

## SUSTAINABILITY IMPLICATIONS OF THE WAR IN UKRAINE FOR GLOBAL FOOD PRICES AND GLOBAL FOOD SECURITY

Joe Glauber & David Laborde
International Food Policy Research Institute

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Please visit:

https://www.ifpri.org/landing/war-ukraine-blog-landing-page



#### **Outline**



Driver 1: Grain and vegetable oil markets



Driver 2: Fertilizer and energy markets



Country vulnerability



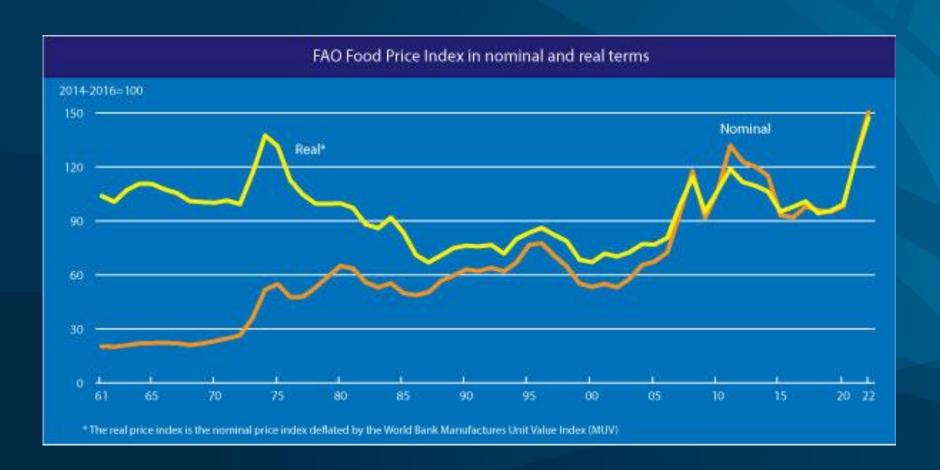
Policy responses

# Grain and Oilseed Markets





## Before the invasion: rising food prices and rising food insecurity



#### Acute food insecurity overview, 2021



in 53 countries/territories were in Crisis or worse (IPC/CH Phase 3 or above) or equivalent in 2021

This figure includes estimates for 20 million people in 12 countries where data was provided by non-IPC/CH sources in 2021 that do not provide a breakdown of figures by IPC/CH phases of acute food insecurity. Therefore the sum of the populations detailed below in IPC/CH Phases 2-5 will not add up to 193 million people.



of the analysed population in 53 countries/ territories were in Crisis or worse (IPC/CH Phase 3 or above) or equivalent in 2021.

FSIN, using IPC, CH, FEWS NET, WFP, SEFSec and HNO data.



**570 000 people** in **4** countries were in Catastrophe (IPC Phase 5) in 2021



**39.2M people** in **36** countries were in Emergency (IPC/CH Phase 4) in 2021



133.1M people in 41 countries were in Crisis (IPC/CH Phase 3) in 2021



**236.2M people** in **41** countries were in Stressed (IPC/CH Phase 2) in 2021

No country with CH data had populations in Catastrophe (CH Phase 5) in 2021. Two figures included in this total were not from the 2021 peak period. The highest number of people in Catastrophe (IPC Phase 5) in Ethiopia was during July-September, while the highest number of people in Crisis or worse (IPC Phase 3 or above) was during May-June 2021. Similarly, the highest number of people in Catastrophe (IPC Phase 5) in Madagascar was during April-September, while the 2021 peak was during November-December due to a wider coverage.

Out of 41 countries/territories that had IPC/CH analyses, 36 had populations in Emergency (IPC/CH Phase 4).

Source: FSIN, using IPC, CH, FEWS NET, WFP, HNO and SEFSec data.



