



# Nutrition, Malnutrition and Food Security

Basic concepts and current Syria situation





# Food and Nutrition

## Nutrition, Food and Nutrient

Nutrition

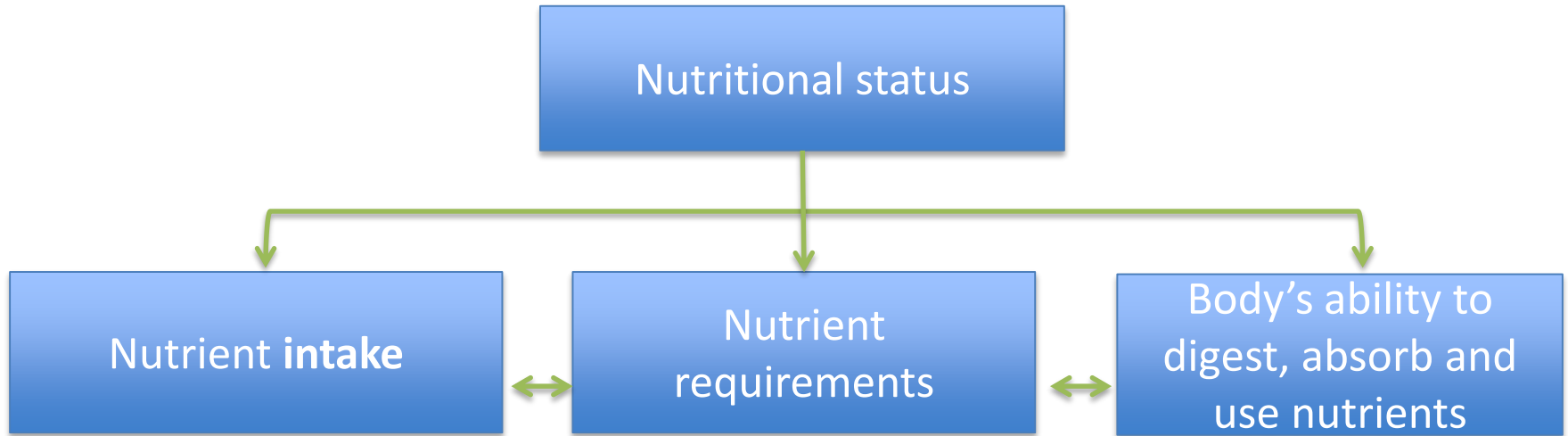
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### ***Nutrition***

“The intake of [food](#), and the interplay of biological, social, and economic processes that influence the growth, function and repair of the body.”



# Nutritional Status

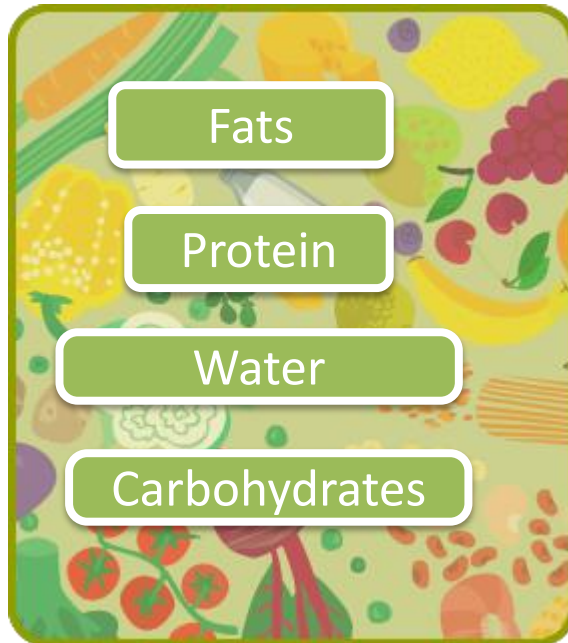


# Nutrient Intake

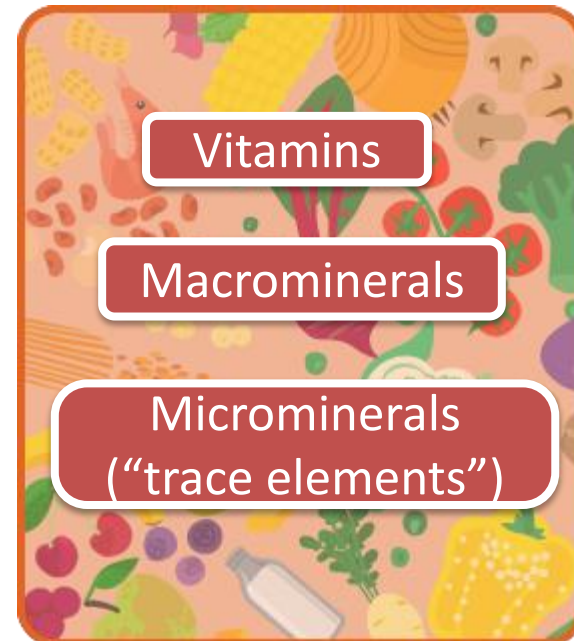
**Nutrient intake** refers to the different nutrients taken in by the body.

There are 2 main types of nutrients:

Macronutrients



Micronutrients



# Nutrient Requirements

The different nutrients needed by the body for energy, growth and repair, and protection from disease.

**2'100 Kcal :**

- **MACRONUTRIENTS**
  - > 50% from carbohydrates
  - 10 - 13% from proteins
  - < 20 from fat
- **MICRONUTRIENTS:** Vitamins and minerals

