

Challenges and opportunities for achieving healthy and affordable diets



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World Vegetable Center

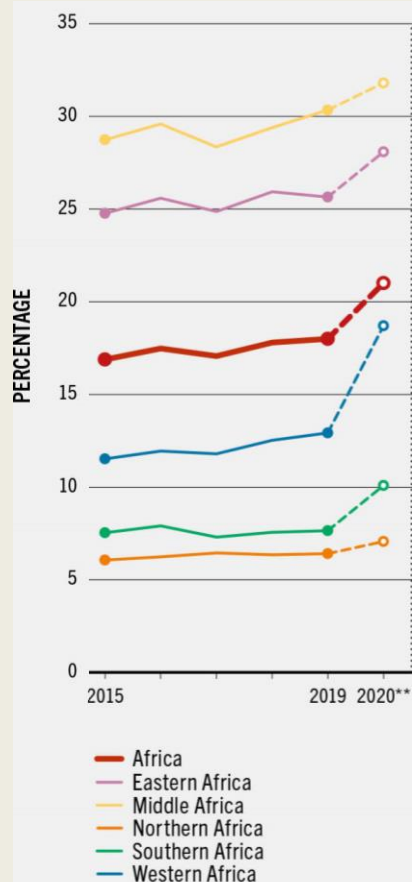
Bridging the gap between production and consumption of nutritious and healthy foods | 27 March 2023

Nutrition landscape in sub-Saharan Africa

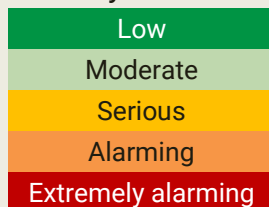


Prevalence of undernourishment

Percentage of people unable to meet daily minimum **energy** requirements, over a period of one year



Severity scale:

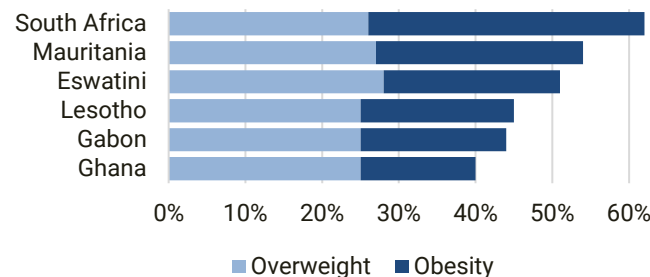


Composite measure, based on prevalence of:

- **Undernourishment**
- **Child stunting**
- **Child wasting**
- **Child mortality**

