



Global Food Security: Challenges and Opportunities

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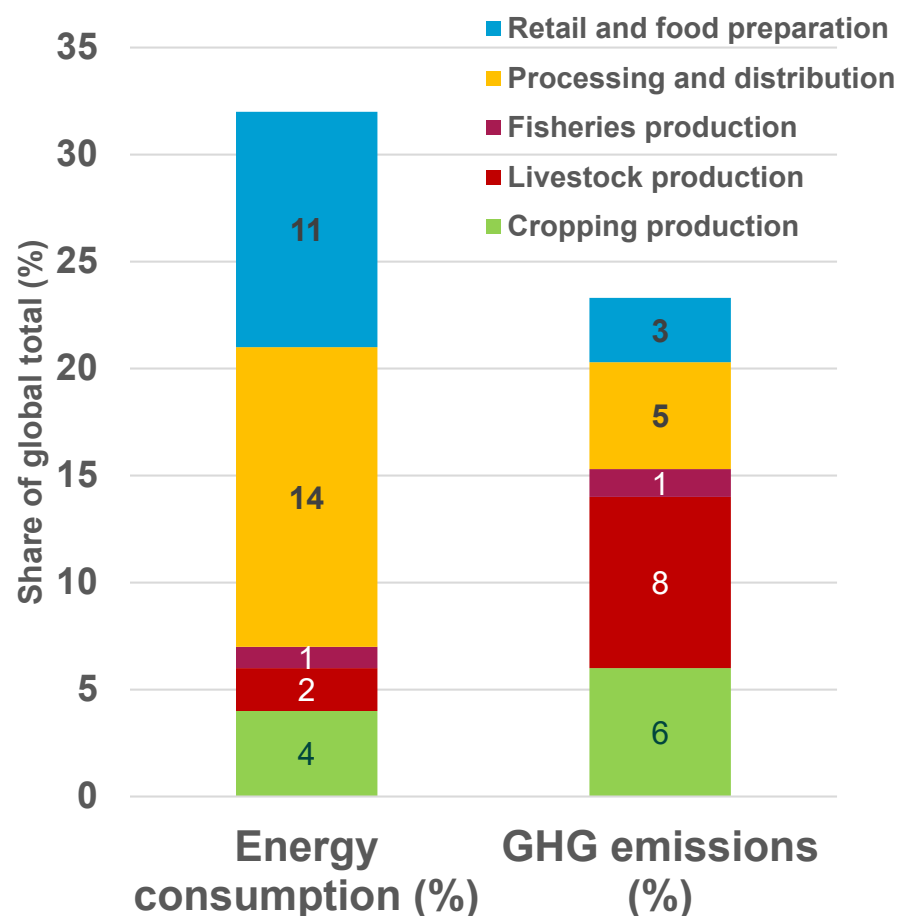
International Food Policy Research Institute

*Symposium: 'Dutch Agriculture, European Policies and
Global Food System Transitions'*

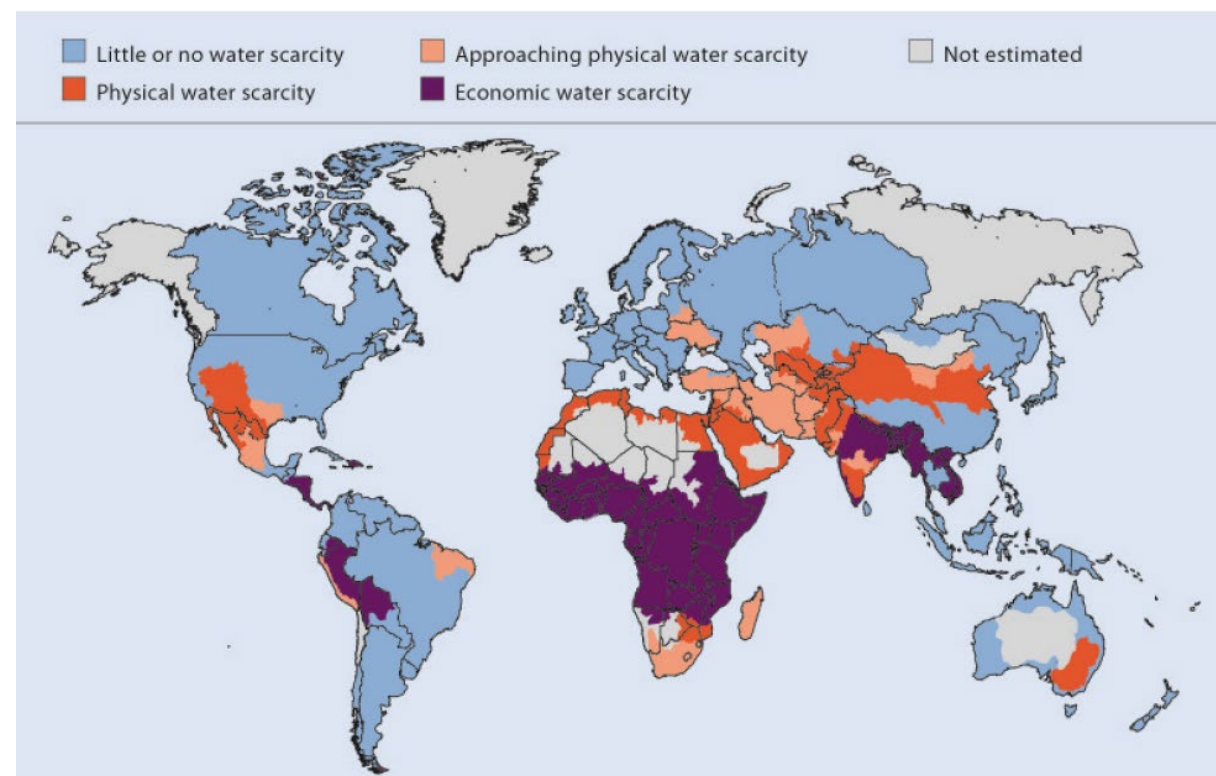
November 2, 2020

Food systems pressure planetary boundaries

The global food system consumes
>30% of global energy and **>20% of global GHG emissions**



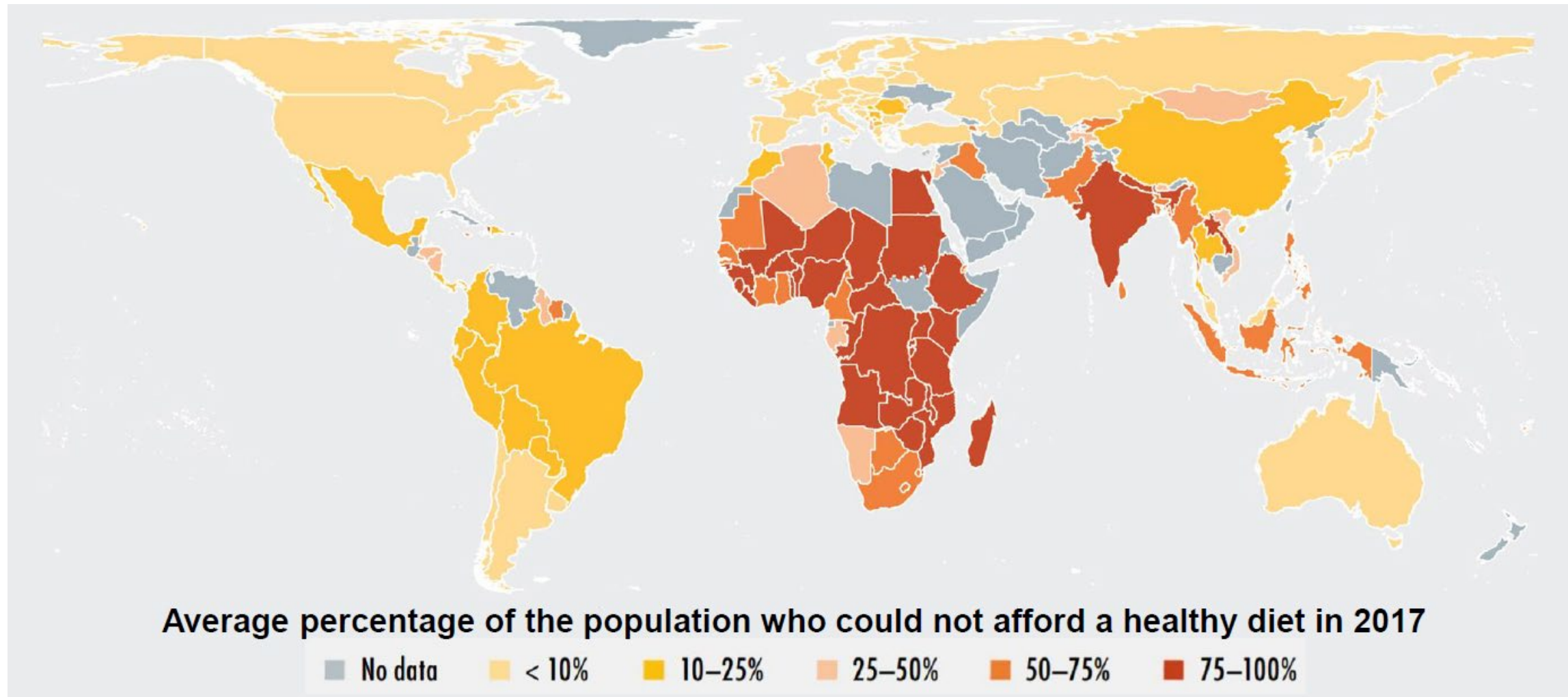
... it also contributes to increased water stress and scarcity, affecting production in large parts of the world



Climate change is reinforcing these pressures.