# Nutrient Requirements

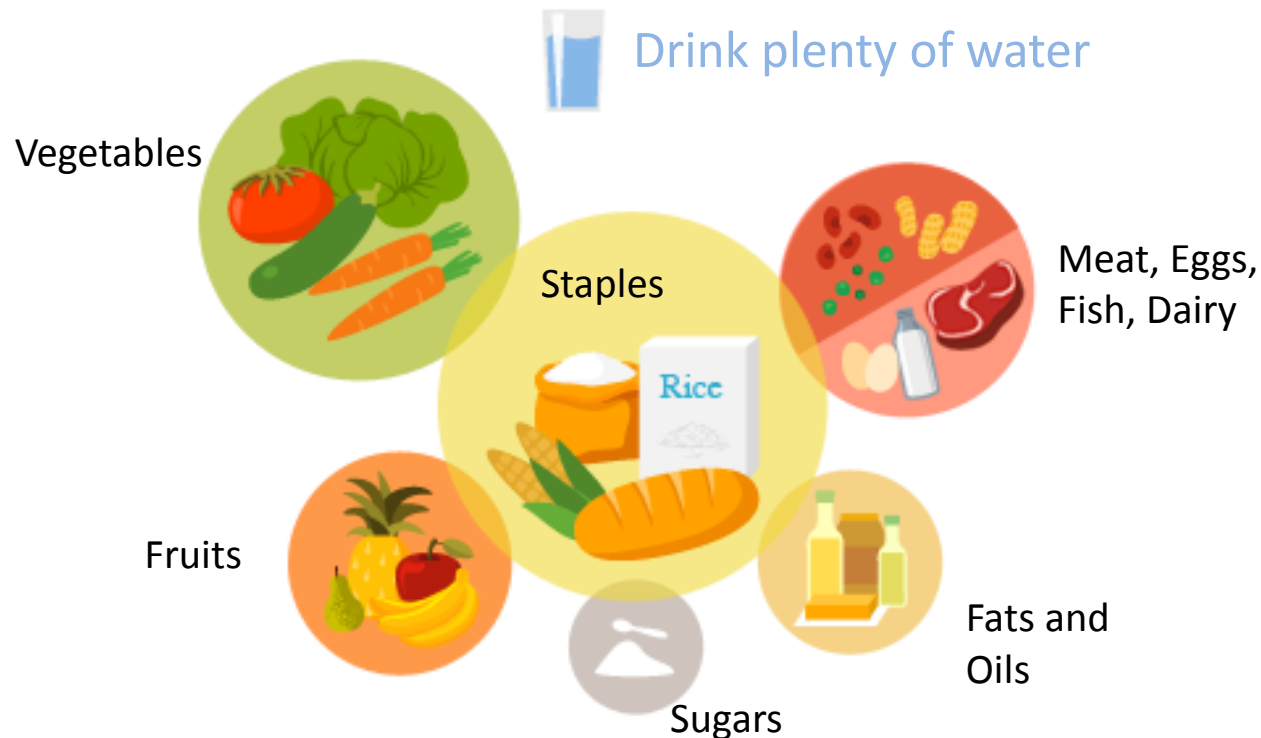


Differ according to the age, gender, level of physical activity, height, weight, stage of life, and health status of each individual.

# A Balanced Diet

A diet that provides an **adequate amount and variety of food** to meet a person's energy and nutrient requirements for a healthy and active life.

It must be composed of a **variety of foods from different food groups**:



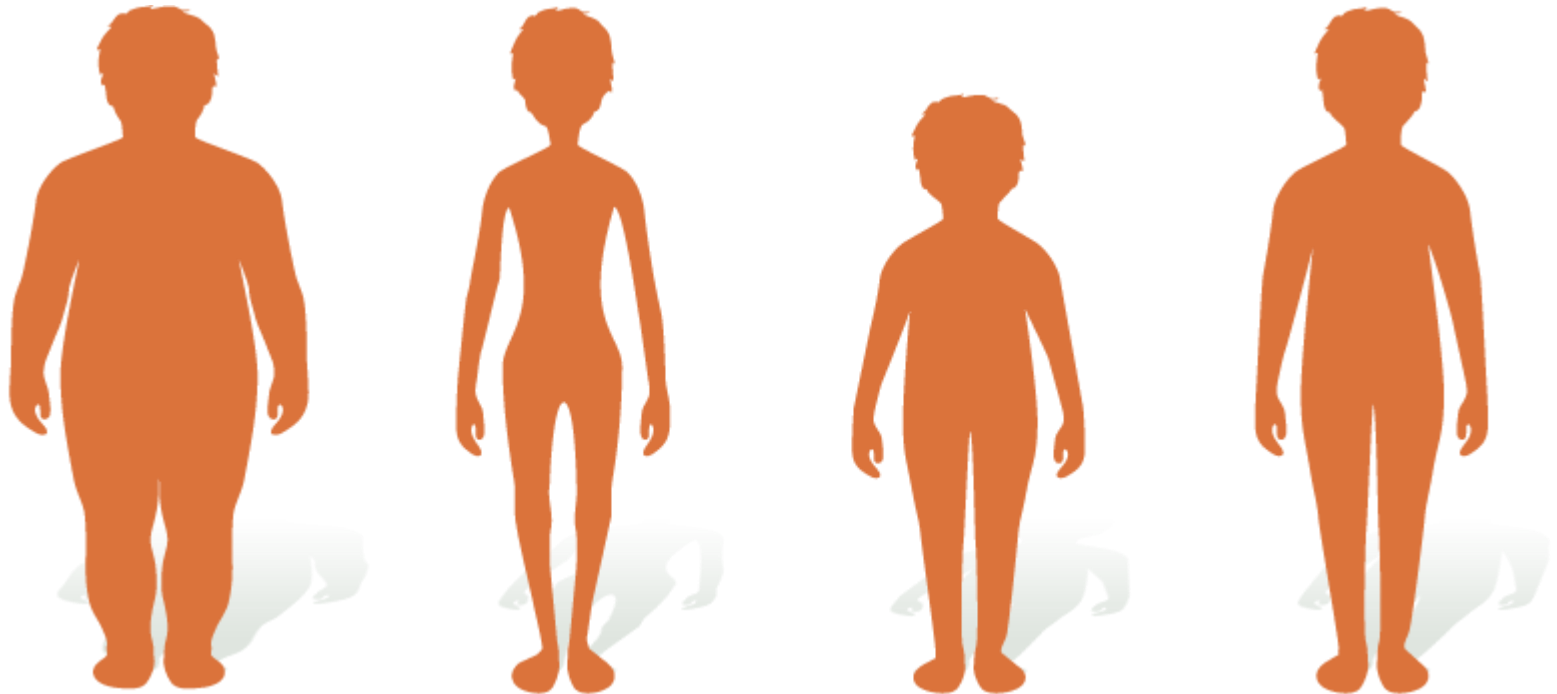


# Malnutrition

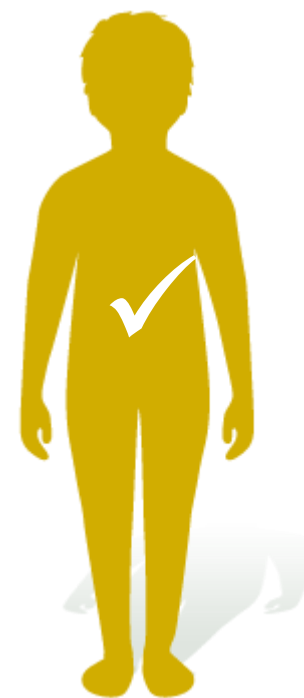
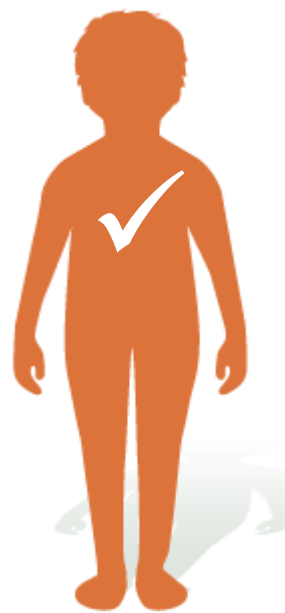
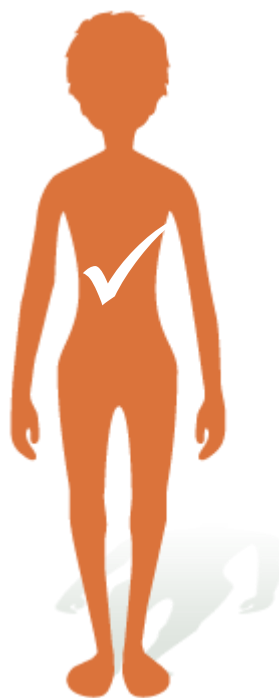
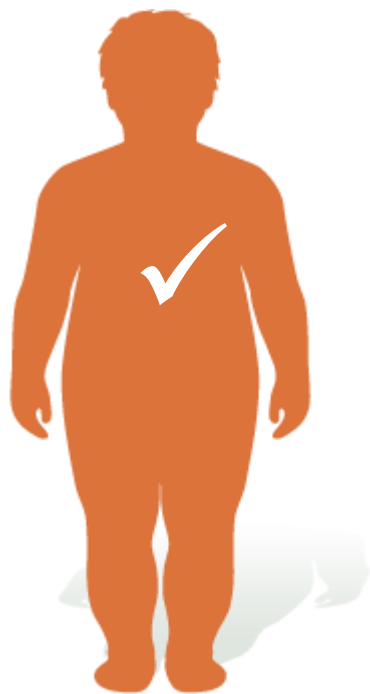


# Identifying Those with Malnutrition

Below are 4 children who are the same age. Who do you think may be malnourished?



