

SHOCK RESPONSIVE SOCIAL PROTECTION

# Disaster Risk Finance

**SESSION 3: DESIGNING AND COSTING A  
SCALABLE MECHANISM FOR MALAWI'S SOCIAL  
CASH TRANSFER PROGRAM**

3 DECEMBER 2020



Disaster Risk Financing  
& Insurance Program



**Objective:**

This session will help guide the government in setting key parameters for the scalability mechanism.

**Key Takeaways:**

Using an online tool customized for Malawi, we will go over the trade-offs on design parameters and costing, including:

- **When:** Review of triggers
- **Where:** Selection of triggers
- **Who:** Number and selection of beneficiaries
- **What:** Payout amount
- **How long:** Duration and timing of disbursement

Please review Chapter 3 (page 50 onwards) in the attached workbook ahead of the training session

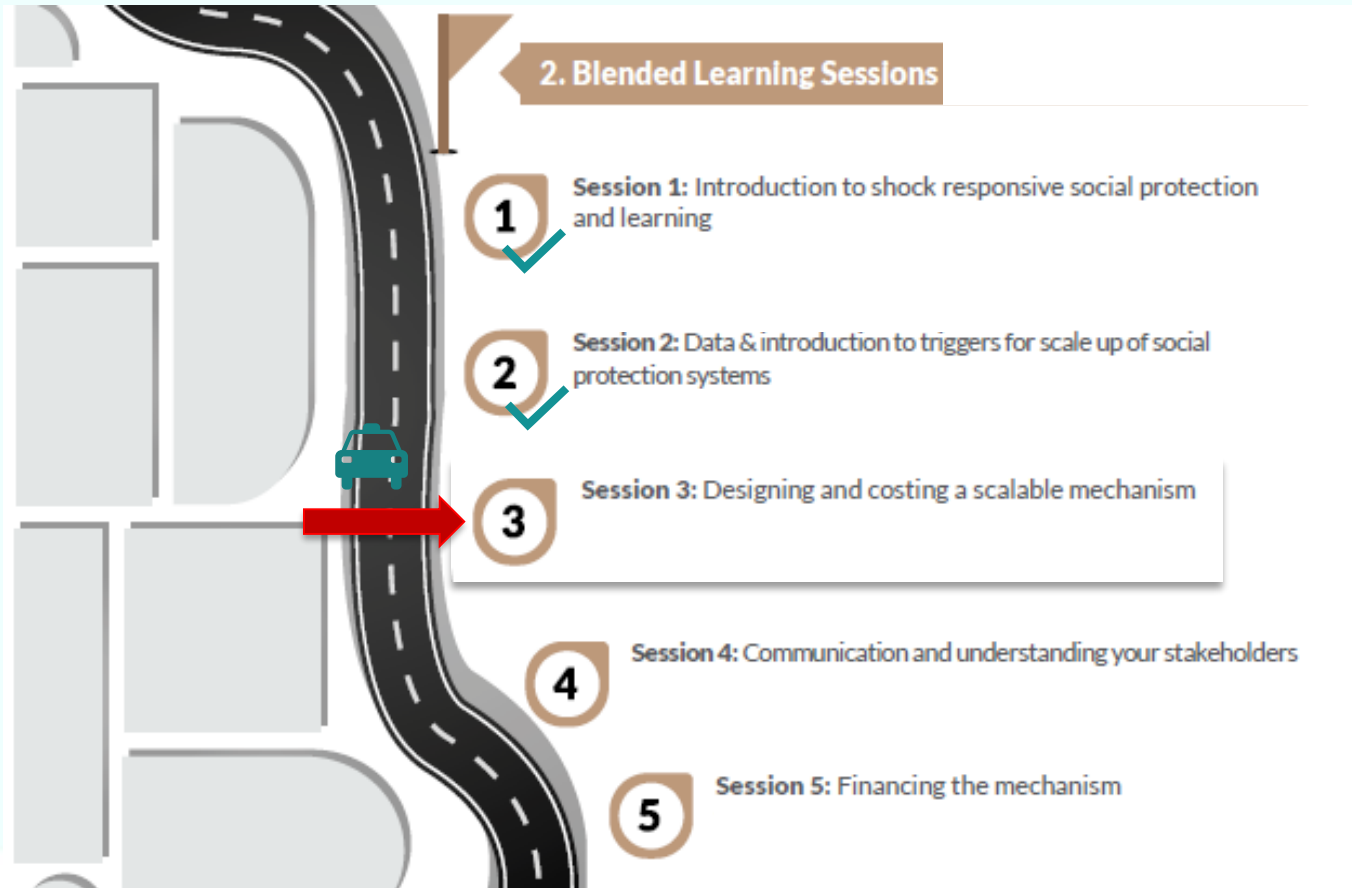
**Time:**

02:30 – 02:50  
 02:50 – 03:30  
 03:30 – 03:40  
 03:40 – 04:30  
 04:30 – 05:20  
 05:20 – 05:30