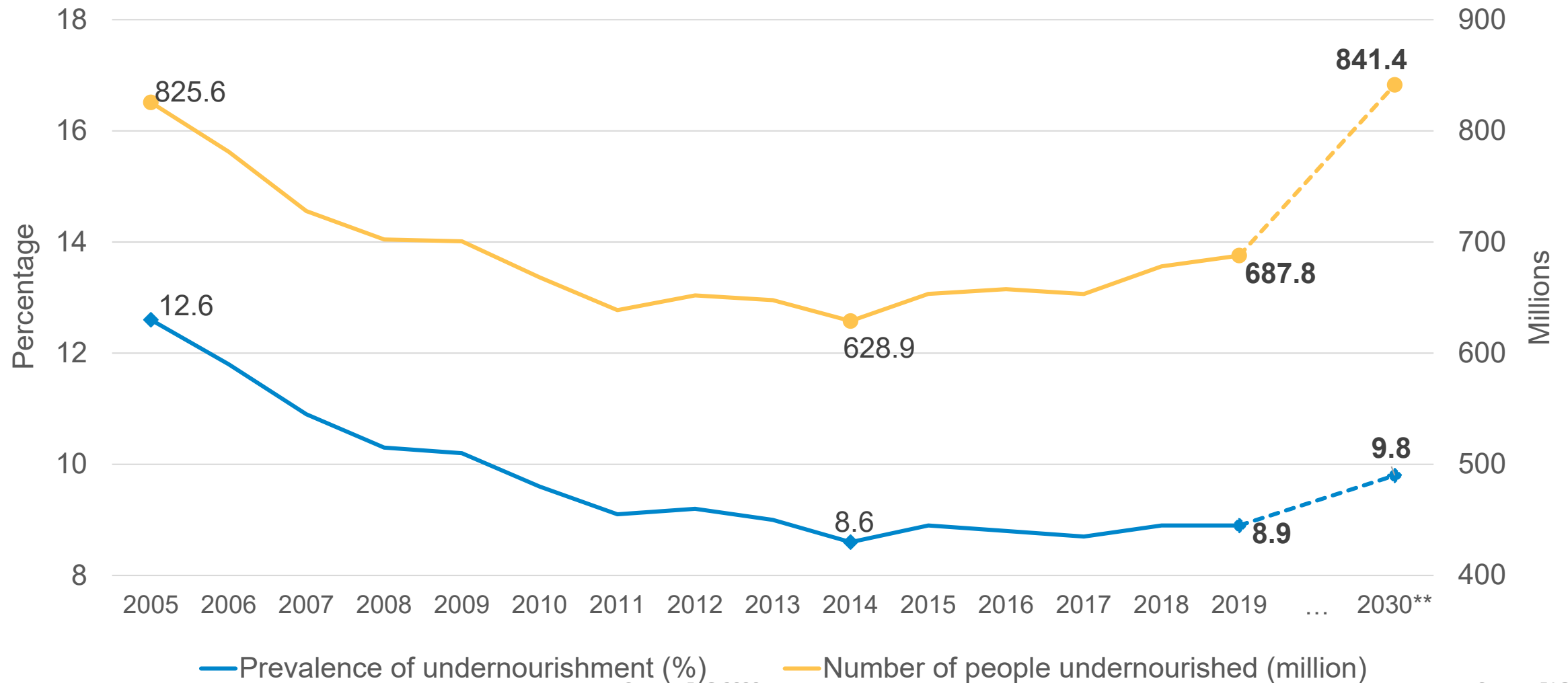
Healthy diets are out of reach for many

More than 3 billion people worldwide cannot afford a healthy diet



The world is not on track to eliminate hunger and malnutrition

Prevalence and number of undernourished worldwide

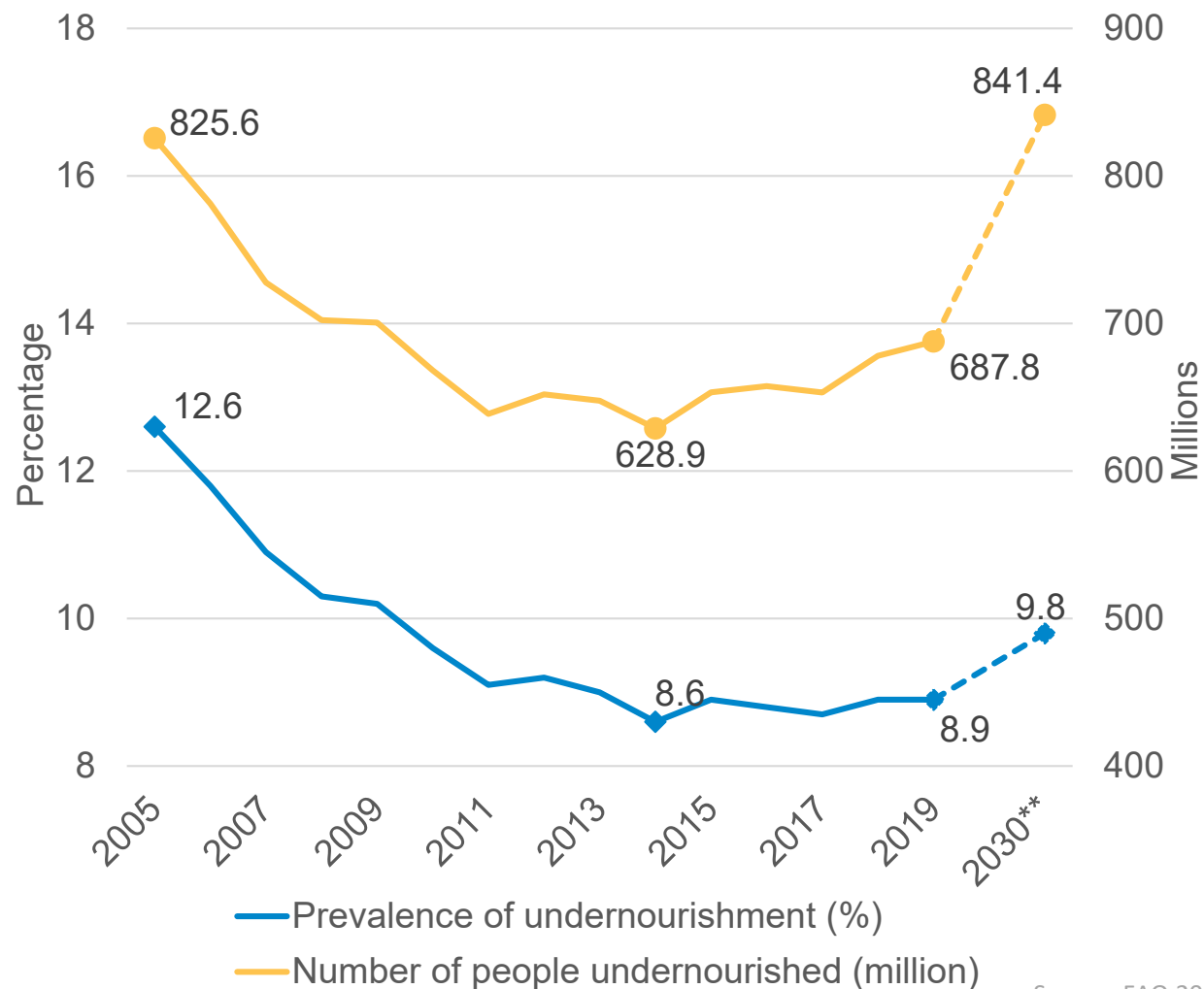


Source: FAO 2020

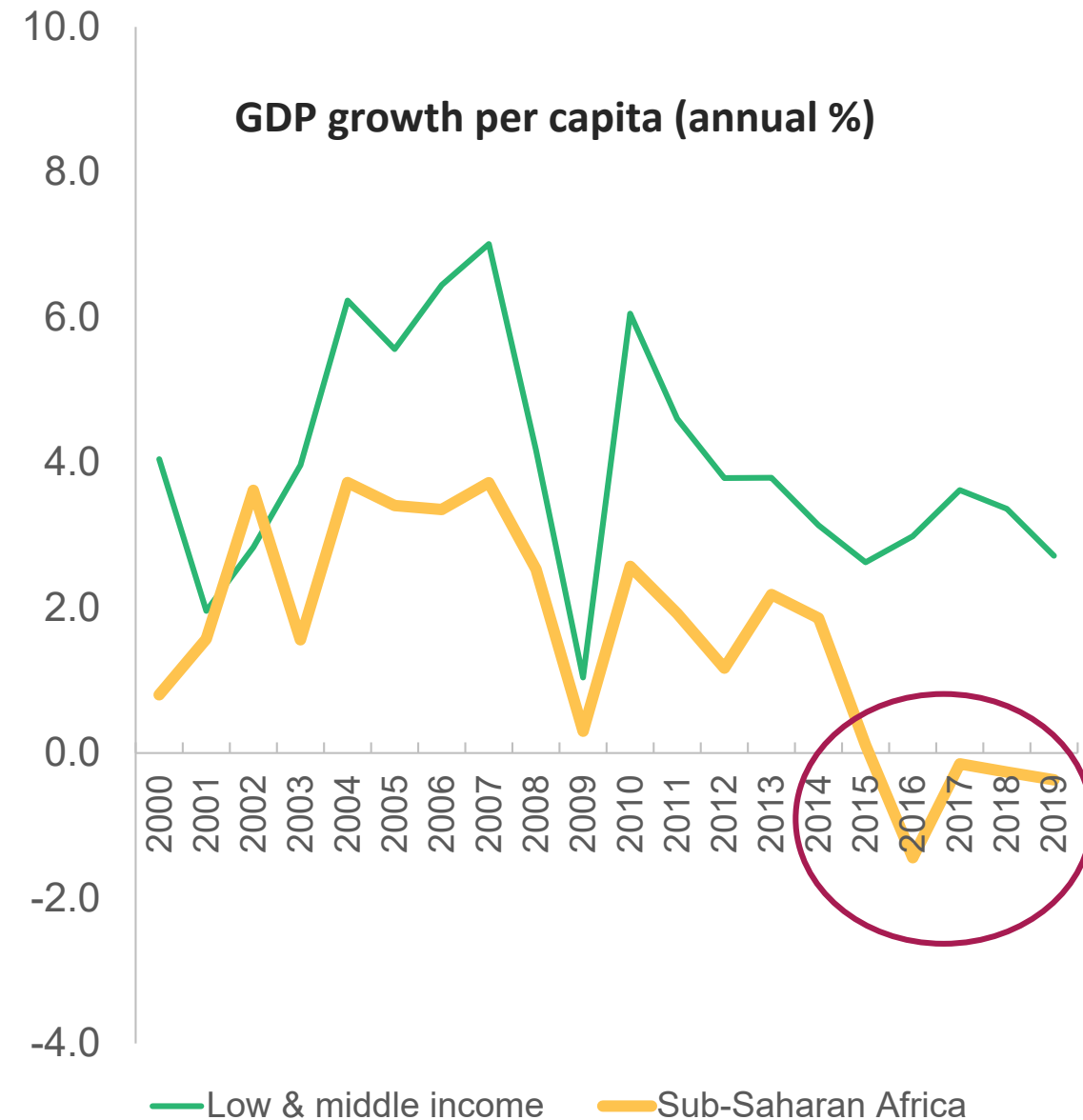
Source: FAO 2020

Economic growth and food security

Prevalence and number of undernourished worldwide

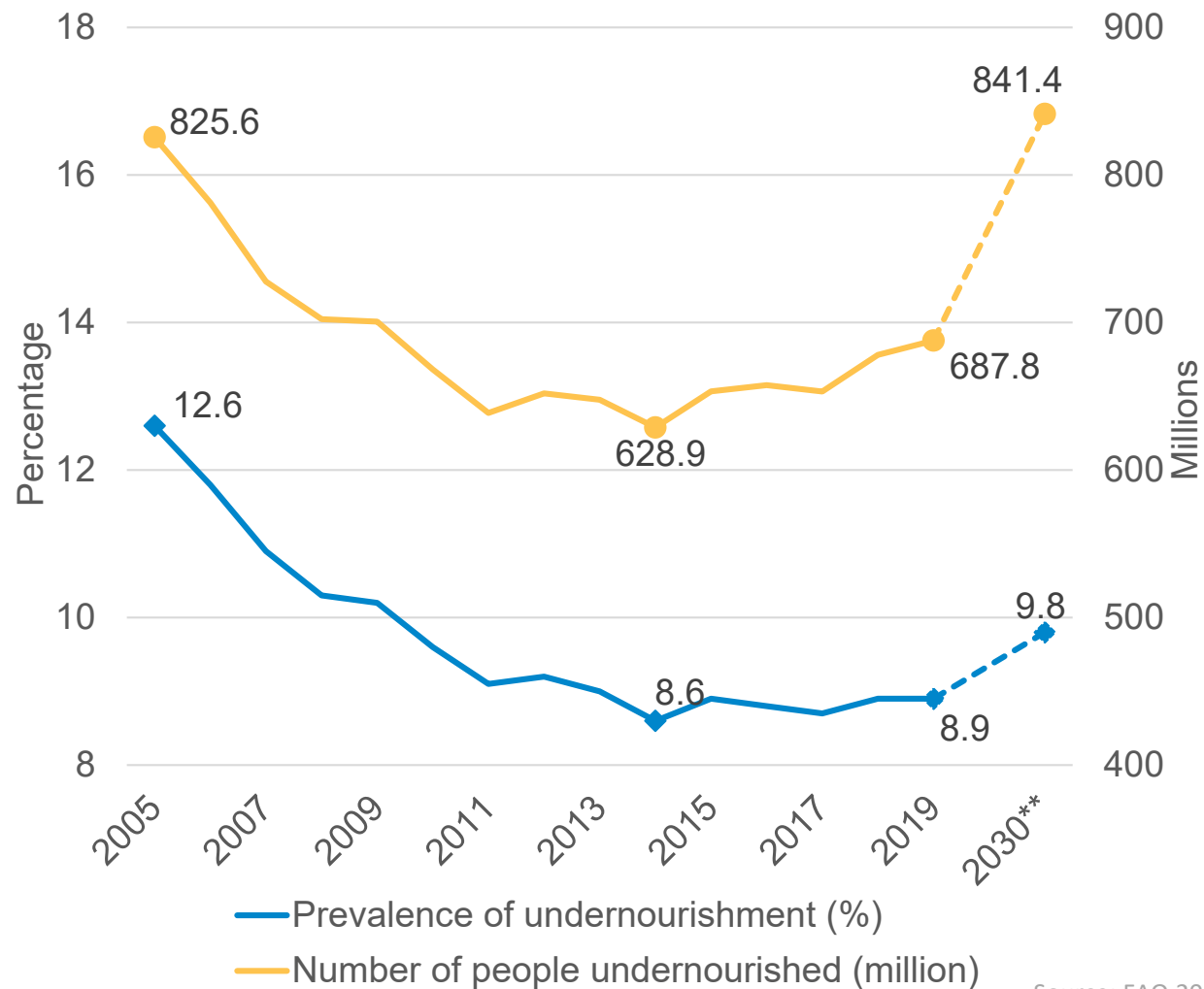


GDP growth per capita (annual %)

