Module 1: Hydrothermal processing to promote micronutrient bioavailability in processed food products

#### Understanding Hidden Hunger -What is Hidden Hunger?





Kerstin Fredlund – Founder Hidden in Grains Primary Care Specialist Doctor of Medicine in Food Science Hidden hunger is a **chronic deficiency of micronutrients**, vitamins and minerals, mainly caused by poor and unvaried diets.

Globally, **two billion people** are estimated to suffer Hidden Hunger.

As the term indicates, the signs are not always visible but hidden hunger has life-long consequences for health, mental development and productivity.

Read more on SDG 2: <u>https://www.un.org/sustainabledevelopment/hunger/</u>



#### What is Hidden Hunger?

The most widespread micronutrient deficiencies are on **iron**, **zinc**, **vitamin A**, **iodine** and **folate**.



## What is Hidden Hunger?

Even mild to moderate deficiencies of micronutrients have detrimental effects on **human functionality and working capacity**.

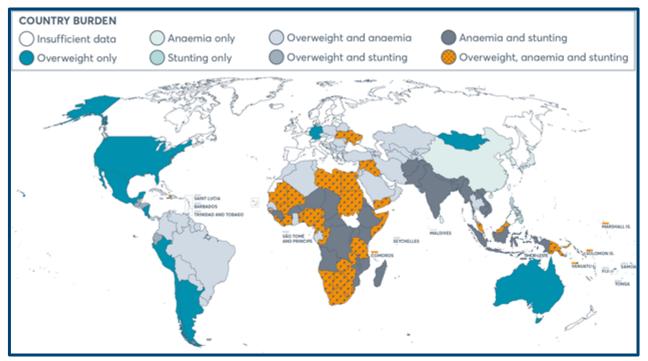
Young **children and women** of reproductive age living in **developing countries** are the most vulnerable.

In developing countries, multiple micronutrient deficiencies often occur in the same population at the same time.



# What is Hidden Hunger?

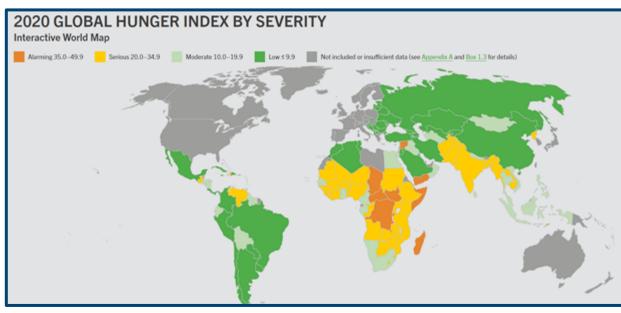
The map shows overlapping forms of stunting in children under 5, anaemia among women of reproductive age, and overweight in adult women



Read more: https://globalnutritionreport.org/reports/2020-global-nutrition-report/inequalities-global-burden-malnutrition/#section-2-4

**Global Hunger Index** is reflecting measures of food security, undernourishment and child mortality.

It captures the multidimensional aspects and consequences of hunger caused mainly by food and caloric deficit.

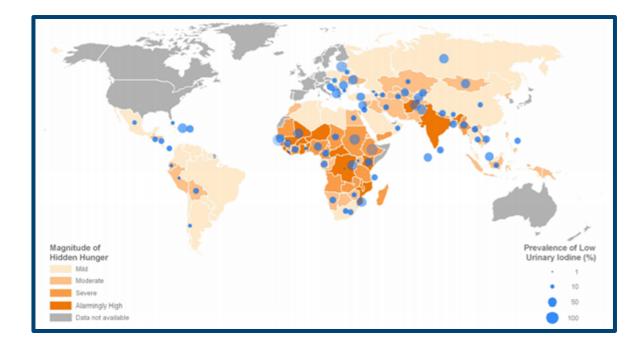


Read more: <u>https://www.globalhungerindex.org/results.html</u>

# **Hidden Hunger Index**

#### Hidden Hunger Index is

the average of three deficiencies: iron, vitamin A and stunting (for zinc deficiency), for preschool children in different countries.



Read more: <u>https://reliefweb.int/sites/reliefweb.int/files/resources/Hidden\_Hunger\_Index\_Executive\_Summary.pdf</u>

**The Global Nutrition Report** (2020) found that most people across the world cannot get access or afford healthy food due to food systems that favour calories over nutrition and the low cost of highly processed foods.

This leads to a triple burden of malnutrition (TBM) and refers to the coexistence of overnutrition, undernutrition and micronutrient deficiencies.

Read more: https://globalnutritionreport.org/reports/2020-global-nutrition-report/

Read more about the causes and consequences of hidden hunger in the following training documents.