Prevalence of overweight and obesity

Women of reproductive age



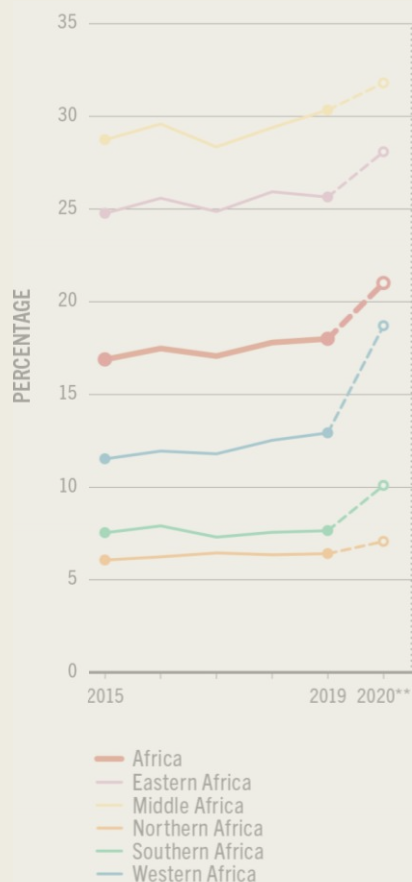
Global Hunger Index rankings

Rank	Country	2000	2007	2014	2022
59	South Africa	18.1	17.2	12.7	12.9
67	Ghana	28.5	22.1	15.5	13.9
71	Senegal	34.2	22.8	17.6	15.6
73	Eswatini	24.7	22.9	18.4	16.3
74	Côte d'Ivoire	33.4	35.8	22.7	16.8
76	Gabon	20.9	20.3	16.5	17.2
78	Namibia	25.4	26.8	22.9	18.7
80	Cameroon	35.8	29.9	21.4	18.9
86	Botswana	27.7	25.8	20.5	20.0
87	Gambia	29.0	26.5	22.2	20.7
87	Malawi	43.3	32.5	24.1	20.7
87	Mauritania	31.8	28.3	26.3	20.7
90	Djibouti	44.3	35.8	27.4	21.5
91	Benin	33.8	26.9	23.2	21.7
92	Togo	39.3	30.2	26.1	22.8
93	Mali	41.7	35.7	26.1	23.2
94	Kenya	36.6	31.1	21.6	23.5
95	Tanzania	40.8	30.9	25.5	23.6
96	Burkina Faso	44.9	34.5	26.5	24.5
98	Angola	64.9	44.7	26.2	25.9
102	Rwanda	49.9	35.9	29.5	27.2
103	Nigeria	40.4	32.1	28.4	27.3
104	Ethiopia	53.6	42.6	27.4	27.6
105	Congo (Republic of)	34.7	33.7	25.3	28.1
106	Sudan	—	—	29.3	28.8
108	Zambia	53.3	46.0	35.2	29.3
111	Guinea-Bissau	37.7	31.0	30.2	30.8
112	Sierra Leone	57.5	51.1	33.1	31.5
113	Lesotho	32.7	29.1	29.3	32.4
113	Liberia	48.2	39.0	34.8	32.4
115	Niger	52.5	40.2	32.8	32.6
117	Chad	50.7	49.0	40.7	37.2
118	Dem. Rep. of the Congo	48.0	43.2	38.7	37.8
119	Madagascar	42.5	37.2	37.3	38.7
120	Central African Rep.	48.8	46.8	44.6	44.0

Nutrition landscape in sub-Saharan Africa



Prevalence of undernourishment

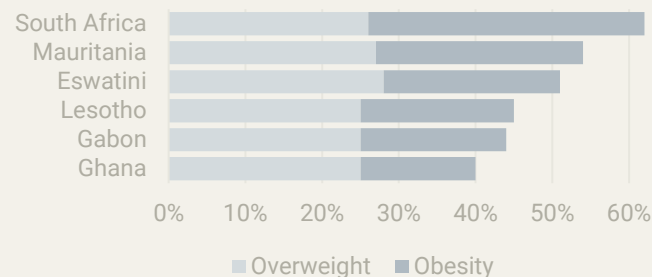


Malnutrition in all its forms

- Wasting (low weight-for-height)
- Stunting (low height-for-age)
- Undernourishment
- Underweight (low BMI)
- Micronutrient deficiencies
- Overweight and obesity (high BMI)
- Non-communicable diseases

Prevalence of overweight and obesity

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Nutrition transitions: shifting nutrition priorities

