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The future Partnership Sustainable Food Systems (SFS); consequences for Food Science and Technology (FST) and vice versa

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11th Central European Congress on Food and Nutrition

“Food, technology and nutrition for healthy people in a healthy environment“

The future Partnership Sustainable Food Systems (SFS);

consequences for Food Science and Technology (FST) and vice versa

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*
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Slovenia, Čatež ob Savi, 27-30 September 2022



INRAE

11th Central European Congress on Food and Nutrition

“Food, technology and nutrition for healthy people in a healthy environment”,

Čatež ob Savi, SLOVENIA, 27th – 30th September 2022



*The future Partnership Sustainable Food Systems (SFS);
consequences for Food Science and Technology (FST) and vice versa*

Hugo de Vries

INRAE, research director and member of DS Food and Bioeconomy,

President of EFFoST

Coordinator of the European CSA Project FOODPathS

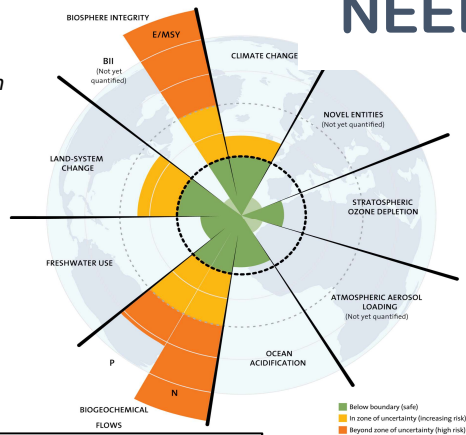
food|paths



➤ Story line of the Future Partnership SFS

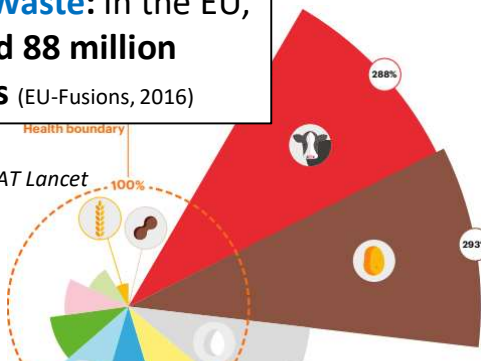
NEEDS

Stockholm Resilience Center;



Food Waste: In the EU, around 88 million tonnes (EU-Fusions, 2016)

Source: EAT Lancet



EU: Obesity: ~15%; **Overweight:** ~50%;
G. Brunori, SCAR SW FS, figures of 2017

INRAE

EVIDENCE

ACTIONS

<https://scar-europe.org/index.php/food-main-actions/food-systems-partnership>

https://ec.europa.eu/info/files/european-partnership-safe-and-sustainable-food-system-people-planet-climate_en

Since 2019: numerous workshops
June 2021 – Narrative & Fact sheet
April 2022 – TEMPLATE
Autumn 2022 – SRIA



➤ What is the Partnership SFS about

- To collectively develop and implement an EU-wide mission-oriented R&I partnership
- To accelerate the transition toward safe and healthy diets, that are sustainably produced in resilient EU and global food systems'



*But, quite a challenging job, thus a
HE Governance call launched > our granted CSA*