# Identifying Those with Malnutrition



# What is Malnutrition and What Does it Include?

## Malnutrition

The term malnutrition indicates an inadequate nutritional status:

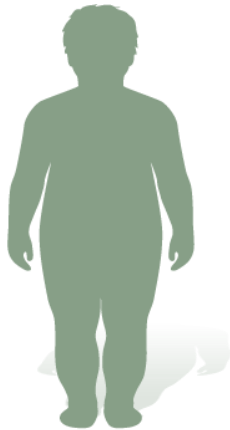
“An abnormal physiological condition caused by **deficiencies**, **excesses** or **imbalances** in energy and/or nutrients necessary for an active, healthy life.

Malnutrition includes overweight and obesity, undernutrition, as well as micronutrient deficiencies.”

# Overweight and obesity

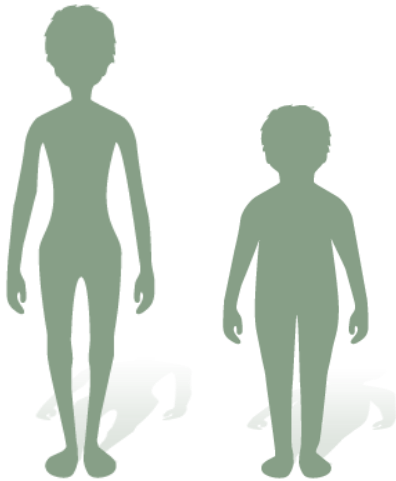
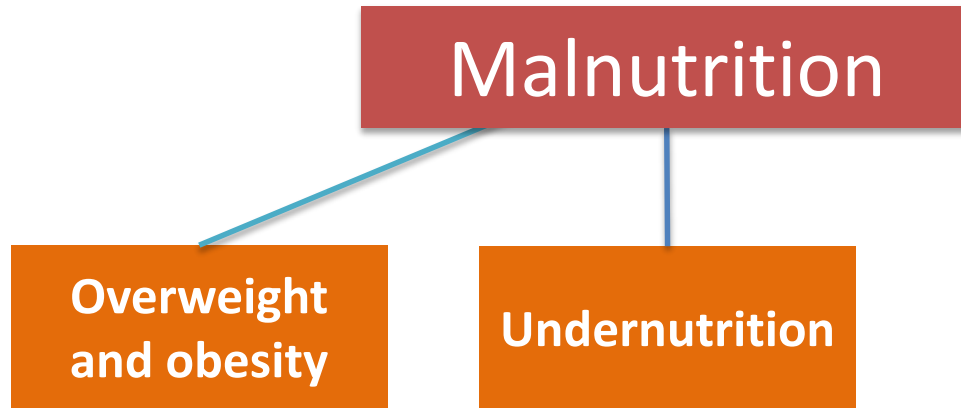
Malnutrition

Overweight  
and obesity



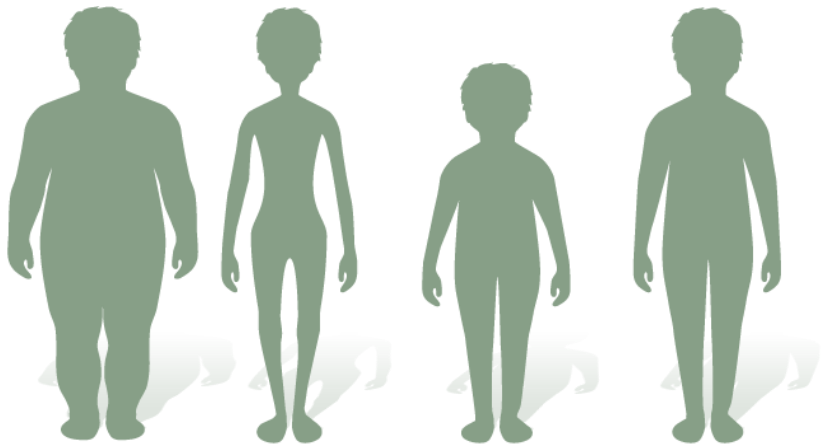
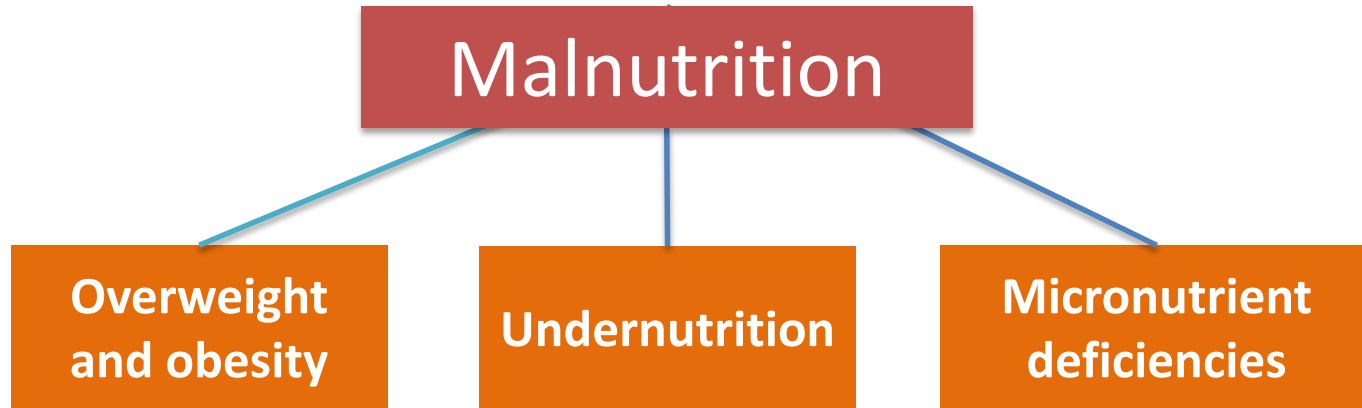
“Body weight that is above normal for height as a result of an excessive accumulation of fat. It is usually a result of excessive food intake relative to dietary nutrient requirements.”

# Undernutrition



“The outcome of insufficient food intake to meet dietary energy requirements, and/or poor absorption and/or poor biological use of nutrients consumed as a result of repeated infectious disease.