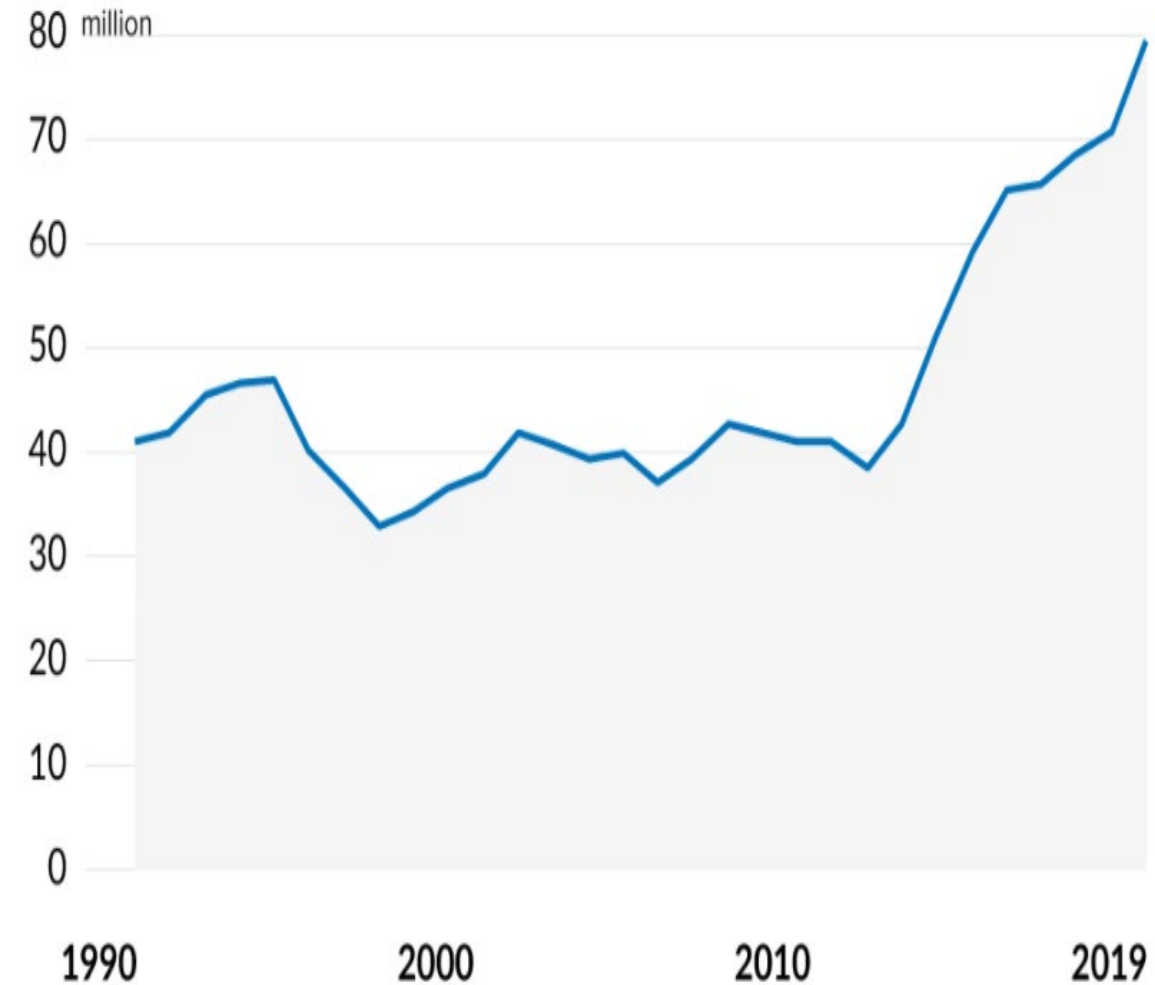


Conflict and food security

Prevalence and number of undernourished worldwide

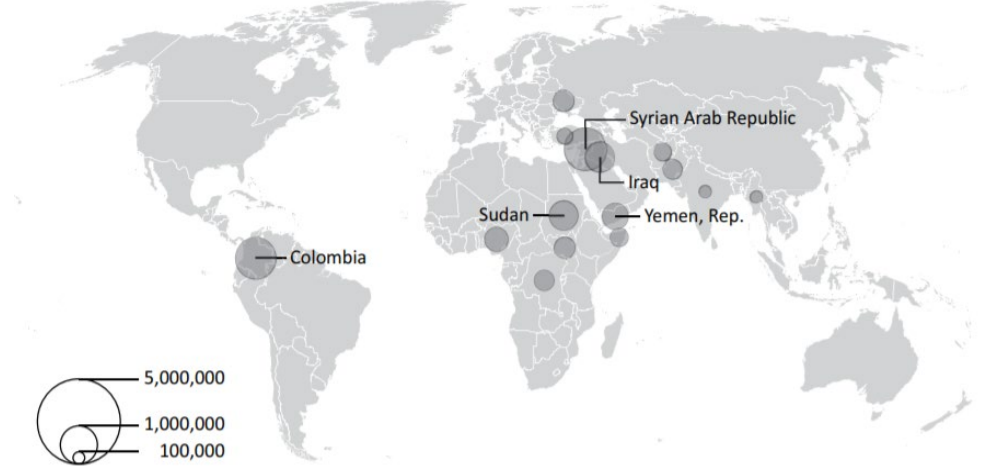


Forcibly displaced people worldwide

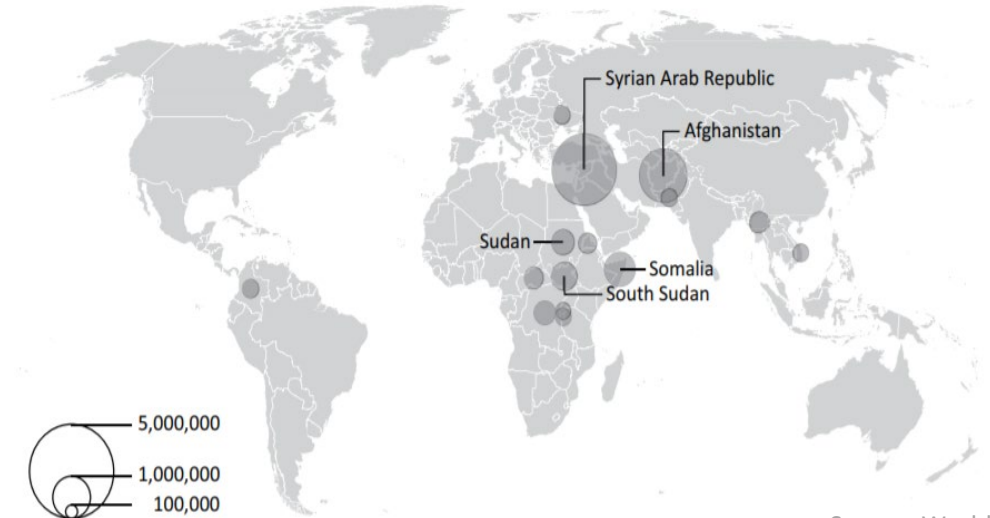


Conflict and food security

Top ten internally displaced people (IDP) countries (2015)



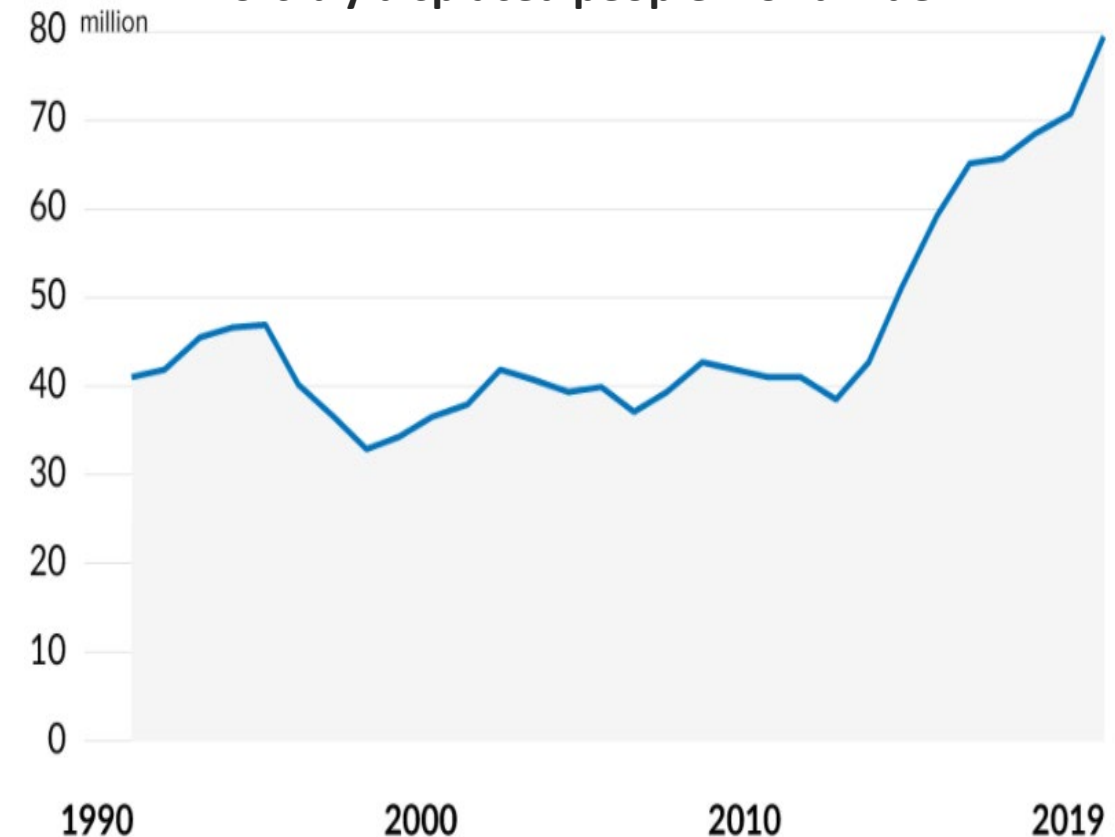
Top ten refugee origin countries (2015)



Source: World Bank 2017

- **2019: 79.5M forcibly displaced**
- **80% of them are in countries affected by acute food insecurity and malnutrition**

