



ACTING BEFORE DISASTER STRIKES

The impacts of anticipatory cash transfers on climate resilience
in Northeast Nigeria



INTERNATIONAL
FOOD POLICY
RESEARCH
INSTITUTE

HIGHLIGHTS

- In flood-prone communities in Northeast Nigeria, we used a randomized evaluation to measure the impacts of providing cash transfers to households before the onset of a shock (“anticipatory cash”) compared to the standard practice of providing cash transfers after a shock occurs.
- Results indicate that providing anticipatory cash to households in flood-prone areas reduced negative coping strategies, increased pre-emptive climate adaptive actions, and enhanced investment in productive assets compared to households that received cash after peak flooding occurred.
- The findings suggest that large, one-time anticipatory cash transfers can build households’ climate-adaptive and resilience capacity, making them a promising intervention to reduce household vulnerability to future climate shocks.

INTRODUCTION

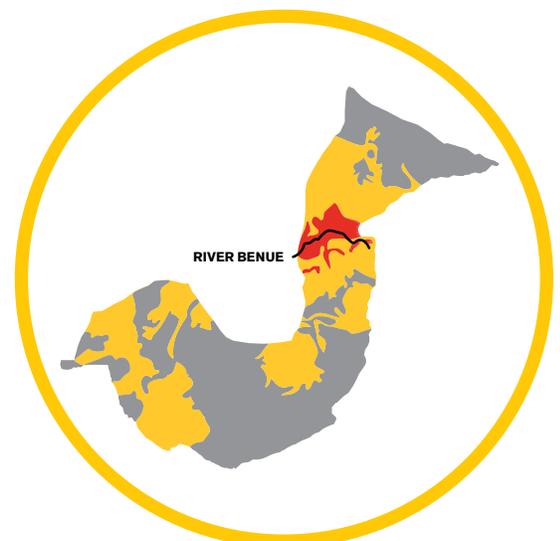
Climate change is producing more extreme and frequent weather events like drought, floods, hurricanes, and cyclones, with destructive and deadly effects. While everyone in the world may be impacted by climate change in some way, people living in low-income countries are four times more likely to be displaced by a climate crisis than those in wealthy countries¹. Communities already affected by conflict and food insecurity are particularly vulnerable. When faced with these disasters, these communities’ businesses and homes are often damaged or destroyed, livelihoods lost or damaged, and lives uprooted.

As climate events have become more prevalent, governments and humanitarian organizations have stepped in to support those worst affected by offering in-kind assistance, temporary shelter, basic services, and increasingly, cash. One-off cash transfers have become increasingly popular in light of extensive research showing that simply giving people cash is an effective way to alleviate poverty, improve food security and boost resilience in the face of emergencies². Cash is also relatively easy to deliver to households. In crisis settings, the standard practice is to deliver cash after a disaster strikes. Recently, however, humanitarian actors have begun to ask, in cases where a disaster can be

predicted, if transferring cash or providing in-kind support to vulnerable households before the peak impacts of a disaster (“anticipatory actions”) may be more protective. However, little evidence exists on the impacts and cost-effectiveness of this approach, and none from fragile or conflict-affected settings.

The International Rescue Committee (IRC) is committed to generating evidence about what works in humanitarian contexts to increase the effectiveness and efficiency of policies and practices in these settings, and ultimately to improve the lives and livelihoods of people affected by crisis. The study described in this brief was the first to use randomized research design to test how anticipatory cash transfers compare to the conventional approach of providing cash after a disaster in a conflict-affected setting.

FUFORE



1 UN OCHA, 2021.

2 See, for example: Bastagli, F., Hagen-Zanker, J., Harman, L., Barca, V., Sturge, G., Schmidt, T. and Pellerano, L., 2016. “Cash transfers: what does the evidence say? A rigorous review of programme impact and the role of design and implementation features.” London: ODI, 1(7).

THE CONTEXT

Nigeria is highly vulnerable to climate-related shocks, especially flooding, and ranks among the countries most susceptible to the effects of climate change. Flooding hazards have led to more displacements than any other climate disaster in Nigeria. In 2012, Nigeria experienced one of its largest floods in a century, causing the displacement of over 2.3 million people, 363 deaths, and impacting the livelihoods of over 16 million people¹. Total economic losses were estimated at \$16.9 billion².

