



Global Forum on Adaptive Social Protection

Protecting lives and livelihoods in times of crisis

13-15 June 2023 • Berlin

Parallel Session 1

Novel uses of data in adaptive social protection

This session is hosted by



giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



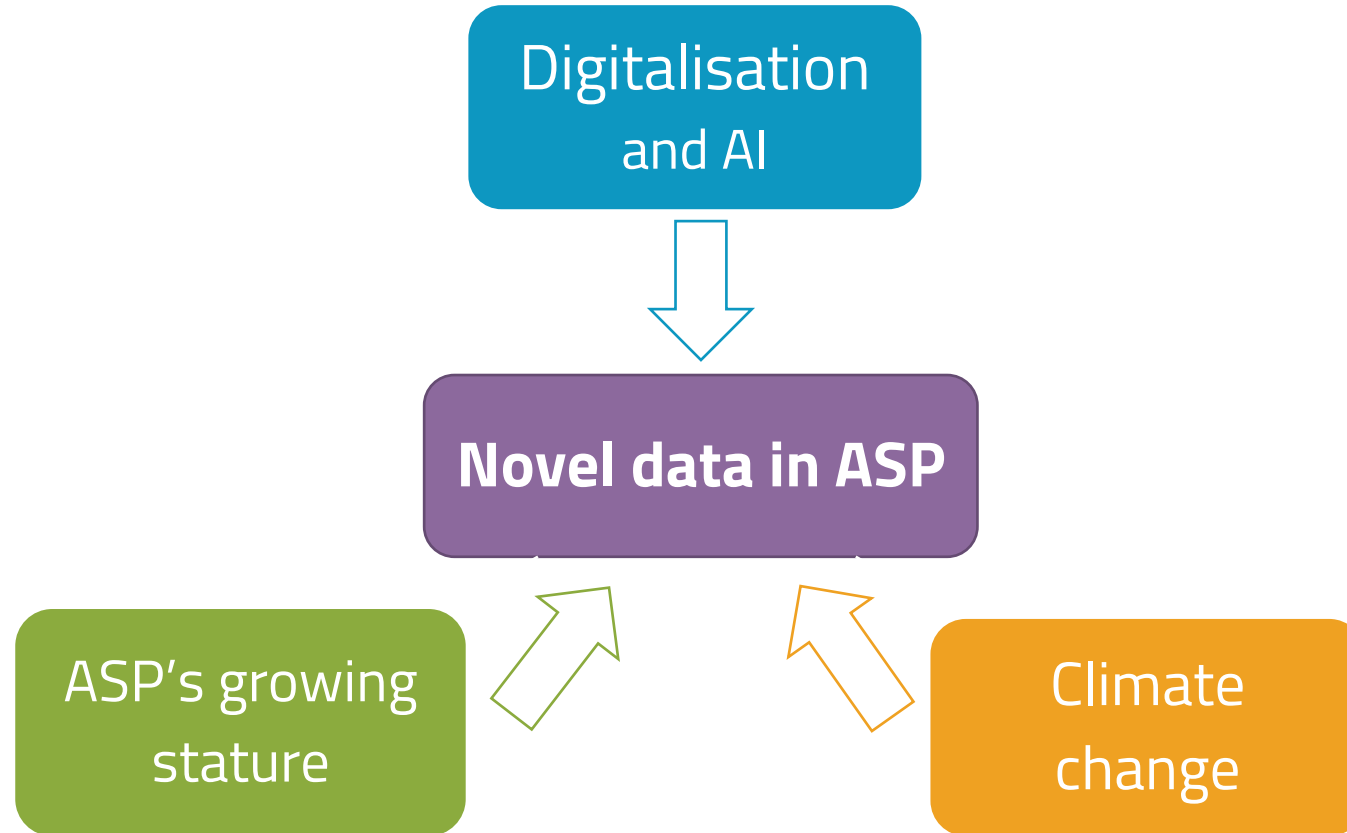
Federal Ministry
for Economic Cooperation
and Development



WORLD BANK GROUP
Social Protection & Jobs



Motivating trends





Today's agenda



Overview



Novel data in ASP: an overview



Four case studies: Togo, South Africa, Malawi, and Niger



Market stalls: audience interaction



Wrap-up



Today's speakers



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Audience poll





Today's agenda



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Wrap-up



Novel data sources for adaptive social protection

Six main data sources

- Satellite imagery
- Remote and in situ sensing
- Mobile phone data
- Web and social media data
- Digital finance data
- Digitised administrative data

Ethical considerations

- Digital exclusion
- Fairness, bias, and representation
- Data access
- Privacy and data security
- Surveillance and power
- Manipulation and transparency





Satellite imagery



Key opportunities:

- Geographic targeting
- Household targeting?
- Adaptive targeting via damage detection
- Monitoring and evaluation



Watch out for:

- Capacity requirements – both machine and human
- Cost of data for highest resolution imagery





Satellite imagery: example deployments



Togo's "Novissi" programme, 2022:

Satellite-based poverty maps (relative wealth index) used to geographically target *cantons* for cash transfers



Prosperia's work in Costa Rica, ongoing:

Satellite-based poverty estimates used to target social worker outreach campaigns



GiveDirectly in the US, 2023:

Damage detection from satellite imagery informed post-hurricane payments following Hurricane Ian

Remote and in situ sensing



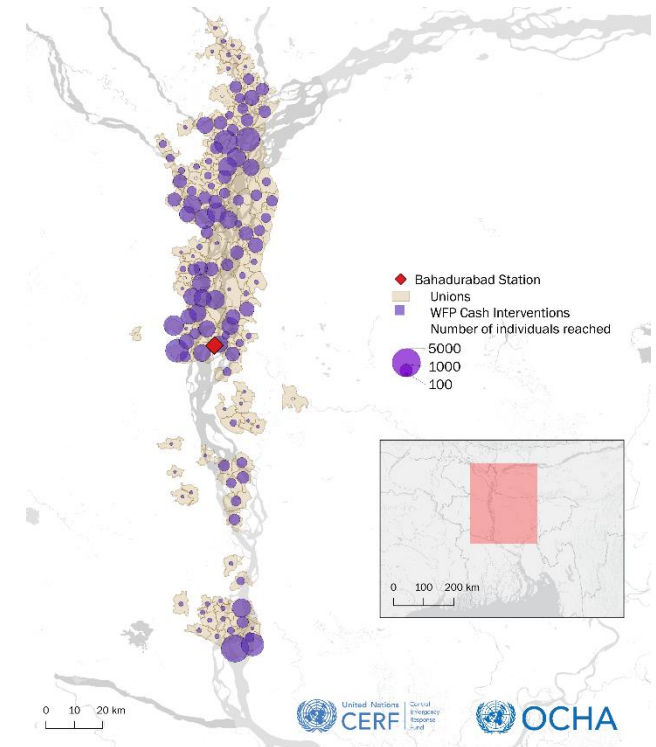
Key opportunities:

- Identifying climate shocks in real time
- Predicting climate shocks (anticipatory action)
- Geographic targeting



Watch out for:

- Data access
- Capacity for data analysis in real-time
- Data accuracy and representativity



Source: Pople et al. (2021)

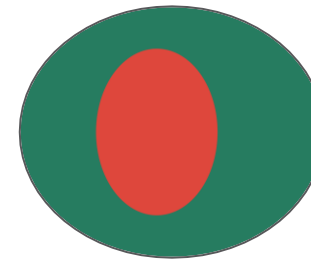
Remote sensing: example deployments



Malawi's ASP programme, ongoing:
Rainfall index from satellites used to trigger cash transfers in drought-affected regions



Niger's ASP programme, ongoing:
Water index from satellites used to trigger cash transfers in drought-affected regions



Anticipatory action in Bangladesh, 2021:
River gauge data used to predict flooding and target cash transfers to households in affected areas pre-flood

Mobile phone data: opportunities and challenges



Key opportunities:

- (Targeted) outreach and intake via USSD and IVR
- Eligibility determination using location and economic status
- Cash delivery via mobile money
- Monitoring and evaluation of benefits use



Watch out for:

- Data access, since CDR are held by mobile network operators
- Privacy and surveillance implications of phone data use
- Digital exclusion of non-phone-owners (33% of world's population)



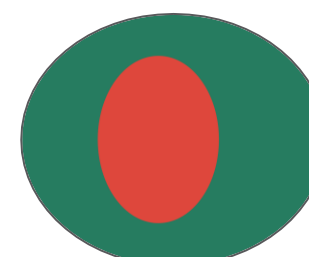
Mobile phone data: example deployments



Togo's "Novissi" programme, 2022:
Phone-based estimates of individual poverty used for programme targeting; phone-based estimates of home location used for targeted outreach



DRC's "STEP-KIN" programme, 2022:
Phone-based estimates of home neighborhood in Kinshasa used for targeted outreach and eligibility determination, along with filters on total phone expenditure



Bangladesh's digital cash transfer, 2021:
Changes in mobile phone use used to identify subscribers likely to be experiencing economic affects of COVID-19 pandemic



Web data



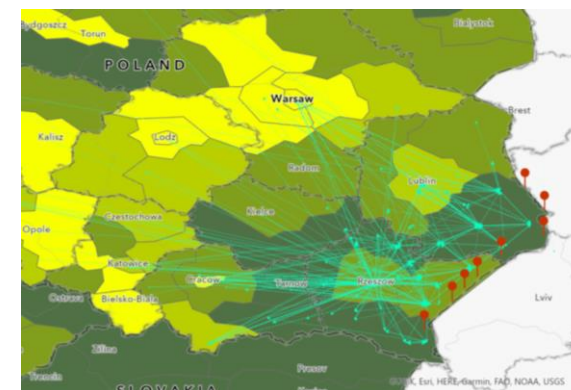
Key opportunities:

- Poverty mapping, often at fairly coarse spatial resolutions
- Real-time tracking of mobility during crises
- Interactive beneficiary management



Watch out for:

- Data access, as most web data sources are held by private companies and APIs are limited
- Digital exclusion and data representativity (40% of the world's population have no internet access)





Web data: example deployments



Global applications:
Facebook's data for good
has used social media
traces to produce
estimates of refugee flows
during global crises
(Hurricane Maria in Puerto
Rico, war in Ukraine)



Digital finance data



Key opportunities:

- Means testing
- Other proxies for targeting (including credit scores)
- Rapid re-assessment of targeting criteria
- Monitoring and evaluation of uses of programme benefits



Watch out for:

- Privacy and surveillance implications
- Digital exclusion of the unbanked
- Algorithmic fairness in credit scoring and other classifications





Digital finance data: example deployments



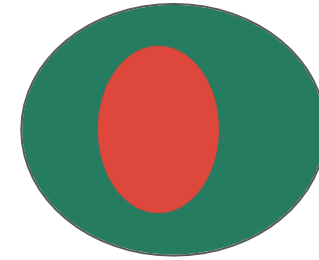
Colombia's SISBEN, ongoing:

Credit scoring data used along with survey-based PMT to determine eligibility for cash benefits, including during the COVID-19 pandemic



South Africa's Social Relief of Distress (SRD) grant, ongoing:

Means test conducted in applicant's bank accounts used to determine eligibility for the grant and reassess eligibility on a monthly basis



Bangladesh's digital cash transfer, 2021:

Changes in mobile phone use used to identify subscribers likely to be experiencing economic affects of COVID-19 pandemic

Digitised administrative data



Key opportunities:

- Targeted outreach upon changing status (e.g. birth of a child)
- Assessment of categorical targeting criteria and proxy-means testing
- Dynamic reassessment with real-time data updating



Watch out for:

- Data sharing among public sector institutions
- Consent for secondary data uses and surveillance implications

The image shows a portion of a 2015 U.S. Individual Income Tax Return (Form 1040A). The form is titled "1040A U.S. Individual Income Tax Return (2015)". It includes sections for "Income", "Exemptions", and "Adjusted gross income". The "Income" section includes lines for wages, salaries, tips, etc. (7), taxable interest (8a), tax-exempt interest (8b), ordinary dividends (9a), qualified dividends (9b), capital gain distributions (10), IRA distributions (11a), pension and annuities (12a), unemployment compensation and Alaska Permanent Fund dividends (13), and social security benefits (14a). The "Adjusted gross income" section includes lines for educator expenses (16), IRA deduction (17), student loan interest deduction (18), tuition and fees (19), and a total adjusted gross income line (20). The form also includes a section for "Exemptions" with lines for the taxpayer (a), spouse (b), and dependents (c). The "Income" section also includes a line for the total number of exemptions claimed (d). The form is dated 2015 and includes a "For Disclosure, Privacy Act, and Paperwork Reduction Act Notice, see separate instructions." at the bottom.



Digitised admin data: example deployments



Turkey's ISAS, ongoing:
Data integrated across a large number of government agencies, contributing to eligibility assessment and triggering outreach and updates to beneficiary data files



South Africa's Social Relief of Distress (SRD) grant, ongoing:
Administrative data from government agencies (e.g. unemployment insurance fund, department of home affairs, and student financial aid scheme) used for "targeting out" of beneficiaries



Global applications:
Used during the COVID-19 pandemic in a large number of additional (e.g. Brazil, Pakistan, Colombia)



Ethical and social considerations

- Digital exclusion
- Fairness, bias, and representation
- Data access
- Privacy and data security
- Surveillance and power
- Manipulation and transparency





Today's agenda



Overview



Novel data in ASP: an overview



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Market stalls: audience interaction



Wrap-up



Novissi

Novel uses of data in Togo's Novissi Program



50% of the population still live under \$1.90/day

During the Covid-19 health crisis, there was an urgent need to prevent a rise in the national poverty rate in a fast and safe way while maintaining social distancing.



Novissi



RÉPUBLIQUE TOGOLAISE

NOVISSI: A social cash transfer program targeting informal workers through digital means



RÉPUBLIQUE TOGOLAISE

- ❑ Drastic measures necessary to contain the COVID-19 crisis had direct impact on economic activities of informal workers
 - ❑ Lockdown in the capital Lomé, central Togo and other cantons, countrywide restrictions on movements, prohibition of selected economic activities
- ❑ High risk of an increase in poverty
 - ❑ in urban and peri-urban areas affected by the strictest restriction on movement (particularly within Grand Lomé)
- ❑ Government's objective: Prevent a rise in the national poverty rate

A clear strategy was announced by the President of the Republic to launch NOVISSI program:

Large-scale cash transfers in urban, peri-urban and border areas to workers in the informal sector affected by the strict measures taken.

NOVISSI was launched on April 8, 2020.



Novissi

How NOVISSI 1 works: enrolment through an USSD platform

People dial *855# to enroll

Welcome to NOVISSI

1- Register
2- Quit

0- Go Back



Automatic screening by NOVISSI platform



Voter ID details valid?



Informal worker?



Located in eligible zone?



Gender check?



Instant payment via mobile money

Welcome! You have received 6,125 FCFA (≈\$11.5) from NOVISSI.



Transfer every 2 weeks

Fully digital system which requires limited data input from the user in a simple form that works via USSD on any basic cell phone. Payments are fast and traceable.