➤ CSA Project FOODPathS

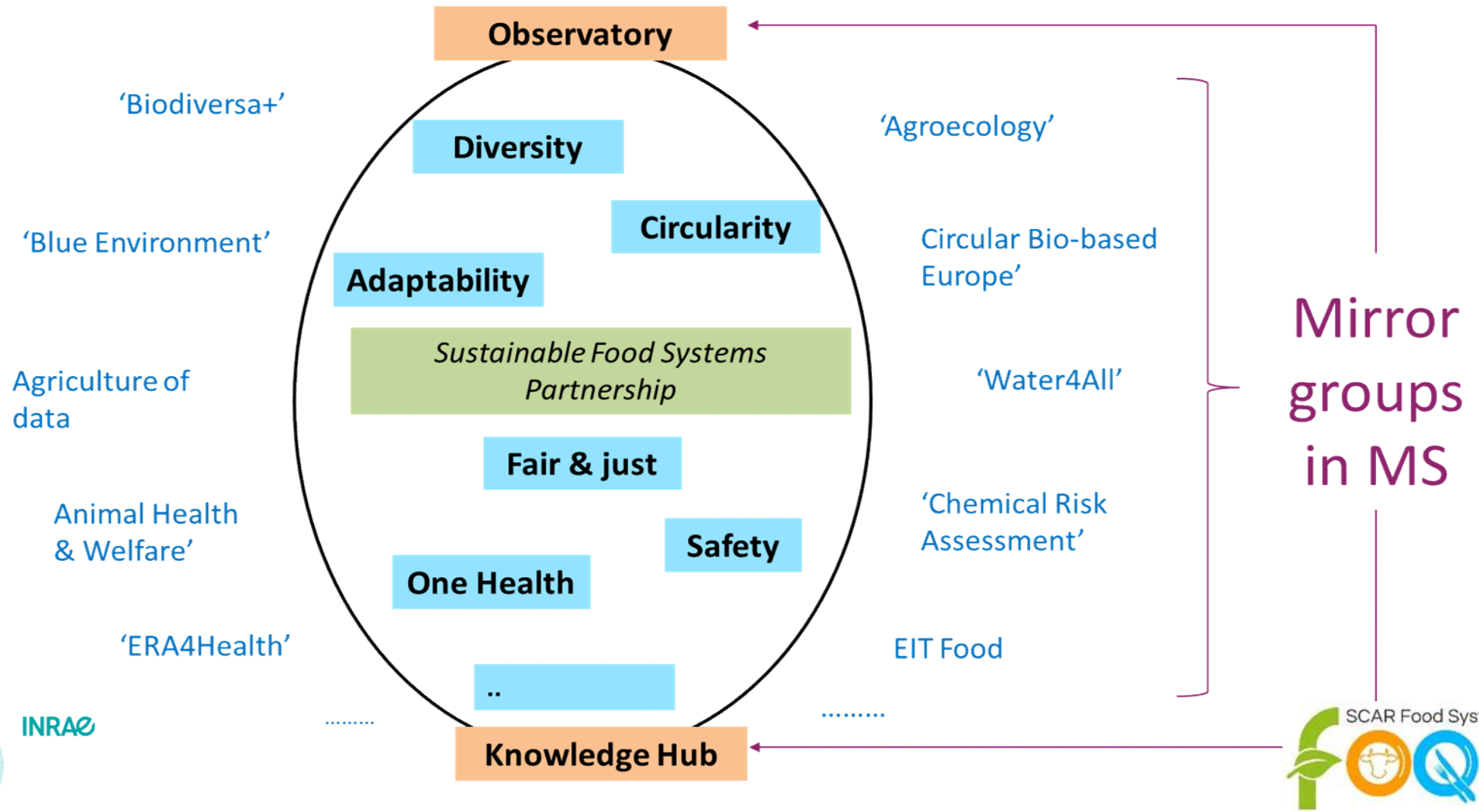
- European Project no. 101059497
- Call topic: 'HORIZON-CL6-2021-GOVERNANCE-01-03 'Preparatory action for the HE FS Partnership'.
- Duration: 3.5 year (kick-off: 1/6/2022; foreseen: 1.5 years overlap with future partnership)
- 17 partners representing 19 networks (local, regional, national, European, global, public-private, philanthropic, research, education, innovation, communication, management)
- ***The project aim: 'FOODPathS' will design the 'Prototype SFS Partnership'.***
- *The Prototype will serve as the first version of HOW the future Partnership will function from 2024 onwards. This includes its co-funding strategies, governance model, Modus Operandi, sustainability charter, strategic research and innovation agenda (SRIA), and vitrine with co-creation cases. It will also list potential trade-offs and will propose ways of communicating with other HorizonEurope Partnerships.*

