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SAVING LIVES
CHANGING LIVES

Monitoring and evaluation of anticipatory actions for drought

Guidance and tools for Forecast-based Financing programmes

WFP
World Food Programme

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Contents

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Measuring the effectiveness of anticipatory actions for drought

I. Introduction: FbF, M&E and drought

A. Forecast-based Financing for drought

Forecast-based Financing (FbF) is a programmatic approach to anticipate disasters and mitigate their impact. FbF relies on in-depth risk analysis to design and implement anticipatory actions (AA) before a severe weather event occurs. Pre-planned and financed activities are undertaken once a forecast trigger reaches a critical threshold, indicating a high likelihood of an extreme weather event becoming a humanitarian disaster. By acting *early*, FbF programmes aim to avoid or reduce human suffering and losses instead of waiting for negative impacts to materialize and focusing exclusively on emergency *response* operations.[1]

WFP has implemented FbF since 2015 in a growing number of countries that are prone to recurrent climate-related shocks. FbF programme activities are closely aligned with national priorities, leverage local field expertise and build on existing coordination mechanisms. FbF strengthens host governments' and partners' capacities to reduce, anticipate and rapidly respond to the effects of climate shocks on food systems before a hazard causes large-scale negative humanitarian impacts.

In the African region, WFP's FbF approach is primarily focused on droughts for now. Water or moisture shortages can severely affect human lives and livelihoods by disrupting crop production, animal forage, drinking water supplies – which can lead to famine and epidemics among other humanitarian emergencies. WFP implements FbF projects in a number of vulnerable drought-prone countries, integrated within a continuum of early warning, anticipatory action, recovery and resilience programming. Anticipatory actions are usually geared towards protecting agriculture, livelihoods and food security in the short and medium term. To strengthen local capacities, WFP collaborates with national and local government partners to strengthen forecasting systems and access to information to enable quick, efficient and effective decision-making that is based on credible forecasts and pre-agreed danger thresholds or triggers.

The overarching goal of WFP's drought FbF work is to provide communities and households with the resources needed to strengthen their capacity to absorb the effects of drought. WFP's drought-related anticipatory actions aim to maintain and ideally improve the food security status of households and to protect their lives and livelihoods. A range of forecast-based actions for drought is conceivable, ranging from information dissemination (e.g. early warnings), distribution of inputs (e.g. seeds; fertilizer), cash or in-kind transfers (e.g. food; animal feed) to infrastructure rehabilitation (e.g. water sources; food storage facilities) and asset creation programmes.

B. Importance of M&E for drought FbF

The humanitarian sector has extensive experience *responding* to the impacts of droughts, particularly where droughts give rise to severe food insecurity, epidemics or conflict. There is also a large body of

[1] For an introduction to the FbF approach and its application in different contexts see WFP (2019), Forecast-based financing (FbF) - Anticipatory actions for food security.

monitoring and evaluation (M&E) results and research on the effects of emergency *response* on the lives and livelihoods of those affected by the crises.[2]

Much less evidence exists on the effects of *anticipatory* humanitarian action. Several studies assess the benefits of AA in anticipation of extreme floods or cold waves[3], but only very few examine drought-related anticipatory actions.[4] With FbF being considered an innovative approach and a relatively recent addition to the humanitarian sector, it is necessary to generate robust evidence on the effectiveness of AA, also compared to conventional humanitarian response, and to learn what works and how to do better, including for drought.

C. Purpose of this guide

This document seeks to offer practical guidance and examples for monitoring and evaluating anticipatory actions for drought, helping to answer the overarching question of "*Does drought FbF make a difference*" to reduce or mitigate the impacts on affected populations. The primary audience are WFP M&E and Programme staff in country offices (COs), although the methods and tools compiled in this guide should be useful to anyone working on M&E of anticipatory action for drought.

The forecast-based nature of an FbF programme and the complexity of the drought context imply several particularities for M&E that are considered in this guide. Instead of aiming to be an exhaustive programme or project M&E manual – which would require repeating existing guidance available elsewhere – this document focuses on the particular M&E challenges posed by the FbF and drought contexts.[5] It does not prescribe a particular approach or method, but flags key issues, provides perspectives for consideration and points to useful resources and further reading to allow FbF teams to make informed decisions about how to set up their M&E.

The examples and tools in this guide are built in a modular fashion so that country teams can adapt and use them in their programme settings. All content is based on practical experience from FbF programmes and built on existing organizational policy, guidance and M&E practice.

[2] For recent examples, see: OCHA (2019), Inter-Agency Humanitarian Evaluation of the Drought Response in Ethiopia 2015-2018. Doocy, S. , Tappis, H. (2016), Cash-Based Approaches In Humanitarian Emergencies: A Systematic Review provides a synthesis of 108 studies on the effects of cash transfers in humanitarian settings.

[3] In July 2020, a CERF-funded trigger of anticipatory actions to prevent extreme flood impacts in Bangladesh generated a number of evidence products on FbF interventions; the results were not yet published at the time of writing this document. For peer-reviewed studies see, for example, Gros et al. (2019), Household-level effects of providing forecast-based cash in anticipation of extreme weather events: Quasi-experimental evidence from humanitarian interventions in the 2017 floods in Bangladesh; Gros et al. (2020), The effectiveness of forecast-based humanitarian assistance in anticipation of extreme winters: Evidence from an intervention for vulnerable herders in Mongolia.

[4] FAO has published several booklets about the effects of Early Warning Early Action work ahead of severe drought, see: FAO, Impact of Early Warning Early Action: Horn of Africa (2018); Madagascar (2019); Sudan (2019); Philippines (2020).

[5] This guide does not provide general introductions to FbF or programme M&E. It is assumed that the target audience – being FbF and M&E practitioners at country level – already have the requisite foundational knowledge.

Feature 1: NORAD and DANIDA support to FbF in WFP: the project context and focus of this guide

The development of this document was supported by the Norwegian Ministry of Foreign Affairs (NORAD) and the Danish International Development Agency (DANIDA). Their grants have enabled WFP to introduce FbF projects for drought in several COs in Africa, including Djibouti, Kenya, Madagascar, Mozambique, Niger, Uganda and Zimbabwe.

The examples and tools provided in this guide are informed by these FbF projects but remain relevant for all WFP COs as well as external partner agencies and practitioners implementing anticipatory actions for drought. The focus on safeguarding and strengthening the food security and livelihoods of drought-affected populations also shapes this material's thematic orientation. The logical frameworks and the anticipatory actions chosen by the countries are relatively diverse. Therefore, this guidance should also be applicable to other country and drought environments.

It is important to note that the NORAD and DANIDA FbF projects also invest in complementary work to strengthen systems, capacity, and to connect WFP's FbF programme with early warning systems, social protection schemes, vulnerability analysis and other mechanisms such as cash-based transfers and asset creation activities. While these enabling programme components are very important for the success of an FbF initiative, a wealth of resources exists covering M&E of capacity and systems strengthening interventions.† **This document focuses on measuring household-level effects, assessing to what extent providing anticipatory assistance makes a difference to the affected**

D. Building on existing policy, guidance and practice

WFP M&E: This document draws on and assumes that WFP staff are familiar with the organization's core guidance on monitoring and evaluation, particularly as it relates to programmes and indicators focused on food security, livelihoods and resilience: [6]

WFP normative framework for monitoring by COs:

- Minimum Monitoring Requirements (MMRs)[7]
- CRF Indicator Compendium
- Monitoring Standard Operating Procedures (SOP)
- Corporate Results Framework 2017-2021 (CRF)
- CRF Logframe Business Rules[8]

[6] Web links related to WFP policies and guidance may be internal to the organization and accessible to WFP staff only. Users not connected to the WFP intranet may see an error message when opening such internal links.

[7] For WFP staff, the MMRs are supplemented by the Corporate Monitoring Strategy and a suite of Corporate Monitoring Guidance. The Monitoring Foundations e-learning course is another useful resource for WFP staff and partners.

† For example, World Bank (2009), The Capacity Development Results Framework: A strategic and results-oriented approach to learning for capacity development. INTRAC (2010), Monitoring and Evaluating Capacity Building: Is it really that difficult?

[8] The CRF Logframe Business Rules are formulated to inform the design of the Country Strategic Plan (CSP) logframe, and also make reference to "conventional" humanitarian response. Some rules will not be applicable to forecast-based interventions that are implemented at relatively short notice in an area that is not precisely known in advance. For example, rule (xii) stipulates that baselines should be established for all outcome indicators "no later than 3 months before and after an activity start as part of the CSP development process". Rule (xvii) states: "For sudden humanitarian responses implemented for less than six months, performance measurement should focus at output and process level. If the emergency activity is extended beyond 6 months, measurement of the outcome level becomes mandatory. Pre-assistance

Evaluation and assessing effectiveness:

- WFP Evaluation Policy (2016-2021)
- Evaluation Charter (OED 2016/007)
- Decentralized evaluation mini-guide for WFP management at country level

Drought FbF and M&E: WFP's CRF was updated in late 2020 to include selected indicators related to anticipatory action. Several of these are highly relevant for the purpose of this guide, especially: "Number of people covered and assisted through Forecast-based Anticipatory Actions against climate shocks" (CRF ref. G.9); "Number of people provided with direct access to information on climate and weather risks" (CRF ref. G.8); and "Percentage of planned tools developed or reviewed to strengthen national systems for Forecast-based Anticipatory Action" (CRF ref. G.7). As described above, the purpose of this guide is to go beyond counting outputs to understand whether AA *makes a difference* to drought-affected people. It is also worth noting that the other new CRF indicators on FbF – such as the one on strengthening national systems for AA – are not discussed further in this guidance note because its focus is to measure household-level effects, not systems changes or the performance of the forecast trigger system.

The Red Cross Red Crescent's FbF and Early Action for Drought Guidance Notes[12] share insights into analyzing drought hazards, designing forecast thresholds and triggering systems, choosing anticipatory actions and guiding thoughts on how to approach FbF M&E in drought contexts.[9] While some general guidance on M&E of anticipatory actions is available outside of WFP[10], this has not been tailored to FbF for drought.

The remainder of the document is structured as follows: Section II puts forward guiding considerations on the 'what' and 'how' to monitor AA for drought and to assess their effectiveness. Section III provides step-by-step suggestions for M&E planning, activity and output monitoring, outcome assessment and learning. The Annexes contain the examples and tools used throughout the guidance document.

baseline should be established regardless of the duration of the emergency response." Section II discusses the practical feasibility of baseline data collection for FbF interventions, while section C reviews options for measuring outcome-level results.

[9] The author of this document has also co-authored the M&E section of the FbF Drought Guidance Notes. This guide builds on the initial thinking shared in the Drought Guidance Notes and expands these concepts by concrete methodological guidance and tools. The Red Cross Red Crescent FbF Practitioners Manual (chapter 6) provides general methodological suggestions for M&E as well as examples and templates for FbF implementing teams. The manual is supplemented by a range of case studies on how the suggested M&E approaches have been applied in FbF interventions (see footnotes 3 and 4).

[10] Red Cross Red Crescent (2020), FbF Practitioners Manual.

II. Basic considerations for drought FbF M&E

As indicated above, this document does not prescribe a specific M&E approach or method. Instead, it wants to enable FbF programme teams to make informed decisions about how to set up M&E for their interventions, and to put useful tools into their hands. Therefore, this section discusses foundational issues that are important to consider when planning and establishing an M&E process for drought FbF.

A. Anticipatory Action in the context of drought

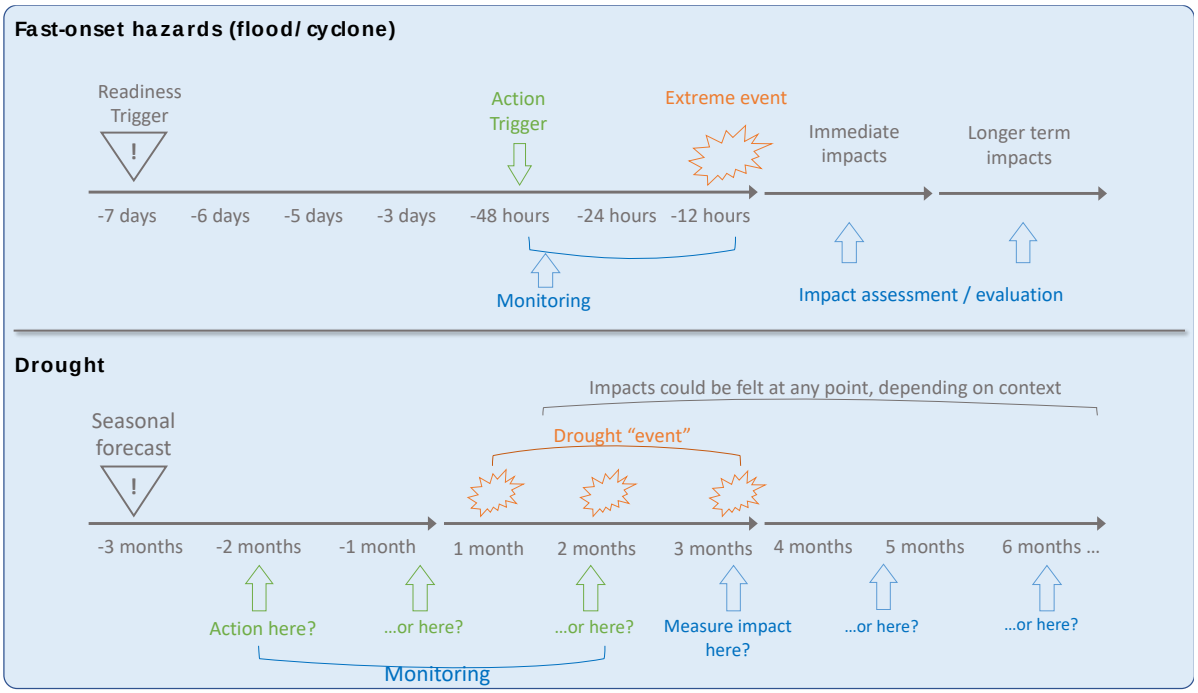
Droughts are highly complex phenomena. While 'drought' generally refers to acute water shortage and a decrease from the expected average of water resource availability over a certain period of time,[11] today it is not understood as a one-off natural disaster anymore but a natural *cycle* that can be worsened depending on a range of hydro-meteorological and socio-economic factors.[11,12]

Figure 1 illustrates the differences in timelines between droughts and fast-onset hazards such as floods and cyclones. Forecasts of the latter typically give anticipatory humanitarian actors a relatively narrow window of opportunity of a few days to several hours. The time constraint limits the choice of anticipatory actions that can be undertaken. The period within which physical impacts occur – devastation from a cyclone making landfall or a land area being flooded – is usually short, from a few hours to days, sometimes weeks in case of severe and prolonged or repeated flooding. Since the anticipatory actions are usually designed to avoid or mitigate the impacts occurring in this short time period, the timing of data collection is typically linked closely to the timing of the extreme weather event.

Given the complexity of drought as a meteorological event with hydrological and agricultural implications, it is challenging to determine **when the ideal time is to deploy anticipatory actions to mitigate drought impacts** and to assess **the intended and unintended effects that anticipatory actions have on the affected population**. By extension, it is important to determine **when and how measuring results is most sensible** in light of the specific drought context and selection of anticipatory actions.

[11] Eslamian, S./F. (eds.) (2018), Handbook of Drought and Water Scarcity.
[12] Heinrich, D., Bailey, M. (2020), Forecast-based Financing and Early Action for Drought: Guidance Notes for the Red Cross Red Crescent.

Figure 1: Timeline comparison of fast-onset hazards vs. droughts (illustrative example)



Source: Adapted from Heinrich and Bailey (2020)[12]

The following section first reviews a simplified theory of change of an AA intervention. This offers a concrete example of the results that drought FbF aims to achieve. Based on the example, the subsequent sections will discuss in more detail what, when and how to measure the effectiveness of AA.

B. Drought FbF theory of change and logical framework

The development of a theory of change (ToC) is the starting point in order to understand and visualize the causal linkages between an intervention and the intended results. Figure 2 outlines a simplified ToC of WFP FbF drought projects, based on AA interventions in Ethiopia, Mozambique, Niger and Zimbabwe. The logical framework[13] then defines how the outputs of different activities contribute to the achievement of the expected results. For each level (output, outcome and impact), the logframe defines the indicators to be measured and the targets to be achieved. For an FbF intervention, this information is defined in the AA SOPs that describe the activities to be implemented, intended beneficiaries, operational and financial requirements.

WFP's normative framework for monitoring[14] provides detailed guidance and resources for developing logical frameworks. This section offers a stylized ToC and logical framework (Annex 1) for anticipatory action to reduce drought impacts, based on a review and synthesis of the FbF interventions that are being planned in the NORAD project countries. The example can be further tailored to specific country, drought and socio-economic contexts.

[13] The terms 'logical framework and 'logframe' are used interchangeably in this document. Both refer to the matrix that captures programme or project results, indicators, baseline and target values, and assumptions, while an M&E plan adds further detail to the logframe by defining data sources, reporting responsibilities and frequencies.

[14] See references and document links in the introduction.

FbF interventions to reduce drought impacts

The main objective of WFP's drought FbF interventions is to reduce impacts on vulnerable smallholder farmers. Most of WFP's FbF projects have prioritized droughts' disruptive effects on livelihoods, primarily agricultural production, and food security, as shown in the integrated ToC depicted in Figure 2. Not every action will be implemented or applicable everywhere. FbF country teams will design anticipatory action plans that are tailored to their specific drought and socio-economic contexts, delivering the results that are most relevant for their target groups.