**Agenda:**

Welcome and recap from Session 2 (data collection & analysis)  
 Presentation on designing and costing a scalable mechanism  
 Short break  
 Interactive session on using the online training tool to inform design  
 Group work on exercises using the Tool  
 Wrap Up

# Chapter/Session 3 of the Learning RoadMap



## Objective and Structure of webinars

### INTENDED OUTCOME:

The purpose of this chapter is to help guide the decision-making process of policy makers in **setting key scale-up parameters for the scalability mechanism that determines and defines a scale-up** of a Shock Responsive Social Protection (SRSP) program.

90-120 minute webinar for each chapter in the workbook



Live polls:  
Please participate



Live exercise:  
Design a scalability mechanism [here](#)



Please share questions  
via Q&A function





## What you will need for this session

- Go to [www.menti.com](https://www.menti.com) (or prepare the QR scanner on your phone)
- Paper and pen for some exercises
- Laptop with stable internet connection
- Be Ready to participate and have fun!

*What do you hope to learn today on **design parameters for a scalability mechanism of the Social Cash Transfer Program?***

Please go to Menti.com on your phone/  
browser and type code **97 51 68 1**



# Workbook: Disaster Risk Finance for Social Protection in Malawi

## I. Conceptual Overview

### II. KEY DECISIONS FOR DESIGNING A SRSP SYSTEM

The five parameter questions laid out below resemble the key choices decision makers have to make when designing a scalability mechanism. They determine when a scale-up is triggered and what the nature of the intervention will be.

#### 1. When should a scale up be triggered?



The decision of when a scale-up occurs must be based on the type of data used to monitor the shock conditions which the scalability mechanism system seeks to protect against and the level of shock conditions that need to be reached to trigger a scale-up.

Building on the lessons from Chapter 2, data sources chosen for the scalability mechanism serve as an appropriate proxy for the type, magnitude, timing, and location of the shock to which the system is supposed to respond. A scale-up is triggered when the chosen disaster index breaches a pre-registered threshold value. The data must be timely, so that scale-ups can be conducted not only quickly but also at points in time when additional transfers are most effective; relevant, so that the mechanism offers reliable protection; objective and possible to audit, to avoid subjective analysis and the risk of politicizing scale-up decisions; and available over a long time horizon.

#### Decisions to be made:

- To what shock drivers should the system respond to (droughts, floods, ...)?
- How are shocks defined and measured, with what data or indicators (rainfall data, vegetation cover, yield data, ...)?
- Should a scale-up be triggered before or after a shock occurred (actual or predicted values)?
- What is the threshold value of the disaster data index that needs to be breached to trigger a scale up?

#### Trade-offs:

- The lower the severity threshold value is set, the more often the system triggers, initiating payouts to affected households more often but also increasing the associated costs.
- If the system is triggered too often with relatively high payouts, the need of the beneficiaries might not be as critical, yet increasing pressure on the budget and increasing the opportunity costs.
- If the system is triggered too often with relatively low payouts, the transaction costs of the operational procedures might outweigh the provided financial benefit for beneficiaries, thereby decreasing the cost-effectiveness of the system.
- If the system is triggered too rarely, populations in need might not receive crucial support from payouts.

#### Take away:

- The threshold value level that triggers a scalability mechanism ultimately decides when, how often, and to which shocks the system responds. Having lower trigger thresholds are generally more suitable for more often occurring but less extreme shocks, triggering 'smaller' scale ups. The opposite is true for rarer but more extreme events, for which thresholds should be less sensitive but trigger 'bigger' in payouts.

## Overview of policy priorities

## Step-by-step explanation & guidance of the tool

## Practical considerations for the design & decision process

## Example questions

## II. Online Tool Manual

### II. DATA

On this page the user can see the pre-loaded data on population and the indicative drought indicator. The data shown here is the foundation of the Tool but for the purpose of this exercise cannot be edited, although it is possible that alternative data sources would be more appropriate.

To view the datasets click on the plus symbol as highlighted below.



Year	Population	Population	Population	Population	Population	Population	Population	Population	Population
2010	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2011	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2012	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2013	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2014	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2015	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2016	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2017	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2018	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2019	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
2020	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000

#### Population Data

The population data is important because it is used to determine the number of households that could be covered by the mechanism and the number of regular beneficiaries (as shown in the final two columns).