➤ Key topics, partners and networks in FOODPaths

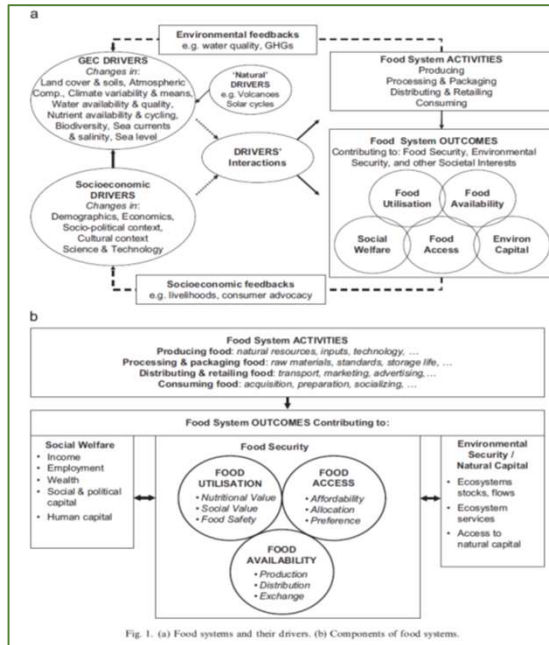
- Common **co-funding food strategy**, while respecting local food cultures
- **Coordination** between EC & member states of food actions, across all levels;
- **Effective networking** across the food value chain in Europe
- **Market uptake of R&I** (with EIT Food now operational);
- **Current food surveillance systems** (under-equipped);
- **Citizen's access** to information & participatory trajectories
- **Food Systems knowledge & approach** (*inter-disciplinarity and trans-disciplinarity*)



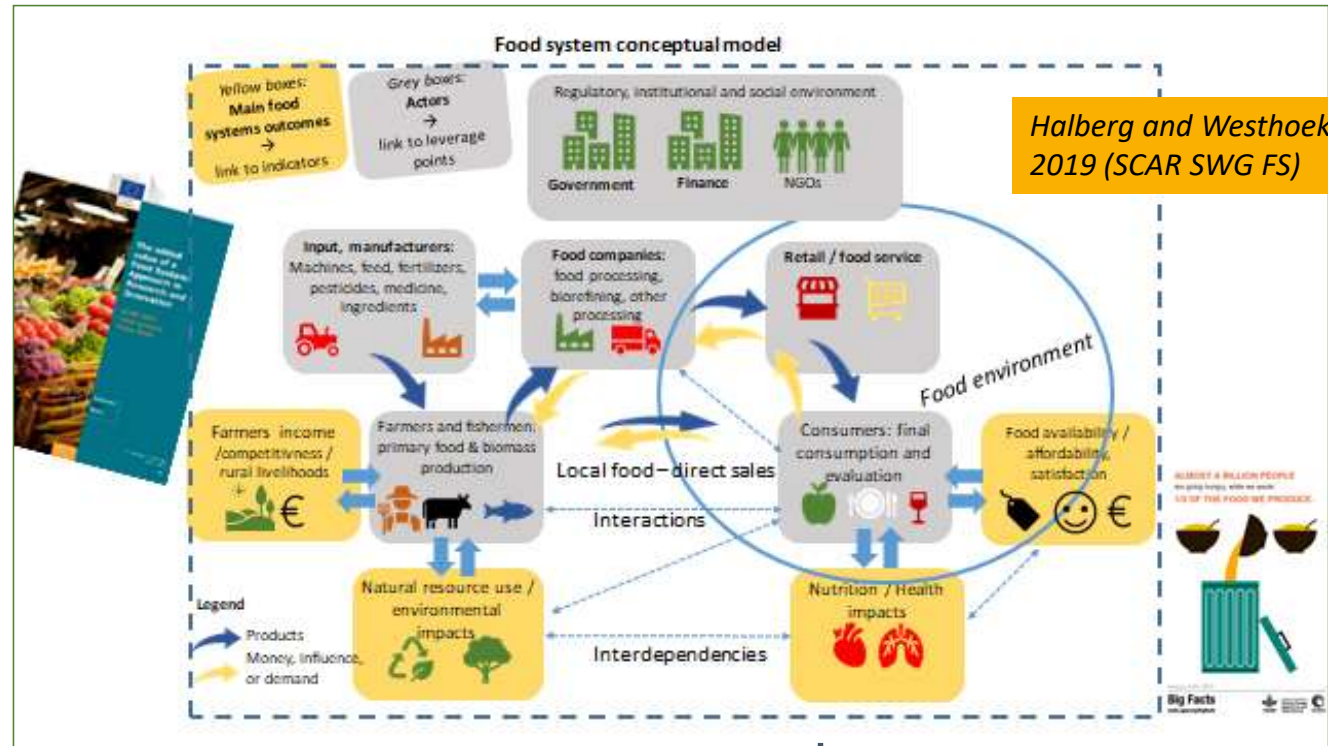
➤ Cooperation with other Partnerships in HorizonEurope



