

UNITLIFE'S PRIORITY INVESTMENT THEMES



**BIOFORTIFICATION
& FORTIFICATION**



**WORKING AGAINST
COVID-19**



**EMPOWERING
WOMEN**



**ACCELERATION VIA
INNOVATION**



**ENVIRONMENTALLY
SUSTAINABLE
APPROACHES**



**REFUGEE
COMMUNITIES**

UNITLIFE prioritizes 6 themes to prevent chronic malnutrition in children and mothers during the first 1,000 days of life. The interventions presented often overlap in a project in line with our holistic approach. Preventing chronic malnutrition is a global goal which will enable children who otherwise would have missed the chance to reach their full potential to thrive in life and contribute to the prosperity of their communities and countries.







BIOFORTIFICATION AND FORTIFICATION: PREVENTING CHRONIC MALNUTRITION



**2 BILLION PEOPLE
SUFFER FROM
MICRONUTRIENT
DEFICIENCIES**

- **Micronutrient deficiencies** – a leading cause of intellectual disability, blindness in children, maternal death in childbirth. It affects 2 billion people and contributes to 5% loss of GDP globally.
- **Biofortification and fortification** can provide the required **micronutrients** (such as zinc, iron, vitamin A, iodine, folate).

REQUIRED MICRONUTRIENTS FOR:

cognitive function	eye health	physical growth	immune system	healthy pregnancy	mental health
					
Iodine Iron Zinc	Vitamin A	Zinc Iodine Vitamin A	Zinc Iron Vitamin A	Iron Iodine & Folic Acid Vitamin A	Zinc

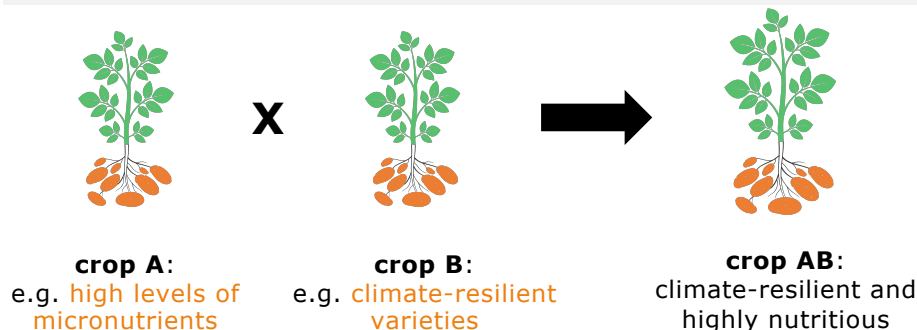
USE CASE:

Over **1 million children** die each year due to Vitamin A and zinc deficiencies

BIOFORTIFICATION

Breeding seed parents with desirable traits, e.g. drought tolerance, high yield to develop high-micronutrient biofortified child varieties.

Only conventional crop breeding and agronomic techniques are used.



- Biofortified foods help fill **daily nutrient requirements**
- **Cost-effective and sustainable:** one time investment in seeds, recurring costs are low
- **Higher yields** and ability to **adjust to climate change**

HIGH RETURN ON INVESTMENT:

\$1 INVESTED IN BIOFORTIFICATION GENERATES

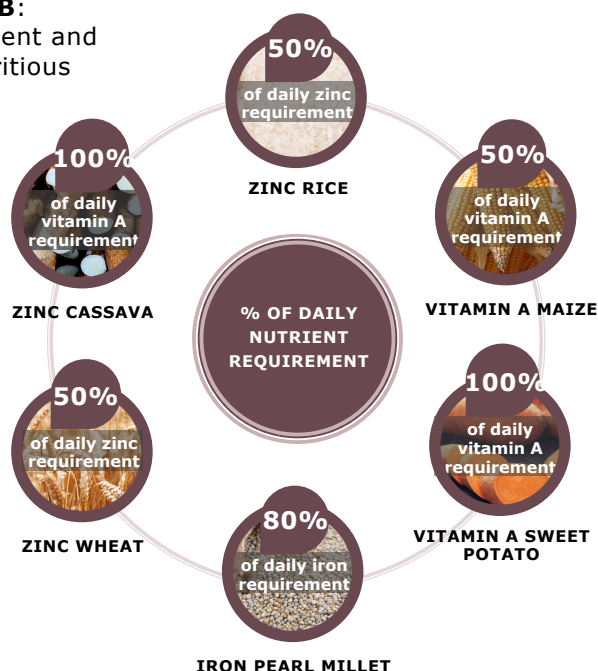
USD \$17 IN RETURN

from reduced illnesses, increased earnings and work productivity.