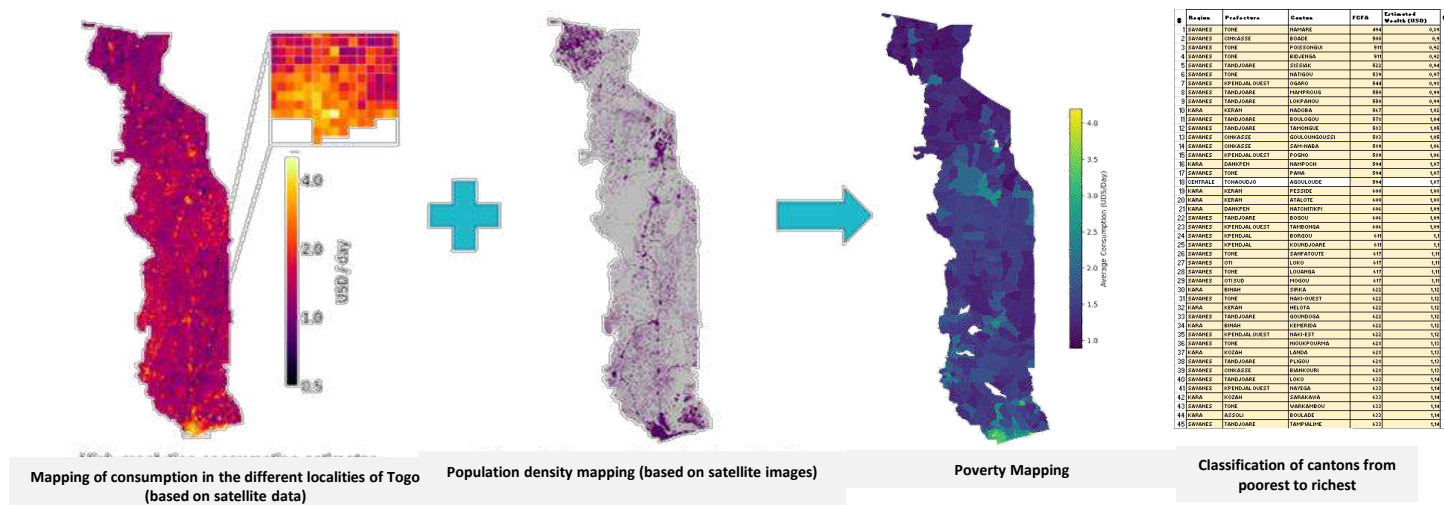


Novissi

NOVISSI 2: An AI-based targeting model

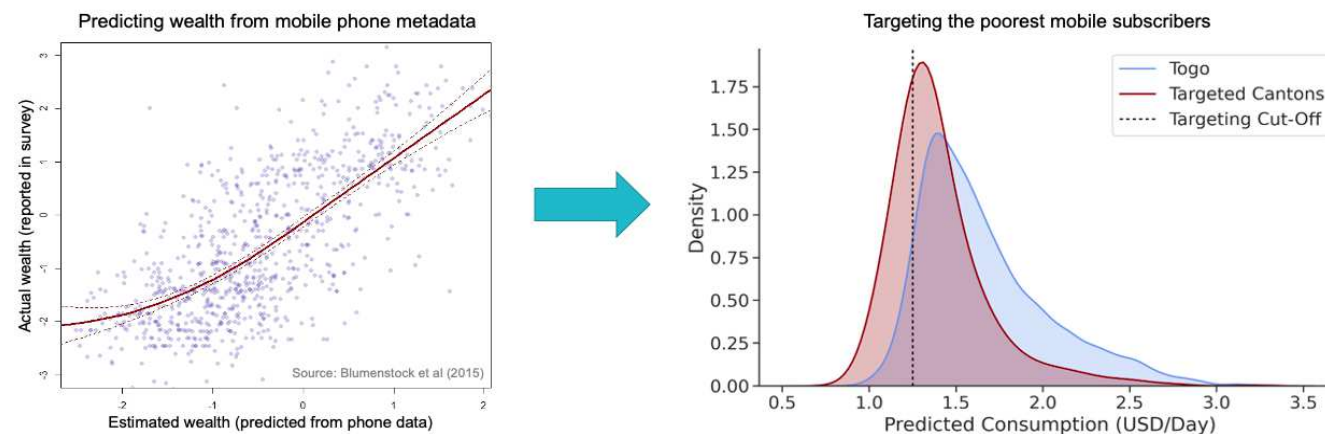
Geographic targeting

Use of satellite imagery, as well as household consumption data to build the poverty map of Togo and rank the ~397 districts in Togo from the poorest to the richest.



Targeting of individuals

Use of mobile network operators metadata (Call detail records) and machine learning to target the poorest individuals in the poorest districts.



Note: This targeting exercise was conducted in partnership with Innovation for Poverty Action (IPA), Center for Effective Global Action (IPA), University of California at Berkeley (UCB)

Partners



Novel data in social Protection: Key challenges

1. Availability of data
2. Unique Identity
3. Data privacy
4. Change management

Using CDR means that you have access to them according to the national law

Uniqueness of the persons is a key in ASP

Build trust

Machine against human vs Machine + human

What's next for Togo in the wake of NOVISSI + Big Data

Objectives

- 1. Digitize all social protection programs and G2P payments**
- 2. Provide digital ID for all and build social registry**
- 3. Harness data-driven approaches to policy-making**

Build on the Novissi model and use mobile payments for all G2P payments.

Implementation of "E-ID Togo", with support from the World Bank, will allow for better targeting of social protection programs and revolutionize service delivery in Togo.

Big data analysis and machine learning unlock fresh insights into poverty reduction. We need to transition to data-driven policy-making in Africa.



Novissi

**Thanks for your
attention**



SRD GRANT

Global Forum on Adaptive Social Protection: Novel Data Sources

14 June 2023



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1 SOUTH AFRICAN SOCIAL SECURITY AGENCY

SOUTH AFRICA'S ECONOMY AND IT'S SOCIAL PROTECTION SYSTEM



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Contextual Analysis

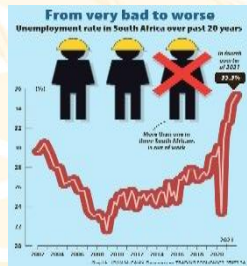
- The South African comprehensive social security programme is **comprised of 3 pillars**; being Social Assistance Programme; Social Insurance; and Private Insurance
- SASSA is responsible for the first pillar which is the Social Assistance Programme, implemented by SASSA on behalf of the Department of Social Development.
- The Social Assistance Programme is one the largest poverty alleviation programs implemented and funded fully by the South African government.
- About 50% of our population is serviced by SASSA every month.

Why SASSA



South African Population - 60.6 Million

- **Our reality:** The vast number of the South African population is **unemployed** and therefore not covered by the occupational based insurance or saving schemes. This therefore contributes to the reliance on government social assistance benefits.
- South Africa's **unemployment rate** in the first quarter of 2023 was recorded at 32,9 %, and is among the highest in the world.
- 45% of the population ***lives below the upper bound poverty line***.
- The poorest 10 percent of the population live on an average monthly income of just R352 per month
- Access to social grants has increased between 2003 and 2023, growing from 12,8% to 31% and **44%** when we consider the Covid-19 SRD Grant.



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South Africa's nine provinces

SASSA provides monthly income support to over **18.8 million South Africans**, which includes older persons, people with disabilities, war veterans, children & people in distress.