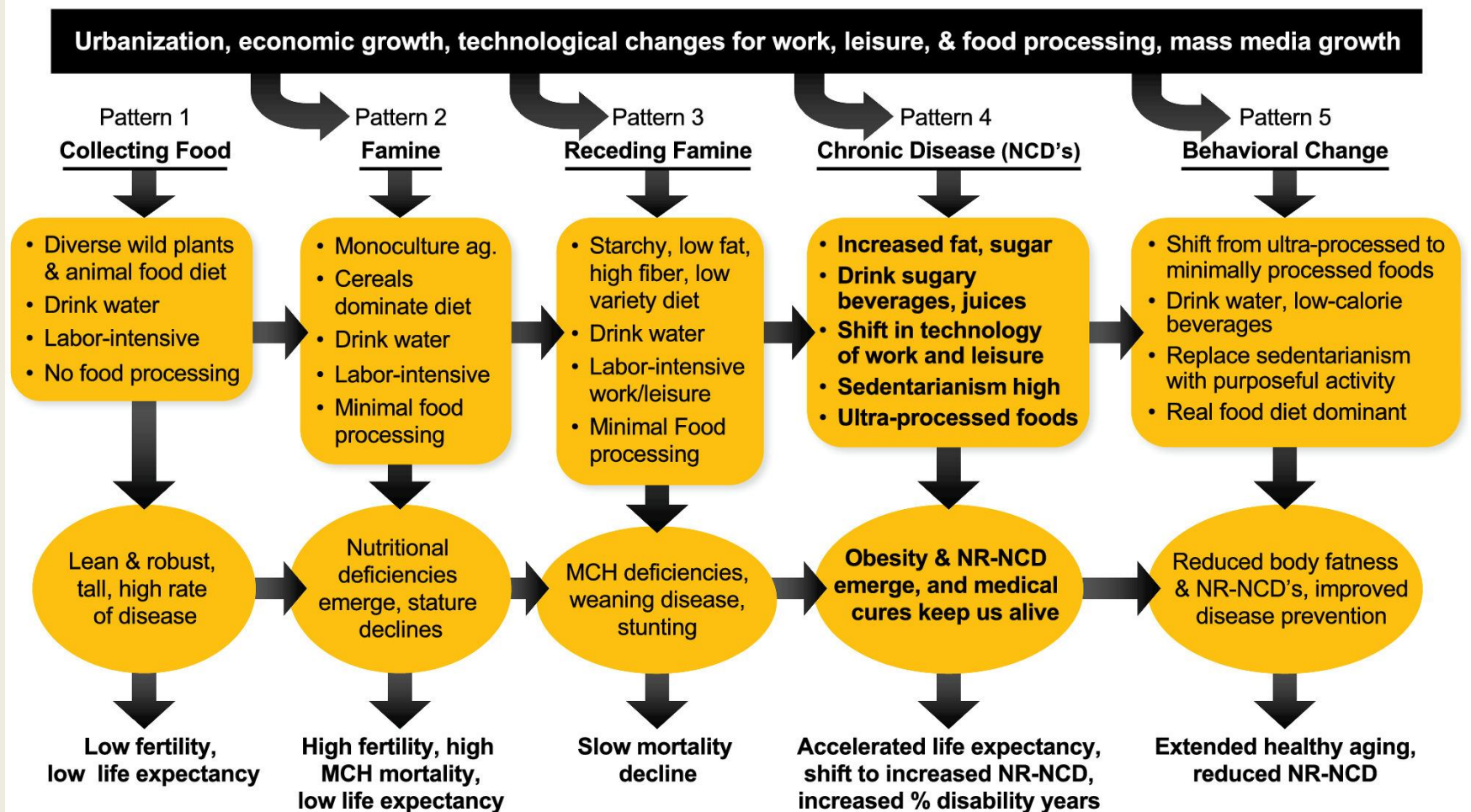


‘Nutrition transitions’