BIOFORTIFICATION RESULTS: REDUCTION OF

VITAMIN A DEFICIENCY by up to **22%**

via Vitamin A sweet potato (reduction of illness, mortality).



BIOFORTIFICATION AND FORTIFICATION: PREVENTING CHRONIC MALNUTRITION

FORTIFICATION

Adding micronutrients during food processing

- Large scale food fortification provides a substantial increase in nutrients (including iron, folate, vitamin A) to vulnerable populations

ADVANTAGES OF FOOD FORTIFICATION:



easily integrated into daily life



low cost



incorporates local private sector's products



SUCCESS STORY ON IODINE:

Since 1990, the proportion of households consuming iodized salt worldwide increased from less than 20% to 88% and the **number of countries with iodine deficiency** (the world's leading cause of preventable mental impairment) **decreased** from over **110 to 20**.

HIGH RETURN ON INVESTMENT:

\$1 INVESTED IN FOOD FORTIFICATION GENERATES **USD \$27 IN RETURN**

FORTIFICATION RESULTS:

REDUCTION OF **CHRONIC MALNUTRITION**

COMMON FORTIFIED FOODS:

maize meal, wheat flour, salt, rice, cooking oil

Return on Investment (ROI) / low annual cost per person:

\$30 / \$0.05



\$8 / \$0.12



\$46 / \$0.12



HOW TO SOLVE TOGETHER?

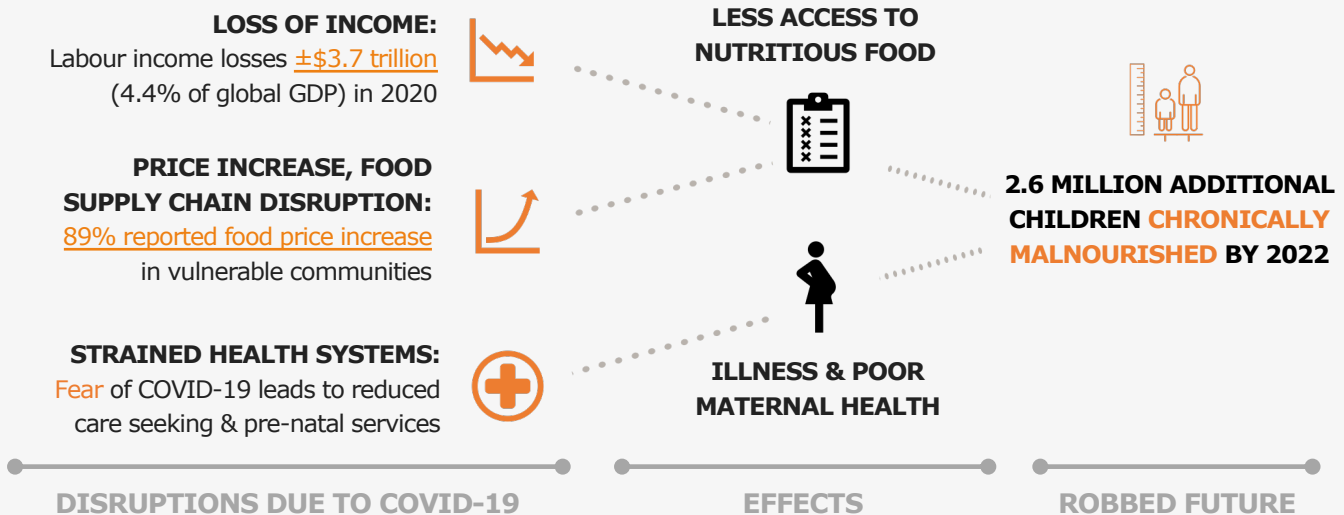
We are calling businesses and development aid agencies to help us fund and execute **biofortification and fortification solutions** which have an incredibly high return on investment and which open doors for the young generations to thrive.



WORKING AGAINST COVID-19 WHILE PREVENTING CHRONIC MALNUTRITION



COVID-19 affects the most fragile people, threatening food supplies, livelihoods and economic stability.



% of households not being able to access a diversified enough diet in the last 30 days

- **73% of households in Nigeria**, 6th most populated country in the world
- **56% of households in Ethiopia**, 2nd most populated country in Africa

2.6 million additional children who are currently less than 1,000 days old will be robbed of their potential to thrive due to COVID-19.