# Micronutrient deficiencies

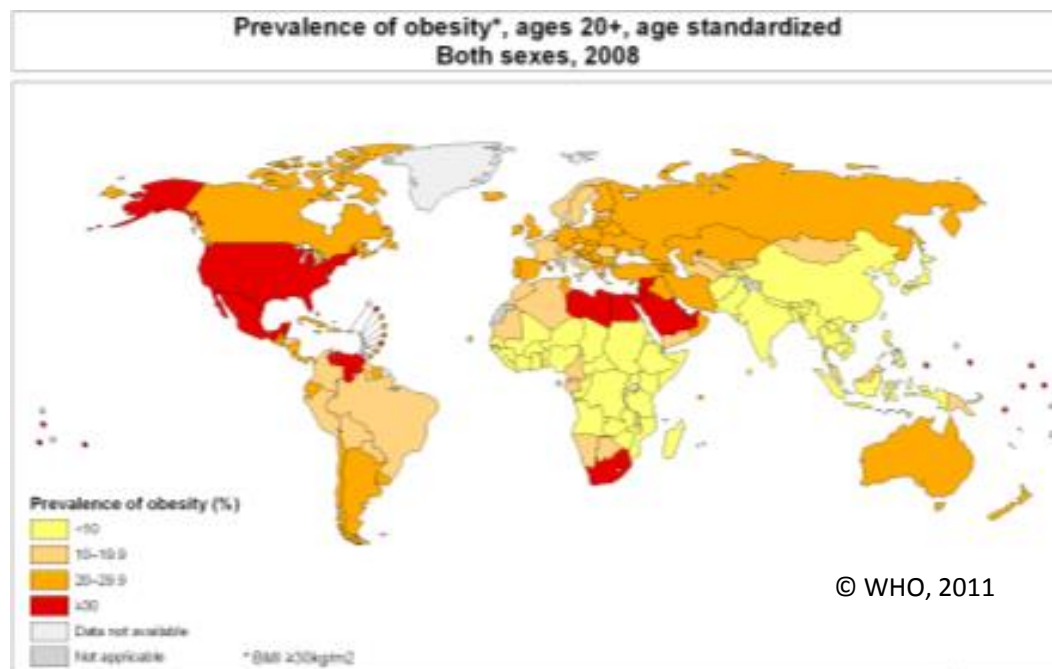


“Lack of vitamins, minerals and/or trace elements required in small amounts which are essential for the proper functioning, growth and metabolism of a living organism.”

# Overweight & Obesity in Syria

## Pre-crisis Syria

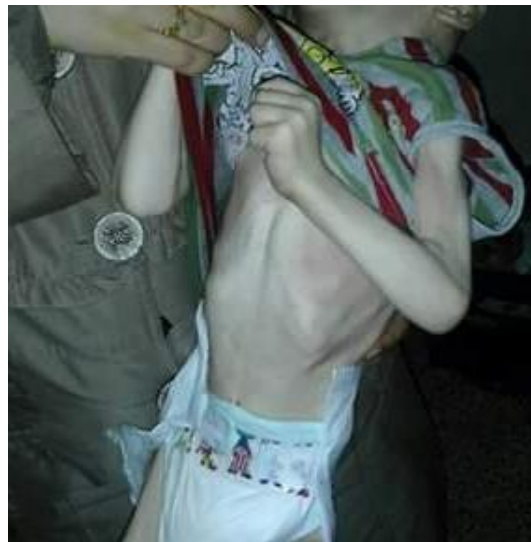
- 45% of deaths attributable to Cardiovascular Disease
- Half of 45-65 year old women had hypertension
- 15% of the population had type 2 Diabetes





## Severe Acute Malnutrition in SYRIA

- Is characterised by **extreme weight loss**, resulting in **low weight for height, and/or bilateral oedema**.
- High risk of morbidity & mortality
- **Global Acute Malnutrition Rate : 7.2%**
- **Northern Syria : Idleb 1.1%, Aleppo 1.3%, Hama 2.4%**
- **Gaps in current data**- Besieged and hard to reach areas



## Chronic Malnutrition (or Stunting)

- Long-term malnutrition as a result of inadequate intake or repeated infections, or both.
- Low height for age
- Can impair physical and/or mental development.

### **SYRIA Stunting Rate**

**Pre-crisis: 23%**

**Current: 22.3%**

**Hama: 26%**



©UNICEF, Dragaj

Two girls, both 5 years old, in Kabul.  
The girl on the left suffers from stunting.

# Micronutrient Deficiencies

Based on the symptoms described, in which micronutrient is each group deficient?



Iodine

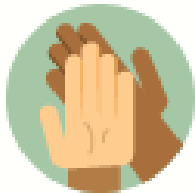
Vitamin A

Zinc

Iron

## Group 1

- Low hemoglobin
- Pale palms and inner eyelids
- Fatigue and reduced work productivity



Pale palms

## Group 2

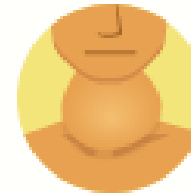
- Night blindness
- Slow bone development
- Weak immune system



Night blindness

## Group 3

- Extreme fatigue
- Goiter
- Severe risk of brain impairment during fetal development and in the first few years of life



Goiter

# Micronutrient Deficiencies

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Zinc

Iron

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- Low hemoglobin
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Pale palms

Vitamin A

**Group 2**

- Night blindness
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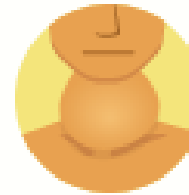


Night blindness

Iodine

**Group 3**

- Extreme fatigue
- Goiter
- Severe risk of brain impairment during fetal development and in the first few years of life



