



Sustainable Food Systems post-COVID in Developing Countries

Johan Swinnen

International Food Policy Research Institute

GTAP Conference

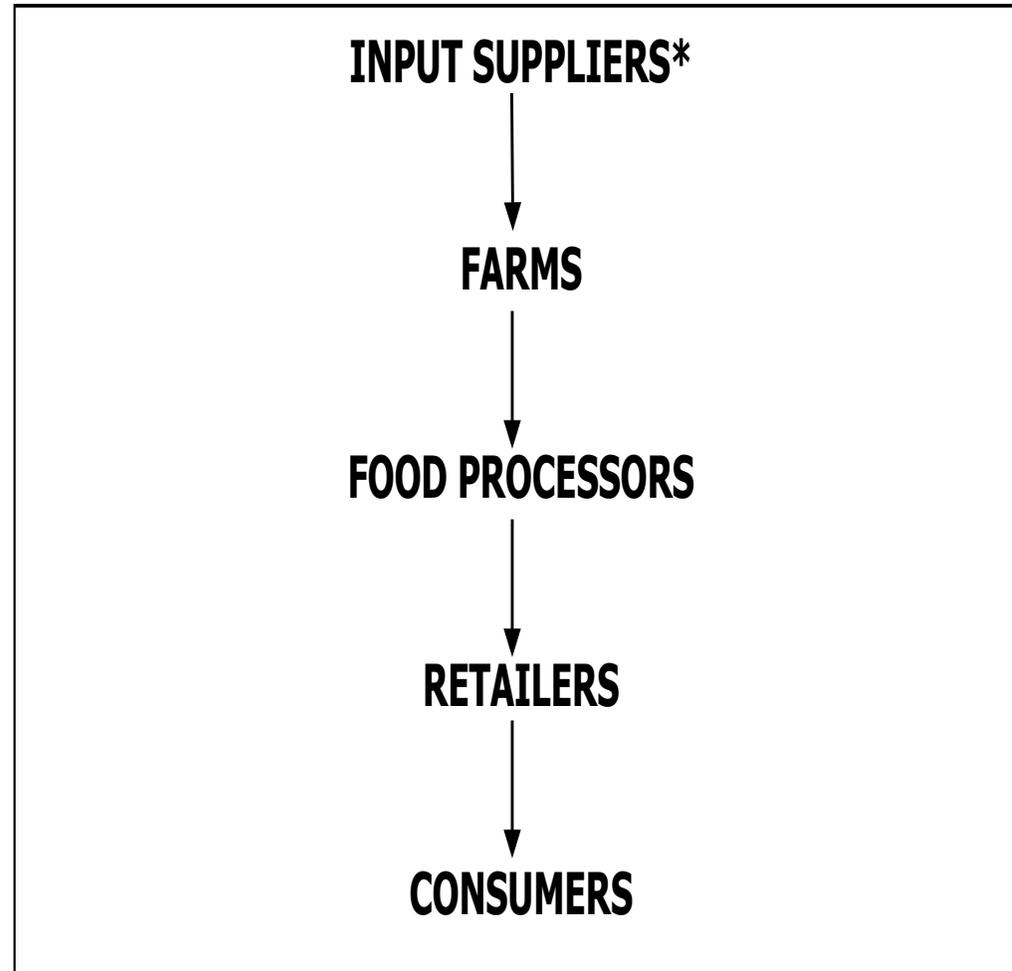
“Food systems sustainability post-COVID”

June 25, 2021

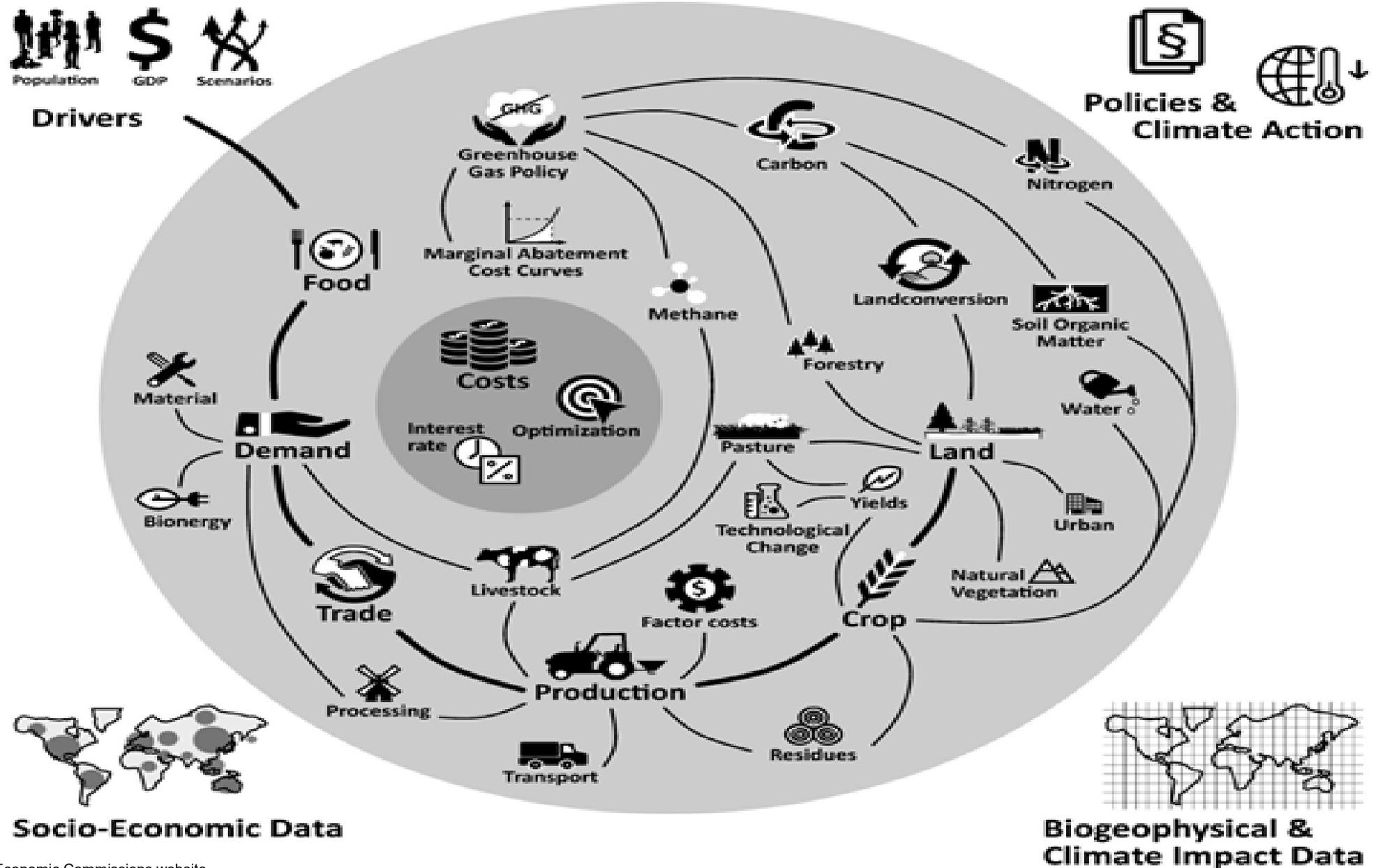
What are “Food Systems” ?

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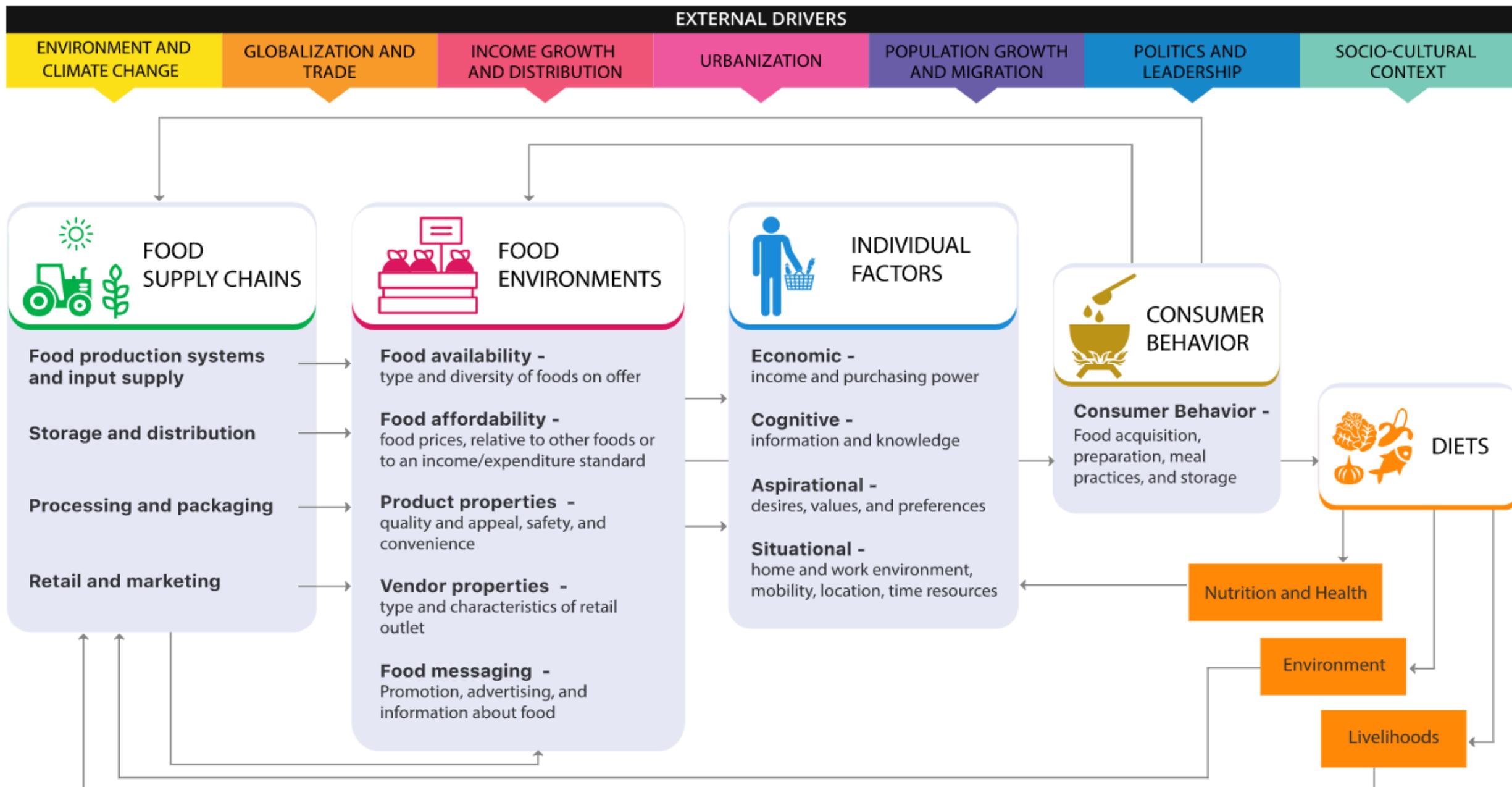
... supply / value chains