SASSA is also considering a further, almost **15 million clients** each month for the special SRD R350 grant to the value of:
R290 billion for 2023/2024



**South
African
Social
Security
Agency**



sassa
SOUTH AFRICAN SOCIAL SECURITY AGENCY

SASSA has:

- Just more than 7 514 staff members
- 9 Regional & 46 District Offices
- 389 Local Offices
- 1 163 Service Points
- 1740 Contracted cash pay points
- 302 Outreach events for this year
- 1 National Call Centre

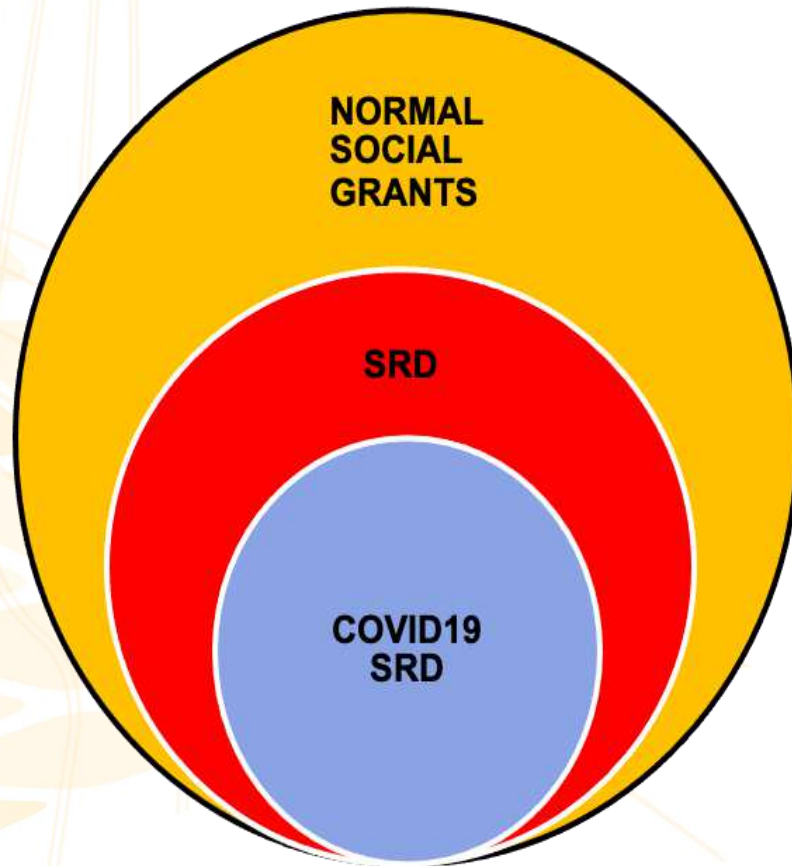


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Social Grants Landscape in a Nutshell



- ❑ **Normal Social Grants** = Older persons, Persons living with a Disability, Children Grants.
- ❑ **Social Relief of Distress (SRD)** = Assistance issued in case of a Disaster which may include none financial means of support.
- ❑ **Covid19 Social Relief of Distress** = introduced in 2020, monthly benefit is capped to a predetermined amount



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SASSA Service Offering

1

All Grants are Means Tested except for Foster Care Grant

Social Grants	Amount
Older Person's Grant	R2 080 & R2 100 (>75)
War Veteran's Grant	R2 100
Disability Grant	R2 080
Care Dependency Grant	R2 080
Foster Care Grant	R1 120
Child Support Grant	R 500
Grant in Aid	R 500
Extended child support grant for care givers of orphaned children	R 750 (R500 + R250)

2

Report from a Social Worker is required for SRD Grants

Social Relief of Distress
Family Distress(No maintenance, breadwinner deceased, incarcerated less than six months, medically unfit and not on UIF, etc.)
Disaster Relief (house burnt, disasters, etc.)
Other (assist in malnutrition in children and rare cases of school uniform and other desperate situations)

3

Covid-19 Relief (Special Covid-19 SRD Grant)	R 350
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Note : Key to the above is the ability of the South African Government to identify everyone who is affected and who qualifies for their grant

Fully
electronic



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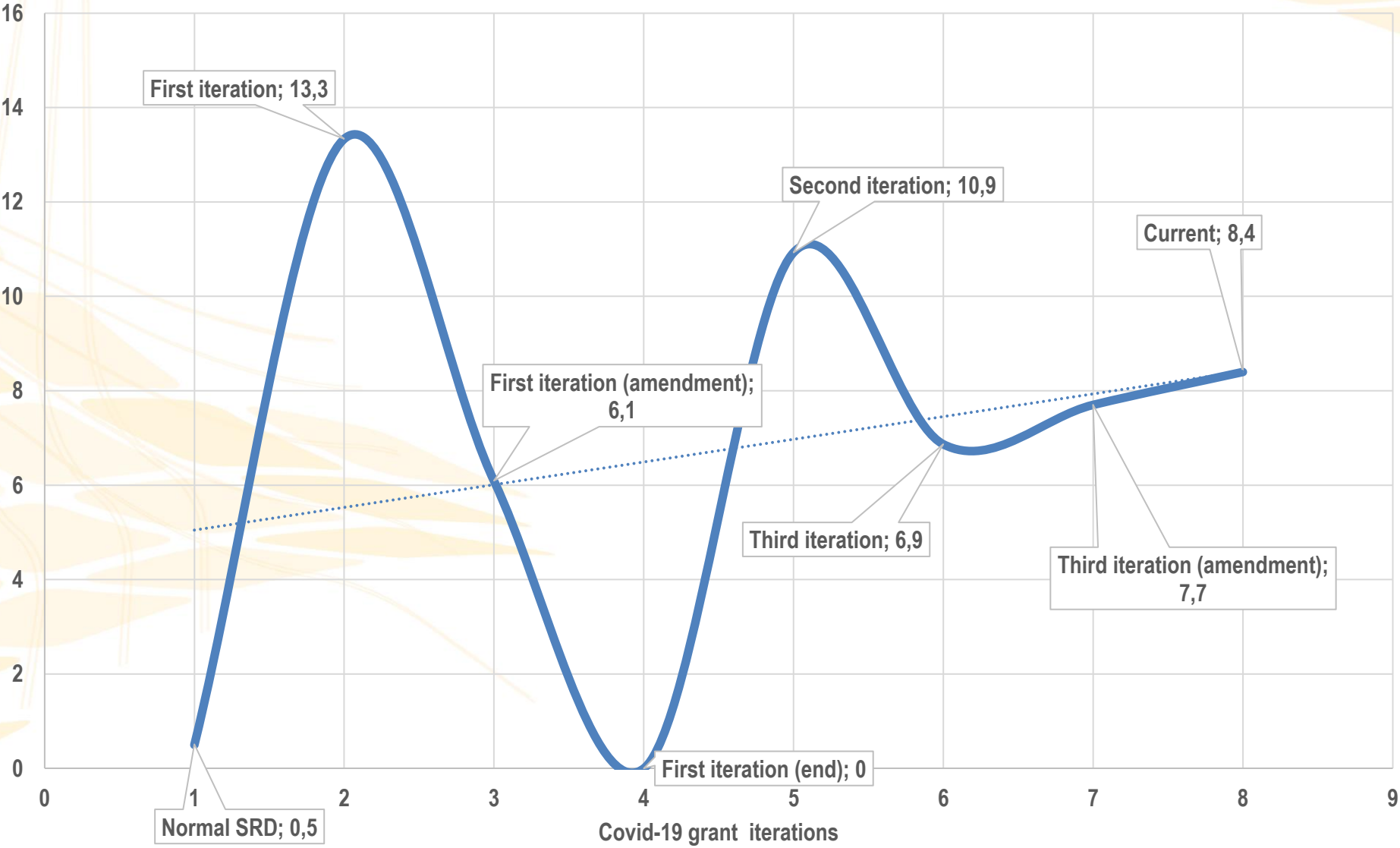
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Initial Period and Extensions

- The Special Covid-19 SRD was initially approved for a period of six months from **May 2020 till 31 October 2020**.
- The grant was then extended on 15 October 2020 for three further months from **1 November 2020 till 31 January 2021**.
- The grant was thereafter extended for a further three months on 11 February from **1 February 2021 till 30 April 2021**.
- The grant was re-introduced after 3 months inactivity from **1 August 2021 till 31 March 2022**.
- Grant was introduced again but under new amended legislation from **1 April 2022 till 31 March 2024 = new applications**

High level SRD Trends: SRD Grant



SRD GRANT: IMPLEMENTATION TIMELINE, ELIGIBILITY, AMOUNT, SPECIAL FEATURES



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Implementation of a Special Covid-19 SRD Grant