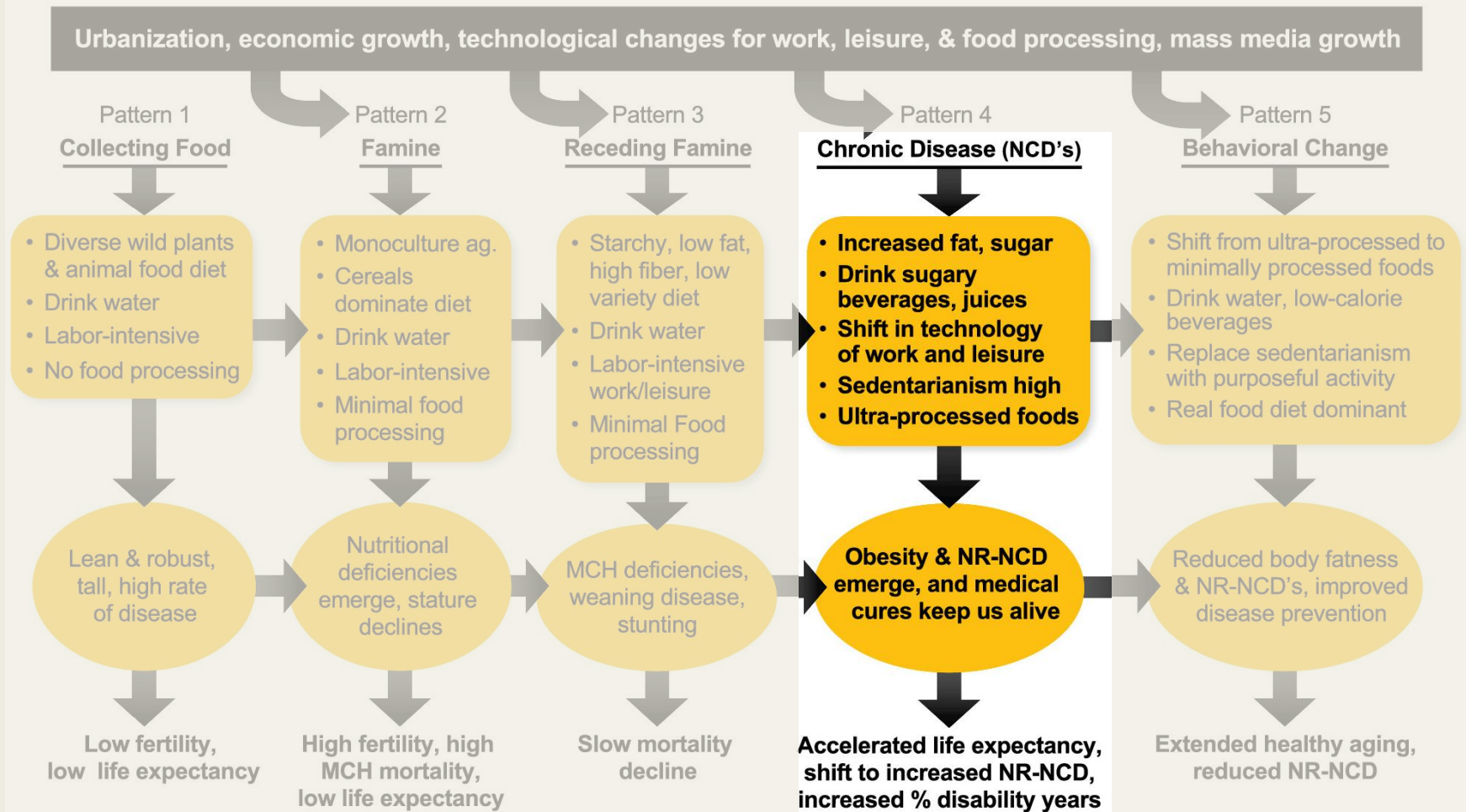
- Proposed in 1990s to describe large changes in human **diets and activity** patterns, occurring globally
 - ↑ sodium, saturated fat, refined carbs
 - ↑ ultra-processed foods
 - ↓ fibre, polyunsaturated fatty acids
- Rise of overweight/obesity and diet-related non-communicable diseases
- Drivers of dietary transitions
 - Urbanisation
 - Economic growth
 - Technological changes
 - Mass media growth
- Variation in nature and pace of change
 - Temporal
 - Spatial
 - Socioeconomic
 - Cultural