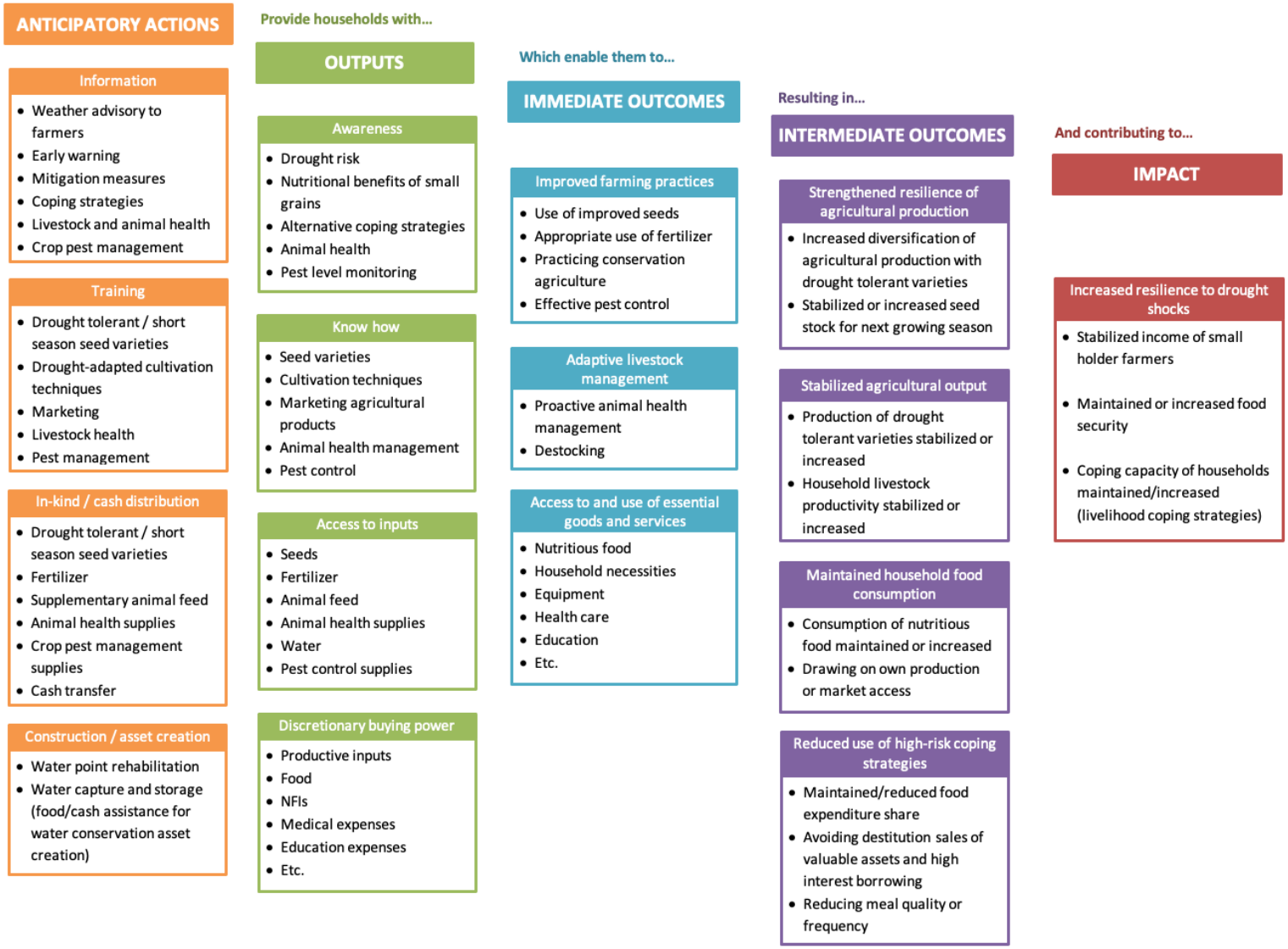
A range of anticipatory actions are conceivable to support livelihoods and food security: disseminating information, offering training, in-kind or cash transfers, and asset creation schemes, among others, to provide farmers with the awareness, know how, inputs or financial resources to drought-proof their farming practices and livestock management and to have continued access to nutritious food. The actions are intended to help farmers stabilize or even increase their farm output, which is expected to positively affect income and access to nutritious food. This should also reduce the need to resort to high-risk coping strategies such as selling valuable assets or resorting to lower quality food. At the same time, anticipatory cash transfers can put fungible resources into the hands of vulnerable households for productive investments or consumptive spending for food access.

The types of anticipatory actions to be implemented and the outputs to be delivered lend themselves to fairly standard monitoring practices, albeit under the time and planning challenges discussed in the following sub-sections. At the outcome level, the interventions seek to change behaviours of how smallholder farmers cultivate crops, manage livestock and the food consumption patterns of drought-affected households. **While activity implementation and output delivery can be tracked via action records and field/process monitoring, survey-based approaches are more suitable for measuring behavioural changes.**

Annex 1 illustrates how a logical framework can be composed following the example of the ToC (Figure 2), based on the existing WFP FbF project country experiences. The logframe assigns indicators for each intended result, showing how progress and success or failure can be measured. The example also includes an overview of the assumptions underlying the results chain.

A question that is frequently asked is: **What is the difference between anticipatory action in drought settings and other disaster risk management or safety net interventions that WFP undertakes**, such as Food for Assets (FFA) or Lean Season Assistance (LSA)? Anticipatory actions are designed to mitigate a drought event's impact on at-risk populations, based on a specific weather forecast that indicates that a drought of a particular severity is likely to happen within a given time period. They are implemented *ahead* of a forecasted extreme climate event to proactively mitigate identified impacts, rather than to: a) respond to humanitarian needs in response to a drought event that has already materialized (as in emergency response); b) reduce long-term vulnerability to disaster risks (as can be the case for FFA); or c) address seasonal food gaps that occur on an annual basis (as is the objective of LSA). Therefore, anticipatory actions are different in scope from multi-year, long-term disaster risk reduction or adaptation programmes that aim to build development gains, as they are **short-term actions intended to cover the residual risk between a severe climate shock and traditional humanitarian response** while also protecting development gains.

Figure 2: Simplified, integrated theory of change of WFP FbF drought projects (see Annex 1 for corresponding logframe with CRF references, including assumptions)

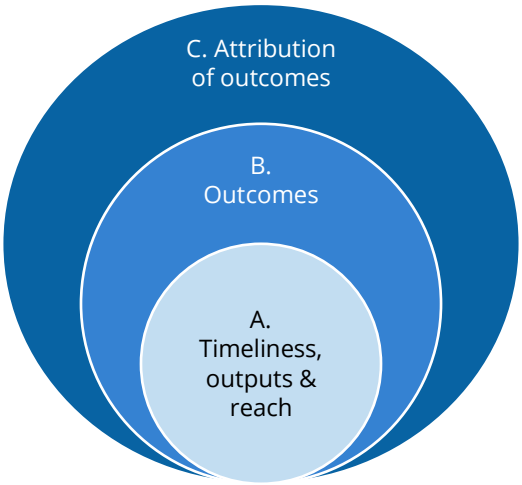


C. Measures of success: reach, outputs and timeliness; outcomes; attribution

The rationale for FbF is that it enables WFP and its partners to act *earlier* than they would normally do. Therefore, knowing **when and how many** people were reached with assistance is particularly important for M&E of drought FbF. Monitoring **outcomes** allows WFP to assess if the expected results can be observed among beneficiaries; and causal attribution analysis enables WFP to understand if the observed results can be **ascribed to the AA intervention**.

Figure 3 illustrates that the three measures of success build on each other: the drought-affected population must be reached by the AA timely enough for the intended outcomes to occur – according to the ToC of the intervention. WFP's process, output and outcome monitoring practices provide the requisite data. Attribution analysis assesses the extent to which observable outcomes are caused by AA.

Figure 3: Three stages of understanding anticipatory action results



i. Reach, outputs and timeliness (process/output monitoring)

At the most basic level, M&E mechanisms must be in place to measure three fundamental parameters:

- **Reach:** How many individuals and how many households were assisted through forecast-based actions and across which geographic area? In case the forecast-based intervention consists of multiple actions, for example, cash-based transfers and distributions of non-food items (NFI), it is important to avoid double-counting beneficiaries.[15]
- **Outputs:** For AA, the following standard WFP output indicator groups are likely to be the most common to be tracked: resources transferred, nutritious food provided, assets created, and communication delivered.
- **Timeliness:** The "cost" of forecast-based humanitarian action is the risk of acting in vain because of the uncertainty attached to the weather prediction.[16] However, the cost of uncertainty should be more than compensated by the advantage of being able to act *before* conditions become extreme. **Therefore, it is essential to track the time when AA reaches the beneficiaries,**

[15] WFP (2019), Guidance Note on Estimating and Counting Beneficiaries.
[16] Therefore, it is generally recommended to choose "no regrets" actions that contribute toward building resilience and have a positive effect on the beneficiaries even if an extreme weather event does not occur.

both in absolute dates and relative to (a) the forecast trigger and (b) the evolution of drought conditions.

Data on the reach and timeliness of AA is easy to generate when planned for in advance. Basic record keeping and monitoring of action implementation provide information on how many people benefitted and the extent to which the actions can be considered timely in relation to the hazard context. FbF programme managers can keep a simple diary of important forecast information, pivotal decisions and actions that were taken.

Annex 3 provides a template and example of such an 'anticipatory action log'. Moreover, depending on the delivery modality of the anticipatory actions, implementing partners can be asked to keep track of how many beneficiaries were reached every day or week using standard distribution monitoring formats. WFP has developed a range of activity implementation monitoring tools that can be used for this purpose.

ii. Outcomes

Building on the understanding of when, where and how many people were reached by AA, **an important learning priority is to understand whether the expected outcomes are observable among the beneficiary population.** This document uses the term 'outcome' broadly to refer to the status of and changes in the experience, behaviour or capacity of the target group**. Outcomes are results beyond the direct control of the AA intervention**. In the context of drought FbF to safeguard food security and livelihoods, it is important to note that 'no change' in status or behaviour may be a desirable result, for example, a maintained Food Consumption Score (FCS) at the 'acceptable' level or the continued avoidance of food-based coping strategies.

Beneficiary outcomes at the household level should be measured using WFP's corporate monitoring tools whenever possible. A wealth of survey instruments is referenced in the MMRs, the Monitoring SOP and the suite of Data Collection Tools for food and cash-based transfers.

When outcome data is collected from AA beneficiaries only (the survey sample is drawn entirely from FbF intervention recipients), it will not be possible to determine the extent to which observable results, if any, can be attributed to the FbF intervention. Therefore, this document includes recommendations on using quasi-experimental methods[17] to understand the contribution of AA to the achievement of outcomes.

iii. Causal attribution of outcomes

A result cannot be claimed to be the effect of anticipatory actions unless there is a demonstrated causal link between the result and the AA intervention. An essential feature of quasi-experimental methods is that they not only measure or describe changes that have occurred but also seek to understand the role of particular interventions in producing these changes. This process is often referred to as causal attribution, causal contribution or causal inference.[18] An overview of different strategies is provided in **Feature 2**.

Given the innovative nature of FbF interventions, it is particularly desirable for FbF programmes to investigate their causal **contribution to results**. The stakes are high for FbF to deliver effective AA that mitigates suffering and losses. Evaluative evidence can inform

[17] See Feature 2 for alternative approaches to causal attribution analysis. Quasi-experimental methods tend to be the most readily accessible and implementable approach for humanitarian organizations implementing FbF.

[18] For a good overview of different approaches to causal attribution and references to further reading see: Rogers, P. (2014), Overview: Strategies for Causal Attribution. UNICEF methodological briefs, impact evaluation no. 6.

decisions about which are the most impactful AA to include in an anticipatory action protocol and where to invest scarce resources. Moreover, FbF is still considered a relatively new approach and robust evidence of its effectiveness is needed.

Feature 2: Strategies for causal attribution

Several different strategies may be used to undertake causal attribution. Each has its own strengths, limitations and suitability according to the specific programme context. One can broadly distinguish three types of approaches:

- **Counterfactual approaches** arrive at an estimate of what would have happened in the absence of a programme or intervention and compare this to what was observed in the presence of the intervention. This approach requires collecting data from a control or comparison group, except when relying on statistical modelling only. The two most commonly used study approaches are experimental designs (both beneficiaries and control group members are randomly chosen, a method also referred to as Randomised Controlled Trial or RCT) and quasi-experimental designs (comparison groups are constructed in various, mostly non-random ways).
- **Consistency of evidence with causal relationship** identifies patterns that would be consistent with a causal relationship, which is usually grounded in a well-developed theory of change, and then seeks confirming and disconfirming evidence. This requires a combination of different methods to achieve robustness. Options include checking results against expert predictions, existing literature, timing of impacts, comparative case studies, process tracing and qualitative comparative analysis.
- **Ruling out alternatives**, an approach which identifies possible alternative causal explanations and seeks information to see if these can be ruled out. Methods include key informant interviews, process tracing, modelling and a general elimination process.

For the majority of contexts in which FbF is currently applied, the **most practical strategy to causal attribution appears to be a counterfactual approach using a quasi-experimental research design to estimate what would have happened without anticipatory actions.** Many COs and programme teams already have some experience in collecting household survey data, and they know where and how to hire additional capacity for sampling, surveying or statistical analysis tasks if needed. In contrast, the more specialized qualitative research skills that are required to implement alternative causal attribution strategies rigorously may be less widely known or accessible to country teams.[19] Therefore, the remainder of this document uses a quasi-experimental study approach as the reference method.

When the comparison group represents the neutral ‘no treatment’ situation, it is possible to measure the absolute effect of the FbF assistance on beneficiary outcomes. It can also be desirable to **compare anticipatory action with conventional humanitarian response, or whichever intervention is considered ‘normal’ in the given context**, to assess whether AA or an alternative mode of assistance has more impact on food security in a drought context. This is typically referred to as ‘multiple treatment arm study’ and can be combined with the neutral counterfactual. In this case, data would be collected from three groups: (i) AA beneficiaries, (ii) intervention B beneficiaries, and (iii) the ‘no treatment’ group.

[19] WFP has developed a Blended Course on Qualitative Research for staff, with additional training materials under development.

In practical terms, this means that, in addition to collecting data on outcome indicators from FbF beneficiaries, **outcome data should also be gathered from a comparison group** of individuals or households that share the same socio-economic characteristics and are equally drought-affected as the intervention group that receives forecast-based assistance. This is **well aligned with WFP's Corporate Monitoring Strategy 2018-2021** in which the increased use of comparison groups is one of the main results to be achieved under workstream 3.3 (*Enhance Use, Credibility and Relevance of Outcome and Process Monitoring*).

For additional information see Annex 6: Research design and analysis plan outline (example).[20,21]

It is also conceivable to **compare the effectiveness of different FbF 'packages' to each other** in the same drought context, to identify which type of assistance is most impactful. For example, beneficiary group A could be given an unconditional cash grant of USD 100, while beneficiary group B receives USD 50 in cash plus USD 50 worth of livestock feed or drought-resistant seeds. Alternatively, one group could receive USD 100 at once at the beginning while the other group receives USD 50 first and USD 50 a bit later. The value of the assistance would be identical in both cases but the configuration would be different. The choice of who receives which 'package' could be randomized at the household, community or district/regional level.

[20] Blanchet, K. et al. (2017), Evidence on public health interventions in humanitarian crises, Lancet, 39, 10109, 2287-2296. O'Mathúna, D., Siriwardhana, C. (2017), Research ethics and evidence for humanitarian health, Ibid. Bruno, W., Haar, R.J. (2020), A systematic literature review of the ethics of conducting research in the humanitarian setting, Conflict and Health, 14, 27.

[21] For an overview of ethical guidance for research in humanitarian settings see ALNAP (2016), Evaluation of Humanitarian Action Guide, section 2.5.

Feature 3: Research ethics in humanitarian contexts

Recognition of the need for evidence-based interventions to help improve the effectiveness and efficiency of humanitarian action has been growing.[20] Research approaches such as quasi-experimental designs can be suitable to generate this much-needed evidence. While any research involving human beings must fulfil ethical standards, this holds particularly true for research with people affected by humanitarian crises.

The United Nations Evaluation Group (UNEG) has issued general UNEG Ethical Guidelines to steer evaluative research conducted by the UN system. Several other agencies have developed ethical guidelines specifically for research in humanitarian settings that also apply to M&E efforts conducted based on this guidance.[21] Important principles include informed consent, 'do no harm', respecting people, their culture and customs, and responsibilities for general and public welfare.

The notion of quasi-experimental research sometimes evokes scepticism among agency staff based on ethical grounds: Collecting data from a comparison group means asking crisis-affected people to respond to interview questions although they did not benefit from a particular humanitarian intervention. In light of this legitimate concern, here are **three issues for consideration**:

(1) It is the prerogative of the local decision makers of the FbF programme whether a quasi-experimental study approach is practical or not. The well-being and safety of everyone involved – the crisis-affected population, agency staff and data collectors – are always the highest priorities.
(2) People affected by disasters deserve effective humanitarian actions that promote health, well-being and livelihoods, respect dignity, and uphold rights. Research that generates robust evidence to help distinguish effective from ineffective interventions can make a significant contribution toward impactful, ethical, anticipatory humanitarian action.
(3) Funding for humanitarian interventions is limited, especially for AA. Unfortunately, it appears almost certain that this situation will prevail for the foreseeable future. Not everyone who is forecasted to be affected by an extreme weather event and who will require assistance will be reached by AA because of a lack of resources. For quasi-experimental research to work, much-needed assistance will not be wilfully withheld from anyone. Funding amounts are simply too small to reach everyone in need. Very unfortunately, there will be disaster-affected people who did not receive AA – and constitute a potential "comparison group".

D. Timing of data collection

The duration and severity of a drought are typically unknown at the time when forecast-based actions are implemented. Anticipatory interventions have to be designed based on assumptions when and for how long the actions will yield the greatest benefit for the targeted population, and when the benefits of the assistance can be expected to have fully materialized.

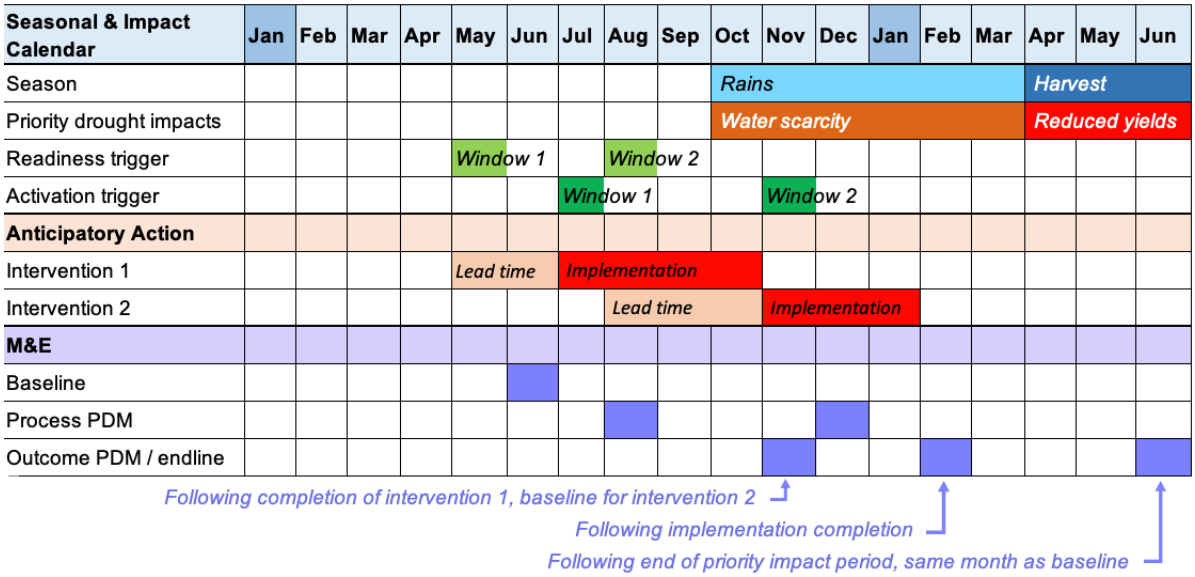
The assumptions about the benefits of AA will differ depending on the type of anticipatory actions to be taken. For example, a cash distribution to enable households to afford food or medical care can show an immediate effect on their health and food security – for as long as the money lasts. In contrast, the results of distributing drought-resistant or fast-maturing seeds or fertilizer may only become fully appreciable during the next growing season or after the harvest.

Therefore, the timing of M&E efforts must be decided based on (a) the timing of the anticipatory actions and (b) the assumptions about the objectives pursued by the intervention, including the timing of the benefits accruing to the drought-affected population. Figure 4 shows a hypothetical timeline of seasonal patterns, the calendar of agricultural activities and the timing of AA; it also illustrates how the

timing of data collection can be decided based on when results (household-level effects) can be expected to materialize.