#### **Pre-Crisis drivers of rising prices**

#### **Strong demand:**

Large purchases from China since early 2021

#### **Limited supply:**

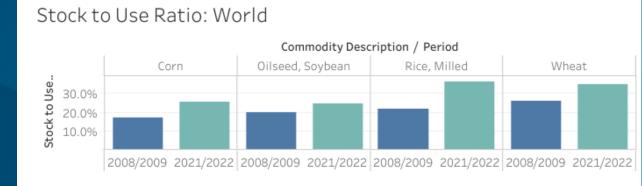
- La Nina hurt South America, in particular soybean production
  - But Argentina wheat production has been spared
- Drought in Middle-East: increased demand
- Supply constraint and trade restrictions on Palm Oil in SE-Asia

#### **Low Inventories:**

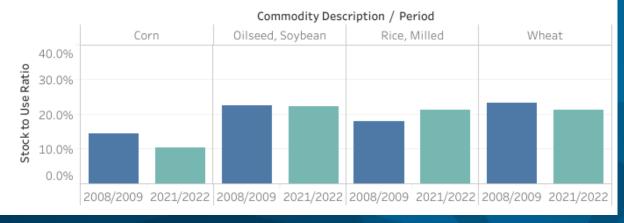
- ❖ Wheat stocks at lowest level since 2007/08
- ❖ Corn stocks at lowest level since 2012/13
- ❖ Soybean stocks at lowest level since 2011/12
- ❖ Rice stocks at *highest* level in more than 20 years

#### Rising production costs:

- Fertilizers
- Energy
- Labor



#### Stock to Use Ratio: World without China

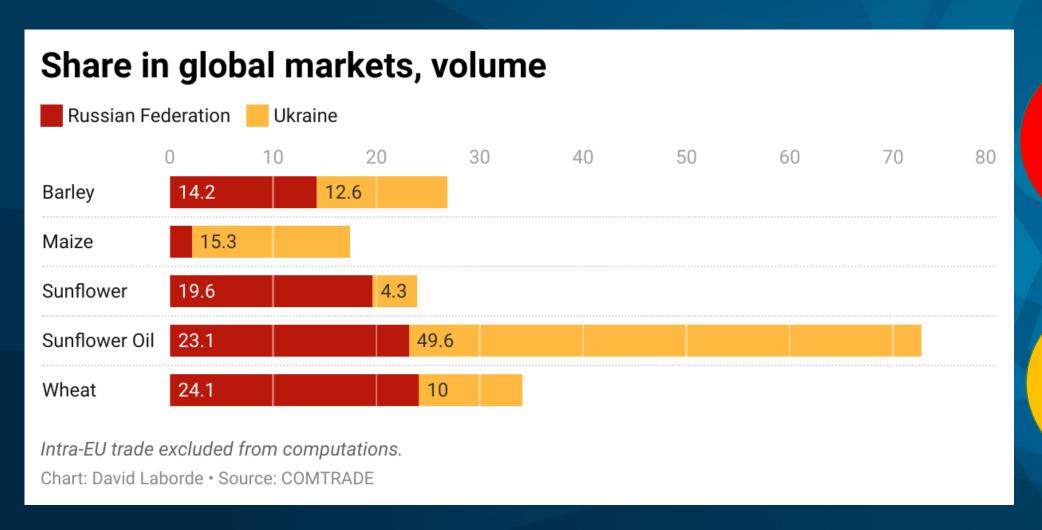


More at Production and Stocks Monitoring System

https://www.foodsecurityportal.org/node/1734

## Russia and Ukraine are key players in global markets for wheat, maize, barley & sunflower oil





Russia
5.8%
Global
Market
Share in
Calories

Ukraine
6%
Global
Market
Share in
Calories

#### Markets have taken further hits since the start of the invasion



#### **Commodity prices in constant USD per Metric Ton**

Prices expressed in 2022 USD.