The Food Systems

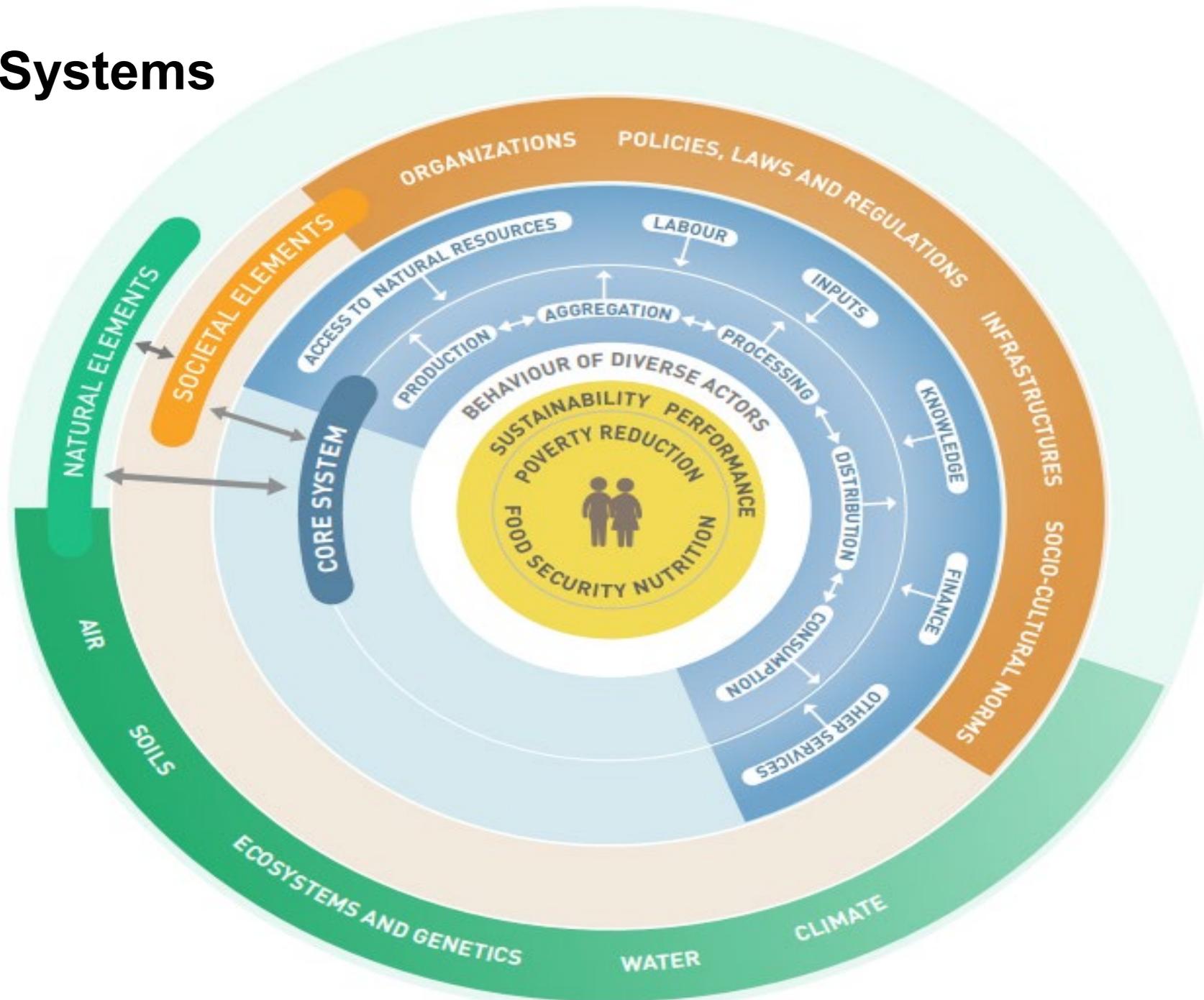


The Food Systems

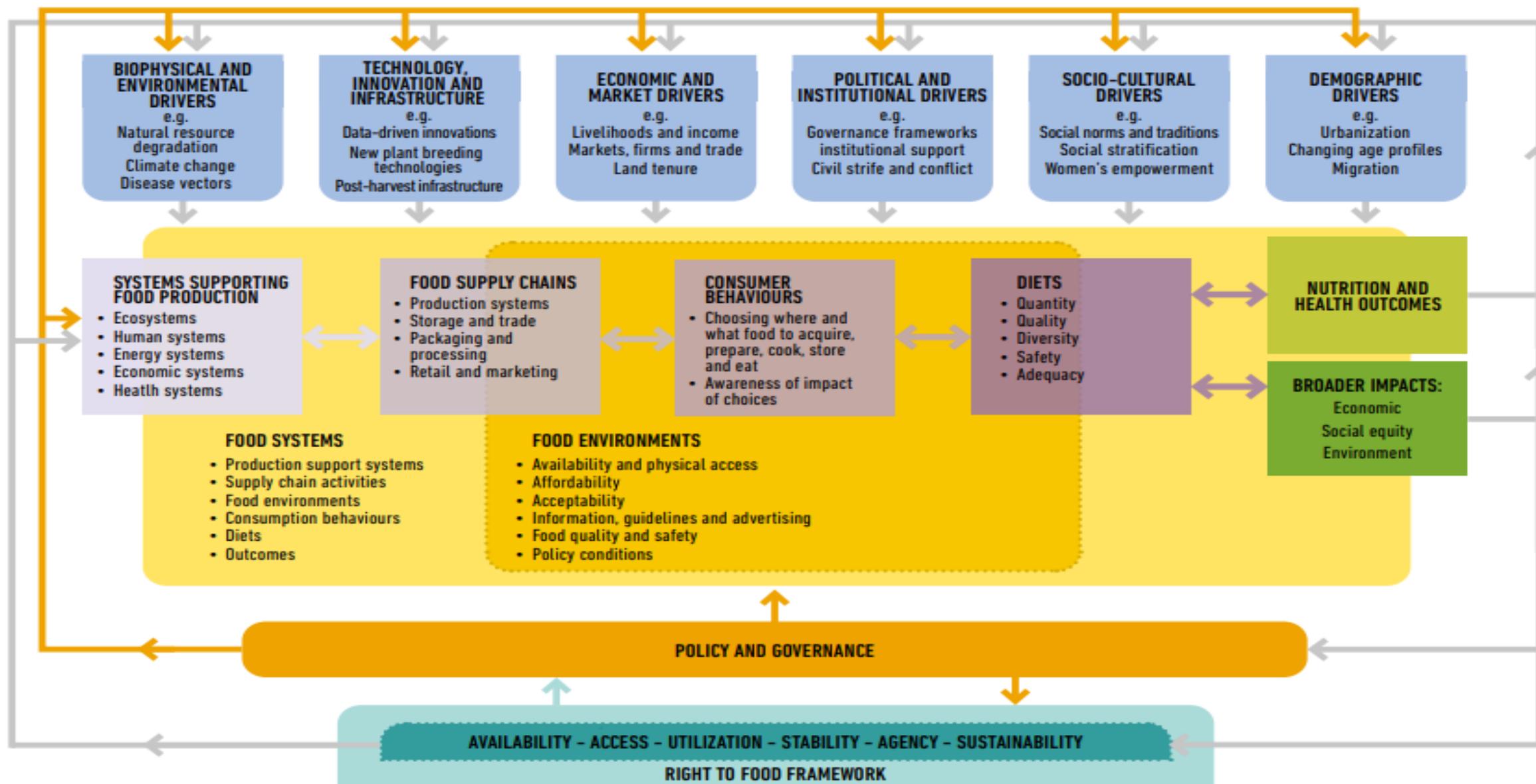


Source: Food System Dashboard website, HLPE (2017)

The Food Systems



Sustainable Food Systems Framework

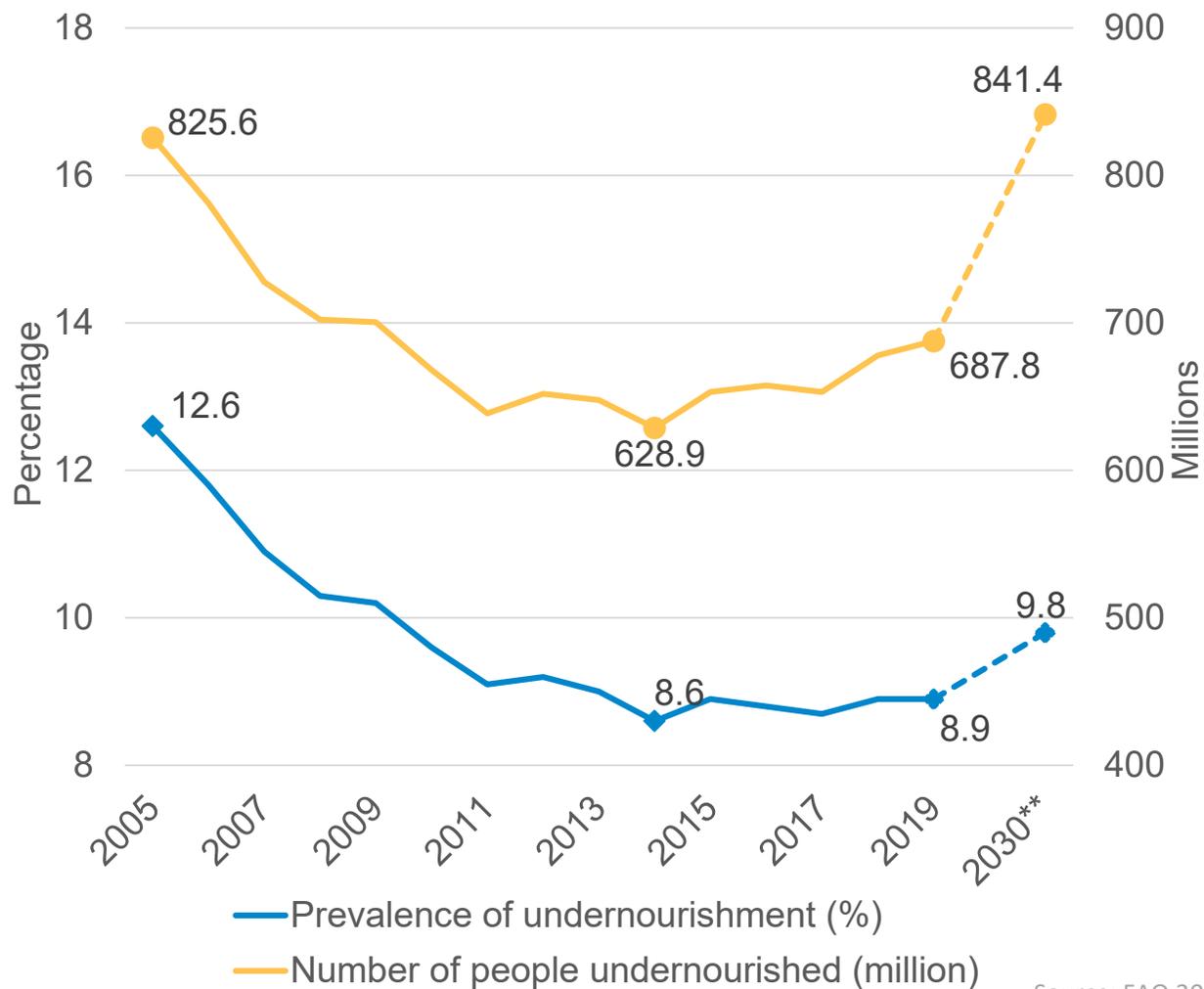


What are food systems ?

