Food and Agriculture Organization
of the United Nations

Leveraging Innovation and Digitalization for Inclusive Agriculture and Food Systems Transformation in Africa

28 October 2020

Regional Office for Africa

Prevalence of undernourishment in the World, Africa, and its sub-regions, 2000–2019 (%)

Region/subregions	2000	2010	2014	2015	2016	2017	2018	2019	Percentage point change from 2014 to 2019
WORLD	13.2	9.6	8.6	8.9	8.8	8.7	8.9	8.9	0.3
Africa	24.5	18.9	17.6	18.3	18.5	18.6	18.6	19.1	1.5
Northern Africa	10.1	8.8	6.3	6.2	6.3	6.6	6.3	6.5	0.2
Sub-Saharan Africa	28.4	21.3	21.4	21.2	21.4	21.4	21.4	22.0	0.6
Central Africa)	41.7	30.4	29	28.2	28.8	28.7	29.0	29.8	0.8
Eastern Africa	39.2	28.9	26.7	26.9	27.1	26.8	26.7	27.2	0.5
Southern Africa	5.9	5.4	7.9	7.0	8.0	7.0	7.9	8.4	0.5
Western Africa	16.0	12.1	14.3	14.3	14.2	14.6	14.3	15.2	0.9

Source: 2020 Africa Regional Overview FSN –Forthcoming

Nutrition Challenges Increasing (Pre COVID-19)