**Who**  
Population data links back to the selection of beneficiaries, for instance how to identify non-routine recipients for a horizontal expansion.

**Where**  
Robust data sources for both population and risk indicator data in considered geographic areas are required for a scalability mechanism and must therefore be analyzed in the design phase.

#### Drought Indicator Data

Rainfall data is used as the drought indicator for educational purposes. The raw monthly rainfall data was converted into a rainfall anomaly for each month in the rainy season (October to April). The months where the rainfall is below average is shown in red and above average in green.

To view the data for all 28 districts in Malawi the user can ask the Tool to show you 50 entries as highlighted below, or use the search bar by entering the district name of interest.

**When**  
The chosen risk indicator will determine when, where, and how often the scalability mechanism is triggered. Rainfall data as used in this example is the only option to be considered for drought events, others may include vegetation and soil moisture.

1. How many Regular SCTP Coverage households are in the district of Rumphi?
2. Scrolling through the drought indicator data, in which of the following months did every district experience below-average rainfall?
3. For which district is neither population nor rainfall data available? (And hence the Tool cannot design a scale up mechanism here.)

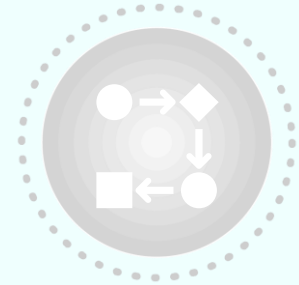
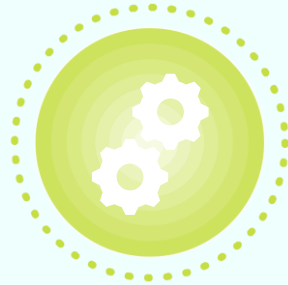
■ A. 4,572 ■ B. 3,452 ■ C. 1,588 ■ A. Feb-12 ■ B. Nov-13 ■ C. Oct-18 ■ A. Dowa ■ B. Likoma ■ C. Neno

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**RECAP SESSION 2:**

**DATA COLLECTION &  
DATA ANALYSIS**

# Data Collection & Data Analysis are key for robust DRF Schemes



## A. Data Collection

**Where** can relevant data be found and what are the **preconditions** to apply it for a robust analysis?

## B. Data Analysis

**How** can the collected data be analyzed according to relevant **policy and operational considerations**?

## Policy Implications

**How do** data analytics **outcomes** feed into the **operational design and procedures** of scale up schemes?



## Poll – Data sources to be considered for the SCTP



**1. What data sources could be used to trigger a scale-up of the STCP?**

**2. Where might you get access to this data?**

Please to Menti.com on your phone/  
browser and type code **97 51 68 1**



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# **I. DECISION MAKING PROCESS**

## OVERVIEW

### **1. POLICY PRIORITIES**

What do decision makers want to achieve

### **2. MECHANISM PARAMETERS**

How to translate policy priorities into action

### **3. TRADE-OFFS**

Balancing different policy priorities under financial constraints

## OVERVIEW

### **1. POLICY PRIORITIES**

What do decision makers want to achieve

### **2. MECHANISM PARAMETERS**

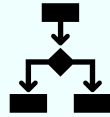
How to translate policy priorities into action

### **3. TRADE-OFFS**

Balancing different policy priorities under financial constraints

Decision makers **need to prioritize between different policy parameters** that define the support provided to affected populations during a shock

## 1. POLICY PRIORITIES



**When** should a scale up be triggered?



**Where** should the shock response happen?



**Who** should benefit from the shock response?



**What** should be the value of any additional transfers?



**How long** should beneficiaries receive payouts for?

## OVERVIEW

### 1. POLICY PRIORITIES

What do decision makers want to achieve

### 2. MECHANISM PARAMETERS

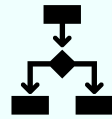
How to translate policy priorities into action

### 3. TRADE-OFFS

Balancing different policy priorities under financial constraints

A scale-up triggers **pre-agreed interventions** that respond to increased needs of vulnerable populations. Decision makers also need to **pre-agree the timing and type of support that is triggered**

