LEVERAGING SIMS FOR EMERGENCY INTERVENTIONS IN MALAWI: A CASE STUDY OF RAPID AND EFFECTIVE RESPONSE

SOPROEN

SOCIAL PROTECTION ENGINEERING

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WRITTEN BY:

Francisco V. Ayala and Susana Ponce.
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10600 Griffin Road A-103, Cooper City, Florida, USA +1 352 2176235 (USA) +593 2260950 (Ecuador)
info@soproen.com

I. ABSTRACT

The Social Interventions Management System (SIMS), developed by SOPROEN, has played a critical role in enabling quick and efficient emergency interventions in Malawi. The platform's flexibility, adaptability, and capacity to process large volumes of information in record time have significantly enhanced the government's response to disasters such as floods, droughts, and tropical cyclones. This paper explores the ways in which SIMS has supported cash transfer programs during emergency situations, outlining the benefits and outcomes achieved in various emergency responses throughout Malawi.

II. INTRODUCTION

When natural disasters such as floods, droughts, or pandemics like COVID-19 strike, governments, NGOs, and international agencies rush to provide relief and recovery support. Cash transfers are considered one of the most efficient methods to deliver aid to affected households, yet these programs often face significant challenges in emergency contexts. Common obstacles include a lack of trained personnel, limited response time, and insufficient software for managing emergency interventions. In Malawi, these factors have historically hindered prompt and effective aid distribution. The country is particularly vulnerable to emergencies; floods frequently displace thousands, while recurring droughts lead to food insecurity in central and southern regions. The Government of Malawi (GoM), through the Ministry of Gender, Community Development & Social Welfare (MoGCDSW), has implemented various interventions to address these emergencies. SIMS by SOPROEN has been instrumental in supporting these efforts.

III. THE ROLE OF SIMS IN EMERGENCY INTERVENTIONS

SIMS, a parametric software developed by SOPROEN, offers a comprehensive solution for emergency interventions. It allows for the rapid setup of cash transfer programs, data collection, and benefit distribution in record time. Key features of SIMS include:

- **Flexibility and Customization**: The software can be tailored to meet the specific requirements of different emergencies, allowing for rapid configuration and implementation.
- **Parametric Design:** Adaptable to diverse emergencies, SIMS can handle multiple events simultaneously. Specific rules can be configured for each unique situation.
- **Fast Implementation**: SIMS can be set up in approximately one week, enabling quick response to emergency situations.
- **Scalability:** SIMS supports existing social programs of any size and manages the entire project cycle, acting as a one-stop solution.
- **Offline tools**: Facilitates offline data collection and payments through dedicated applications, catering to areas with limited internet connectivity.
- **Efficiency and Speed:** Cash transfers occur in under a month, with the operational configuration typically completed within a week.

- **Transparency and Security**: SIMS minimizes errors, reduces the risk of fraud, and ensures transparency throughout the intervention process.
- **Accessibility:** As a web-based platform with offline apps, SIMS can efficiently handle large volumes of data quickly and reliably.
- **Real-time Monitoring:** Provides online reports and real-time indicators for program monitoring.

IV.   USE OF SIMS IN MALAWI

SOPROEN has supported the MoGCDSW in implementing several emergency interventions in Malawi, including Rural and Urban Lean Season Response, Floods Recovery Response, and Tropical Cyclone Freddy (TCF) Early Recovery Response. In all these cases, SIMS facilitated the rapid deployment of cash transfers to more than 150,000 households. The tool's ability to process information quickly and distribute benefits efficiently has significantly contributed to the success of these programs.

MoGCDSW has also employed SIMS for non-emergency cash transfer programs, demonstrating its broader applicability.

