International grain markets driven by severe supply chain interruptions

Stehen wir vor einer Lebensmittelkrise?

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Introduction

Christian Joerg

Born on 04-12-66 and raised on a small farm in the Canton of Schwyz

Married, three children between 18 and 27

Senior executive with strong international business experience in agricultural, trade and trade finance

Funding and setting up food security programs for Angola, Ethiopia and Saudi Arabia

Lived and worked in the Netherlands, England, Australia, Switzerland, Portugal, Belgium, USA, Peru and Saudi Arabia

Ukraine, the breadbasket for the poorest

Ukraine, the breadbasket for the poorest and the world

The invasion of Ukraine on 24 February 2022 is having deep human, as well as social and economic impact, across all countries and sectors in the food supply chain

The global food system on fertilizers' inputs, on grain production, on export logistics and on trade is severely disrupted by the war in Ukraine

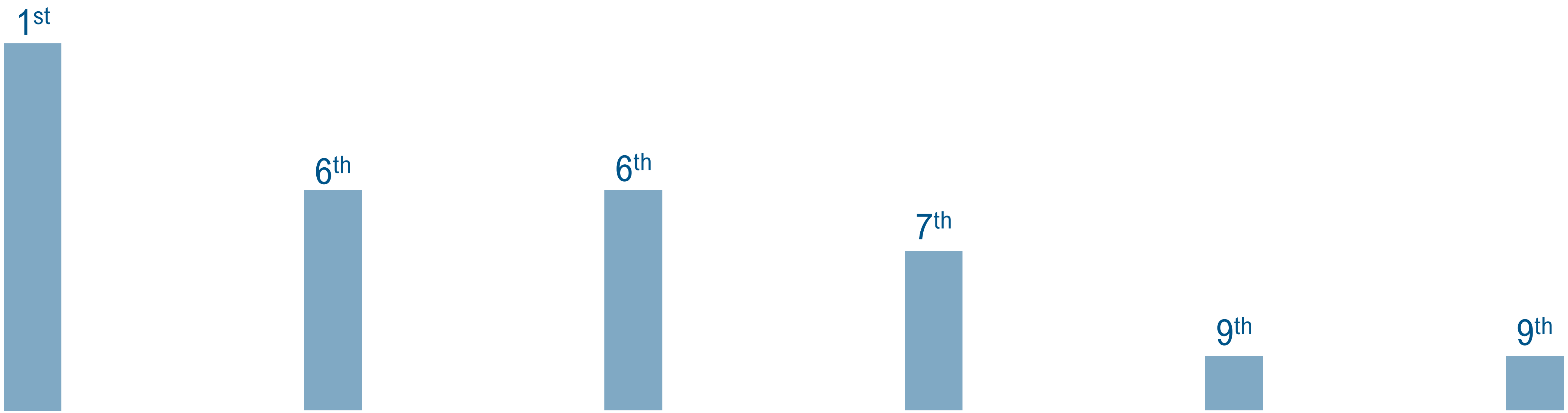
Ukraine still has 20 m MT to export from last year. With the current pace of exports, it will take 2 years...

The real problem starts in July....

