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UNITED NATIONS
FOOD SYSTEMS
SUMMIT 2021

Transforming Food Systems –

the challenges of food security, malnutrition, climate change, ecosystems degradation, well-being

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https://sc-fss2021.org/

European Union - FAO Strategic Dialogue
Thursday 6 May 2021, 14.00-16.00 CET

How Can Food Systems be Transformed Towards Sustainability?

Overview

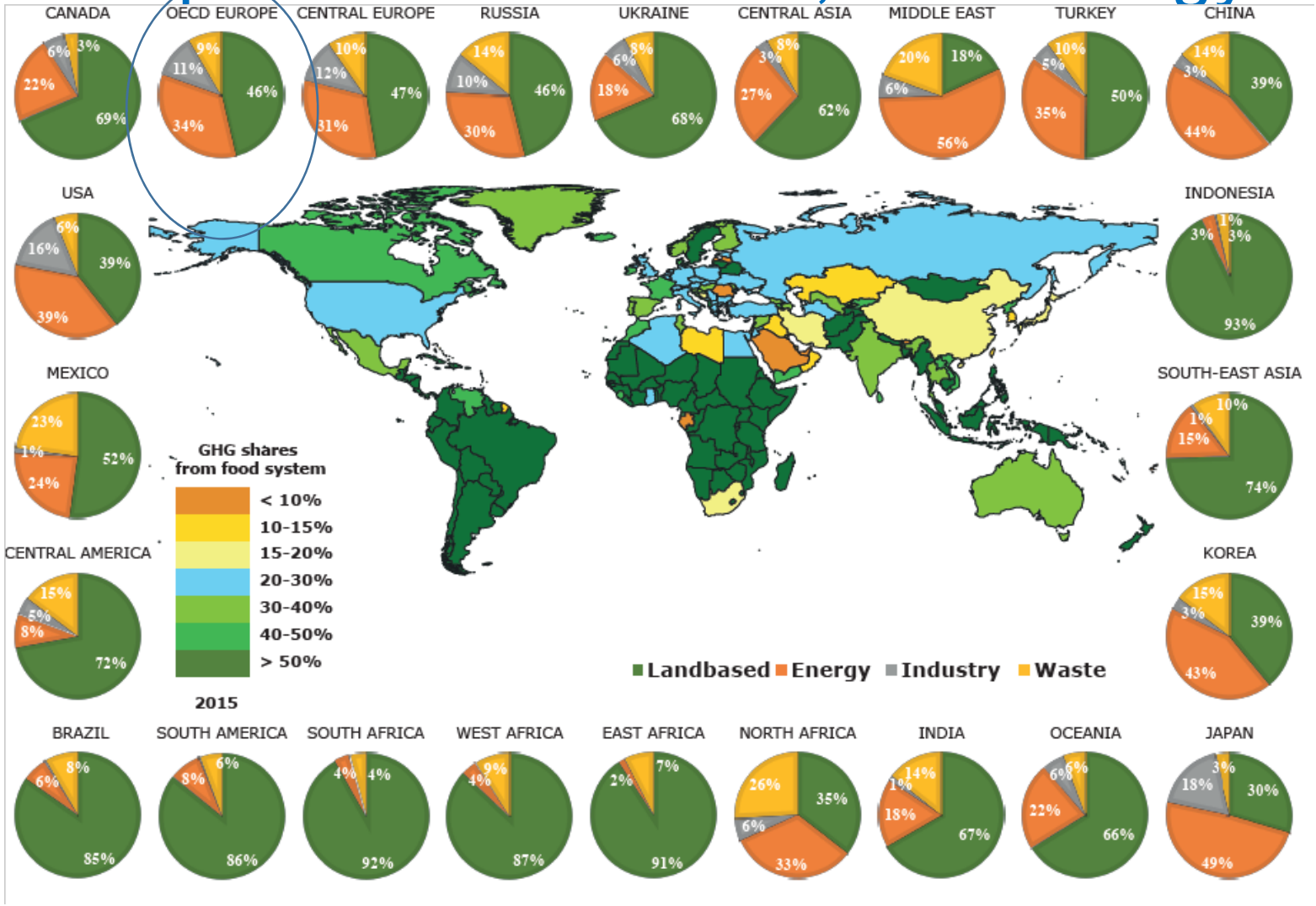
1. What Food Systems?
2. Food Systems Summit Opportunities?
3. EU's Potential Engagement?