Goiter

# Micronutrient Deficiencies in Syria



**Pre-Crisis:**

**Vitamin A**  
8.7%



**Iodine**  
12.9%



**Iron**  
29.2%

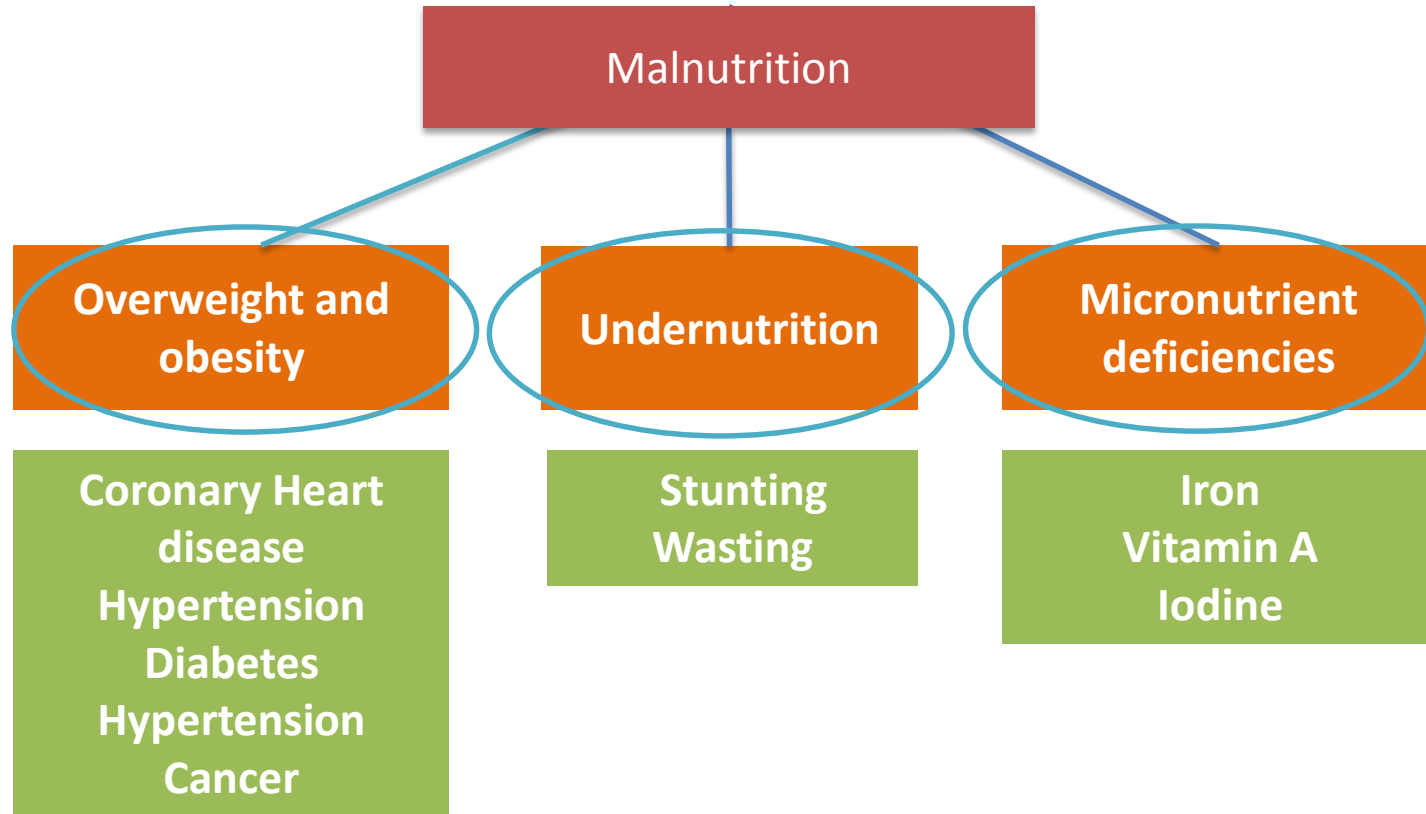
**Current  
Situation:**

**Iron deficiency Anaemia**

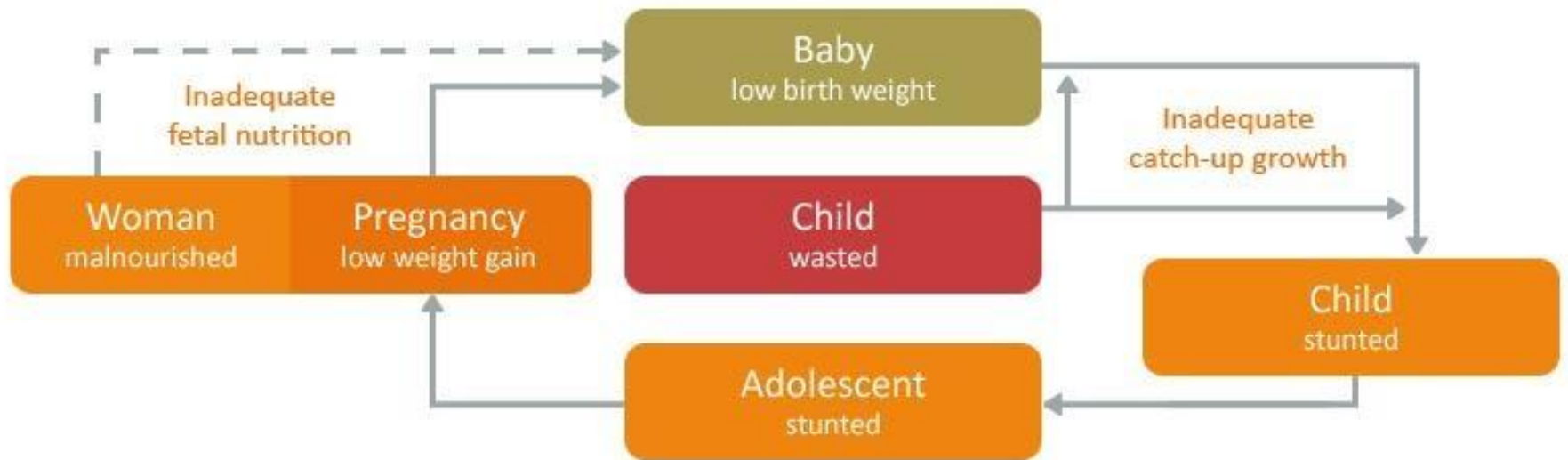
**Syrian Refugees,  
children 6-59 months:  
48.7%**

**IDPs in Idleb & Aleppo,  
children 6-59 months:  
37%**

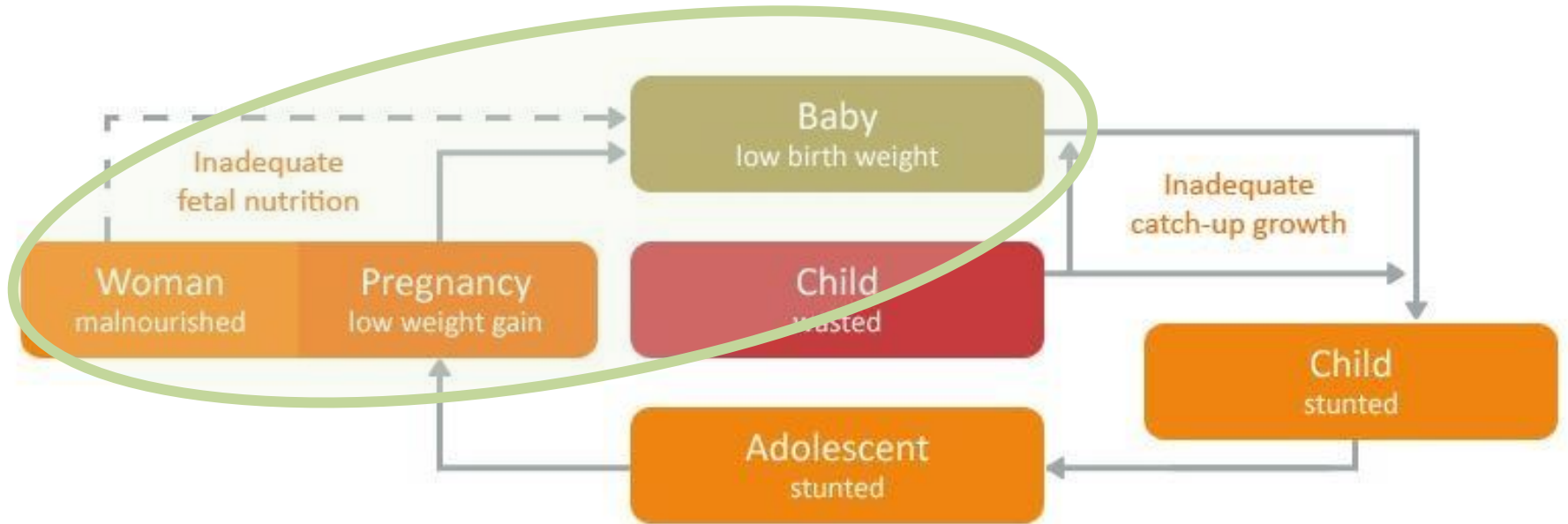
# Triple burden of malnutrition in Syria