Ukraine’s place in the world food production markets

Ukraine is ranked …

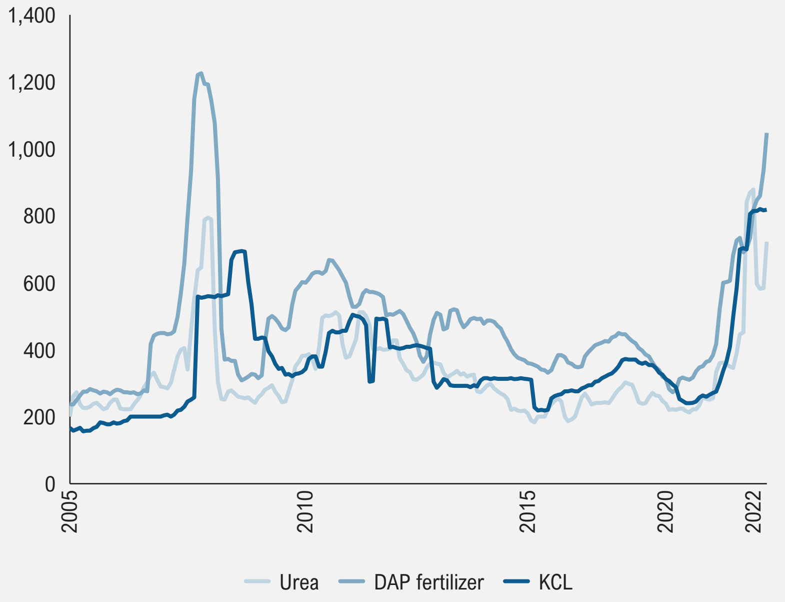
30 % of production at stake in current combat areas…



5.1 mt	24.7 mt	5.7 mt	2.7 mt	20.1 mt	1.1 mt
					
Sunflower seed oil	**Corn**	**Barley**	**Rapeseed**	**Wheat**	**Soybeans**

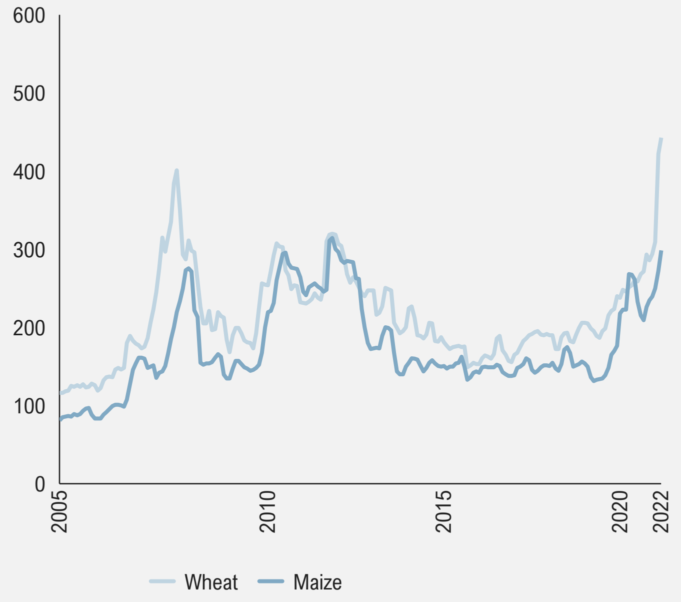
The war in Ukraine impacts food value chains end to end