With a child born every **9 seconds**, we must support solutions that improve maternal & child nutrition during the 1,000 days.

WHAT CAN WE DO? 1,000 DAYS = WINDOW OF OPPORTUNITY

UNITLIFE is calling businesses and development aid agencies to protect the upcoming generation by funding and executing solutions that focus on populations whose food security and nutrition situation has worsened due to COVID-19.

- **Improved maternal nutrition** (improves fetal development)
- **Promotion of breastfeeding** (prevents diseases – diarrhea and pneumonia – causes of child mortality)
- **Fortified foods for children 6-24 months old** (increases nutrient intake, improving development)
- **Access to biofortified crops** (increases nutrient density of crops)



Mothers need to be able to afford and access nutritious food during and after pregnancy.

58% of women work in the informal economy, while informal workers **lost ≈60% of their income** during 1st month of pandemic.

- Our investments focus on the economic **empowerment of women**, who are the most affected by the crisis.
- Women are also **more likely to reduce the number of chronically malnourished** children in their household, making it a win-win situation for investment.

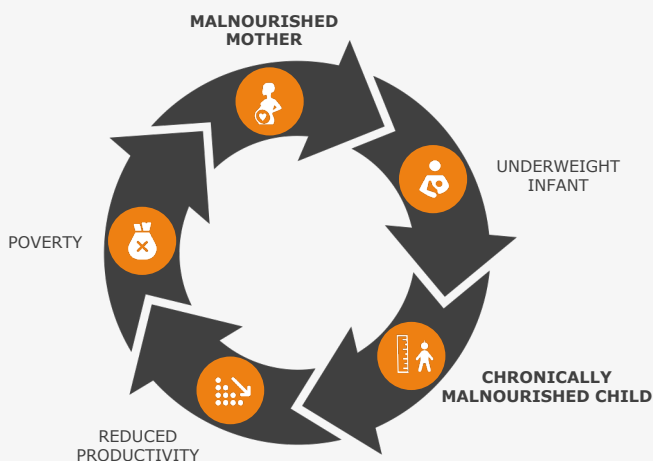
EMPOWERING WOMEN TO PREVENT CHRONIC MALNUTRITION

50% of the population deserves access to 50% of resources to enhance society's well-being.

In Sub-Saharan Africa and South Asia, **women** represent 50% of small-holder farmers, but they have less access to land, livestock, equipment & technology, financial services and markets.

Closing the gender gap in agriculture could raise production by 20-30% on women's farms in developing countries, which could lift 100-150 million people out of hunger!

Maternal malnutrition affects the child's body and brain development, resulting in life-long economic injustice – productivity and income losses in adulthood.



WOMEN play a key role.

They are more likely to reduce the number of chronically malnourished children in their household.

When they gain economic autonomy, they invest in the nutrition of their children. And when children receive good nutrition, their communities thrive.

Girls who were chronically malnourished in early childhood are more likely to:

- Give birth to a baby with a low weight and size, who is at risk of **repeating the cycle of malnutrition**
- Have a smaller pelvis and face **complications during childbirth**

Anemia affects 1 in 3 women in the world:

- Is usually caused by **iron-deficiency**
- Causes fatigue & **reduces economic productivity**
- Affects **baby body & brain development**

HOW CAN YOU EMPOWER WOMEN TOGETHER WITH US?



Agricultural productivity

Investing in women's access to nutrition-sensitive agricultural resources, we support their economic autonomy and reduce malnutrition at the same time.



Financial training & access

Increasing women's income through savings mechanism coupled with financial literacy skills to maximize their ability to grow food and raise livestock.



Support women-led SMEs

Local SMEs can accelerate access to good nutrition, while increasing their income. Women comprise 58% of African's self-employed population, yet they earn 34% less than men in Sub-Saharan Africa.