The Food System we have:
Is not serving people and planet

- **Hungry, undernourished people:** 690 mill. + Covid increase
- **Stunting among children:** unacceptably high.
- **Micronutrient deficiencies:** harm over 2 bill. people.
- **Healthy diets:** not affordable for 3 bill. people
- **Obesity:** more than 800 mill. people
- **Unsafe food:** affects ca. 1 in 10 people
- **High food losses and waste:** Up to one-third lost or wasted.
- **Environmental destructions:** to land, water, seas, atmosphere.
- **Poverty on the farms:** ca. 500 mill. small farms, home to large share of poor people
- **Malnutrition in urban areas**: growing

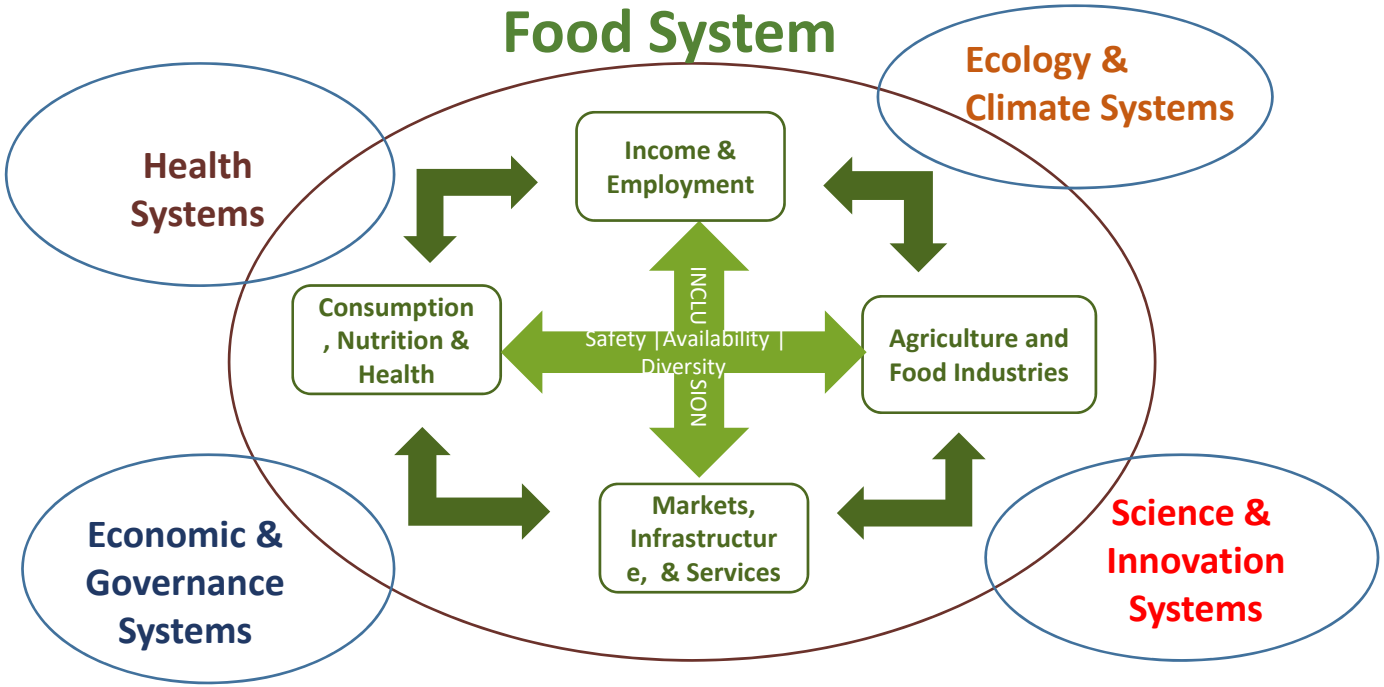
GHG emissions from food systems

Europe: 46% landbased, 34% energy



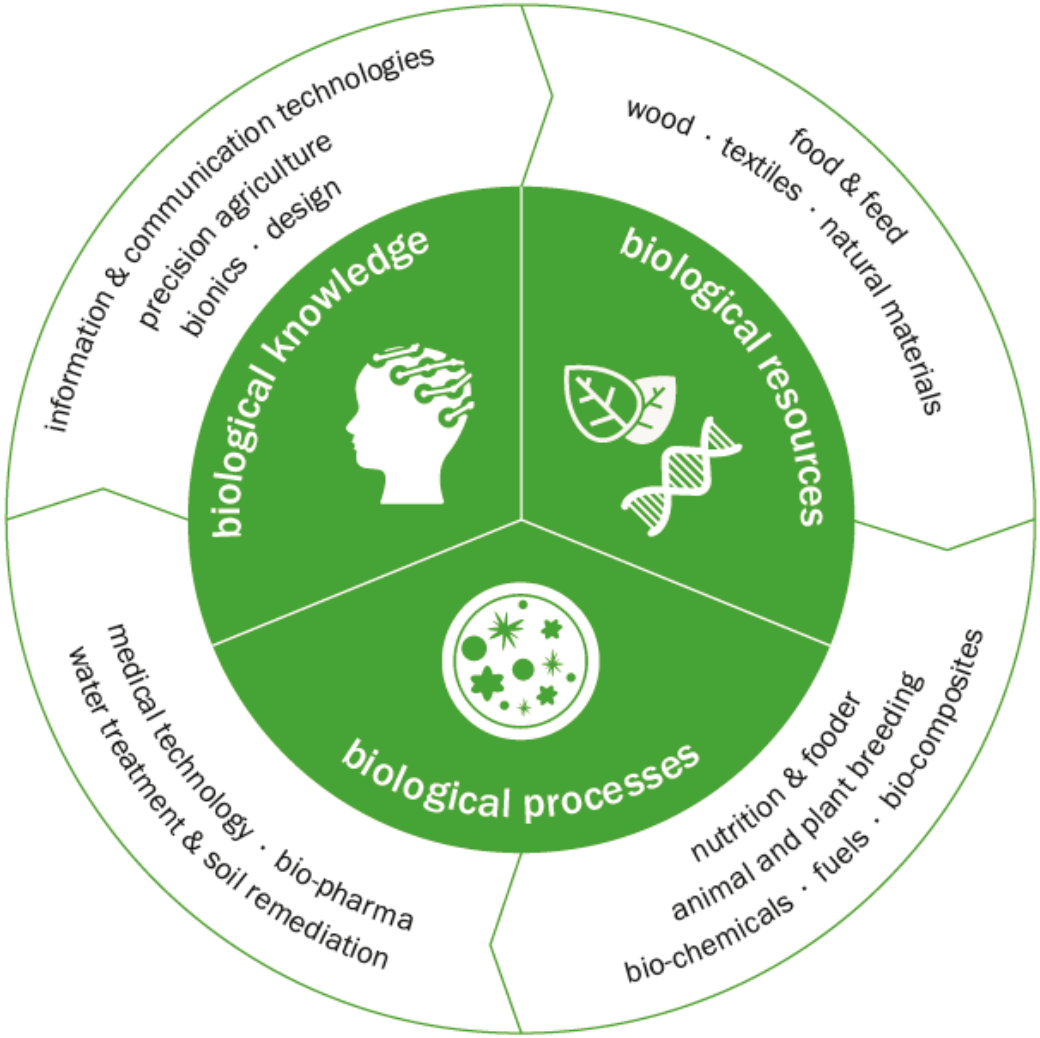
Sources: JRC EU Science Hub, EDGAR-Food database, Crippa et al. (2021)

The Food System we want serves people & planet



Source: Food Systems – Definition, Concept and Application for the UN Food Systems Summit https://sc-fss2021.org/materials/scientific-group-reports-and-briefs/ (von Braun et.al 2021)

Transformation of food systems to what?