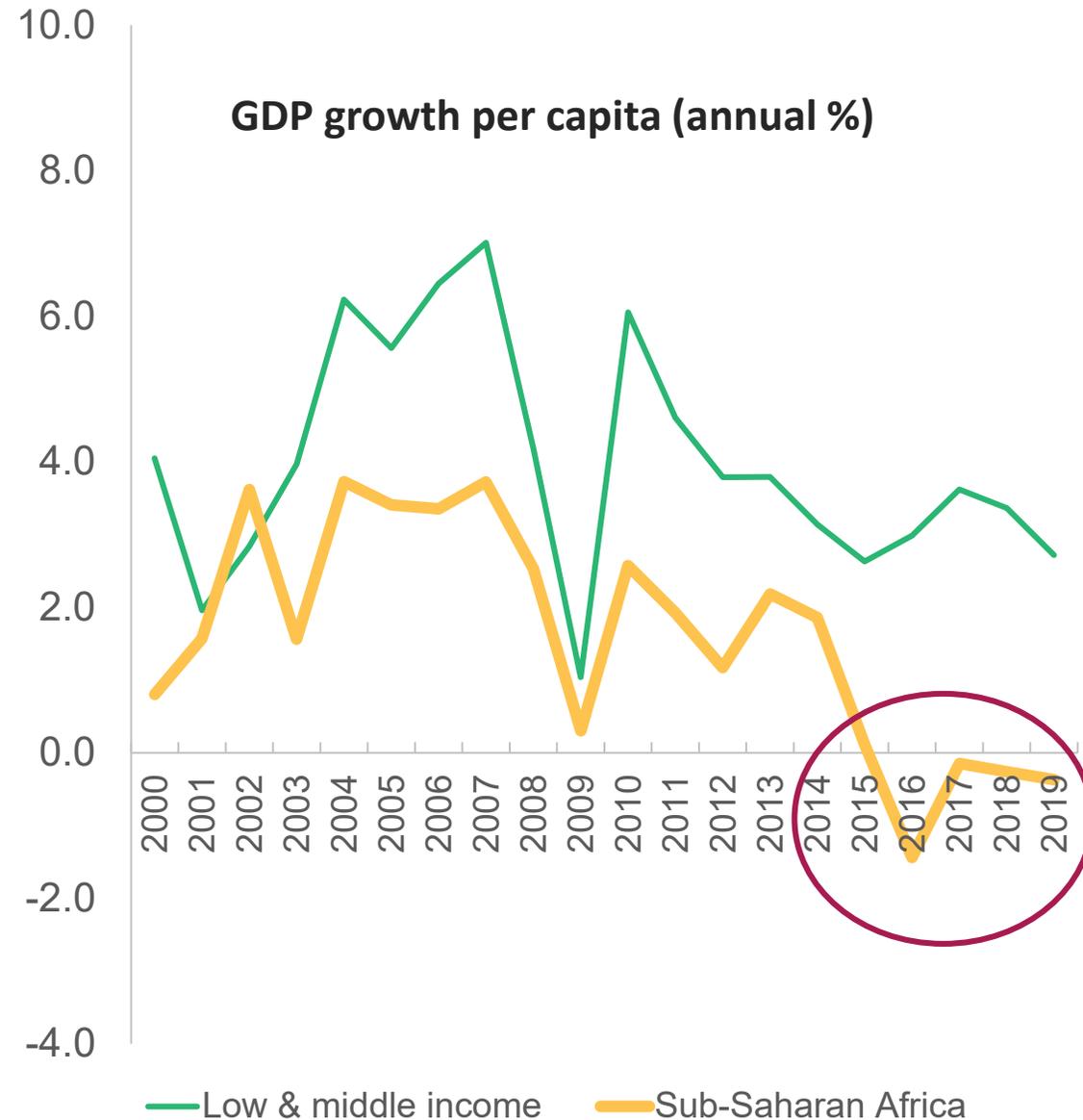


Economic growth and food security

Prevalence and number of undernourished worldwide

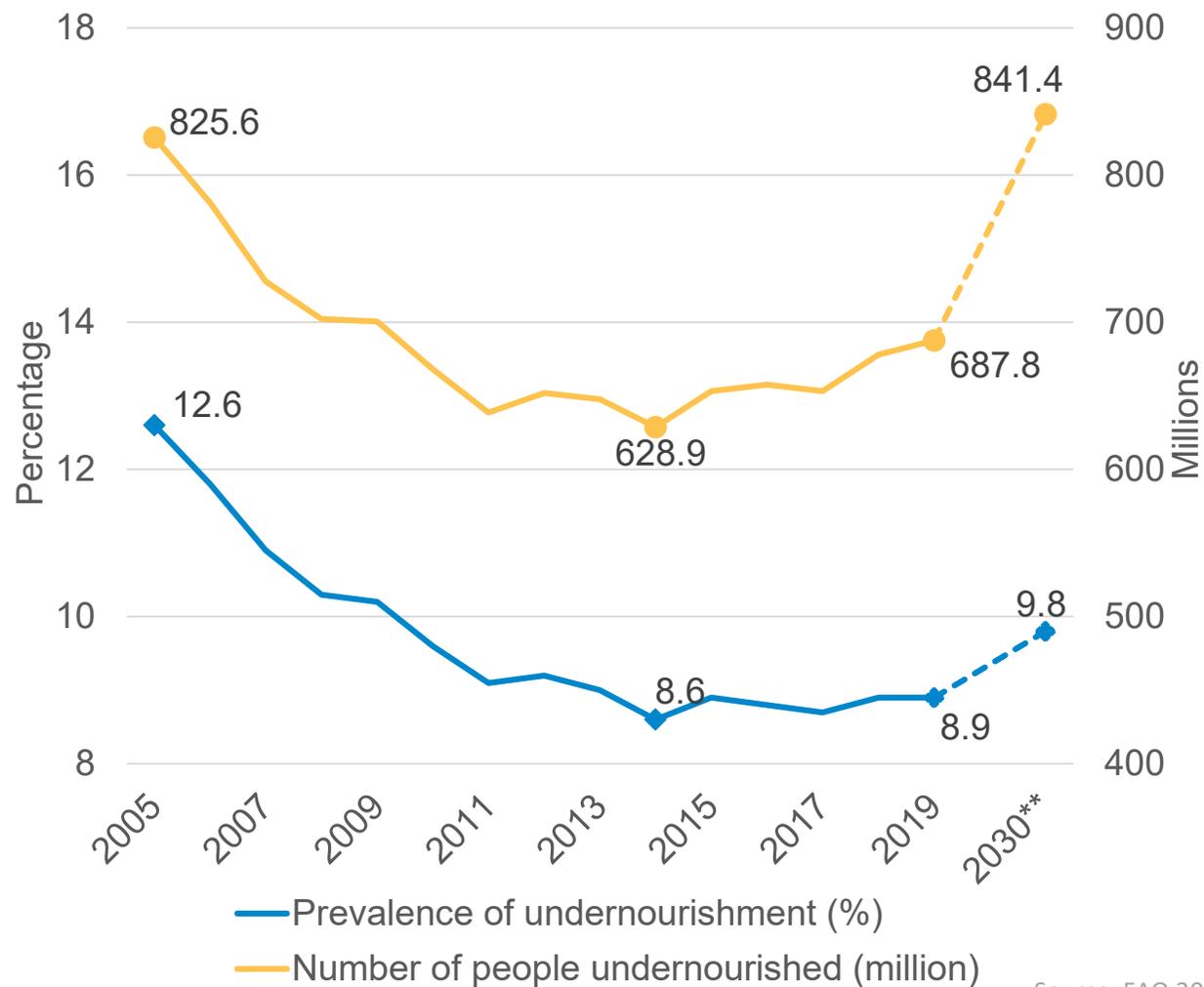


GDP growth per capita (annual %)

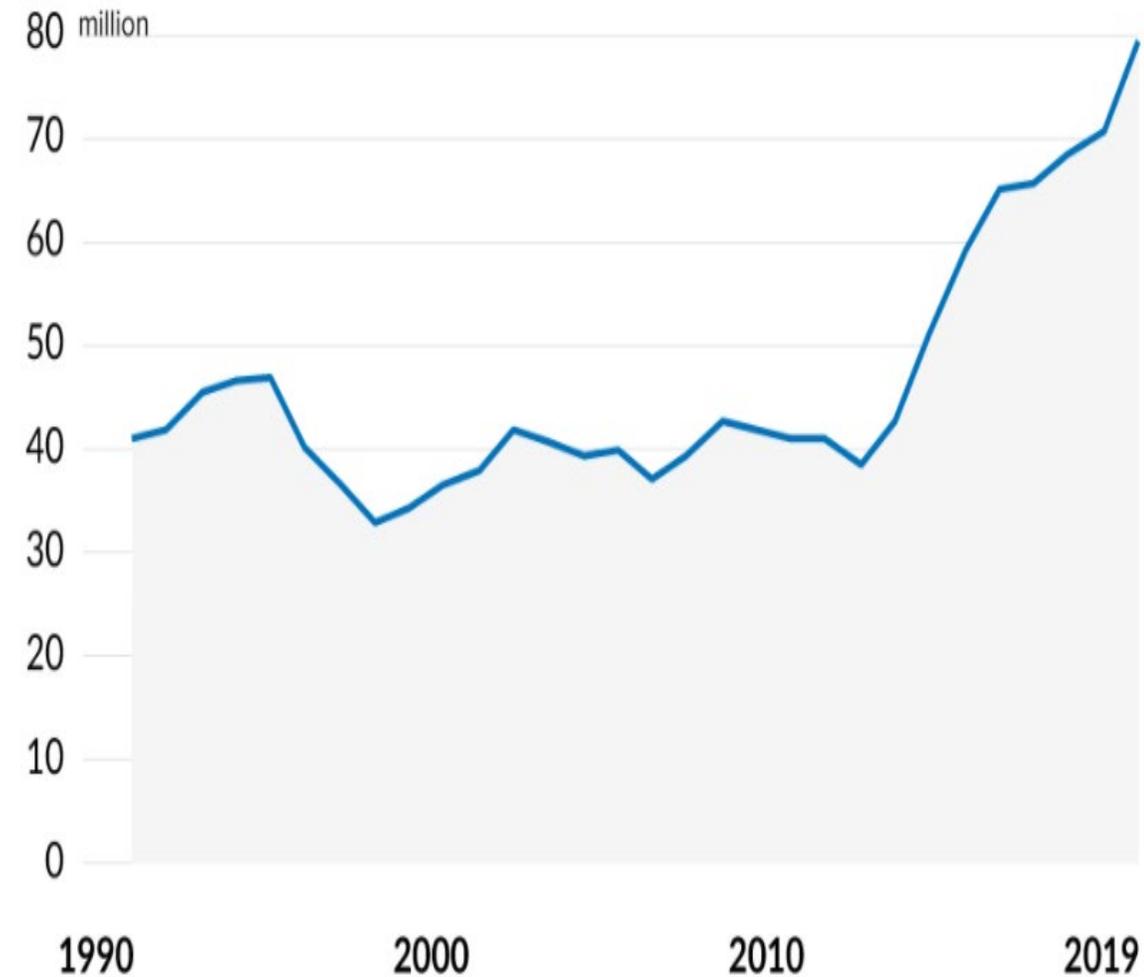


Conflict and food security

Prevalence and number of undernourished worldwide

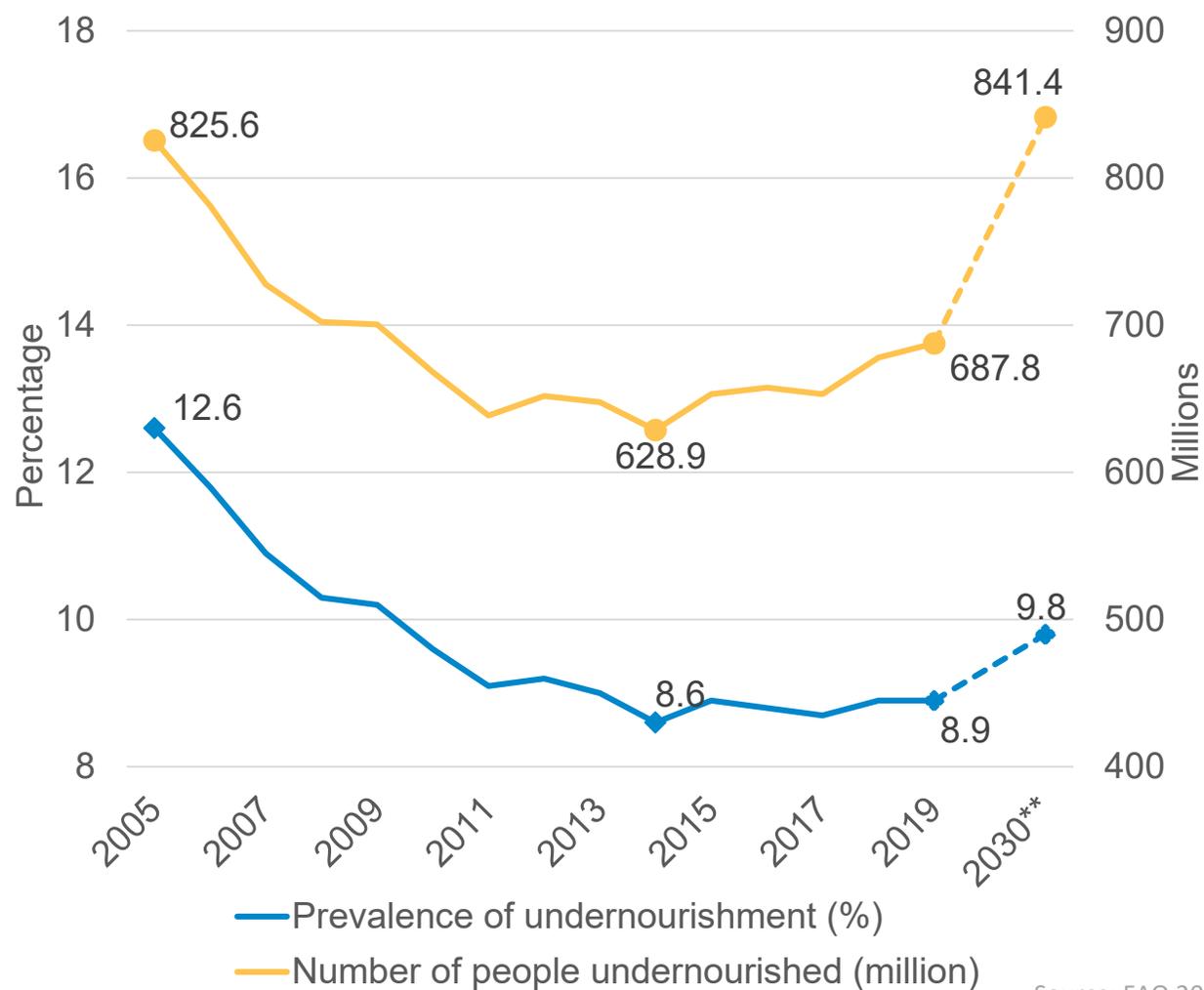


Forcibly displaced people worldwide

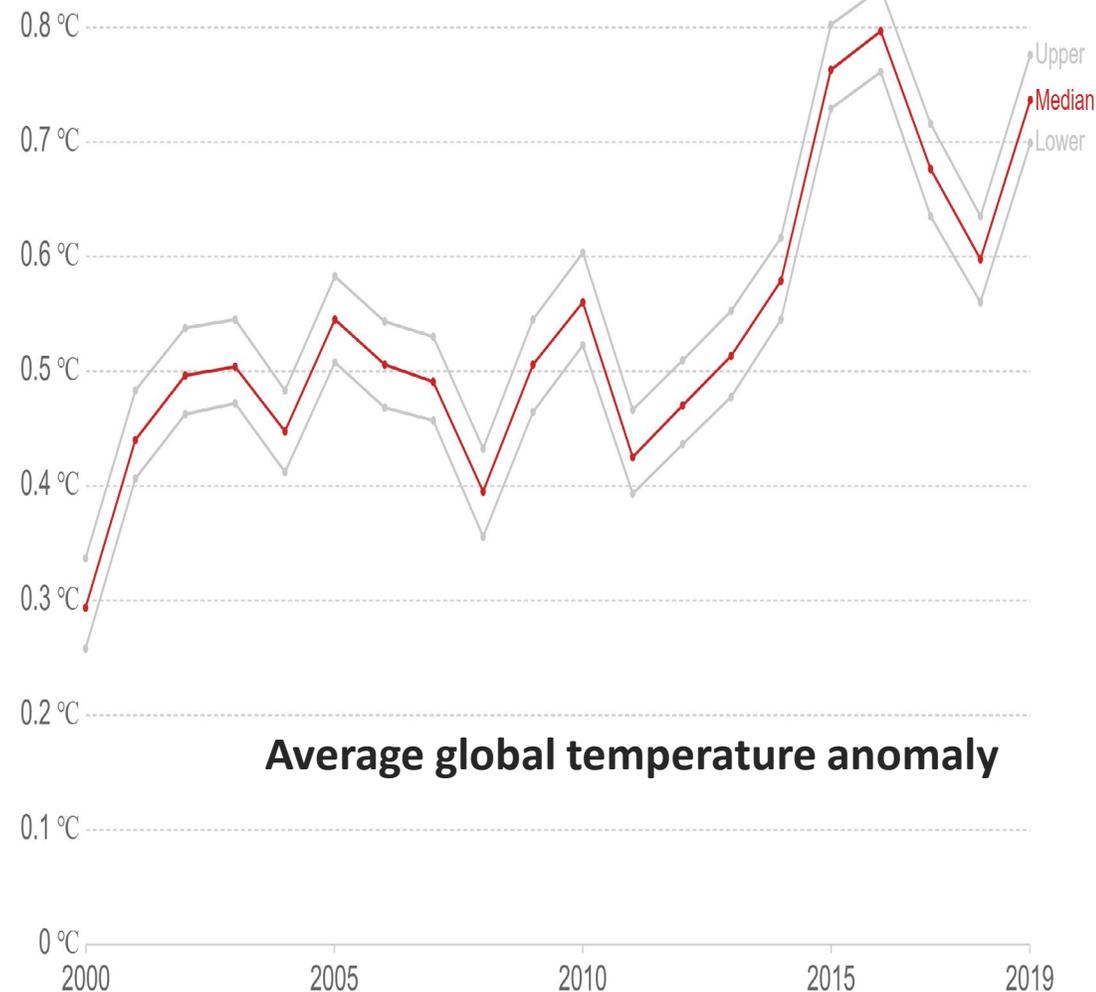


Climate change and food security

Prevalence and number of undernourished worldwide



Global average land-sea temperature anomaly relative to the 1961-1990 average temperature.