Adamawa state, in northeastern Nigeria, where this research took place, is among the most flood-affected states in Nigeria, with an estimated 260,000 people exposed to floods and around 1,000 square kilometers of land submerged across the state each year³. In 2022, severe flooding occurred in Adamawa following heavy rainfall that triggered an overflow of the Benue River and spillage from the Lagdo dam in neighboring Cameroon.

The challenges brought on by the floods are compounded by food insecurity and conflict in the region. Communities largely rely on subsistence farming and livestock herding for their food and livelihoods, making them highly vulnerable to natural calamities. Protracted and frequent conflict, including the Boko Haram insurgency, further disrupts agricultural activities and food supply chains that worsen food insecurity and malnutrition.

FILLING THE RESEARCH GAP

With funding from Google.org, the IRC partnered with the International Food Policy Research Institute (IFPRI) and the Center for Disaster Protection to pilot and evaluate the effects of early warning systems and anticipatory cash interventions to protect the livelihoods of smallholder agro-pastoralists that are threatened by an increasing occurrence of severe flooding in the northeastern state of Adamawa.

Through a randomized evaluation, the research team measured the impacts of providing cash transfers to households before the onset of peak flooding shocks compared to the standard practice of providing cash transfers after the shocks occur to households in six communities in Fufore local government area⁴. This study provides the first experimental evidence from a randomized evaluation on how anticipatory cash compares to the conventional approach of post-shock cash transfers in a conflict-affected environment.

In partnership with the Upper River Benue Basin Development Authority, the Nigerian Meteorological Agency and the Nigeria Hydrological Services Agency, the IRC created a flood-risk monitoring platform that incorporated indigenous knowledge, hydrological data, meteorological data and satellite information to set forecast-based thresholds and provide evidence on hydrological and meteorological parameters (water level, discharge and rainfall) for triggering anticipatory cash payments. Data on flood risks was shared with community members and local stakeholders through a network of community-based early warning information workers.

During the 2022 agricultural season, the pilot project delivered one-time lump-sum cash payments of ₦195,000 naira (equivalent to \$400) to 1,450 households randomly assigned to one of two groups. The treatment group consisted of 725 eligible households who received their cash when triggered by the flood monitoring platform's risk thresholds (e.g., when river water volume exceeded a certain amount and the probability of a flood was high). An equal number of comparable households ("control group") received equal cash payments after the flood hit. The intervention also included early warning messages to all households before the floods through community-based early warning workers.

1 Adekola and Lamond, 2018; Adelekan and Asiyebi, 2016; Boamah et al., 2015

2 Tiwari and Tiwari, 2015

3 REACH Initiative, 2022

4 This study did not include a pure control group because it would not be ethical to not provide a benefit to households that were already eligible. Before the study, vulnerable families were eligible for post-disaster cash transfers.