…to a key component of the circular sustainable bioeconomy

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The Food Systems Summit 2021 Agenda is Set…

… set by the SDGs
and SDG2 in particular

connecting food-, climate-, biodiversity-, health- agendas

FSS2021 is Action Oriented

Action Track 1 – Ensuring Access to Safe and Nutritious Food for All Through Transformation of Food Systems

Action Track 2 – Shift to Healthy and Sustainable Consumption Patterns

Action Track 3 – Boost Nature Positive Production

Action Track 4 – Advance Equitable Livelihoods

Action Track 5 – Building Resilience to Vulnerabilities, Shocks and Stresses

Attention to Regions

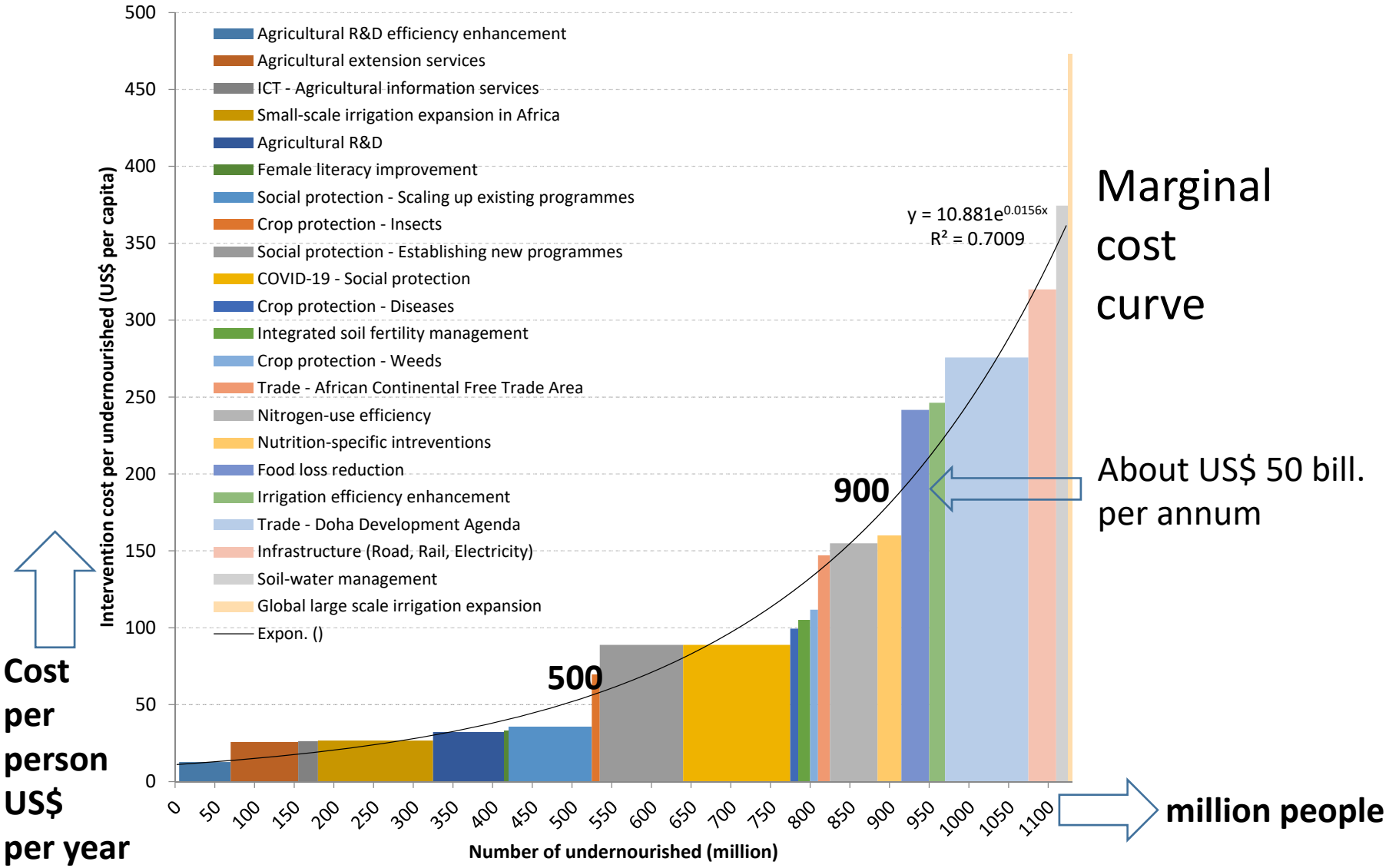
There were Food Summits before…

- 1943 World Food Congress Hot-Spring, Va, USA.
- 1963 World Food Congress
- 1996 World Summit on Food Security.
- 2002 World Food Summit.
- 2009 World Summit on Food Security.
- 2021 UN Food Systems Summit

➢ Triggered by crises

➢ Triggering institutional and policy innovations

Ending hunger by 2030 as a goal



Marginal cost curve

About US$ 50 bill. per annum

Cost per person US$ per year

million people

Source: ZEF & FAO, 2020. INVESTMENT COSTS AND POLICY ACTION OPPORTUNITIES FOR REACHING A WORLD WITHOUT HUNGER (SDG 2)

Financing End of Hunger by 2030?

explore innovations for additional US$ 50 bill. p.a.