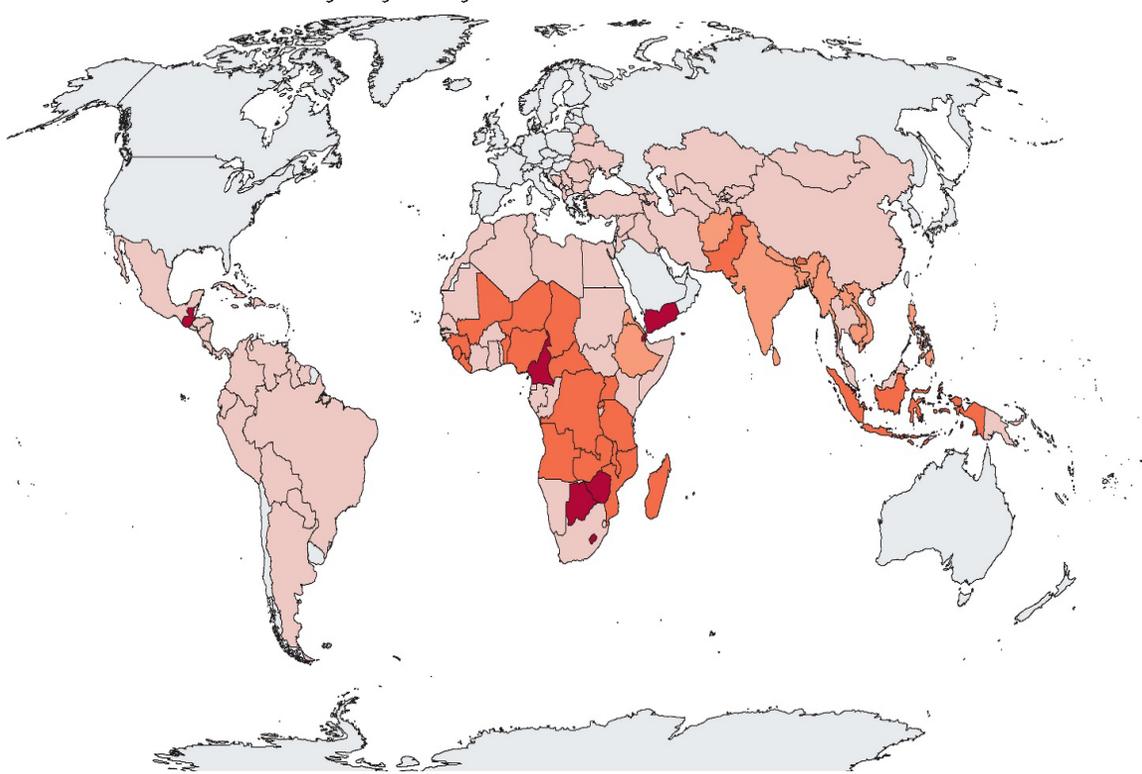


Average global temperature anomaly

Double burden of malnutrition

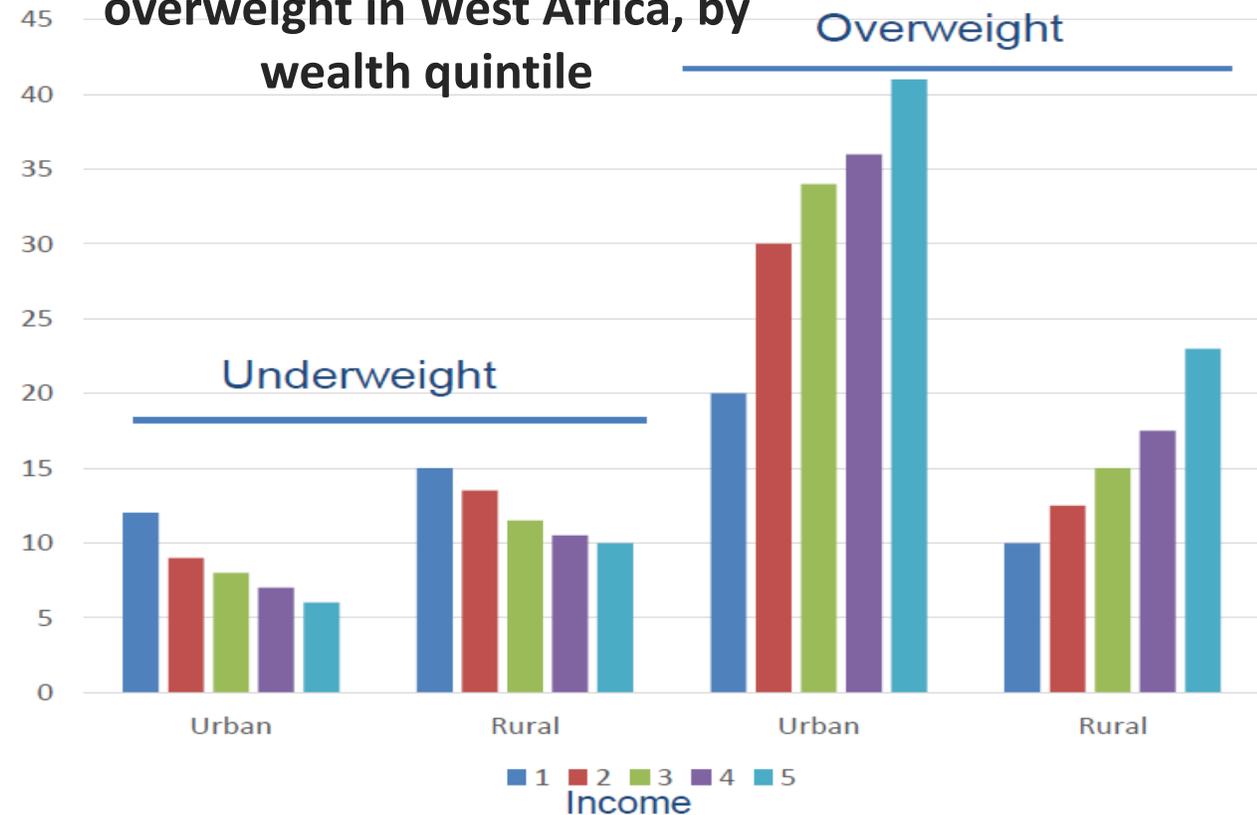
Coexistence of undernutrition (wasting and stunting), thinness in women, and overweight and obesity

Countries with double burden of malnutrition, 2010



- Diets high in sugar, salt, saturated fat
- Increasing consumption of ultra-processed foods
- “Nutrition transition” faster in urban than rural areas

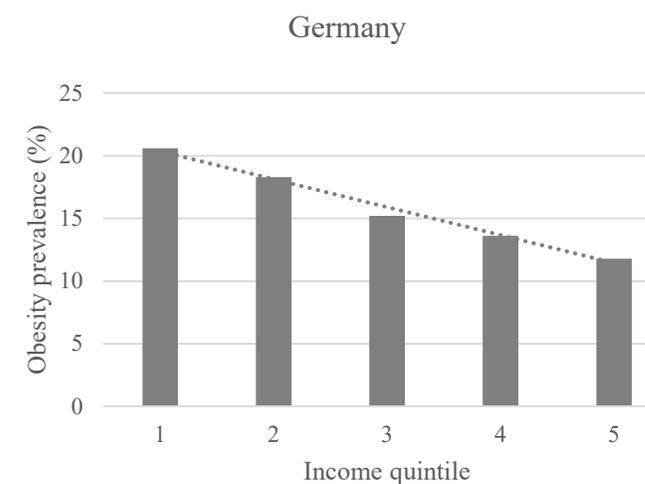
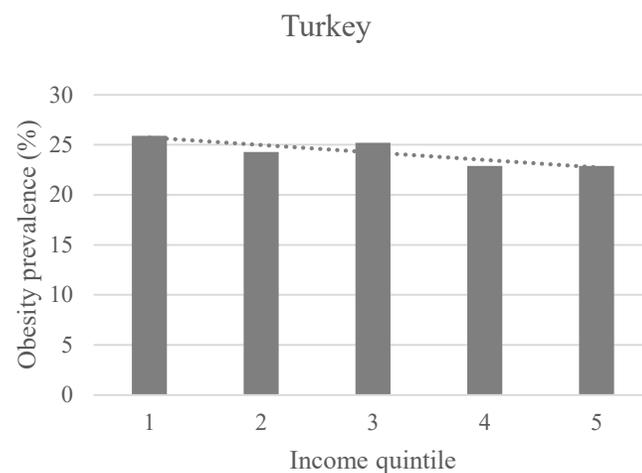
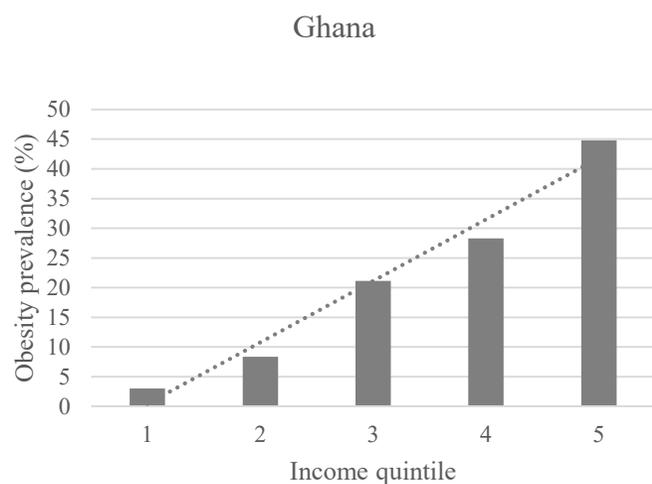
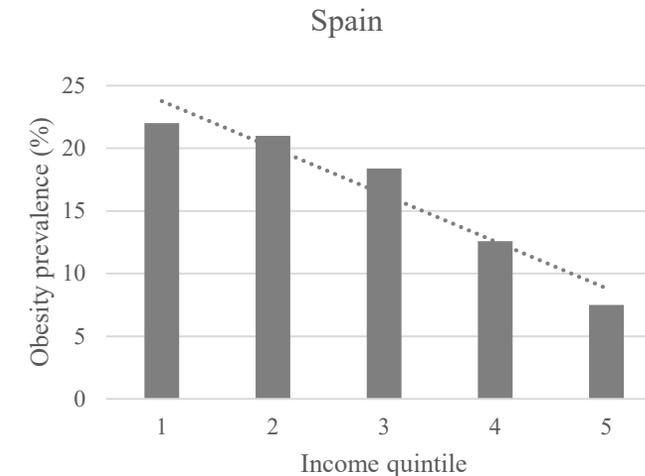
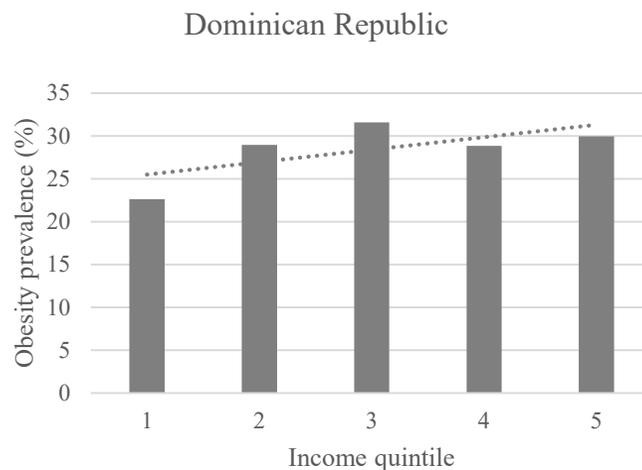
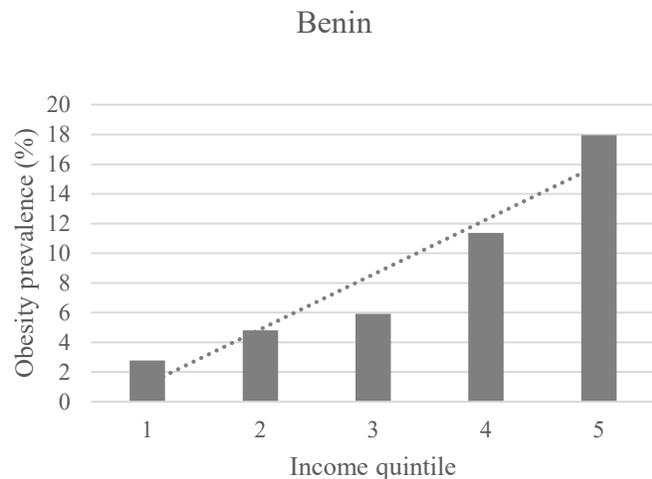
Share of adults underweight and overweight in West Africa, by wealth quintile



