IRC Nigeria Climate Resiliency – Anticipatory Actio

PRESENTATION

JULY 2022 NATIONAL CASH WORKING GROUP MEETING

July 28, 2022

ANTICIPATORY ACTION PROJECT

Pilot Overview

Project Background

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The IRC is partnering with Google.org, IFPRI & the Center for Disaster Protection to implement a **Climate Resiliency project** in the Northeastern state of Adamawa, Nigeria piloting the use of **climate-risk reduction ex-ante cash payments to small holder farmers and livestock owners** in the region from October 2021-December 2022.

This pilot is hinged upon the central hypothesis that when climate vulnerable communities have **timely access** to information and **the financial and social resources** to act upon that information, they will avoid negative coping strategies and build more diversified and climate resilient livelihoods.

Project Goals

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Program: To reduce the use of negative coping strategies and support households to build resilience against climate shocks by providing climate risk reduction payments and early warning messaging to smallholder farmers.

Research: To assess the effectiveness of use of early warning systems and anticipatory cash to mitigate the level of shock and stress experienced by small holder farmers in the event of a hazardous climatic event

Outcome: Households reduce the use of negative cooping strategies, improve food security and income and build resilience to climatic shocks.

Approach

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Develop a trigger system for Anticipatory Cash transfer and Anticipatory Action

Provision of ex ante anticipatory and ex-post cash transfers

Provision of early warning, early action and disaster risk reduction messages

Comparative review of evidence of ex-ante and ex-post cash transfer for climate shock reduction

Pilot Reach

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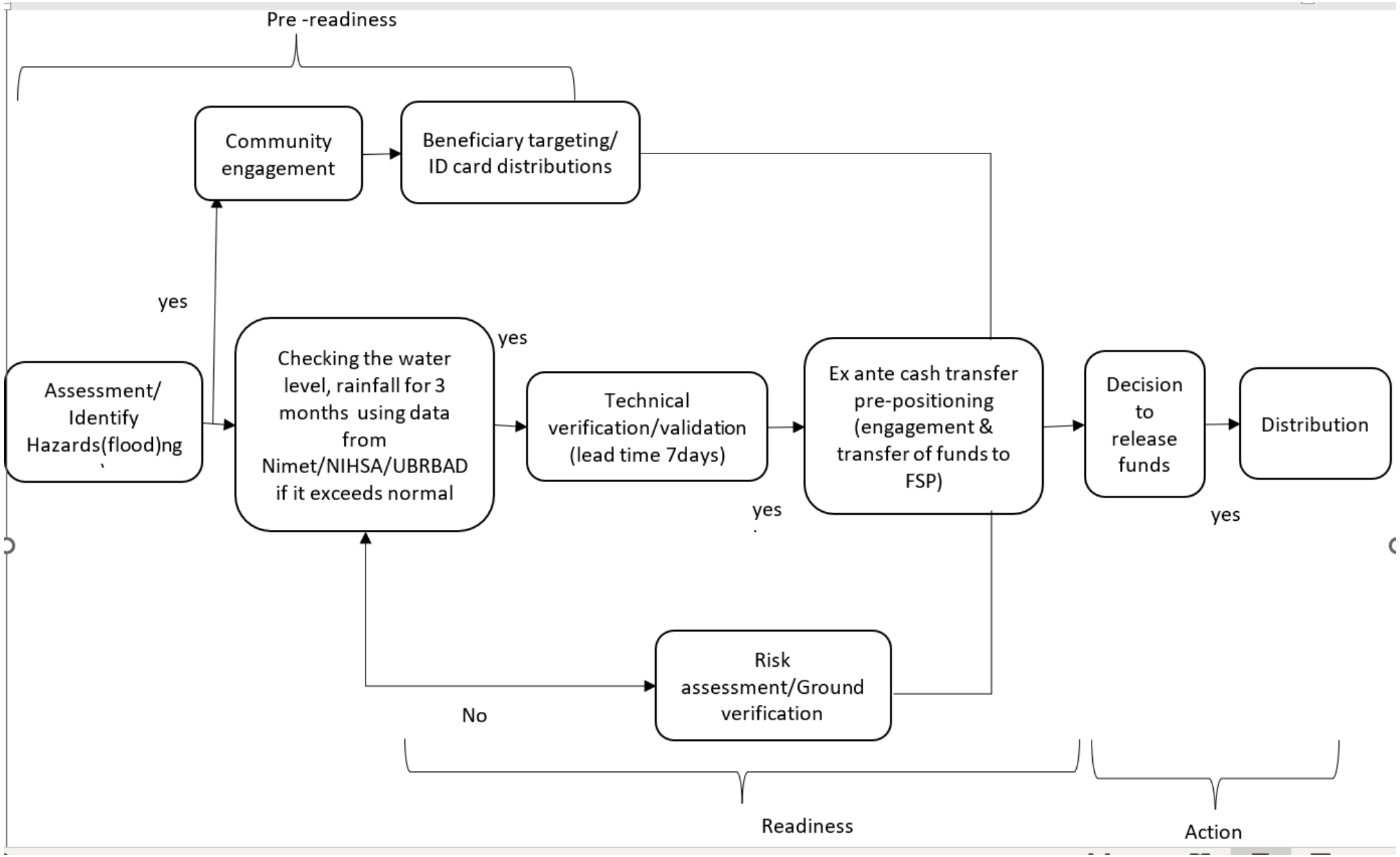
1450 Smallholder Farmer HHs
(5000 individuals)

