



ENDING HUNGER: WHAT WOULD IT COST?

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THE METHODOLOGY





5 CATEGORIES OF SPENDING



- **Category I: Social safety nets**
Support to consumers through cash transfers and food stamps



- **Category II: Farm support**
Helping producers through fertilizer and seed subsidies, capital investments (e.g. tractors), R&D, improved technology, extension services and better organizing



- **Category III: Rural development**
Infrastructure, education, storage, market access and value chains



- **Category IV: Enabling policies**
Land reform, tax reform, trade and investment policies and institutional reform



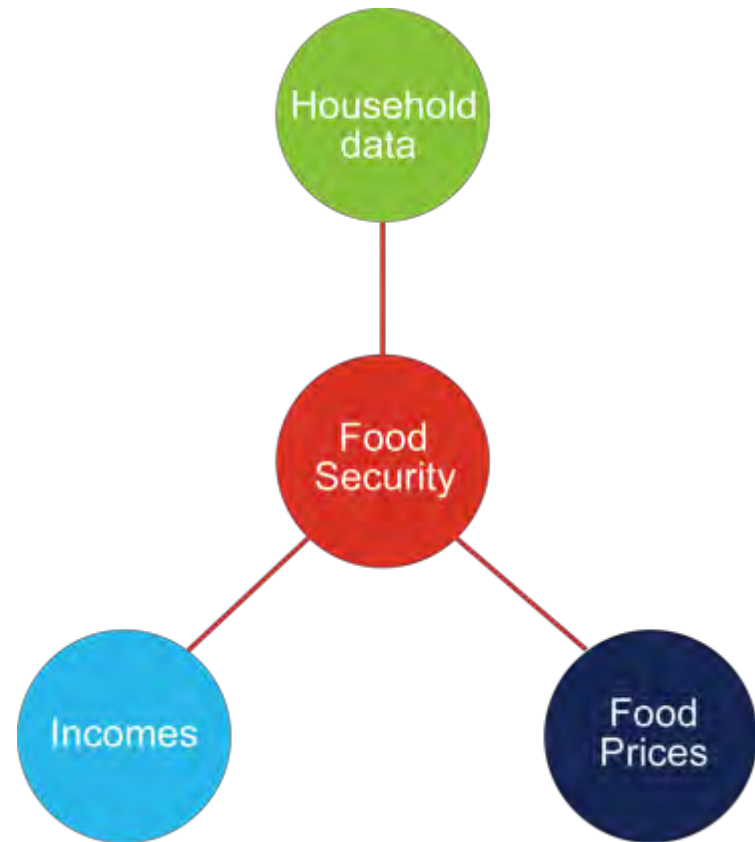
- **Category V: Nutrition**
Addressing the global nutrition concerns, including stunting, exclusive breastfeeding, wasting, anemia, low birth weight, and overweight.



WHAT MODEL DO WE USE? MIRAGRODEP

An innovative model that uses macroeconomic data with household level data

- MIRAGRODEP is a computable general equilibrium (CGE) model that simulates national and international markets, taking into account production, demand and prices
- The model relies upon household data to allow for a bottom-up approach
- It is then matched with donor spending to calculate the donor share





ENDING HUNGER: DEFINITION

- Household level threshold defined in terms of calories per capita (FAO threshold).
- Country level goal: Target reached if 5% or less of the population hungry (FAO threshold).





WHAT DO WE PUT IN THE MODEL?

A limited subset of interventions based on criteria:

- Interventions should deliver bulk of the pay-off by 2030
- Interventions should be relevant for donors
- Interventions should focus on food consumption and/or production



SOCIAL SAFETY NETS

- Food stamps



FARM SUPPORT

- Capital investment (e.g. Tractors)
- Technology
- Fertilizer subsidies
- Extension Services
- Production subsidies



RURAL DEVELOPMENT

- Rural infrastructure
- Rural Education
- Reduction in post-harvest losses



WHAT DO WE MISS AND WHY?