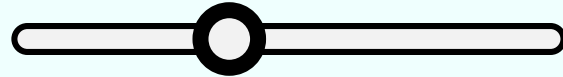
## 2. SETTING PARAMETERS



**When**

-  
Fewer

Trigger Frequency



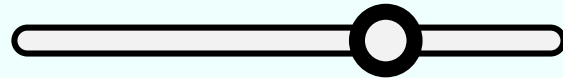
+  
More



**Where**

-  
Fewer

Districts



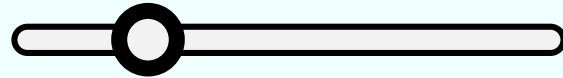
+  
More



**Who**

-  
Fewer

Beneficiaries



+  
More



**What**

-  
Less

Payout Amount



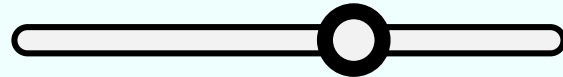
+  
More



**How long**

-  
Fewer

Months



+  
More

## OVERVIEW

### 1. POLICY PRIORITIES

What do decision makers want to achieve

### 2. MECHANISM PARAMETERS

How to translate policy priorities into action

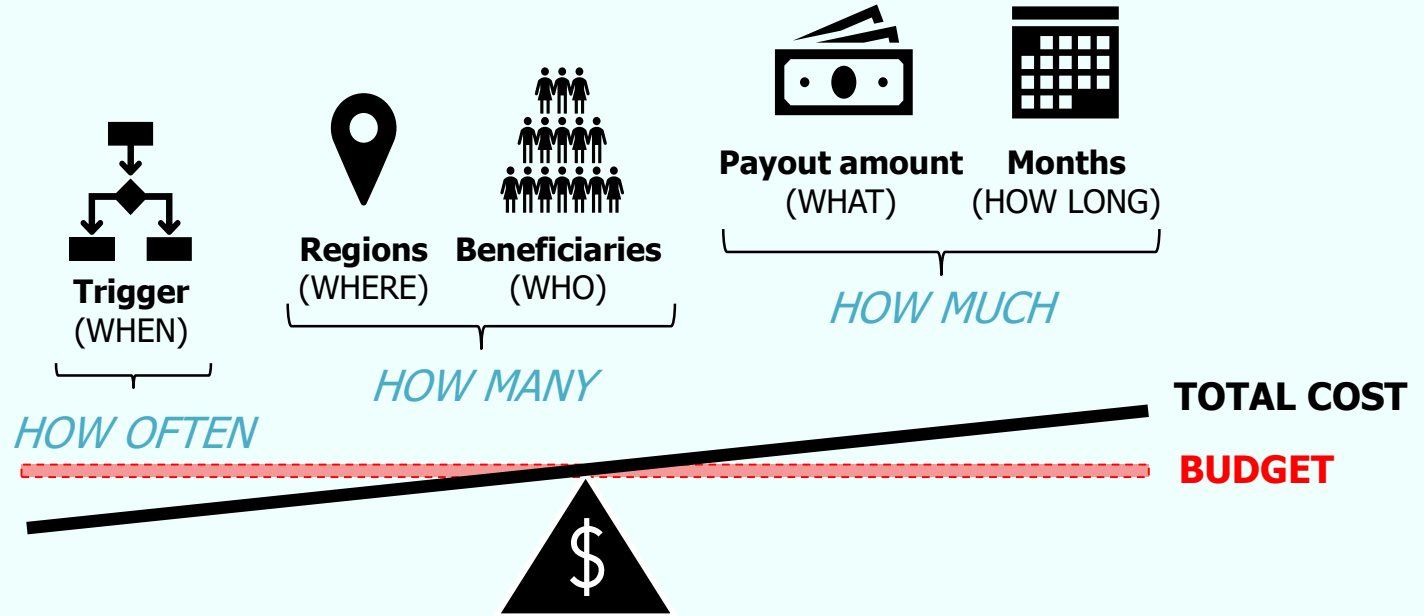
### 3. TRADE-OFFS

Balancing different policy priorities under financial constraints



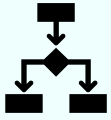
A scale-up always comes with **financial, operational, and opportunity costs**, creating trade-offs that need to be considered when determining the values of different parameters.