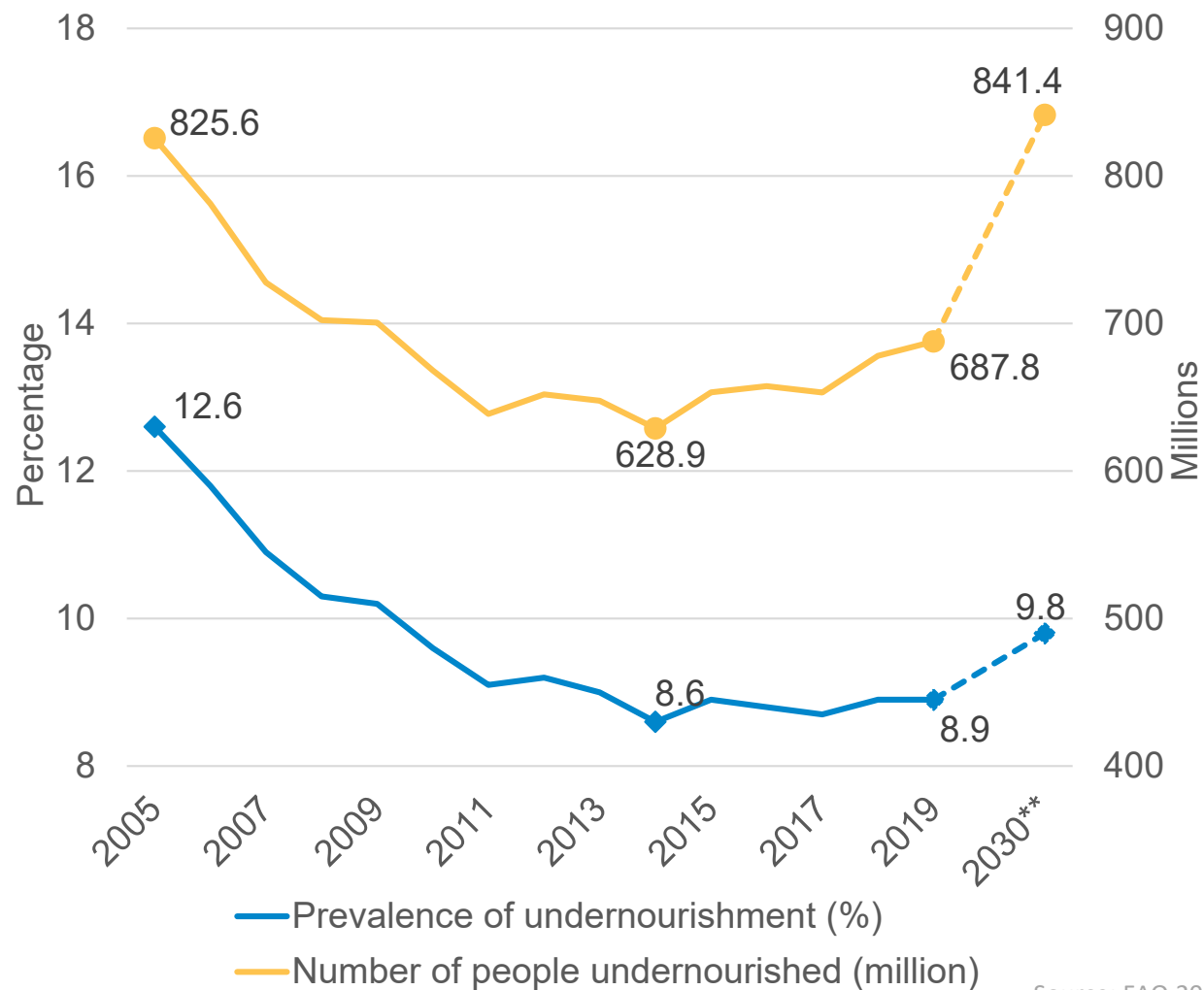
Forcibly displaced people worldwide



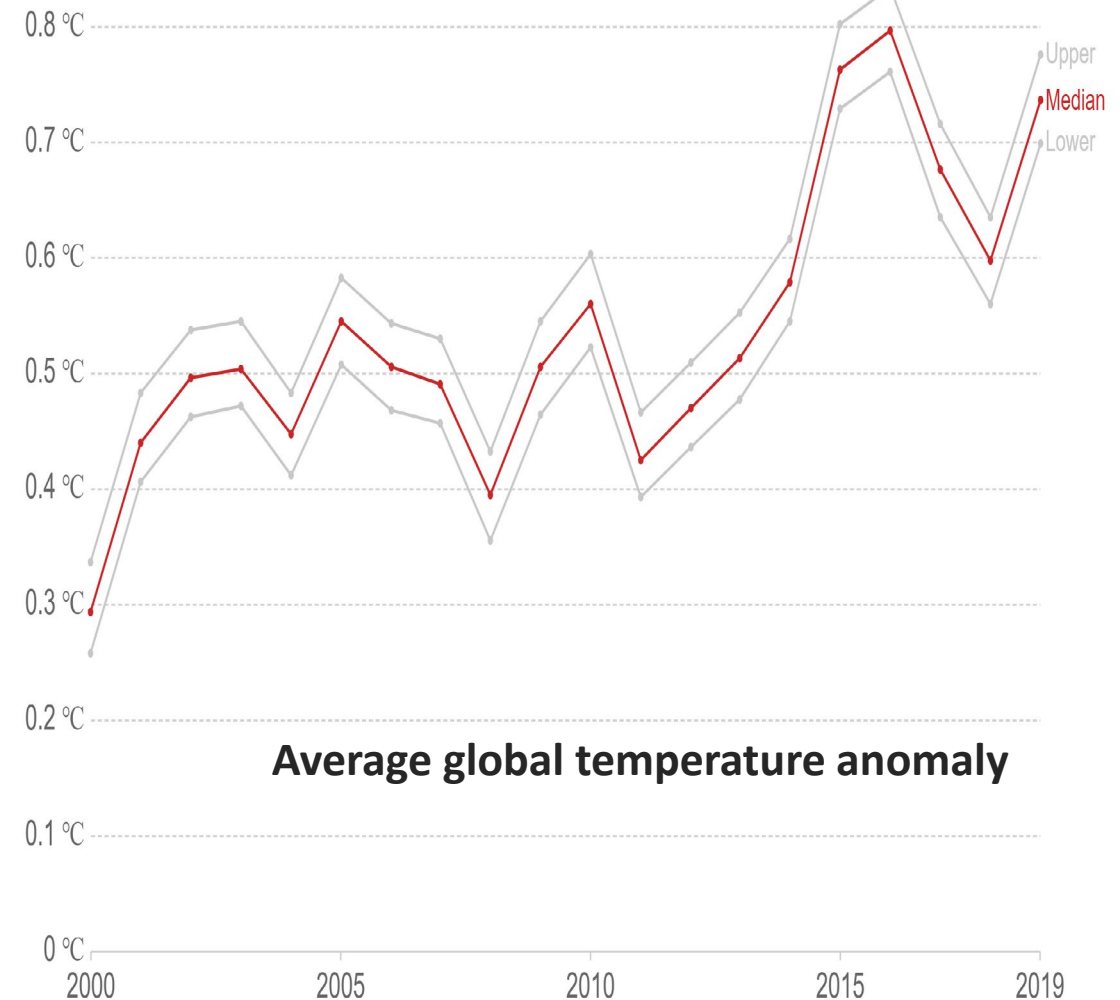
Source: UNHCR 2019, 2020

Climate change and food security

Prevalence and number of undernourished worldwide



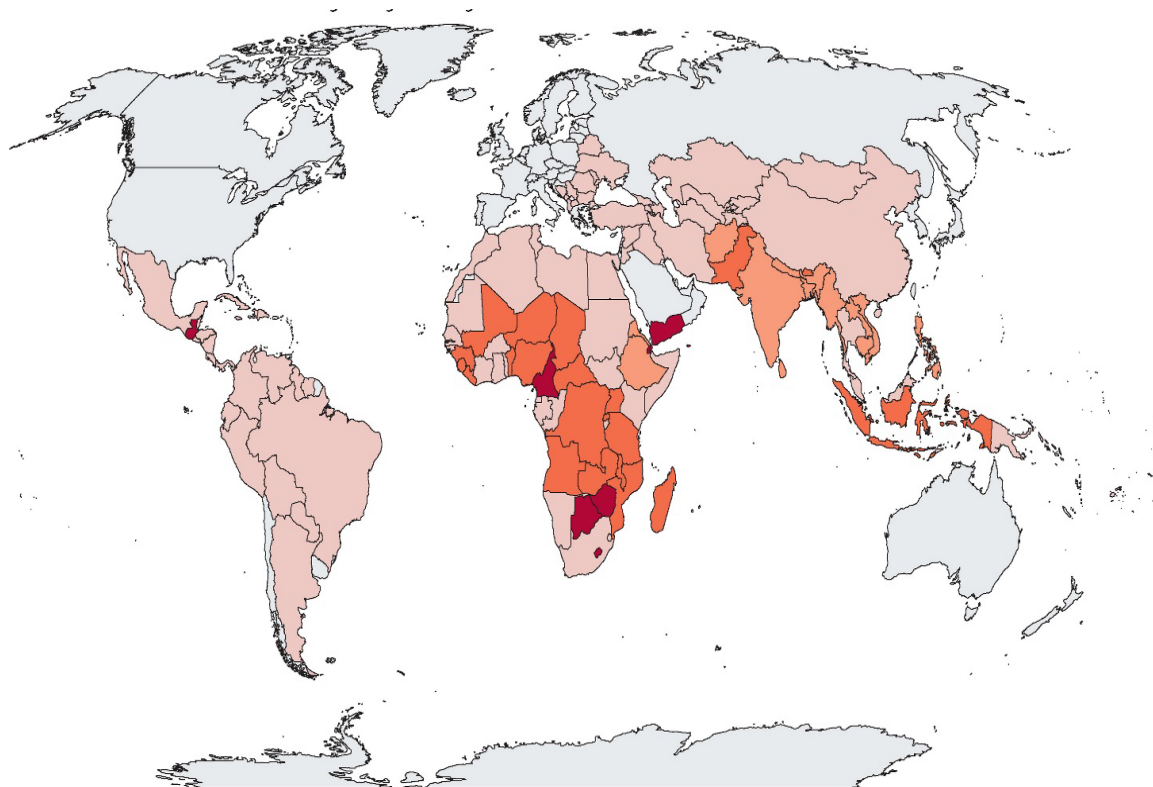
Global average land-sea temperature anomaly relative to the 1961-1990 average temperature.



Double burden of malnutrition

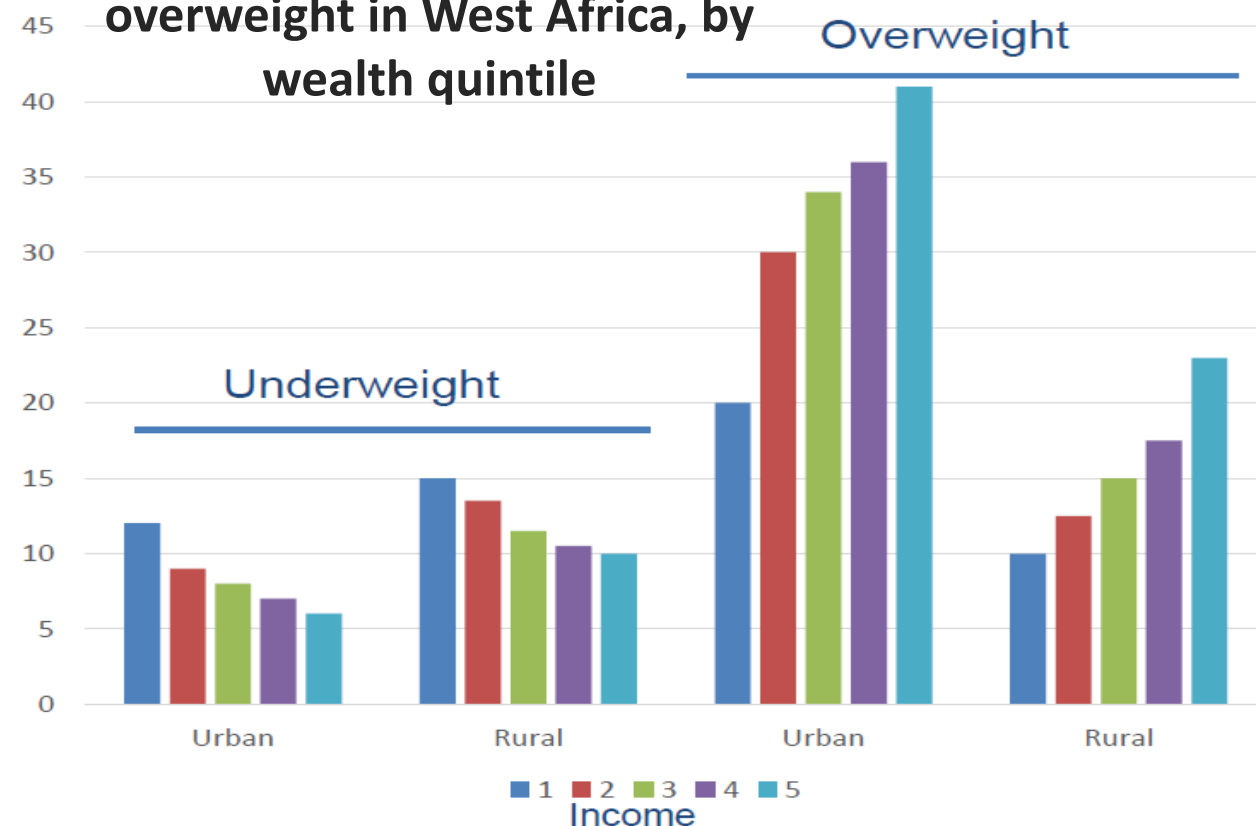
Coexistence of undernutrition (wasting and stunting), thinness in women, and overweight and obesity

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

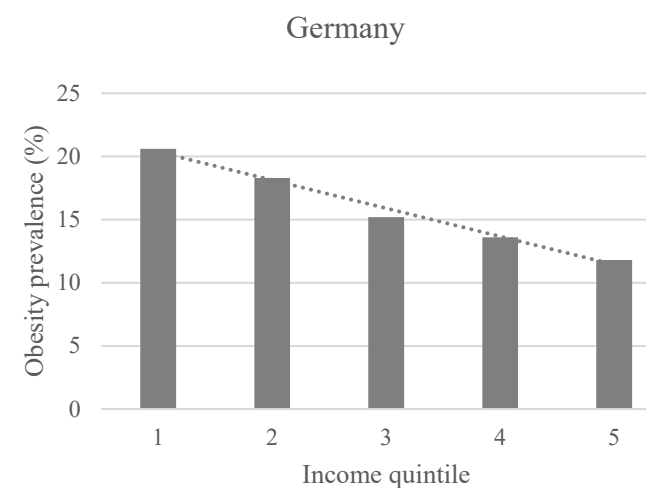
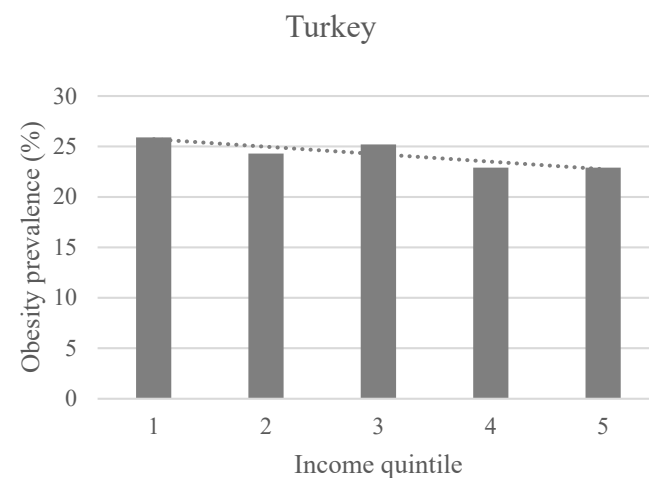
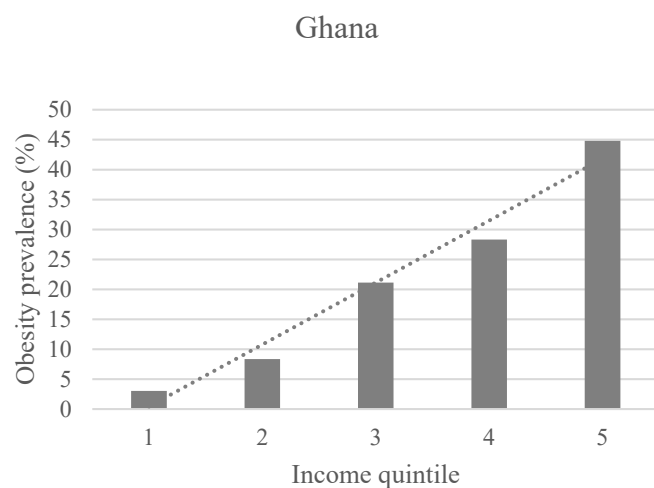
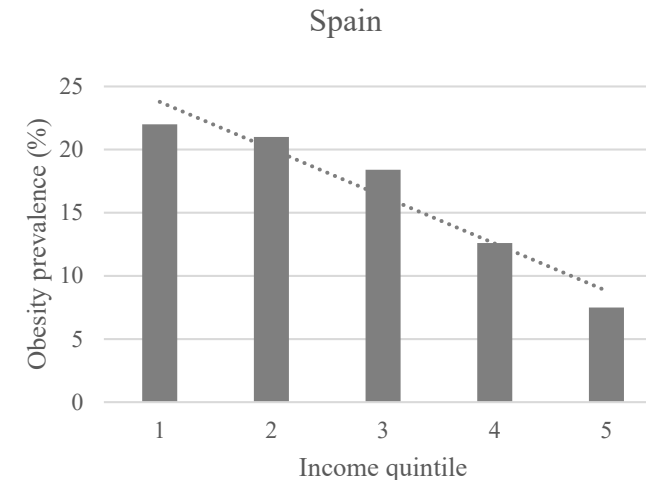
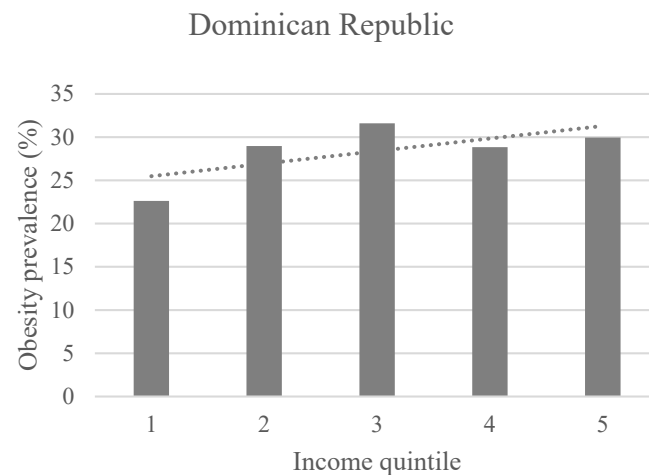
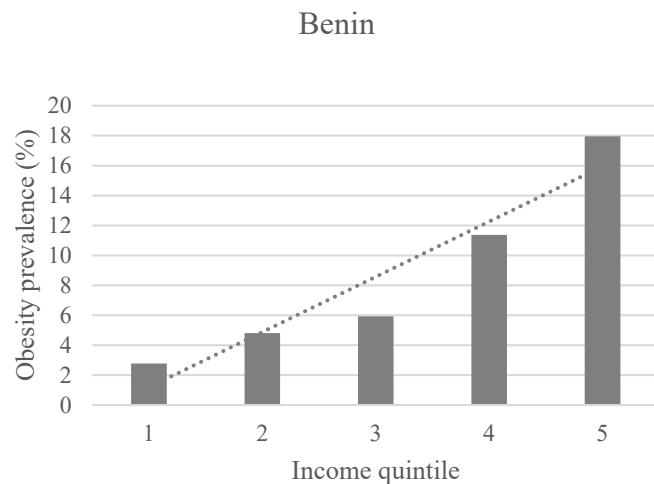
Share of adults underweight and overweight in West Africa, by wealth quintile