Category IV: Enabling policies

- Too difficult to put numbers into the model that accurately attribute spending on policy reform with increased calorie consumption



Category V: Nutrition

- The model does not directly cost nutrition, because the household data is incomplete
- We are working with 1000 days, R4D and the World Bank who are trying to estimate the cost of ending malnutrition using a different model





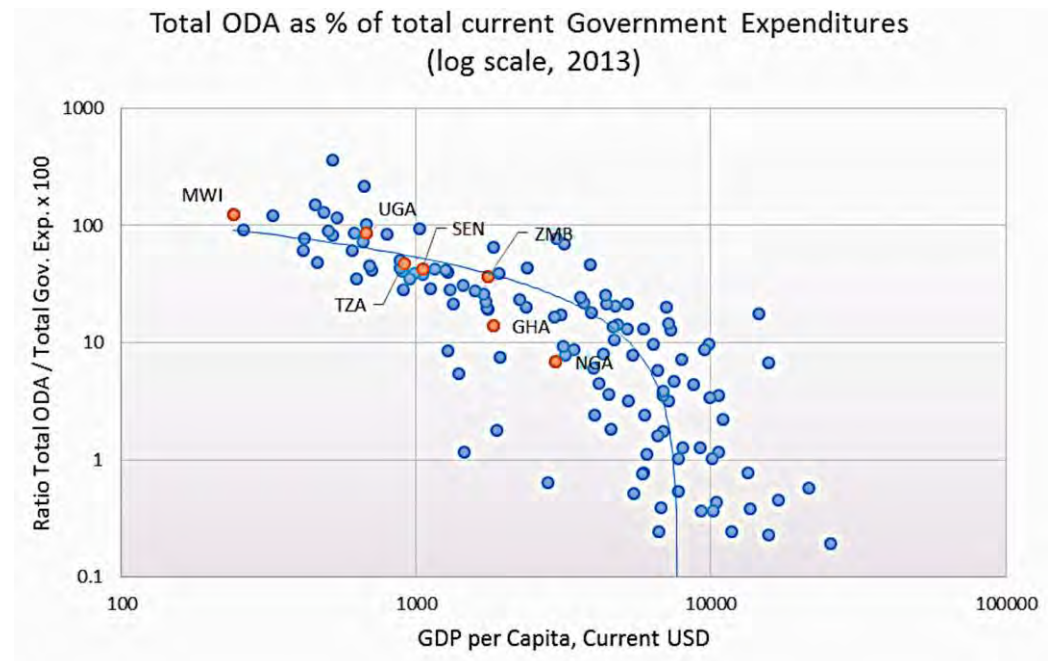
HOW DO WE CALCULATE THE DONOR SHARE?

STEP 1: co-funding rule

Conduct an econometric analysis of donor support to developing country budgets. The analysis gives an external donor share by country and by level of GDP per capita.

STEP 2: donor share

The model defines the total cost of achieving SDG2. The co-funding rule is applied on an annual basis. The remaining costs are provided by domestic taxes or loans.



The share of donor money as a percentage of government spending declines as a country develops