The following table shows the number of projects created in SIMS as of May 2024, the total number of households that have benefited, and the total amount of U.S. dollars distributed:

Table 1: Interventions in Malawi using SIMS since 2020

Intervention	Projects managed by SIMS	Total paid beneficiaries	Total transferred in US Dollars
Rural Lean Season Response	4	16,083	335,813.04
Rural lean Season Response for remaining households	3	1,171	24,450.48
Floods Recovery Response	4	12,127	379,817.64
Lean Season for Nkhata Bay	2	3,759	109,011.00
Urban Lean Season Response	1	44,106	1,279,074.00
Tropical Cyclone Freddy (TCF) Early Recovery Response	9	72,705	6,325,335.00
CCT	2	55,870	4,860,690.00
Lean Season 2023 - 2024	2	11,036	1,280,176.00
TOTAL	**27**	**216,857**	**14,594,367.16**

The implementation of SIMS in emergency interventions follows a structured process:

A. Definition of design parameters
B. Operational Setup
C. Preparatory Activities and Data Collection process
D. Information Processing and Payment process
E. Payment reconciliation
F. Grievance and Redressal

A. Definition of design parameters

In this stage, the key rules that govern the intervention are defined. This involves specifying the operational processes that make up the project cycle and setting the eligibility criteria. For most emergency interventions in Malawi, eligibility is determined by factors like disaster impact, vulnerability, and food insecurity. Additionally, the design parameters include the ranking criteria based on the established eligibility requirements. This stage also addresses the rules for the payment process, such as the amount to be paid, payment method, terms, frequency, and the types of payment agencies involved. The types of grievances and redressals that the intervention will accept from beneficiary households are also defined.

B. Operational Setup

SIMS can be configured within one week to support a specific cash transfer intervention. In this initial setup, the key operational processes for the project cycle are defined. SIMS offers flexibility, allowing for both simple and complex project setups based on the intervention's requirements. The configuration includes the creation of a data

collection form, which is built from a pool of over 200 questions. Users can select the specific questions needed for the intervention, with the added flexibility of choosing different catalog options for questions that require multiple-choice answers. Additionally, SIMS allows dynamic configuration of payment formulas. By selecting various criteria, users can determine payment amounts and the rules governing the payment process. It's possible to configure multiple payment formulas. Similarly, SIMS enables a dynamic setup of payment terms, giving users the flexibility to create terms at a national level or by specific geographic areas. In Malawi, for example, interventions are often designed at the district level, as these regions tend to share similar characteristics, allowing for tailored design parameters. However, these parameters may vary even within the same program, depending on the specific district's needs and conditions.

C. Preparatory activities and data collection

Once the data collection form is defined, it is approved by the relevant authorities at the Ministry, and fieldwork preparations begin. This involves generating the files that must be installed on the devices used by field surveyors. In Malawi, these devices were tablets. SOPROEN developed an offline app to facilitate data collection, recognizing the need for a solution that works in areas with limited or no internet connectivity.

SIMS provides the flexibility to upload household lists into the app with pre-loaded information from the Unified Beneficiary Registry (UBR) or to initiate data collection from scratch, capturing all necessary information in the field. The Ministry determines whether households affected by

an event and who are beneficiaries of the main cash transfer program, the Social Cash Transfer Program (SCTP), will receive additional funds from this program using top-ups (vertical expansion) or whether they will be supported through the emergency intervention alongside those who are not SCTP beneficiaries (horizontal expansion). Both approaches are possible.

If the Ministry decides on vertical expansion to support SCTP beneficiaries, data collection for those households is not required; information from the UBR is filtered to exclude these beneficiaries. Conversely, if the emergency intervention is chosen to support SCTP beneficiaries, information from these households is collected to update their basic information.

In many cases, not all households in the affected area are eligible for benefits from the intervention due to budget constraints. Therefore, community committees are utilized to generate preliminary lists for pre-selection of potential beneficiaries.

D. Information Processing and Payment process

After the data collection is completed, the collected information is analyzed to give authorities insights into the progress of the process in each district. The data is processed through SIMS, which selects households that meet the defined eligibility criteria. If needed, SCTP beneficiaries can be filtered out at this stage. If there are more eligible households than the maximum number allowed due to budget constraints, SIMS can rank the households according to a predefined formula set by the Ministry. In this way, only the required number of households are ultimately selected by SIMS.