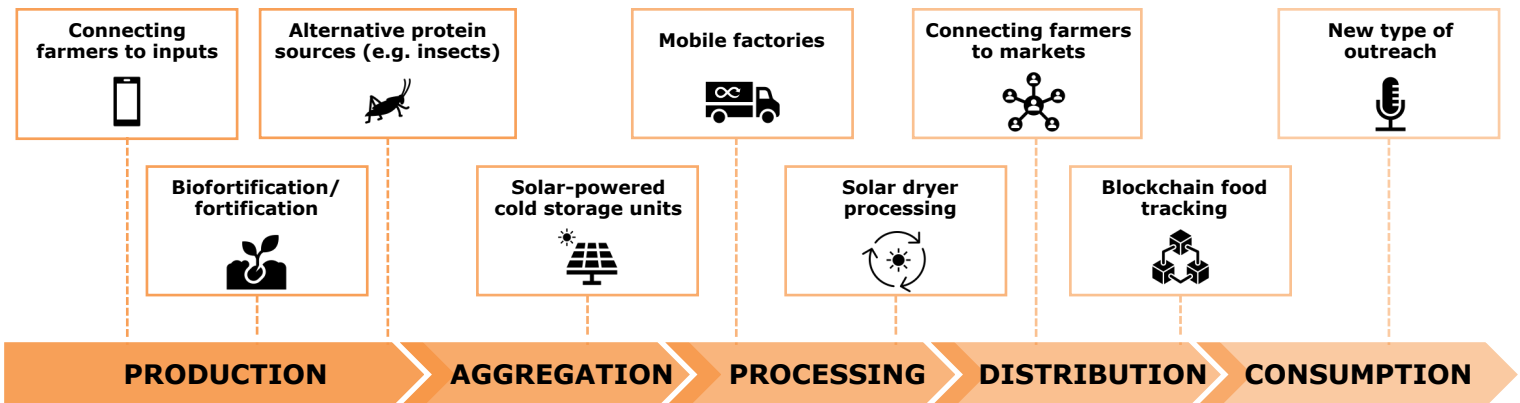
Nutritional awareness

To ensure nutrition stays central, we always include maternal & child nutrition awareness programs so mothers can make the best feeding decisions for themselves and their children.

ACCELERATING INNOVATION TO PREVENT CHRONIC MALNUTRITION

Innovation can make the standard interventions **more efficient and accelerate** the process, while ensuring no one is left behind.

UNITLIFE is calling businesses and development aid agencies to join the scale-up of innovative approaches **along the food supply chain** that can accelerate the eradication of chronic malnutrition. Examples:



FOOD INNOVATION

Biofortification

- Breeding seed parents with desirable traits, e.g. drought tolerance, high yield to develop high-micronutrient biofortified child varieties.

Fortification

- Adding essential micronutrients (iron, vitamin A, zinc, etc) to foods. One of the top 3 international development interventions based on cost-benefit analysis: \$1 invested in fortification generates \$27 in economic return.

Alternative sources of protein

- Many non traditional sources of protein, such as insects, are also rich in micronutrients. E.g. beef contains 3mg of iron per 100g, whereas locusts contain up to 20mg of iron per 100g.

CLIMATE-SMART INNOVATION

Solar-powered cold storage units

- Cold storage units powered by solar energy for perishable foods, reducing post-harvest food loss, which accounts for 45%+ of all perishable foods going to waste in developing countries.

Mobile factories

- Fully-equipped trucks serving as mobile food processing units. They are equipped for production of juices, flours, or pickles and can move across rural areas where access to processing technologies is limited.

TECHNOLOGICAL SOLUTIONS

Solar dryer-processing

- Used to dry foods (mangos, potatoes, etc) for effective nutrient preservation. Such products also have a longer self-life, allowing people in rural areas to access nutrient-rich foods that last longer.

Connecting farmers to markets

- Trading mobile platform connecting small-holder farmers in rural areas to buyers in cities, thereby increasing access to markets, meaning more income and thus ability to buy/grow nutritious food.

Blockchain for food tracking

- Smallholder farmers can be connected to international markets by tracking the journey of their seeds and receiving money directly from vendors on their phone wallets, thus allowing for transparency and financial empowerment.

Connecting farmers to inputs

- Mobile app and website allowing farmers to find nearby sellers of certified biofortified seeds, thus helping to strengthen the biofortified seed system.

