



Food and Agriculture
Organization of the
United Nations

Supply Chains and Food Security

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“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”.

(World Food Summit, 1996)



Food Security: Pillars, Determinants and Factors Affecting It

Availability

- Ensured when there is reliable supply of food of sufficient quantity and quality
- Depends on:
 - Domestic production; Food import and export, food aid and national food stocks.

Access

- Ensured when individuals and households have adequate resources to obtain appropriate food
- Depends on:
 - Political, economic, social factors; Equitable distribution; Markets/Infrastructure; Affordability; Purchasing Power

Utilization

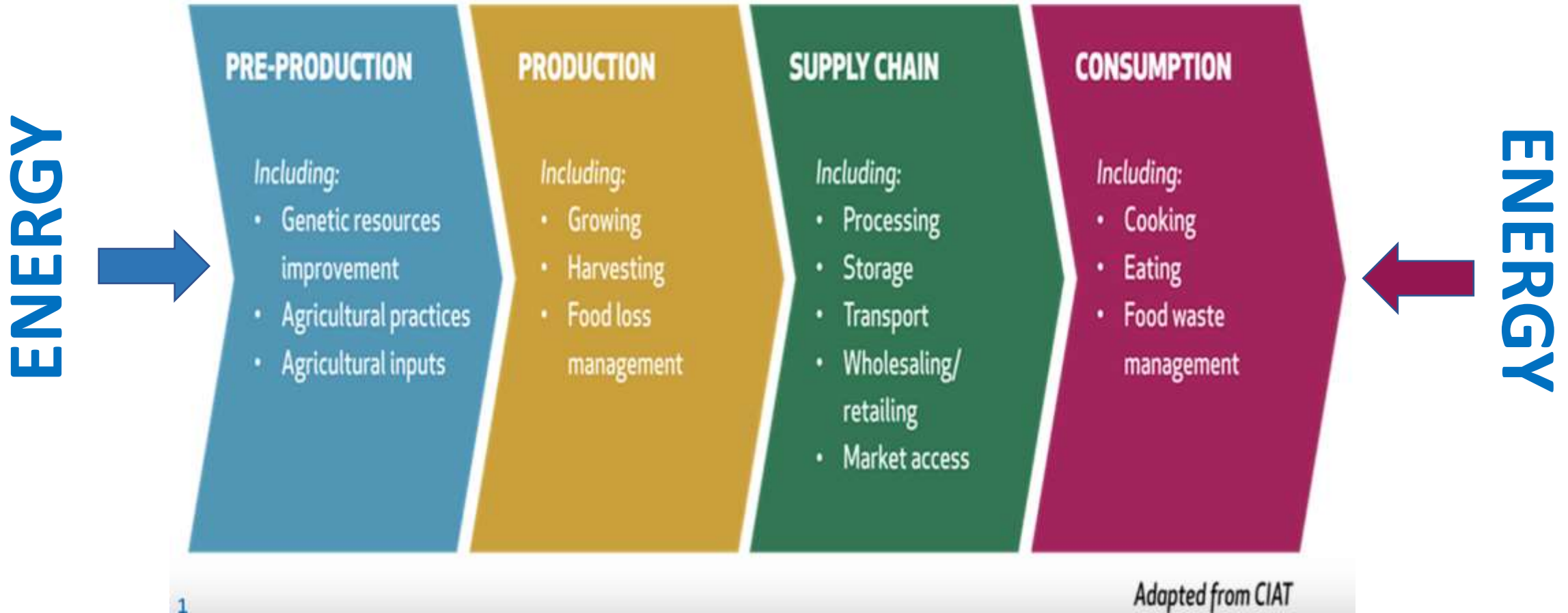
- Ensured when food is nutritious and can be adequately metabolised and used by the body
- Depends on:
 - Food safety; Food quality; Nutritional knowledge; Proper preparation; Clean Water/Sanitation/Healthcare
- Utilization requires healthy physical environment and adequate sanitary facilities etc.

Stability

- Ensured when there is permanent and durable access to food
- Depends on:
 - Maintenance of all three pillars over time; No risk (risk reduction) of loss of supply due to economic, political, or environmental factors.