### 3. TRADE OFFS



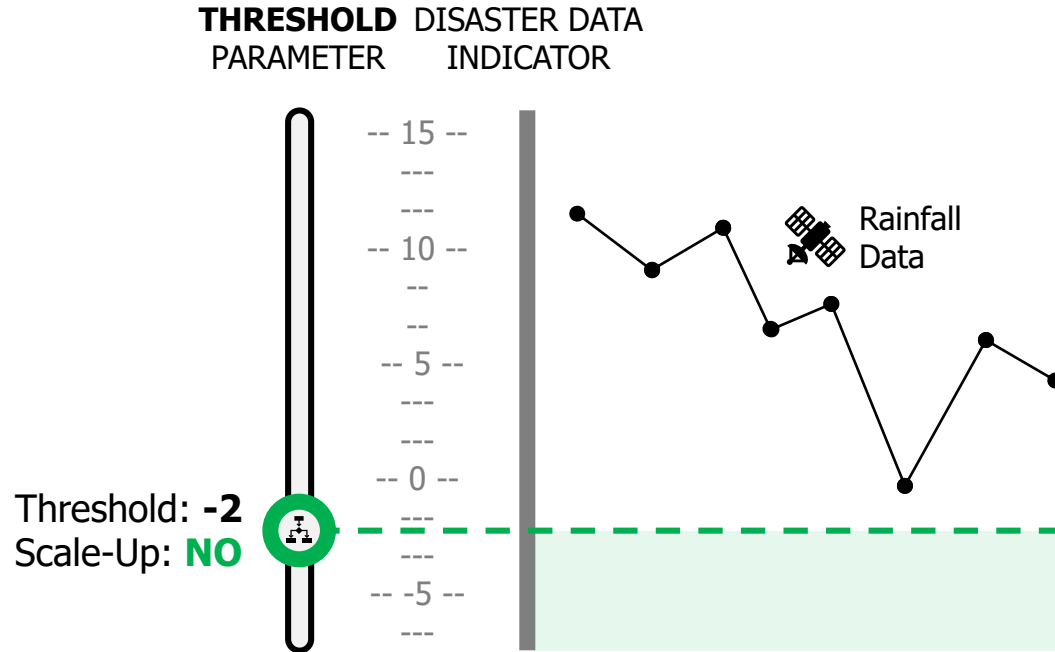
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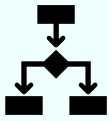
## **II. DESIGN PARAMETERS**



## When

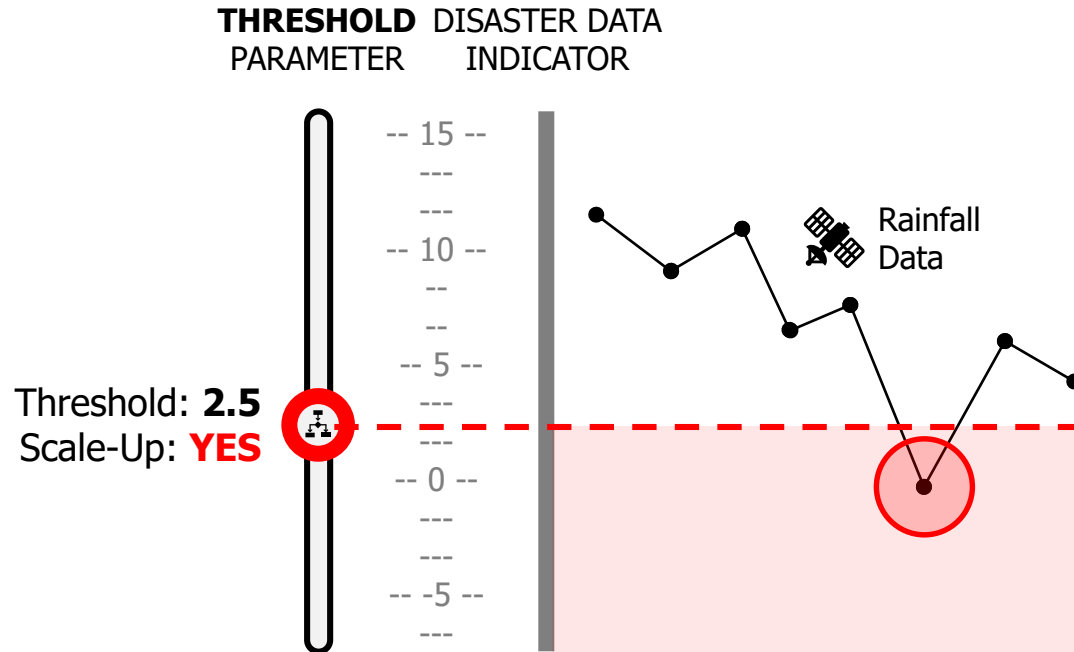
The decision of when a scale-up occurs is based on the **type of data** used to monitor the shock conditions (data indicator) and the **threshold** of shock conditions determined to trigger a scale-up





## When

The decision of when a scale-up occurs is based on the **type of data** used to monitor the shock conditions (data indicator) and the **threshold** of shock conditions determined to trigger a scale-up



## Aspects to consider

- Disaster: Which *shock drivers*?
- Sources: What data *indicators*?
- Timing*: Before or after shock?
- What is the *threshold* value?

Poll – *When* should a scale up be triggered?



Setting a higher threshold increases the chance of scale-ups.  
What are the potential implications of having more scale ups?