01 Inputs



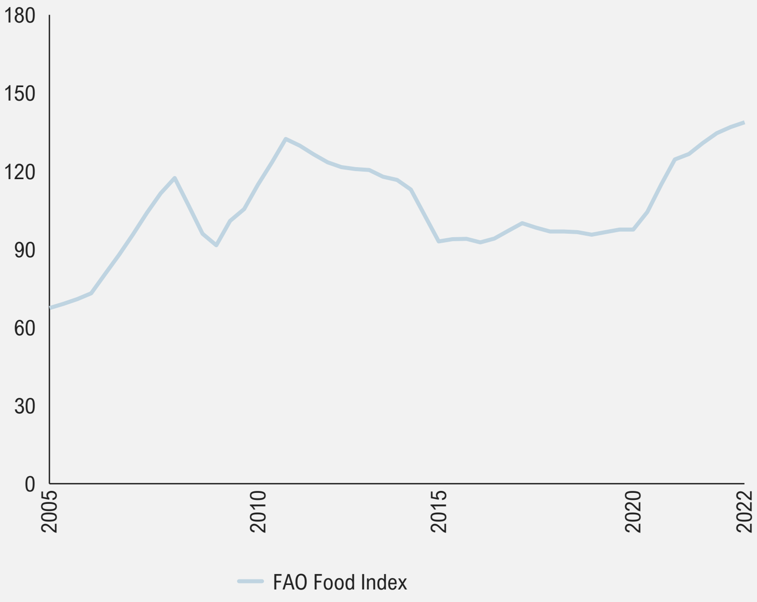
Fertilizers price[2],
USD per tonne

02 Crops



Commodity crops price[1],
USD per tonne

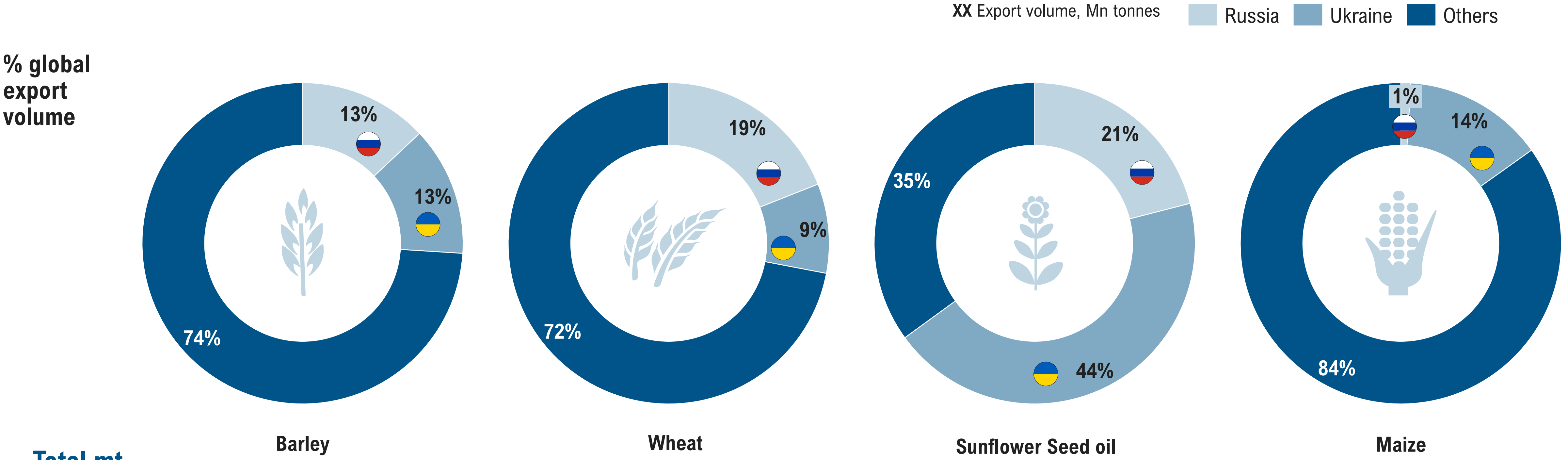
03 Food & Feed



Food price (EU),
Index with 2005 as 100

1. Barley-NCDEX Barley Futures, CBOT Chicago SRW Wheat Futures,
2. Fertecon, Mosaic website, Urea Black Sea/Baltic FOB, Vancouver KCL 2005-16; Brazil 17-current

Ukraine and Russia are an integral part of major crops export worth 105 mt of crops per