➤ Food system approaches and existing FS concepts

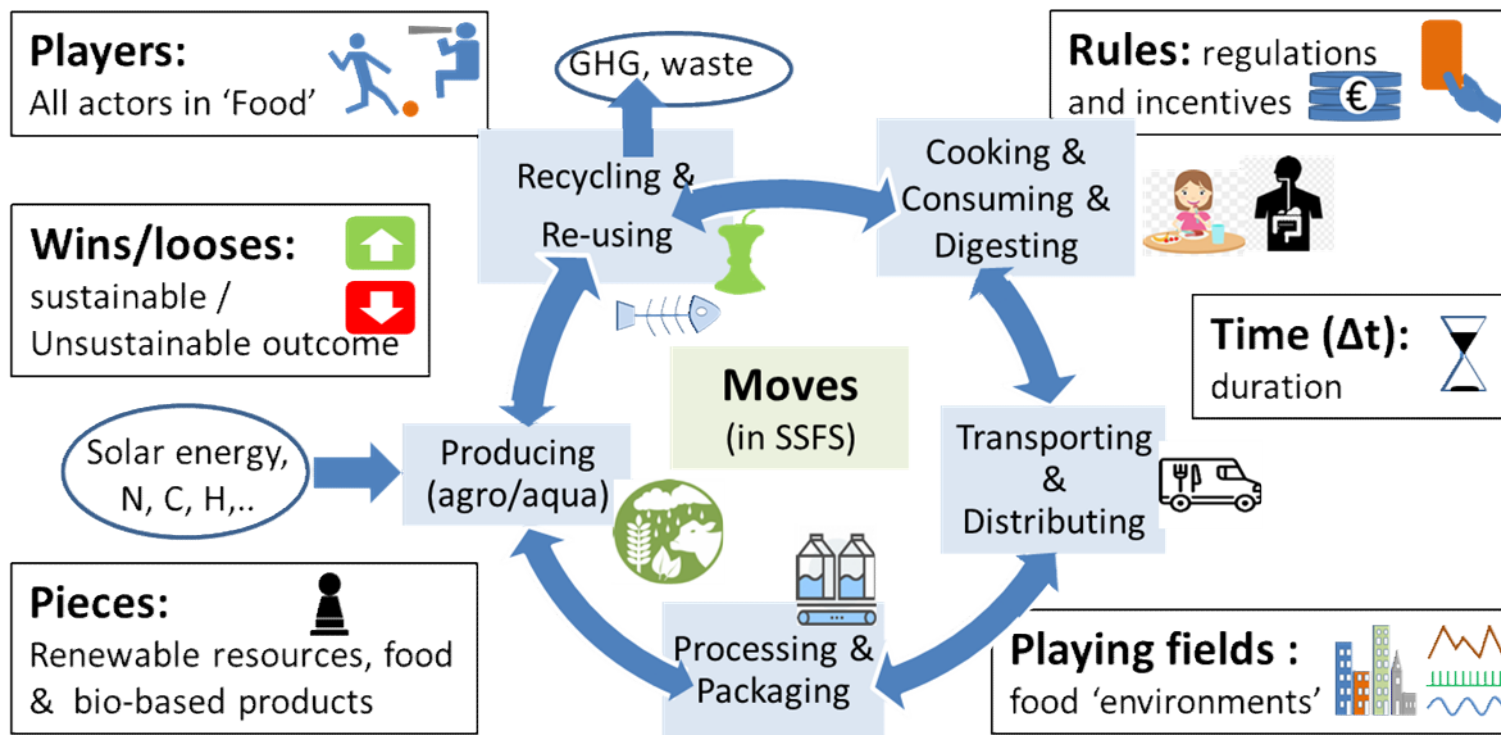


Ericksen, P., 2008 (Oxford)