Chart: David Laborde • Source: IFPRI based on CBOT quotation and US Bureau of Labor statistics



https://www.ifpri.org/blog/do-no-harm-measured-policy-responses-are-key-addressing-food-security-impacts-ukraine-crisis

#### Daily vegetable oil prices, current USD



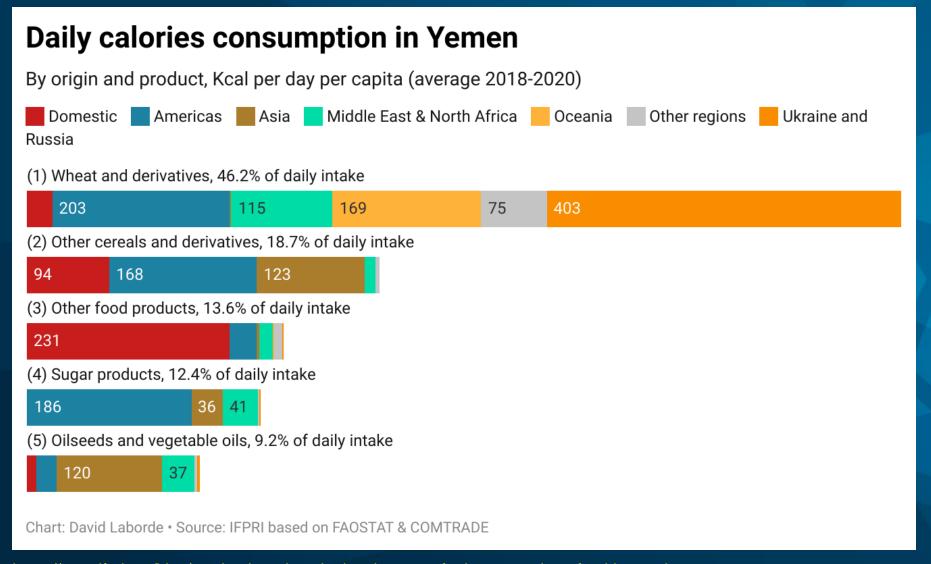


Soybean oil: CBOT, Palm Oil, crude: Malaysian Board daily price, Rapeseed Oil: Rotterdam spot prices, Sunflower oil: India CIF Mumbai price Chart: David Laborde • Source: MPOB, Bloomberg, CBOT



#### Direct vulnerability depends of countries' diet and sourcing: Yemen has a strong dependency to wheat and the Black Sea





## Direct vulnerability depends of countries' diet and sourcing: West Africa has a limited dependency to wheat and the Black Sea



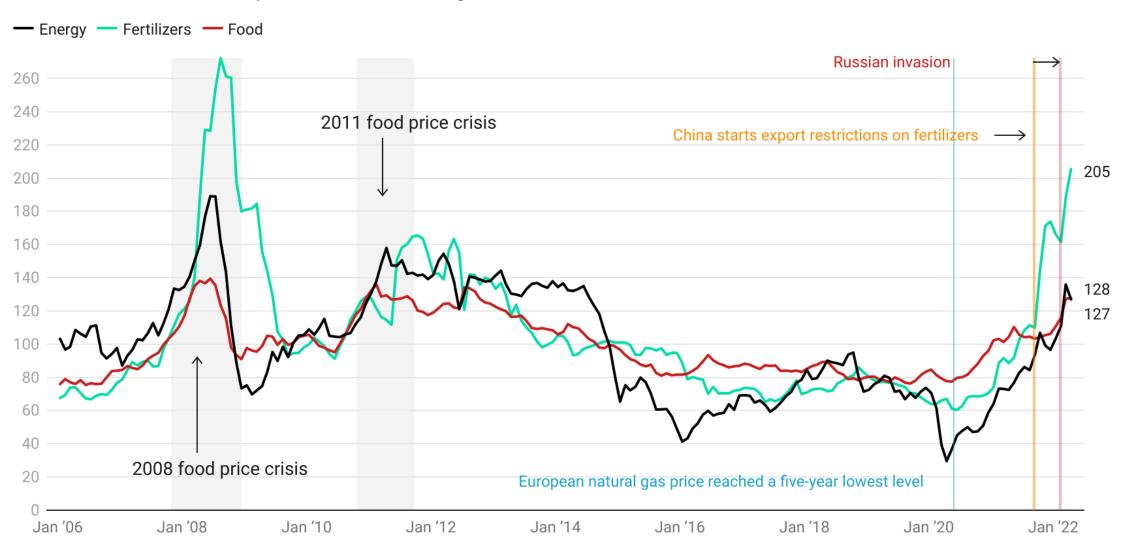
#### Daily calories available for consumption in West Africa