Early Warning Disaster Risk Messaging
6 Communities

725 HHs Ex-Ante Cash
725 HHs Ex-Post Cash

Implementation Process



Anticipatory Cash Evidence

Feasibility and Acceptability: limited evidence on client acceptability of ex-ante climate risk payments

Effectiveness & Potential Effectiveness: “small” cash transfers have been found to be effective, for some outcomes, yet may hinder overall effectiveness, larger transfers should be evaluated

Cost-Efficiency: general feeling that anticipation is more cost-efficient than post-ante, yet cost-efficiency data is not available for most programs

Differences in impacts by gender: there is limited data on impact disaggregated by gender or other sub-populations

Scaling and Integration: limited integration cross-organization or between organizations and governments of anticipatory services

Assessments & Design

Feasibility Assessment

The project team conducted a feasibility studies and rapid assessments in **Michika** & **Fufore LGAs, Adamawa** to determine **prevalent climatic hazards** in the broad areas of intervention and held design workshops with partners to validate findings of the assessments.

Results from the feasibility studies and rapid assessments in Michika and Fufore LGA s revealed **dry-spells** (Michika), **flooding (Fufore)** and **drought** (Fufore) to be the most prevalent climate related hazards in the region which had impact on small holder agro-pastorialists.

These finding were backed by review of **historical data** of climate-hazard emergencies

Given the difficulties with dry-spell prediction and a need to test the approach within the project timeline the team decided to focus on **Fufore and flood hazards**

The assessments and design sessions also determined **windows of interest** according to the seasonal calendar and **communities of interest** according to flood risk