Continuous feedbacks

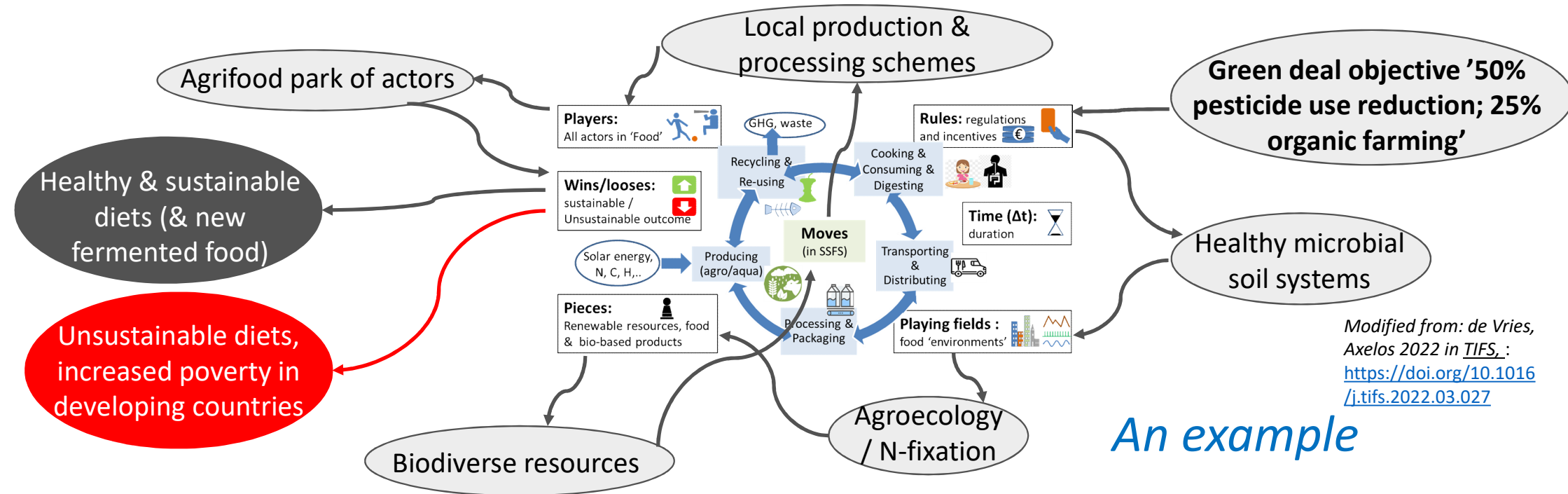
➤ Understanding the complexity of FS via a 'simplified' scheme



Modified from: de Vries, Axelos 2022 in *TIFS*, : <https://doi.org/10.1016/j.tifs.2022.03.027>

➤ Main questions, co-benefits & trade-off considerations

- What is the impact of an external trigger (stress, leverage point, stated aim, ..) ?



- Will it destabilise the entire system and how ('avalanches' & 'butterfly effect' & trade-offs)?
- Will systems be sufficiently resilient to withstand and how to adapt?
- Will systems be capable of learning and evolving?
- How should FS transform themselves to evolve sustainably, globally - locally?