By origin and product, Kcal per day per capita (average 2018-2020) Americas Asia Europe Other regions Ukraine and Russia Domestic (1) Other food products, 40.5% of daily intake 1049 (2) Other cereals and derivatives, 38.8% of daily intake 861 130 (3) Oilseeds and vegetable oils, 10.4% of daily intake 205 (4) Wheat and derivatives, 6.5% of daily intake (5) Sugar products, 3.8% of daily intake 62 Chart: David Laborde • Source: IFPRI based on FAOSTAT & COMTRADE • Created with Datawrapper



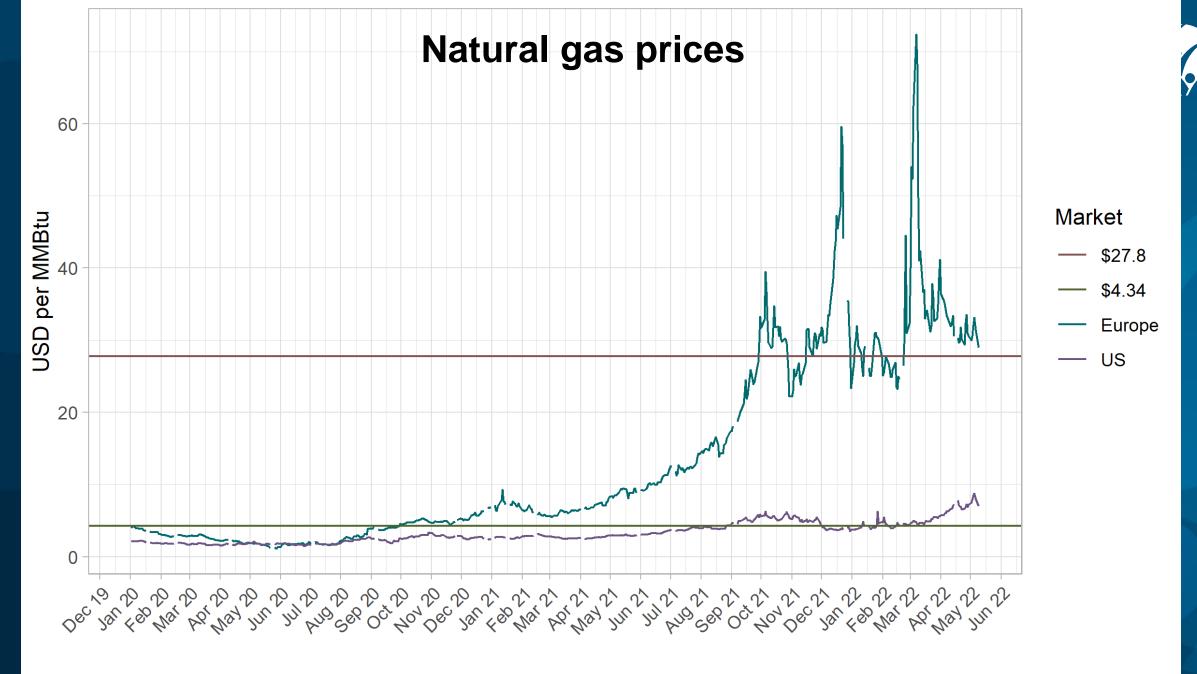
#### Prices for food, fertilizer and energy

Index based on constant USD prices. Base 100 = Average 2010-2020









US price based on Natural Gas, next month, contract. Europe price based on Dutch TTF contract.