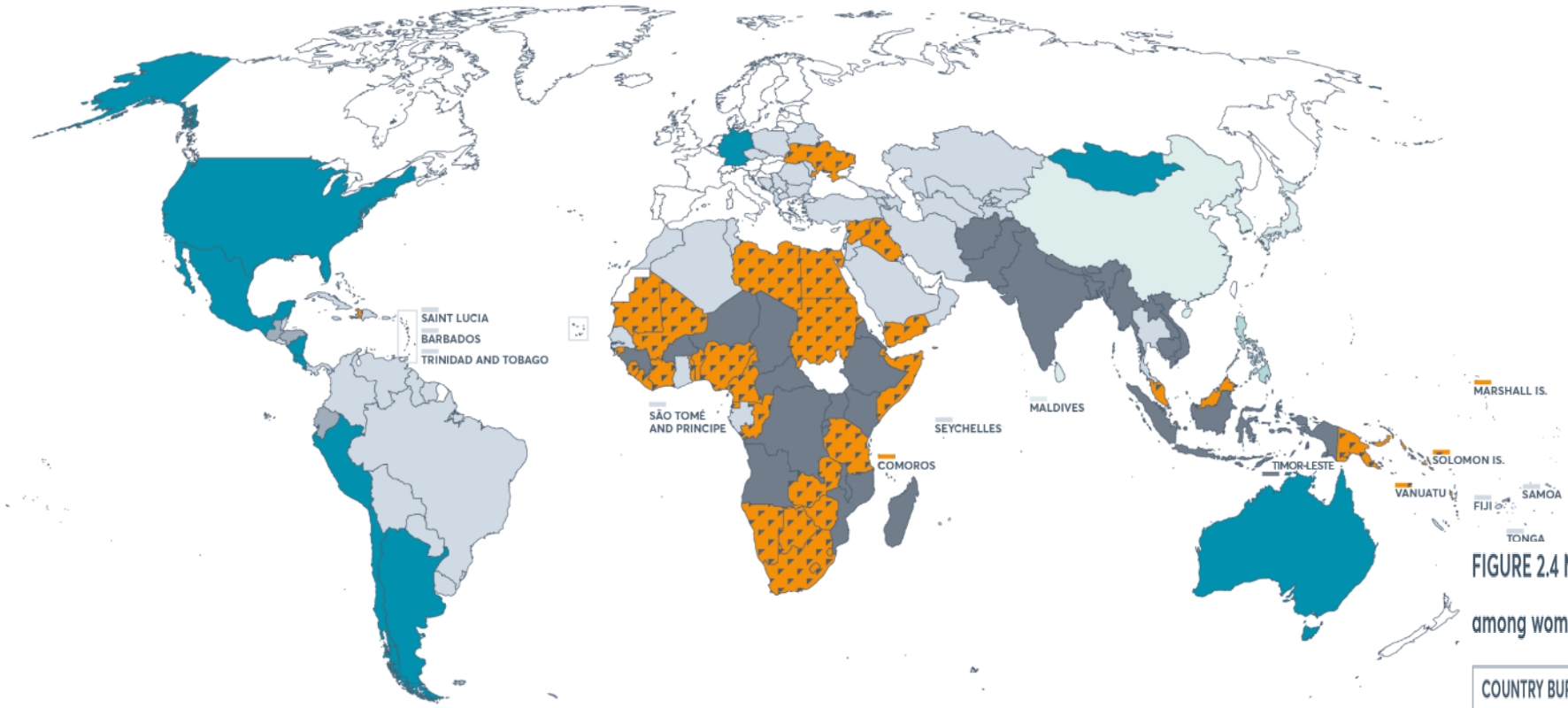


FIGURE 2.4 Map of countries with overlapping forms of stunting in children under 5, anaemia among women of reproductive