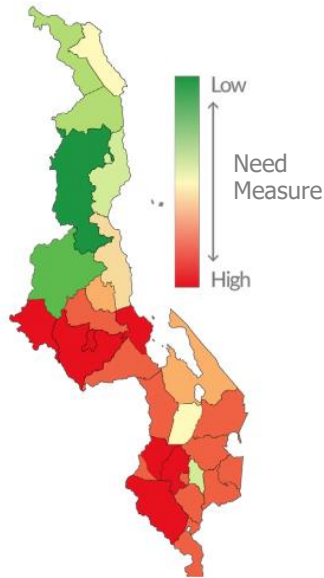
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## Where

The decision of scale-up areas should be informed by the **need and vulnerability** of populations as well as **existing operational systems** in different areas and on different administrative levels



### Need Analysis

- Poverty Rates
- Malnutrition levels
- Food insecurity
- Disaster-related vulnerability

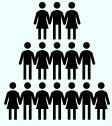
### Administrative Feasibility

- Existing capacity -
- Accessibility -
- Necessary staff -
- Regional balance -



### Aspects to consider

- Where:* Which areas should be covered?
- Decision factors:* Political? Needs? Existing systems?
- Administrative unit:* Regional, district, ward level?

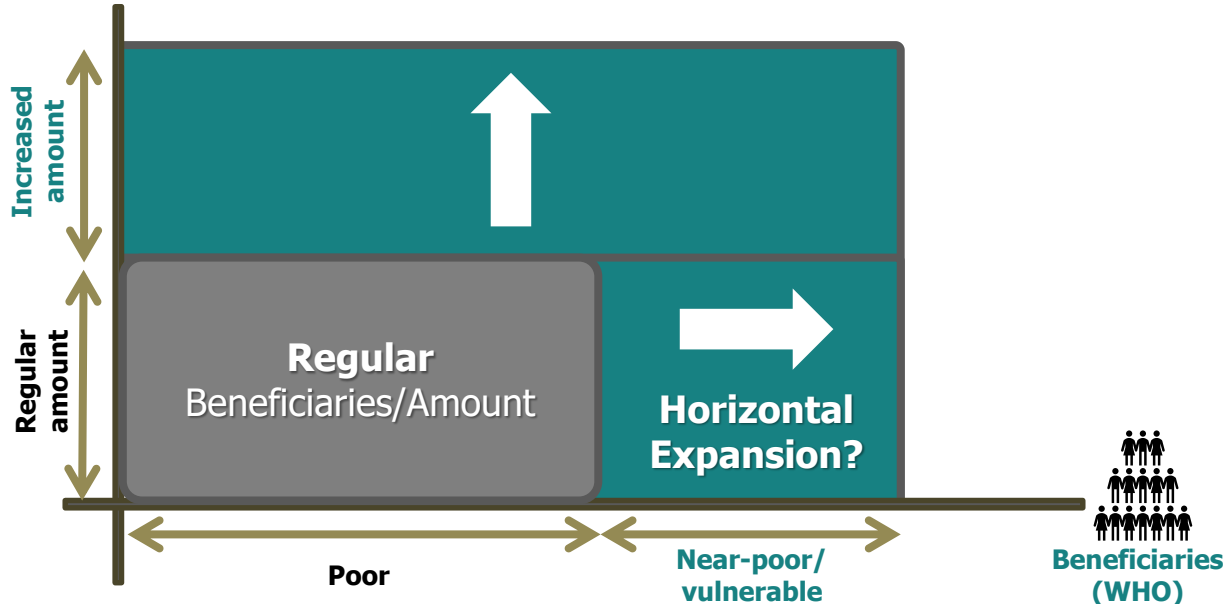


## Who

The choice of beneficiaries should be based on **budget** considerations, the **relative need** of regular and non-routine recipients, and the **investment and transaction cost** of identifying and reaching them



Payout Amount  
(WHAT)



## Aspects to consider

- Recipients:* Regular or non-routine?
- How many:* Number of additional HHs?
- Decision criteria:* Needs-based? Geography?
- Registries:* How to *identify* beneficiaries?

Poll – *Who* should benefit from the shock response?

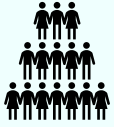


- A. Vertical scale-up only?**
- B. Horizontal scale-up only?**
- C. A mixture of both?**