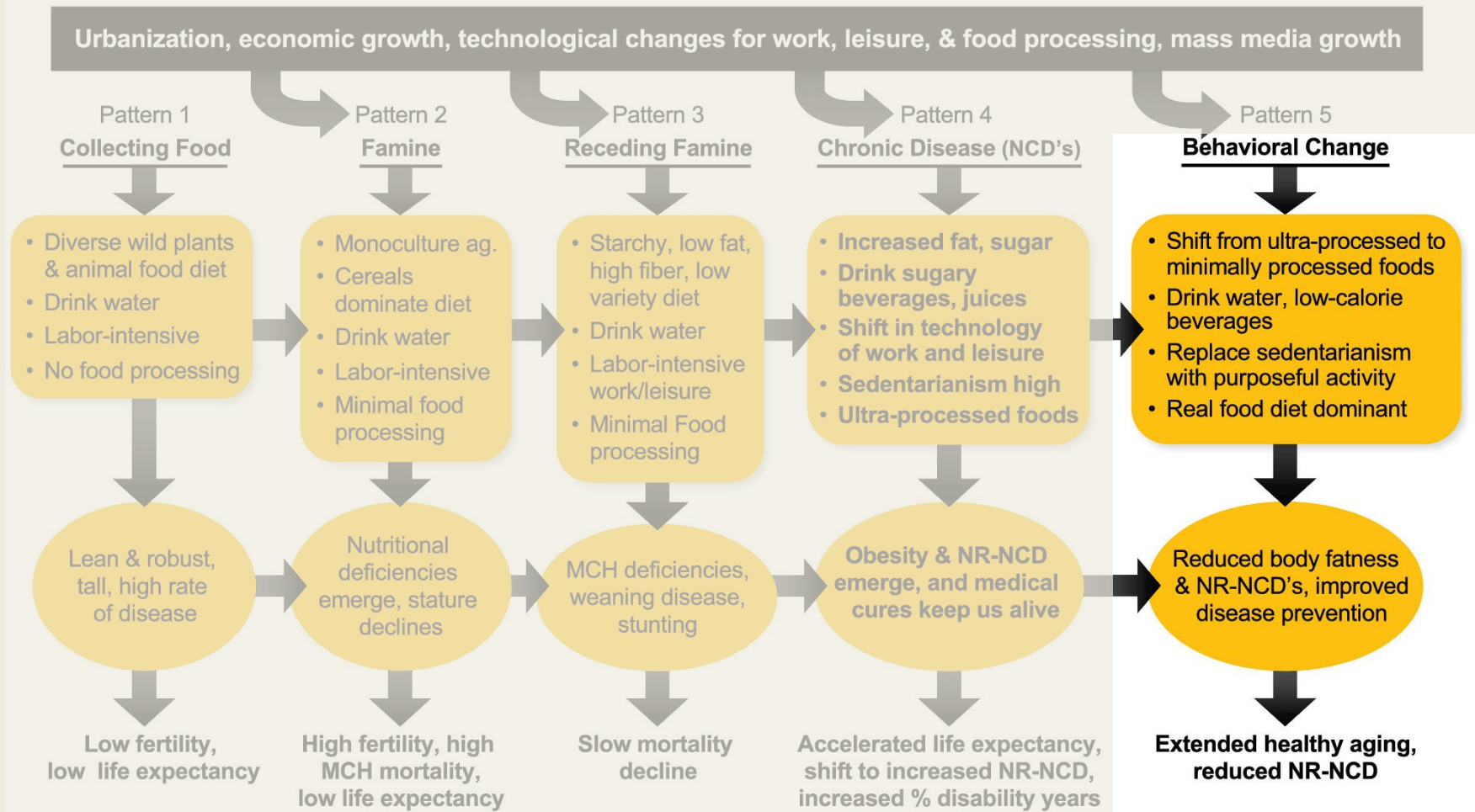
Nutrition transitions: shifting nutrition priorities