With these lists, the preparation for the payment process begins, including generating unique IDs for payment receivers who do not have National IDs. SIMS generates a unique document for these households, as the only authorized form of identification for receiving payments is either a National ID or this automatically generated ID. Authorities determine the payment process, which can involve using an offline app with encrypted files or sending beneficiary household lists to payment agencies. In Malawi, these agencies are typically mobile phone companies such as TNM and Airtel.

E. Payment reconciliation

Payment reconciliation is a crucial process that ensures the accuracy and transparency of cash transfer disbursements. It involves generating lists of households that have received their cash transfers and comparing these lists with payment records to verify that the correct amounts were distributed to the intended beneficiaries.

SIMS simplifies payment reconciliation by facilitating the upload of payment files for each payment term. This streamlined approach eliminates the need for manual data entry, reducing the risk of errors and delays.

SIMS effectively handles unclaimed funds, ensuring that these resources are not lost or misallocated. For unclaimed funds arising from any reason, SIMS provides the flexibility to treat them as arrears for the subsequent payment term. This feature ensures that beneficiaries who missed out on their initial disbursement have the opportunity to receive their due funds in the next payment cycle.

SIMS promotes transparency and accountability throughout the payment reconciliation process. By generating detailed reports and providing clear audit trails, SIMS enables stakeholders to track the flow of funds and verify the proper distribution of cash transfers.

F. Grievance and Redressal

Beneficiaries of the emergency intervention can reach out to the Ministry's call center to submit their grievances or complaints, which are immediately processed through the Grievance Redressal Management (GRM) Management Information System (MIS). This system is an additional and complementary software used by MoGCDSW to manage grievances from any social protection program in the country.

Complaints typically involve dissatisfaction with the quality of service, while claims concern issues like incorrect transfer amounts.

In the GRM process, each case presented by beneficiary households is received, classified, and investigated.

The call center initially logs the details of the case, including any issues related to project activities or service delivery, such as mistreatment by staff or requests for information on cash transfer schedules.

The GRM officer then classifies the case, generating an electronic notification that is sent to the project team for further action.

The Project GRM Officers investigate the case, entering all the steps taken into the GRM MIS until the case is closed. Once a case has been processed, a notification is sent to the beneficiary's household to inform them about the case resolution or the actions taken.

The Central GRM unit also conducts a quick satisfaction survey to gauge the beneficiary's response to the case resolution process. If a beneficiary is not satisfied, the case can be refiled. Beneficiaries can also call the call center for follow-up to receive updates on the status of their previously submitted cases. This structured process ensures that grievances are addressed promptly and beneficiaries are kept informed about the progress and resolution of their cases.

V.   ENHANCEMENTS IN SIMS 2.0

The version used in Malawi, SIMS 1.0, includes modules for administration, targeting, enrollment, payments, case management, conditionalities, reporting, dashboards and indicators, and household cards.

In 2024, SOPROEN released SIMS 2.0, which is characterized by its increased flexibility and significant feature enhancements. The updated platform offers innovative functionalities and modules, including advanced ranking and community validation. This high degree of flexibility allows for the design of multiple projects and their implementation in various geographical areas, each tailored to its specific conditions and design parameters.

SIMS 2.0 introduces several new elements, such as:

- **Duplicate Analysis and Cleaning**: Tools to identify and remove duplicate data entries, ensuring data accuracy.
- **Offline Application for Field Update Collection**: An offline app

for data collection in areas with limited internet connectivity.

- **Community Validation in Targeting**: A mechanism to engage community stakeholders in the targeting process to ensure inclusivity and fairness.
- **Ranking in Targeting**: A ranking system to prioritize beneficiaries based on predefined criteria.
- **Improvement in Report Retrieval for End Users**: Enhanced report generation and retrieval for better user experience.
- **Decryption of Payment Files for Administrators**: A feature to decrypt payment files, providing administrators with secure access to sensitive information.
- **Backup and Program Removal for Administrators**: Options for secure data backup and the ability to remove programs when no longer needed.

SOPROEN is continually improving SIMS, and new functionalities and modules are currently being developed, leading to SIMS 3.0. In the coming months, SIMS will be able to manage linkage and referral mechanisms, as well as in-kind transfer interventions.

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