ENDING HUNGER IN SEVEN AFRICAN COUNTRIES





**SEVEN
COUNTRIES**

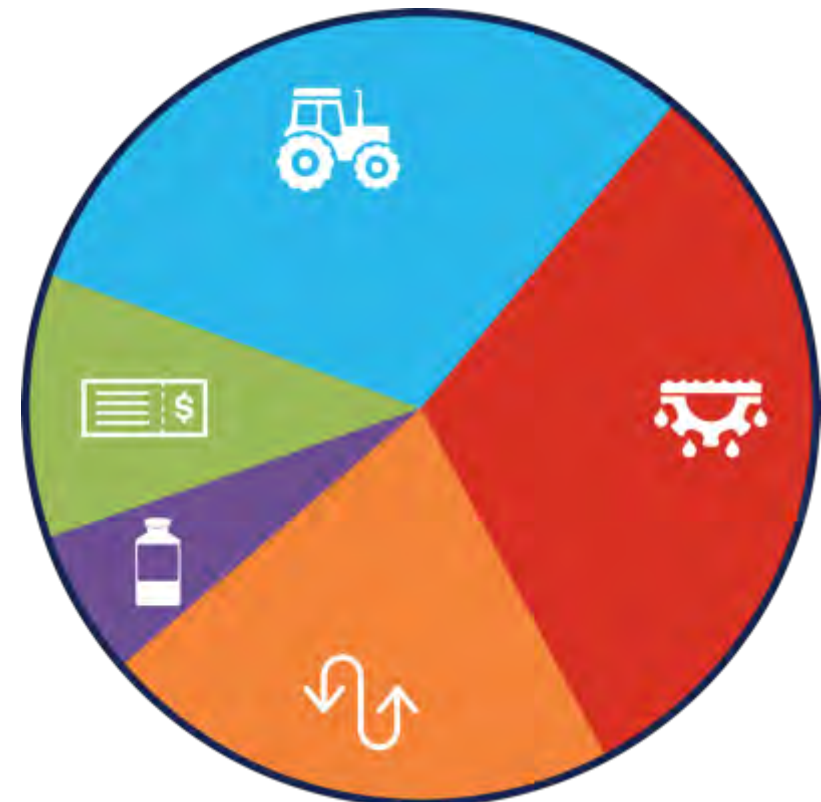
**52
million
hungry people**





CURRENT DONOR SPENDING IN THE 7 COUNTRIES: \$1 BILLION/YR

	Category I: Food aid/food security programmes
	Category II: Agricultural education/training, agricultural financial services, agricultural inputs, agricultural research, agricultural services, food crop production, livestock/veterinary services, livestock
	Category III: Agricultural cooperatives, rural development, rural infrastructure, agro-industries
	Category IV: Agricultural land resources, agricultural policy and management, agricultural water resources
	Category V: Basic nutrition





HUNGER IN 2030 IF NO EXTRA AID

67
Million





HOW MUCH *EXTRA* PUBLIC MONEY IS NEEDED TO END HUNGER IN THE SEVEN COUNTRIES?

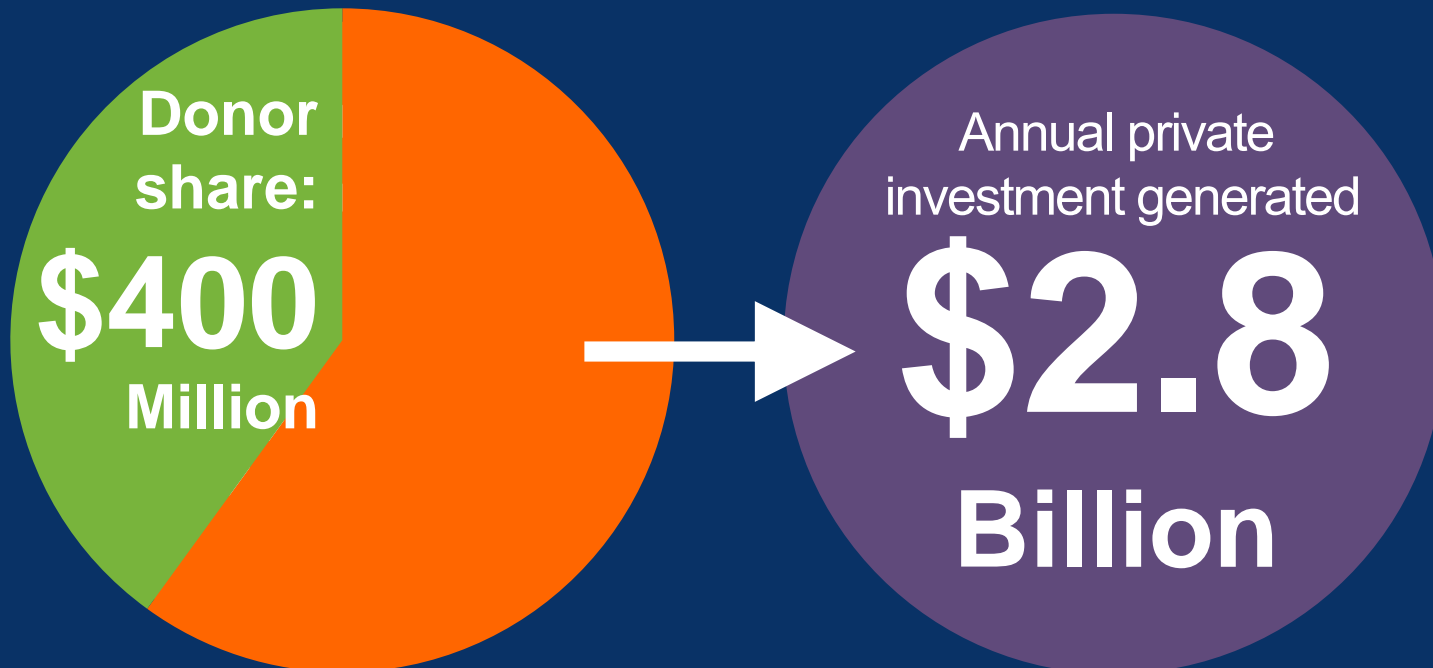
Annual
average cost:

\$1

Billion

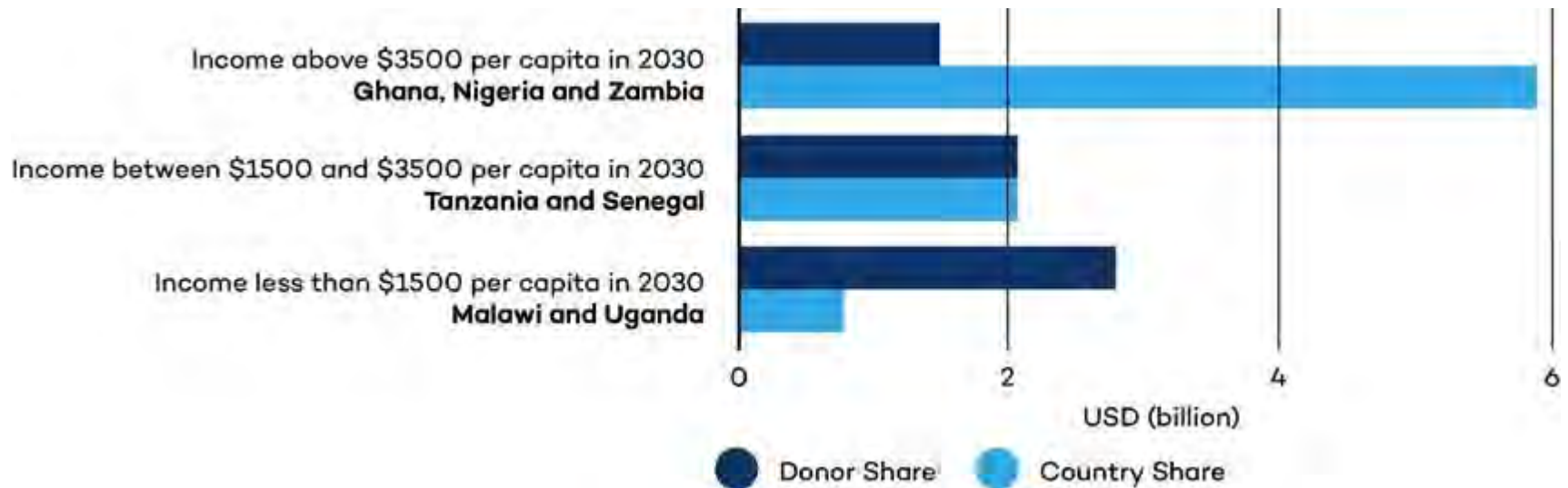


WHAT IS THE DONOR SHARE? HOW MUCH PRIVATE INVESTMENT IS GENERATED?