# Malnutrition Throughout the Life Cycle



# The 1000 days





# PHYSIOLOGICAL Vulnerabilities TO Malnutrition



- The first 1000 days of life
  - Pregnant and lactating women
  - Children below 2 years old

- Sick patients:

- chronic (HIV/TB)
- acute (surgery)



- Elderly



# SOCIO-ECONOMICAL Vulnerabilities TO Malnutrition

- Livelihood groups facing a shock
- Cyclical insecurity
- Children in the poorest households are more than twice as likely to be stunted as children in the richest households

# Causes of Malnutrition

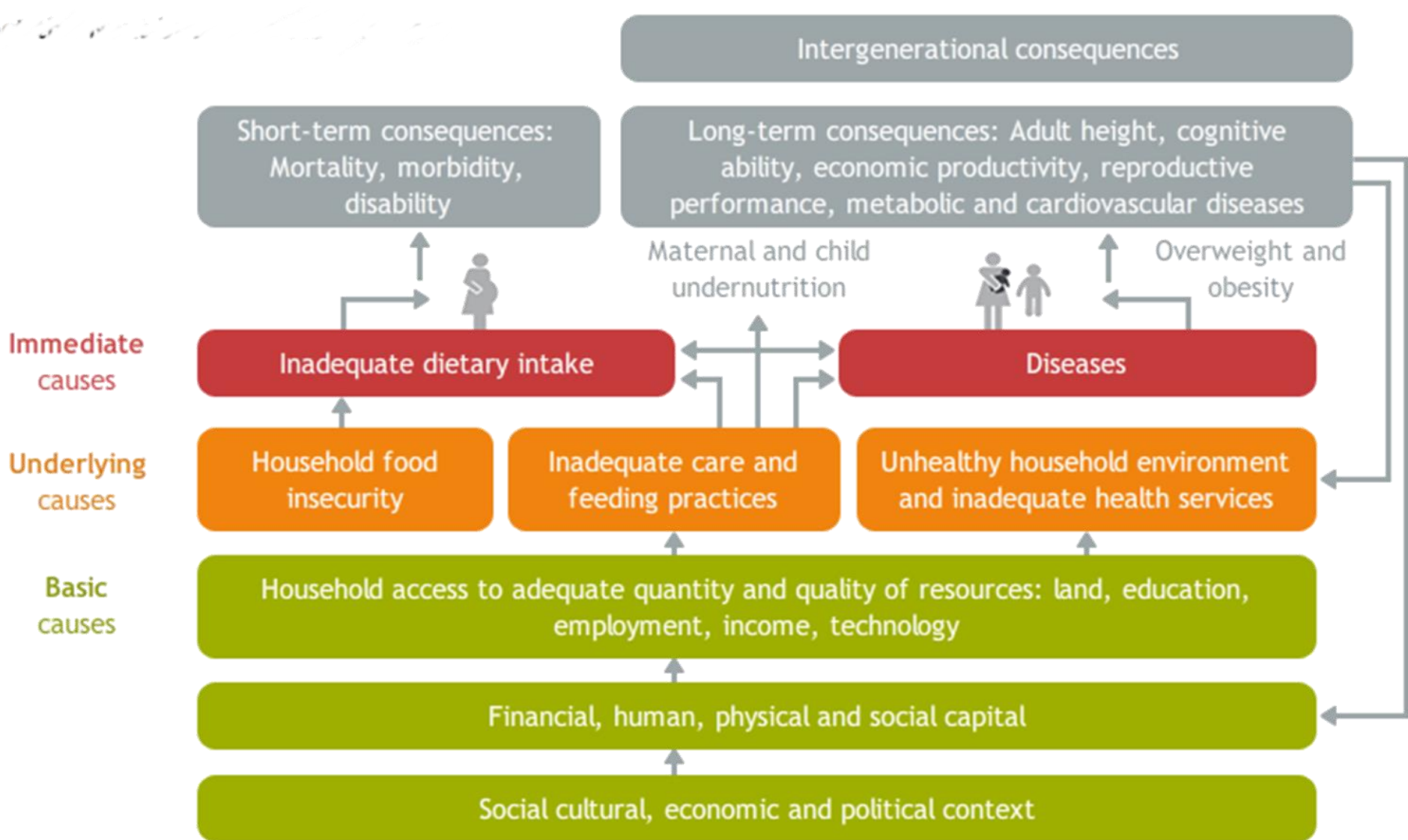
Nutritional status is influenced by **multiple and interrelated factors.**

The most important factors can be grouped under these broad categories:

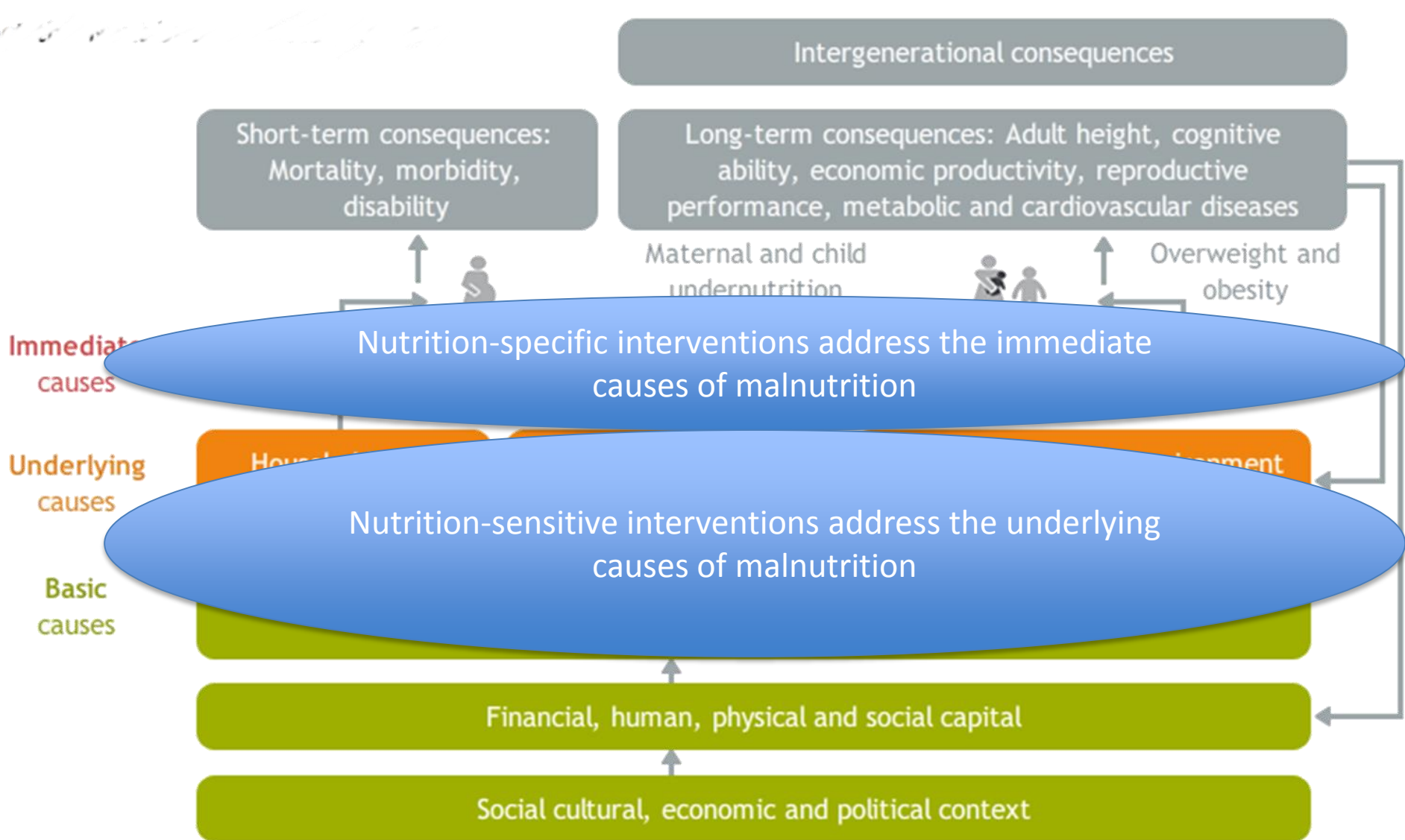
- FOOD
- HEALTH AND SANITATION
- CARE AND FEEDING PRACTICES



# UNICEF Malnutrition Conceptual Framework

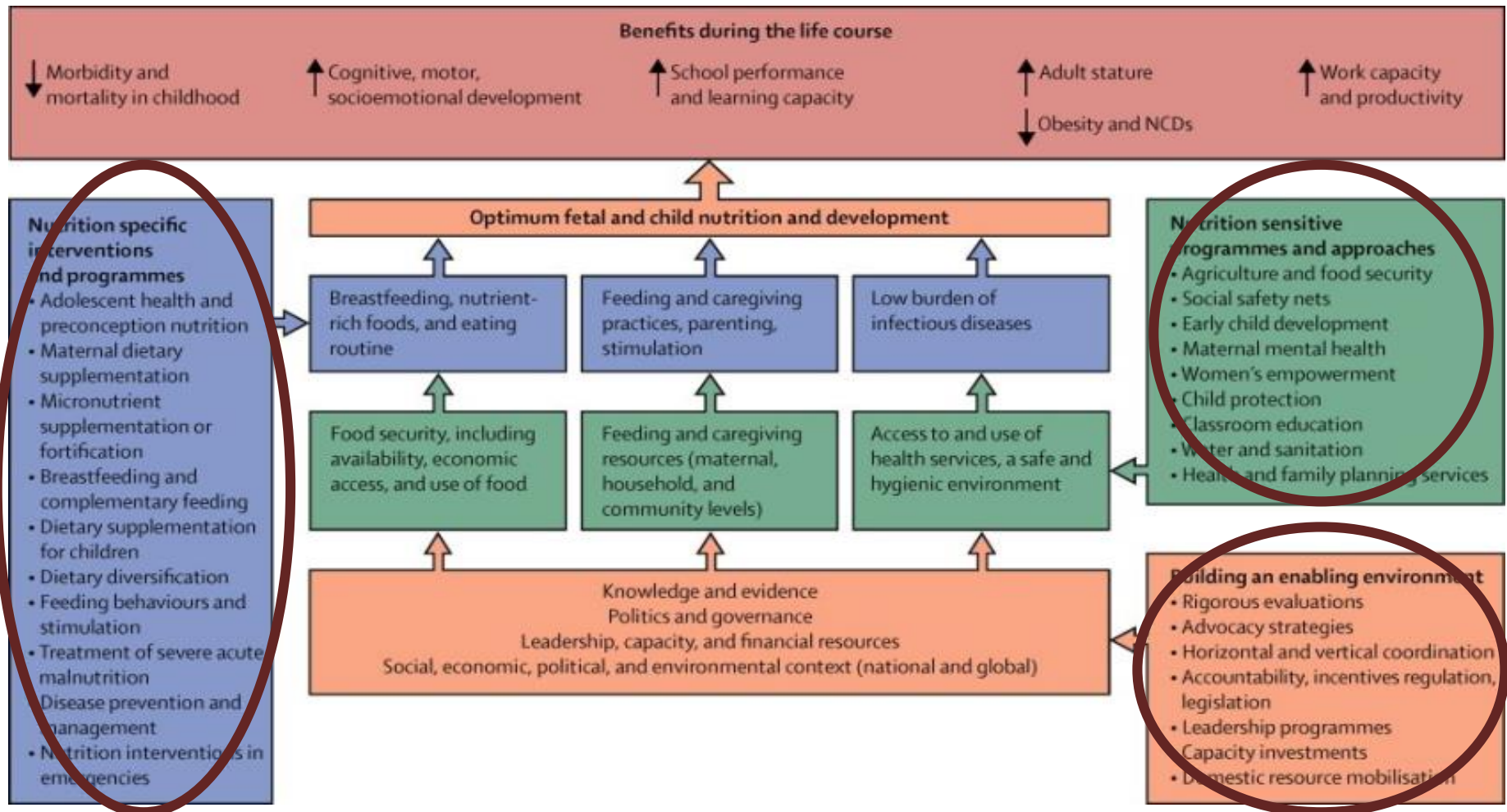


# Nutrition-sensitive interventions



# Framework for actions

to achieve optimum foetal and child nutrition and development, 2013 Lancet series



# Take home messages



- Determinants of malnutrition are multi-sectoral: food intake, access to food, health, care, water and sanitation, gender...
- Agreeing on malnutrition causes leads to design joint actions