Window of Interest

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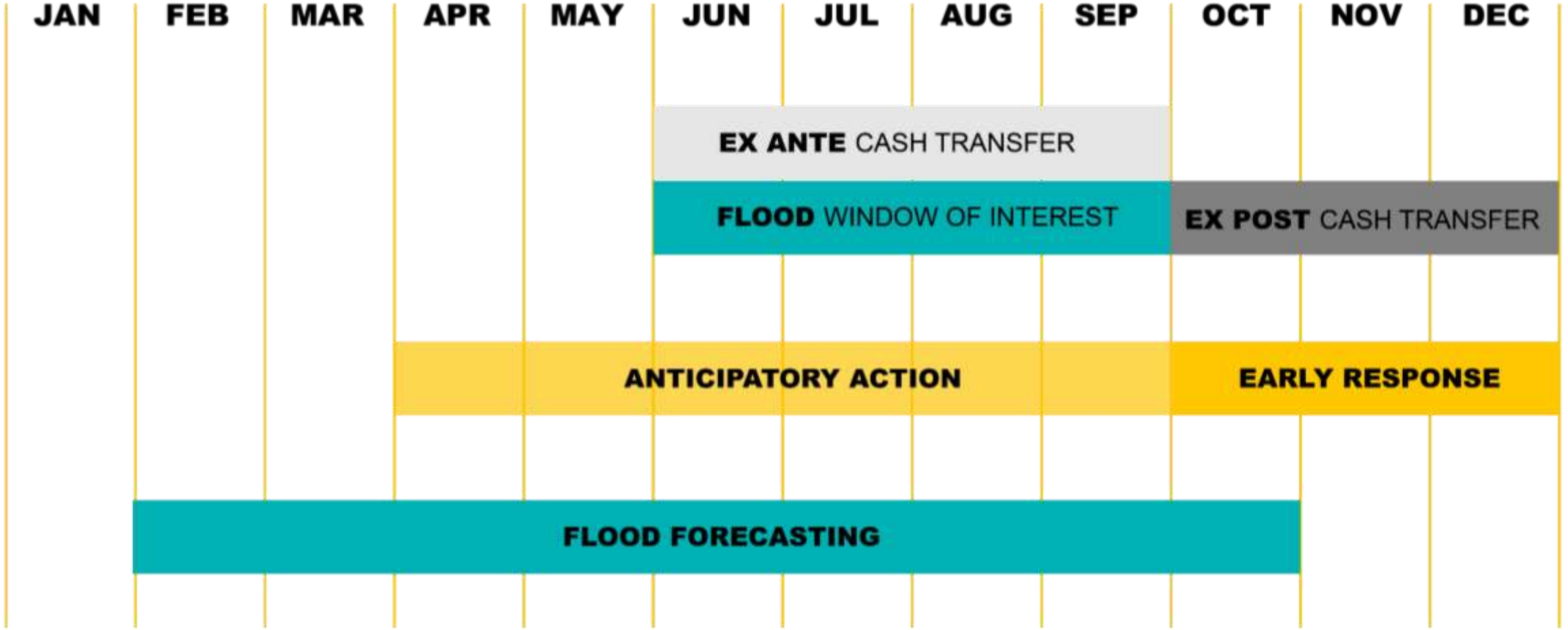
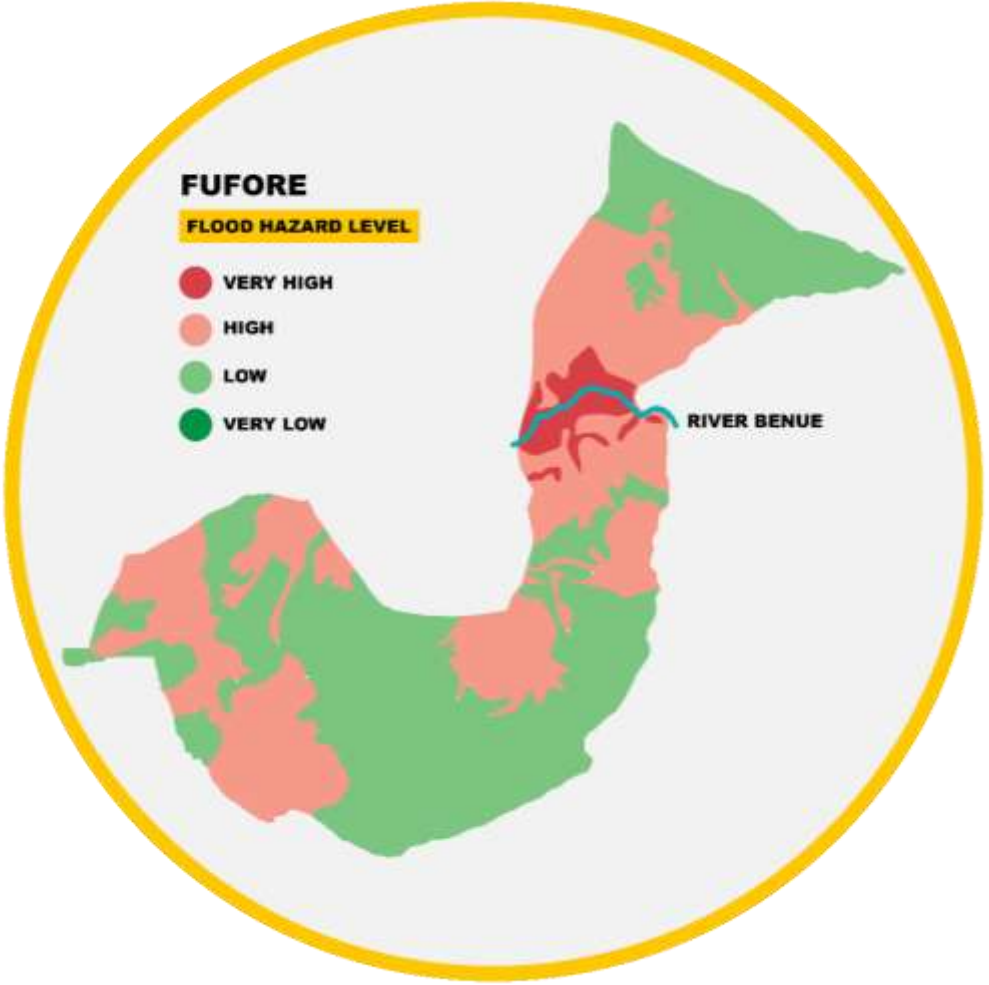