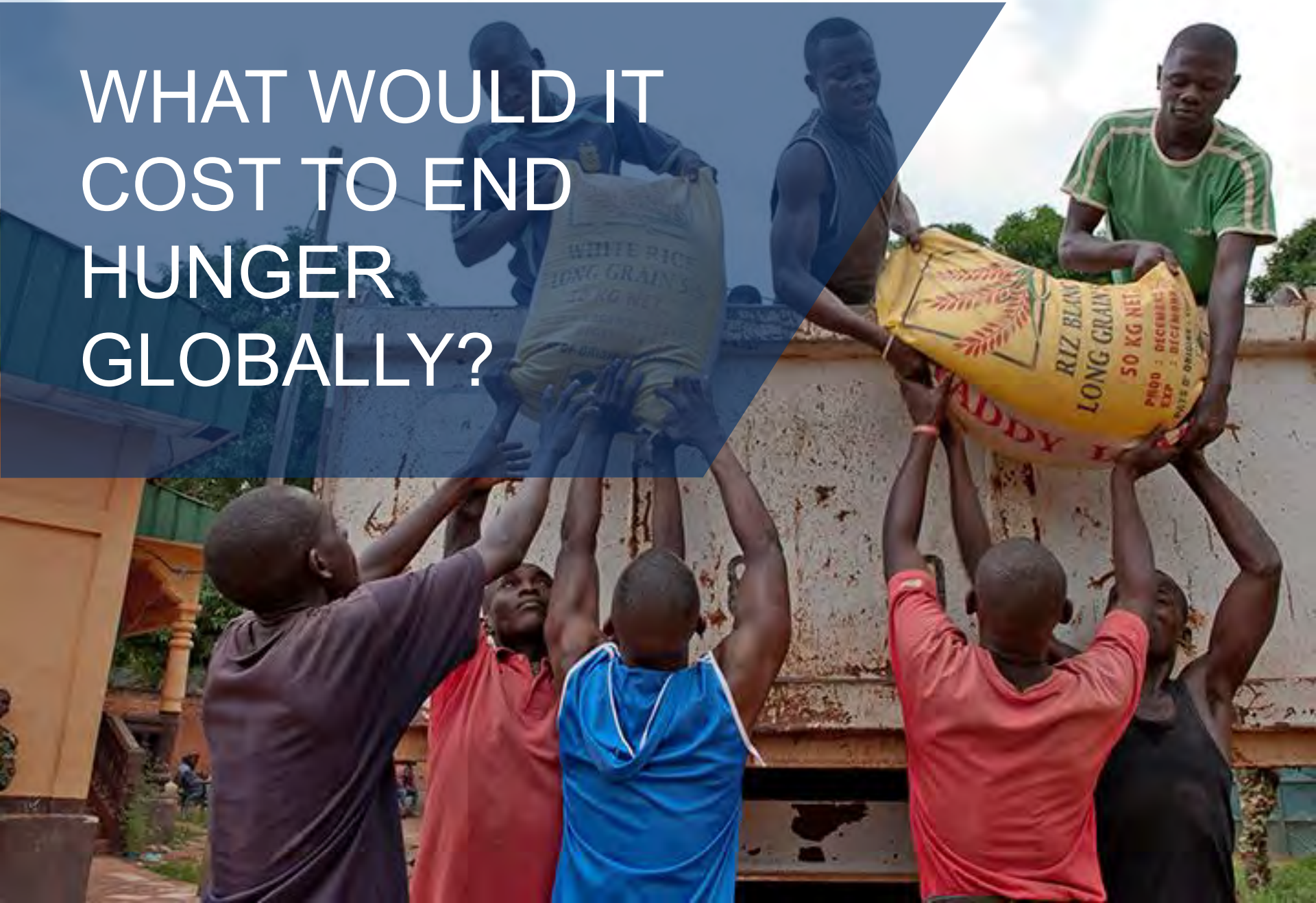




WHO PAYS WHAT?