# Food Security



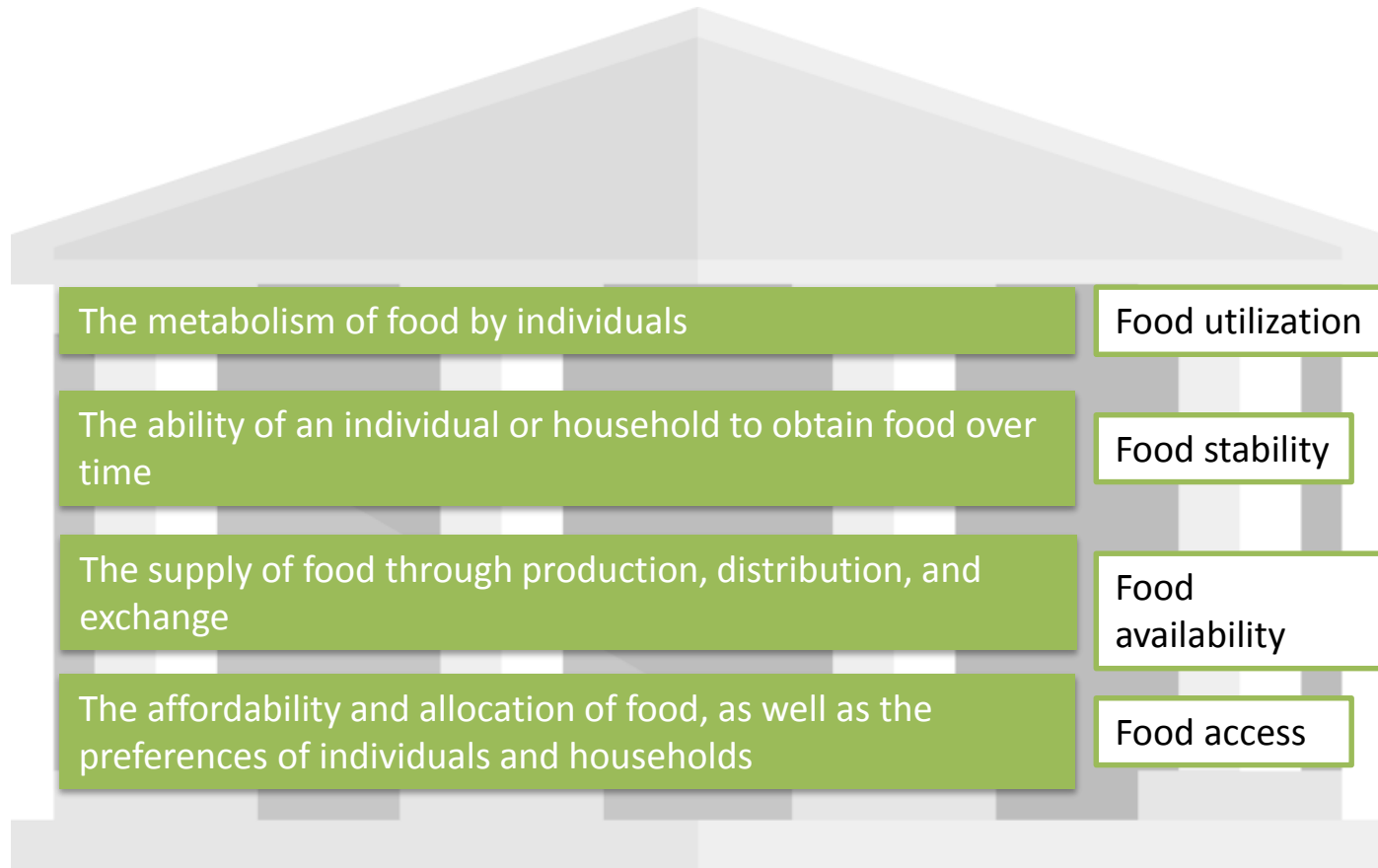


# The Definition of Food Security



“All people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”

# The Four Pillars of Food Security



# From Food Security to Food and Nutrition Security

Food Security

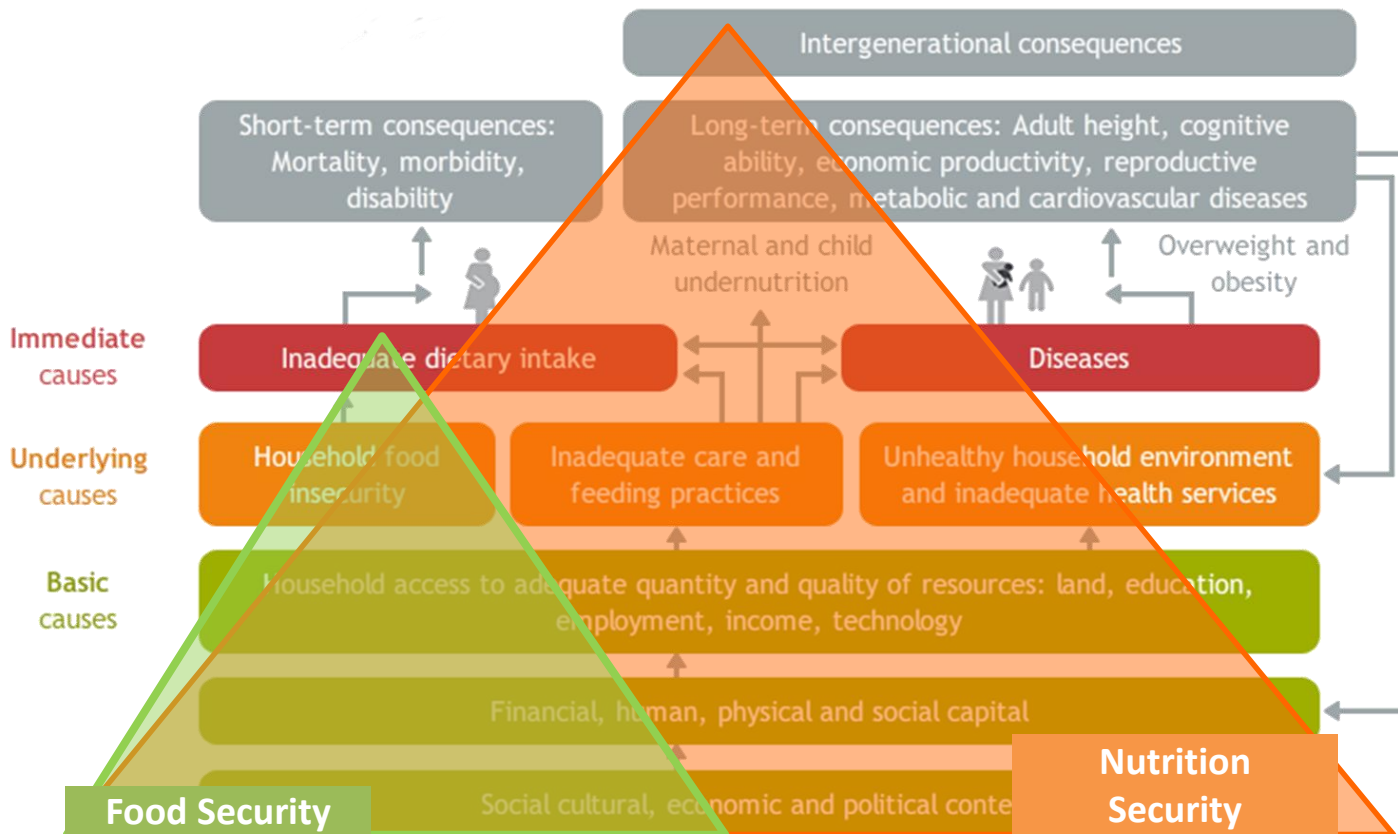


Nutrition Security



“All people at all times consume food of sufficient quantity and quality in terms of variety, diversity, nutrient content and safety to meet their dietary needs and food preferences for an active and healthy life, **coupled with a sanitary environment, adequate health and care.**”

# Nutrition Security and How it Differs from Food Security



# Causes of Nutrition Insecurity in Syria

## FOOD SECURITY

- 8.7 million people are unable to meet their basic food needs
- Crop production impacted by high labour cost, shortages of workers, crop destruction and fragmented markets with disrupted supply chains and severe damage to mills and bakeries
- Food production is 40% below pre-crisis levels
- In besieged areas, tens of thousands of people subsist on grass and weeds while warring parties prevent access to food and essential medicine

# Causes of Nutrition Insecurity in Syria

## HEALTH

- June - August 2015, one healthcare facility struck by aerial attacks every two days, severely Disrupting the provision of services
- 42 per cent of pregnant women scheduling caesarian sections to plan deliveries rather than risk going into labour amidst conflict
- Only 45 per cent of the pre-conflict health work force is active inside Syria.
- Over 1 million children under five have not been reached by routine immunization

## WASH

- 70% of the population lacks access to safe drinking water
- There has been an increase of the occurrence and spread of Water Born Diseases, especially acute bloody diarrhoea, particularly in children < 5 yrs