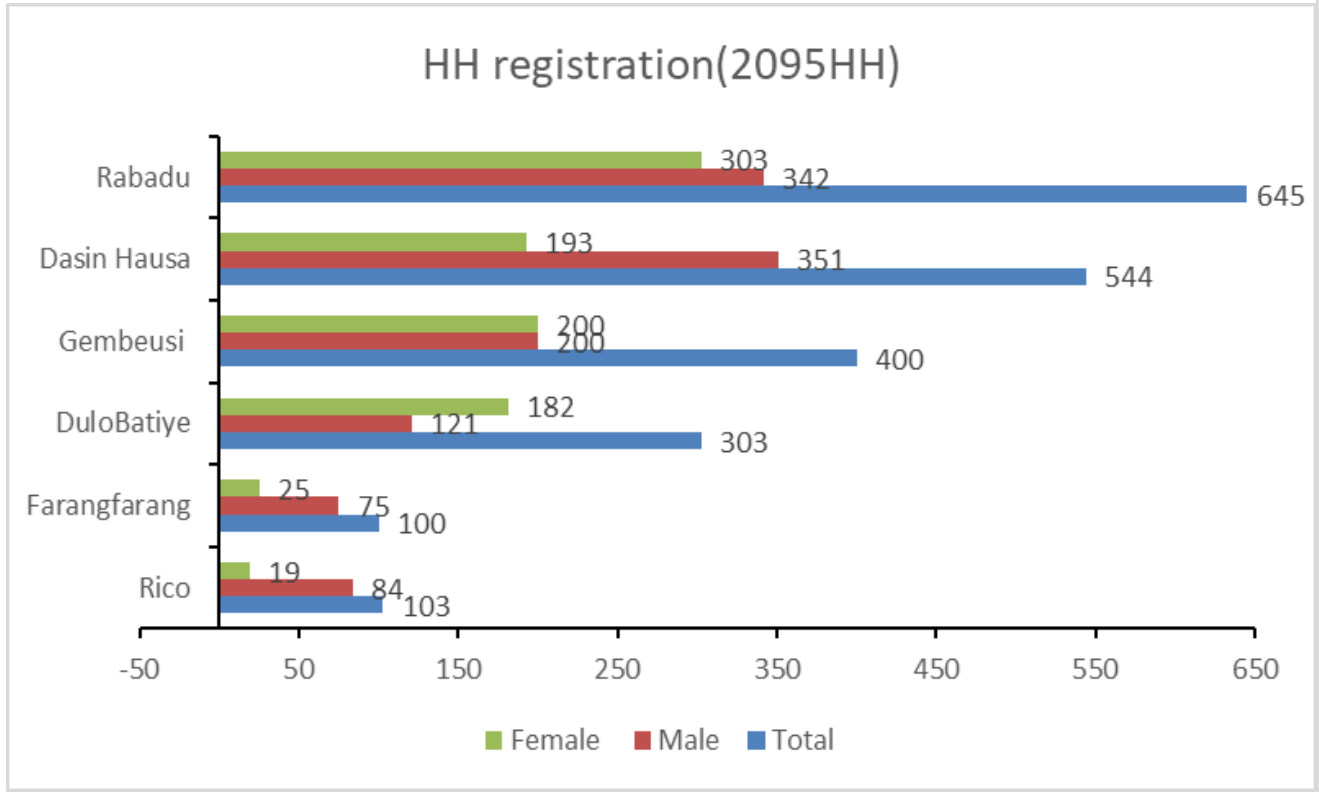
At Risk Communities:

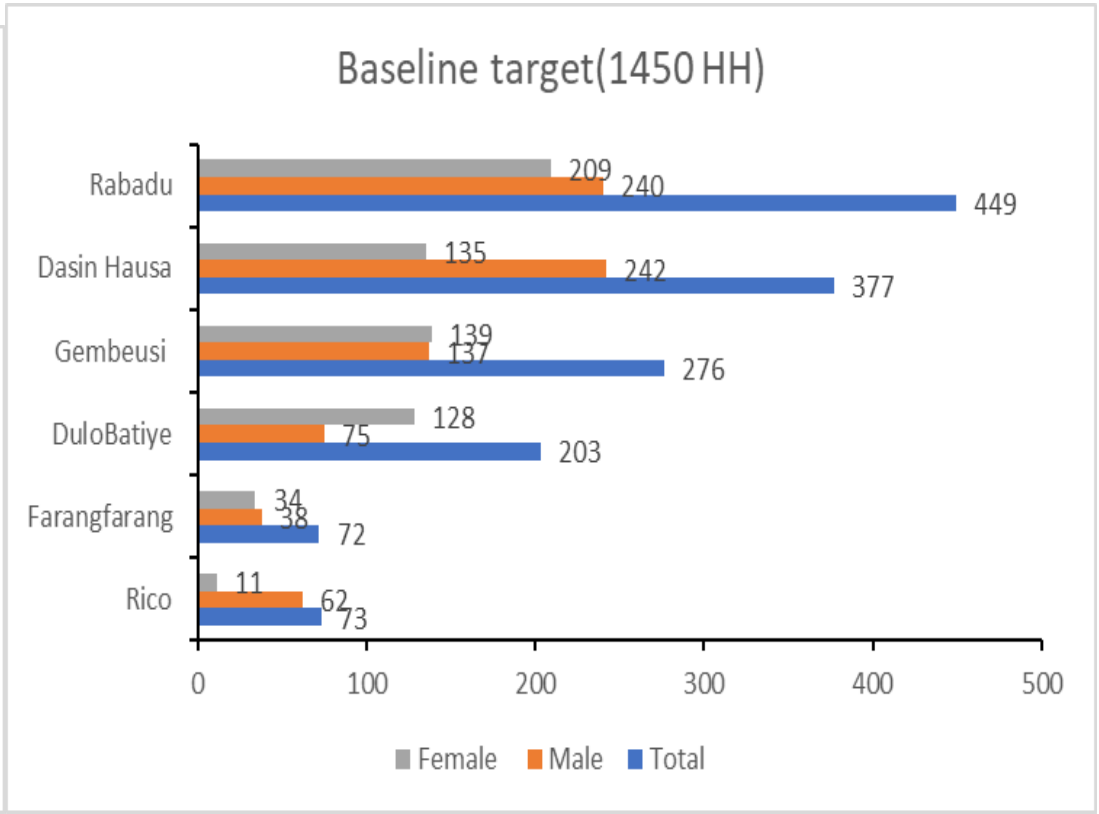


Based on review of secondary data and assessments, six (6) communities were identified to be of interest based on predisposition to flood.

Dulobwatiye
Ribado
Dasin Hausa
Farangfarang
Rico
Gembuesi

Registration and Baseline studies





- 1450 clients were randomly selected from the registration(2095) for the baseline using stratified random selection process, out of which 750 clients were randomly assigned to received ex ante and ex post cash has transfer as part of the project design

Selection Criteria

- Smallholder farmer that are into crop production, Fishing and rearing of livestock
- Residence of the selected community and not planning to relocate in the next one years
- Households with persons living with disabilities
- Female headed households
- Elderly headed household (60 years and above)
- Households that are most prone to climate shock (flooding and or drought)
- Households that are either their residence or farmland are located on the flood plain
- The household head must be 18 years and above
- The household head should not be a civil servant