> **The timing of data collection should be aligned with the type of anticipatory actions and the timing when results are expected to have fully materialized**, not to the hazard context. In other words, the beginning and end of a drought period, to the extent that it can be clearly defined at all, are not necessarily the times when meaningful data about results can be collected.
>
> For example, Post-Distribution Monitoring (PDM) can be conducted shortly after an AA intervention, such as a cash transfer, for process and output monitoring (e.g. to measure beneficiary access to and use of the resources provided), while an outcome survey would be conducted at the end of the time period for which the benefits of the cash amount (e.g. maintaining the beneficiaries' food security) are expected to last.

Figure 4: Planning calendar: Seasonal patterns and timing of anticipatory actions and M&E[22]



The timing of M&E efforts and choice of methods will also depend on **whether the anticipatory actions are implemented as one-off or recurring interventions**. Typically, FbF programmes aim to pre-plan and pre-finance impactful one-off actions that can be implemented quickly as soon as the forecast triggers the activation based on a critical threshold. However, in a drought context a first set of actions may be deployed in anticipation of a poor rainy season, while a second set of actions is implemented before or at the start of the agricultural lean season. Moreover, AA might be activated following, or in parallel with, other programmes such as Lean Season Assistance (LSA). Therefore, M&E aimed at measuring the effects of anticipatory actions must be able to account for the influence of other interventions benefitting the same population group. Otherwise, the data would most likely reflect the **compounding effect** that AA has in conjunction with other assistance.

[22] Adapted from the WFP Drought Anticipatory Action Standard Operating Procedures (SOP) Template. Seasonal calendars for many countries, similar to this one, can be found on the Famine Early Warning System website: https://fews.net

The M&E plan of the intervention must take into account whether AA are one-off or recurring, and be able to account for the influence of other interventions (see Figure 4 for illustrative timelines).

- **Baseline data** can provide a historical point of reference and information on the starting conditions of the beneficiary population, and ideally of a **comparison group** of an equally vulnerable and drought-affected population. A baseline survey can also be used to ascertain whether and when the survey population accessed benefits of other programmes (see following sub-section for a more detailed discussion). Looking at the example in Figure 4, the baseline survey would be conducted in June, just before the first intervention, e.g. a cash transfer, is implemented.
- **Process PDM** can accompany staggered or recurring interventions, for example, monthly cash transfers in advance of and during the drought period. The data can yield valuable insights to help steer the intervention implementation. For example, in Figure 4, process and output monitoring are done in August and December, after the intervention roll-out has begun. In case the data reveal inefficiencies or problems with the distribution process, COs can use this information to make adjustments to the ongoing or the upcoming implementation operation.
- **Outcome PDM** can serve as midline stocktaking and is particularly useful in contexts where the anticipatory actions are intended to sustain benefits over an extended period of time. In the Figure 4 example, outcome PDM is conducted in November and February, following the completion of the first and second intervention (e.g. cash transfer) implementation periods. The PDM data can confirm whether the expected immediate benefits – such as access to food – are materializing. In an extreme drought context, the PDM findings also ensure that interim results are recorded before they may be eroded by worsening drought conditions. Process and outcome PDM can be combined.
- **An outcome survey at endline is best conducted when the intended effects of the intervention have fully materialized**. For example, if the objective of the intervention(s) is to maintain people's food security throughout the priority impact period, one would measure the food security status *at the end* of this time period and hope to see the results to be in the targeted value range. In case a baseline was conducted, ideally the endline is conducted during the same period to avoid seasonal effects. Figure 4 shows that, in this example, the endline survey is conducted in June of year 2, after all interventions are completed and the critical period has ended during which the AA were meant to mitigate negative drought impacts; this is also the same month when the baseline survey was conducted during the previous year. However, when conducting an endline survey more than three months after the intervention completion, it must be considered whether AA benefits will still be visible, measurable and/or recallable by survey respondents. Therefore, the survey could also be conducted sooner if seasonality effects can be controlled for through the survey questionnaire.

It is not required to conduct four surveys to assess the effectiveness of the FbF intervention. **At a minimum, it is suggested to conduct one outcome survey at endline.** If baseline data collection is feasible, it is recommended to also collect baseline data.

E. Baseline data: options and alternatives

The project logframe includes indicators to measure the achievement of intended results. For humanitarian and development interventions, baseline values for these indicators are often established at the start of a programme or project. The purpose of a baseline is usually (a) to know the context in which

an intervention takes place and (b) to determine a reference point (the starting conditions) against which a future situation will be compared.

The feasibility of baseline data collection depends on the lead time between forecast trigger and action implementation: FbF programmes are implemented based on weather or climate forecasts indicating where the hazard impacts are expected to be greatest. This implies that, in many contexts, the intervention area is not usually known in advance with a high degree of certainty. This, in turn, can put limitations on the practical feasibility to collect baseline data.

In case baseline data collection is *not* feasible:

- **Secondary data on vulnerability and hazard exposure** are already built into the SOP trigger mechanism that informs the decision on when and where to act based on a forecast. For example, available data might include indicators on protracted food insecurity, or population groups dependent on rain-fed agriculture, for example, from the last CSP follow up/endline survey or VAM population-based data. This can be useful as an estimate of average conditions at the time when the AA activation is triggered. The usefulness of the data as a baseline for a specific AA intervention will depend on when the data were collected (should be near the start of the AA implementation) and their granularity (requires household level data on the beneficiary population, from the same geographic area).
- **Beneficiary selection can be an opportunity for baseline data collection:** The anticipatory action SOPs must include criteria and an operational process for how AA beneficiaries are selected. The eligibility or targeting criteria are typically based on the same type of vulnerability information used to define the trigger system and applied at the individual or household level. This means that the criteria-based process to select households or individuals to benefit from AA provides an opportunity to also collect data relevant to the result indicators in the logframe.

It is worth reiterating that **a baseline-endline (before-after) comparison alone is neither strictly necessary nor sufficient to ascertain a cause-and-effect relationship** between the intervention and an observed outcome if not also complemented by a comparison vis-à-vis the counterfactual of what would have happened in the absence of the intervention. Baseline or 'starting conditions' can be estimated in later surveys using recall questions.

In case baseline data collection is possible:

- **Follow standard baseline data collection procedures:** WFP's MMRs recommend baselines to be established three months before or three months after the start of the activity as per CRF business rules pertaining to the Country Strategic Plan. According to the MMRs, these baseline values may be pre-assistance, or first monitoring values, depending on the indicator.
- **To assess the counterfactual, collect data from beneficiaries and a comparison group of non-beneficiaries.** This allows to compare the average change over time in the outcome indicators for the beneficiary group to the average change over time for the comparison group, an approach also known as Difference in Differences (DiD), as illustrated in Figure 5.
- **Align baseline data collection with beneficiary targeting.** There are three possible scenarios:
    i. **Beneficiaries are yet to be selected.** A baseline survey can be used to develop (if not already defined in the SOP) or fine-tune the selection criteria. This would require a large sample size because it can be expected that not all households who were interviewed will be eligible for AA assistance. Therefore, their information would not be usable as baseline data for AA beneficiaries.
    ii. **Beneficiary selection criteria are developed but beneficiaries have not yet been selected**. Baseline data collection can serve as a 'screening' opportunity to help identify the

beneficiaries (e.g. by location, or by identifying the proportion of sub-groups to be included).

iii. **Beneficiaries have already been selected.** In some country contexts, government authorities do the beneficiary selection, or community self-targeting mechanisms are used. In these situations, the baseline data collection can be used as a verification exercise, to ensure selected beneficiaries meet the criteria.

A final note on the temporal aspect of baseline (and any other) data, since forecast-based actions and the measurement of their results are understandably time sensitive:

A dataset captures a snapshot of a moment or period of time. It is crucial to **understand the situational context reflected in the data**: Do they represent pre-drought conditions or a status quo that has already been affected by the drought? Was data collected at a time that can be thought of as the "prevailing normal" or exceptional in any way? And lastly, when was the data collected in relation to the FbF system trigger?

From an M&E perspective, baseline data would ideally reflect the situation immediately before anticipatory actions are implemented, acknowledging that it would require an agile approach to collect data from a representative sample of people during the time between AA being triggered and before actions are implemented.

F. Setting indicator targets

Irrespective of whether baseline values are established, an FbF intervention should set targets for "how much" the AA are expected to achieve. As this document focuses on household level effects in the event of an activation, the discussion on setting targets is framed in this context.

Several different ways are conceivable to decide upon the indicator target values in the logframe:

- **Absolute values** can be defined, for example, as minimum or maximum desirable threshold for each indicator ("at least 80% of beneficiaries will have an 'acceptable' FCS"; or "at most 15% of beneficiaries will have a Food Expenditure Share (FES) greater than or equal to 65% of their monthly budget" following the intervention).

  It can be difficult to set absolute targets for drought FbF actions because the intervention effect will depend on (be *relative* to) the duration and severity of the drought. Both factors are not known in advance with any precision. Besides, while a high absolute target for an indicator such as the FCS is desirable, the achievement of that target alone does not preordain a conclusion as to whether this can be attributed to the FbF intervention.

- **Targets over baseline** are the most common form of relative target setting (for example, "15% above the baseline value"). While this alone is not generally recommended for FbF programmes because of the caveats discussed above, one can readily conceive of an approach that would gather baseline information – even from secondary sources that were established well before the FbF trigger (and thus may not reflect near-activation starting conditions) – and define discretionary targets vis-à-vis these baseline values.

- **Relative targets** can be set in relation to the counterfactual of "what would have happened without the FbF intervention". This can be based on the risk analysis and drought impact estimates in the SOPs which might have revealed, for example, that 50% of households in the drought risk area are likely to face deteriorating food security if they remain without assistance.

Since the counterfactual of 'what would have happened without FbF assistance' is not directly observable, the next-best solution is to collect data from a comparison group of equally vulnerable households that was equally affected by the drought but not reached by the FbF intervention (the quasi-experimental approach discussed above).[23] A relative indicator target could look like this: "The proportion of households with an 'acceptable' FCS will be 50% among beneficiaries higher than among comparison households".

Challenges can also arise when setting relative targets: the drought context and the comparison group(s) are dynamic and will evolve over time; estimating the likely effect size of AA can be difficult. The extent to which any effects can be measured with certainty will also depend on the sample size and the quality of the sampling process and the survey data to be collected (discussed in more detail in section III.C below).

Any one or a combination of the above target setting approaches may be suitable for an FbF intervention. The *target* column in the Annex 1 logframe example illustrates how relative targets can be set against the comparison group counterfactual.

G. Summary of M&E options and the recommended approach

Figure 5 provides a visual summary of the common options for generating evidence on drought FbF interventions, based on a hypothetical scenario of anticipatory actions for drought.

The top half of the figure shows the measurements of a given outcome indicator, for example, the FCS. The graph tracks the indicator values for two groups over time: FbF AA beneficiaries (blue dots) and non-beneficiaries (in grey) who are equally vulnerable and likely to be drought-affected. Notice how, on the left, the future beneficiaries and non-beneficiaries start out at about the same level. In the absence of an external shock or programme intervention, one can expect the indicator values to show slight variations as time passes: both groups register small increases in the outcome indicator until the first AA is implemented, for example, a cash transfer. The intervention is rolled out because the situational context is expected to deteriorate. Failing rains might leave herders without sufficient water and forage for their animals. Less income from livestock products can negatively affect their ability to afford sufficient nutritious food for their families. The FCS is likely to drop.

The hypothetical case in Figure 5 indicates that the AA beneficiaries experience an increase in the FCS following the first cash transfer, thanks to the additional money used to buy food. At the same time, the food security of non-beneficiaries starts to decline. However, as the drought conditions continue – and possibly worsen – and the AA cash transfer is spent (presumably not only on food but also on other necessities), the FbF beneficiaries also see their food security weaken, albeit not at the same rate as the people who were not reached by AA. By the time the second cash transfer arrives near the middle of the drought period, AA beneficiaries are back near the indicator level at which the measurement started. The additional resources from the second AA give an immediate boost to their FCS, gradually wearing off as the drought conditions persist. Non-beneficiaries experience a continuing decline in their food security situation.

It is usually not possible to observe the movements of outcome indicator values over time with as many data points as shown in Figure 5. Outcome data are typically collected via surveys which require time and resources. **The bottom half of Figure 5 indicates that data are collected four times in this example:** a baseline and endline survey, and two PDM exercises are conducted in between. The outcome indicator

[23] Annex 6, section 5 includes suggestions on how to identify a comparison group and ensure it is comparable on key characteristics.

data points measured through the four surveys are shown in darker shading in the top half of the figure, illustrating that – in reality – these would be the only known indicator values, everything in between would be unknown. It is also worth noting that WFP's MMRs broadly distinguish between Process PDM and Outcome PDM. While process monitoring data is highly relevant to inform an ongoing intervention, the emphasis in this example is on outcome monitoring to measure AA results.

The conventional method for WFP to collect outcome data on interventions concentrates on beneficiaries before, during and after, eventually making **'before-after' (baseline-endline) comparisons**, indicated as **assessment option (1) in Figure 5**. The example further illustrates what can happen when only relying on baseline-endline data from AA beneficiaries for a given outcome indicator: Since the anticipatory actions are implemented before a drought event of unknown – but expected to be extreme – severity, the impacts of the drought can erode the results achieved by the AA intervention in the short term. The outcome indicator might even record a *lower* score at the time of the endline measurement (after the drought period) than before the drought and AA assistance. The example in Figure 5 shows that, without data on the counterfactual (what would have happened without AA), one would miss the fact that the AA intervention was successful in helping beneficiaries mitigate the worst drought impacts. The outcome data from the **comparison group** (not having received forecast-based assistance) indicate that the drought impacts would have been much worse without AA, revealed by **assessment option (2)**.

In case data is collected from AA beneficiaries and a comparison group of non-beneficiaries in the baseline *and* endline surveys, a **DiD** approach can be used to calculate the effect of the intervention by comparing the average change over time in the outcome indicator for the beneficiary group to the average change over time for the comparison group, highlighted as **assessment option (3)** in Figure 5.

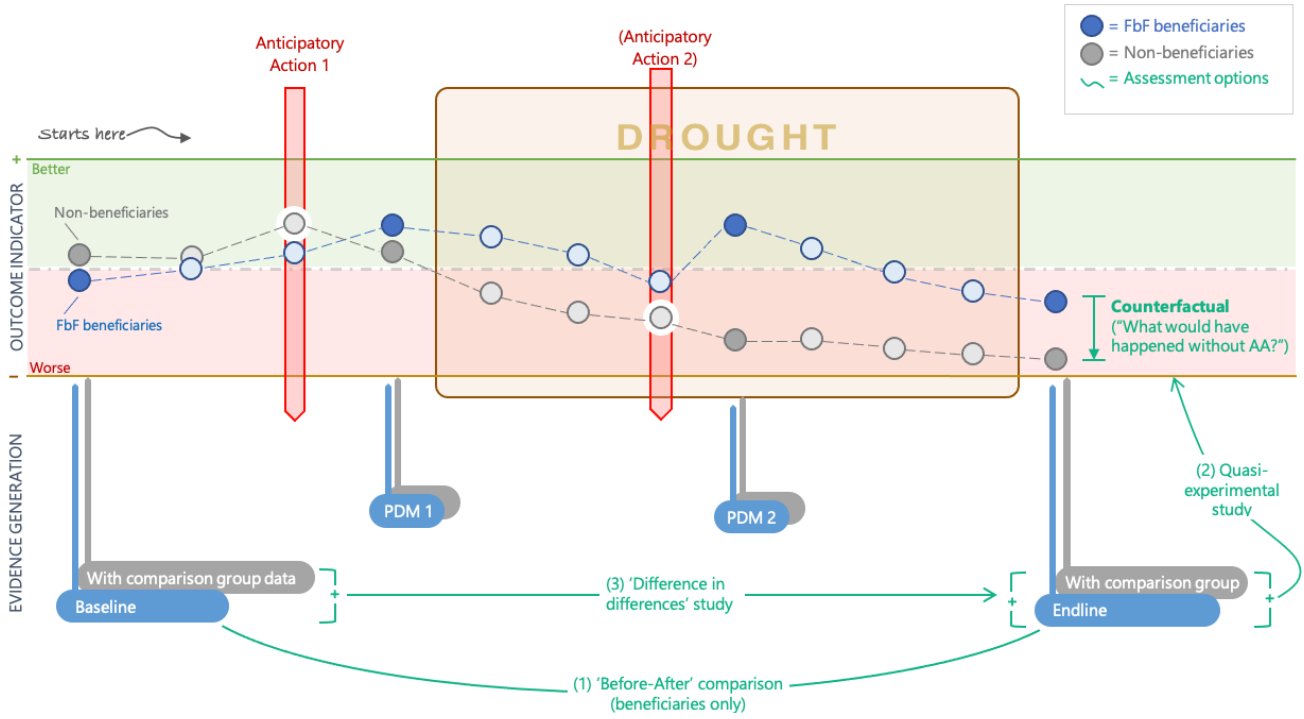
The recommended option is to follow a quasi-experimental approach of measuring outcomes vis-à-vis a comparison group of similarly vulnerable and drought-affected people who did not benefit from the AA intervention, or who received conventional humanitarian response assistance.

In contexts where **baseline data** collection is possible, it is suggested to survey **beneficiaries and a comparison group**. This constitutes the most robust – albeit the most resource-intensive – of the three options illustrated in Figure 5 because it allows for a DiD analysis approach.

The conventional method for WFP to collect outcome data on interventions concentrates on **beneficiaries before, during and after**, eventually making baseline-endline comparisons. In the context of AA interventions, there is a risk that this approach will not effectively capture FbF results.

All three options should build on or be complemented by **standard WFP process and outcome monitoring** exercises (PDM) to assess whether the interventions are reaching the intended beneficiaries and to take interim result measurements.

Figure 5: Options for evidence generation, illustrated on a hypothetical FbF intervention scenario (objective: maintain a given outcome indicator on an acceptable level until after the drought period)



With the basic considerations discussed, the following section provides practical step-by-step suggestions for how to monitor drought FbF actions and assess their effects on the food security, livelihoods and well-being of the drought-affected target population. FbF programme teams should be able to adapt these steps and resources, with some modification, to their specific context.

III. Step-by-step guidance for drought FbF M&E

The following suggestions assume that a drought FbF programme or project has already been established or is in the process of being designed. Ideally, M&E is part of the FbF planning process from the very beginning so that data, analysis and learning can be generated to inform decision about where, when and how to act in anticipation of drought.

The central reference point for the step-by-step guidance are the SOPs because they define the anticipatory actions to be taken when triggered by a forecast. These actions and their effects are the primary object of 'drought FbF M&E'. Another important source of direction will be the logical framework of the FbF programme or project, which can be found either in the SOPs, the FbF project/programme document or the CSP.

Access tools and examples online

Readers with access to WFP intranet resources can download editable versions of the tools and examples referenced in the 'toolbox' segments of this section using this link:

Link to tools and examples (WFP intranet)

Tools that have not been developed specifically for this guide but which were already available elsewhere are referenced with web or intranet links.

A. Planning and setting up the M&E system

1. Review the SOPs and logframe to ensure results and indicators are aligned with the ToC

The development of a **ToC** is the starting point for an FbF intervention and should inform the prioritization of anticipatory actions in the SOPs. As a next step, the **logframe** is created to translate the intervention logic into a results chain with indicators defined to track progress at each step of the way.

An important 'to do' from an M&E perspective is to ensure that all indicators are clearly defined and measurable (see next step).