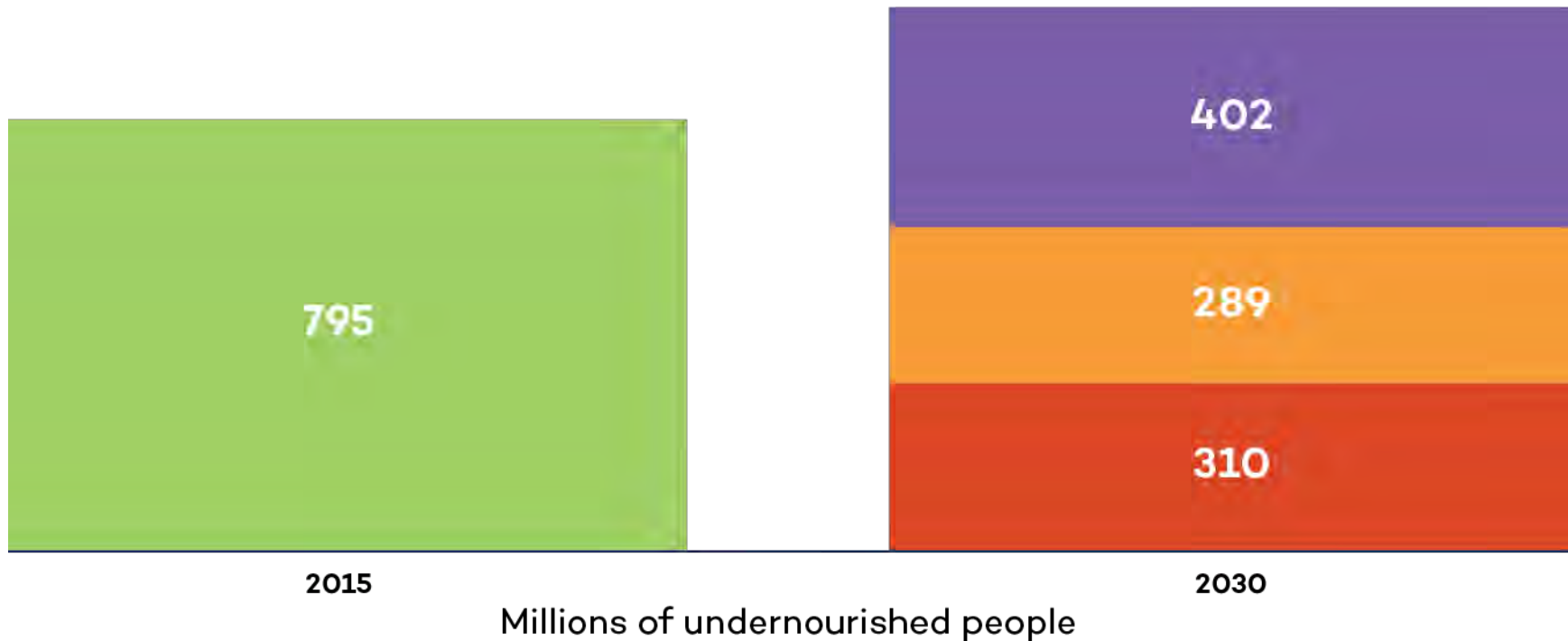


WHAT WOULD IT COST TO END HUNGER GLOBALLY?





HUNGER LEVELS IN 2015 & 2030



- 2015 situation
- Hunger eliminated in the business-as-usual

- People no longer hungry as a result of the additional spending
- Hungry people remaining after 5% national target is reached



HOW DO WE ARRIVE AT A GLOBAL COST ESTIMATE?

1. Cluster countries together based on key variables (hunger, poverty, size of rural pop, etc...)
2. Estimate a per-capita average cost for each cluster type.
3. Estimate the global 2030 poverty and hunger level using macroeconomic projections at the country level.
4. Apply the per capita cost to get the total cost of ending hunger.
5. Apply our co-funding rule on a year-by-year basis at the country level





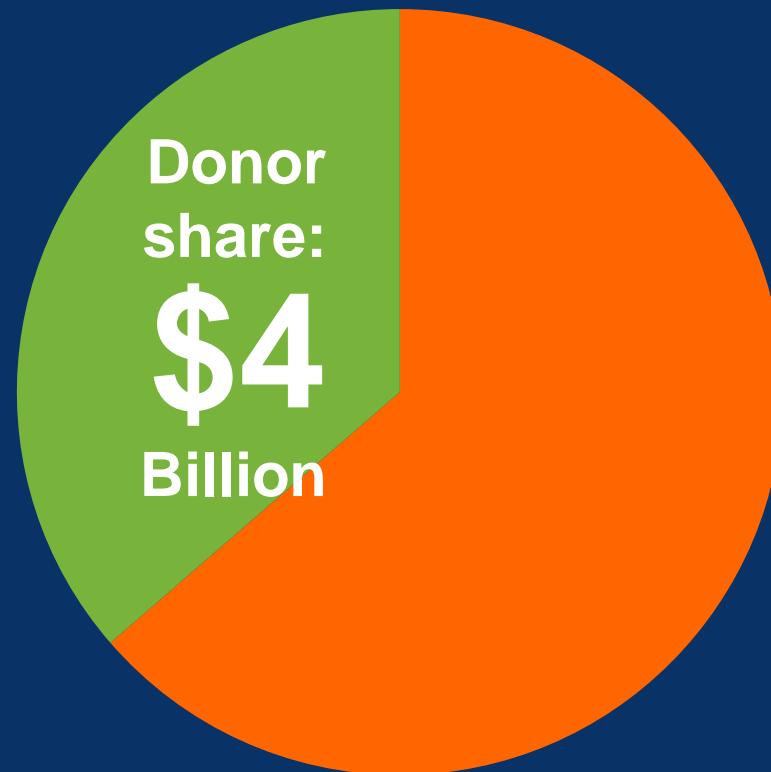
HOW MUCH *EXTRA* PUBLIC MONEY IS NEEDED TO END HUNGER?

Annual
average cost:

**\$11
Billion**

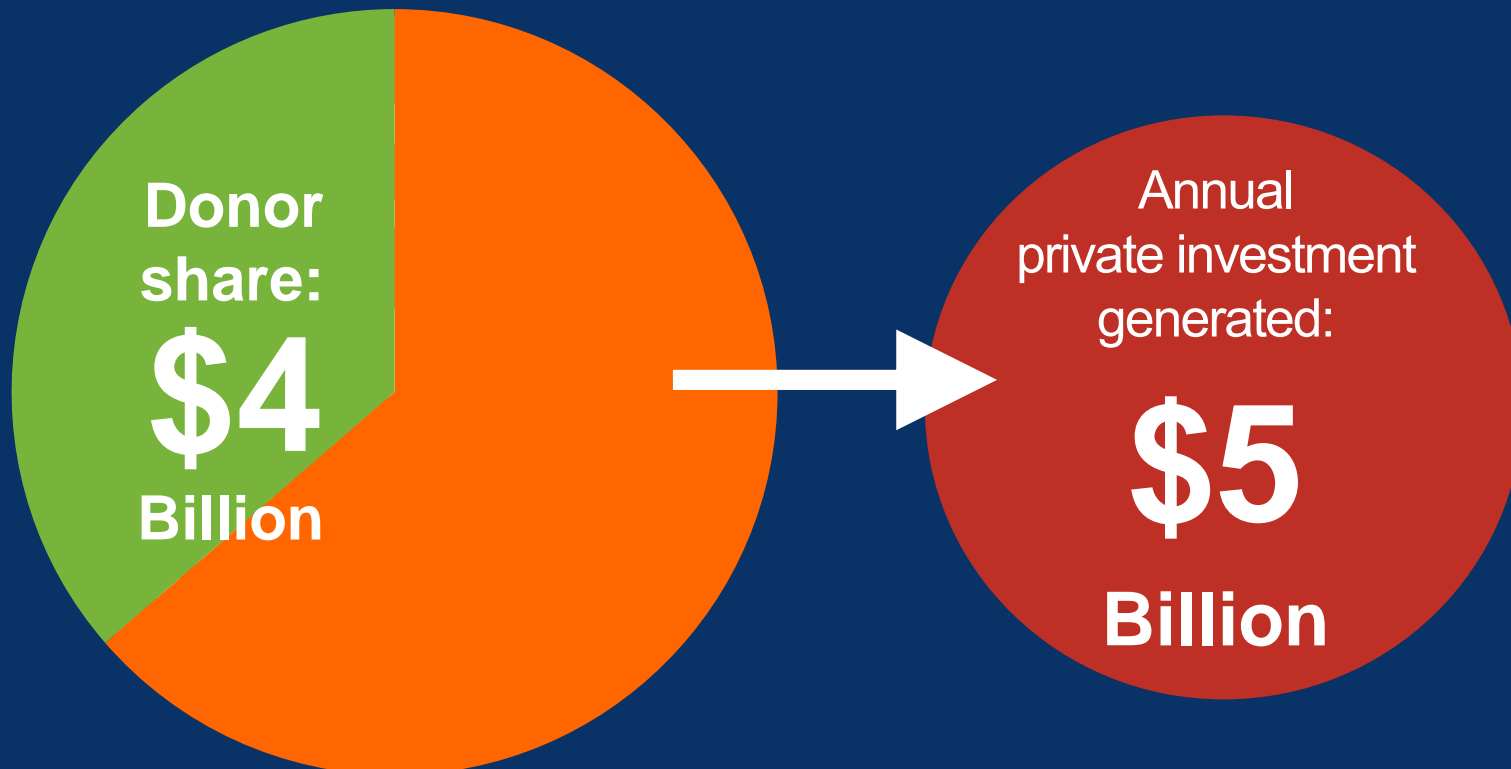


WHAT IS THE DONOR SHARE?





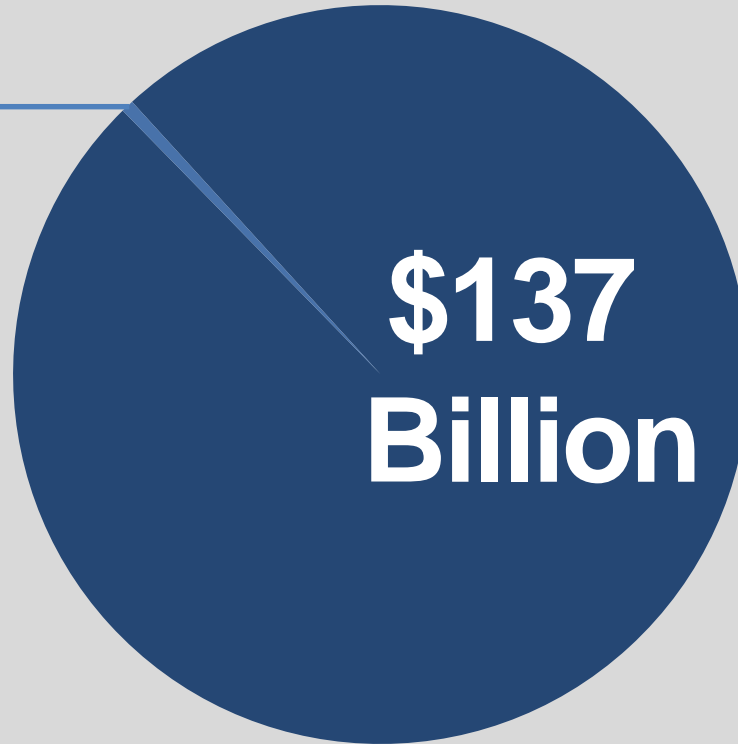
HOW MUCH PRIVATE INVESTMENT IS GENERATED?