Anticipatory Action Mechanism

System Set Up

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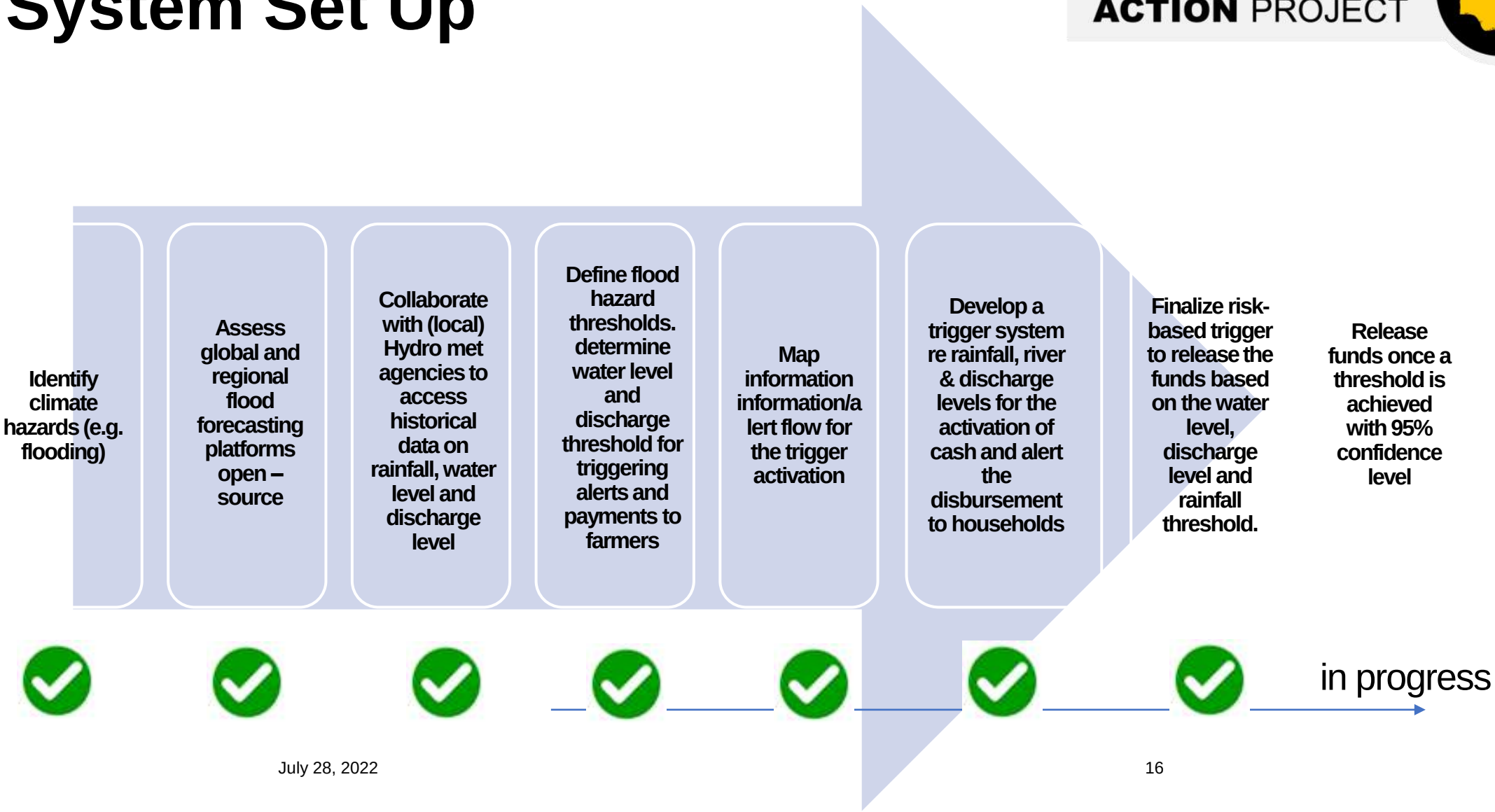

