or housing type the better criteria to use as a proxy indicator for a household’s resilience to the shock? And within housing type, should we focus on type of roofing material or type of wall material? And how do we use these criteria to rank the relative level of “resilience” of households living in different areas?

Step 3: Updating and adjusting the initial analysis in the following days and weeks, based on data from the field

The third – and most technically challenging – phase of the 72-hour approach involves regularly updating the initial analysis, during the weeks following the disaster. The 72-hour assessment released in the first few hours is clearly not an end in itself – it is merely the initial step of what should be a fluid, continuous assessment (or rather, re-assessment) process.

With each passing day following a disaster, our understanding of its impacts becomes clearer, as we start receiving data from field verifications, government assessments, and remote sensing. It is therefore key to establish a process and associated tools to allow WFP country offices to quickly and regularly incorporate this new information to revise the initial assessment.

The idea is to regularly re-run the analytical model used in the initial 72-hour secondary analysis, using updated, field-based data on affected areas and numbers of affected people (including any population movements). This is used to produce revised priority areas and numbers of people needing assistance. This will provide essential information to guide programme decisions over the first month following the disaster (or until a more in-depth household field assessment is conducted – if needed).

While it is unrealistic to aim for an identical, standard method which will work in all countries and for all disaster types, WFP and other humanitarian agencies are working to establish a common approach and a range of tools for this updating process, which can be adapted to each context. Various secondary data sources, data collection methods and IT platforms have been tested to determine the best approaches.

For example, in the week following Typhoon Pam in Vanuatu, the government's National Disaster Management Office, in collaboration with WFP and the Food Security Cluster, set up a mobile household

survey using SMS, asking people throughout the country how they had been affected by the typhoon. The aim was to use the results to verify the priority areas initially identified in the 72-hour assessment. This SMS survey unfortunately yielded limited results, due to literacy issues and lack of public communication around it (many people reported having received the SMSs on their phone but having deleted them because they didn't know what they were).

The Food Security Cluster in Vanuatu therefore decided to use another data collection method to validate the initial 72-hour analysis: a short observation checklist distributed to NGO and UN staff already in the field. Unlike many emergency assessment questionnaires, which collect much more detailed information and often require interviewing hundreds of households, the checklist was specifically designed to be concise and quick to complete. Thus, rather than having to carry out a range of interviews in each of the locations visited, the staff simply completed one overall checklist per location, based on the general impression they got from their physical observations and from talking to community leaders and members. The checklist provided a classification of the severity of the cyclone's impacts in six sectors: overall physical and infrastructural damage; agriculture and livelihoods; food needs; markets; housing and health. Visited locations were assigned a single severity score for each of these sectors. This enabled WFP not only to adjust the initial 72 hour priority map, but also to create specific priority maps for each sector, which were used by other humanitarian partners.

After the Nepal earthquake, WFP also used a multi-sector checklist to verify the initial 72 hour assessment. Unlike in Vanuatu, this time WFP was able to capitalize on the extensive field presence of both its own staff of and the government's district Food Security Monitoring System (NeKSAP) – who were able to quickly go to all affected areas and fill in the checklist. The entire 72-hour assessment process in Nepal – from the initial secondary data analysis, to the rapid field validation assessment to the final in-depth household and market assessment – is described in more detail in the case study below.

Paper assessment checklists and phone surveys like the ones used in Vanuatu and Nepal are only some of the possible ways of collecting information to update the initial 72-hour analysis. The BBC Nepali Facebook “experiment” in Nepal (see box below) shows that social media could be a promising channel, yet much work remains to be done to really understand how

to best exploit the potential of Twitter, Facebook etc. as sources of humanitarian data. Other potential sources of information to update the initial 72-hour assessment include satellite imagery, GPS-linked aerial and ground photographs taken by WFP staff or partners, or mobile-app checklists used by humanitarian staff, to name but a few.