Toolbox

- Drought FbF ToC (example in Figure 2 on page 11); general guidance on developing ToCs available[24]
- Drought FbF logical framework (example in Annex 1 on page 37)
- WFP CRF logframe template
- WFP How to build your logframe in 16 steps

2. Develop an M&E plan based on the SOPs and logframe

Based on the logframe, it is advisable to develop an **M&E plan** that (a) clearly defines each indicator, (b) identifies a data source or method how data for the indicator will be collected, (c) when data will be collected, and (d) who is responsible for ensuring that data will be collected at the right time using the appropriate methodology. An example is included in Annex 2.

[24] See WFP (2017), Guidance on Developing Theories of Change. Useful examples can also be found in Hivos (2015), Theory of Change Thinking in Practice: A Stepwise Approach.

The development of the M&E plan is an important planning moment to reflect about **when is the most appropriate time to collect outcome data**. As discussed and illustrated in section II, the timing of survey activities should be planned according when the results can be expected to have fully 'materialized'. The planning calendar can serve as a collaborative tool to facilitate a discussion with the FbF team and with affected communities about the timing of events and data collection activities. In addition, Annex 4 includes a matrix tool as a decision aid for when to collect data on results, with further details and guidance.

Ensure that the choice of indicators is aligned with the expected timing of data collection. The M&E plan development is an opportune moment to review this. Some indicators have specific **recall periods**[25] which will be reflected in the data collection tools. Longer recall periods (between 3-12 months) better capture broader trends but are less sensitive to recent changes, while short recall periods (24 hours to 1 week) are very time sensitive.

However, all survey questions will be subject to **recency bias** – the cognitive tendency to favour recent events over more historic ones. Therefore, it is advisable to not delay outcome data collection for too long after the results are expected to have materialized, else they may be forgotten (and intended short-term gains may be eroded by, for example, unexpected and exacerbating drought conditions).

Baseline and endline surveys will generally contain all relevant outcome indicators irrespective of the recall period. For outcome surveys that are done immediately following a distribution (PDM), indicators with short recall periods, such as the FCS, might already reflect the effects of the latest intervention while metrics with longer recall periods, such as the LCS or FES, are less sensitive to recent changes.

Using the example presented in Figure 5, the first PDM might use a shorter questionnaire focusing on process monitoring and selected outcome indicators with short recall periods. This is because a baseline survey was recently completed and behavioural patterns like coping strategies or general household spending may not have changed significantly yet, while the FCS (one week recall period) could already register an improvement thanks to the AA assistance. The second PDM can again include process monitoring questions and feature additional outcome indicators with longer recall periods to assess whether the first intervention was successful, for example, in helping beneficiaries avoid negative coping strategies over the preceding month or so. Therefore, PDM 2 in Figure 5 can be considered as a midline survey.

Here is an overview of the recall periods used in several key indicators at the household and community level:

Food security:

- Household Dietary Diversity Score (HDDS): 24 hours
- Minimum Dietary Diversity for Women (MDD-W): 24 hours.
- FCS and FCS-Nutrition (FCS-N): 7 days
- Food Insecurity Experience Scale (FIES, not a WFP CRF indicator): 12 months
- FES: Household expenditures are split into recall periods of 30 days (food basket), and 6 months depending on estimated frequency of purchase of non-food items or health and education expenditure

Coping strategies and livelihoods:

- Consumption-based Coping Strategy Index (CSI): 7 days

[25] The 'recall period' is the time span referred to in a question which has to be remembered (recalled) by the respondent, for example, "how many times during the last 7 days", or "in the last 24 hours, have you…".

- Livelihood-based Coping Strategies (LCS): 30 days
- Asset Benefit Indicator (ABI) and Environmental Benefit Indicator (EBI): *since the beginning* of the Food for Assets (FFA)/asset creation intervention (applicable to asset creation beneficiaries)

Capacity to manage climatic shocks and risks:

- Climate Capacity Score (CCS): The questions comprising this indicator are mostly binary ('does your community have access to…' – yes/no), and for some items the recall period is three years.

  The CCS indicator as defined in the CRF is not ideally suited to measure the results of an AA intervention. AA is not a long-term capacity development programme but an ad hoc activity intended to mitigate the impact of an impending extreme weather event. However, specific CCS questions can be modified to apply in the AA context. For example, CCS question 1 asks: "Does the community have access to climate/weather information useful for livelihood decision making?". If early warning or other weather information was part of the AA, the question can be modified to ask: "Did you receive an early warning in [time period of AA activation] informing you about heightened drought risk during [risk period]?".

Toolbox

- M&E plan (example in Annex 2)
- CRF Indicator Compendium
- Planning calendar (example in Figure 4, page 17)
- Timing of data collection decision matrix (Annex 4)

3. Ensure implementation monitoring forms and processes are defined and ready

A considerable amount of information can be collected when actions are being implemented. Since the anticipatory actions are often carried out by implementing partners, it is important to agree in advance which data must be generated and at which frequency. At a minimum, weekly or even daily updates about the **number of beneficiaries reached** with assistance, and their **location** and at which **time** should be transmitted to WFP using process PDM tools or the example format provided in Annex 5.

When the mode of implementation allows for direct interactions with beneficiaries (as opposed to, for example, mobile money transfers of cash assistance), useful **additional information can be generated**, for example, about the perceived timeliness and utility of the AA. The forms and data collection processes (the 'who' and 'how') to do this should be developed during the planning phase, before an AA activation occurs.

Increasingly, **mobile data collection** (with questionnaires programmed into tablet devices or smartphones) **and remote surveying** means (through phone interviews or SMS polls) **are gaining traction**.

WFP has made guidance and tools available for these purposes (see toolbox). Their use is encouraged as it can speed up data collection processes, increase the quality of data thanks to the in-built data validation features, and lower the cost of data collection by reducing interview and travel times. FbF teams can deploy the forms included in this guidance document via WFP's Mobile Operational Data Acquisition (MoDa), the organization's version of Open Data Kit (ODK), to mobile devices for field data collection.

Toolbox

- Basic implementation monitoring form for timeliness and reach (example in Annex 5)
- Overview of WFP implementation and outcome data collection tools
- WFP cash-based transfer distribution monitoring form
- WFP food distribution monitoring form
- WFP Remote Monitoring Quick Guide
- WFP Mobile Operational Data Acquisition (MoDa), the organization's version of ODK
- WFP Data Quality Guidance
- WFP Monitoring Recommendations for Covid-19 Response, including guidance for remote data collection

4. Plan for outcome data collection and analysis

The decisions about the **monitoring and research design** – how, when and how often outcome-level results will be measured – are ideally taken at the planning stage, once the SOPs has been finalized. This is important to ensure that the FbF programme will have the requisite **capacity for data collection** and **capacity for analysis** in place when the time comes. Therefore, some of the process steps to be taken and tools to be designed that are mentioned in the 'measuring household level effects' section below are best tackled at this early stage, before a trigger occurs.

Toolbox

- → See toolbox under 'Assessing household-level effects' (page 29)

B. Activity implementation, process and output monitoring

The following steps should be carried out once forecast-based actions have been triggered. Ideally, the planning to be ready for these steps is done before the trigger occurs.

1. Monitor timeliness: keep timeline of events / anticipatory action log

The risk of AA to act in vain if a forecast was inaccurate is offset by the ability to act sooner than usual when the forecast conditions do occur. Therefore, it is very important for FbF programmes to generate evidence on the timeliness of their anticipatory actions.

The timeliness of AA can be thought of in at least three dimensions:

a) Timeliness in relation to **hazard and drought conditions** (for example, "for weeks after the last rainfall" or "with the beginning of the raining season")

b) Timeliness in relation to the **trigger** (for example, "7 days after the SOPs was activated")

c) Timeliness according to **beneficiary perceptions** (for example, beneficiaries may perceive cash assistance to have come too late for their main expenditure needs, or seeds to have come too soon to be kept safe and in good condition until planting)

Timeliness dimensions (a) and (b) can best be tracked by keeping an Anticipatory Action Log; a rudimentary example is included in Annex 3.

The timeliness according to beneficiary perceptions (c) requires collecting feedback from beneficiaries. This can be done at the time of distribution, soon after, or as part of an outcome

survey at a later time. In the latter case, not too much time should have passed between the distribution and the survey because the potential recall bias must be taken into account.[26]

Toolbox

- Anticipatory Action Log (example in Annex 3)

2. Monitor outputs and reach

The reach of anticipatory actions refers to the **number of beneficiaries** receiving assistance and the **geographic coverage** of the interventions, i.e. where they live. This information is best captured as it is generated during distributions or other activity implementation. Implementing partners can use standard reporting processes, and the FbF team can record beneficiary numbers and locations in the Anticipatory Action Log.

An added benefit of entering and storing data electronically through tools such as MoDA (see above) and SCOPE (WFP's beneficiary and transfer management platform) is that it can reduce the cost of data collection and entry and it can be readily visualized on a map – a powerful communication tool to show the reach of an intervention.

Toolbox

- Basic implementation monitoring form for timeliness and reach (example in Annex 5)
- Standard implementing partner reporting

3. Process monitoring

Any interaction with beneficiaries can be an opportunity to collect useful data, for example, during or after anticipatory action implementation or once distribution activities are carried out. The additional data can inform the current implementation or future improvements of the AA design.

For example, monitoring teams can collect initial reactions from beneficiaries about the perceived **relevance and usability** of the assistance provided, and they can highlight **unforeseen constraints or opportunities** that may affect the effectiveness of the anticipatory actions. For instance, if a cash distribution is meant to enable farmers to buy supplementary feed for their livestock, but feed is not available in the local market, the immediate feedback from beneficiaries can flag this supply shortage early on and enable the FbF team to explore alternative actions.

The type of operationally relevant information to be collected, if any, depends on the AA and the local drought context. Data can be collected in **face-to-face interviews** using the basic implementation monitoring form (see toolbox) or via **periodic telephone check-ins** with beneficiaries, with those

[26] A number of studies, mainly from the health sector, have shown that longer recall periods do not automatically translate into greater recall bias. The main take-away is that the recall period must correspond to the characteristics of the phenomenon of interest and the purpose of the assessment. A recent study with rural farmers in Bangladesh found that food expenditures and livelihood-related tasks (for example, the amount of time worked on farm) were recalled with considerable consistency over longer periods of time, while non-food expenditures and non-livelihood related questions seem to be more likely to be forgotten or mis-remembered. Bell et al. (2019), Assessing recall bias and measurement error in high-frequency social data collection for human-environment research, Population and Environment 40, 325–345. On flexible recall periods see Stull et al. (2009), Optimal recall periods for patient-reported outcomes: challenges and potential solutions, Current Medical Research and Opinion, 25, 4. See also Kjellsson et al. (2014), Forgetting to remember or remembering to forget: A study of the recall period length in health care survey questions, Journal of Health Economics, 25, 34-46.

who have phones and whose phone numbers have been collected during the registration or distribution.

4. Consider periodic check-ins, where relevant

WFP's "regular" programmes have periodic monitoring requirements that are defined in the organization's normative framework for monitoring by COs. While the timing of FbF interventions and their effects may be somewhat different, it is equally relevant for them to learn from the beneficiaries' experiences.

> The longer time horizon of droughts means that there may be room for "top-up" actions or mid-implementation course corrections. Therefore, instead of only planning for an initial process PDM effort and a final outcome survey, FbF teams may consider conducting periodic check-ins with beneficiaries.

The periodic check-ins can be set up with a randomly selected sub-set of beneficiaries and fielded via short phone calls or SMS polls. Key information to collect could pertain to (a) the status of local drought conditions, (b) agricultural activity, (c) food security, and (d) any other feedback or concerns.

5. Consider alternative data sources and opportunities to generate insights

There may be alternatives to collecting data directly from beneficiaries to generate insights that are relevant for programme decision making. For example, **remote sensing** – satellite or arial imagery and drone footage – can provide information on real-time changes in drought conditions or agricultural activity (identifying fields where planting has begun; soil conditions; forage availability; or crop damages). **Other humanitarian agencies** with activities in the areas where the AA are implemented may be able to share data about local conditions or movements of people.

C. Assessing household-level effects

1. Choose a research design

The decision on how to measure the effects of AA on the drought-affected population is the prerogative of the FbF team. The WFP minimum requirement is that outcomes are measured following the guidance in the normative framework. As discussed in section II, this guidance document proposes to go one step further and use a **quasi-experimental** study approach to assess whether observable outcomes can be attributed to the forecast-based intervention. This involves collecting **household survey** data from beneficiaries and a **comparison group** of equally drought-affected and similarly vulnerable households that did not receive AA assistance, and/or a group of beneficiaries who received conventional humanitarian response assistance.[27]

In addition to household survey data, it is recommended to collect **qualitative data** that help contextualize the quantitative findings, yield richer contextual insights and contribute to answering the 'why' questions behind some of the key findings that emerge. For example, immediately once preliminary results from the quantitative survey data analysis area available, focus group discussions and key informant interviews can reveal why beneficiaries did or did not decide to spend their cash

[27] For an overview of options and practical approaches for selecting comparison groups and their trade-offs see: White, H. (2013), An introduction to the use of randomised control trials to evaluate development interventions; White, H. and Sabarwal, S. (2014), Quasi-Experimental Design and Methods: Methodological Briefs – Impact Evaluation No. 8; White, H., Sabarwal, S. and de Hoop, T. (2014), Randomized Controlled Trials (RCTs): Methodological Briefs – Impact Evaluation No. 7.

transfer resources on a particular purpose, or why agricultural inputs distributed via AA could not be used by the beneficiaries as foreseen in the SOPs.

The timing of when outcome-level data are collected is very important, as discussed in section II and should be built into the research design, based on the drought situation and informed assumptions about when results can be expected to have fully materialized. It may also be desirable to **plan for more than one outcome/impact assessment**, for example, a short-term assessment and a medium-term assessment to determine whether the immediate benefits of FbF assistance were retained or had an influence over a longer period of time.

Annex 6 includes a research design outline with practical suggestions for **how to frame the assessment approach**. Annex 6, section 5 includes suggestions on **how to identify a comparison group**, which will involve a screening and listing of equally vulnerable and drought-affected districts, communities and households that were not reached with AA assistance.

Toolbox

- Research design outline (example in Annex 6)

2. Define a sampling approach

Besides the resources available and the overall operational context, the sample size to be chosen depends on several factors:

- Geographic coverage and reach of the intervention (total population of interest)
- Acceptable margin of error and the desired confidence level
- The minimum effect size and the anticipated distribution of results (whether we expect 50% of respondents to be food insecure or 90% has implications for the required sample size)
- The specific sampling strategy, for example, because the number and size of clusters in the sample (e.g. how many households are interviewed in each sampled community) affects the size of the sampling error
- Types of anticipatory actions and the FbF intervention eligibility criteria (also called beneficiary selection or targeting criteria) because they will determine how to identify a suitable comparison group

The usefulness of a quasi-experimental design hinges on the ability to identify *statistically significant* differences between the FbF intervention and the comparison group. A (desirable) result that indicates FbF beneficiaries experiencing a 10% lower food expenditure share than the comparison group, on average, will not be meaningful if this difference is "consumed" by a sampling error margin of 15%.

Because an appropriate sampling strategy is so decisive, it is important to ensure that the FbF team has adequate capacity available to do the sampling. The sampling frame can be prepared with in-house capacity based on existing guidance (see toolbox), or a statistician/demographer is brought on board under contract or through partners to help prepare a sampling approach.

Based on the typical FbF intervention sizes and in line with WFP's guidance for two-stage cluster sampling, it can be expected that the **sample size** will be between 300 and 600 *per group*, i.e. a total of 600 to 1,200 interviews will need to be conducted. These figures are for general orientation only and must be calculated for the respective intervention and context.

The research design outline in Annex 6 includes basic sketches of a sampling approach.

Toolbox

- Research design outline (example in Annex 6)
- WFP Sampling Quick Guide
- Raosoft Sample Size Calculator

3. Tailor data collection tools to actions, results and context

The questionnaire design follows the intervention's ToC and the definition of indicators in the logframe and the M&E plan. The choice and sequencing of questions should also be guided by the assumed pathway of change which the survey results can help to confirm or disprove. Consider two examples:

- Cash distribution: Assumed pathway of change (ToC): FbF intervention distributes cash to beneficiaries. → Beneficiaries are able to buy nutritious food. → Beneficiaries will be able to eat more and consistently nutritious food for as long as the money lasts. Monitoring information should already be available to indicate when beneficiaries received the money. The survey can include questions to assess how beneficiaries spent the money (whether primarily on food or other expenses), for how long it lasted, what their current food security status is and whether they relied on adverse coping strategies, and how the latter two findings compare to similarly vulnerable and affected households who did not receive FbF cash assistance.
- Seed and fertilizer distribution: Beneficiaries have seeds and fertilizer available. → They will be able to plant at the right time and apply appropriate amounts of fertilizer to ensure fast maturing crops. → Beneficiaries will experience a better harvest than comparison households (a distribution of supplementary animal feed would retrace similar steps but with the result of having healthier animals or less animal mortality at a certain point in time). The survey will include questions on whether and when beneficiaries made use of the FbF supplies, whether the crops matured as planned or any challenges were encountered, and will compare planting and harvesting outcomes between beneficiaries and comparison households.

The draft questionnaire should be field tested, as is standard practice, to ensure that all questions are clear, concepts are universally understood, and response options anticipate the majority of given answers to the extent possible.

It is advisable to start programming the questionnaire into MoDa or any other electronic data collection platform well in advance of the field data collection. This will allow the team to make full use of the data validation features of such platforms and be sure to have completed the technical setup without rushing, which can lead to errors that are difficult to fix once data collection has begun.

Toolbox

- Outcome survey questionnaire example (Annex 7)
- WFP Data Collection Tools
- CRF Indicator Compendium
- WFP Mobile Operational Data Acquisition (MoDa), the organization's version of ODK

4. Collect data

As the sampling strategy and data collection tools have been developed in previous steps, the primary data collection becomes a significant logistical task that involves:

- Training enumerators
- Planning field work logistics

- Quality assurance of data collection

Advance planning is essential to have sufficient capacity for data collection available at the appropriate time. Data is commonly collected by any one or a combination of WFP, partner and government staff who all need to be trained on the questionnaires and data collection protocols.

In case data collection is externalized, partnerships with academic institutions are a promising avenue and can be set up to provide assistance with the sampling strategy; hiring, training and coordinating enumerators for field work; and doing data analysis. Framework partnership contracts can be established during the design phase of an FbF programme and include an activation clause: the main set of tasks of the partnership are only activated when the FbF system is triggered.

Toolbox

- Monitoring Standard Operating Procedures (SOP)
- WFP Mobile Operational Data Acquisition (MoDa), the organization's version of ODK

5. Analyse data

At the heart of the quasi-experimental assessment design is the comparison of outcomes between FbF beneficiaries and a comparable group of non-beneficiaries. As indicated under step 2, simple descriptive statistics and frequency counts will be insufficient as they do not take into account the sampling error. Instead, outcome indicators must be tested for statistically significant differences between the groups, or their absence confirmed as a sign of potential ineffectiveness of the intervention.

The research design outline in Annex 6 includes a basic example of how a **data analysis plan** can be presented.

The results of the analysis should be reported in whichever format is most suitable to the operational context of the CO. For example, an outcome monitoring report, including charts and data tables, can be produced to provide a detailed account of the analytical results, while shorter or visual summaries may be more appropriate for external audiences (see below).