- The new COVID-19 SRD R350 grant required a unique approach, as the **potential applicants were not on** the SASSA - or any other government - **grant support programme**.
- A ***new system*** was thus developed to validate applications, where **collaboration** with government and private institutions are key.
 - South Africa has **no central Government database** for Government to capture and store social security information
 - The agile capability to **verify income through banks** did not exist
 - **Electronic Know Your Client (eKYC)** Capabilities to interact with fraud prevention agencies and banks to verify accounts and suspicious applications were crucial.
 - **Biometric verification ability** (fingerprints and facial) and a **highly scale-able** solution was paramount.
- SASSA needed a payment mechanism to process payment anytime & throughout the month and not only once-off monthly payments.
- Innovative Payments methods through EFT, Cash send, retailers etc. had to be considered.
- Opening of bank accounts on behalf of clients where they had no alternative payment options was another consideration

Timeline from Announcement to Payment

- **24 March 2020** – President announced ***nation-wide lockdown*** which started on 26 March 2020
- **21 April 2020** – President announced the ***new Social Relief of Distress*** financial support for South Africans
- **30 April 2020** – Minister of Social Development announced ***measures to implement*** the interventions
- **9 May 2020** – The ***Directions issued*** governing the SRD grant
- **11 May 2020** – Minister of Social Development ***launched the grant*** and applications streamed in
- **15 May 2020** – SASSA ***paid its first clients*** for the SRD R350 grant with a newly developed fully online electronic system

Qualification Criteria

- **A special COVID-19 Social Relief of Distress of R350 pm for distressed individuals will be provided as per following criteria:**
 - South African Citizen, Permanent Resident or Refugee registered on the Home Affairs database; a holder of a special permit under; the Special Angolan Dispensation/ the Lesotho Exemption Permit dispensation /the Zimbabwe Exemption Permit Dispensation / an asylum seeker whose section 22 permit or visa is valid; Resident within the borders of the Republic of South Africa;
 - Between the ages of 18 and 60;
 - Has insufficient means; (*income threshold above R624 - Means Test*)
 - Not receiving any adult social grant on behalf of himself/herself
 - Not receiving unemployment insurance benefit and does not qualify to receive unemployment insurance benefit;
 - Not receiving a stipend from the National Student Financial Aid Scheme; and
 - Not resident in a government funded or subsidised institution.
- Declaration and Consent Form signed by applicants

Comprehensive Electronic Grant

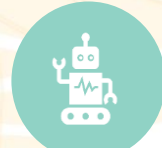
Only make use of online channels for application and communication



USSD & Whats App



Website



Chatbot & Call Centre



Email, SMS



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Client Consideration and Verification

- **Monthly verification for each client**
 - **NB to note:** each client is considered & verified **each month** as the circumstances of a client could have changed during the month
 - The client might have been recently employed, imprisoned / or released, successful in the application for NSFAS; received another Government relief grant; received income above the threshold etc.
- **Monthly outcome for each client**
 - Through the verification mechanism there is an outcome each month for each one of the almost 15 million clients: approved or declined.
- **Risk Management Framework Process**
 - Risk Mitigators are used to verify fraudulent activity
 - Known perpetrators of Fraud as registered on South African Fraud Prevention Services
 - In these instances the client is in a referred status for investigation and consideration
 - Referred Clients are followed-up and communicated with

NOVEL DATA SOURCES: USE OF ADMINISTRATIVE, FINANCIAL & RISK RELATED DATA



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Engaging Strategic partners for the future



Department of Home Affairs



PERSAL (Government Personnel Salaries)



Government Employee Pension Fund (GEPF)



Department of Correctional Services



Banks through the Banking Association of South Africa (BASA) – *Means Testing*



South African Revenue Services (SARS)



Unemployment Insurance Fund (UIF)



National Student Financial Aid Scheme (NSFAS)



Central Bank & National Treasury



Risk Mitigator Organisations

Note : Key to these partnerships is an Identity Number as a unique identifier for each applicant



PAYMENT

- Clients are paid to their preferred method of payment:
 - **EFT** via own bank account
 - **Cash send** via the Major banks through validated Cellphone number
 - **Post bank** created accounts
 - Collect at Retail stores (Checkers. Shoprite, Usave, PnP & Boxer)
- Internally Payments are done through the SRD Payment system, which have biometric authentication:
 - SRD EFT Payment system
 - SRD Cash payment System

SRD GRANT: CHALLENGES



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Most Prevalent Challenges Experienced

-  Current databases used have resulted in both **inclusion and exclusion errors** (Appeals Tribunal – Administrative Justice Act)
-  Need for a **centralised government database**
-  Multiple clients using a **single cellphone number** to apply
-  **Communication** with clients
-  Declaration and consent to be **obtained as early as possible**
-  Clients not having **banking details** / providing it late / incorrect

SRD GRANT: LESSONS LEARNED: KEY INSIGHTS



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SRD: Lessons Learned

- **Combining different technologies for comprehensive solutions.**
 - Companies should not only continue with what they have, but combine various technologies and platforms to create solutions.
 - SASSA used different application platforms (USSD, WhatsApp, Facebook Messenger, Website) and also biometric solutions (Fingerprint and facial recognition), as well as other underlying technologies, such as Application Programme Interfaces to build a single solution.
- **Use of novel data sources and Interfacing with other government and private institutions.**
 - This ensures an integrated approach to serving the needs of the citizens at a social level and also assists with breaching any challenges with regards to possible fraud in the new online era.
- **Effective and ongoing communication within the organisation, to citizens and other stakeholders.**
 - Keeping all stakeholders well informed and taking them on the journey assists tremendously – especially when challenges are experienced.

SRD Key Insights

- SASSA has approximately 30 million clients - almost half of the South African population - as their clients, thus rendering it as the government institution that makes the most payments.
- The SRD System opened a new way for considering, serving and paying clients in Government:
 - **Technology driven and Paperless environments** are possible – but improvements should be considered
 - There is **more integration** between Organisations (**internal & external** to Government), but the dependency on accurate data and more seamless integration is now more evident than ever before.
 - **Technological advancement** in Government is now more evident than ever before with cell phone applications, digital payment, biometric verification etc.
 - In this regard SASSA wants to continue serving clients from application to payment from where ever they are with a single device in the palm of their hands.

Impact and Evaluation Results

Findings for the Rapid Assessment triangulated information gathered through an online survey and in-depth interviews with key informants and focus groups, as well as literature reviews:

- **88.68%** recipients agreed the process to apply for the Special COVID-19 SRD grant was **easy and straightforward**
- **95.84%** of respondents **own a cell phone** and could apply for the online grant
- **Food** is by far the one single item that the Special COVID-19 SRD grant is used for.
- **70%** of those who applied for the Special COVID-19 SRD grant live in **households with 4 and more** household members confirming that SASSA addressed the initial need
- There is ample evidence for the need of a **government-wide integrated social registry**
- The use of **online digital platforms** has prepared the ground for the advent of **digital welfare in South Africa**

END OF PRESENTATION



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Malawi: SOCIAL SUPPORT FOR RESILIENT LIVELIHOODS PROJECT