Food Production and Supply Chains: Farm to Fork





Types of Food Insecurity

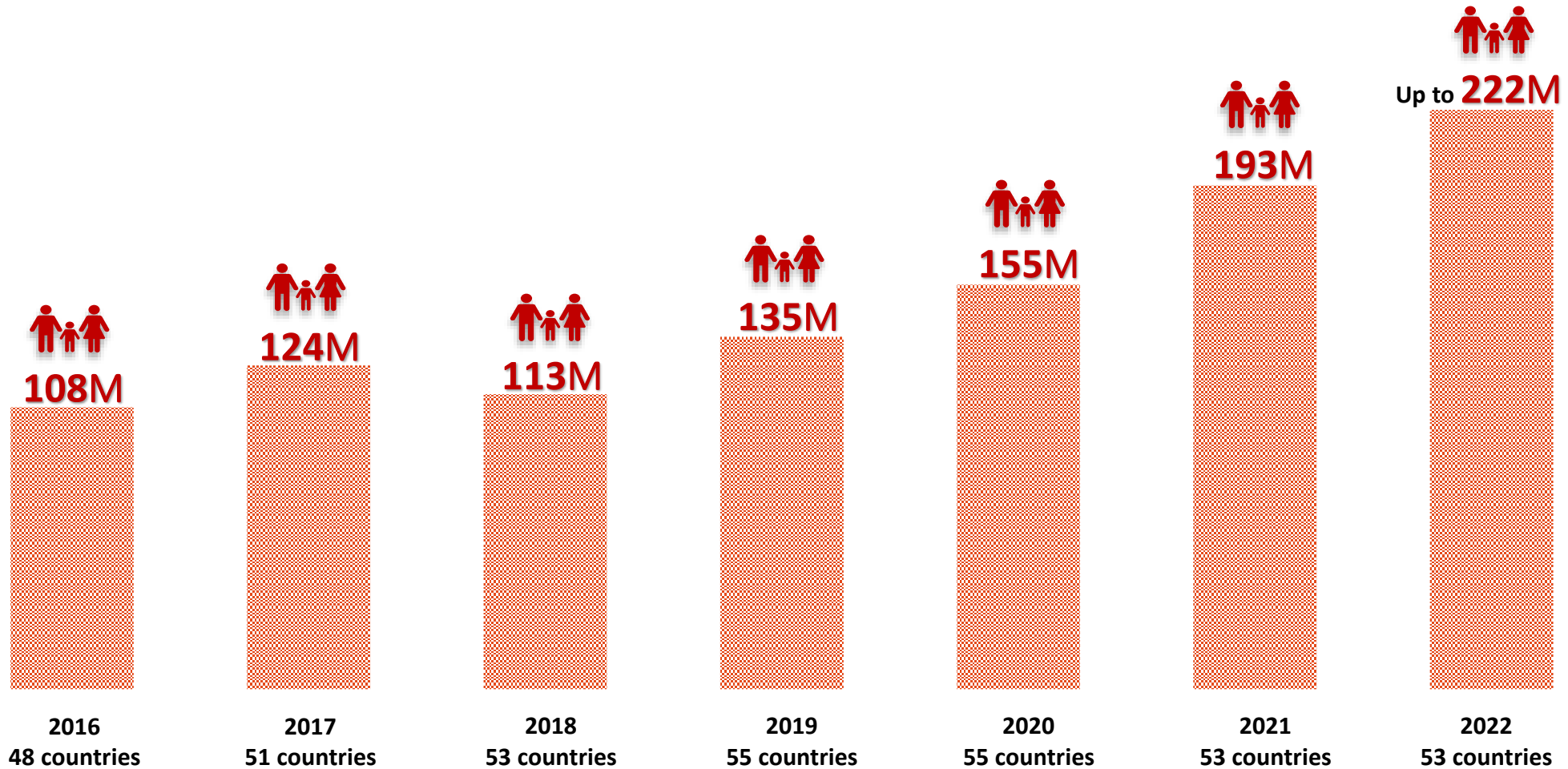
- Acute food insecurity - generally the **result of an emergency or shock**, is relatively short-term and often requires immediate action to save lives and livelihoods.
- 222 million people in 2022

Food insecurity in
protracted crises

- Chronic food insecurity (hunger) - long-term, typically requires well targeted development initiatives to build sustainable livelihoods.
- 702 – 828 million people in 2021



Trends - Populations in High **Acute** Food Insecurity (2016-2022)