WFP corporate indicators should be reported through the appropriate channels (COMET).

Statistical data analysis using a quasi-experimental approach is a technical task with specific capacity requirements. Likewise, the **analysis of qualitative data** from focus group discussions (FGD) and key informant interview (KII) – if it is included in the data collection (see C.1 above) – **demands a methodological approach and rigour**. It is recommended to take stock of the existing in-house capacity – regarding technical expertise of staff and the availability of suitable software packages[28] – and consider bringing on board additional expertise when required. The most commonly sought profiles are statisticians, demographers or qualitative research specialists.

Toolbox

- Research design and analysis plan outline (example in Annex 6)

[28] *SPSS* and *Stata* are commonly available, commercial software solutions and can be used for the types of statistical test required for this analysis. *R* is a free, open-source alternative with equally powerful statistical analysis and visualization functions. Software packages to assist with coding and analysing qualitative data can be found online, some of them for free.

D. Learning

The primary objective of this document is to support FbF teams in generating data-driven insights about whether and how their interventions make a difference to vulnerable people affected by drought. The conclusions should allow WFP FbF teams to design more effective AA, and enable drought-affected people to cope better with extreme weather events in the future.

1. Review and interpret data and draw conclusions about the FbF programme

Once the process and outcome survey data are analysed and the results are written up, it is important to ensure that this valuable information is used.

An **After Action Review (AAR)** can be a suitable exercise to reflect on results, guided by the typical AAR questions: (i) What was expected to happen? (ii) What actually occurred? (iii) What went well and why? (iv) What can be improved and how?

It is recommended to plan for a strategic moment of reflection that allows the FbF team and its partners to engage with and interrogate the findings, and to draw conclusions about how the FbF programme can be strengthened. This can be done as a stand-alone meeting or built into a longer (2-3 days) lessons learned workshop about the FbF activation.

Toolbox

- Lessons learned session or workshop guidance (example in Annex 8)

2. Prepare, share and discuss findings with key audiences, including affected people

WFP's Strategy for Accountability to Affected Populations (AAP) commits the organization to three key activities that are meant to operationalize accountability: information provision, consultation, and complaints and feedback mechanisms (CFM).

It is good practice to design M&E processes not as extractive information gathering exercises but as endeavours of shared learning.

In addition to technical reports and presentations, FbF programmes should **share M&E findings back to the drought-affected populations**. Insights about which adaptation, livelihood or coping strategies have proven to be more successful during the drought conditions can help vulnerable people prepare better and recover faster from the extreme weather event.

The format in which findings are shared should be tailored to the community audience, for example, by oral presentation in group meetings, visual representations of the results, and participatory processes for discussing and reflecting on the findings.

Guidance at a glance: 1-page summary

WHAT TO MEASURE?

The guidance provides recommendations for answering the following questions:

- How many people were reached with anticipatory actions?
- What and how much assistance did beneficiaries receive?
- How timely was the AA? Did assistance arrive earlier than it would normally have?
- To what extent can changes in household-level outcomes, if any, be attributed to the AA intervention?

HOW TO ASSESS?

This guidance recommends assessing the effects of AA using a quasi-experimental approach, that is, by measuring differences in outcomes, if any, between beneficiary households and a comparison group of similarly vulnerable and drought-affected households who did not benefit from the AA intervention, and/or who benefited from a different intervention aiming to achieve the same outcomes. This is aligned with WFP's Corporate Monitoring Strategy which encourages the use of comparison groups for impact assessment.

WHEN TO COLLECT DATA?

This approach requires collecting sample survey data from FbF beneficiaries and comparison households *at least once* at endline, and ideally also at baseline. A midline survey, for example, in the form of an outcome PDM, is recommended for one-off or recurring interventions that are designed to cover a longer period of time (else the drought conditions might erode benefits that may have been observable previously).

WHAT ARE THE CAPACITY REQUIREMENTS?

The suggested approach is fully aligned with existing WFP M&E processes and tools, including the organization's increasing attention to comparison groups for impact assessment. Depending on the types of AA chosen by the CO, some outcome indicators (e.g. related to livestock productivity) may be non-standard to WFP and will require some customization. Moreover, testing for statistical significance is an important part of intervention-comparison group analysis. In case in-house time or capacity are limited, CO teams may consider hiring temporary support using the available FbF project funds to support the design or implementation of their AA activation M&E.

STEP-BY-STEP GUIDANCE

A. Planning and setting up the M&E system

1. Review the AA SOPs and logframe (Annex 1) to ensure results and indicators are aligned with the ToC (Figure 2).
2. Develop an M&E plan (Annex 2) based on the SOPs and logframe. → Align choice of indicators (recall periods!) with timing of data collection and when outcomes (results) are expected to materialize.
3. Ensure implementation monitoring forms and processes are defined and ready.
4. Plan for outcome data collection and analysis. → See C. below and prepare questionnaires, data collection and analysis according to research design. See also timing of data collection decision matrix (Annex 4).

B. Activity implementation, process and output monitoring

1. Monitor timeliness: keep timeline of events. → Anticipatory action log (Annex 3)
2. Monitor outputs and reach. → Standard output monitoring; basic monitoring form for timeliness and reach (Annex 5).
3. Process monitoring.
4. Consider periodic check-ins, where relevant.
5. Consider alternative data sources and opportunities to generate insights.

C. Assessing household-level effects

1. Choose a research design. → A quasi-experimental approach is recommended; research design outline (Annex 6).
2. Define a sampling approach. → Sample size should be sufficient to detect significant differences based on expected effect size.
3. Tailor data collection tools to actions, results and context. → Questionnaire design; example (Annex 7).
4. Collect data. → Surveys should cover beneficiaries and comparison households, at endline and ideally baseline.

5. Analyse data. → Test for statistically significant differences in outcomes between beneficiaries and comparison group.

D. Learning

1. Review and interpret data and draw conclusions about the FbF programme. → Lessons learned workshop guidance (Annex 8).
2. Prepare, share and discuss findings with key audiences, including affected people.

Contribute your tools and insights

Readers are encouraged to share their adapted research designs, questionnaires or analytical results with the PRO-C team. Materials can be added to the growing online repository of tools and benefit FbF practitioners in other countries.

Annex

Annex 1: Logical framework for a drought FbF intervention (example)

This logical framework is based on the ToC shown in Figure 2 and serves as an example of how indicators, target values, means of verification and assumptions can be established. The indicators and targets in this example are defined so they apply **in the event of a trigger**, when anticipatory actions (AA) have been implemented.

Since every country context and SOP is different, this guidance does not prescribe a common set of indicators that *must* be monitored for every FbF intervention. It is recommended that standard CRF indicators are included wherever possible (esp. on food security, see 'ultimate outcomes' below).

LEVEL	Outcome / output	INDICATORS [CRF ref. numbers]	BASELINE	TARGET compared to *'without AA' scenario*	Means of verification	Assumptions
ULTIMATE OUTCOMES	Household food security and livelihoods protected from negative drought impacts	**I.1** Food Consumption Score (FCS) - proportion acceptable/borderline/poor [CRF ref. 1.1.1/ 3.1.5/ 4.1.1]	See section II for a discussion on relevance/ options for baseline data	+20%	Household sample survey of among beneficiaries and comparison households following an activation of anticipatory actions (*Survey*)	The severity of the drought did not exceed the magnitude for which the AA were designed, and hence the intended positive effect of the AA lasts throughout the drought period.
		I.2 Consumption-based Coping Strategy Index (rCSI) [1.1.2/ 3.1.6/ 4.1.2]		-20%		
		I.3 Livelihood Coping Strategy Index (LCS) – stress/crisis/emergency [1.1.2/ 3.1.6/ 4.1.2]		-10%		
		I.4 Food Expenditure Share - proportion spending >= 65% of monthly budget on food [1.1.3/ 3.1.7/ 4.1.3]		-20%		
		I.5 Income per capita from agricultural production over reference period		+10%		
	Strengthened resilience of **crop**	**O.1.1** Proportion (%) of smallholder farmers reporting having seed stock available		As above, targets	Survey	Farmers are able to use AA assistance effectively as intended

INTERMEDIATE OUTCOME 1	**production** and stabilized agricultural output of smallholder farmers	**O.1.2** Percentage of targeted smallholder farmers reporting increased production of nutritious crops [3.1.9]		should be set based on a realistic assessment of what the AA can be expected to achieved		and do not face unanticipated (e.g. labour, other disaster-induced) constraints.
		O.1.3 Crop yield (kg/ha)				
		O.1.4 Proportion of production sold on market (not used for household consumption)				Markets are functioning.
IMMEDIATE OUTCOME 1.1	Enhanced uptake of improved farming practices	**IO.1.1.1** Proportion of farmers reporting having taken action for drought-adapted farming practices (use of improved seed varieties; application of fertilizer according to recommendations; practicing conservation agriculture)			Survey	Farmers are able to use AA assistance effectively as intended and do not face unanticipated (e.g. labour, other disaster-induced) constraints.
		IO.1.1.2 Proportion of assisted people who report that AA advisory / information was <u>useful</u>				
		IO.1.1.3 Proportion of assisted people who report that AA advisory / information was <u>timely</u>				
		IO.1.1.4 Proportion of assisted people who report that AA advisory / information was <u>used for decision making</u>				
OUTPUT 1.1.1	Early Warning and drought-adapted crop management advisory disseminated	**OP.1.1.1.1** Number of early warning information dissemination channels set up (disaggregated by type)			Programme records	Targeted beneficiaries attend trainings or receive information materials. The content of the trainings/materials is sufficiently clear to the target audience (e.g. local language, using illustrations). The messages are understood.
		OP.1.1.1.2 Number of people provided with direct access to information on climate and weather risks and crop management advisory, disaggregated by sex			Programme records	
		OP.1.1.1.3 Total number of individuals trained as part of the AA [F.1]			Programme records	
INTERMEDIATE OUTCOME 2	Maintained or increased **livestock production** and productivity of smallholder farmers	**O.2.1** Production: total output from livestock production per species (kg/smallholder farmer)			Survey	Livestock owners understand and practice adaptive livestock management. Livestock are in reasonably acceptable health condition at the outset of the drought. Destocking is not the primary coping strategy chosen by the household.
		O.2.2 Productivity: birth rate per species (or: number of newborn animals per species)				
		O.2.3 Livestock mortality rate per species (or: number of animals that died during the drought period)				

IMMEDIATE OUTCOME 2.1	Enhanced uptake of adaptive livestock management	**IO.2.1.1** Proportion of households reporting having taken action for drought-adapted livestock management (evaluate available forage; move livestock; secure access to water; provide supplemental feeding; wean offspring as soon as possible when safe)			Survey	Livestock owning households understand and appreciate the benefits of adaptive livestock management. Animal health-related interventions are still meaningful given the severity of the drought and existing animal health conditions at the outset.
OUTPUT 2.1.1	Early Warning and drought-adapted livestock management advisory disseminated	**OP.2.1.1.1** Number of early warning information dissemination channels set up (disaggregated by type)			Survey	Targeted beneficiaries attend trainings or receive information materials. The content of the trainings/materials is sufficiently clear to the target audience and understood.
		OP.2.1.1.2 Number of people provided with direct access to information on climate and weather risks and livestock management advisory, disaggregated by sex				
		OP.2.1.1.3 Total number of individuals trained as part of the AA [F.1]			Programme records	
INTERMEDIATE OUTCOME 3	Access to essential commodities ensured (animal fodder, livestock drugs, nutritious food for household)	**O.3.1** Proportion of total monthly expenditure spent on food			Survey	All items are available in the market; markets are functioning relatively normally.
		O.3.2 Proportion of total monthly expenditure spent on livestock fodder / water / drugs / non-food items				
IMMEDIATE OUTCOME 3.1	Stabilized household purchasing power to maintain access to essential commodities	**IO.3.1.1** Economic capacity to meet essential needs (ECMEN)			Survey	
OUTPUT 3.1.1	Unconditional cash transfer provided	**OP.3.1.1.1** Number of households receiving cash-based transfer			Programme records	Intervention logistics and distribution mechanisms function as expected.
		OP.3.1.1.2 Total amount of cash transferred to targeted beneficiaries [A.3]				
OUTPUT 3.1.2	Households receive in-kind transfer	**OP.3.1.2.1** Number of households receiving in-kind transfer (food)				
		OP.3.1.2.2 Number of households receiving vouchers (food)				
		OP.3.1.2.3 Quantity of food provided [A.2]				
		OP.3.1.2.4 Quantity of non-food items distributed [A.5]				

CROSS-CUTTING CRF INDICATORS					
Protection	Proportion of assisted people informed about the programme			Programme records	
Accountability to Affected Populations	Proportion of targeted people receiving assistance without safety challenges				
	Proportion of targeted people who report that WFP programmes are dignified				
	Proportion of targeted people having unhindered access to WFP programmes				
Linkages to financial resources and insurance services facilitated	Number of people provided with direct access to information on climate and weather risks [G.8]				
	Number of people covered and assisted through Forecast-based Anticipatory Actions against climate shocks [G.9]				
	Number of people benefiting from assets and climate adaptation practices facilitated by WFP's Risk Management activities [G.10]				

Annex 2: M&E plan for a drought FbF intervention (example)

The M&E plan follows the logframe example (Annex 1). Data collection means and responsibilities should be adapted to the implementation context of the respective intervention. It is very important to note that the timing of when indicator data is to be collected ('frequency & schedule' column) depends on the specific anticipatory actions, their timing and the assumptions about when their impacts will have fully materialized.

LEVEL	INDICATORS (insert from logframe)	Indicator definition	Data collection method / sources	Frequency & schedule	Responsibility
ULTIMATE OUTCOMES	**I.1a** Food Consumption Score (FCS) - proportion acceptable/borderline/poor	See WFP CRF indicator compendium	Household sample survey of among beneficiaries and comparison households following an activation of	After every AA activation, at least once, between 30 and 120 days after the activation, and/or the end	WFP M&E focal point for FbF programme (lead) with programme team
	I.2 Consumption-based Coping Strategy Index (rCSI)				
	I.3 Livelihood Coping Strategy Index (LCS) - proportion crisis coping strategy				

	I.4 Food Expenditure Share - proportion spending >= 65% of monthly budget on food		anticipatory actions (*Survey*)	of the drought period, depending on the type of AA chosen.	
	I.5 Income per capita from agricultural production over reference period	Numerator (N): Total amount of income (in local currency) generated by the entire household from sales of agricultural products (crops/animal products) during the 4 weeks preceding the survey. Denominator (D): Number (#) of household members			
INTERMEDIATE OUTCOME 1	**O.1.1** Proportion (%) of smallholder farmers reporting having seed stock available	N: # of surveyed smallholders reporting having (had) seed stock available in time for planting. D: Total # of surveyed smallholders	Survey	After every AA activation	Lead responsible for surveying
	O.1.2 Percentage of targeted smallholder farmers reporting increased production of nutritious crops	See WFP CRF indicator compendium			
	O.1.3 Crop yield (kg/ha)	N: Weight of total crop production in kg (to be converted from locally used units) over reference period. D: hectare (to be converted from locally used units)	Survey. Possibly assisted through self-reporting of respondents (keeping a production diary; submitting recent figures via SMS)	Survey: after every AA activation. Self-reporting: periodically (e.g. ever 2 weeks)	Lead responsible for surveying; Implementing partner responsible for communicating & collecting reporting information from beneficiaries
	O.1.4 Proportion of production sold on market (not used for household consumption)	N: Amount of agricultural production (converted to kg) sold to market. D: Total agricultural production (converted to kg)			
IMMEDIATE OUTCOME 1.1	**IO.1.1.1** Proportion of farmers reporting having taken action for drought-adapted farming practices (use of improved seed varieties; application of fertilizer according to recommendations; practicing conservation agriculture)	N: # of surveyed smallholders reporting having taken [type of action]. D: Total # of surveyed smallholders	Survey	After every AA activation	Lead responsible for surveying
	IO.1.1.2 Proportion of assisted people who report that AA advisory / information was useful	N: # of surveyed smallholders reporting the AA advisory/information was useful. D: Total # of surveyed smallholders			

	IO.1.1.3 Proportion of assisted people who report that AA advisory / information was <u>timely</u>	N: # of surveyed smallholders reporting the AA advisory/information was timely. D: Total # of surveyed smallholders			
	IO.1.1.4 Proportion of assisted people who report that AA advisory / information was <u>used for decision making</u>	N: # of surveyed smallholders reporting the AA advisory/information was used for decision making. D: Total # of surveyed smallholders			
OUTPUT 1.1.1	**OP.1.1.1.1** Number of early warning information dissemination channels set up (disaggregated by type)	# of early warning information dissemination channels set up	Programme records	After every AA activation	Lead responsible for surveying
	OP.1.1.1.2 Number of people provided with direct access to information on climate and weather risks and crop management advisory, disaggregated by sex	# of people provided with direct access to information on climate and weather risks and crop management advisory	Programme records		
	OP.1.1.1.4 Number of smallholder farmers supported/trained	See WFP CRF indicator compendium	Programme records	Immediately after every training	Training implementer
INTERMEDIATE OUTCOME 2	**O.2.1** Production: total output from livestock production per species (kg/smallholder farmer)	For each species: N: Total volume of animal products (converted to kg); D: Total # of surveyed smallholders	Survey	After every AA activation	Lead responsible for surveying
	O.2.2 Productivity: birth rate per species (or: number of newborn animals per species)	For each species: N: # of living newborns. D: # of female animals of reproductive age			
	O.2.3 Livestock mortality rate per species (or: number of animals that died during the drought period)	For each species: N: # of deaths. D: # total herd size			
IMMEDIATE OUTCOME 2.1	**IO.2.1.1** Proportion of households reporting having taken action for drought-adapted livestock management (evaluate available forage; move livestock; secure access to water; provide supplemental feeding; wean offspring as soon as possible when safe)	N: # of surveyed smallholders reporting having applied at least one drought-adapted livestock management technique. D: Total # of surveyed smallholders	Survey	After every AA activation	Lead responsible for surveying
OUTPUT 2.1.1	**OP.2.1.1.1** Proportion of farmers who are familiar with the minimum set of adaptive livestock management practices	N: # of surveyed smallholders who recall at least one drought-adapted livestock management technique correctly. D: Total # of surveyed smallholders	Programme records		Lead responsible for surveying
	OP.1.1.1.2 Number of people provided with direct access to information on climate and weather risks and livestock management advisory, disaggregated by sex	# of people provided with direct access to information on climate and weather risks and livestock management advisory	Programme records		

	OP.1.1.1.3 Total number of individuals trained as part of the AA [F.1]	See WFP CRF indicator compendium	Programme records	Immediately after every training	Training implementer
INTERMEDIATE OUTCOME 3	**O.3.1** Proportion of total monthly expenditure spent on food	N: Total amount spent on food for the household last month. D: Total amount spent for the household last month.	Survey	After every AA activation	Lead responsible for surveying
	O.3.2 Proportion of total monthly expenditure spent on livestock fodder / water / drugs / non-food items	N: Total amount spent on [category] for the household last month. D: Total amount spent for the household last month.			
IMMEDIATE OUTCOME 3.1	**IO.3.1.1** Economic capacity to meet essential needs (ECMEN)	Percentage of households with total monthly expenditure above the minimum expenditure basket (MEB) threshold. See WFP Essential Needs Assessment Guidance Note	Survey	After every AA activation	Lead responsible for surveying
OUTPUT 3.1.1	**OP.3.1.1.1** Number of households receiving cash-based transfer	Total # of unique households who received cash-based transfer	Programme records	To be recorded immediately with each transfer	WFP programme staff / implementing partner
	OP.3.1.1.2 Total amount of cash transferred to targeted beneficiaries	See WFP CRF indicator compendium			
OUTPUT 3.1.2	**OP.3.1.2.1** Number of households receiving in-kind transfer (food)	Total # of unique households who received in-kind transfer			
	OP.3.1.2.2 Number of households receiving vouchers (food)	Total # of unique households who received voucher			
	OP.3.1.2.3 Quantity of food provided [A.2]	See WFP CRF indicator compendium			
	OP.3.1.2.4 Quantity of non-food items distributed [A.5]	See WFP CRF indicator compendium			

Annex 3: Anticipatory action log (example)

				Tick applicable category		
Entry #	**Date**	**Recording (details)**	**Reach (HH)**	**Weather/ forecast**	**Decision**	**Action**
1	30 Oct 2020	La Niña conditions continue over the equatorial Pacific, with a 95-percent chance of persisting through the end of March 2021. During the past month, dry conditions expanded rapidly across the northern parts of the country. There is an above 70% probability that this part of the country will receive less than 25 percent of normal rainfall in the next 30 days.		X		
2	15 Nov 2020	**TRIGGER:** Describe conditions that triggered the AA Standard Operating Procedures for activation: … • • •		X	X	
3	16 Nov 2020	Funds transferred to implementing partner A to implement cash-based transfer AA				X
4	18 Nov 2020	First batch of 5,400 beneficiaries in districts F (2,000) and G (3,400) received US$ 60 (equiv.) cash transfer into their mobile money accounts	5,400			X
5	20 Nov 2020	Second batch of 10,200 beneficiaries in district H received US$ 60 (equiv.) cash transfer into their mobile money accounts	10,200			X
6	10 Dec 2020	Prevailing drought conditions exacerbated by extreme heat: temperatures of 20% above long-term monthly average have been recorded in region A; health facility admissions due to heat stress have peaked. There is an increased risk of heat conditions negatively affecting already weakened livestock.		X		
…	…	…				

Annex 4: Timing of data collection decision matrix

This matrix is designed as a decision aid to record assumptions, the rationale and conclusions about the best time to implement AA and collect results data. It can be filled in as a desk-based exercise, or to facilitate a discussion among the FbF team, or in consultation with drought-affected community members.