age, and overweight in adult women

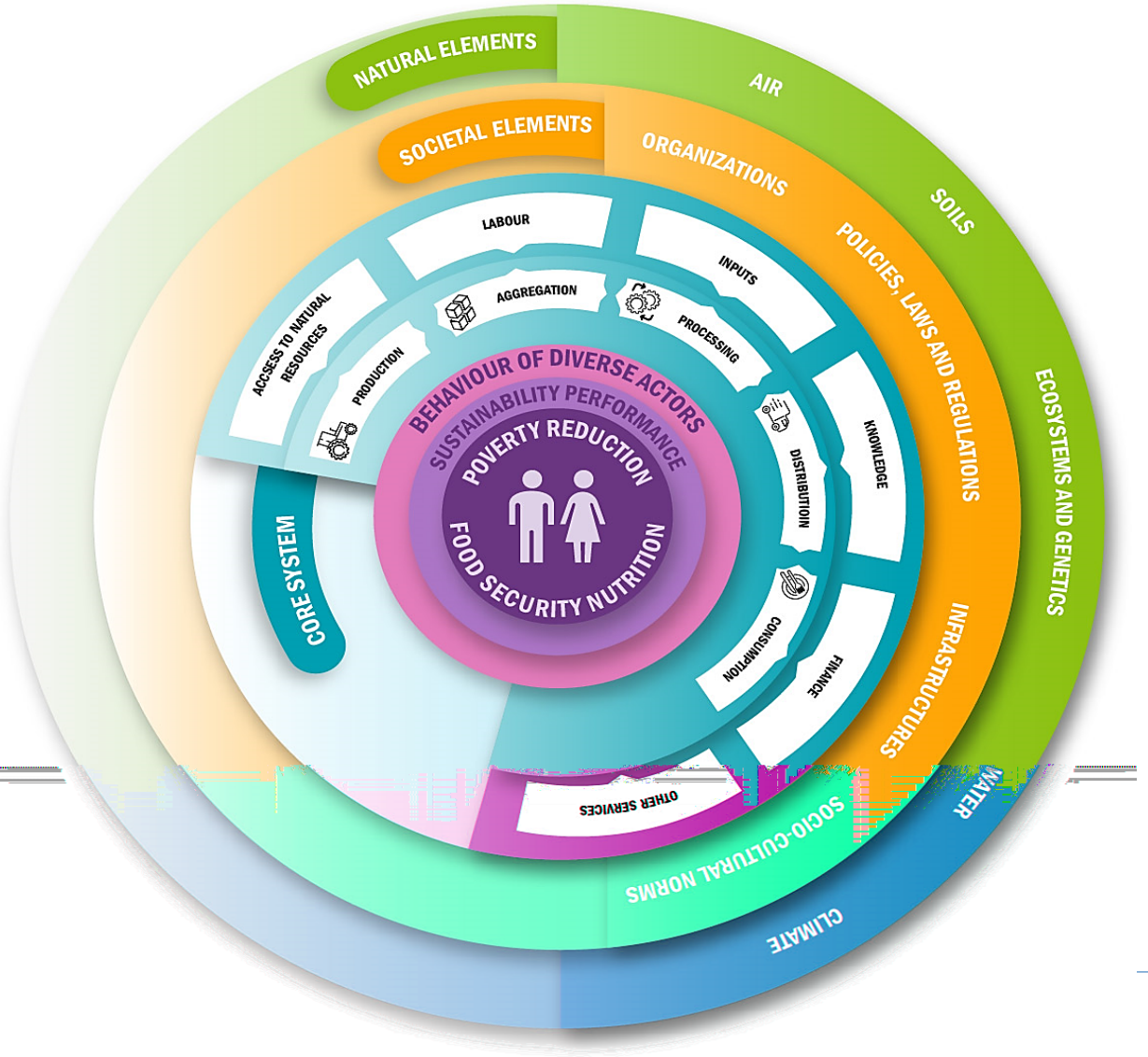
Almost three quarters of Africa's population cannot afford a healthy diet