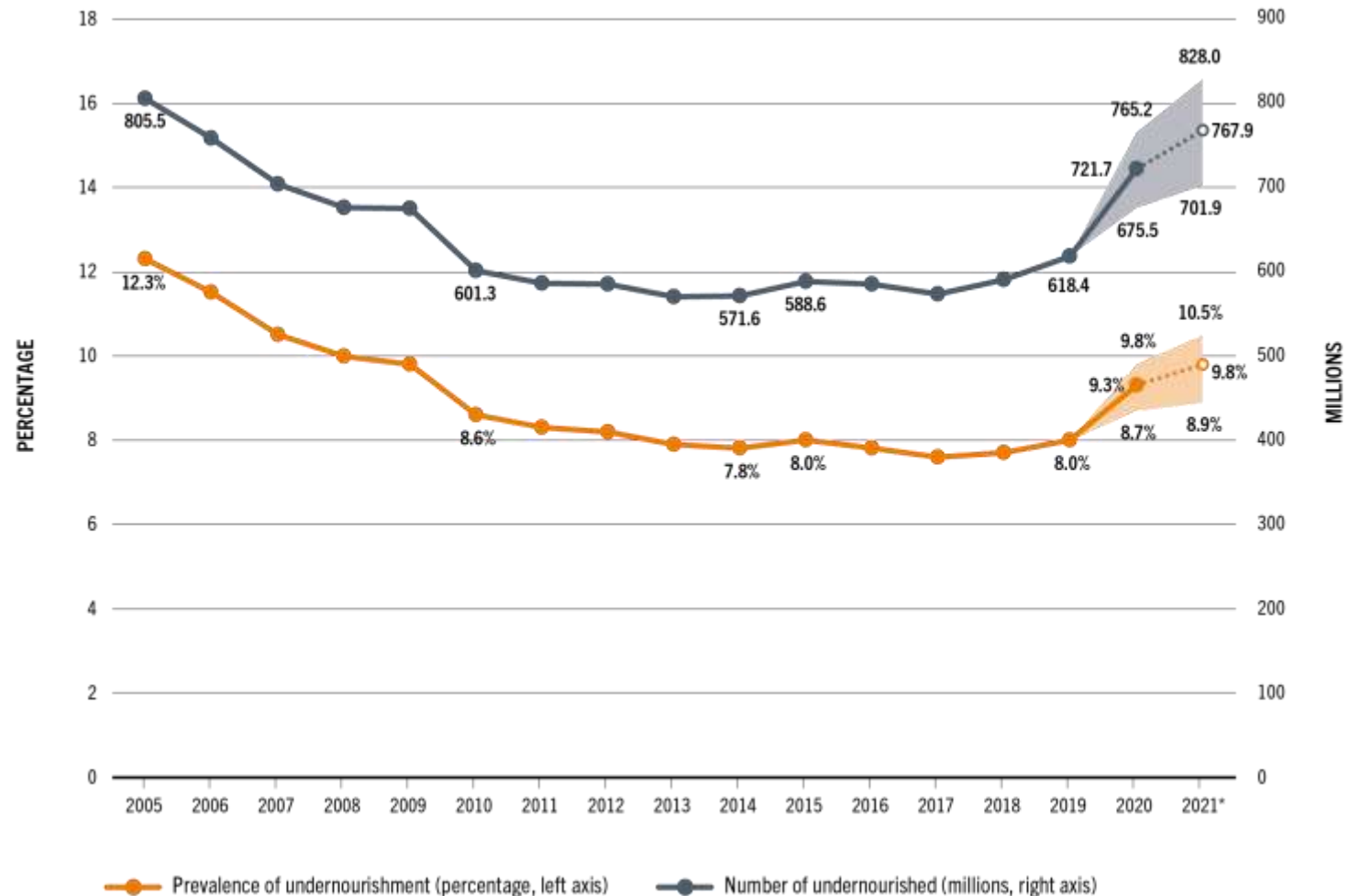


Trends - Populations in Chronic Food Insecurity (2005-2021)

BETWEEN 702 AND 828 MILLION PEOPLE IN THE WORLD WERE FACING HUNGER IN 2021

Hunger affected about 46 million more people in 2021 than in 2020 (considering the middle of the projected range).

A total of 150 million more people since the outbreak of the COVID-19 pandemic in 2019 (considering the middle of the projected range).





MAJOR DRIVERS AND UNDERLYING FACTORS

WE ARE NOT ON TRACK TO ENDING HUNGER, FOOD INSECURITY AND MALNUTRITION

COVID-19 pandemic

Economic slowdowns and downturns

Climate variability and extremes

Conflict

Cost and affordability of healthy diets



UNDERLYING CAUSES OF POVERTY AND INEQUALITY



Energy, Agriculture, Supply Chains, and Food Security

Agriculture absorbs high amounts of energy directly, through the use of fuel, gas and electricity, and indirectly, through the use of agri-chemicals such as fertilisers, pesticides and lubricants.

