

STUNTED GROWTH AND DEVELOPMENT

Context, Causes and Consequences





Child

Consequences

» Concurrent problems and short-term consequences

- **Health:** ↑ Mortality, ↑ Morbidities
- **Developmental:** ↓ Cognitive, motor, and language development
- **Economic:** ↑ Health expenditures, ↑ Opportunity costs for care of sick child

» Long-term consequences

- **Health:** ↓ Adult stature, ↑ Obesity and associated co-morbidities, ↓ Reproductive health
- **Developmental:** ↓ School performance, ↓ Learning capacity, Unachieved potential
- **Economic:** ↓ Work capacity, ↓ Work productivity



Household

Causes

› The home

- Inadequate sanitation and water supply
- Low wealth and socioeconomic status
- Food insecurity
- Low status of women
- Low caregiver education
- Inappropriate intra-household food allocation

› Poor quality foods

- Poor micronutrient quality
- Low dietary diversity and intake of animal-source foods
- Anti-nutrient content
- Low energy content of complementary foods

› Food and water safety

- Contaminated food and water
- Poor hygiene practices
- Unsafe storage and preparation of foods

› Infection

- Enteric infection: Diarrhoeal disease, environmental enteropathy, helminths
- Respiratory infections
- Malaria
- Reduced appetite due to infection
- Inflammation

› The mother

- Poor nutrition during pre-conception, pregnancy and lactation
- Short maternal stature
- Infection
- Adolescent pregnancy
- Short birth spacing
- IUGR and preterm birth
- Poor mental health
- Hypertension

› Inadequate care

- Poor care practices
- Inadequate child stimulation and activity
- Non-responsive feeding

› Inadequate breastfeeding

- Delayed initiation
- Non-exclusive breastfeeding
- Early cessation of breastfeeding

› Inadequate complementary feeding

- Infrequent feeding
- Inadequate feeding during and after illness
- Thin food consistency
- Feeding insufficient quantities



Community/ Nation

Context

› Political economy

- Food prices and trade policy
- Marketing regulations
- Political stability
- Poverty, income and wealth
- Financial services
- Employment and livelihoods

› Agriculture and food systems

- Food production and processing
- Availability of micronutrient-rich foods
- Food safety and quality

› Water, sanitation and environment

- Water and sanitation infrastructure and services
- Population density
- Climate change
- Urbanization
- Natural and manmade disasters

› Health and healthcare

- Access to healthcare
- Qualified healthcare providers
- Availability of supplies
- Infrastructure
- Health care systems and policies

› Society and culture

- Beliefs and norms
- Social support networks
- Child caregivers (parental and non-parental)
- Women's status

› Education

- Access to quality education
- Qualified teachers
- Qualified health educators
- Infrastructure (schools and training institutions)

An interactive version of the conceptual framework in a ZIP file is available on request from nutrition@who.int.