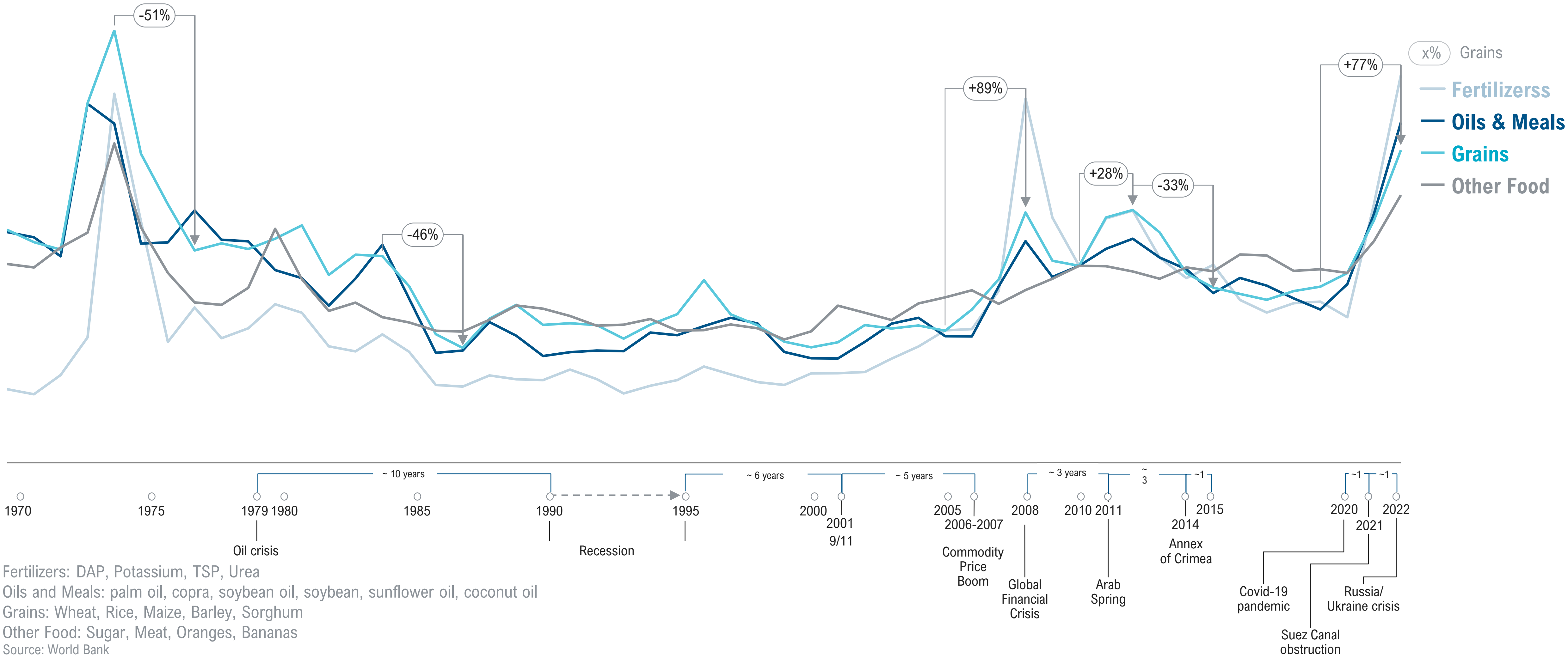


Total mt	Barley	Wheat	Sunflower Seed oil	Maize
105	10	55	10	30
47	5	37	3	2
58	5	18	7	28

Global markets in grains and oilseeds

The frequency and intensity of disruptive events are expected to increase

Annual indices, 2010=100, real 2010 US dollars



Fertilizers: DAP, Potassium, TSP, Urea

Oils and Meals: palm oil, copra, soybean oil, soybean, sunflower oil, coconut oil

Grains: Wheat, Rice, Maize, Barley, Sorghum

Other Food: Sugar, Meat, Oranges, Bananas

Source: World Bank

Wheat Markets: 28-02, The start of the war

CBOT Wheat, September

Within days, CBOT wheat futures increased by 52 %.

Ocean freight increased during the same period by 25%, due to high oil prices, sharply increased insurance premiums and blocked capacities in China (Covid).

MATIF Wheat, September

Within days, MATIF wheat futures increased by 70 % .