BOX 1

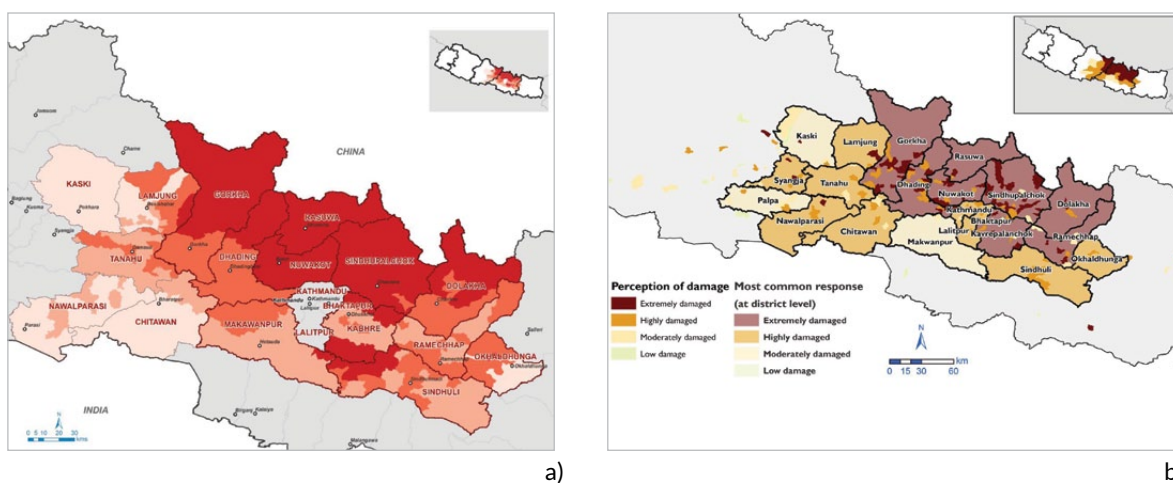
Testing the use of Facebook to collect information after a disaster

After the earthquake in Nepal, WFP decided to test whether social media could be used to collect information on damage. The day of the earthquake, WFP contacted the BBC, who agreed to post a simple question on its BBC Nepali Facebook page, asking readers to assess the level of damage in their area. Readers were asked to rank damage to housing and property in their sub-district, on a scale of 1 to 4, and post their response in the answer feed below the question. Over 320 responses were recorded within the first 48 hours, and translated with the help of Nepali volunteers. Three days later, WFP asked the BBC to re-post the questions, to ensure that it featured on top of the Facebook page and people didn’t have to scroll down to see it. This round received 40 responses.

The results were encouraging, as they matched relatively well with those of the checklist-based field assessment (see comparison below). They served as an alternative source of information against which to corroborate the field assessment results.

FIGURE 4

Comparison between the damage severity map obtained from the rapid field observation assessment done by WFP and government staff (a), and the one obtained using the Facebook responses crowdsourced from the general public (b). In both maps, darker colors indicate higher levels of damage





WFP assessment team arriving in Dolakha district, northern Nepal, a few days after the earthquake. A dozen teams were dispatched throughout the affected areas to do a rapid field validation of the initial 72-hour remote assessment, using short checklists.

4. The 72-hour approach in action

Nepal earthquake case study

A magnitude 7.8 earthquake struck Nepal on 25 April 2015, killing over 8,000 people and destroying more than 750,000 buildings. Using the mapping data and reports already stored on the WFP Nepal SDI server, VAM officers in Bangkok, Nepal and Rome were able to immediately work together to conduct a first remote assessment, which provided an initial snapshot of the earthquake’s impact on livelihoods and food security and preliminary figures of number of people in need of immediate assistance.