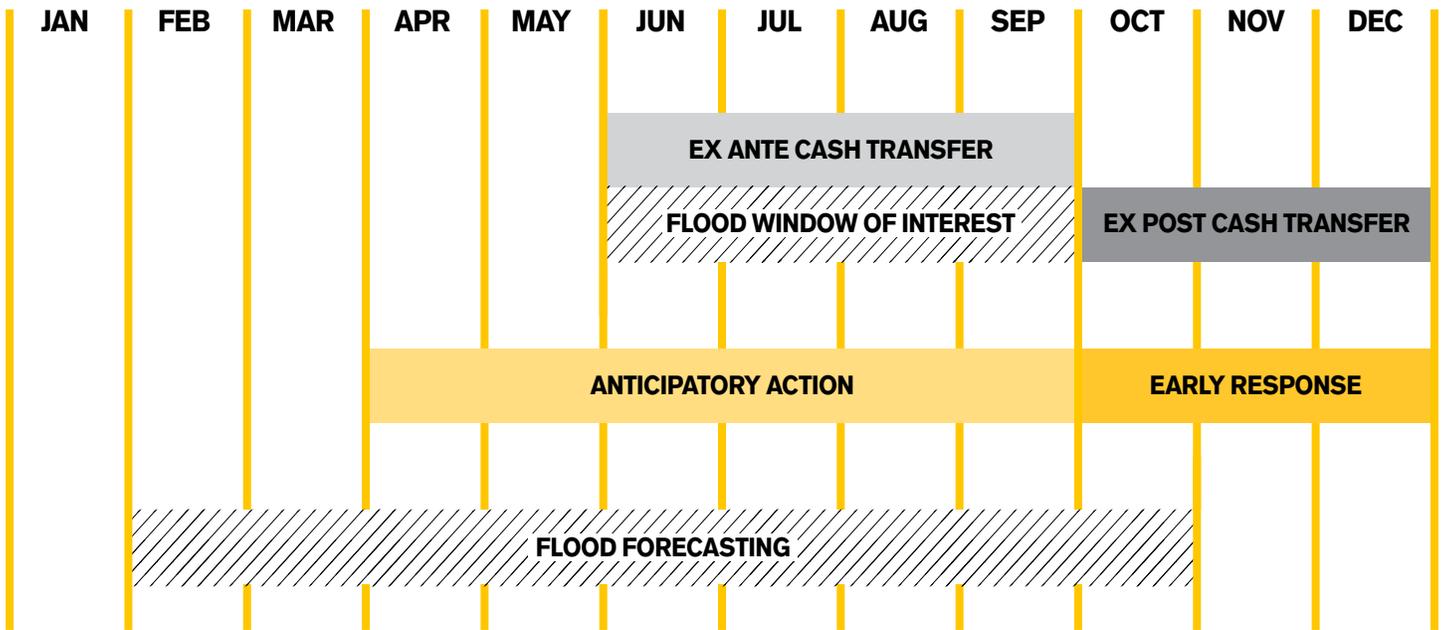


FIG 1. Flood calendar of the study area and trigger development process

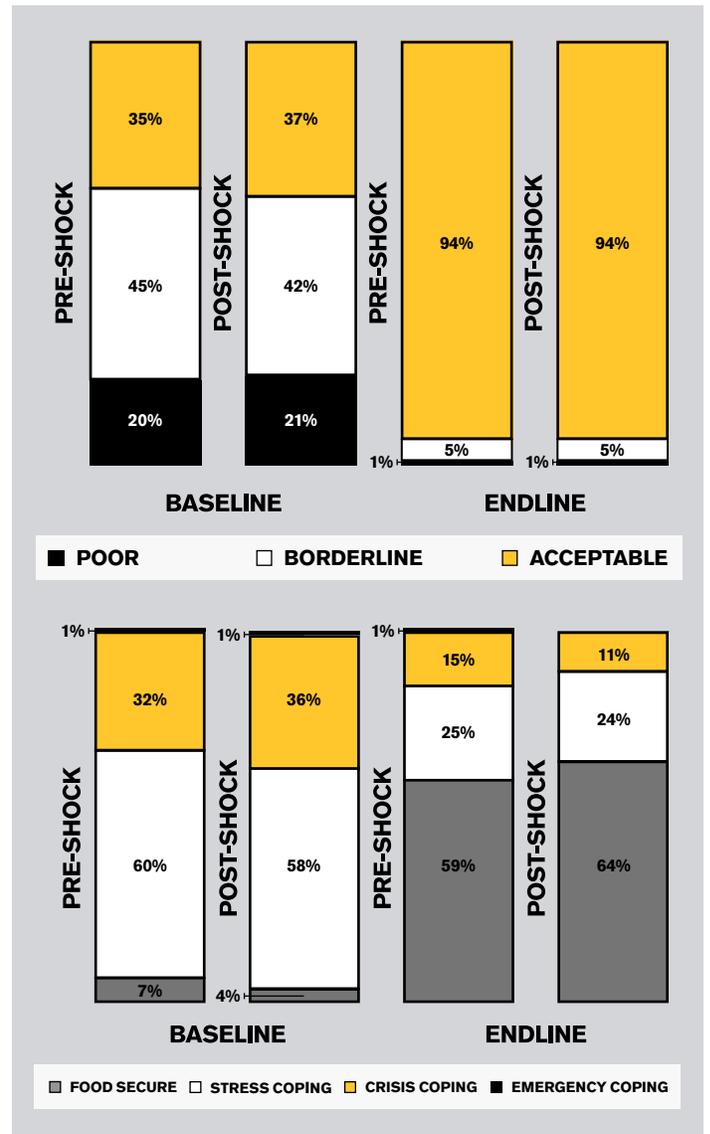
DATA COLLECTION

The research team conducted a baseline survey of the 1,450 participating households before the intervention, between April 25 and May 31, 2022. The anticipatory cash transfers were delivered in person by the United Bank of Africa (UBA) and the IRC between July 27-28, 2022, and the standard post-shock transfer was delivered on November 7, 2022. Figure 1 shows the flooding calendar, trigger development and forecast monitoring, and windows of interest for early warning and cash transfer interventions.