Market outlook

Current and future production risks

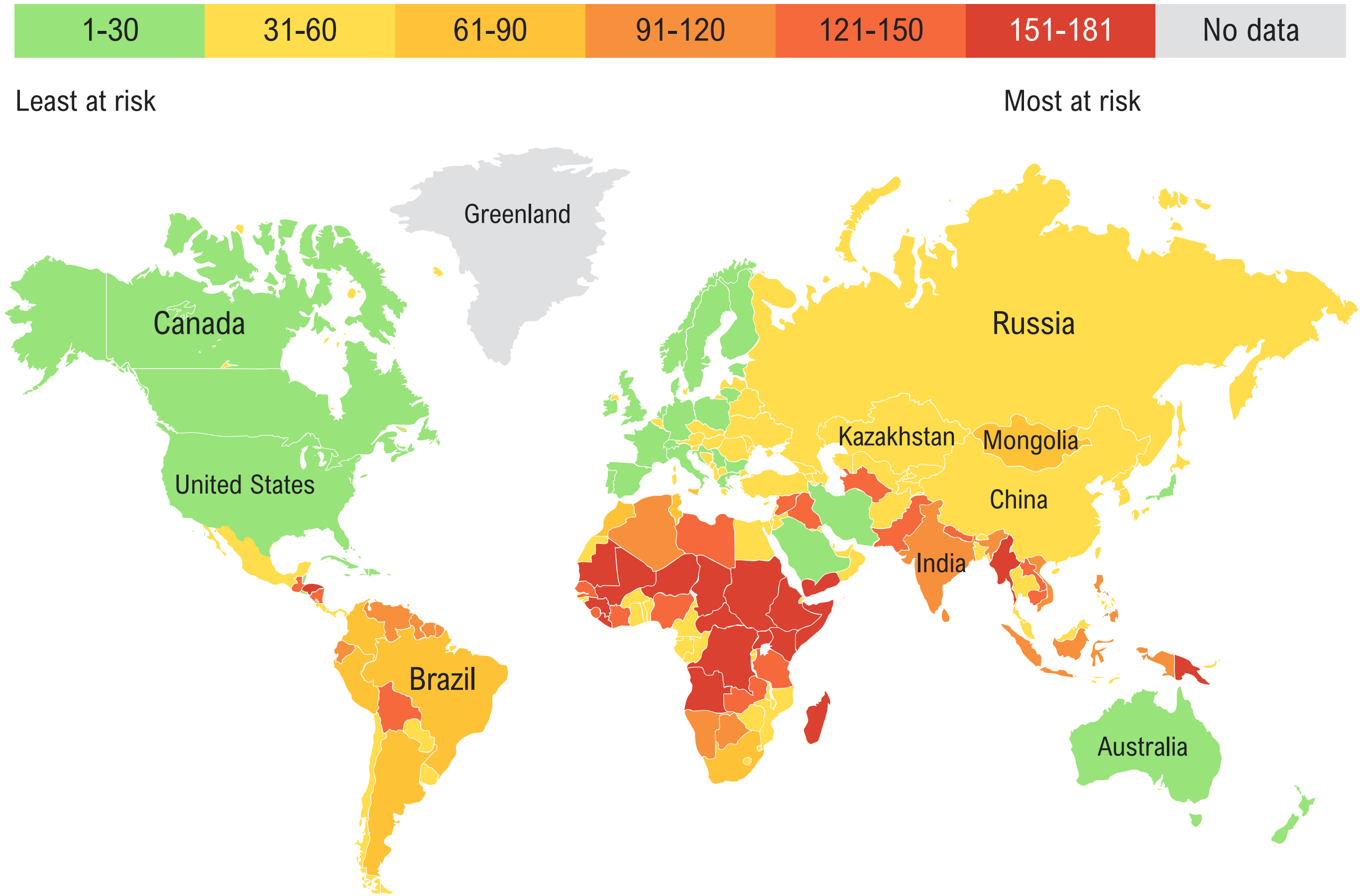
Farming risks

- Lack of Financing
- Lack of seeds, CP, fuel and other inputs