Anticipatory Action Pathway

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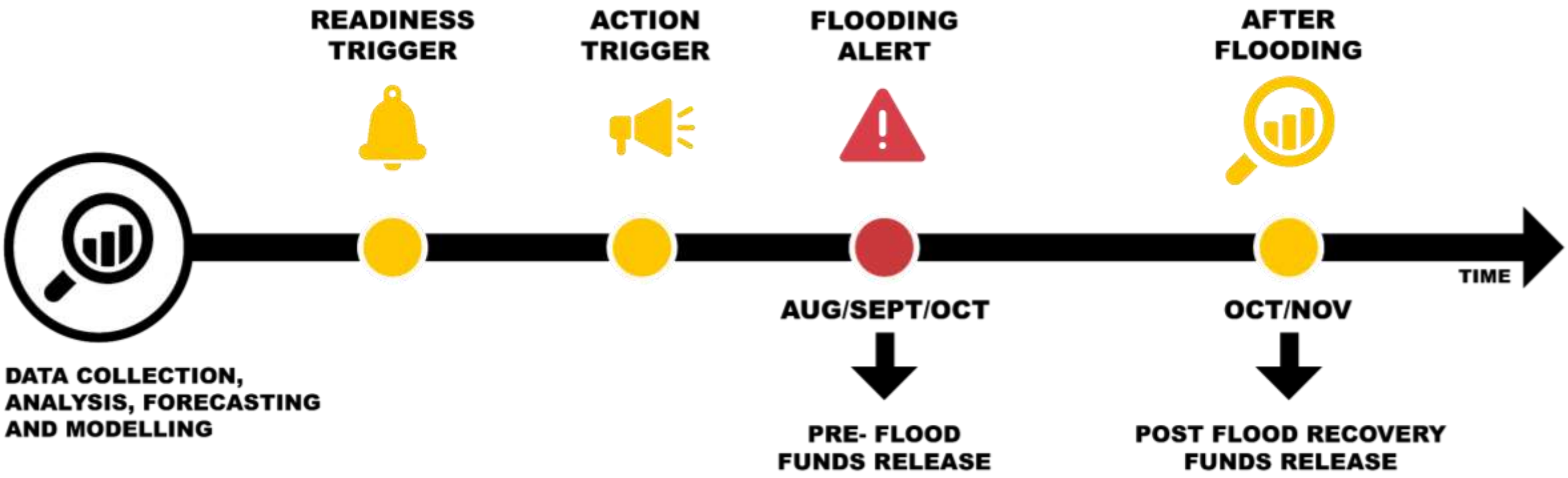

Early warning, early action messaging

- Conducted community sensitization/ engagement meetings.
- Develop early warning guide
- Recruited and trained 24 community – based early warning volunteers.
- Supported EWV to stepdown and disseminate early warning information, reaching over 1380HH directly.

Flood trigger Monitoring Data

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Collaborate the Nigeria Hydrological Service Agency (NiHSA),Nigeria Meteorological Agency (NiMET), Upper Benue River Basin Development Authority to monitor rainfall, water level and discharge data.

Collaborate with the Nimet, NiHSA and the UBRDBA to set trigger thresholds for rainfall, water level and discharge data.

Open Source platforms such as GloFAS and FANFAR were used to remotely monitor rainfall, water discharge and water level for flooding close to the communities along the Upper Benue River

Flood Trigger Decision

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DAYS, MONTHS

RAINFALL

DOES THE RAINFALL EXCEED A CERTAIN THRESHOLDS?

→ NO

→ YES

DISCHARGE

DOES THE DISCHARGE EXCEED A CERTAIN THRESHOLDS?

→ NO

→ YES

WATER LEVEL

DOES THE WATER LEVEL EXCEED A CERTAIN THRESHOLDS?

→ NO

→ YES

VERIFICATION/ TRIGGER READINESS AND DECISION

Flood Hazard Thresholds

Upper Benue River Basin Development Authority threshold			
Gauge station/River threshold	**Normal**	**Warning**	**Peak/flooding**
Wurobokki, River Benue. Zero Level: 170.395	2.5-3.5m	4.0-5m	5.5 m and above
Dasin Hausa, River Benue, zero level: 93.820	3.0-4.5m	5.5.0m-6.5	6.5m and above
Jimeta Bridge, River Benue, Zero Level: 151.166	1.5- 3.5m	4.5m- 5.5m	7.0 and above

Nigeria Hydrological Service Agency threshold		
Gauge station/River	**Warning**	**Peak/flooding**
Wurobokki, River Benue. Water levels	5.0m - 6.0m	6.5m above
Wurobokki, River Benue. Discharge levels	2290m^3/sec	2780m^3/sec

Nigeria Meteorological Agency Dekad threshold

Months	From 1 to 10	From 11 to 21	From 21 to 31	Total
June	44.73mm	47.81mm	46.31mm	138.85mm
July	46.86mm	53.66mm	59.2mm	159.72mm
Aug	51.2mm	69.64mm	75.39mm	196.23mm
Sep	69.54mm	65.37mm	54.49mm	189.4mm
Oct	38.19mm	19.81mm	9.88mm	67.88mm