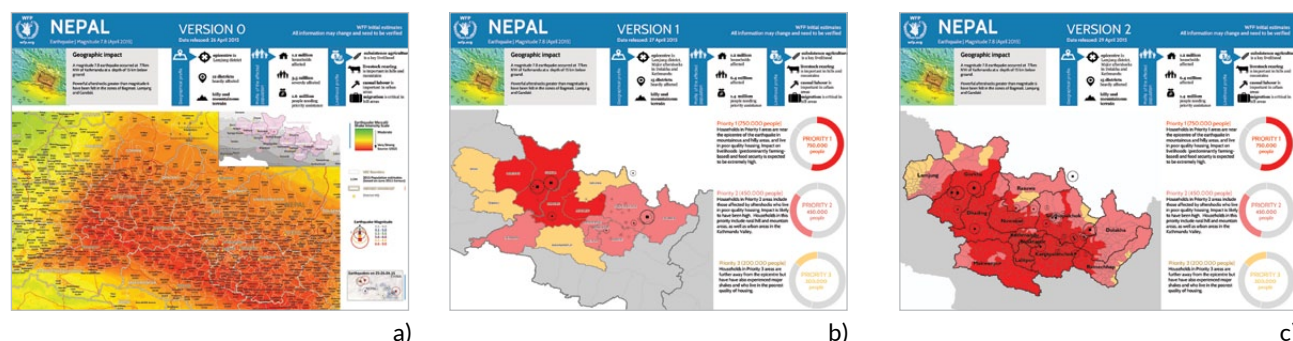
This first report, released less than 24 hours after the earthquake, was the first in a series of three so-called “72-hour assessments” (despite being called the “72-hour assessment approach”, the very initial assessment (based on secondary data) is normally released within 24 hours). The second and third releases of this initial remote assessment were published two and four days after the earthquake, respectively. Each of these new releases provided updated figures, based on the latest available secondary information.



WFP field staff talking to a household affected by the 2015 earthquake in Dholaka district, Nepal, during the in-depth household survey carried out two weeks after the earthquake – after the initial remote 72-hour analysis and rapid field validations.

FIGURE 5

The initial 72-hour emergency assessment released on 26 April 2015(a), and the two updated versions released on 27 April (b) and 29 April (c).

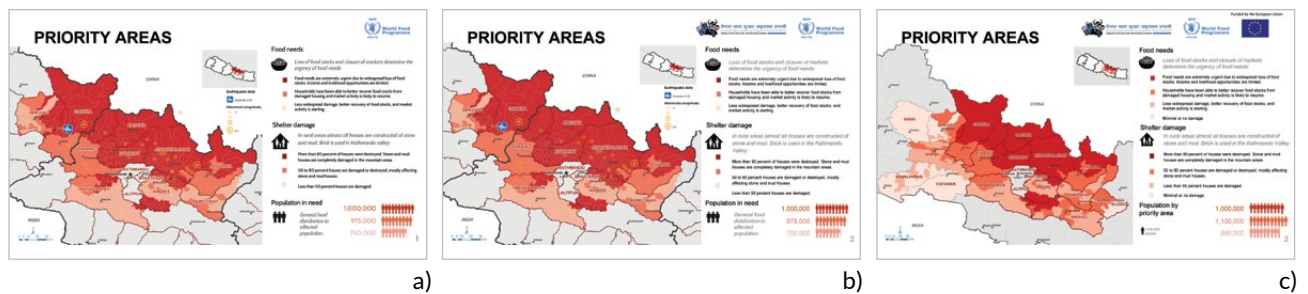


Immediately after this initial phase of remote assessments, WFP initiated a series of rapid field assessments, in order to ground truth and update these figures. Results from this second phase of assessments were based on a short observational checklist completed by WFP field staff and their partners from the government's district food security

monitoring system (NeKSAP). The first of these field-based rapid assessments was released 6 days after the earthquake ([Release 1](#)). Following new rounds of data collection, two updated versions of the report were released 9 days ([Release 2](#)) and 13 days ([Release 3](#)) after the earthquake.