Supply chain risks

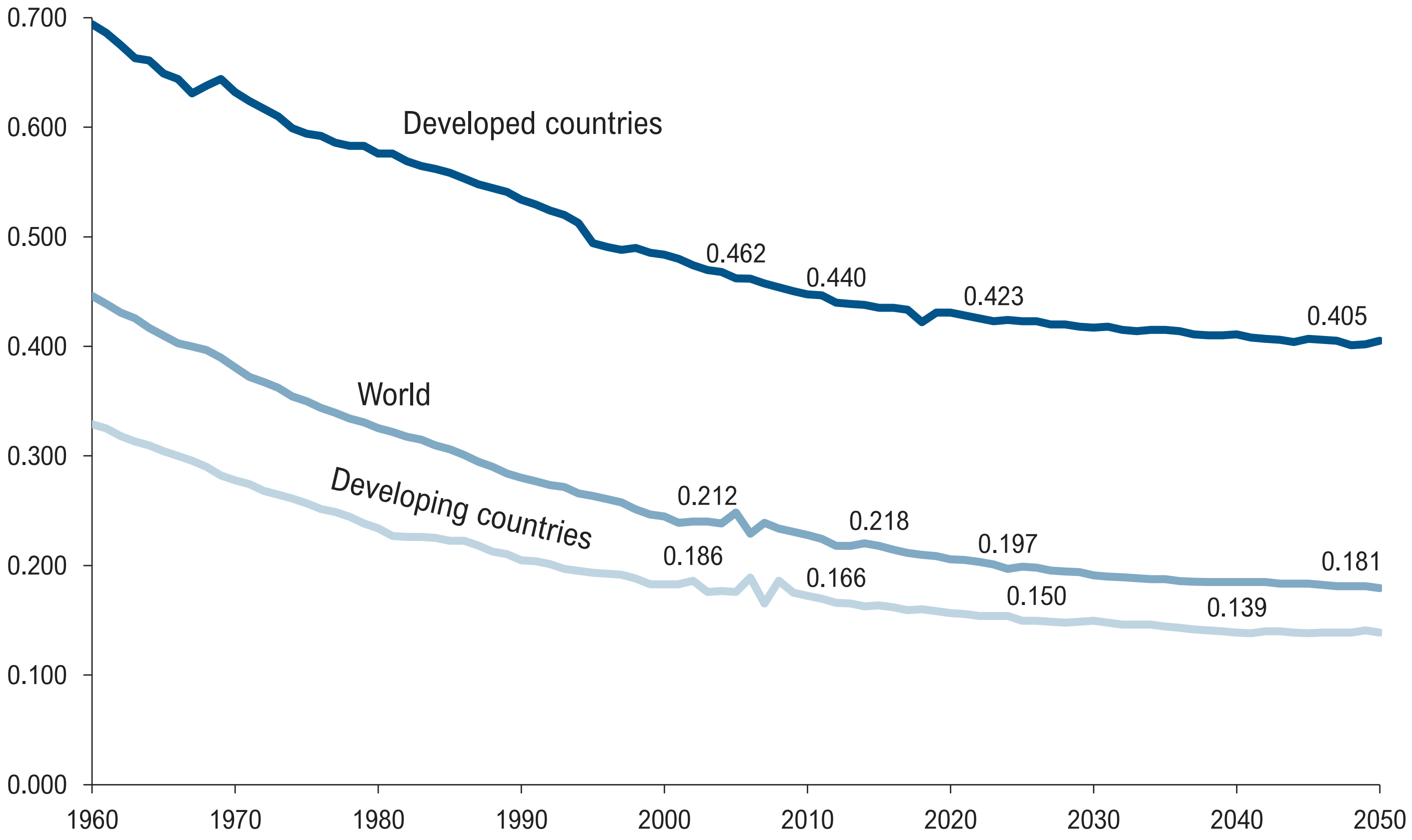
- Limited sea trade routes
- Ship sanctions
- Insurance constraints
- Inland transportation