Source: Popkin et al. 2020

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

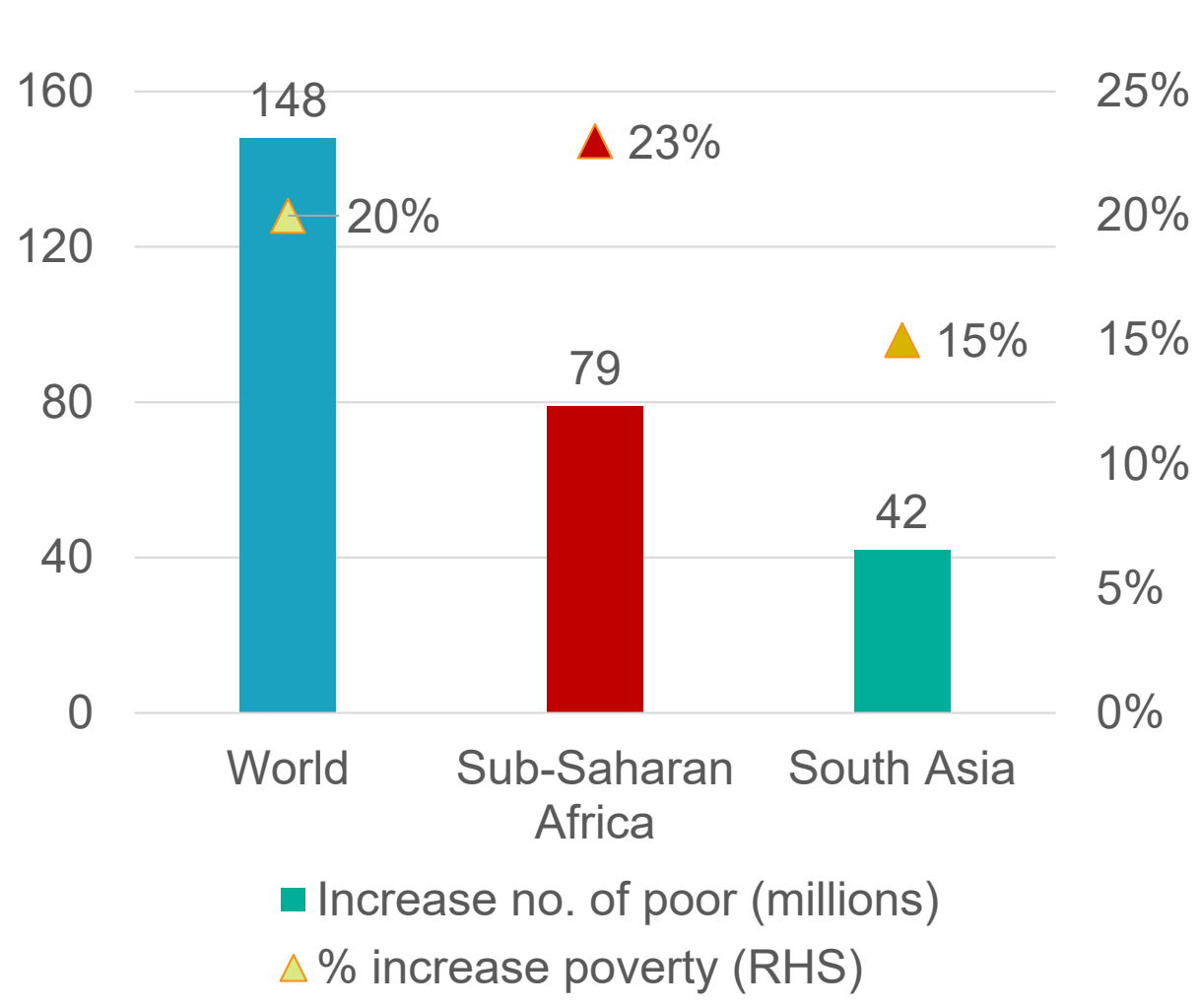
Obesity prevalence (%) and income



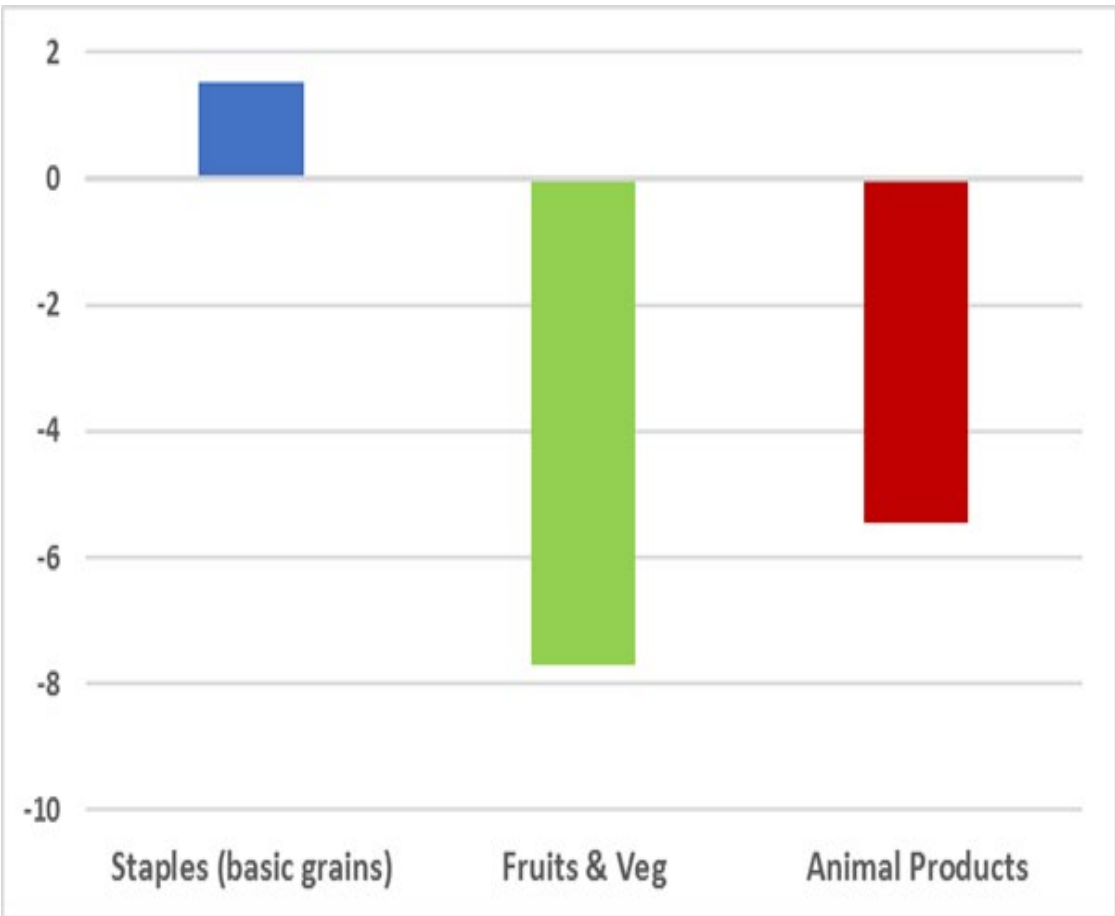
* Within-country female obesity prevalence and income. For low- and middle-income countries, this type of data is only available for females.

COVID-19 impacts on global poverty and nutrition

Impact on Global POVERTY



Impact on Global NUTRITION

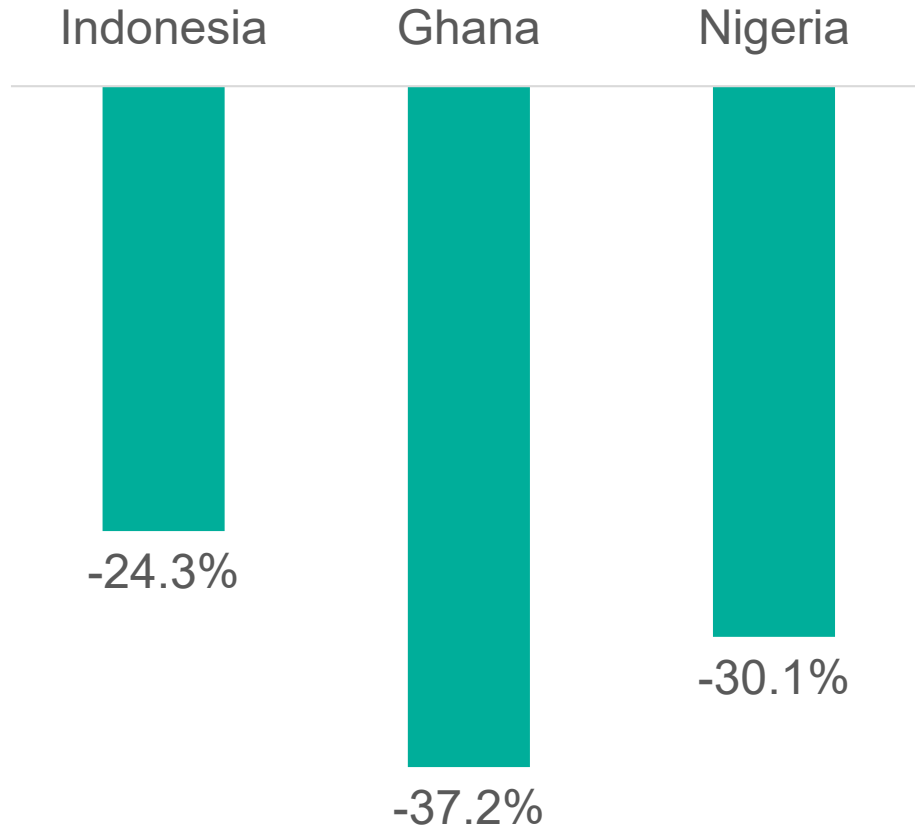


Source: Laborde, Martin and Vos, 2020

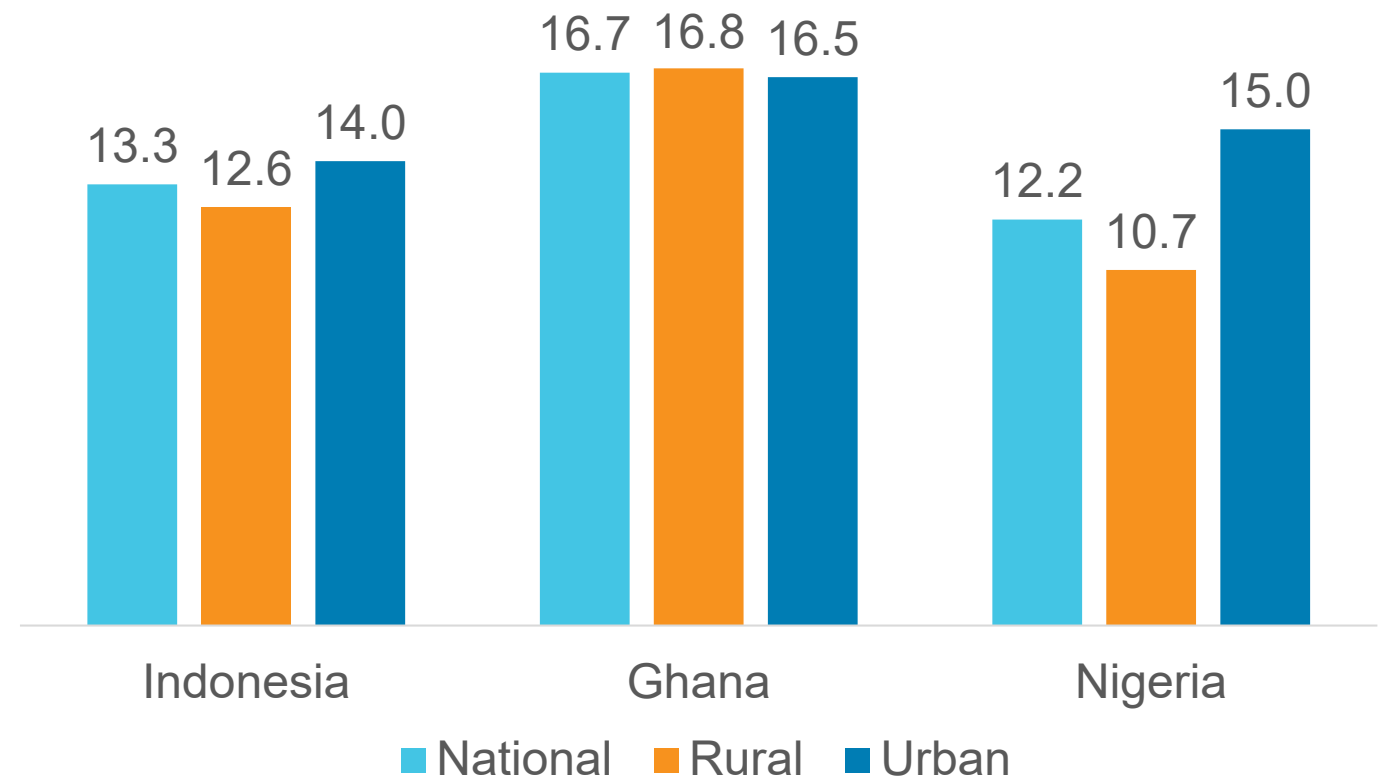
COVID-19 impacts on country GDP and poverty