FIGURE 6

The checklist-based rapid assessment released on 1 May (a), and the two updated versions released on 4 May (b) and 8 May (c).

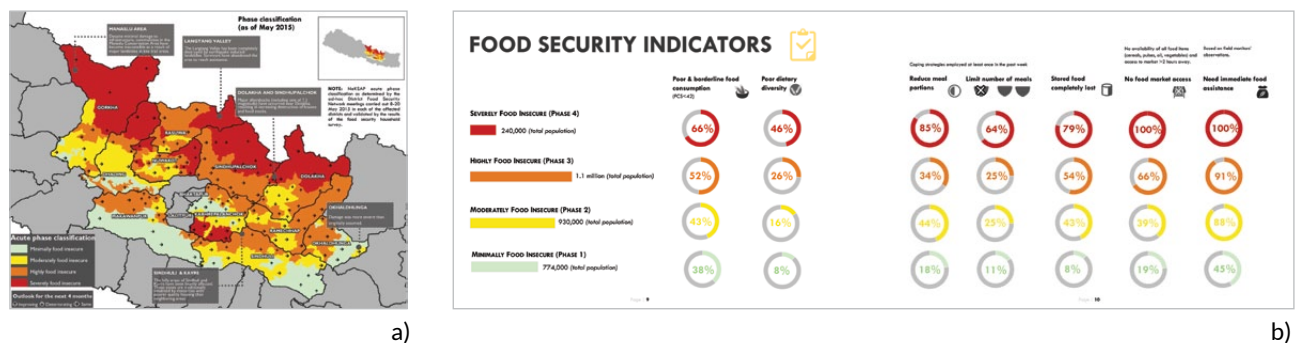


The final phase in this dynamic continuum of assessments was a more conventional in-depth food security assessment, released 30 days after the earthquake. This assessment was based on a survey of 1,000 households, complemented by a district

food security phase classification exercise (which was done using a method inspired by the Integrated Phase Classification (IPC)). The household survey was carried out in all 6 affected districts (excluding the Kathmandu valley area), over a period of 12 days.

FIGURE 7

Sections from the in-depth assessment released on 25 May: district food security phase classification map (a) and results from the household survey for various food security indicators (b).



5. What next?

WFP will continue to test out the 72-hour approach throughout Asia and beyond, as part of its continuous effort to improve how the organization responds to climate disasters and how it helps governments manage the losses and damages associated with these disasters. The approach will be further refined and adapted to different country contexts and different types of sudden-onset disasters (climate and non-climate related).

The key next step is to expand it beyond WFP, so that it becomes embedded into agreed national disaster assessment processes and an integral part of the humanitarian community inter-agency assessment approach. In particular, much work remains to be done to ensure that following a disaster, governments and humanitarian partners systematically collect comparable data across impacted areas, through a coordinated (but quick!) process.

As this approach is rolled out, it will be important to carefully balance the need for common guidance, with the need to keep the approach flexible and adaptable to each context. It is critical that the method keeps evolving over time, to keep up with fast-changing information needs and sources.



A United Nations Humanitarian Air Services (UNHAS) helicopter, operated by WFP. In many emergencies, WFP's logistics team provides common services for the entire humanitarian community – from storage facilities to supporting transport of relief items such as medicine and shelter material.

WFP staff surveying areas affected by Typhoon Haiyan from the air, Philippines.





Tacloban city after being hit by Typhoon Haiyan in 2013, Philippines.

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The 72-hour emergency assessment approach

IMPROVING THE SPEED AND EFFICIENCY OF WFP'S RESPONSE TO DISASTERS



C-ADAPT Climate Resilience
for Food Security:
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The Climate Adaptation Management and Innovation Initiative (C-ADAPT) is an initiative funded by the Government of Sweden's fast-track climate finance that allows WFP and partners to explore innovative climate-induced food insecurity analyses, programmes and best practices, with the goal to help individuals, communities and governments meet their food and nutrition needs under a changing climate.



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