How to fill the columns:

A. **Action description:** The anticipatory action to be implemented when the FbF system is triggered, and the duration of how long it will take until the action is fully implemented (i.e. all targeted beneficiaries reached). If it is a recurrent action, note down the frequency and periodicity of implementation.
B. **When, in relation to seasonal calendar:** The time when the action should be implemented in the seasonal calendar to have the greatest likelihood of yielding the maximum benefit for beneficiaries, for example, "at the beginning of the raining season", or "as late as possible in the growing season". In case the seasonal timing is not relevant, please also provide a short description of the rationale, for example, "not relevant because food distribution will have maximum positive impact whenever there is a severe nutrition crisis".
C. **When, in relation to agricultural activity:** The time when the action should be implemented in the agricultural calendar to have the greatest likelihood of yielding the maximum benefit for beneficiaries, for example, "as early as possible in the planting season", or "immediately before the harvest starts". Also note rationale if not relevant.
D. **When, in relation to anticipated drought impacts:** The timing of action implementation in relation to socio-economic or agricultural conditions that are relevant for the decision to act, for example, "as soon as water reservoir levels drop below 15%", or "as soon as Integrated Phase Classification (IPC) phase 4 (emergency) is reached indicating large food consumption gaps".
E. **What is the expected result / benefit** of the action for beneficiaries, for example, for a seed distribution "fast-maturing seeds allow harvest within 2 months of planting and yield on average 3 months' worth of food supply", or for a cash-based transfer "beneficiaries can afford buying sufficient food for the household lasting 2 months".
F. **When, "first signs"** of the result(s) are observable, for example, for a seed distribution "within 2 weeks of the start of the harvest season, approx. 8 weeks after planting", or for a cash-based transfer "within two weeks of the distribution, when households will definitely have made the first purchases".
G. **When, "fully materialized"** results are expected to be observable or can be recalled by the beneficiaries without a long period of time having passed in the meantime, for example, for a seed distribution "at the end of the harvest season, on average 12 to 16 weeks after planting", or for a cash-based transfer "8-12 weeks after the distribution when beneficiaries can be expected to have spent the majority of the cash and food security results should be observable or recallable".
H. **Method** of data collection, for example, a "face-to-face survey of beneficiaries and a comparison group across 4 districts", or "phone survey of beneficiaries and a roster of pre-identified comparison households".
I. **When, earliest and latest:** Columns I and J (earliest and latest time of data collection) should be primarily decided based on column G (results fully materialized). However, it is important to consider that a protracted drought situation may continue for longer than the AA assistance was designed to "withstand". Therefore, results can be expected to "disappear" after a period of time if the extreme conditions and vulnerabilities persist. To measure

immediate effects, the ideal window of opportunity for results data collection is *as soon as* results can be expected to have fully materialized and within 4-8 weeks. The more time passes between intervention/benefit accrual and survey, the greater the recall bias will be (people are likely to forget or misremember). To measure medium-term effects, including whether benefits "lasted" or when they "ran out", repeat surveys can be undertaken, for example, in an interval of 3-6 months.

J. **When, latest:** See column I.

ANTICIPATORY ACTION				RESULT			DATA COLLECTION		
A. Action description & duration	**B. When, in relation to seasonal calendar**	**C. When, in relation to agricultural activity**	**D. When, in relation to drought impacts**	**E. What is the expected result / benefit**	**F. When, "first signs"**	**G. When, "fully materialized"**	**H. Method**	**I. When, earliest**	**J. When, latest**

Annex 5: Output monitoring form (example)

This is an adapted questionnaire based on WFP's existing monitoring forms: https://monitoring.manuals.wfp.org/en/3-tool-kit/data-collection-tools/

This form is intended to capture essential information regarding the receipt of benefits, their reach and timeliness. The data collected through this form is intended to assess whether, where and to what extent the planned benefits were distributed to beneficiaries as expected. Process and output monitoring will also generate output level data on the *number* of people provided with FbF benefits and services (new CRF indicators G.8, G.9 and G.10). FbF teams should review their FbF M&E plan and the monitoring plan of their CO and add additional questions, if needed, to monitor context and operation specific processes.

Monitoring data can be collected during a household visit or at the time of distribution, for example, at the following steps: collection of cash in envelopes, receiving vouchers (both electronic or paper), receiving a SIM card that will be used for cash transfers, opening a bank account for the purpose of WFP cash based transfers, withdraw of cash from financial institution, verification process to be eligible for top-up of entitlement, etc.

The questionnaire should be kept as short as possible to avoid interview fatigue and minimize the cost of data collection. At the same time, **every direct interaction with the beneficiary is an opportunity to collect valuable data:**

SOCIO-ECONOMIC BACKGROUND: If the socio-economic background characteristics of the beneficiary have not yet been recorded, the following question items should be added to the questionnaire; this will help to assess the level of vulnerability of the beneficiary group and aid the analysis process by making it easier to identify a comparison group of equally vulnerable households:

- Age of household head
- Total number of household members
- Number of children under 5
- Number of elderly (over 60)
- Number of family members with a disability
- Whether this is a single-headed household
- Highest level of education of the household head
- Amount of (any) income in the last 30 days; alternatively:
- Total amount spent on food and non-food items in the last 30 days

OUTCOME INDICATORS / BASELINE DATA: Monitoring data collection may be an opportunity time to collect outcome-level data on indicators that are comparatively easy to collect (consisting of only a few questions), such as the Food Consumption Score or the Household Dietary Diversity Score.

Implementation / output monitoring: timeliness and reach
(Example for a cash-based transfer)

Informed Consent: Please read the following consent form prior to starting the interview:

<Show your identification badge>

My name is <name> and I work with <partner organization> and WFP, who are the organizations that have been recently providing <type of assistance> assistance.

I am here to collect information about how the distribution took place and if the <entitlement> was appropriate. This will allow us to adjust our operations and better serve the people in need.

Your participation in this interview is not mandatory and you can decide to opt out. If you choose to participate, you may choose to not respond to some questions. If you do not understand any of the questions, please say so and I will explain it. You may ask me questions at any point during the interview. Please note that your decision to be part of the interview will not guarantee or affect your participation in future WFP activities. The information you provide us will be used by WFP and <specify which partners will have access to monitoring data e.g. UN agencies, NGO, Government>.

After the interview if you want to correct or delete the information you provide today, please contact <CO to insert beneficiary feedback contact details>. Do you have any questions?

May I start the interview?

Have you read the informed consent to the interviewee? (informed consent statement is found above in blue) (Yes = 1, No = 0)	☐
Please have the interviewee who is answering the questions sign the informed consent statement (below). *"I fully understand the information that I was given regarding the use and disclosure of my personal data by WFP and the other mentioned partners and I give my consent to it"* If the interviewee is unable or unwilling to sign, please explain why in the comments section at the end of this form, and ask the interviewee to read (or repeat in case of illiteracy) the informed consent statement found above in quotations	☐ Interviewee signature

1. INTERVIEWER INFORMATION, GEOGRAPHIC LOCATION AND ACTIVITY INFORMATION

1.1. Interviewer information

1.1.1	Name of interviewer		1.1.4	Interviewer title	
1.1.2	Interviewer organization		1.1.5	Questionnaire Number	
1.1.3	Sex of the interviewer 1 = Male, 2 = Female	☐	1.1.6	Interview date	

1.2. Geographic information

1.2.1	Governorate/ Region/ State				
1.2.2	District			1.2.6	Name of Partner organization
1.2.3	Community				
1.2.4	FDP				

1.2.7	**Occasion of interaction with beneficiary**			
	Household visit (after distribution)	☐	Distribution of phone SIM card	☐
	Distribution of paper voucher	☐	Beneficiary opening a bank account for the purpose of receiving WFP cash based transfers	☐

	Distribution of electronic card	☐	Beneficiary withdrawing WFP entitlement from a financial institution through bank machine or employee		☐
	Distribution of cash (i.e. cash-in-envelope)	☐	Other (explain in comments box at end of section)		☐
1.3 Activity information					
1.3.1	Activity Type 1 = UIRT, 2 = FFA, 3 = SM, 4 = Nutrition teatment, 5 = Nutrition prevention ; 6 = Other	☐☐	1.3.3	Beneficiary Category 1 = Refugees, 2 = Returnee, 3 = Displaced, 4 = Residents, 5 = Mix	☐
1.3.2	Sub activity (if applicable)	☐☐			
1.4 Household identifier					
1.4.1	Name of respondent:	_____			
1.4.2	Phone number of respondent:	_____		Doesn't have phone #	☐
2. BENEFICIARY PERCEPTIONS ABOUT DISTRIBUTION PROCESS					
2.1	What is the interviewee's relationship with the head of household, age, gender and participation in WFP project?	2.1.1	Interviewee is 1 = Head of Household, 2 = spouse, 3 = dependent, 4= other		☐
		2.1.2	IF 2.1.1. not (1) (household head), name of the household head:	_____	
		2.1.3	IF 2.1.1. not (1) (household head), phone # of the household head: 888=No phone	_____	
		2.1.4	Interviewee's age, 999= other (explain in comments section at end of form)		☐
		2.1.5	1 = Male 2 = Female		☐
			Interviewee directly participates in WFP conditional project (CO to adapt possible responses)		
		2.1.6	Food for Assets (Yes = 1, No = 0)		☐
		2.1.7	Nutrition (Yes = 1, No = 0)		☐
		2.1.8	School meals (Yes = 1, No = 0)		☐
		2.1.9	Other (Yes = 1, No = 0)		☐
		2.1.10	None (Yes = 1, No = 0)		☐
2.2	Have you already received your entitlements? 1 = Yes, 0 = No				☐
	If YES, by when have you received your entitlements			MM	YY
2.3	Did you face any problems while receiving your entitlement? Select all relevant answers interviewee mentioned from list below. (Yes = 1, No = 0, Not Applicable = 3) (List of options can be modified by CO)				
	2.3.1	Long waiting time at distribution point			☐
	2.3.2	People working at distribution point are disrespectful and/or cheating			☐

	2.3.3	Distribution point overcrowded	☐
	2.3.4	Distance from residence to distribution point too far and/or cost of transport too expensive	☐
	2.3.5	Security concerns going to or leaving distribution point (if yes, provide more details in question 3.4)	☐
	2.3.6	Vulnerable persons were not given priority	☐
	2.3.7	People were trying / pressuring / breaking WFP program rules (explain in comments section)	☐
	2.3.8	Household not able to collect entitlement (explain why in comments section)	☐
	2.3.9	I was beaten/harassed (e.g. by other beneficiaries, partner/WFP personnel, police, etc.) (explain in comments box at end of section)	☐
	2.3.10	I was asked for money/ favors in return for assistance (explain in comments box at end of section)	☐
	2.3.11	Other (explain in comments box at end of section)	☐
2.4	If you felt/feel insecure about going to or returning from the distribution point tell us why. Select all relevant answers interviewee mentioned from list below. (Yes = 1, No = 0, Not Applicable = 3) (List of options can be modified by CO)		
	2.4.1	Won't answer	☐
	2.4.2	Entitlement could be stolen	☐
	2.4.3	Had to/might have to pay bribe	☐
	2.4.4	Have received/might receive threats	☐
	2.4.5	Had to/might have to overcome movements restrictions (e.g. curfew, check points)	☐
	2.4.6	Other (explain in comments box at end of section)	☐
2.5	Is the WFP assistance and its key components clearly understood by the HH? (Yes = 1, No = 0) Ask beneficiary to briefly explain the programme and its benefits and mark all answers that are mentioned. Do not suggest or prompt the beneficiary with ideas.		
	2.5.1	Value/quantity HH should receive: ___ / ___	2.5.2 Value/quantity you have effectively received during this distribution: ___ / ___
	2.5.2	Distribution and redeeming cycles: ___	2.5.4 Type of products which can be redeemed and where: ___
	2.5.3	Feedback mechanisms available: hotlines, local committees, etc. ☐	2.5.6 Things HH should not do with entitlement (sell, exchange) ☐ 2.5.7 Targeting process ☐
2.6	Approximately how long does it take you to receive this WFP assistance? (answer in minutes)		
	2.6.1	Travel to distribution point ☐	2.6.2 Waiting at distribution point ☐ 2.6.3 Other time required to get entitlement ☐
	2.6.4	How much money, approximately, do you have to pay in transport costs from the distribution point to your current residence? (total for both ways in local currency) ☐	
2.7	Comments and further information from beneficiary interview:		

3. TIMELINESS AND USEFULNESS

3.1	The assistance you received is intended to help you cope with the impacts of drought, and to avoid negative consequences of suffering from drought impacts. In this light, **how timely** do you consider the assistance to have come? 1 = Much too late, 2 = Somewhat too late, 3 = Somewhat too early, 4 = Much too early, 5 = Exactly at the right time, 6 = Don't know, 7 = Refuse to answer	☐
3.2	IF 3.1 is not (5) (exactly at the right time): When would be the **ideal time** for you to have received this assistance?	MM YY
3.3	**How useful** is the assistance you received from WFP to help you cope with the impacts of drought, and to avoid negative consequences of suffering from drought impacts? 1 = Not at all useful, 2 = A little useful, 3 = Useful, 4 = Very useful, 5 = Don't know, 6 = Refuse to answer	☐
3.4	Is there **any other type of assistance** that would be more useful for you to help you cope with the impacts of drought, and to avoid negative consequences of suffering from drought impacts?1 = More cash, 2 = Seeds, 3 = Fertilizer, 4 = Livestock feed, 5 = Food, 6 = Medicine, 7 = Tools/equipment, 8 = Other, 9 = Don't know, 10 = Refuse to answer	☐
	[8] Other:	_____
3.5	Have you **already used** some or all of the assistance you received from WFP or its partners? 1 = Yes, some, 2 = Yes, all, 3 = No, 4 = Don't know, 5 = Refuse to answer	☐

4. Enumerator Observations

Annex 6: Research design and analysis plan outline (example)

Assessing household-level effects of forecast-based assistance to vulnerable households in anticipation of extreme drought conditions in <name of country/region>

1. Background

[Describe the FbF programme context in your country, the trigger methodology and the actions to be implemented when the SOPs are triggered.]

2. Purpose

[Describe the objective of the research, for example:]

The objective of this assessment is to understand the extent to which forecast-based cash assistance in anticipation of extreme drought conditions in <name of country> is effective in improving the food security and avoidance of negative (food-based) coping strategies among beneficiary households.

3. Research question(s) / hypotheses to be tested

[Formulate clear research questions to be answered by the assessment, or hypotheses to be tested, for example:]

This study will investigate the following hypotheses about the effectiveness of AA:

- H_1: FbF beneficiary households experience significantly higher food security, as measured through the FCS, at the end of the drought period compared to equally drought-affected and vulnerable households without FbF assistance (comparison group).
- H_2: A significantly lower proportion of FbF beneficiaries uses food-based coping strategies, as measured through the rCSI, compared to non-FbF-assisted households.
- H_3: FbF beneficiaries whose main livelihood is based on livestock experience significantly lower animal mortality rates compared to the comparison group without FbF assistance.
- H_0: There is no discernible difference in the outcomes of FbF beneficiaries and non-beneficiaries (null hypothesis).

4. Study design

[Describe the design of the study, whether quantitative, qualitative or mixed, and how the hypotheses will be tested/assessed, for example:]

This assessment uses a quasi-experimental study approach, comparing FbF beneficiaries with a comparison group of equally vulnerable and drought affected households in the same geographic area. …

[Note that different study design may be feasible, depending on several factors, including whether baseline data collection is possible (allowing for a DiD approach); whether randomization of the assignment of communities or households to the FbF intervention is possible (a precondition to conduct an RCT); the available budget and logistical resources which will influence the viable sample size; among others. Common to all study designs will be attempts to control for bias in the data. For example, Propensity Score Matching (PSM) and Regression Discontinuity Design (RDD) are two common approaches used with quasi-experimental designs to control for selection bias. Each bias correction and matching method has different strengths and weaknesses; discussing the trade-offs would go beyond the scope of this example. Recommended reading: White, H. (2013), An introduction to the use of randomised control trials to evaluate development interventions]

5. Study population and sampling

[Describe the population of interest and involved in the study. See also the WFP Sampling Quick Guide. This will typically include a detailed description of the targeting criteria which can be taken from the SOPs, for example:]

The study will compare FbF beneficiaries (the intervention group) with a comparison group of non-beneficiaries. Both groups will consist of highly vulnerable smallholder farmers in <district A>, <district B> and <district C>. It is envisaged that the FbF intervention will be implemented in the 100 most vulnerable communities across the 3 most drought-affected districts, reaching a total of approx. 5,000 households.

Intervention communities are selected based on the following criteria:

- Criteria A: <e.g. livelihood options>
- Criteria B: <e.g. food security scores>
- Criteria C: <e.g. average rainfall over the past 6 months>
- …

Beneficiaries within the intervention communities are selected into the FbF intervention based on the following eligibility/targeting criteria which are assessed by means of a mini household survey:

- Criteria A: <e.g. asset poverty, assessed through PMT>
- Criteria B: <e.g. high dependency ratio>
- Criteria C: <food insecurity>
- …

A two-stage cluster sampling approach will be used to select study participants from the FbF intervention group and a comparison group (i.e. two sample populations).