#### Global markets of fertilizers in 2019

Russian Federation

China

**Qatar** 

Belarus

Canada

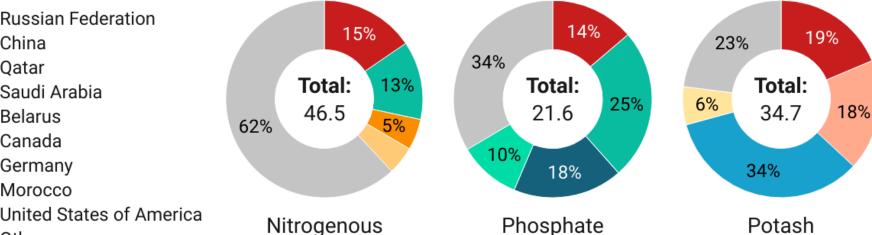
Germany

Morocco

Other

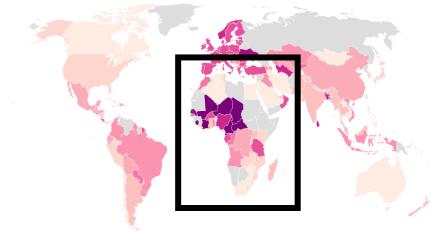
Saudi Arabia

Market shares of main exporters and total amount of traded nutrients in metric tons.



Percentage of the Russian Federation and Belarus in potassium fertilizer imports by country





Global production of N is estimated at 123 mio MT, of P2O5 44 mio MT, and of K2O 44 mio MT. Chart: David Laborde • Source: FAOSTAT

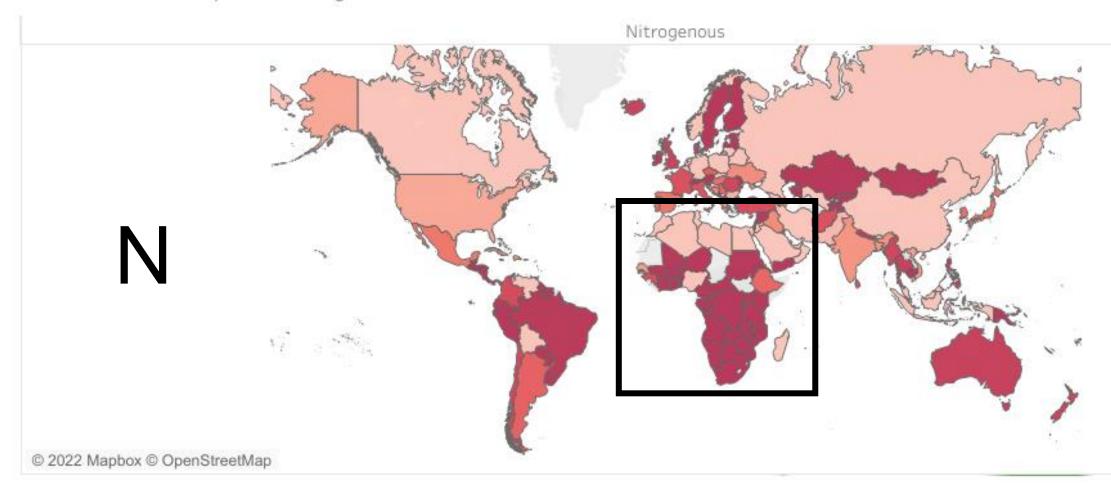
https://www.ifpri.org/blog/high-fertilizer-prices-contribute-rising-global-food-security-concerns

#### Russia and Belarus plays a critical role on fertilizer markets

#### Dependency Ratio



Ratio between imports and agricultural use.



The map shows the dependency ratio, ranging from 0, no imports, to 1, domestic use fully supplied by imports. You can generate various maps by selecting several nutrients. 3 years available.

Source: Computations based on FAOSTAT



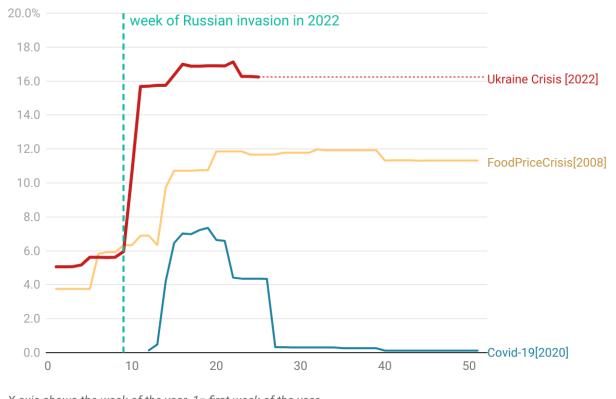
## How to make things worst: Export restrictions



#### Food & Feed

#### Evolution of the share of global trade, in calories, impacted by export restrictions

Daily update. Includes food, feed and other uses of food products.