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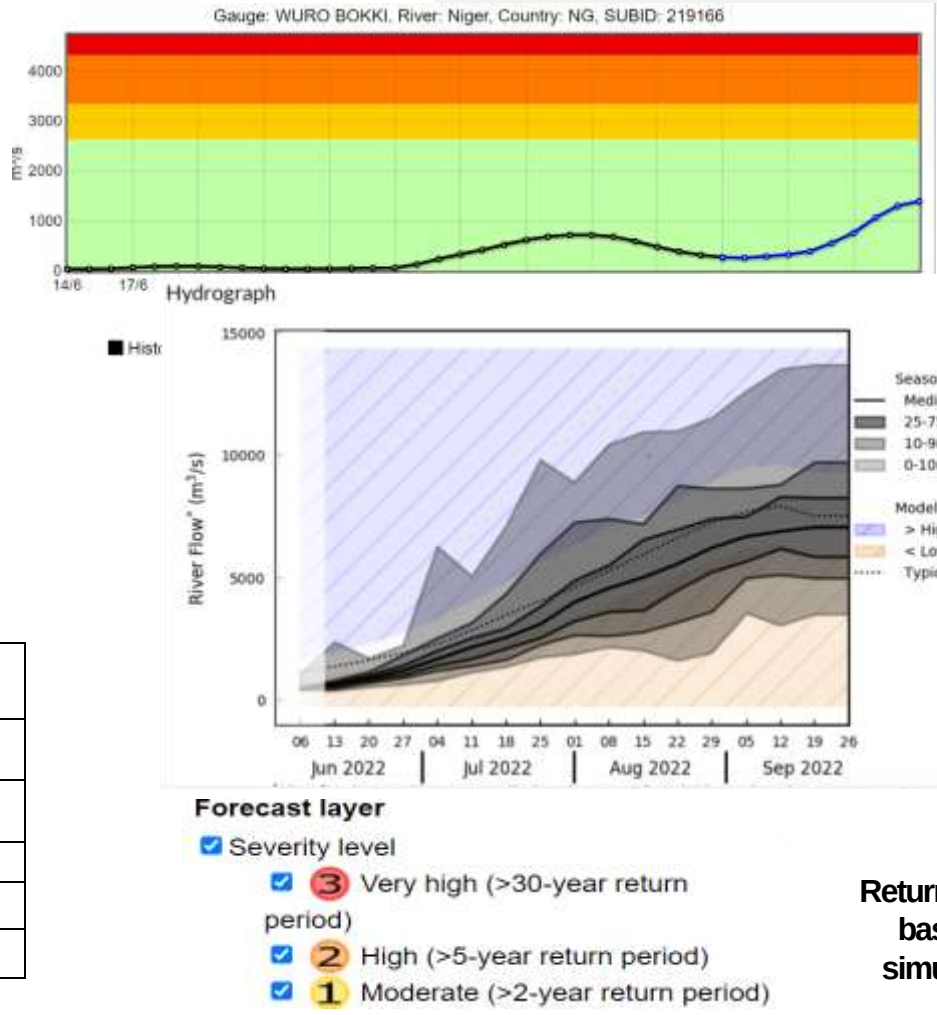

Return periods based on simulations

Trigger Activation Process and Alert

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As of 17th July 2022, the water level downstream at Dasin Hausa gauge station has risen to 6.33m as against the 5.72m on 29/06/2022, which exceeds the Upper Benue River Development Authority 6.0 m warning and 6.5m peaking flooding thresholds (see attached).

Nimet, NiHSA, and UBRDBA has confirmed that the trigger level has been reached with a good **lead time of at least 14 days**.

Community based early warning volunteers have been activated to raise awareness and reinforced early warning actions to build resilience against the flooding.

Ex ante cash transfers will be provided to targeted vulnerable smallholder agropastoral households

Opportunities & Challenges

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Opportunities

- Evidence generation
- Global network of practitioners & case studies
- Scale the use of anticipatory action in the BAY states of Nigeria
- Establish climate-smart communities in the BAY states of Nigeria
- Develop government ownership of the process for sustainability and replication to other communities
- Donor interest in anticipatory action

Challenges

- Targeting fatigue for humanitarian assistance in project locations
- Scarcity of global and local model for forecasting flooding for small rivers
- Most existing models are for flooding with return period of 5 years, not for seasonal flooding with a return period of 1 year or less
- Higher risk of basis risk and false alarm
- Access to the communities during flooding.
- Duration of the project is too short for a trigger with a return period of 5 years flood

Thank You!
Merci!
Jërëjëf !
Mèsi!