For each group, we estimate a sample size of 450 households to be sufficient to yield results with an error margin of 5% and a confidence level of 95%, balancing the need for a higher sample size due to the greater design effect in two-stage cluster sampling with the shortage of funds for survey data collection (the ideal sample size would be 600 per group, see the WFP Sampling Quick Guide and Raosoft Sample Size Calculator). This means that a total of 900 interviews will have to be conducted.

Intervention group (FbF beneficiaries):

- In the first stage of sampling, 30 communities will be randomly selected with probability proportional to size.
- In the second stage of sampling, beneficiary households will be randomly selected from each community to participate in the survey, with the number of households per community proportional to size.

Comparison group (without FbF assistance, and/or benefitting from conventional humanitarian response):[29]

- Since the FbF intervention is implemented in the 100 most vulnerable communities across the 3 districts, two strategies are available to select comparison communities:
  (a) Draw up a list of the 100 next most vulnerable communities in the same 3 districts (which will be slightly less vulnerable than the intervention communities).

[29] For an overview of options and practical approaches for selecting comparison groups and their trade-offs see: White, H. and Sabarwal, S. (2014), Quasi-Experimental Design and Methods: Methodological Briefs – Impact Evaluation No. 8; White, H., Sabarwal, S. and de Hoop, T. (2014), Randomized Controlled Trials (RCTs): Methodological Briefs – Impact Evaluation No. 7. For further suggestions on how to identify exact-match comparison communities, see Red Cross Red Crescent Climate Centre (2019), FbF M&E Guide: Identifying a Comparison Group for a FbF programme/project.

(b) Draw up a list of 100 equally vulnerable communities from neighbouring districts that fulfil the following criteria: (i) the FbF intervention is not implemented there, nor any other intervention that is not also implemented in the intervention communities; (ii) communities are equally drought affected; (iii) the community population shares the same socio-economic vulnerabilities as the intervention group.

- We opt for option (a) since the vast majority of communities in the 3 intervention districts are extremely vulnerable and differences between communities are very small. Moreover, there is practically no risk of 'sample contamination' as the cash transfer amount is not large enough to be likely to influence market prices in the area, and benefits are not expected to leak to non-beneficiary households.
- The first stage of sampling involves drawing a random sample of 30 of the 100 next-most-vulnerable communities in the 3 FbF districts.
- In the second stage of sampling, a household listing using the FbF eligibility criteria will be carried out in each of the 30 selected comparison community. From the list of eligible households, a random sample of survey participants is drawn with their number proportional to size.

6. Data collection methods and instruments

[Describe which data collection methods and instruments will be used in the assessment, for example:]

a) Household survey (quantitative): A household survey will be conducted among beneficiary and comparison households included in the sample (see above). The survey will ensure that 50% women and 50% men will be interviewed. The household questionnaire is attached in <Annex X>.

b) Focus group discussions (qualitative): From each group (intervention and comparison), 10 communities will be randomly selected. Two focus group discussions (FGD) will be organized in each community, one with women and one with men. The FGD discussion guide is attached in <Annex Y>. The primary purpose of the FGD is to contextualize the quantitative information and yield rich qualitative insights not obtainable otherwise, including answers to some of the emergent 'why' questions.

c) Key informant interviews (KII): In the 10 communities (each) in which FGDs are conducted, two KIIs will be conducted. One KII will interview the local agricultural extension worker about drought conditions and agricultural activity, the second KII will be held with a member of the local water management committee. The KII semi-structured questionnaires are included in <Annex Z>.

7. Data analysis methods

[Describe which data analysis methods will be used and the main variables of interest, for example:]

a) Household survey (quantitative): Statistical analyses will be performed on the quantitative dataset including
   - Exploratory data analysis and data cleaning
   - Descriptive statistics and sample means analysis of the main socio-economic predictor variables to assess the comparability of the two groups (intervention and comparison)
   - Statistical balancing of sample imbalances between the two or more groups, for example, through Propensity Score Matching (PSM), or use of bias-corrected matching estimators using nearest-neighbour matching (to mention some among other possible options to control for bias in the data; the choice also depends on the structure of the data and the experience of the analyst)
   - Hypothesis (see above) testing by assessing outcome variables for statistically significant differences between the treatment and comparison groups

b) Focus group discussions (qualitative): FGDs will be transcribed verbatim and coded for patterns using standard qualitative software analysis tools (such as *QDA Miner* or *Dedoose*).

c) Key informant interviews (KII): KIIs will be transcribed verbatim and equally coded for patterns. An inductive approach will be taken to identify information relevant to the interpretation of survey or FGD findings and to assist in tracing causal attribution of results to the FbF intervention (or not).

8. Quality assurance mechanisms

[Quality assurance mechanisms are particularly relevant for survey enumerator training, field data collection and analysis. It is also critical to ensure professional facilitation of FGDs and KIIs to avoid leading questions, bias due to power dynamics, etc., for example:]

a) Household survey (quantitative): It is envisaged that a team of 10 enumerators and 3 field supervisors will be needed for data collection. 15 enumerators will be trained and assessed during the 2-day training. Only the 10 most suitable enumerators will be deployed for data collection, with the 5 less suitable remaining as backup options.
Interviews will be facilitated and data entered via the MoDa mobile data collection platform, enabling supervisors and the M&E focal point in the CO to have a live overview of the income data. Data submissions will be spot-checked daily to ensure quality and consistency.

b) Focus group discussions (qualitative): FGD facilitators will have to have undergone facilitation training and be experienced in leading inclusive group discussions that allow all participants to have their voice heard.

c) Key informant interviews (KII): Interviewers will have to have undergone interview training and be experienced qualitative researchers to be able to prompt when appropriate, give room for elaboration when needed, and avoid asking leading questions.

9. Ethical considerations

[Population-based surveys or any form of data collection involving people may require ethical clearance, depending on local protocol. When collaborating with implementing partners or universities, it is recommended to ensure they subscribe to and follow all ethical research standards. Universities often have Ethics Review Boards (ERB) and it is recommended to subject the research design and tools to ERB review; for example:]

The assessment follows WFP's code of conduct and the UNEG Ethical Guidelines. Moreover, informed consent and 'do-no-harm' principles form the basis of this assessment.

10. Resources required

[It is suggested to estimate and set aside a realistic budget amount for the impact assessment, based on previous experiences with the cost of surveys and qualitative research in the local context. Costs vary considerably by country; also include non-financial resources that may be contributed in-kind by WFP or partners, for example:]

- Total impact assessment budget: <enter amount in USD or local currency> (see <Annex X> for detailed budget)
- Non-financial resources:
    - 13 tablets for mobile data collection using MoDa (10 enumerators + 3 field supervisors): will be borrowed from the National Statistics Office free of cost
    - The WFP CO will provide 3 vehicles including drivers and fuel costs (not included in above budget) to facilitate data collection field work

11. Target audience, presentation of findings

[Describe who will be the primary users of the study findings, which will inform the preparation and presentation of results; clarify expectations whether a detailed written report is required or essential statistical and qualitative result information will be sufficient and can be provided in tables and charts only; for example:]

- WFP FbF programme team, to learn about the effectiveness of AA and to improve the SOPs. Format for presentation of findings: document containing all key statistical tables and charts, which a few sentences summarizing the key take-aways for each visual.
- External partners, to learn about the FbF intervention and its effects. Format: a slide deck (PowerPoint) of mainly charts with one-line summaries of key take-aways.
- Study participants (treatment and comparison group), to ensure we are accountable to them, share our learnings and provide an opportunity for feedback. Format: a maximum of 10 printed pictorial illustrations of key findings, delivered during 2-hour (approx.) community meetings in a sample of intervention and comparison communities.

12. Annex (questionnaires, ethical clearance, etc.)

[Include questionnaires; FGD and KII interview guides; budgets; inventory lists; and anything else relevant to the assessment.]

Annex 7: Outcome survey questionnaire (example)

Forecast-based Financing
Anticipatory Actions for Drought

Outcome Survey Questionnaire

Please note: This questionnaire is meant to serve as an example and starting point for FbF teams to adapt and develop their own questionnaires. The modules and specific questions must be tailored to the country context, seasonal conditions, the choice and timing of anticipatory actions, and the time when results are anticipated to be observable (see theory of change). Anticipatory action-specific modules should only be included for FbF beneficiary households.

Introduction and informed consent:

[Enumerator, read out]: My name is <…….> and I work for WFP. I would like to speak to you to learn about the experience of you and your household during this drought period. By this I mean the period from <approximate starting month> until <approx. end/current month>. This information will help us to understand the impacts of the drought on affected households like yours and to improve the effectiveness of our assistance to drought-affected households in the future.

Your participation in this interview is voluntary. If you agree to be interviewed, you can choose not to answer specific questions or end the interview at any time. The information you share with me will only be used for the purposes of our research. Your personal information will not be disclosed to anyone.

Please note that your decision to be part of the interview will not guarantee or affect your participation in future WFP activities. Declining to be interviewed will have no effect on any benefits that you may be otherwise entitled to.

The interview will take about 45 minutes. If you do not understand any of the questions, please let me know and I will be happy to explain. You may ask me questions at any point during the interview.

If you want to correct or delete the information you provide today, or if you have any other questions about this research, please contact <name of focal point> at <phone number (ideally toll free>

Do you have any questions?

Do you voluntarily agree to participate in this interview? 1. Yes 2. No *[Record module A,then skip to end]*

Geographical information: ***(Sub-district, union, village and ward names are selected the drop-down list)***

Sub-district:	Union:	Village:	Ward:	

Module A: Respondent/household identifier

#	Questions	Responses
1.	Household (HH) ID ***(write from list)***	
2.	Survey sample ID ***(write from list***)	
3.	Respondent name	

4.	Relationship with head of household	1=Self 2= Husband/wife 3= Son/Daughter 4= Son/Daughter in law 5= Grand children	6= Father/Mother, 7=Father/Mother in law 8= Brother/Sister, 9=Relative 10=Non-relative 11=Refuses to answer
5.	Age of respondent		
6.	Sex of respondent	1=Female 2=Male 3=Refuses to answer	
7.	What is the highest level of education that you have completed?	0. Never attended school/No class passed/pre-schooling 1. Class 1 2. Class 2 3. Class 3 4. Class 4 5. PSC/equivalent 6. Class 6 7. Class 7 8. JSC/equivalent 9. Class 9	10. SSC/equivalent 11. HSC/equivalent 12. Vocational 13. Nursing 14. Technical Education 15. Graduate/equivalent 16. Medical 17. Engineering 18. Postgraduate/equivalent 19. Other (Specify) _____
8.	Are you the head of the household?	1=Yes [--> Skip to next module] 2=No	
9.	What is the name of the household head?		
10.	How old is the household head?	_____	[ ] Don't know
11.	What is the sex of the household head?	1=Female 2=Male 3=Refuses to answer	

Module B: Demographics and socio-economic background

#	Questions	Responses		
1.	How many people are part of this household? By this I mean how many have slept under this roof last night?	Male	Female	Total
			+	=
2.	Are there any members of your household who are…	…under the age of 5?	…over age 60?	
		Enter number: ____	Enter number: ____	
3.	What is the <u>main</u> income source of this household?	1. Farming/agriculture (crops) 2. Agriculture (livestock) [Include Module I] 3. Day labour-agriculture based 4. Day labour- Non agriculture based 5. Business/small business (informal) 6. Service (informal) 7. Formal employment 8. Social security / government transfers 9. Other (specify)_____		
4.	Is this a woman-headed household?	1. Yes 2. No		
5.	Is there any person with disabilities (PwD) among the household members?	1. Yes 2. No [--> Skip to B.6]		

#	Questions	Responses		
6.	Please let me know the total number of PwD in your household: ***Please record the disability type:*** *a) At all or have major difficulty seeing;* *b) At all or have major difficulty hearing;* *c) At all or have difficulty walking or climbing steps;* *d) Psychological problem or have difficulty remembering or concentrating;* *e) have difficulty (with self-care such as) washing all over or dressing;* f) *have difficulty communicating (e.g. understanding/being understood.*	# of Male: *a)* ___ *b)* ___ *c)* ___ *d)* ___ *e)* ___ *f)* ___	# of Female: *a)* ___ *b)* ___ *c)* ___ *d)* ___ *e)* ___ *f)* ___	# of Total PwD: *a)* ___ *b)* ___ *c)* ___ *d)* ___ *e)* ___ *f)* ___
7. .	Type of ownership of your housing	1.Own property 2.Husband's property 3.Father/Mother-in-law's home 4.Rented 5.Inherited property of household	6.Father/Mother/ relatives home 7. Khas land (without rent) 8. Others' land (without rent) 9. Char Bondoki 10.Other (specify) _____	
8.	Type of your house structure	1. Raw/Kacha house (Wall made of mud/straw/bamboo / roof made of tin, straw) 2. Tin made house (both wall and roof) 3. Semi paka house (ceiling is tin, others are made in brick) 4. Brick house 5. Others (specify):		

Module C: Assistance received

#	Questions	Responses		
1.	Have you or your family members received any assistance in the last <number of> days [or: since <beginning of drought period>]from the government, WFP, NGOs, relatives, neighbours or other sources?	1. Yes 2. No [→ Skip to Module F]		
2.	Types of assistance (enter code): a) WFP b) Government c) Local NGO/CBO d) International NGO e) Religious organization f) Family/relatives g) Neighbours h) Friends i) Other (specify): _____	Sources of assistance **[multiple mentions possible]**	Approximate amount (if cash-based) / Approximate quantity (if non-cash based)	When did you first receive the assistance? ***[MM/YYYY]***
	1. Cash [--> Include Module D]			
	2. Food commodities			
	3. Non-food household items			
	4. Medicine			
	5. Agriculture inputs: seeds			
	6. Agriculture inputs: fertilizer			

	7. Agriculture inputs: supplementary animal feed			
	8. Other (specify): _____			

Module D: Cash assistance recipients (only; not for baseline survey)

#	Questions	Responses		
1.	By what date had you received or withdrawn (in case of bank or mobile money transfer) the full amount of money (<____> amount mentioned in C.2)			
	1. _____ (date)	2. Not yet withdrawn/received full amount	3. Other (specify): ____	4. Don't know 5. Refuses to answer
2.	You mentioned that you received the cash <insert date from C.2>. To what extent did this assistance come **timely enough** to help you cope with or mitigate the effects of the drought on your household or your main income generating activity?	1 = Somewhat too late 2 = Much too late 3 = Somewhat too early 4 = Much too early 5 = Exactly at the right time 6 = Don't know 7 = Refuses to answer		
3.	When did you spend the majority of the cash?	1. Immediately after having received/withdrawn (D.1) the full amount of money 2. Within 1-7 days 3. Within 8-14 days 4. Within 15-30 days 5. By [MM/YYYY] (enter month/year) 6. Not yet spent [--> Skip to next module] 7. Cash was lost or stolen [--> Skip to next module] 8. Other (specify)_____ 9. Don't know 10. Refuses to answer		
4.	IF C.2.1 = a (Received cash from WFP) How did you utilise the cash received **from WFP**? *[multiple mentions possible, OR (o) OR (p)]*		Approximate amount of cash assistance	
	a) Buy food for household			
	b) Seeds			
	c) Fertilizer			
	d) Other agricultural inputs			
	e) Supplementary animal feed			
	f) Medicine or health services for household			
	g) Animal health related expenses (treatment, vaccination, etc.)			
	h) Buy animals			
	i) Replay loan/debt			
	j) Educational expenses (school fees, stationary, uniforms, etc.)			
	k) Household items			
	l) Clothing			
	m) Saved (not yet spent)			

	n) Other (specify): _____	
	o) Don't know	
	p) Refuse to answer	

5.	Who in your household made the spending decisions for the majority of the cash amount?	1. Husband 2. Wife 3. Jointly by husband and wife 4. Other family member

Module E: Recipients of agricultural inputs (only; not for baseline survey)

#	Questions	Responses			
1.	By what date had you received the full quantity of (<____> item and quantity mentioned in C.2)?				
	1. Same day as first assistance received (C.2)	2. Enter date: ____	3. Not yet fully received	4. Other (specify): ___	5. Don't know 6. Refuses to answer
2.	You mentioned that you first received assistance with agricultural inputs on <insert date from C.2>. To what extent did this assistance come **timely enough** to help you cope with or mitigate the effects of the drought on your household or your main income generating activity?	1 = Somewhat too late 2 = Much too late 3 = Somewhat too early 4 = Much too early 5 = Exactly at the right time 6 = Don't know 7 = Refuses to answer			
3.	When did you use the majority of the items you received?	1. Immediately after having received/withdrawn (E.1) the full quantity 2. Within 1-7 days 3. Within 8-14 days 4. Within 15-30 days 5. By [MM/YYYY] (enter month/year) 6. Not yet used [--> Skip to next module] 7. Items were lost or stolen [--> Skip to next module] 8. Other (specify)_____ 9. Don't know 10. Refuses to answer			

Module F: Household Food Consumption

1.	**FOOD CONSUMPTION SCORE (FCS)** Ask the specific food name from the below list and note the information *(Only food consumed by the majority of the HH members together and in relevant quantities (**more than a teaspoon, more than half an egg/person, etc.)** is to be counted. E.g. meat used as flavoring or food consumed by only one person of the household is NOT to be recorded!*	How many days over the last 7 days, did members of your household eat the following food items, prepared and/or consumed at home ***[Enter frequency between 0 (not eaten) and 7]***
	CEREALS (Rice, pasta, bread, sorghum, millet, maize, fonio, potato, yam, cassava, white sweet potato, parched rice (muri), chira, rice particle, kaun rice)	
	LEGUMES/NUTS (beans, peas, peanuts, lentils, mascalai, mung beans, khesari, ankar, arahar pulses, nut, soy, and / or other nuts)	
	MILK AND OTHER DAIRY PRODUCTS (fresh milk / sour, yogurt, cheese, other dairy products) ***(exclude margarine/butter or small amounts in tea/coffee)***	
	MEAT, FISH, EGGS (goat, beef, chicken, buffelo, fish, including tuna, dry fish, and/or other seafish, eggs) (if answer is '0', then ask 'vegetable' questions)	
	VEGETABLES AND LEAVES (various spinach, onion, tomatoes, carrots, peppers, green beans, lettuce, etc.) (if answer is '0', then ask 'Fruits' questions)	
	FRUITS (banana, apple, lemon, mango, papaya, peach, etc.) (if the answer is '0', then ask 'Oil, Fat, Butter' questions)	
	OIL, FAT, BUTTER (vegetable oil, palm oil, shea butter, margarine, other fats / oil)	
	SUGAR OR SWEET (sugar, honey, jam, cakes, candy, cookies, pastries, cakes and other sweets including sugary drinks)	
	CONDIMENTS AND SPICES (tea, coffee / cocoa, salt, garlic, spices, yeast / baking powder, lanwin, tomato/sauce, **meat or fish as a condiment,** condiments including small amount of milk/tea coffee)	