NEW TYPE OF OUTREACH

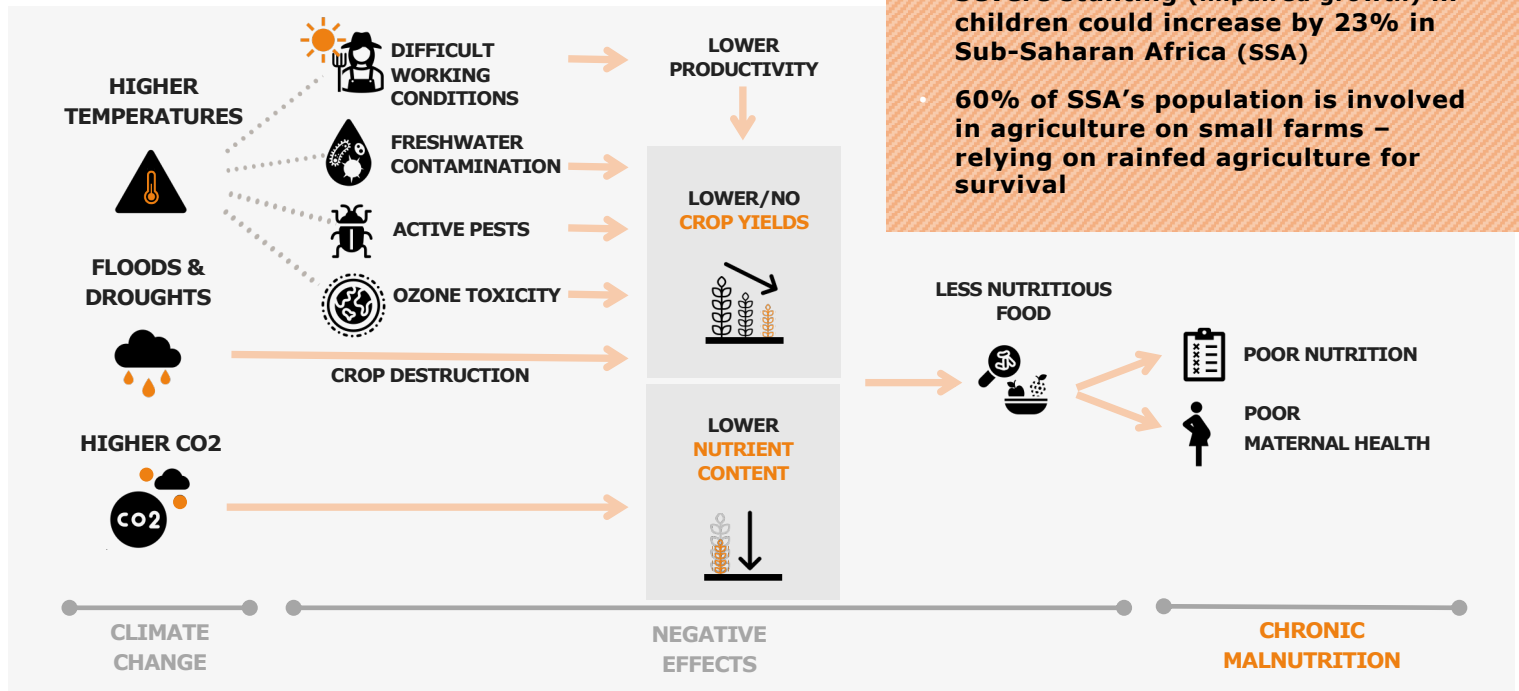
Entertaining means (radio / tv programs, boardgames, engagement online platforms with content to inspire and educate youth / women on good nutrition, etc.)

ENVIRONMENTALLY SUSTAINABLE APPROACHES TO END CHRONIC MALNUTRITION

A 2021 study on 19 low-income countries showed that **negative impacts of climate** are an **equal or greater contributor to child malnutrition and low quality diets** than poor sanitation and poor education.

FACTS ON CLIMATE CHANGE EFFECTS

- Cereal production reduced by 9–10% in the last 50 years
- Severe stunting (impaired growth) in children could increase by 23% in Sub-Saharan Africa (SSA)
- 60% of SSA's population is involved in agriculture on small farms – relying on rainfed agriculture for survival



WORK WITH US ON CLIMATE-SMART AGRICULTURAL SOLUTIONS SUCH AS



Crops 2.0: Nutrient-rich + climate-resilient

Improved *fruits & vegetable* seeds are bought from local SMEs to set up micro-gardens. We also promote local “forgotten” crops, e.g. Bambara groundnuts – highly nutritious, fast-growing, drought-resistant crop.



Solar-powered irrigation for year-long production

These systems for community gardens ensure access to nutritious foods during the lean season, while providing reliable and affordable energy to farmers.



Climate-smart farming practices

Erosion control, soil and water conservation techniques, post-harvest and storage practices. E.g. *zai* and *half-moon* planting techniques used to harvest rainwater and regenerate degraded soils.



Extension services

Advisory and financial services, and training to improve farming combined with nutrition education, which has shown more impact when implementing climate-smart agricultural programs.