About 30 percent of global energy is consumed in the agricultural and food sector. Energy is needed at every level of the food supply chain, including the production of agricultural inputs, agricultural production in the field, food processing, transportation, marketing and consumption.

Primary agriculture consumes only about 20 percent, whilst food processing including transport uses around 40 percent, and thereby significantly contributes to global energy consumption along agricultural supply/value chains



High prices of food and energy are regressive on poor consumers as they may entail a reduction in quantities and/or qualities of food consumed, leading to more hunger and malnutrition, or less money for other necessities such as health and education.

Curtailing such important expenditures could send communities into a vicious cycle of deepening and entrenching food insecurity and poverty, with potentially irreversible effects.

Energy is an engine of transformative socioeconomic opportunities that touches on every aspect of sustainable development and the ability to access energy is a fundamental enabler to achieving **food security** and zero hunger.

Not only is energy necessary to consume food but also throughout Food Systems to produce, process and preserve it.



(Disaster) Risk = $f(\text{Hazard, Exposure, Vulnerability})/\text{Capacity}$

Types of Risk

Idiosyncratic - a specific risk or un-systemic risk

Covariate - Systemic risk - A risk or risks affecting many individuals, households or businesses in the same area and/or at the same time - may result in disaster e.g. Drought, hurricane, locust, TADs, conflict, etc.

- **Hazard** categories that impact on food security (including supply chains)
 - Climate related (drought, floods, hurricanes, Forest fires, etc.)
 - - Other natural hazards – earth quakes, forest fires etc.
 - Food Chain Crises (Transboundary animal diseases (e.g. RVF, FMD) plant pests – locust etc.)
 - Conflict
 - Market related Crises

Data and information on hazards collected/analysed include - drought monitoring, locust monitoring, rainfall monitoring, livestock early warning system (LEWS), conflict early warnings (CEWARN), etc.



- Exposure

- Livelihood type (crop, livestock, fisheries, forestry, food markets, etc.) - Geo-physical (e.g. areas and extent of flood inundation, etc.)
- Etc.

- *Data and information on exposure collected/analysed (macro, meso, micro levels) include – e.g. Agricultural Stress Index (ASIS), price monitoring, aggregate production decline, Data in Emergencies (DIEM), IPC, forest fire monitoring, fisheries, etc.*

- Vulnerability

- Economic - Socio-political - Environmental - Etc.

- *Data on vulnerability collected/analysed include – income and expenditure, unemployment, poverty data, Gender and inclusion, soil mapping, deforestation, land degradation etc.*



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Resilience and Food Security

To increase the resilience of people, livelihoods and food systems to threats and crises

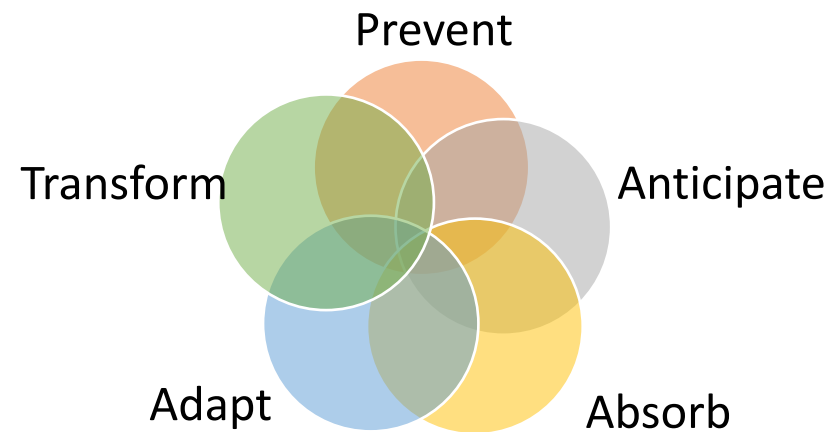
- help people to anticipate and prepare for crises
- responds fast to crises
- reduce risks and address vulnerabilities
- Diversify (livelihoods, sources of energy, types of produce, etc.)
- Adapt and transform





UN Common Guidance on Helping Build Resilient Societies

The ability of individuals, households, communities, cities, institutions, systems and societies to **prevent, anticipate, absorb, adapt** and **transform** positively, efficiently and effectively when faced with a wide range of risks and crisis, while maintaining an acceptable level of functioning, without compromising long-term prospects for sustainable development, peace and security, human rights and well-being for all.





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Thank you