Nutrition transitions: shifting nutrition priorities



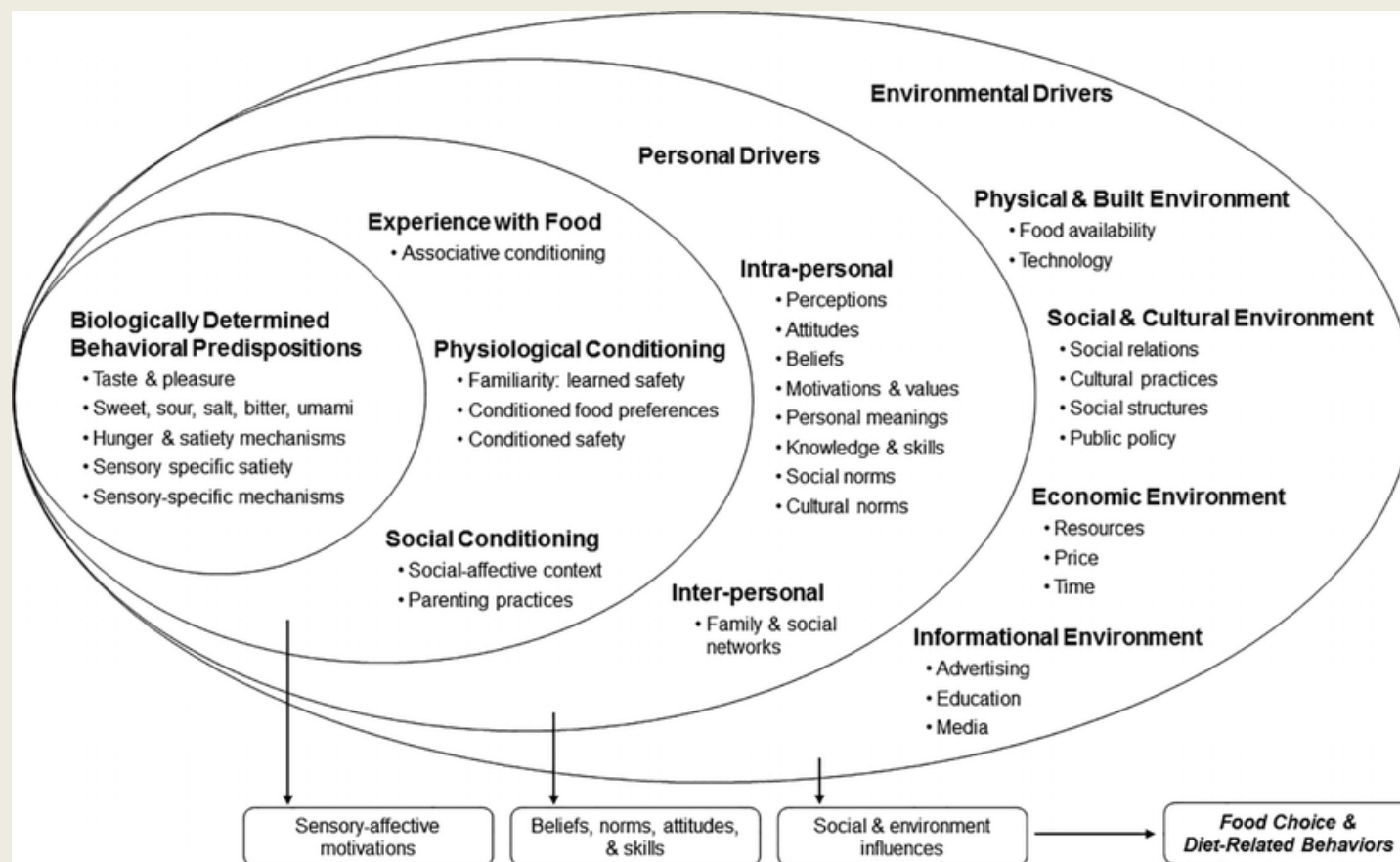
Nutrition transitions: shifting nutrition priorities



Drivers of food choice



“Why do people eat the foods they do?”