Using Rainfall Satellite Data to Trigger Payment

BY MULDER MKUTUMULA



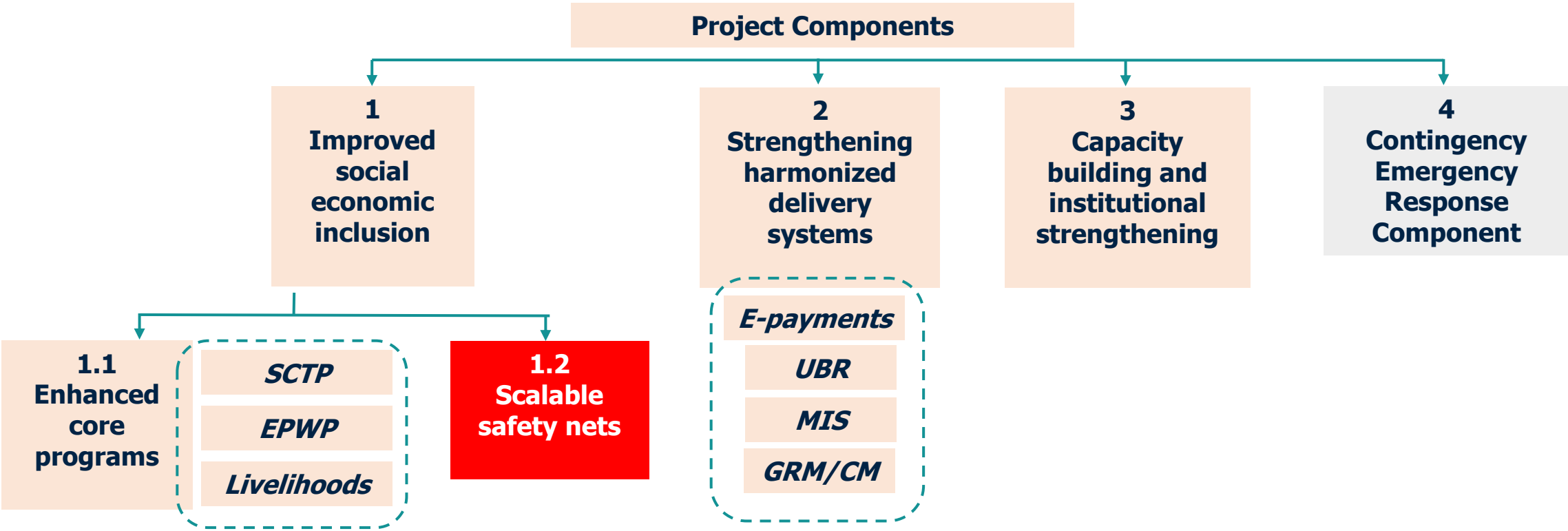
Background on shock response in Malawi

- Malawi continues to face different types of climate related disasters/ shocks – including floods, drought, stormy rains, strong winds, hailstorms.
- Such events are one of the biggest threats to social and economic progress and it makes hard for vulnerable household to recover from poverty.
- Malawi's main mechanism to deal with the consequences of climate shocks is based on the following financing instruments.
 - EX-POST (Budget reallocations; Post disaster borrowing; International assistance; Post-Disaster Support to farmers)
 - EX-ANTE (Contingent credit or CAT DDO, sovereign insurance)
- However, there is an urgent need to channel resources, especially to poor households to address vulnerability to disaster and climate risk.
- The increasing frequency and intensity of natural disasters in Malawi, make it imperative that the Malawi Government be prepared to respond on time **so using rain gauge data is not a way.**

Social Support for Resilient Livelihoods Project

Project Development Objective

To improve resilience among the poor and vulnerable population and strengthen the national platform for safety nets in Malawi.



Initial Scalable Mechanism

Social protection	Social Cash Transfer Program
Districts covered	Blantyre, Chiradzulu, Karonga, Nkhotakota, Ntcheu, and Thyolo these districts were selected based on Drought Risk, Food Security, Systems readiness & other interventions
Type of scale-up	Potential for vertical and horizontal expansion
Finance	Flexible project contingency financing (US\$20 M) World bank Funding for premium of sovereign risk transfer instrument (US\$10 M) Global Shield Each HH receives MK25,000/month for 3 months
Types of perils	Drought is the priority (though some contingency funding could be used for floods or other perils)
Triggers	Two primary triggers based on rainfall satellite-based indices used to capture the impact of drought. Funded through risk transfer. Complementary secondary trigger or evidence review will be a soft trigger used as a ‘fail-safe’ to capture the impact of shocks which may not be captured by the primary triggers. It will be subject to a transparent and robust decision-making review process. Funded through contingency finance.
Government Task Force	Scalability Task Force (chaired by MoEPD&PSR and includes MoF; MoA; Met; DoDMA; NLGFC; Gender and Social Welfare)

Modeling and Trigger Decisions

- The primary trigger is based on two indices constructed using satellite rainfall data. The first uses **TAMSAT** v3.1 decadal (10-day) data to calculate the low rainfall over a 30-days (3-consecutive dekads) rolling window, over the first half of the agricultural season (1st November to 31st January) and identifies moderate to severe droughts.
- The second uses **ARC v2** decadal (10-day) data to calculate the low rainfall over a 30-days (3-consecutive dekads) rolling window over the full agricultural season (1st November to 10th April) and identifies very severe droughts only. The expectation is that the risk model will trigger if either the early season or full season drought index threshold is met. The table below sets out the GoM's baseline proposal for trigger thresholds based on rainfall as % of historical average rainfall over the same time periods.
- For the 2023/24 Season we intend to replace ARC v2 with Climate Hazards Group InfraRed Precipitation with Station (CHIRPS) data due to the delay in obtaining daily weather station measurements by ARC v2
- TAMSAT stands for Tropical Applications of Meteorology using SATellite
- ARC v2 stands for Africa Rainfall Climatology version 2.0

Primary rainfall trigger description

	Early season drought index	Full season drought index
Satellite Data	TAMSAT v3.1 decadal (10-day) data	ARC v2 decadal (10-day) data
Period covered	1st November to 31st January	1st November to 10th April
Structure	Calculates low rainfall over a 30-days (3-consecutive dekads) rolling window, over the first half of the agricultural season	Calculate low rainfall over a 30-days (3-consecutive dekads) rolling window over the full agricultural season

Satellite Data Collection and Analysis

End date	Dekadal-rainfall	Ntcheu	Blantyre	Thyolo
10/11/2022	31	30	37	41
20/11/2022	32	23	30	31
30/11/2022	33	27	18	28
10/12/2022	34	30	37	47
20/12/2022	35	85	82	107
31/12/2022	36	74	63	60
10/01/2023	1	84	85	104
20/01/2023	2	79	69	78
31/01/2023	3	93	60	53
End-date of latest completed dekadal		31-Jan-23		

Actual rainfall over 30 days	Ntcheu	Blantyre	Thyolo
30/11/2022	80	85	100
10/12/2022	79	85	106
20/12/2022	141	137	182
31/12/2022	188	182	214
10/01/2023	243	230	271
20/01/2023	238	217	242
31/01/2023	256	214	235

How we use the data

District	Ntcheu	Blantyre	Thyolo	Karonga	Chiradzulu	Nkhotakota
Early season index						
Lowest value	82%	88%	92%	68%	89%	86%
Trigger	55%	45%	45%	45%	45%	50%
Scale-up	NO	NO	NO	NO	NO	NO
Full season index						
Lowest value	81%	78%	63%	79%	65%	66%
Trigger	15%	10%	10%	25%	15%	25%
Scale	NO	NO	NO	NO	NO	NO
Overall scale-up	NO	NO	NO	NO	NO	NO

Lessons Learnt

- It enables us to predict that there will be a drought/ food insecurity before the shock happens
- It is easily accessible and it is fast
- It enables us to pre-finance the response and ensures that the systems are ready to respond on time hence reducing the impact
- Developing systems or risk models requires time, resources and dedication(the WILL power)
- Sometimes Satellite data can be misleading/ not always accurate so there is a need for ground truthing.
 - In the case of Malawi, MET Services monitor the rainfall on the ground



SAHEL ADAPTIVE SOCIAL PROTECTION PROGRAM

The value of early response to climatic shocks – impact evaluation agenda in the Sahel