Average per month of lockdown

Changes in country GDP (%)



Increase in POVERTY headcount (% points)



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**

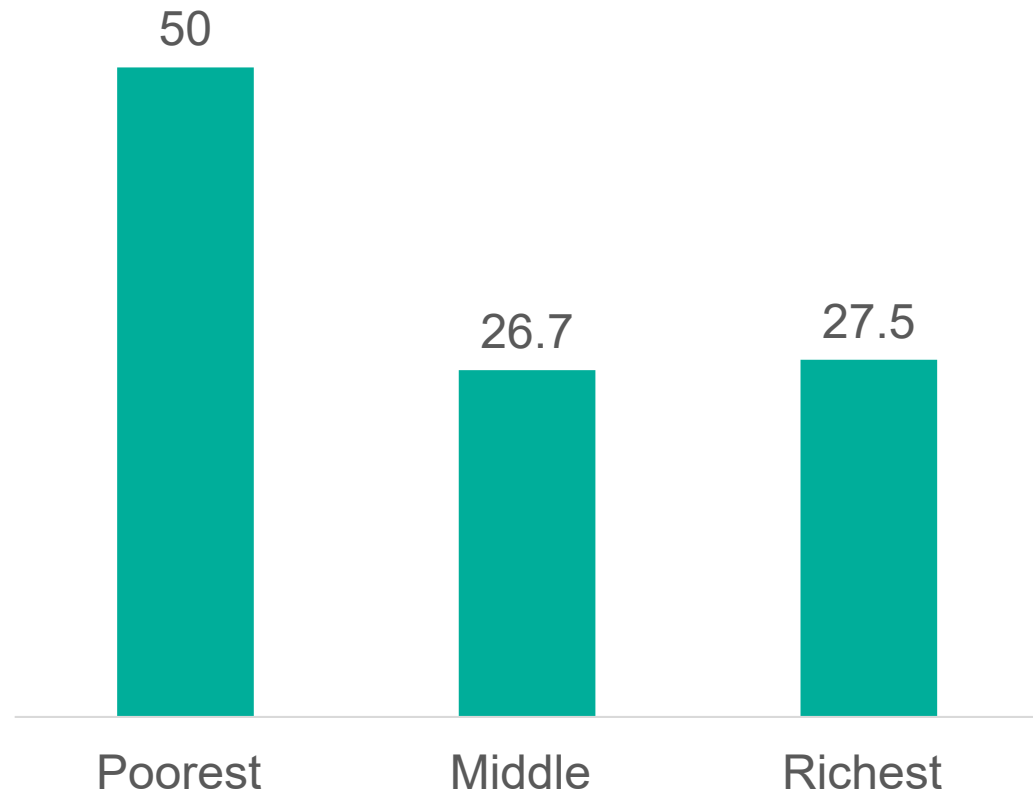


COVID-19 impacts on inequality in food systems

Survey results from Ethiopia

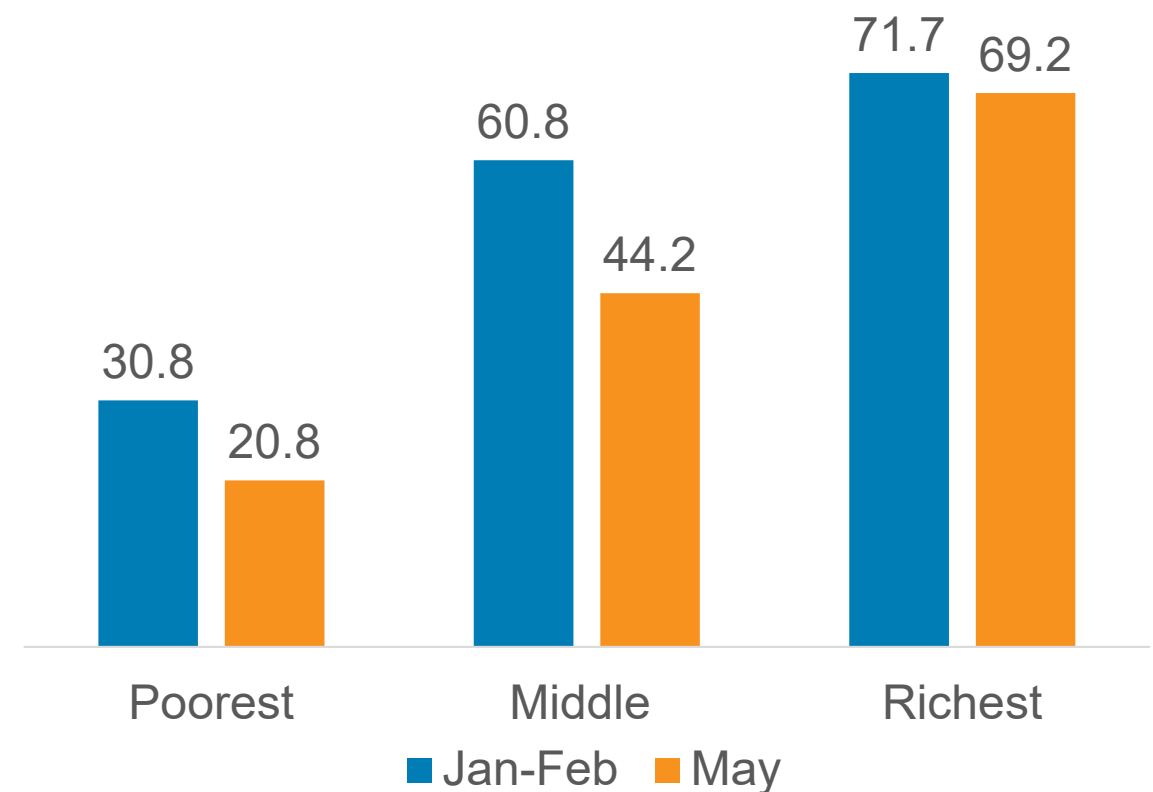
Poor people suffer more
from **INCOME** declines

% 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



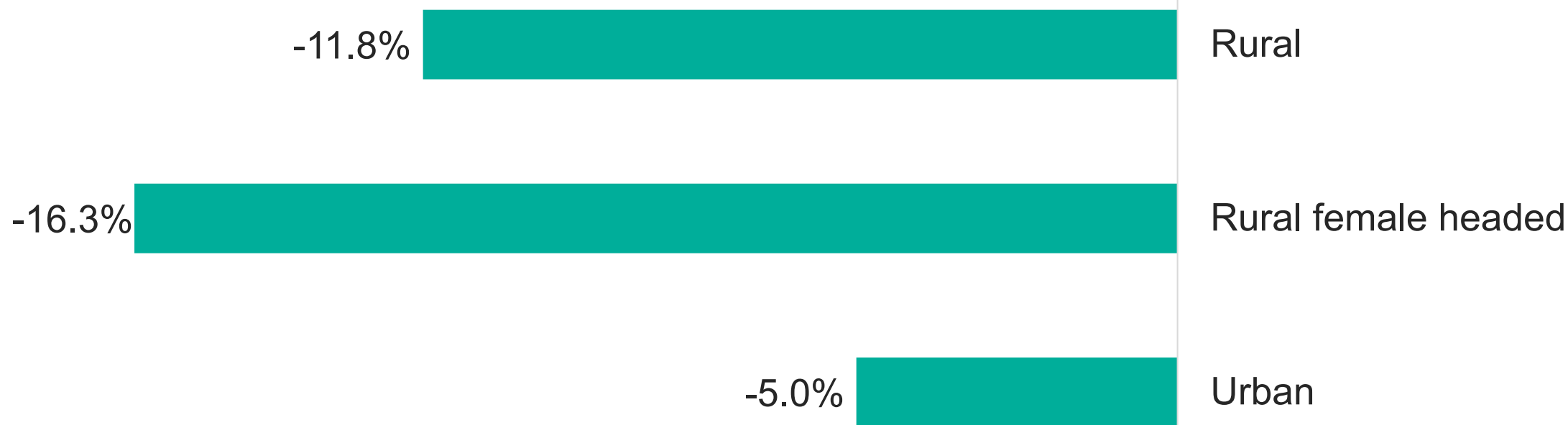
Gender-sensitive policy responses

- **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

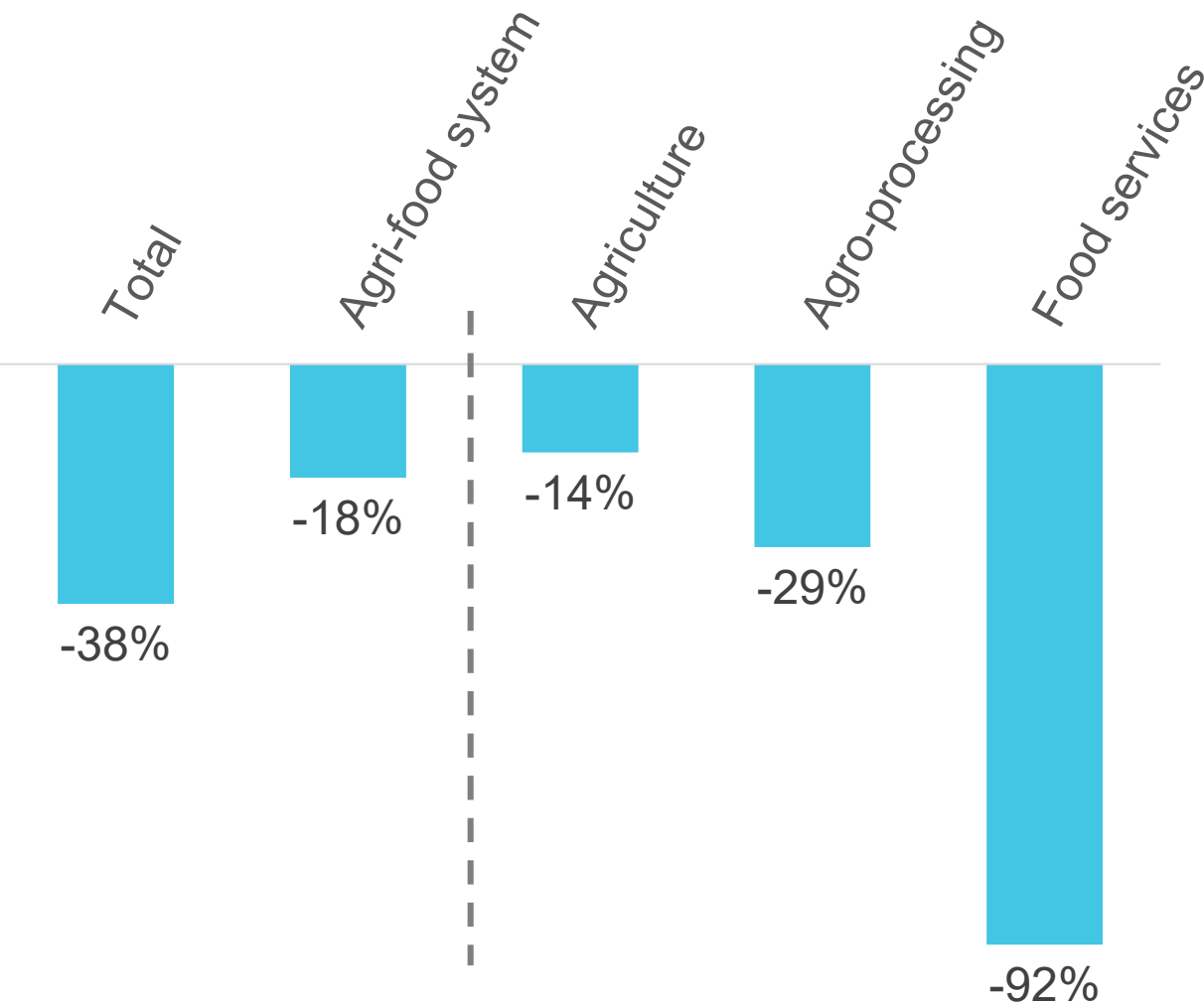
Impact of fall in remittances in Myanmar