Source: Popkin et al. 2020

Source: Ruel 2019, Leroy 2019, Van Wessenbeeck et al. 2018

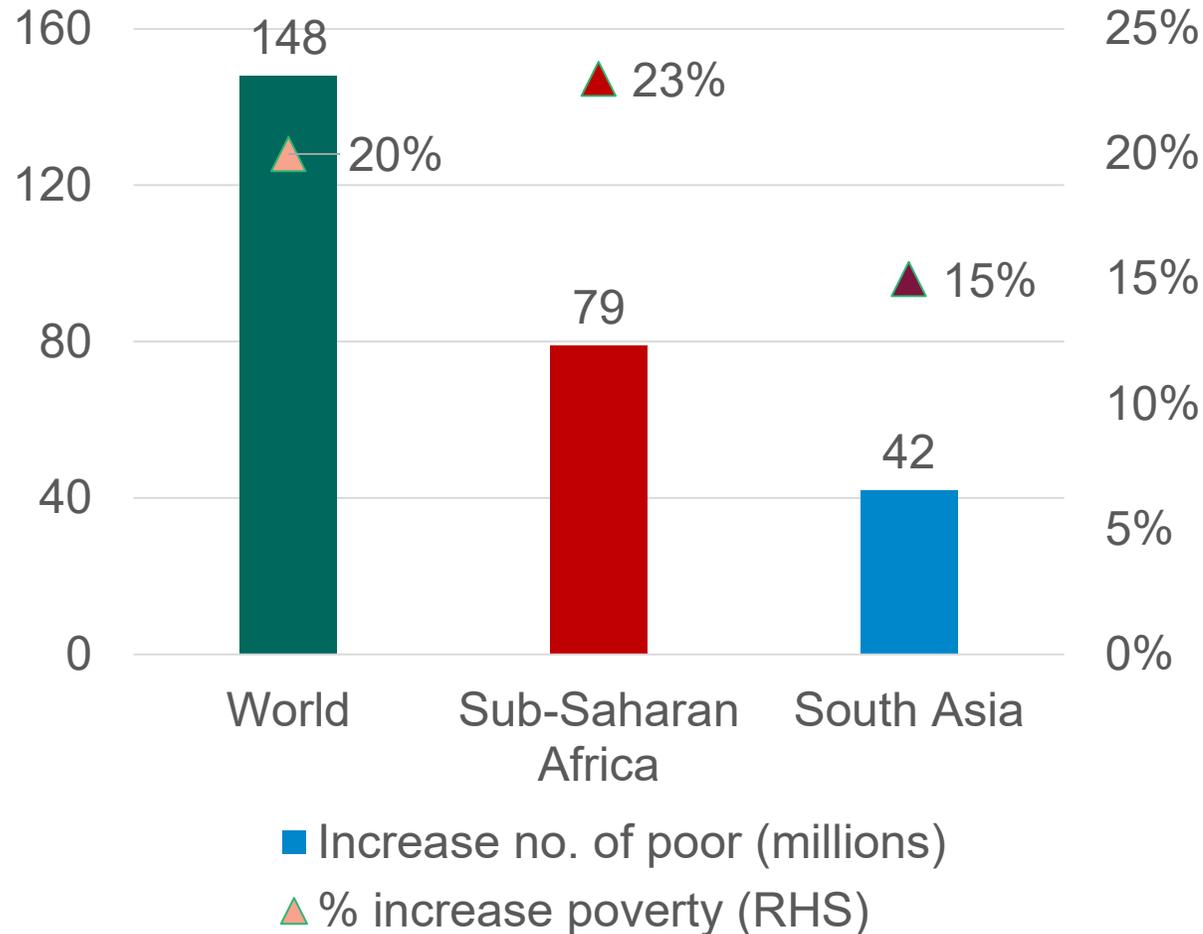
Obesity prevalence (%) and income



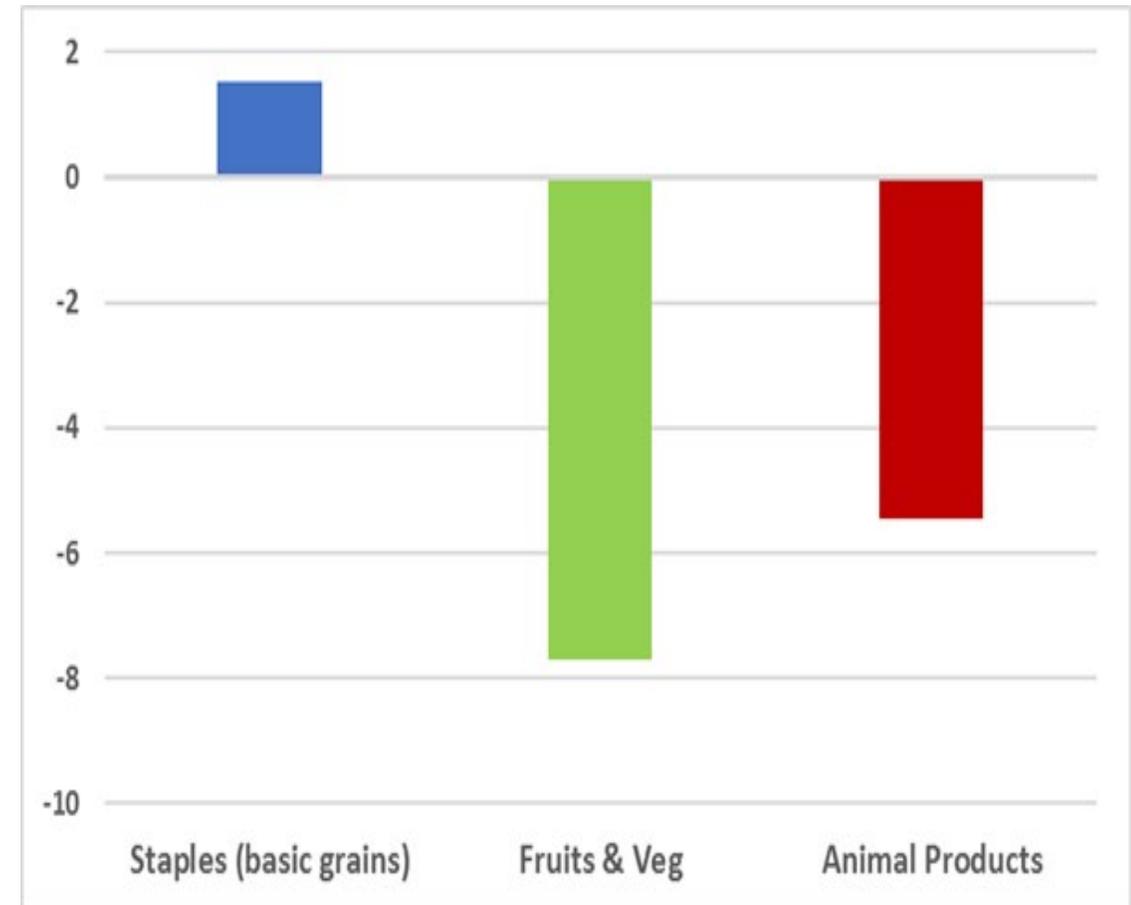
* Within-country female obesity prevalence and income. For low- and middle-income countries, this type of data is only available for females.

COVID-19 impacts on global poverty and nutrition

Impact on Global POVERTY



Impact on Global NUTRITION



Poor people's food and nutrition security is disproportionately affected by COVID-19

1. They spend a large share of their **income on food**
2. Their main production factor and asset is **physical labor**
3. COVID causes more **disruptions** in their (private) **food value chains** – since more labor-intensive
4. **Public social and nutrition programs** are disrupted (more important for them)
5. Less access to **health services**
6. Especially vulnerable: **children, women, (ex-)migrants**

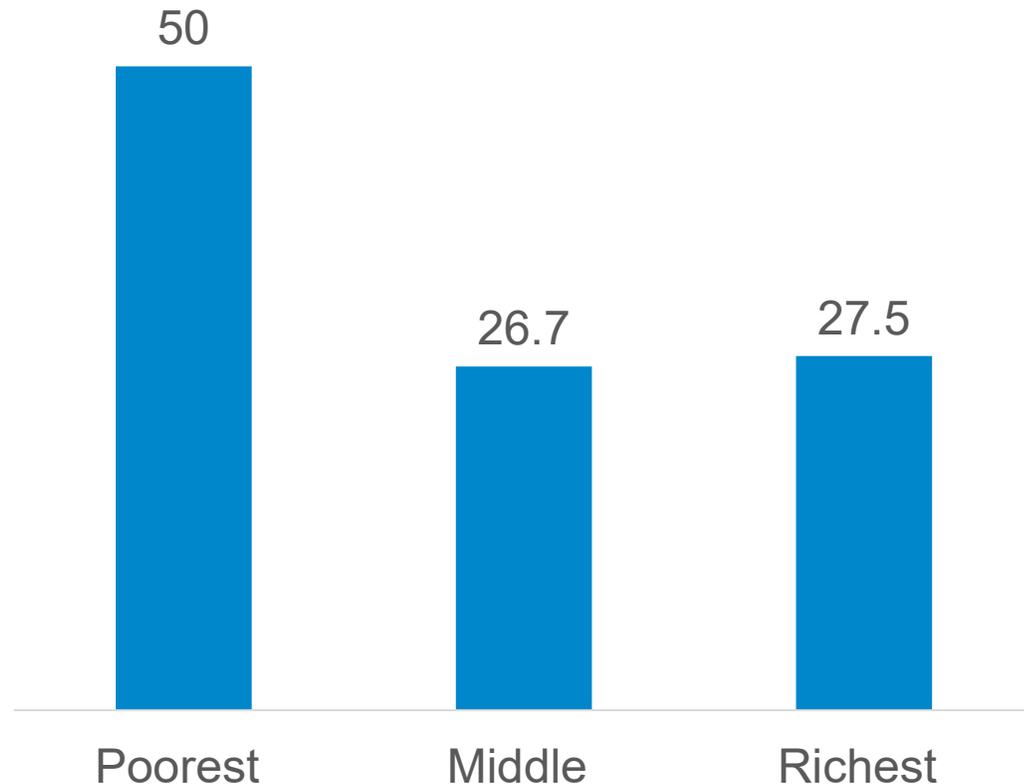


COVID-19 impacts on inequality in food systems

Survey results from Ethiopia

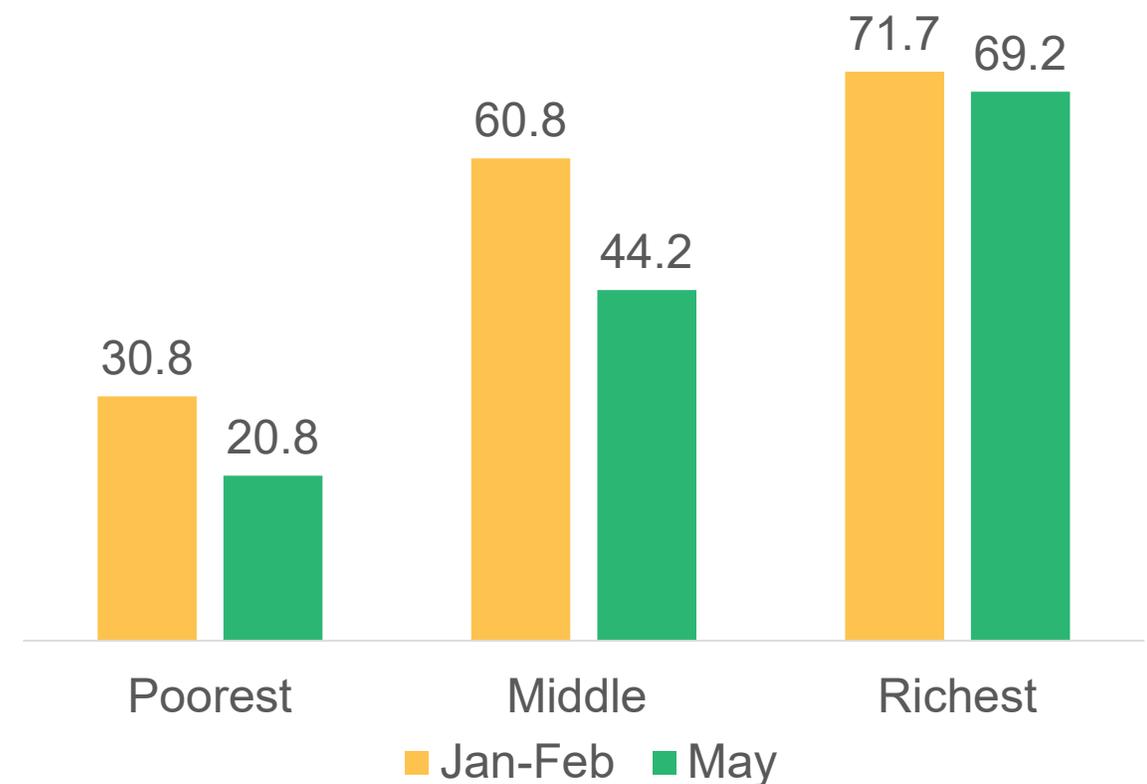
Poor people suffer more from **INCOME** declines