Contact: Margaux Vinez mvinez@worldbank.org



MINISTRY OF
FOREIGN AFFAIRS
OF DENMARK



Federal Ministry
for Economic Cooperation
and Development

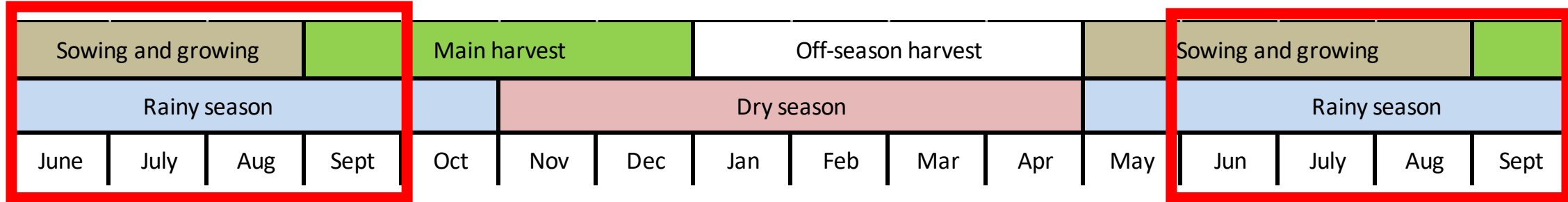


WORLD BANK GROUP
Social Protection & Jobs

Motivation

- Climate change makes extreme weather events more frequent, and exposure to shocks slows down poverty reduction efforts
- The Sahel is one of the most vulnerable regions to extreme droughts, floods, heatwaves and other climate-related shocks
- The effects of climate shocks can be anticipated through ASP systems. The **Sahel Adaptive SP Program** supports countries to (i) build resilience (ii) improve responses to shocks.
- **How can we make shock-responsive cash transfer programs timelier and more effective?**

Traditional response to (slow-onset) droughts in the Sahel



Drought shock

(weather and production shock) during the main agricultural season

?

Traditional response

aims to avoid food insecurity during the following lean season (before next harvest)

Is that traditional response optimal?
What is the value of early intervention?

Design of early action programs in Niger, Senegal and Mauritania

- In **Niger**, the Safety Net Unit (CFS) developed a trigger-based adaptive safety net for drought response based on the WRSI
- In **Senegal**, the National Solidarity Fund (FSN) is developing a shock response program to respond to drought and food insecurity using three satellite-based trigger indices (SPEI, NDVI, SWI)
- In **Mauritania**, the government developed a model to predict food insecurity early and will pilot its use to trigger early responses to drought. Using ML and a combination of historical microdata on food security and satellite imagery (NDVI and EVI)

These programs rely on government-led adaptive safety net systems

The Niger drought response program

 Intervention commune

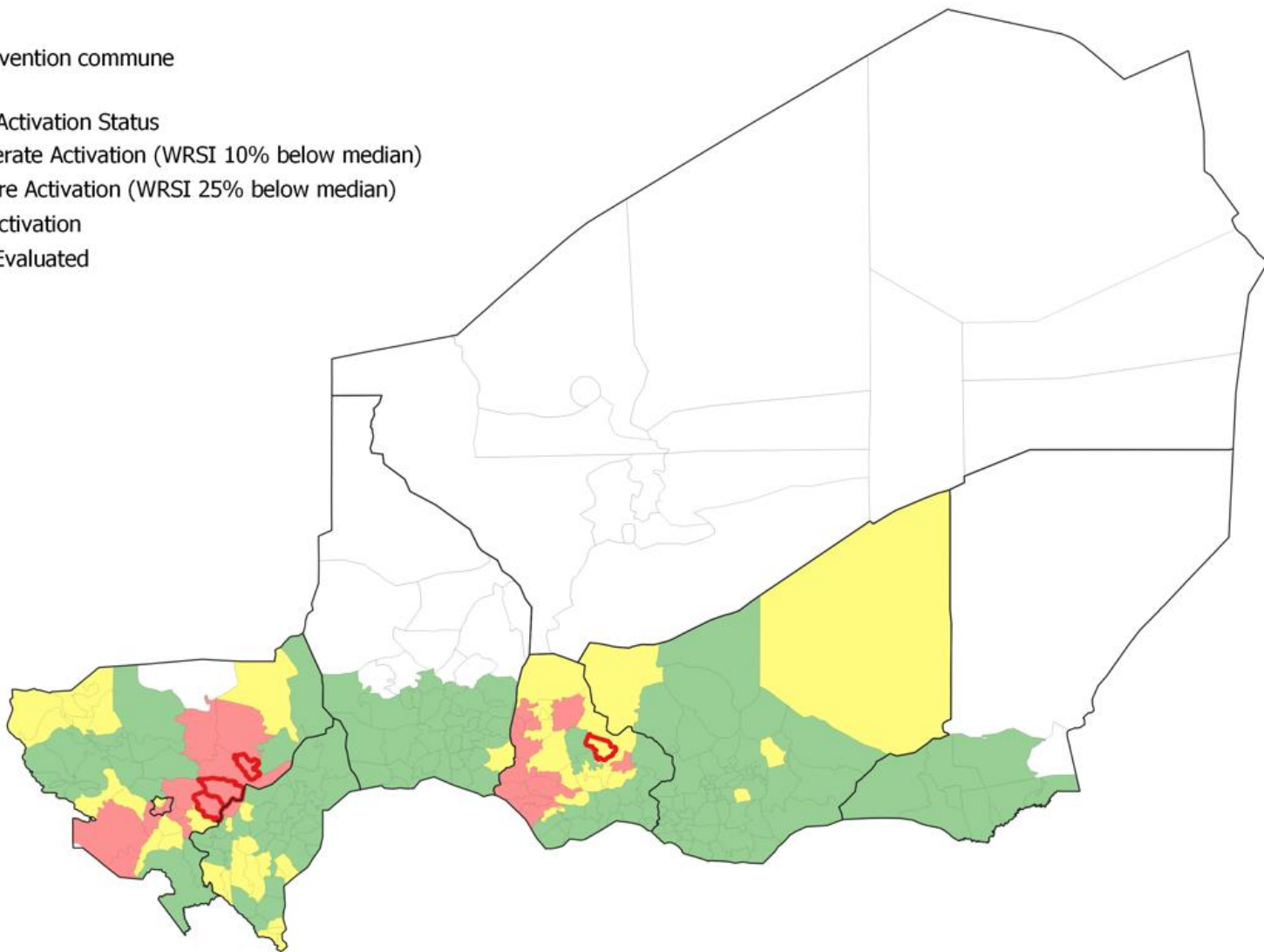
Payment Activation Status

 Moderate Activation (WRSI 10% below median)

 Severe Activation (WRSI 25% below median)

 No Activation

 Not Evaluated



Triggers:

1. Water Requirement Satisfaction Index (WRSI) Satellite measure
2. Cadre Harmonisé

Coverage in 2021:

- 4 communes (3 included in the RCT)
- 15,400 households (poorest 44%, based on PMT data)

Implemented by Niger Safety Nets Unit (CFS)

- National agency in charge of regular cash transfer program that has reached 120,000 HH in last 10 years

The Niger drought response program

Triggers and coverage:

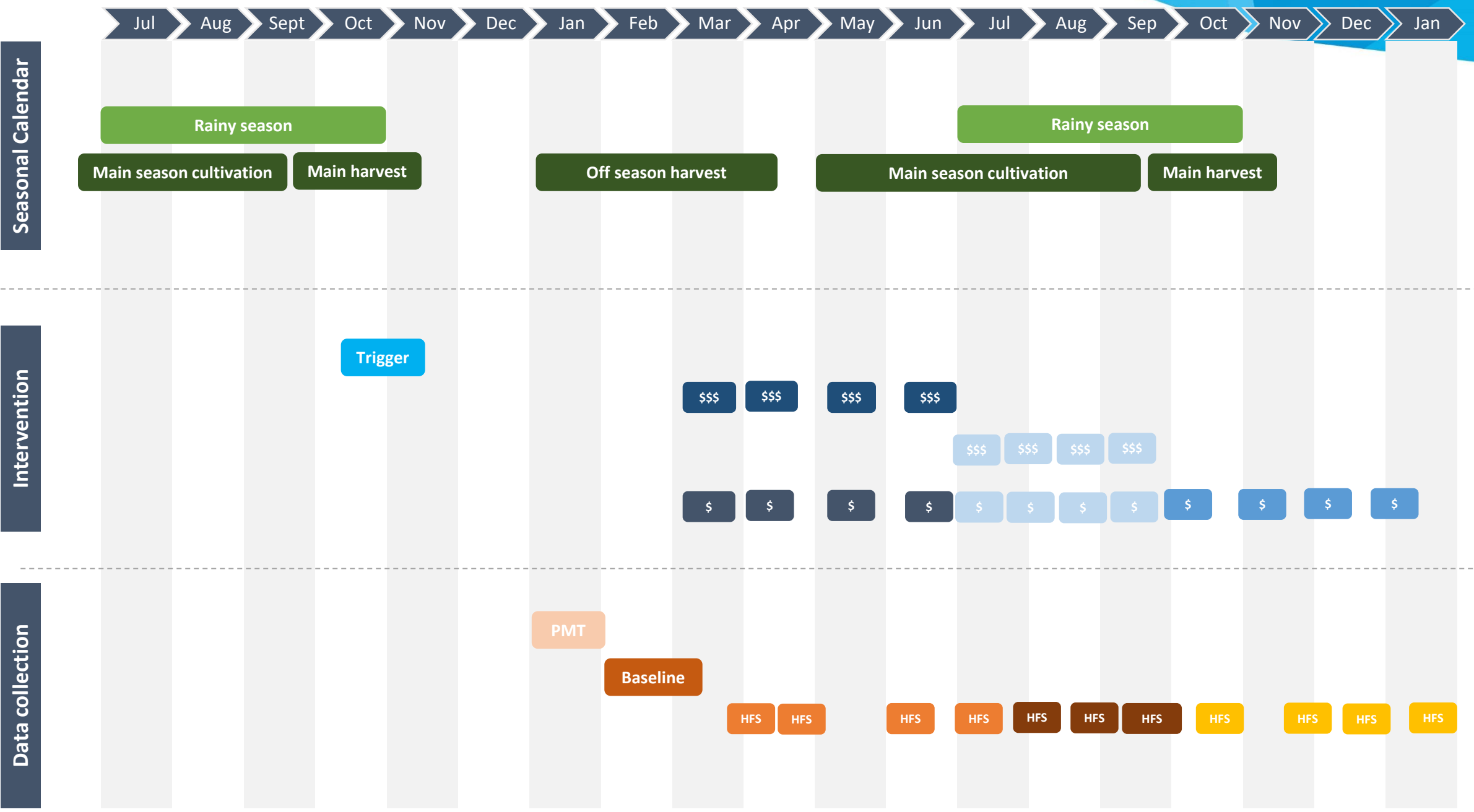
- 1) A primary trigger mechanism based on the Water Requirement Satisfaction Index (WRSI)

WRSI is closely correlated with the yield of millet at the end of the agricultural season - WRSI for millet is calculated every year in October

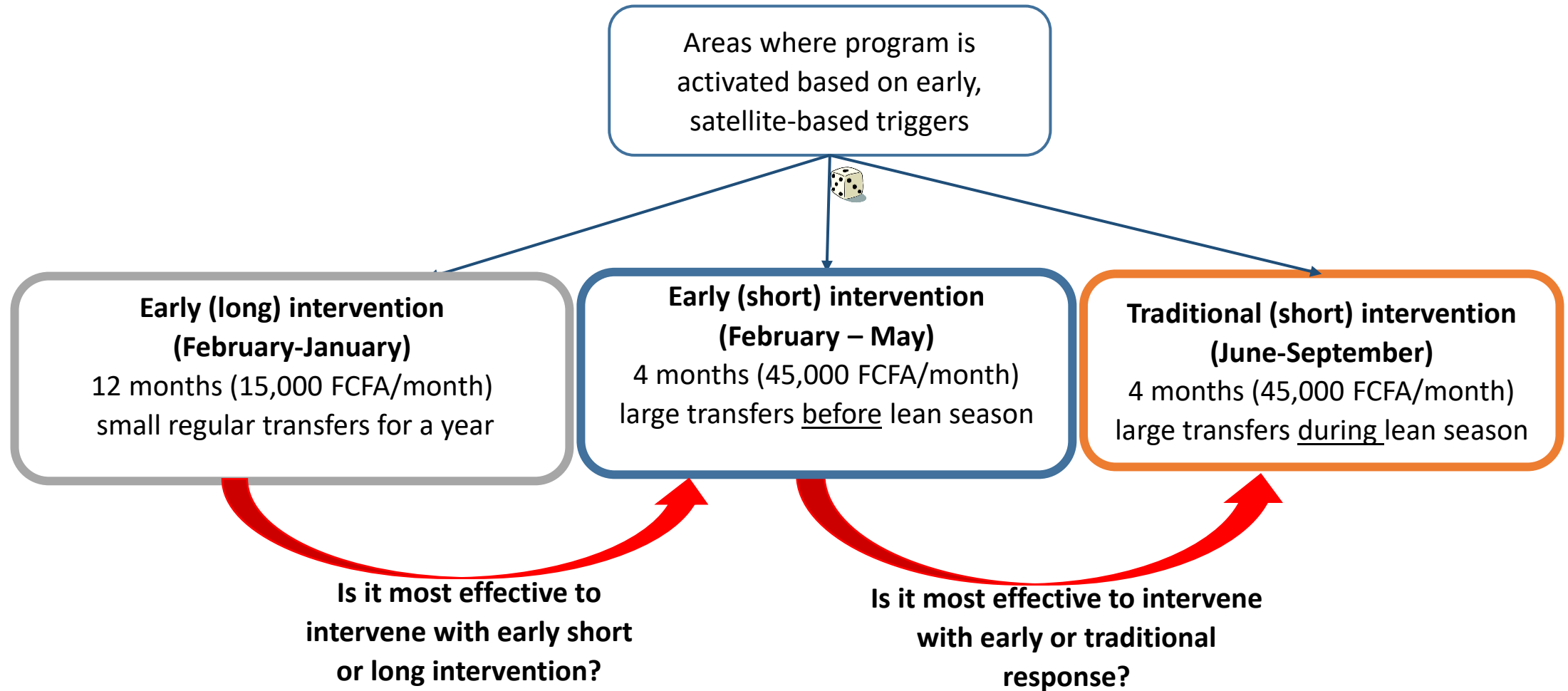
- Moderate drought (-10%) => Scale up to 22% of total population in each commune
- Severe drought (-25%) => Scale up to 44% of total population in each commune

- 2) A secondary trigger based on the Cadre Harmonisé

Monthly transfers of 15,000 FCFA for 12 months



Sahel ASP Multi-Country Study on shock-responsive cash transfers for drought





AI SAABOU ! MUN GODE!

MERCI!

Next steps

MAY - JUNE
**Endline data
collection**

- Measures medium-run impacts of the timing of cash 9 months post-harvest and 6 months after the last cash transfer.

JUNE
Mission

- Present preliminary results to govt counterparts and conduct field visit

JULY – SEPT
**Data
cleaning
and analysis**

- Clean endline data, analyze medium-run impacts and produce preliminary final results

SEPT – NOV
**Launch
Senegal &
Mauritania**

- Calculate the triggers and launch studies in Senegal and Mauritania



Today's agenda



Overview



Novel data in ASP: an overview



Four case studies: Togo, South Africa, Malawi, and Niger



Market stalls: audience interaction



Wrap-up



Market stalls



- Your chance to ask presenters anything
- Feel free to move between stalls

Front of room: Togo



Back of room: South Africa



Small room outside: Malawi and Niger

Reconvene in current room by 12:25



Today's agenda



Overview



Novel data in ASP: an overview



Three case studies: South Africa, Bangladesh & Togo



Market stalls: audience interaction



Wrap-up



Your say



Market stalls: *What did the audience want to talk about?*



Audience poll: *Version 2.0*



Social media: *#GlobalForumASP*



Audience poll





Further reading & contact



Novel Data Report

<https://rb.gy/g16ne>



Guidance Tool on Alternative Data Sources

<https://bit.ly/3N4RFIP>



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Thank you!



**Global Forum on
Adaptive Social Protection**
Protecting lives and livelihoods
in times of crisis

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