Module G: Food Expenditure Share

1. FOOD BASKET VALUE MODULE (LIGHT)				
		A. Did you **purchase** any of the following items during the **last 30 days** for domestic consumption? If '**no**', enter '0' and proceed to next food-item. If '**yes**', ask the respondent to estimate the **total cash and credit expenditure** on the item for the 30 days.		**B.** During the **last 30 days**, did your household consume the following foods without purchasing them? If so, estimated the **value of the non-purchased food** items consumed during the last 30 days
		CASH (local currency)	CREDIT (local currency)	Local currency
1.	**Cereals** (maize, rice, sorghum, wheat, bread)			
2.	**Tubers** (sweet potatoes, cassava)			
3.	**Pulses** (beans, peas, groundnuts)			
4.	**Fruits & vegetables**			
5.	**Fish/Meat/Eggs/poultry**			
6.	**Oil, fat, butter**			
7.	**Milk, cheese, yogurt**			
8.	**Sugar/Salt**			
9.	**Tea/Coffee**			
10.	**Other meals/snacks** consumed outside the home			

1. FOOD BASKET VALUE MODULE (LIGHT)			
		A. Did you **purchase** any of the following items during the **last 30 days** for domestic consumption? If '**no**', enter '0' and proceed to next food-item. If '**yes**', ask the respondent to estimate the **total cash and credit expenditure** on the item for the 30 days.	**B.** During the **last 30 days**, did your household consume the following foods without purchasing them? If so, estimated the **value of the non-purchased food** items consumed during the last 30 days

2. NON-FOOD HOUSEHOLD EXPENDITURE					
Did you purchase the following items during the **last 30 days** for domestic consumption? (If none, enter 0 and go to next item)			In the past **6 months**, how much money have you spent on each of the following items or service? (If none, enter 0 and go to next item)		
		Local currency, last **30 days**			Local currency, last **6 months**
1.	Alcohol & Tobacco		9.	Medical expenses / health care	
2.	Soap & household items		10.	Clothing, shoes	
3.	Transport		11.	Education, school fees, uniform, etc	
4.	Fuel (wood, paraffin, etc.)		12.	Debt repayment	
5.	Water		13.	Celebrations / social events	
6.	Electricity/lighting		14.	Agricultural inputs	
7.	Communication (phone)		15.	Savings	
8.	Rent		16.	Constructions / house repairs	

Module H: Coping Strategies

1.	***CONSUMPTION-BASED COPING STRATEGY INDEX (rCSI / CSI food)*** **During the past 7 days, did you have to follow any strategy which mentioned in below, because of there was not enough food or cash to buy food?**	Number of days [0 – 7]
	1. Rely on less preferred and less expensive food	
	2. Borrow food or rely on help from relative (s) or friend (s)	
	3. Limit portion size at meals	
	4. Restrict consumption by adults for small children to eat	
	5. Reduce number of meals eaten in a day	
2.	***LIVELIHOOD-BASED COPING STRATEGIES (LCS)*** During the past 30 days, did anyone in your household have to engage in any of the following activities because there were not enough resources (food, cash, else) to access essential needs (e.g. adequate shelter, education services, health services, etc)?	1 = No, because I did not face a shortage of food 2 = No, because I already sold those assets or have engaged in this activity and cannot continue to do it. 3 = Yes 4 = Not applicable
	1. Sold household assets/goods	
	2. Purchased food on credit or borrowed food	
	3. Spent savings	
	4. Borrowed money	

1.	***CONSUMPTION-BASED COPING STRATEGY INDEX (rCSI / CSI food)*** **During the past 7 days, did you have to follow any strategy which mentioned in below, because of there was not enough food or cash to buy food?**	Number of days [0 – 7]
	1. Rely on less preferred and less expensive food	
	2. Borrow food or rely on help from relative (s) or friend (s)	
	3. Limit portion size at meals	
	4. Restrict consumption by adults for small children to eat	
	5. Reduce number of meals eaten in a day	
	5. Sold productive assets or means of transport (sewing machine, wheelbarrow, bicycle, car, etc.)	
	6. Consumed seed stocks that were to be held/saved for the next season	
	7. Withdrew children from School	
	8. Sold house or land	
	9. Begged	
	10. Sold last female animals	

Module I: Livestock economy (suggestion; not a standard WFP survey module)

1.	**How many animals did you own at the beginning of the drought period (approximately <month/year>)?**				Enter number	
	Cattle					
	Sheep					
	Goats					
	Horses					
	Chickens					
	Ducks					
	Other (specify): _____					
2.	**Between then and now, how many animals have you…**	Sold	Slaughtered for household consumption	Died because of the drought	Bought (new animals)	New born
	Cattle					
	Sheep					
	Goats					
	Horses					
	Chickens					
	Ducks					
	Other (specify): _____					

1.	**How many animals did you own at the beginning of the drought period (approximately <month/year>)?**					Enter number
	Cattle					
	Sheep					
	Goats					
	Horses					
	Chickens					
	Ducks					
	Other (specify): _____					
3.	If any animals were **sold**: What was the average market price (local currency) you received per animal:	Live animals (local currency per animal)		Carcass (local currency per unit)		
	Cattle					
	Sheep					
	Goats					
	Horses					
	Chickens					
	Ducks					
	Other (specify): _____					
4.	**Did you have access to sufficient water for your livestock?**	1. Yes 2. No 3. Don't know 4. Refuses to answer				
5.	**Did you have sufficient feed available for your crops?**	1. Yes 2. No 3. Don't know 4. Refuses to answer				
6.	**Was supplementary feed available in the market to buy?**	1. Yes 2. No 3. Don't know 4. Refuses to answer				

Module J: Agricultural crop production (suggestion; not a standard WFP survey module)

1.	**Does your household have access to land for agriculture?**	1: Yes [Continue, else skip to next module] 2: No 3: Don't know 4. Refuse to answer	
2.	**What kind of ownership does your household have for your land?**	1. Illegal access, squatting 2. Leasehold between 10-20 years 3. Share-cropping arrangement 4. Leasehold between 21-30 years 5. Rented for less than 12 months 6. Leasehold between 31-40 years	7. Leasehold less than 5 years 8. Leasehold for period of more than 40 years 9. Leasehold less than 10 years 10. Freehold (legally owned)
3.	**How much land do you have available for agricultural production?**	**Unit:** 1. Hectare 2. Acre 3. Decimal 4 Local unit (specify): ___	**Quantity (area):** _____
4.	**What do you cultivate on your land?**	**How much area do you use for each crop variety (in unit J.3)**	**How much have you produced this season (in kg)?**
	Maize **Sorghum** **Millet** **Wheat** **Other (specify): _____**	Area: ____ Area: ____ Area: ____ Area: ____ Area: ____	KG: ____ KG: ____ KG: ____ KG: ____ KG: ____
5.	**Did you have sufficient seed stock available for planting?**	1. Yes 2. No 3. Don't know 4. Refuses to answer	
6.	**Were seeds available in the market to buy?**	1. Yes 2. No 3. Don't know 4. Refuses to answer	
7.	**Did you have sufficient fertilizer available for your crops?**	1. Yes 2. No 3. Don't know 4. Refuses to answer	
8.	**Was fertilizer available in the market to buy?**	1. Yes 2. No 3. Don't know 4. Refuses to answer	
9.	**Did you have access to sufficient water for your crops?**	1. Yes 2. No 3. Don't know 4. Refuses to answer	
10.	**This season that was affected by drought, have you produced less, the same or more than during previous harvests?**	1. Much less 2. A little less 3. About the same	4. A little more 5. Much more 6. Don't know 7. Refuses to answer

Module K: Household income (suggestion; not a standard WFP survey module)

1.	**In the past 30 days, have you or someone in your household worked for remuneration for at least one hour? By "work for remuneration" I mean any activities you undertook in exchange for money or food, including daily labour, working for wages or in-kind, working on your own account or running a business, including an agricultural business where you sell your own crops or livestock.**	1. Yes 2. No 3. Don't know 4. Refuses to answer
2.	IF yes: **How much did you and anyone else in your household earn from this work in the past 30 days?**	**Amount (in local currency)**

1.	**In the past 30 days, have you or someone in your household worked for remuneration for at least one hour? By "work for remuneration" I mean any activities you undertook in exchange for money or food, including daily labour, working for wages or in-kind, working on your own account or running a business, including an agricultural business where you sell your own crops or livestock.**	1. Yes 2. No 3. Don't know 4. Refuses to answer
	a) Crop production & sales	
	b) Selling animals or animal products	
	c) Day labour, on farm	
	d) Day labour, off farm	
	e) Other informal business, petty trading	
	f) Formal employment	
	g) Begging	
	h) Other (specify):_____	
3.	Have you received any remittances or government transfers (e.g. pension, disability payment, other social security benefit) in the last 30 days?	1. Yes 2. No 3. Don't know 4. Refuses to answer
4.	IF yes: **How much remittances or government transfers did you receive in the last 30 days?**	**Total amount (in local currency):**

Annex 8: Lessons learned session or workshop guidance

Guidance and agenda (example) for an interactive learning exercise[30]

What is the purpose of a lessons learned session/workshop about anticipatory action?
The overall goal of this learning exercise is to contribute to the understanding of the FbF team and its partners about the performance of their anticipatory actions and associated processes, and to help promote learning and accountability.

Following the implementation FbF anticipatory actions, and ideally the analysis of outcome survey/impact assessment data, the exercise typically takes a 1-3 day workshop format and brings together all key staff and stakeholders involved in financing and implementing the anticipatory actions in anticipation of drought.

More specifically, the learning exercise can:

- Provide space for implementers and partners to engage with, interrogate and interpret the M&E findings, drawing data-driven conclusions about what the anticipatory actions achieved and where they fell short of expectations;
- Share experiences and perspectives about what went well and where there is room for improvement;
- Identify recommendations to the FbF team (management, staff and partners) for improving the SOPs and/or other anticipatory action-related plans and decisions.

Overall questions for reflection that frame the exercise:
During the learning exercise, the following questions can help you to reflect on the performance of the SOPs and draw lessons learned:

- What do the data and the qualitative beneficiary feedback tell us about the effectiveness of the anticipatory actions? Have they achieved their goals?
- What worked work well in our actions, and why?
- What did not work well, and why?
- What should we replicate and scale up, and what do we need to do differently in such situations?

Thematic areas for learning:
Every SOP activation will be different, depending on the hazard and geographic context. Therefore, the learning exercise should focus on areas of learning that are most relevant for the local context. Areas to consider are:

a. <u>The different components of an SOP activation:</u>
   - SOPs development, including trigger definition / analysis and use of forecast information (planning)
   - Anticipatory action selection and implementation (activities)
   - Effects of the anticipatory actions on the target population (outcomes / results)

b. <u>The operational dimensions of the activation:</u>
   - Logistics planning, preparedness and implementation
   - Financial management
   - HR, staff and implementation team / volunteers
   - Data collection, monitoring, information management
   - Assessment, analysis & decision making
   - Safety and security

[30] Adapted from Red Cross Red Crescent Climate Centre (2019), FbF M&E Guide: Lessons learned from activation.

- Line management / leadership
- Resource mobilisation & fundraising
- External communication

Who should be involved?
It is important to involve all key individuals who can meaningfully contribute to learning about the recent SOP activation. Typically, this includes:

- WFP FbF team and management;
- SOP implementing partners (with experience from field-level actions, not only office staff/management);
- Forecast providers (e.g. meteorological agency representatives);
- Government disaster preparedness/response agencies or other partners involved in the SOP process;
- Other humanitarian agencies with similar interventions;
- Representatives from the financing organization, as applicable.
- Representatives of drought-affected/beneficiary populations.

Which preparations are needed?
It is recommended to compile all the available data about the recent activation, including but not limited to:

- Forecast information & weather data based on which the SOPs were triggered, and data on the extreme event (e.g. wind speeds; water levels; rainfall intensity; etc.);
- SOP implementation monitoring data;
- Outcome survey data;
- Secondary data sources about impacts of the weather event (e.g. crop losses; water availability; rainfall conditions, etc.).

Which other resources are available?
It is recommended to structure the content and process of the exercise according to the local learning priorities. The internet is full of helpful resources on learning workshops and after-action reviews, including for the international development and humanitarian fields. One recommended resource is ODI's Tools for Knowledge and Learning: A Guide for Development and Humanitarian Organisations.

Agenda (example)

*Note on group work: Whenever "**group work**" is suggested, a large participant group should be organized into group tables or similar. If only a small number of people participate in the workshop, then the exercises may be done in plenary.*

Day 1	
Introduction	**Welcome & introductions** Purpose: Participants get to know each other and the objectives for the workshop • Warm up get-to-know-each-other exercise • Introduction of workshop flow and methodology • Group exercise: Introduction of participants & expectations (1 desired take away per person on a piece of paper, then table groups discuss these among themselves) • Facilitator collects expectations (on paper) and organizes them on the wall for later sharing (if the group is small, this can be done immediately in plenary)

Session 1	**Timeline exercise**
	Purpose: Create a common understanding of "what happened and when"; can be done from scratch or with a core timeline prepared
	• Suggestion: begin with a short presentation on "what happened" to summarize the main facts (key disaster events, number of people affected, where, main impacts)
	• Put a series of flipchart papers on the wall and draw a timeline
	• Group work: Let participants identify & note key events on cards. One event per card. Three different colors are suggested:
	  o Color 1: Natural (weather / disaster-related) events
	  o Color 2: External event (e.g. actions taken by people, organizations, etc.)
	  o Color 3: Internal event (e.g. SOP decisions, actions, finances, …)
	• Reconvene in plenary; a representative from each table places the cards on the timeline, with the help of the facilitator
	• Plenary discussion: review timeline, identify enablers / obstacles / critical problems or breaking points

Session 2	**Reflecting on forecast, trigger and the link to action**
	Purpose: Understand how good the trigger model and the forecast was, and to what extent the information was analyzed, understood and acted upon.
	• Organize the group by area of expertise/task (e.g. forecasters, field implementers, programme managers)
	• Let each group reflect on:
	  o Did the impact-based forecast reflect actual events on the ground?
	  o How timely was the information?
	  o How useful was the information?
	  o Were there any problems with the forecast / trigger?
	  o Do we have new information that can help us refine/improve the trigger
	• In plenary, let the groups share their reflections with each other and identify any discrepancies in perceptions → what can we learn from our common understanding and our differences?

Session 3	**Reviewing the SOP implementation**
	Purpose: Participants reflect on the implementation of the SOPs and identify what worked well, what did not work so well, and why.
	• Questions for reflection (either in groups by question, or in plenary):
	  o Were the anticipatory actions clearly defined?
	  o Were roles and responsibilities clearly defined? (Suggestion: note down the key roles involved in the SOP implementation and check for each role, e.g.: logistics team, volunteer coordinator, field volunteers, finance, M&E, management)
	  o Did everyone do what they were supposed to do, vis-a-vis the plan? (again, go through the roles/functions)
	  o To what extent were the anticipatory actions, suitable and appropriate to the disaster situation?
	  o What were the main problems? (assess by internal and external causes of the problem)
	  o What were the main opportunities that enabled the work (internal/external, lucky coincidence/designed-for)?

	○ How well did the financing mechanism work (incl. timely release of funds)? Were there any problems with the financial aspects of the SOP implementation? • Share key reflections in plenary and prioritize main problems and opportunities/enablers.
Wrap-up	**Reflections** on learnings from day 1, evaluation day 1
Day 2	
Refresher	**Summary of day 1** flow and key learnings • Can be crowd-sourced or prepared by a rapporteur or the moderator
Session 4	**Assessing what we know about the effectiveness of actions and impacts** Purpose: Assess to what extent the anticipatory actions achieved their objectives, and whether unintended effects were observed • First, begin with a short presentation on the selection of anticipatory actions and theory of change (what were the actions meant to achieve) • Second, a short presentation (e.g. by M&E focal point) of the available data on (a) implementation monitoring, (b) beneficiary impacts (survey / secondary data) • Group work: For each action, reflect on ○ What were the main disaster impacts (in the intervention area)? ○ What effects did the anticipatory actions have, intended or unintended, ▪ On physical assets and structures? ▪ On the health and well-being of the target population? ▪ On the economic activity or status of the population? ▪ Any other effects? ▪ How do the effects match with what the actions were meant to achieve? Is this over- or under-achievement? ○ Are there any observable differences between people who received anticipatory action assistance and people who didn't? What can we infer from the differences about the effectiveness of the intervention? • Plenary reflection on key learnings about effectiveness and impact
Session 5	**Consolidating our learning** Purpose: The participants create a synthesis of the main learning points from each session and prioritize areas for improvement • Group work, e.g. by thematic areas for learning (see first page): Let participants prioritize their most important take-aways from sessions 2, 3 and 4. ○ Identify main problems in each area (internal + external) ○ Identify main opportunities/enablers in each area (internal + external) ○ Identify linkages between sessions 2, 3 4, i.e. between forecast/trigger, operations/implementation/management/finance, and monitoring and impact evaluation. • Let participants summarize their key learnings for each thematic focus area • For each area, identify the main issues that need improvement/change
Session 6	**Planning to improve - next steps** Purpose: *For each thematic focus area*, participants draw up a concrete action plan for how to implement the necessary changes • Group work: For each thematic focus area, reflect:

	○ What needs to change? ○ Who needs to take action to achieve the change? ○ Who takes the lead / coordinating responsibility? ○ By when? ○ What are the resources (people, materials, finances) to make it happen? • After the workshop, the organizers synthesize the plans into one consolidated improvement action plan
Wrap-up	**Summary of day 2, closing reflections, overall workshop evaluation**

Note: The duration of sessions 2 through 5, i.e. the core learning and reflection sessions, can be designed according to your learnings needs. One session could be done in as little as 1.5 hours or half a day each.

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Acronyms

AA	Anticipatory Action
AAP	Accountability to Affected Populations
AAR	After Action Review
ABI	Asset Base Indicator
CCS	Climate Capacity Score
CERF	Central Emergency Response Fund
CFM	Complaints and Feedback Mechanisms
CRF	Corporate Results Framework
CSI	Coping Strategy Index
CSP	Country Strategic Plan
DANIDA	Danish International Development Agency
DiD	Difference in Differences
EBI	Environmental Benefit Indicator
ERB	Ethics Review Board
EWEA	Early Warning Anticipatory Action
FAO	Food and Agriculture Organization
FbA	Forecast-based Action
FbF	Forecast-based Financing
FCS	Food Consumption Score
FCS-N	Food Consumption Score - Nutrition
FFA	Food for Assets
FES	Food Expenditure Share
FGD	Focus Group Discussion
FIES	Food Insecurity Experience Scale
HH	Household
HDDS	Household Dietary Diversity Score
IPC	Integrated Phase Classification
KII	Key Informant Interview
LCS	Livelihood-based Coping Strategies
LSA	Lean Season Assistance

M&E	Monitoring and Evaluation
MDD-W	Minimum Dietary Diversity for Women
MMRs	Minimum Monitoring Requirements
MoDa	Mobile Operational Data Acquisition
NFI	Non-Food Item
NORAD	Norwegian Ministry of Foreign Affairs
ODK	Open Data Kit
PDM	Post Distribution Monitoring
PMT	Proxy Means Test
PSM	Propensity Score Matching
rCSI	Reduced CSI, also called CSI food
RCT	Randomised Controlled Trial
SOP	Standard Operating Procedure (also referred to as Anticipatory Action Protocol/Plan)
ToC	Theory of Change
ToT	Training of trainers
WFP	World Food Programme
UNEG	United Nations Evaluation Group