	%	Total number (million)	%	Total number (million)	%	Total number (million)
	Energy sufficient diet		Nutrient adequate diet		Healthy diet	
WORLD	4.6	185.5	23.3	1513.0	38.3	3021.5
AFRICA	11.3	148.6	51.0	680.6	73.8	964.8
Northern Africa	1.4	2.9	29.2	84.3	46.0	136.1
Sub-Saharan Africa	12.5	145.8	53.4	596.3	76.9	828.8
Eastern Africa	9.4	28.9	53.9	224.2	75.3	325.1
Central Africa	18.5	27.9	59.8	112.5	78.5	142.4
Southern Africa	10.0	11.1	41.7	33.8	64.3	40.3
Western Africa	13.1	77.9	53.5	225.8	81.6	320.9
African low-income countries	13.7	46.5	64.4	336.9	88.6	472.5
African lower-middle countries	10.9	91.3	45.5	310.3	68.4	441.9
African upper-middle countries	4.4	10.9	18.8	33.5	36.9	50.4

Source: FAO, IFAD, UNICEF, WFP and WHO. 2020. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome, FAO. https://doi.org/10.4060/ca9692en

Sustainable Food Systems

A sustainable food system (SFS) is a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not

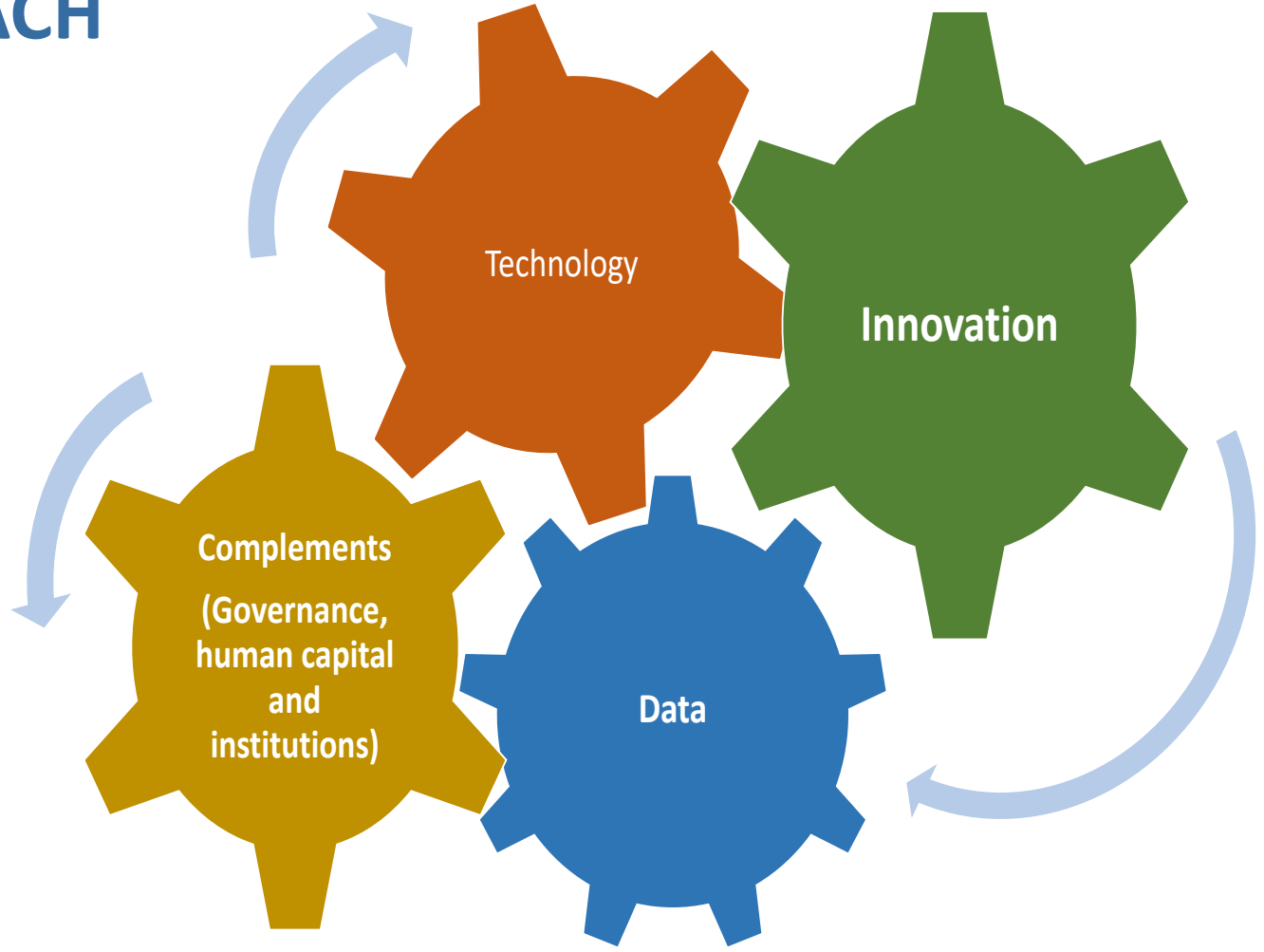


Policy	• 2030 Agenda for Sustainable Development • Malabo Declaration • AfCFTA market of 1.2 billion people
Demographics	• 800% increase in rural-urban food flow since 1970s • 60% of young people under 25 • Urban food demand projected to average 47% in 2030 and 58% by 2050
Climate and Natural resources	• 26m in 20 countries affected by climate shocks • 34% fish stocks overfished; 60% at max sustainable limit • Soil degradation increasing, over 20% of land already degraded, affecting 65% of population
Shocks and disruptions	• Increasing incidence of pests and diseases • Trade, tourism and remittances losses from COVID-19 to cause -1 % GDP alone; overall between -2.1% to -5.1% 2020.

A SYSTEMS APPROACH

Scope for game-changing solutions exists but….

- **Alignment of action is critical**
- **Trade-offs need to be understood and managed**