% of households that have much lower incomes



Poor people suffer more from **NUTRITION** effects

% of households consuming dairy products



Women are especially vulnerable

Gendered impacts of COVID-19

- **Health** measures affect women and men differently in developing countries, particularly in rural areas
- **Income shocks** also have gendered impacts
- Impact on women's **empowerment** and children's **schooling** could affect female labor force participation in the next generation, also violence-related services



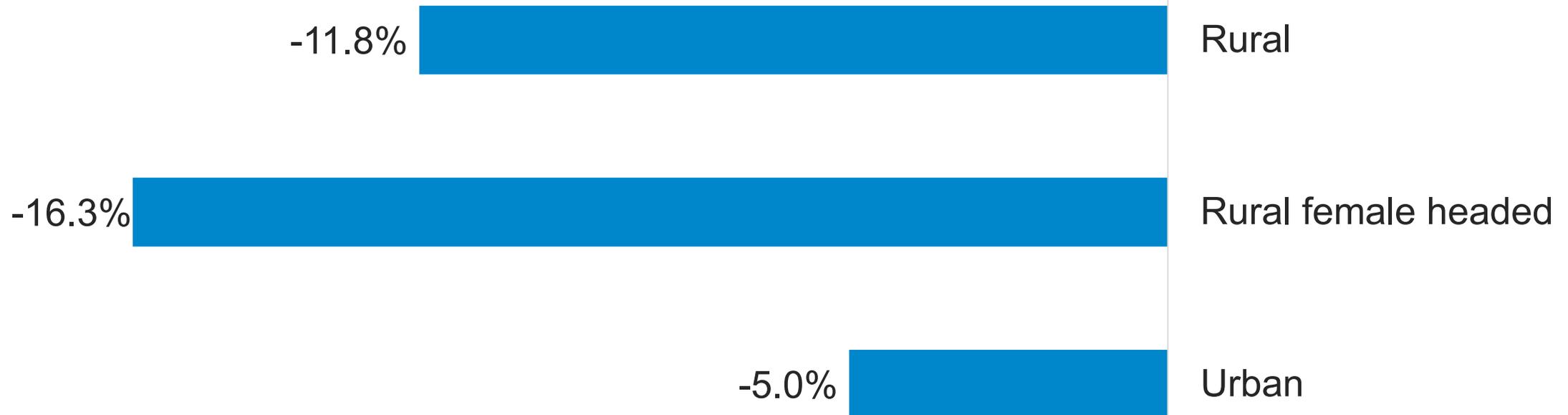
Gender-sensitive policy responses

- **Adapt** existing policies and social protection to account for gender implications
- Improve **program targeting** for women
- Utilize accessible **delivery mechanisms**
- **Complementary programming** in food and nutrition, water and sanitation, maternal health, etc.

Income declines and gender effects of COVID-19

Impact of fall in remittances in Myanmar

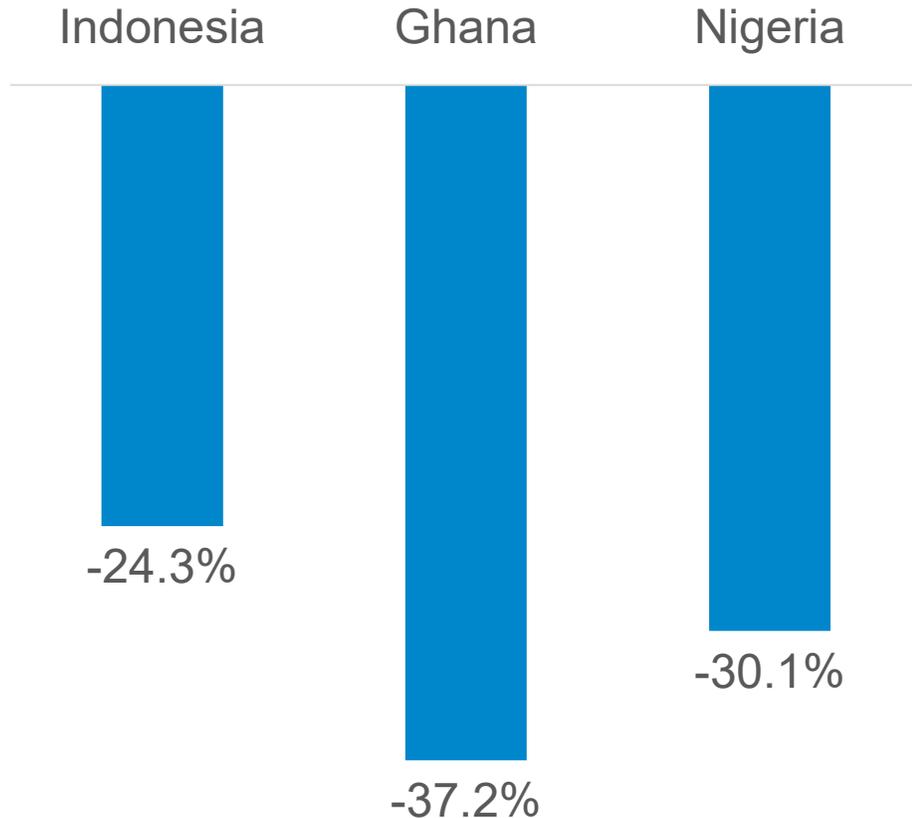
Income decline (%) due to a 50% international remittance shock and a 30% domestic remittance shock among poor households



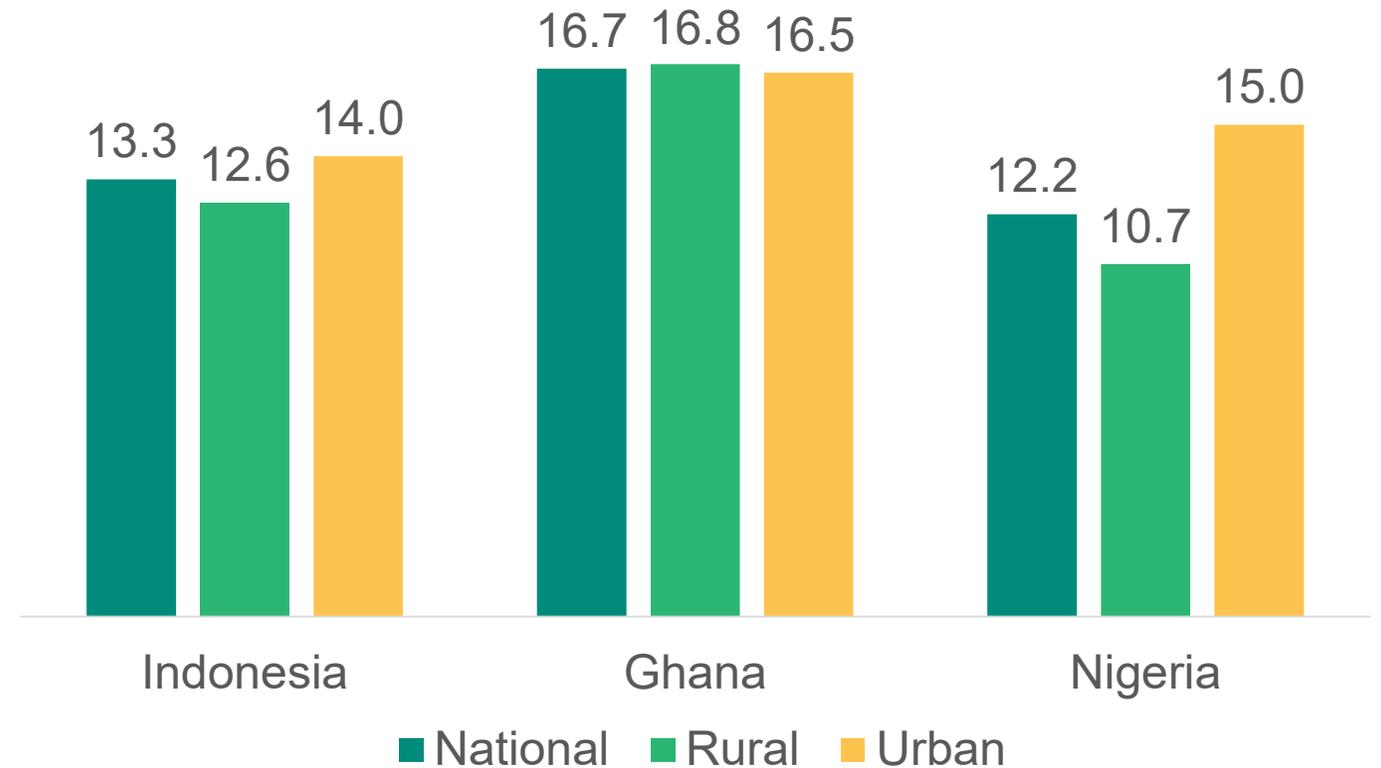
COVID-19 impacts on country GDP and poverty

Average per month of lockdown

Changes in country GDP (%)



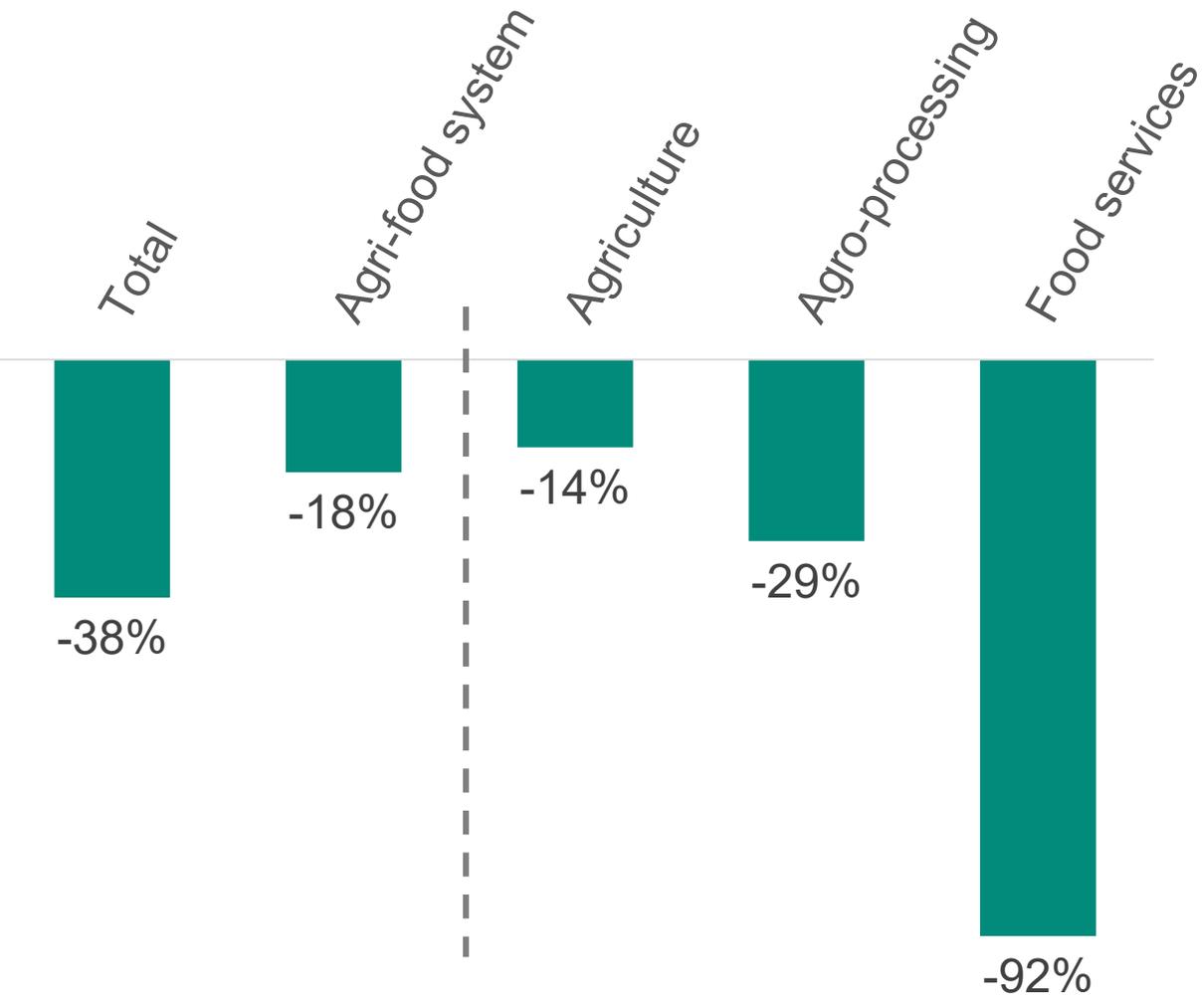
Increase in POVERTY headcount (% points)