X-axis shows the week of the year. 1= first week of the year.

Chart: David Laborde • Source: IFPRI

#### **Fertilizers**

Agricultural use and import shares impacted by export restrictions

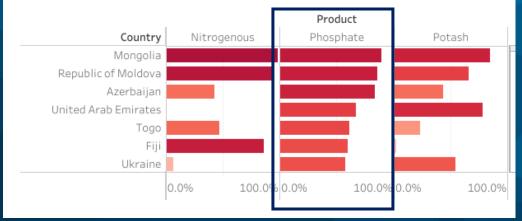
Share of agricultural use impacted by export restrictions



Map based on the IFPRI Food and Fertilizer Export Restrictions tracker data, and domestic agricultural use quantities from FAOSTAT.

European Union considered as an integrated market. Shares based on 2018-2020 average.

Share of imports impacted by export restrictions in total agricultural consumption

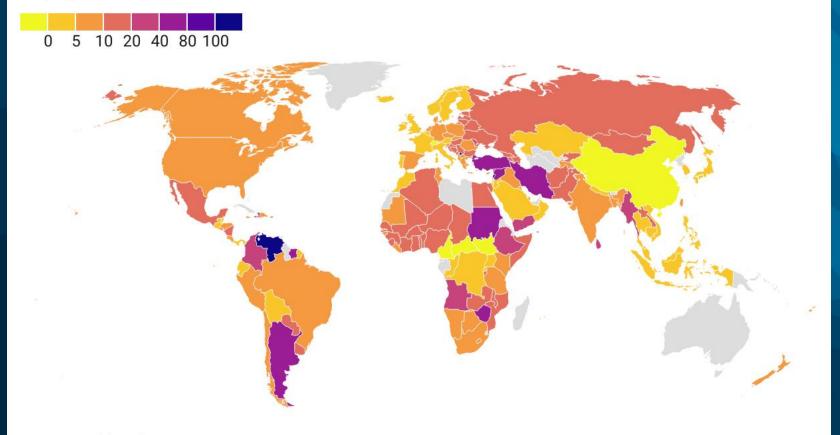




#### Food inflation was increasing, even before the war

#### **Food Price Inflation**

12 month inflation rate for food products. Only countries with update in the last 90 days displayed.