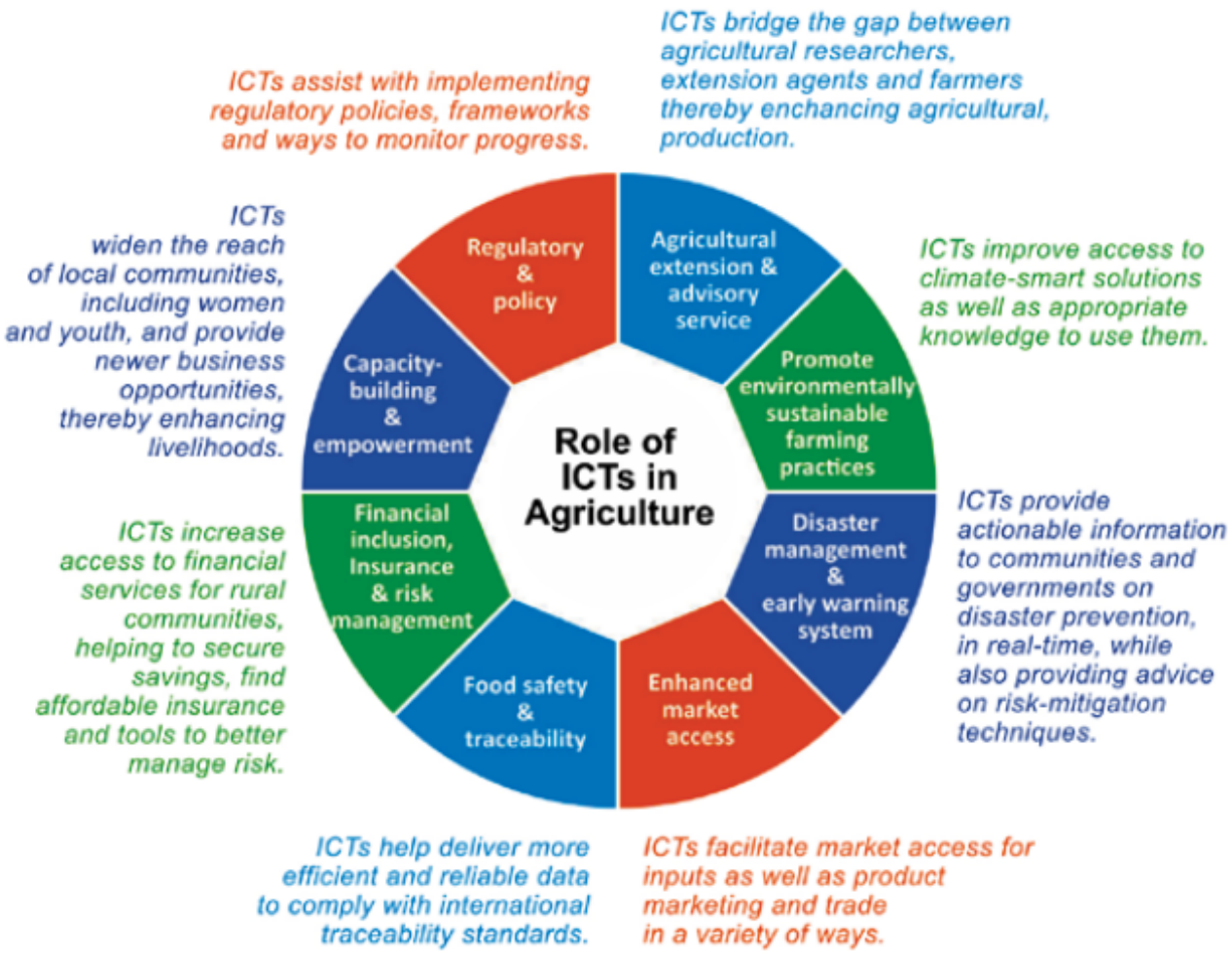


Innovation as an accelerator

FAO defines agricultural innovation as the process whereby individuals or organisations bring new or existing products, processes or ways of organisation into use for the first time in a specific context in order to increase effectiveness, competitiveness, resilience to shocks or environmental sustainability and thereby contribute to food security and nutrition, economic development or sustainable natural resource management (FAO, 2018)

Examples of FAO Support on Innovation

- Documentation and dissemination of good practices and innovations through FAO-hosted platforms like TECA
- Development of guidelines for the assessment of agricultural innovation systems (AIS) and extension and advisory services (EAS).
- Facilitation of participatory dialogue among agri-food system stakeholders
- Scale-up of innovative practices and associated technologies (e.g. mechanization services, digital technologies)
- Enabling inclusive access to innovations for small-scale family farmers and processors and producer organizations through use of digital technologies



Examples of new technology applications

Internet of things: Checking soil health, introducing the traceability of products

Big data analytics: Customized weather and agriculture advisory services, e-agriculture marketplace information, disaster alerts

Blockchain: Smart contracts, improved supply chain monitoring, food safety, insurance

Drone and GIS based applications: Land use mapping, crop monitoring, productivity estimation, weather advisory services

Articial intelligence: Plant disease detection, weather prediction, climate change analytics

Source: FAO, ITU, 2019 Blockchain for Agriculture Opportunities and Challenges

Growing number of examples of Blockchain pilots in the region – such as the Cocoa Value Chain in Ghana and Coffee in Ethiopia

Not a panacea for all problems – requires the right ecosystem and stakeholders with capacities to sustain solutions and progress

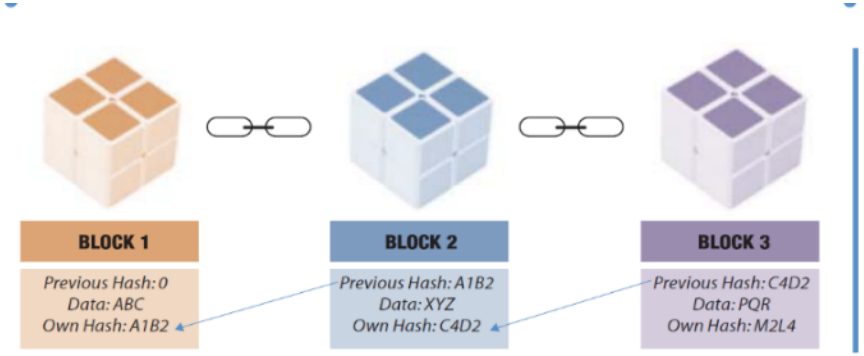


Figure 3: A blockchain

Examples of FAO's support to Food Systems Transformation

- Programmatic work across sectors, disciplines, with multifunctional objectives
- National Food Systems Assessments
- FAO Covid-19 Response and Recovery Programme
- UN Food Systems Summit

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Gracias

Merci

Obrigado

Thank you