Economic impacts on food systems

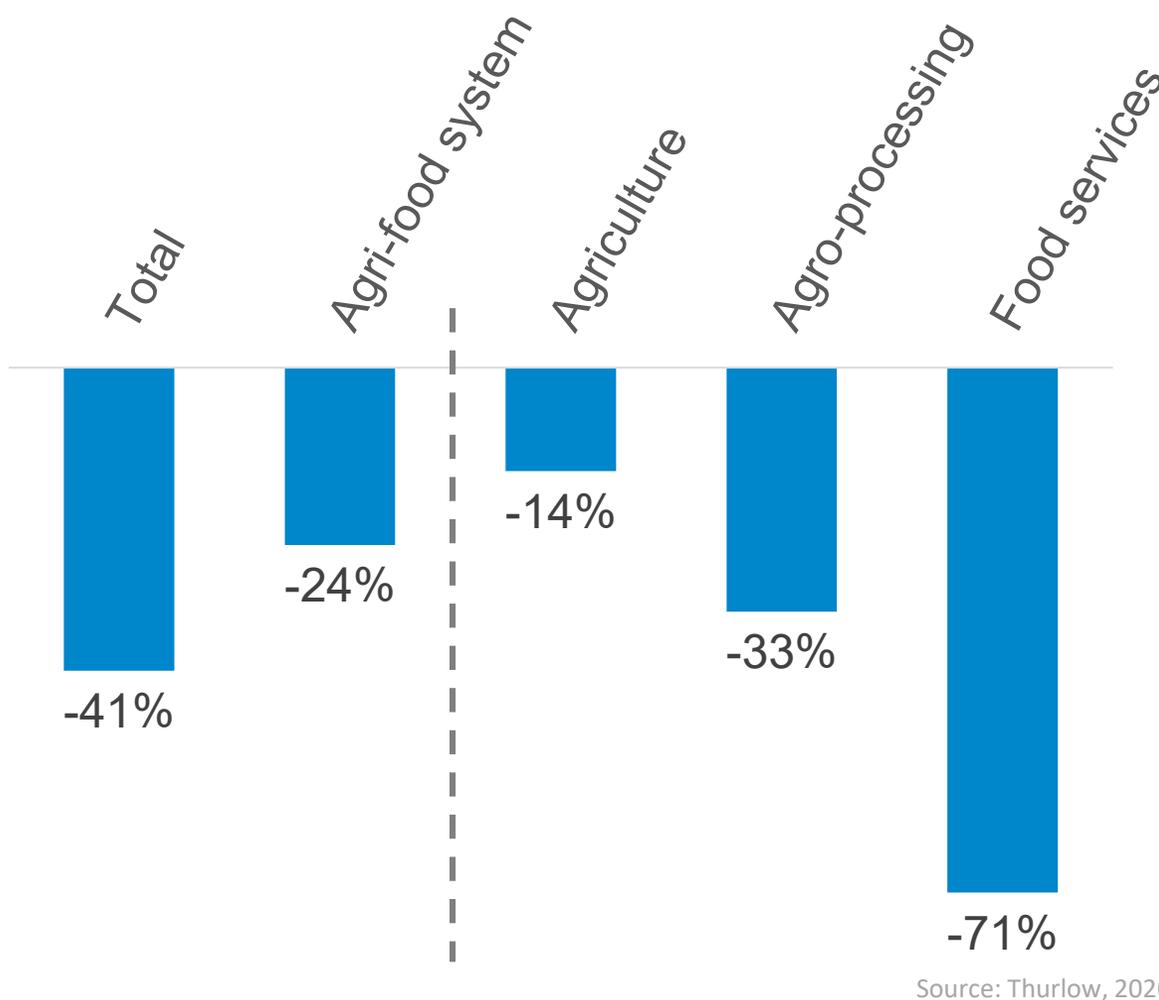
Changes in GDP (%),

NIGERIA: 5-week lockdown



Changes in GDP (%),

MYANMAR: 2-week lockdown



Source: Thurlow, 2020.

Restructuring supply chains and food systems

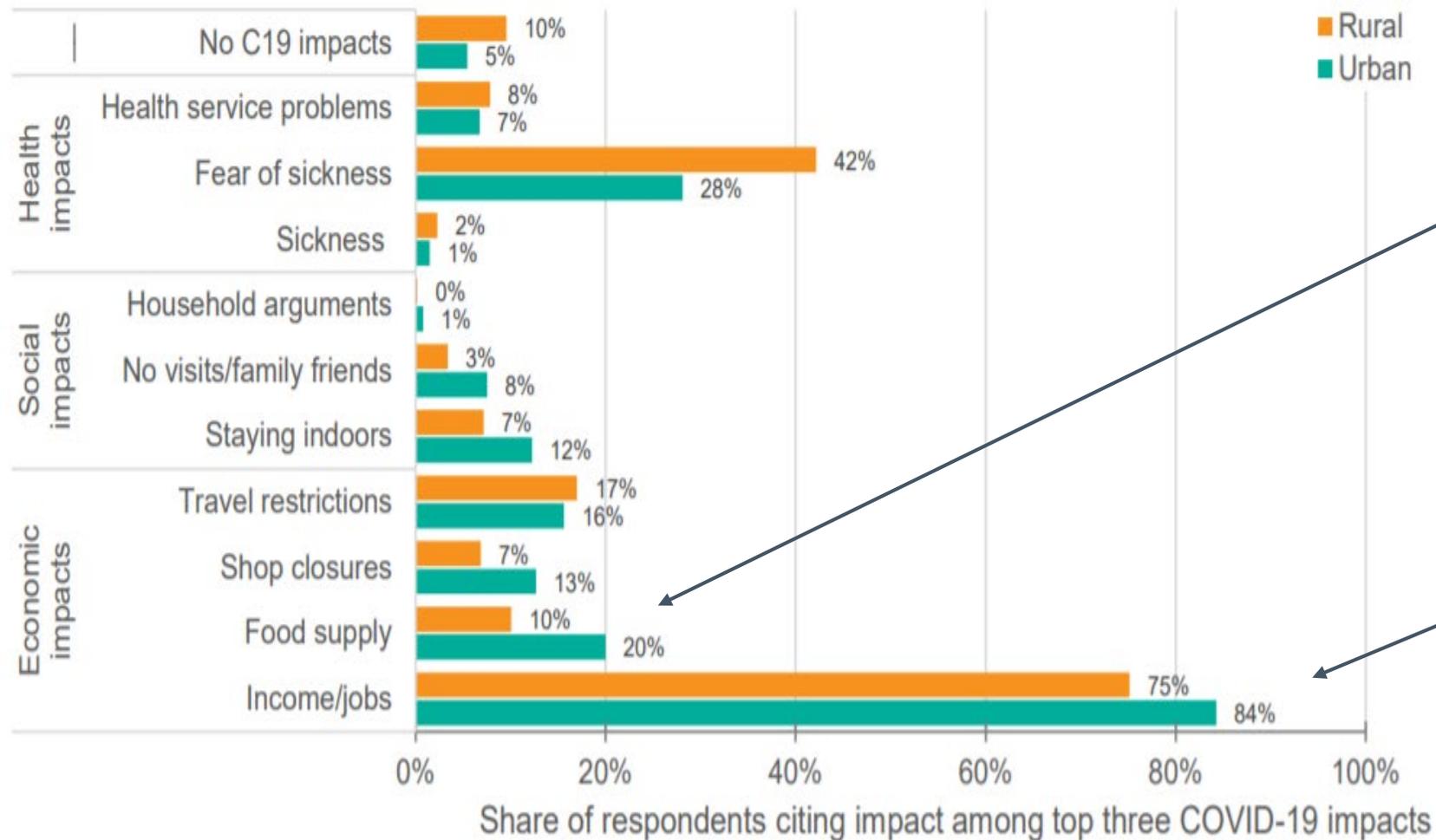
- **Heterogeneity:**
 - Global -- local
 - Labor -- capital intensity
 - Large -- small-scale
 - Short -- long run
 - Staples -- perishables
- **Many innovations** to overcome restrictions
 - **E.g. Digital growth :** e-commerce & ICT solutions
-



Supply disruptions versus income and employment

Survey evidence from Myanmar

Figure 4. Respondent assessments of three largest impacts of COVID-19 on their household

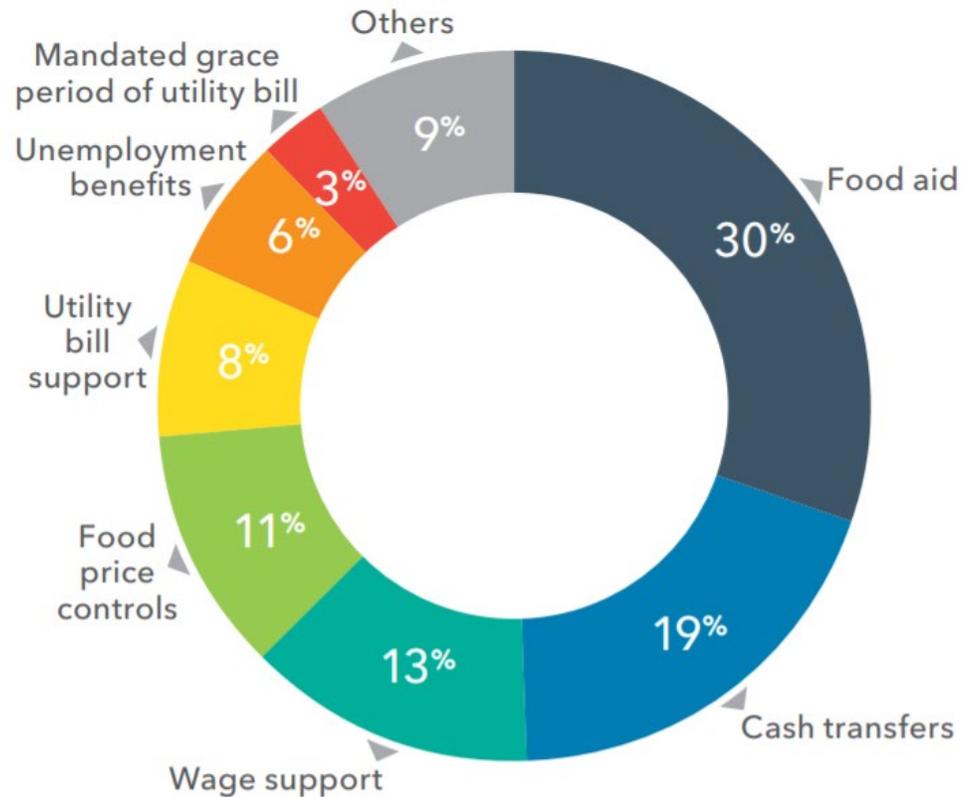


■ Despite disruptions, **food supply chains adjusted relatively well** to meet demand

■ **Household income and job loss** were most severe impact

Scaling and sustaining social protection under COVID-19

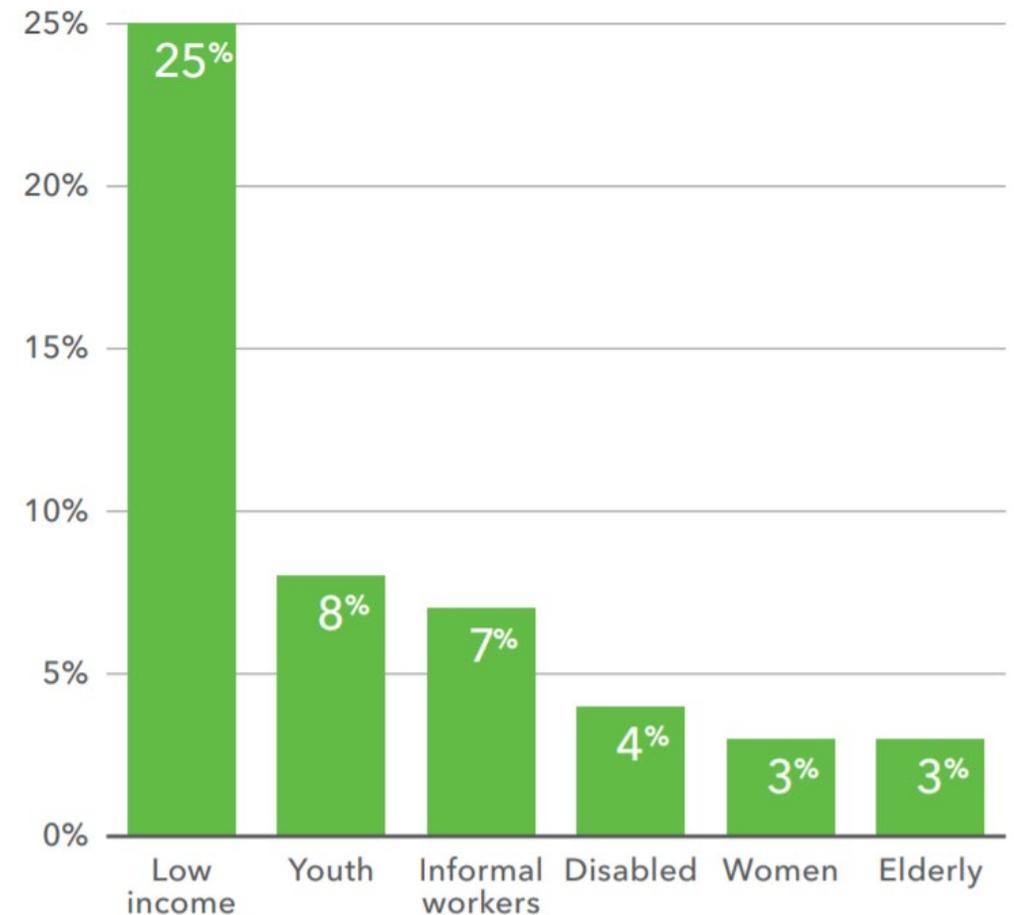
Distribution of policy types within social protection



Source: Calculated from IFPRI (2020).

Note: The "Others" category includes such policies as expanded credit options, rent support, consumer food subsidies, pension increase, and school fee waivers.

Share of social protection policies targeted to specific populations



Source: Calculated from IFPRI (2020).

Source: Fang, Kennedy, and Resnick, 2020.