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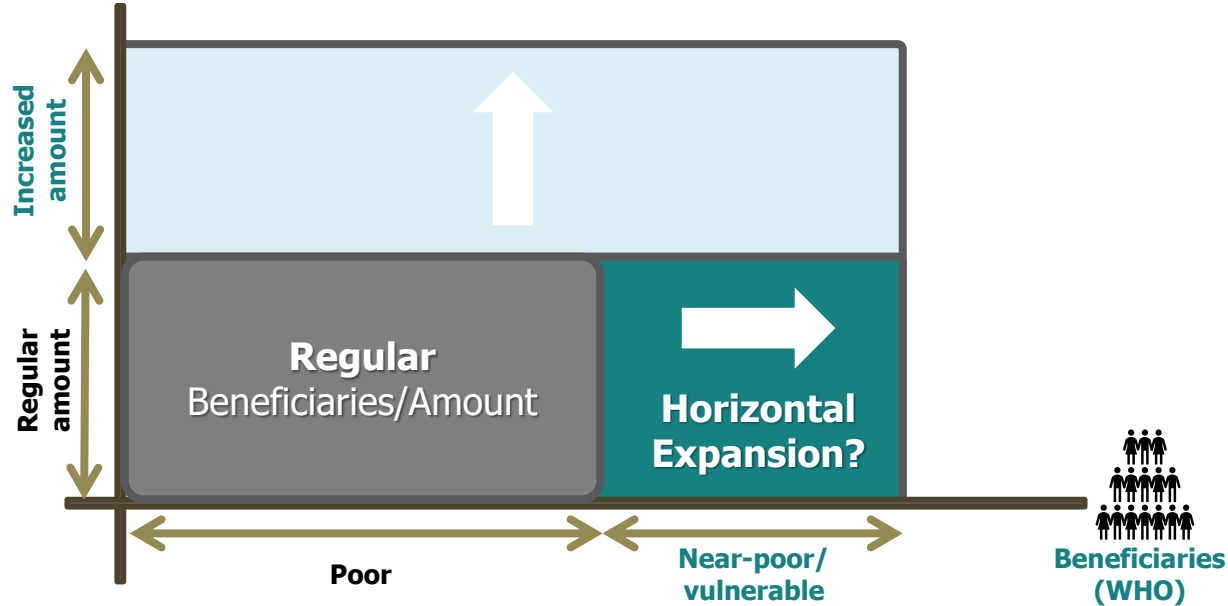


## Who

The choice of beneficiaries should be based on **budget** considerations, the **relative need** of regular compared to non-routine recipients, and the **investment and transaction cost** of disbursements



Payout Amount  
(WHAT)



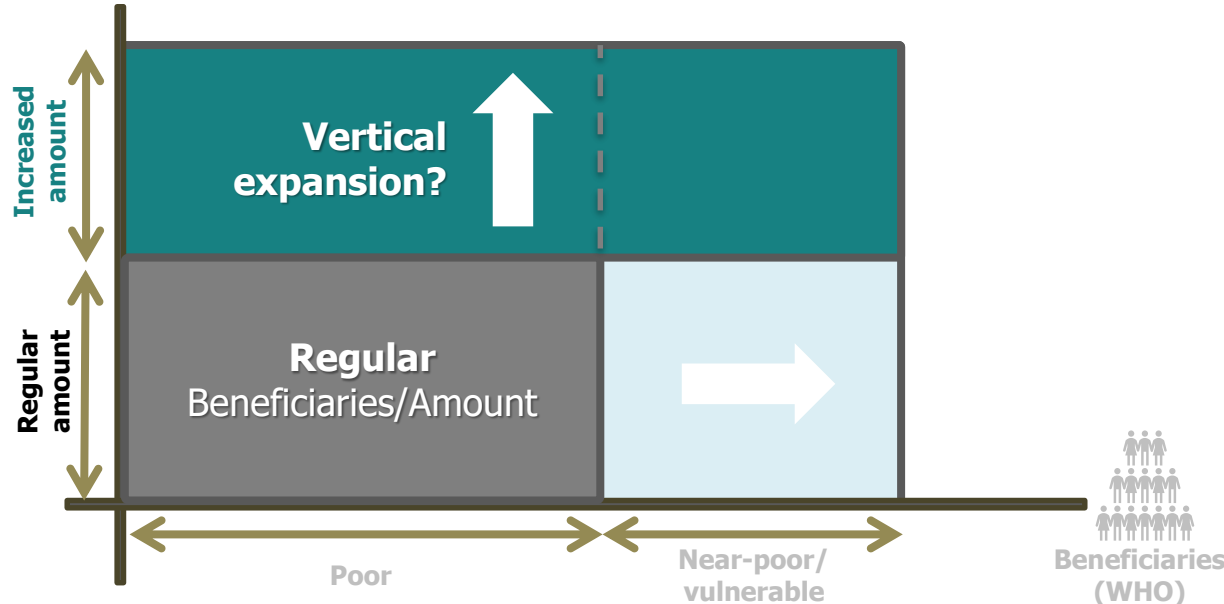


## What

The payout amount to regular and non-routine beneficiaries should be decided on the **available budget** and the **relative need** caused by the shock