The endline survey was administered five months after the baseline survey, in December 2022. In both surveys, heads of households, sometimes accompanied by their spouses, were asked a range of questions related to household socio-demographics, food security conditions, sources of income, food and non-food expenditures, assets holdings (durable assets, land and livestock), subjective well-being, households' climate resilience (climate-adaptive actions, livelihood diversification), and various coping strategies.

KEY FINDINGS

Households that received cash transfers either before or after the flood had much better food security and used fewer negative coping strategies like reducing meals and selling off assets than before the transfers.



TOP: Figure 2a. Food consumption scores (FCS)

BOTTOM: Figure 2b. Reduced coping strategy index (rCSI)

At baseline, only 35-37% of survey households reported acceptable levels of food security (Fig. 2a) and around 58-60% were already adopting stress-coping strategies to get by at that time (Fig. 2b). In the endline survey, about 94% of households moved to acceptable food security levels, and a much higher proportion of households in both groups reported being food secure (64% and 59% of control and treated households, respectively). Similarly, the percentage of households that used stress and crisis coping strategies notably reduced in both groups.

The anticipatory cash transfers improved households' coping strategies related to securing enough food and protecting their livelihoods, compared to households that received cash after the flood.

Households that received cash payments before the peak of flooding were less likely to resort to reducing the number of meals or portion sizes or borrowing to meet food needs. They were also less likely to resort to measures like selling livestock or other assets, taking on debt, or spending their savings to meet basic needs.

The anticipatory cash transfer had a significant impact on the number of pre-emptive actions taken by households in anticipation of flood shocks, including harvesting early, stockpiling food and evacuating one's household. However, the number of post-shock actions taken was not significantly different across the groups.

PHOTO: Anticipatory cash transfers increase the instances of positive pre-emptive actions such as harvesting crops early and stockpiling food.

The anticipatory cash transfer increased productive investments, including agricultural assets and productive livestock, on average, relative to the group that received the cash transfers afterward. Since productive investments could enhance a household's future income-generating capacity and reduce its vulnerability to future shocks, this result suggests that anticipatory cash may help build long-term resilience capacity.

The households that received anticipatory cash took certain actions to diversify their livelihoods that the standard transfer group did not, namely labor re-allocation such as migrating for work. Offering the transfer before rather than after did not spur other livelihood diversification measures—which can help dampen the impact of climate shocks for farming households—such as crop diversification, mixed crop-livestock diversification and non-farm business activities. The lack of impact on these areas is likely due to the short timeline of the study and/or a concern that these investments could be damaged by flooding.

As noted above, the timing of the cash transfer did not seem to have significant impacts on short-term food security and non-food consumption expenditures compared to post-shock cash transfers, nor did it impact subjective well-being. The absence of differences between the groups on these outcomes may be attributed to the fact that the cash transfer is large enough to allow pre-shock households to invest in productive assets and still remain with some cash to spend on food and other basic needs after the flood.





Anticipatory cash transfers improve a household's ability to prepare for and respond to riverine flooding.

RECOMMENDATIONS



1. Given that anticipatory cash improved climate resilience capacity and was just as effective at supporting households to meet basic needs as standard cash programming, we suggest humanitarian agencies and governments consider using anticipatory cash transfers where suitable. Not all humanitarian contexts in which climate shocks occur will be conducive to anticipatory action, however. Agencies should weigh the feasibility of anticipation action against other climate risk mitigation and resilience activities and should strongly consider anticipatory action if:
 - there is quality data to predict a high-probability climate shock and
 - there is adequate time to intervene ahead of the onset or peak effects of the shock based on predictions, allowing households time to safely act and have sufficient resources with which to act.
2. As climate shocks continue to worsen and humanitarian funding needs remain unmet for both emergencies and early recovery, anticipatory approaches may be critical to meeting the short- and longer-term needs of climate- and conflict-affected households.
3. Future research should examine the impacts of different size cash transfers and gather more granular, high-frequency data to understand how anticipatory cash interventions may influence food security and well-being throughout the course of the flood season.

COVER PHOTO: Floods are ravaging farmland, destroying crops and forcing thousands of people to abandon their homes in communities like Imburu in Adamawa State. Radeno Haniel/AFP via Getty Images

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For more information, please refer to the [working paper](#).

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