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

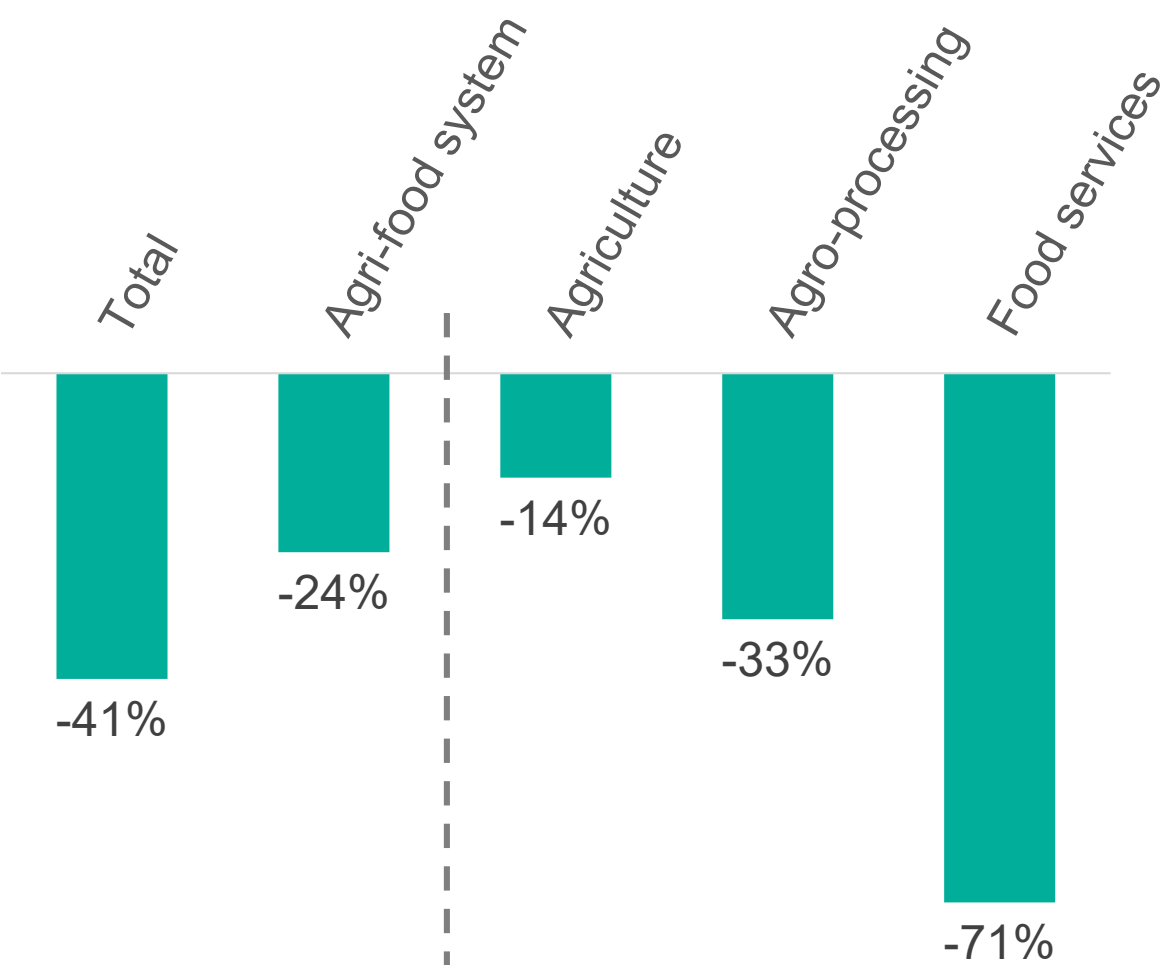


Economic impacts on food systems

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

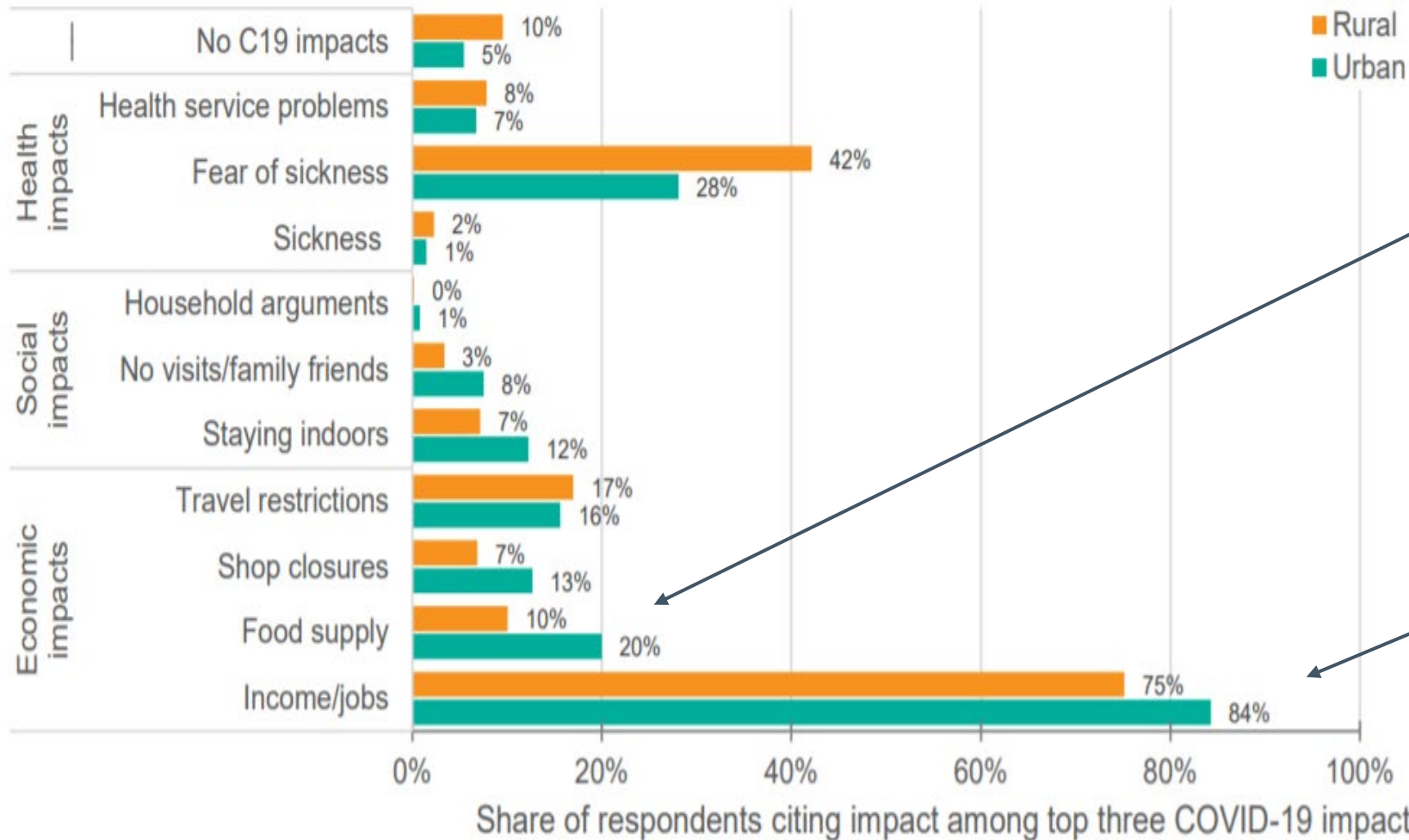
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Supply disruptions versus income and employment

Survey evidence from Myanmar

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

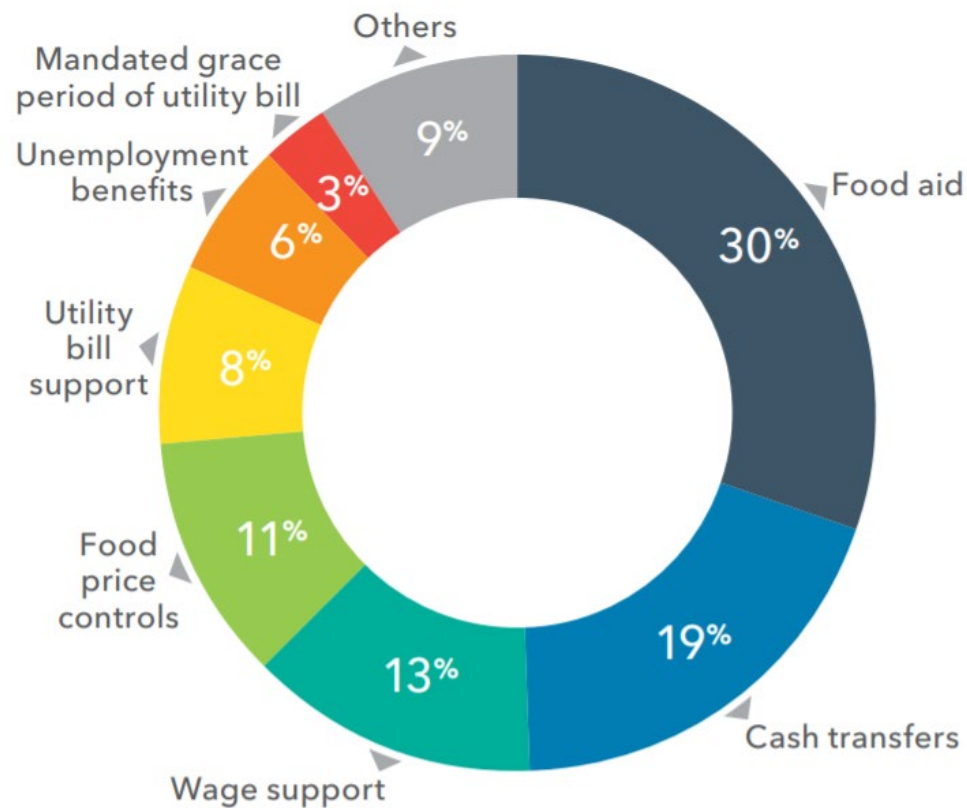


■ Despite disruptions, **food supply chains adjusted relatively well** to meet demand

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

Scaling and sustaining social protection under COVID-19

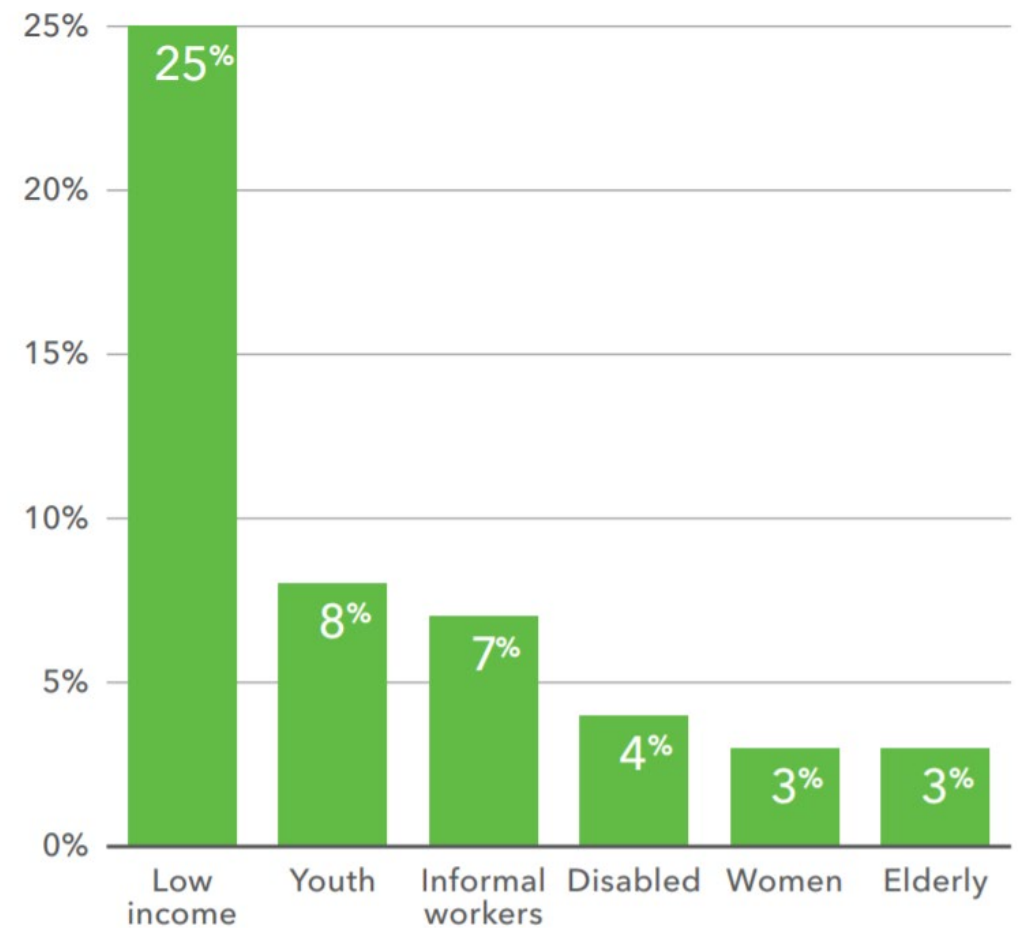
Distribution of policy types within social protection



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.