REFUGEE COMMUNITIES: PREVENTING CHRONIC MALNUTRITION

80 million people worldwide have been forced to leave their homes.

26 million
refugees* in 2020

50%
of refugees are
children under 18

86%
of refugees are hosted in
developing countries

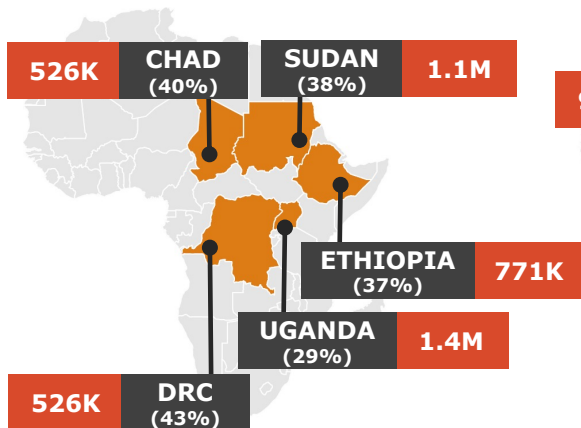
As emergency support is prioritized (emergency food distributions, shelter), **nutrition is severely underfunded.**

Refugees **lack income opportunities** or access to land, thus lacking access to **nutrient rich foods** (fruits/vegetables, meat, etc).

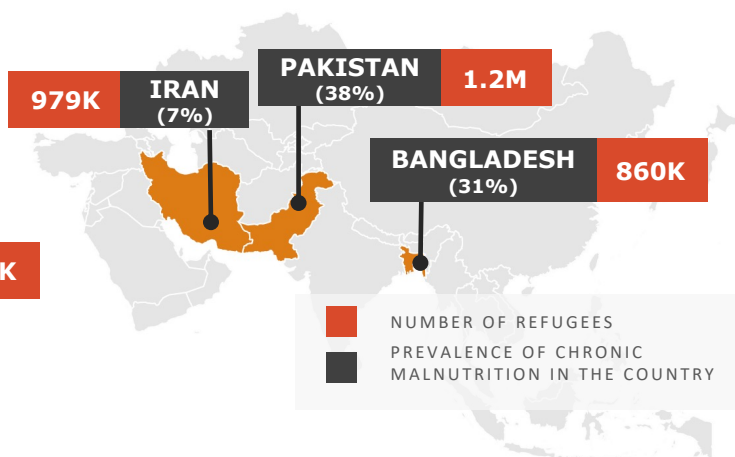
MOST COUNTRIES HOSTING REFUGEES HAVE FOOD INSECURE POPULATIONS

Highlighted countries have high chronic malnutrition rates, excl. Iran.

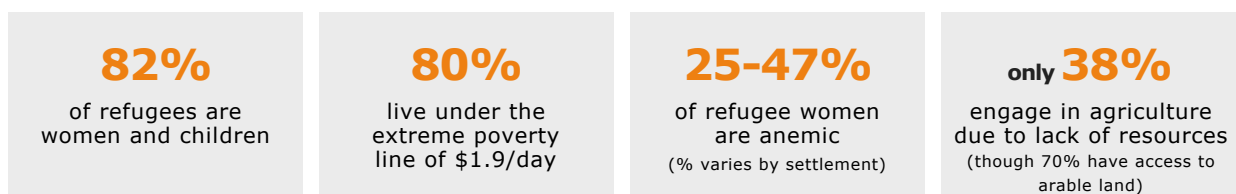
TOP 5 REFUGEE HOSTING AFRICA (by # refugees)



TOP 3 REFUGEE HOSTING COUNTRIES IN ASIA



COUNTRY CASE STUDY: UGANDA – 3rd LARGEST HOST COUNTRY IN THE WORLD



HOW CAN WE INTERVENE IN REFUGEE COMMUNITIES?

- ✓ **By providing refugees with opportunities** to become self-reliant for food and thus break the cycle of dependence on emergency support.
- ✓ **The type & scope of interventions depend on the context** (e.g. do refugees have the right to work? Do they have access to land? Are they in camps or living among the host community? Are they in rural or urban settings?)
- ✓ Such interventions include: **Job creation in nutrition-sensitive agriculture**, especially for women; **space-efficient vegetable gardens** to complement emergency food assistance, **climate-smart agriculture techniques** to preserve the host community's natural resources (e.g. preventing soil erosion, improving water management).

*Refugees are people who have fled war, violence, conflict or persecution and have crossed an international border to find safety in another country.