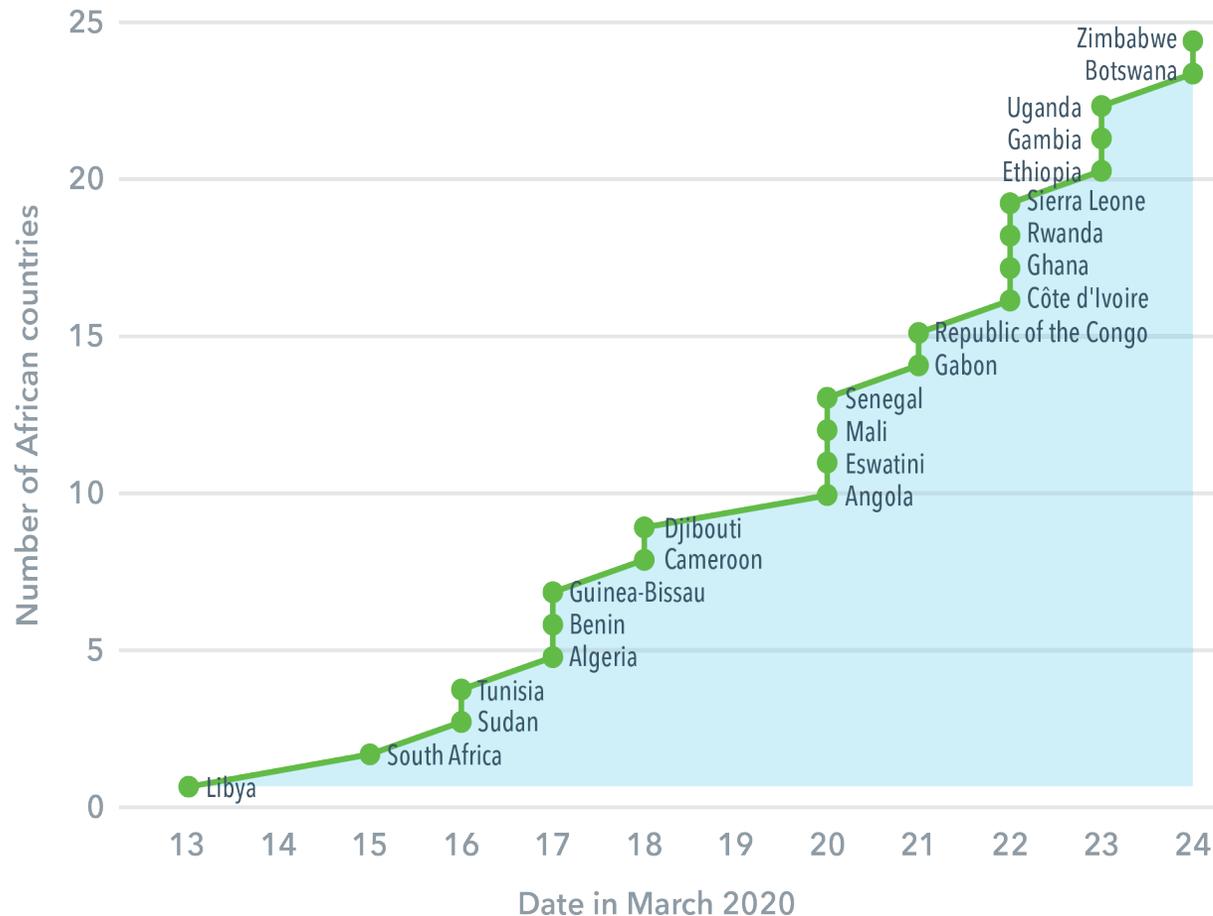
Trade is crucial for food security and for dealing with climate change

- But food and trade policies need to support rather than hamper trade



COVID-19 trade restrictions (int'l and domestic) create problems for developing countries

FIGURE 1 Closure of land borders in Africa, March 2020



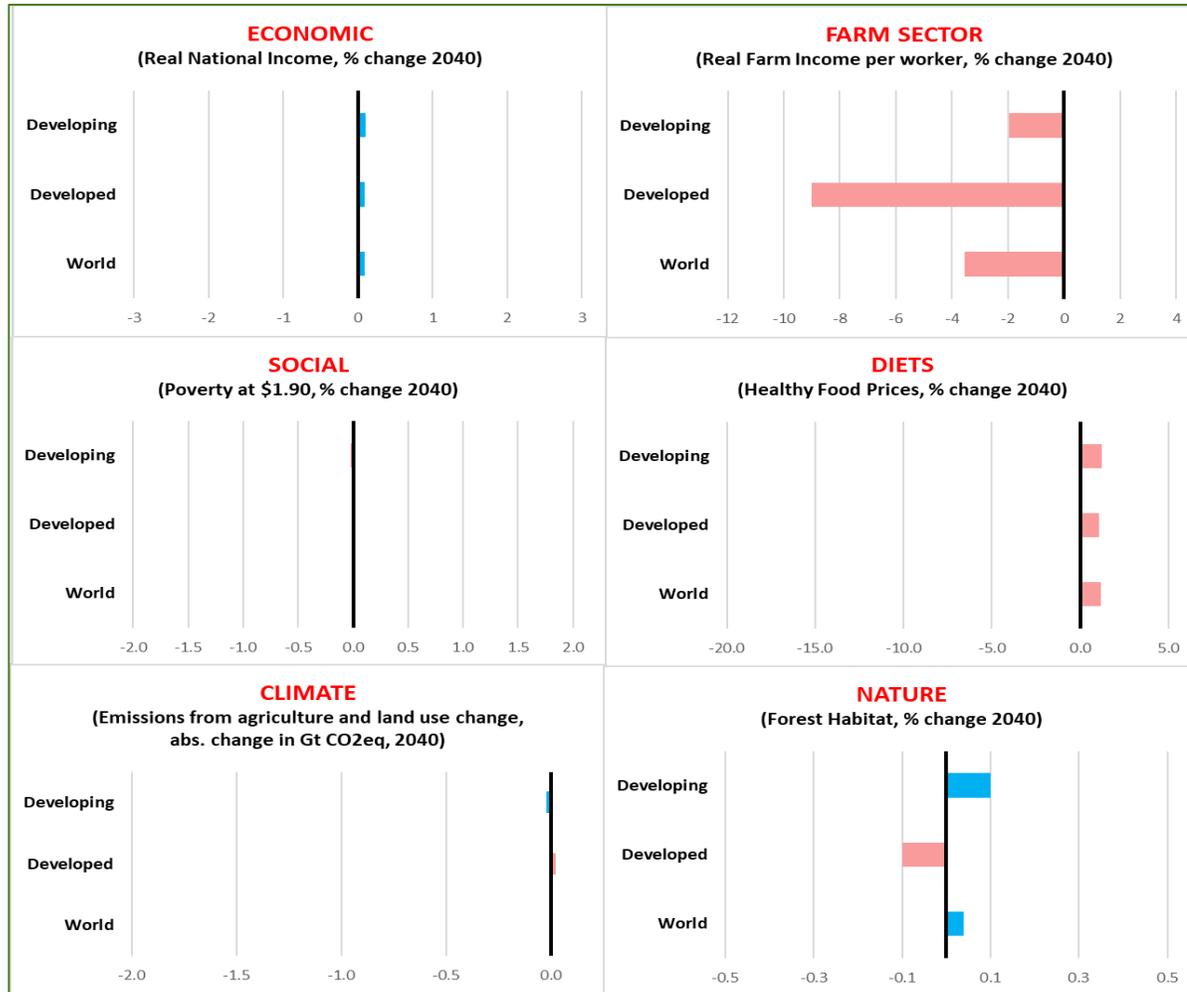
Source: Authors' elaboration from websites of US embassies in Africa and from al Jazeera.

- Rapid response to export restrictions by major global producers: “**Trade restrictions are worst possible response to safeguard food security**”
 - FAO, G20, WTO etc., called for open trade to avoid repeating the problems of 2007-2008—skyrocketing world prices
- **Developing country responses vary widely** in approach and impact
- **But trade restrictions very widely applied**

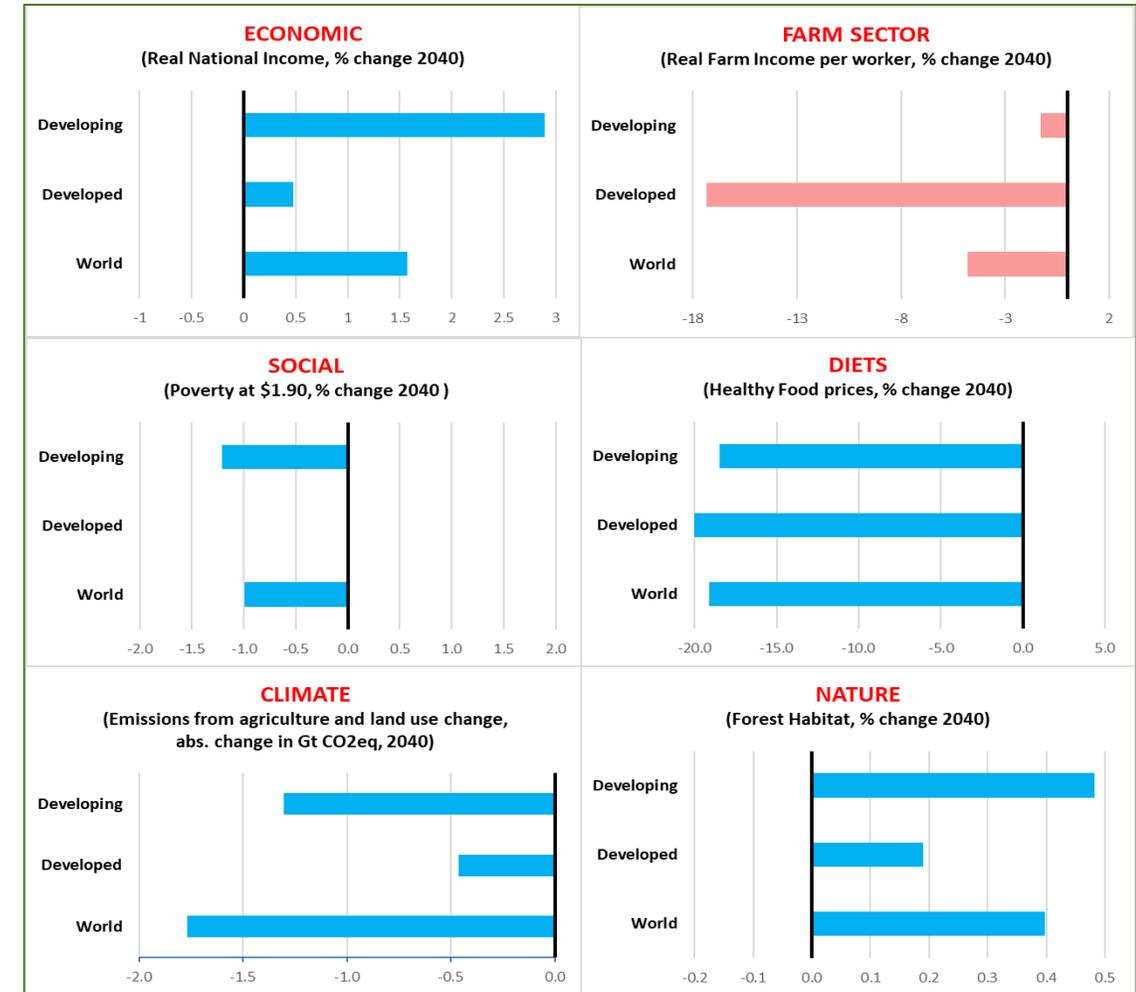
See: [IFPRI's COVID-19 Policy Response Portal](#)

Repurposing agricultural policy support for climate change mitigation

Scenario 1. Removal of all subsidies & border control



Scenario 2. Shifting a small share of current subsidies toward productivity enhancing and emission reducing technologies



Repurposing agricultural policy support for climate change mitigation

Scenario 1. Removal of all subsidies & border control

- **Some outcomes are good, but its impacts are very small**
- There will be a **big decline in farm income**, which may lead to challenges
- **There are clear tradeoffs** among environmental, economic, nutrition and social objectives when simply removing subsidies

Scenario 2. Shifting a small share of current subsidies toward productivity enhancing and emission reducing technologies

- The productivity enhancing shock has **vastly larger benefits in almost all dimensions**
- **The decline in farm income is large** because the supply increase hits a low elasticity of demand
- The fall in farm income per worker is transitional - because of the cost of transforming farm workers into non-agricultural workers
- Overall, it appears to yield a win-win result

Repurposing agricultural policy support for climate change mitigation

Scenario 1. Removal of all subsidies & border control

Scenario 2. Shifting a small share of current subsidies toward productivity enhancing and emission reducing technologies

Several other scenarios...



Key messages

- **Agricultural support measures could play a critical role** to reduce poverty and to transform food systems to be more sustainable and resilient.
- However, it is very important to be **very strategic about the type of reforms to be pursued if those goals are to be achieved**

Further thoughts

- **Political economy issues related to these different scenarios are not identical.** It depends on the distribution of the benefits and costs – and possible compensation policies

Building back better will be key for food systems

1. A **transformative moment** in history
2. Much **creativity and innovation** in restructuring value chains and food systems to deal with crisis
3. From crisis management to **opportunity** to create more **resilient** and more **sustainable** and more **inclusive** food systems
4. Crucial role to play for **public and private** sectors