1. a Zero Hunger **Fund** (double ODA for food and agr. - US$ 14 bill. per year until 2030).
2. 2% of the future issuing of **IMF SDRs** for **"zero hunger bond"**
3. reallocate and better target agricultural **subsidies and investment,** scale up social safety nets in affected **countries**

NEED TO REDEFINE VALUE OF FOOD
– culture, ecology, health, economics -

Food is valued through market prices. Does not include external costs & benefits (climate, biodiversity, health…)

Market prices do not take into account…

- benefits of affordable or healthy food

- costs of unhealthy or unsustainable food

Business' profits not reflect value created/reduced for society

GDP of food system does not reflect contribution to welfare

>> Sustainable & healthy food is too expensive

>> Unsustainable& unhealthy food is too cheap

>> toward "true price of food"

>> modeling, data, interdisciplinarity; all stakeholders

5 Policy and Institutional Innovations for FSS2021

1. **incentivize availability and affordability of healthy diets and nutritious foods**. Ensure **food prices reflect true costs.**
2. **overcome inefficient and unfair land, credit, and labor arrangements** (incl. earn living wages).
3. **de-risk food systems**. Efficient social protection programs and nutrition programs, school feeding. One Health; Connection to Covid.
4. **facilitate inclusion, empowerment, rights of women and youth**. Education…, capacity, …
5. **strengthening science and policy interface**: an Intergovernmental Scientific Advisory Panel **- IPFood**

5 Science- and Technology Innovations for FSS2021

1. **Bio-Science innovations,** adapted to local conditions and to make them accessible and affordable to smallholders.
2. **Digital innovations and engineering**. Reaching rural communities. Attention to employment effects and a focus on the poor.
3. **Innovations for climate-neutral, climate-positive, and climate-resilient food systems.** Moving quickly…Transform livestock systems. Carbon pricing for innovation. Waste reduction.
4. **Innovations for productive soils, land and water, and to protect the agricultural genetic base and biodiversity.** Smallholder farmers and indigenous peoples; integrate forest systems.
5. **Innovations for sustainable "blue economy" to protect and harness oceans, fisheries, and coastal areas.**

Scientific Group and Pontiical Academy of Sciences April 20-21, 2021

http://www.pas.va/content/accademia/en/events/2021/foodsystems/final_statement.html

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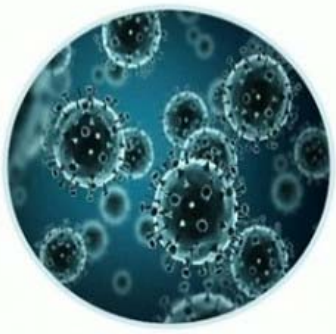
The Farm to Fork Strategy offers opportunities

2030 Targets for sustainable food production

Reduce by 50% the overall use and risk of **chemical pesticides** and reduce use by 50% of more hazardous **pesticides**

Reduce **nutrient losses** by at least 50% while ensuring no deterioration in soil fertility; this will reduce use of **fertilisers** by at least 20 %



Reduce sales of **antimicrobials** for farmed animals by 50%

Achieve at least 25% of the EU's agricultural land under **organic farming** and a significant increase in **organic aquaculture**

Sources: European Commission

The Farm to Fork (F2F) Strategy needs some follow up

- Clearer **concept** of what is "sustainable food systems"
- Complexity of institutional governance at the EU and national levels; **Coordination** between member countries
- Need for ex ante modelling of F2F measures, including impacts on **rest of the world**, especially on low income countries, and EU indirect footprints (e.g. soy imports carbon footprint stemming from embodied deforestation; water footprint in water scarce areas)