ANNUAL GLOBAL DONOR SPENDING

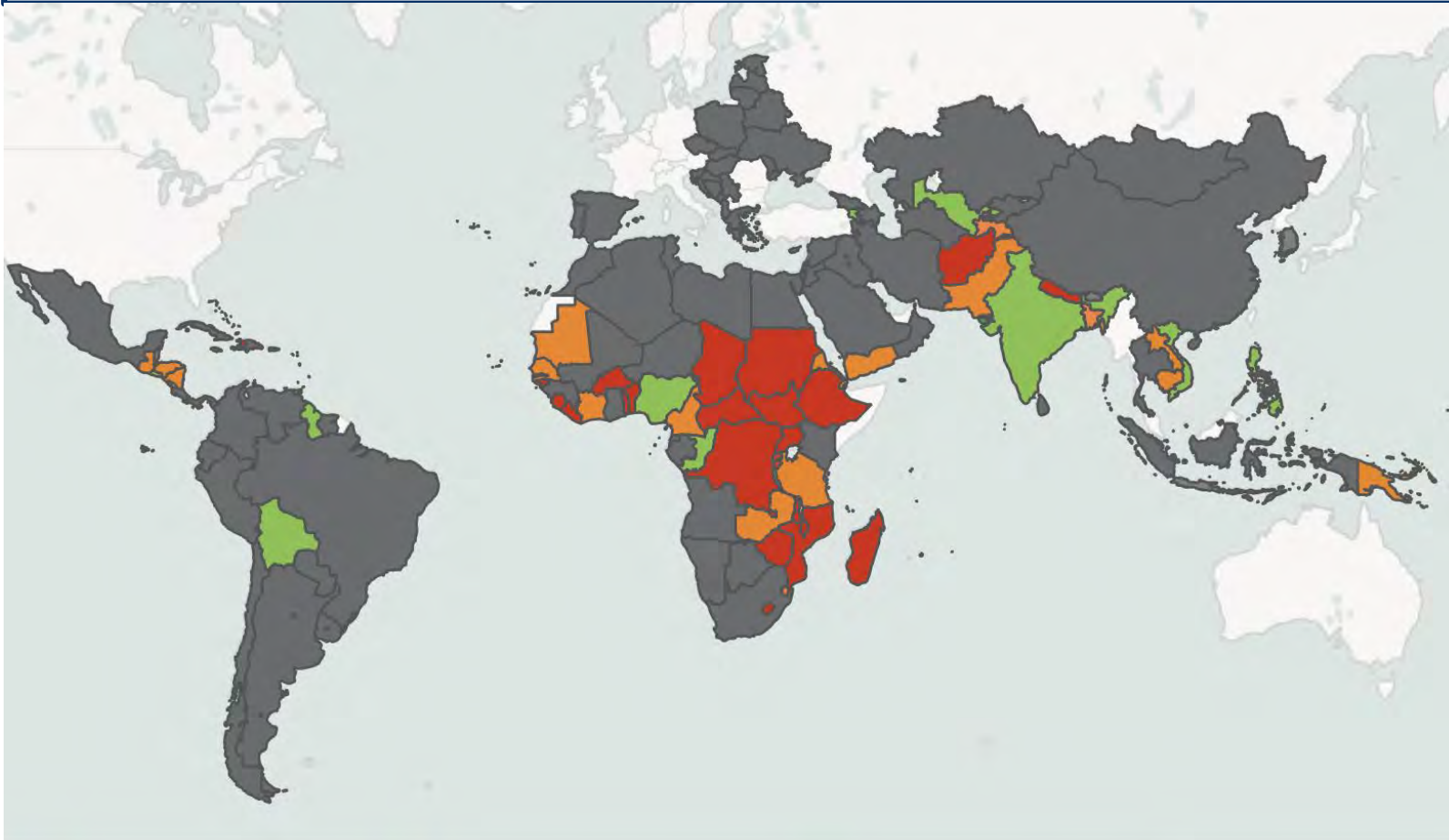
\$4
Billion



+3%
Increase
needed



WHERE SHOULD THE *EXTRA* MONEY GO?



- High Priority
- Medium Priority
- Low Priority
- On Target

To learn more visit:

www.iisd.org/project/ending-hunger-what-would-it-cost

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