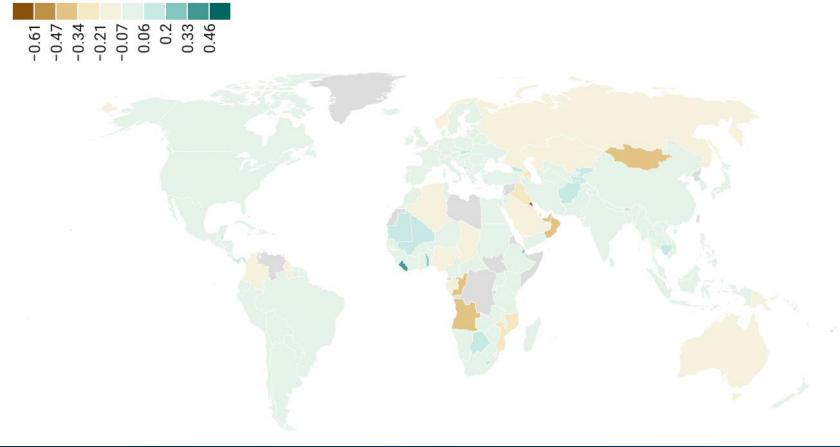


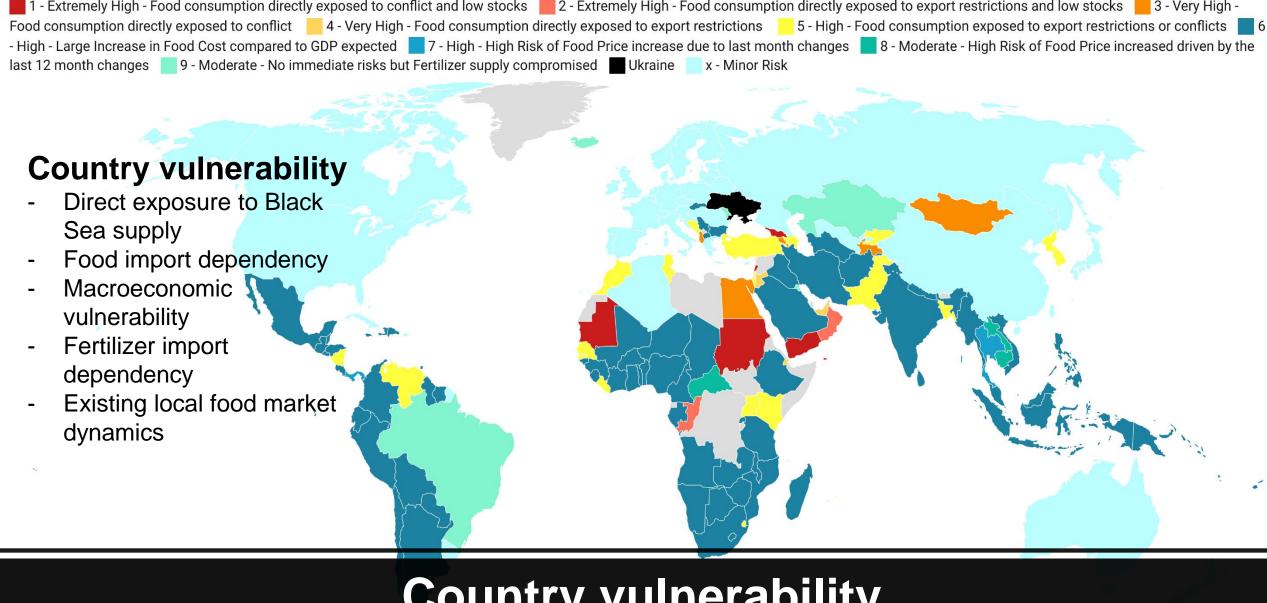
Source: World Bank; IMF; EUROSTAT; BECEAO; NSI

## Consequences of changing world prices on current account









#### Country vulnerability



## Conclusions



## Crisis will not disappear with the end of conflict in Ukraine

18 months for markets to adjust

Short term response should not replace the long-term food transformation agenda

Policy response should be evidence-based and not emotionally driven

#### **Summary**





DO's	Remove biofuel subsidies and mandates
	Target social safety nets to the most needy
	Boost funding to WFP and other humanitarian programs
	Allow market prices to guide producer and consumer decisions.
DON'TS	Apply sanctions that obstruct food and fertilizer trade
	Implement export restrictions
	Panic buying
	Target subsidies to specific crops, or large-scale fertilizer subsidies programs
	Cancel environmental initiatives without weighing long term costs
	Promote self sufficiency policy and autarky strategy

https://www.ifpri.org/blog/do-no-harm-measured-policy-responses-are-key-addressing-food-security-impacts-ukraine-crisis