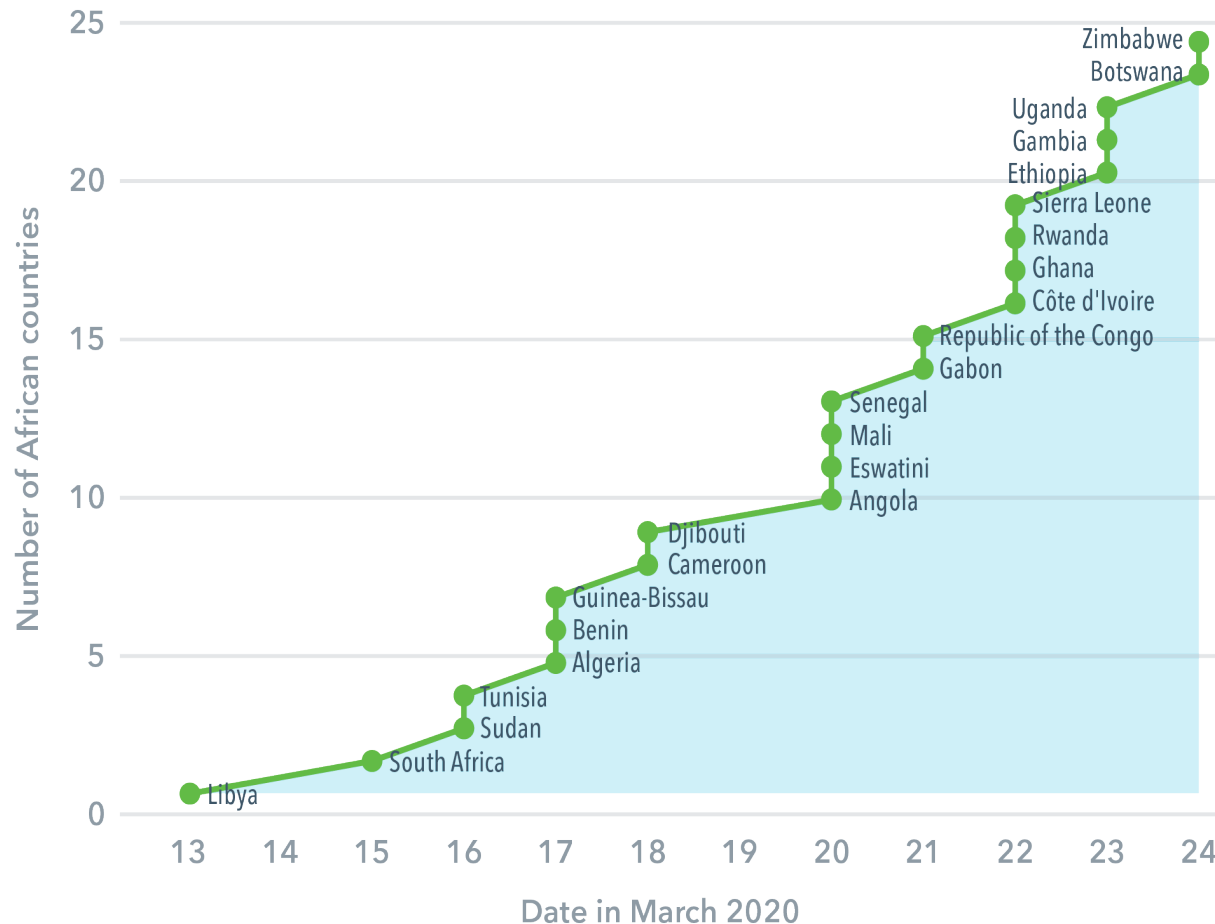
Trade is crucial for food security and for dealing with climate change

- 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



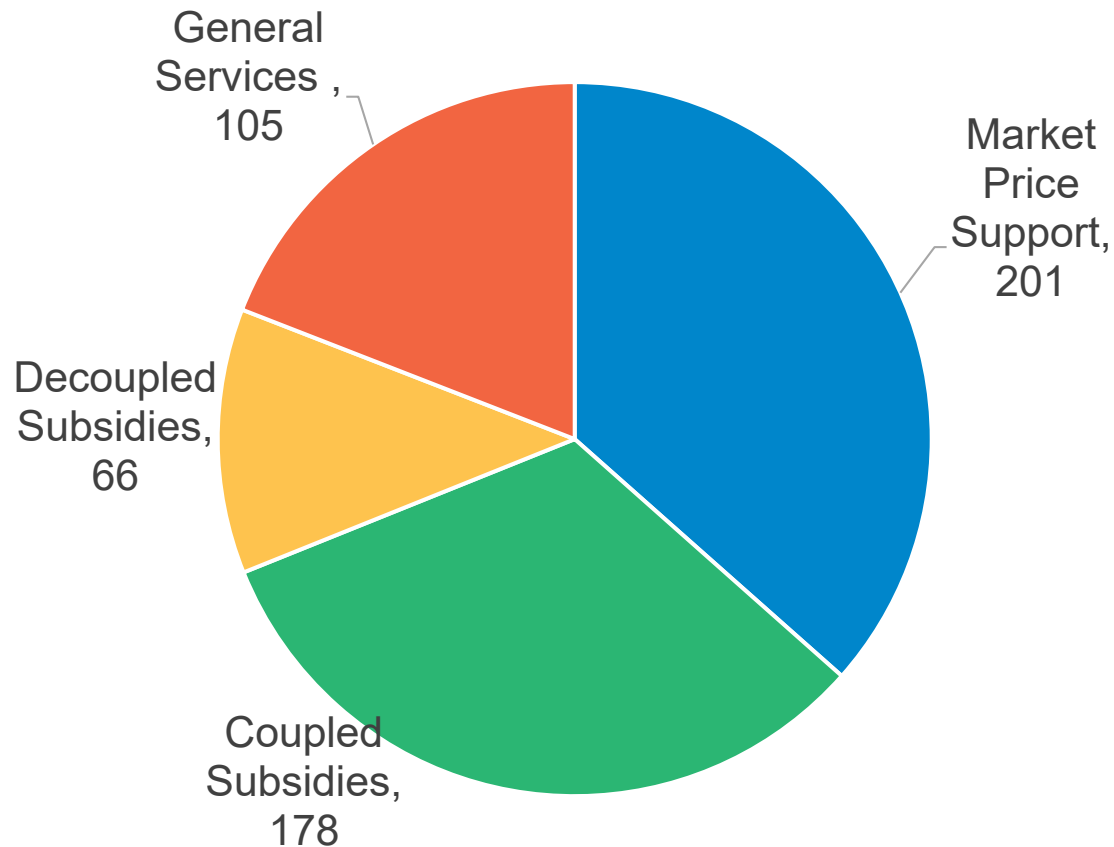
Source: Authors' elaboration from websites of US embassies in Africa and from al Jazeera.

- 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**

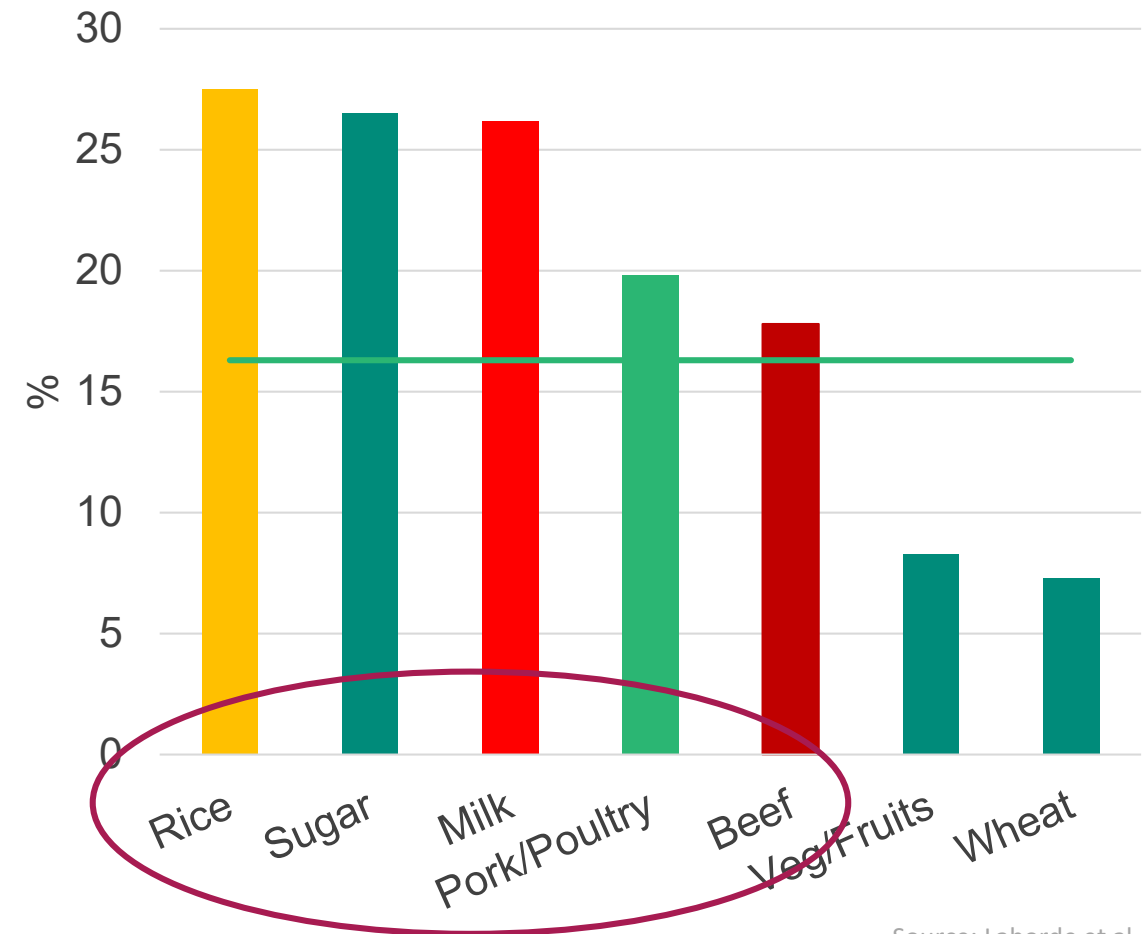
See: ***IFPRI's COVID-19 Policy Response Portal***

Trade protection and coupled agric support is concentrated in emission-intensive commodities

Producer Assistance, \$bn, 2016-18



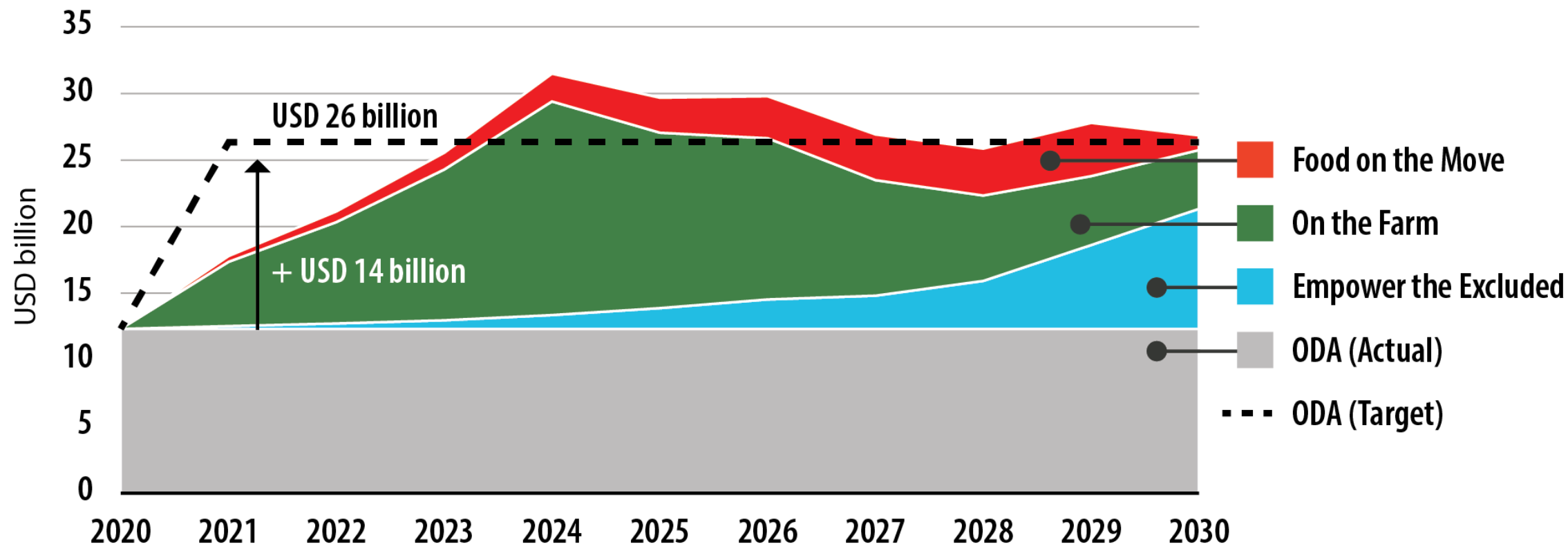
Import Tariffs, 2016-2018



Significant investment needed to end hunger sustainably by 2030

Additional USD 14 bill. from donors and USD 19 bill. from affected countries are needed on average per year

The funding gap over time and by category of intervention



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



More information : www.ifpri.org

- IFPRI Global Food Policy Report 2020 on “**Building Inclusive Food Systems**”
- Swinnen J. and J. McDermott (eds), 2020, ***COVID-19 and Global Food Security***, IFPRI Publications (e-book)
- Special **blog series** on COVID-19 and food and nutrition security



Appendix

Prioritize cost-effective investment areas (1)



**Empower the
Excluded**

**DONOR CONTRIBUTION:
USD 3 BILLION PER YEAR**

- Support participation in farmers' organizations
- Invest in vocational programs for rural youth that offer integrated-training in multiple skills
- Scale up social protection programs to help create a bridge for people living in poverty to find productive jobs

Prioritize cost-effective investment areas (2)



On the Farm

**DONOR CONTRIBUTION:
USD 9 BILLION PER YEAR**

- Invest in information and training, particularly for women, to increase the uptake of new technologies
- Ensure new environmentally-friendly farming methods are also economically viable
- Support the adoption of climate-resilient crops
- Increase research on how to help small-scale producers in water-scarce regions
- Target improvements in the quantity and quality of livestock feed to small and medium-sized commercial farms

Prioritize cost-effective investment areas (3)



Food on the Move

**DONOR CONTRIBUTION:
USD 2 BILLION PER YEAR**

- Reduce post-harvest losses by expanding the focus of interventions beyond the storage of cereals, to include more links in the value chain, and more food crops
- Invest in the infrastructure, regulations, services and technical assistance needed to support small and medium-sized enterprises (SMEs) that supply or buy from small-scale farmers