The Warren Centre
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Humanitarian
Innovation Hackathon

Challenge B
Climate change resilient agricultural practices

40%

of global population
highly vulnerable
to climate crisis

2 ZERO HUNGER

THE GLOBAL GOALS
For Sustainable Development

SDG 2 End Hunger, achieve food
security and improve nutrition and
promote sustainable agriculture

Target 2.4 Sustainable Food
Production and Resilient Agricultural
Practices

By 2030, ensure sustainable food
production systems and implement
resilient agricultural practices that
increase productivity and production,
that help maintain ecosystems, that
strengthen capacity for adaptation
to climate change, extreme weather,
drought, flooding, and other disasters that
progressively improve land and soil quality.

Overview

The Food and Agriculture Organization (FAO) estimates that
40% of the world's population is highly vulnerable to the
climate crisis, and extreme weather events are a major driver of
global hunger.[1] There exists a vicious cycle where unsustainable
agricultural practices degrade the quality of soil, deplete water
resources, drive deforestation and result in biodiversity loss;
which further **increases vulnerability** to climatic events, such as
drought, flooding and extreme weather events.[2]

To break this cycle, **sustainable agricultural practices** are
needed that consider the intersection of food, water, land and
biodiversity, to both strengthen climate change resilience and
food security.

Challenge Task

Design a sustainable farming intervention that
includes appropriate farming technologies and/or
nature-based solutions that would increase climate
change resilience for larger-scale producers in
LMIC contexts.

Through the development of your design, be
specific with the type of farming, context and
climate risk you are addressing.

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Overarching Challenge

Globally, hunger and food insecurity have shown a rapid increase since 2015, due to the combined impacts of the COVID-19 pandemic, conflict, climate change, and deepening inequalities.

In 2022, **9.2%** of the population (735 million people) were experiencing chronic hunger, and **2.4 billion** people faced moderate to severe food insecurity, which indicates the scale of the crisis.[4]

Overcoming hunger and malnutrition is critical to achieving sustainable development. People are not able to realise their full potential when suffering from hunger and/or malnutrition, as they are **more likely to get sick,** which further reduces their abilities to generate a livelihood.

Tackling global hunger is a complex process that requires cross-disciplinary teams to consider multi-dimensional approaches.

Namibia is experiencing its worst drought in 100 years and farming businesses are failing.[4]

Considerations

In designing your zero hunger innovations, the principles of Humanitarian Engineering need to be employed. These principles can be summarised as solutions that are:

Effective
The desired change is logically achievable.

Affordable
Financially feasible for lower-income households or local business projects in low and middle-income countries (LMIC).

Appropriate
Wanted by the community and culturally acceptable within the regional context.

Sustainable
Consideration for how the innovation will be sustained into the future (e.g. public funding sources or market mechanisms).

Do no harm
The innovation considers inclusiveness and does not cause harm.

References

1. Food and Agriculture Organization (FAO), 2024, *Transforming Agrifood systems holds the key to climate, biodiversity and land solutions*, **fao.org/director-general/news/2024/ transforming-agrifood-systems-holds-the-key-to-climate-biodiversity-land-solutions**

2. FAO, 2024

3. United Nations, 2024, *SDG 2. Zero Hunger*, **un.org/sustainabledevelopment/hunger**

4. Farmer's Weekly, 2024, *Drought through the eyes of farmers*, **farmersweekly.co.za/agri-technology/ farming-for-tomorrow/drought-through-the-eyes-of-farmers**