Climate change risks



Arable land per capita has been declining

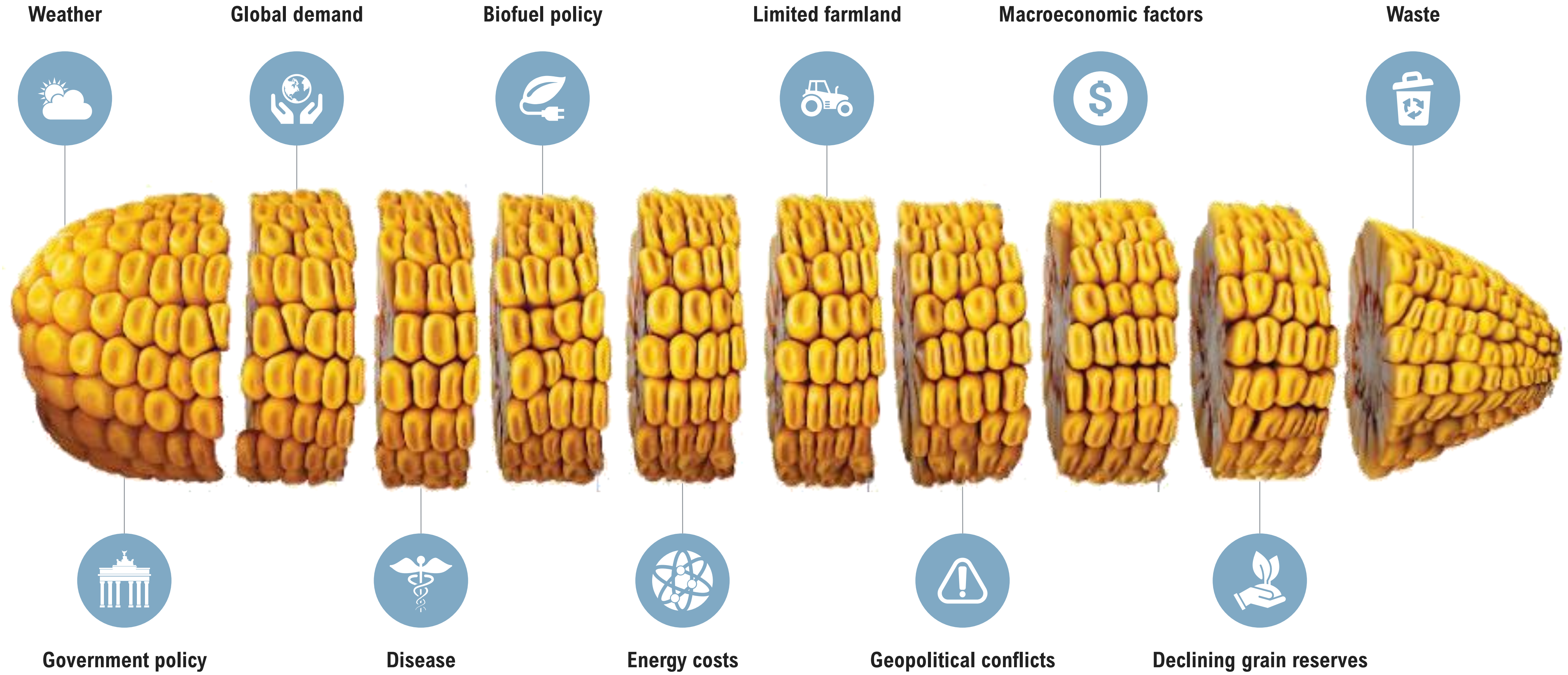
Arable land per capita (ha in use per person)



Arable land per person has been declining in most parts of the world

We need to be more productive with less land, increase yields

The facts behind food prices



Source: Cme Group

Q & A