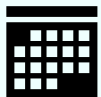


Payout Amount  
(WHAT)



## Aspects to consider

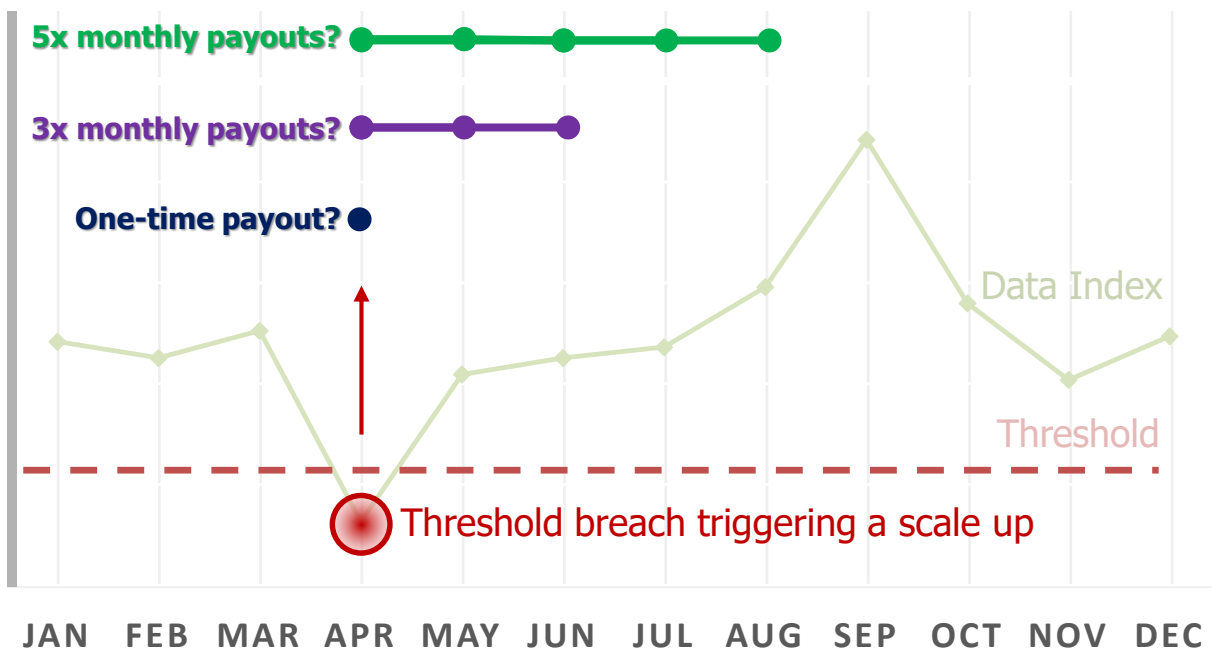
- How much:* Value of additional transfer?
- Distribution:* Amount difference between beneficiary groups?
- Flexibility:* Standard or varying amount?
- Disbursement:* Which *channels* to use?



## How long

The timeline of payouts must be determined by when the **need** of beneficiaries are the highest, which **disbursement channels** are available, and how the **payments align** with other interventions

Disaster Index



## Aspects to consider

- Duration*: How long should payouts last?
- Payment split*: One-time lump sum or several payments?
- Amount/split*: How should amount vary depending on the number of payouts?

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**QUESTIONS & BREAK**

# III. ONLINE TOOL TRAINING

<https://disasterriskfinance.shinyapps.io/malawidesignsrsptool/>

## Online Tool Exercises

This exercise starts with analyzing the cost for the **default parameters**.

Please keep changes in the parameter values for subsequent exercise sections.

Choose  
*Mangochi, Blantyre & Phalombe*

1a. What is the **average cost** of running the mechanism in these 3 districts under the **default assumptions**?

- A. \$1,067,894     B. \$2,427,903

1b. If we assume a budget of \$3 million per year, in **how many seasons** would the **cost be more than the available budget**?

- A. One     B. Two     C. Five

Choose  
*15% horizontal coverage*

2a. How does the **cost and coverage of the mechanism change** if we assume **no scale up to regular recipients**?

- A. Cost: -US\$266,683/-1,830 HHs  
 B. Cost: -US\$427,157/-3,560 HHs

2b. How high can you set the monthly payment for horizontal expansion such that the **average costs** remain **below US\$1 million**?

- A. \$12     B. \$15     C. \$20

Add  
*Mulanje & Zomba*

3a. Including the new districts, in how **many more years** is the **budget exceeded**?

- A. 5     B. 6     C. 7

3b. **Which district** has the **highest household coverage**? (tip: see exhibit 2)

- A. Mulanje  
 B. Blantyre  
 C. Phalombe