Drivers of food choice: Food environments

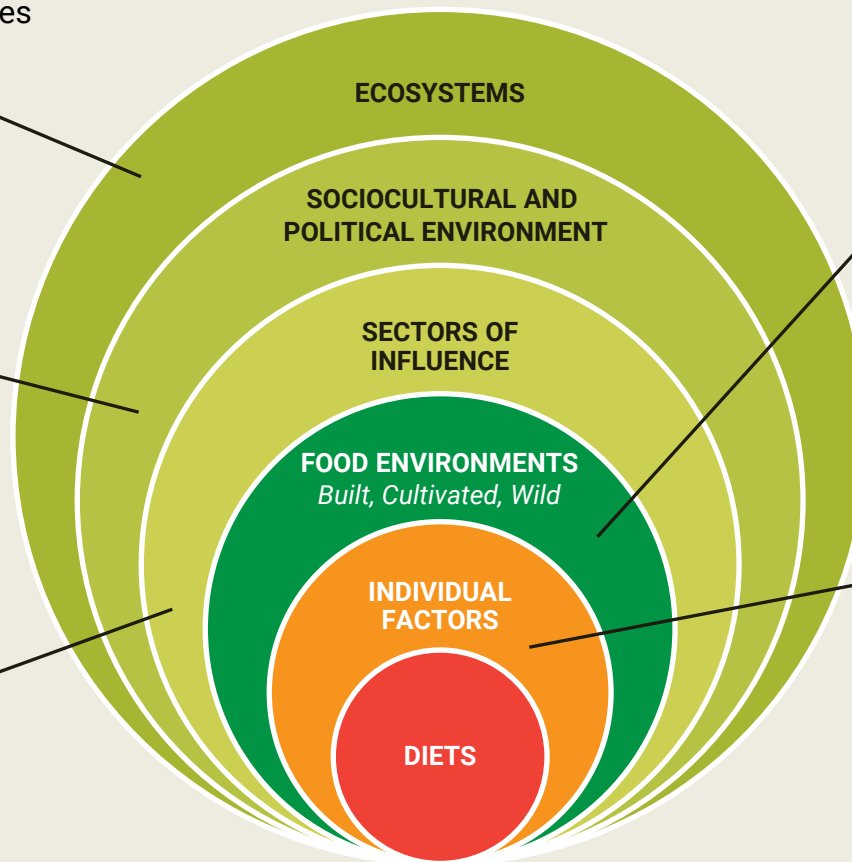


“Why do people eat the foods they do?”

Climate
Natural resources
Earth Systems Cycles
Topography
Habitat

National income
Governance
Policies
Education
Human Capital
Networks
Religion
Culture
Conflict

Agriculture
Media
Labour
Distribution
Trade and markets
Industry
Technology
Planning



Food environments

- Availability
- Affordability
- Promotion
- Convenience
- Quality
- Sustainability properties

Individual factors

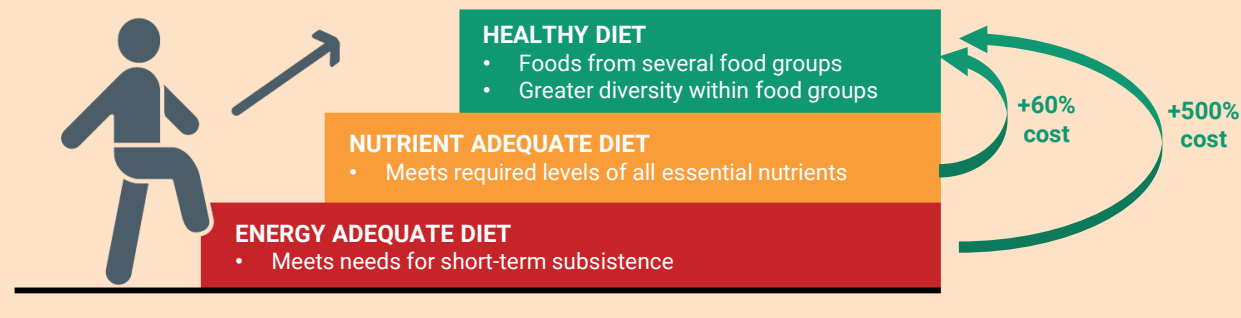
- Income
- Values
- Beliefs
- Preferences
- Social capital
- Health Knowledge
- Mobility
- Skills
- Time

Affordability of healthy diets



- Cost of a diet increases as **diet quality** increases

The stairway of affordability, from subsistence to health



Adapted from Herforth et al, 2020. *Cost and affordability of healthy diets across and within countries*

- Variation by region in changing cost of healthy diets over time
- Affordability** reflects cost of a diet, people's income, or both
- Poor spend a **larger proportion** of household income on food
- 80%** of population in Africa cannot afford a healthy diet

	Cost of a healthy diet		Unable to afford a healthy diet	
	Cost (USD/person/day)	Change 2017 – 2019 (%)	Percent	Change 2017 – 2019 (%)
World	4.04	+7.9	41.9	-0.7
Africa	4.37	+12.9	80.2	+5.4
Eastern Africa	4.88	+33.0	85.0	+5.3
Middle Africa	3.81	+2.2	87.9	+6.8
Southern Africa	4.07	+2.1	61.8	+2.0
Western Africa	4.30	+6.8	86.8	+5.9