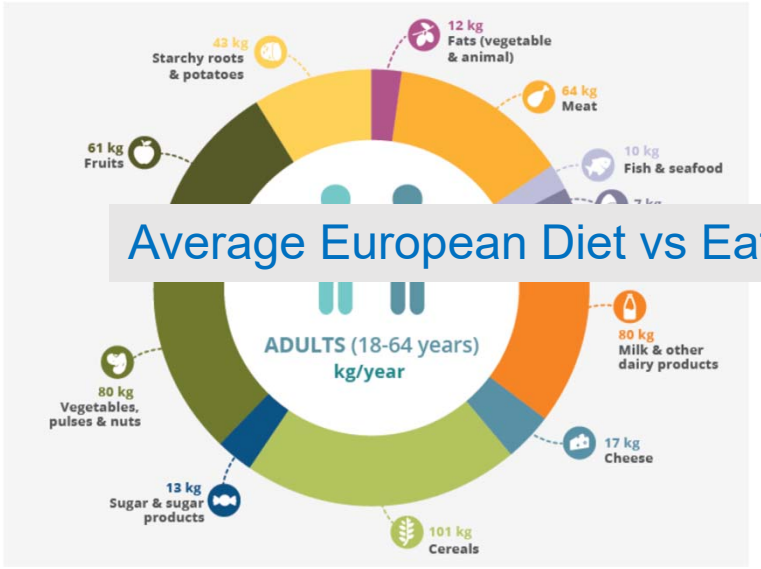
Need to Address Food Consumption and Health >> Toward One Health

52 % of European population is overweight or obese

5 % of EU population is at risk of undernutrition

In Covid19 lock down 55% say "difficult to make ends meet"

https://eit.europa.eu/news-events/news/eit-food-report-reveals-impact-covid-19-pandemic-european-food-behaviours



Average European Diet vs Eat Lancet recommendation

Source: European Environmental Agency

Source: EAT Lancet Commission

The EU's potentially biggest contribution to Food Systems Transformations? Science, Technology, Innovation!

- **Mobilize the EU science community**
- **Scale up sharing and partnerships**
- **Prioritizing innovation investments that matter for global food systems, the hungry, and "One Health"**

EU - top science producer in the world

Region or Country	All publications	Agricultural and Biological sciences	Environmental sciences
EU	**965,926**	**71,881**	**63,915**
USA	699,633	42,774	35,927
China	605,616	41,504	48,758
UK	216,528	11,958	12,386
India	179,049	10,975	12,448
Latin America	173,451	29,309	14,012
Africa	109,534	13,486	9,670
World	**4,035,084**	**298,436**	**273,316**

Source: Scimago journal and country rankings for 2018

EU high in agricultural research spending (bln USD)

Region and Country	1981	2000	2016	Share in total GDP in 2016 (%)	Share in total agricultural value added in 2016 (%)
European Union	**4.6**	**6.4**	**7.6**	**0.05%**	**3.78%**
China	**0.2**	**1**	**7.7**	**0.09%**	**0.93%**
India	0.5	1.6	4.0	0.18%	1.17%
Brazil	1.4	1.8	2.7	0.13%	3.41%
Sub-Saharan Africa	1.3	1.6	2.3	0.15%	0.94%
North America	4	5.6	5.3	0.03%	2.87%
West Asia, North Africa	1.3	2.3	4.5	0.19%	3.46%
The rest of the world	7.8	10.6	12.7	0.06%	1.24%
World	**21.1**	**30.9**	**46.8**	**0.07%**	**1.55%**

Sources: Beintema et al., 2020 ASTI. Own estimates for the shares, using World Bank data

STI are essential to Accelerate the Ongoing Food Systems Transformation Towards Sustainability!

Sustainability means “ending hunger and serving people and planet”!

•**Assess science-based options** to achieve more healthy diets and more efficient, inclusive, resilient and sustainable food systems.
•**Explore the frontiers of science** to catalyze food systems transformation to achieve SDG2.
•**Critically assess risks, opportunities, and controversies** in science and innovation for food systems, with attention to equity and to resilience.
•Engage in dialogues to **strengthen the science–policy interface** so that scientific evidence can best inform policy and policy in turn can better use science to support the transition to sustainable, inclusive and resilient food systems.

A registration link will be circulated shortly.

Twitter: @sc_fss2021 **&** @FAO **| #ScienceDays & #FoodSystems**

https://sc-fss2021.org/