## Lessons about sustainability and the need of smart policy actions



How to produce food: the fertilizer issue



What to produce with our land: food, feed and biofuels or ecosystem services

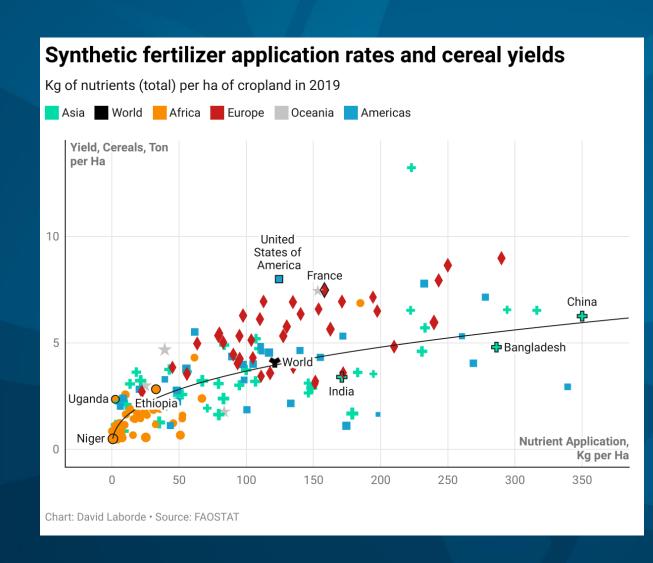


Learning from previous crisis: the role of information



#### Could we do without mineral fertilizers?

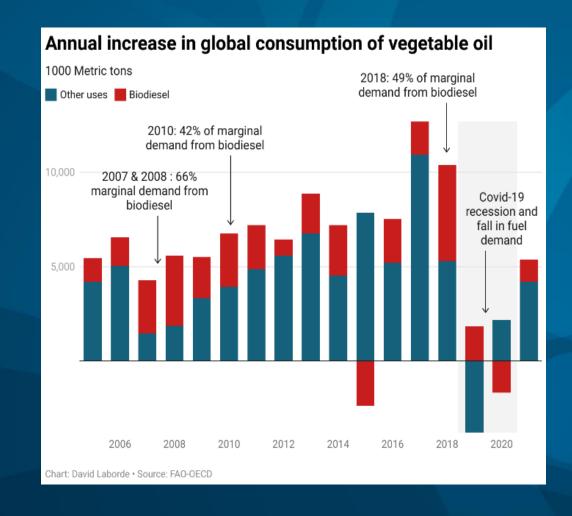
- Simple answer: no
- Could and should we have a more responsible use of fertilizers: yes, and policy matters
- Opportunities and challenges of green ammonia: a new nexus for food, energy and climate actions

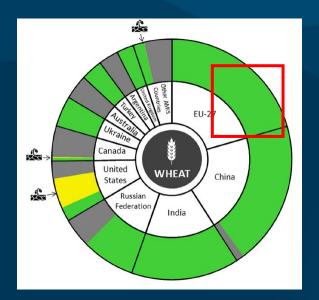




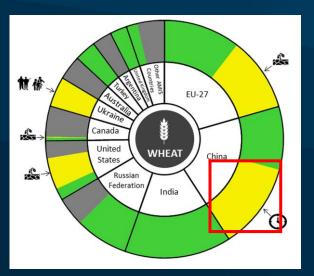
#### What to do with our land

- The risk of agricultural land expansion to "compensate" reduced yields (fertilizer shortage) and lack of Ukraine products → do not compromise long term initiative in protecting/restoring biodiversity and carbon stocks
- The role of biofuel policies and in particular biodiesel
- The delicate issue of livestock sector → differentiated needs and responses around the globe

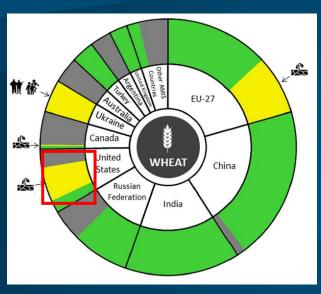




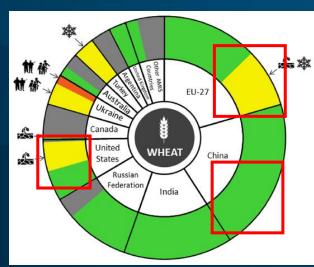
Feb 2022



Apr 2022



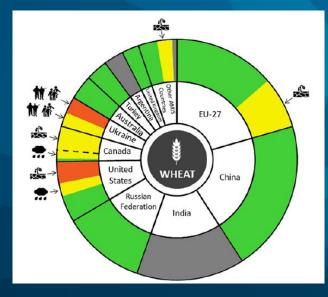
March 2022



May 2022



The critical role of AMIS and crop monitoring
Better information is the best defense against risk of panic or speculation



June 2022





## Thank you

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