State of Food Insecurity, 2021

Healthy diets for children and adolescents



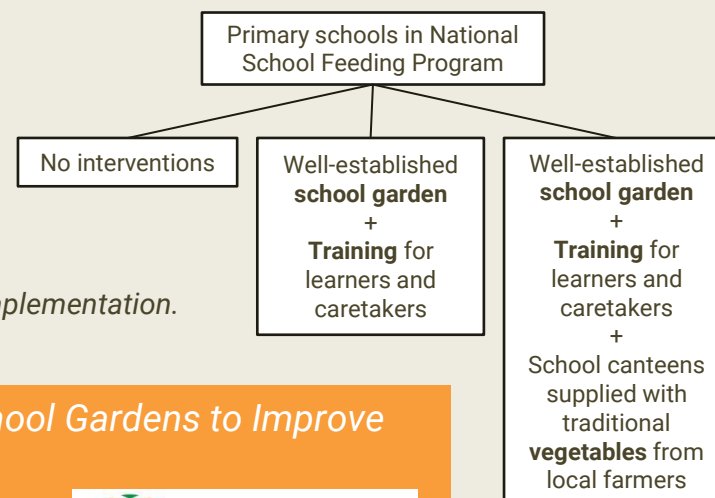
- Formative period for **behaviours and habits**, effective entry point for intervention
- Social and cognitive factors influence **adolescents' food choice**
 - Peer influence
 - Family, cultural norms and expectations
 - Expression of autonomy
 - Mass media and social media – unhealthy foods

Mukanu et al, 2022. *IJERPH*.

- **School meal programs and school gardens**

- Low fruit and vegetable consumption
- Interest, awareness and knowledge
- Discovery-based learning, entrepreneurship
- Community connectedness, livelihoods

Redwine & Schreinemachers, 2022. *Strategy Brief for School Garden Implementation*.



Current research: Home-grown School Feeding and School Gardens to Improve Children's Dietary Preferences and Practices

- 1,105 children, 24 schools in Eswatini
- Greater knowledge and recognition of fruits than vegetables
- Exotic vegetables more familiar than indigenous vegetables



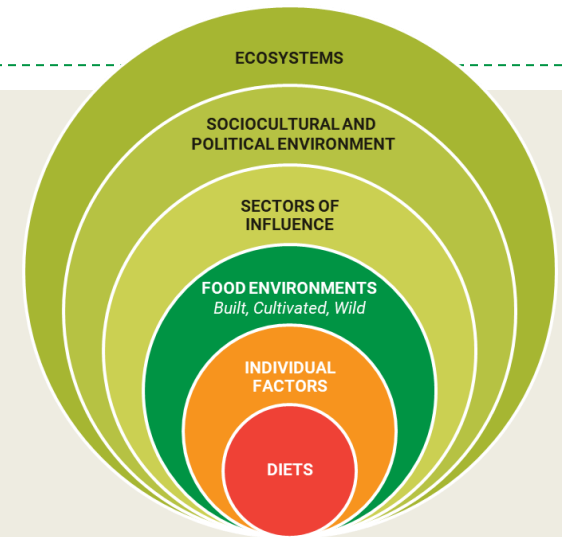
Levers for change to support healthy diets



42 policies and actions to orient food systems towards healthier diets for all (Hawkes et al, 2020)

- **Education and public awareness actions**

- Deliver culturally-appropriate **nutrition education, food literacy and skills training** for children and adults through schools, health services, agricultural extension schemes and community settings
- Provide **dietary counselling to women** during antenatal care and pregnancy, including awareness of benefits of healthy foods and risks of unhealthy foods
- Launch engaging and compelling **mass media and behaviour change communication campaigns** about foods and diets
- Promote **traditional food cultures** associated with good nutrition by supporting and protecting traditional foods, providing information about traditional dishes and public awareness campaigns.



- Agricultural actions
- International trade actions
- Research, processing and technology actions
- Supply chain infrastructure actions
- Financial actions
- Public institution actions
- Business incentives
- Regulations and laws
- National guidelines



Thank you.

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