➤ TOO broad > thus key focus areas in the future Partnership

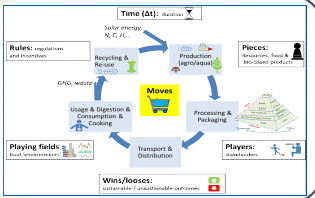
Vertical

- TF1 – CHANGE THE WAY **(what)** WE EAT
- TF2 – CHANGE THE WAY WE PROCESS AND SUPPLY
- TF3 – CHANGE THE WAY WE CONNECT **(act)** CITIZENS AND FOOD PRODUCTION
- TF4 – CHANGE THE WAY WE GOVERN THE FOOD SYSTEMS

Horizontal

- TF5 – CO-FUND PROCESS
- TF6 – FS OBSERVATORY, DATA, METHODS
- TF7 – FS KNOWLEDGE HUB OF HUBS, CO-CREATION
- TF8 – SCIENCE TO POLICY AND VICE-VERSA

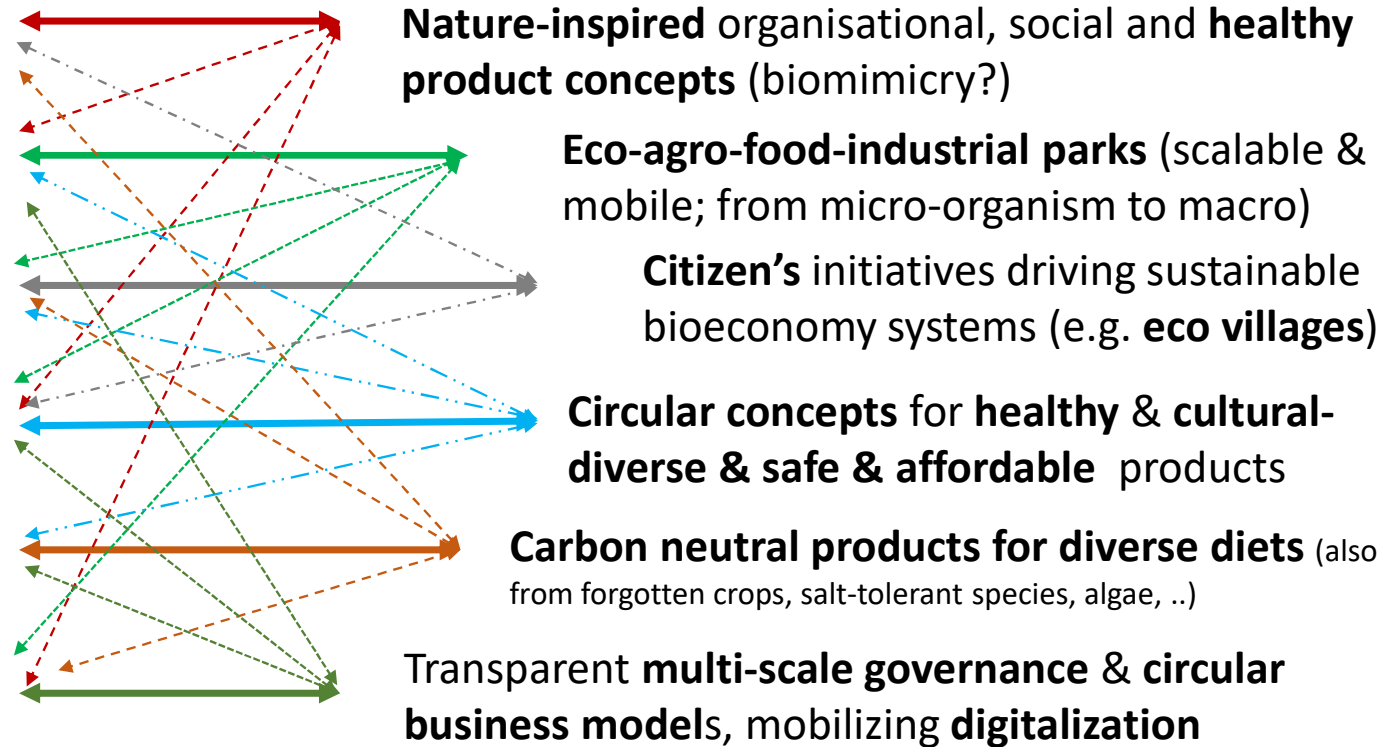
All from a Food Systems lens perspective, taking into account trade-offs & co-benefits



<https://scar-europe.org/index.php/food-main-actions/food-systems-partnership>

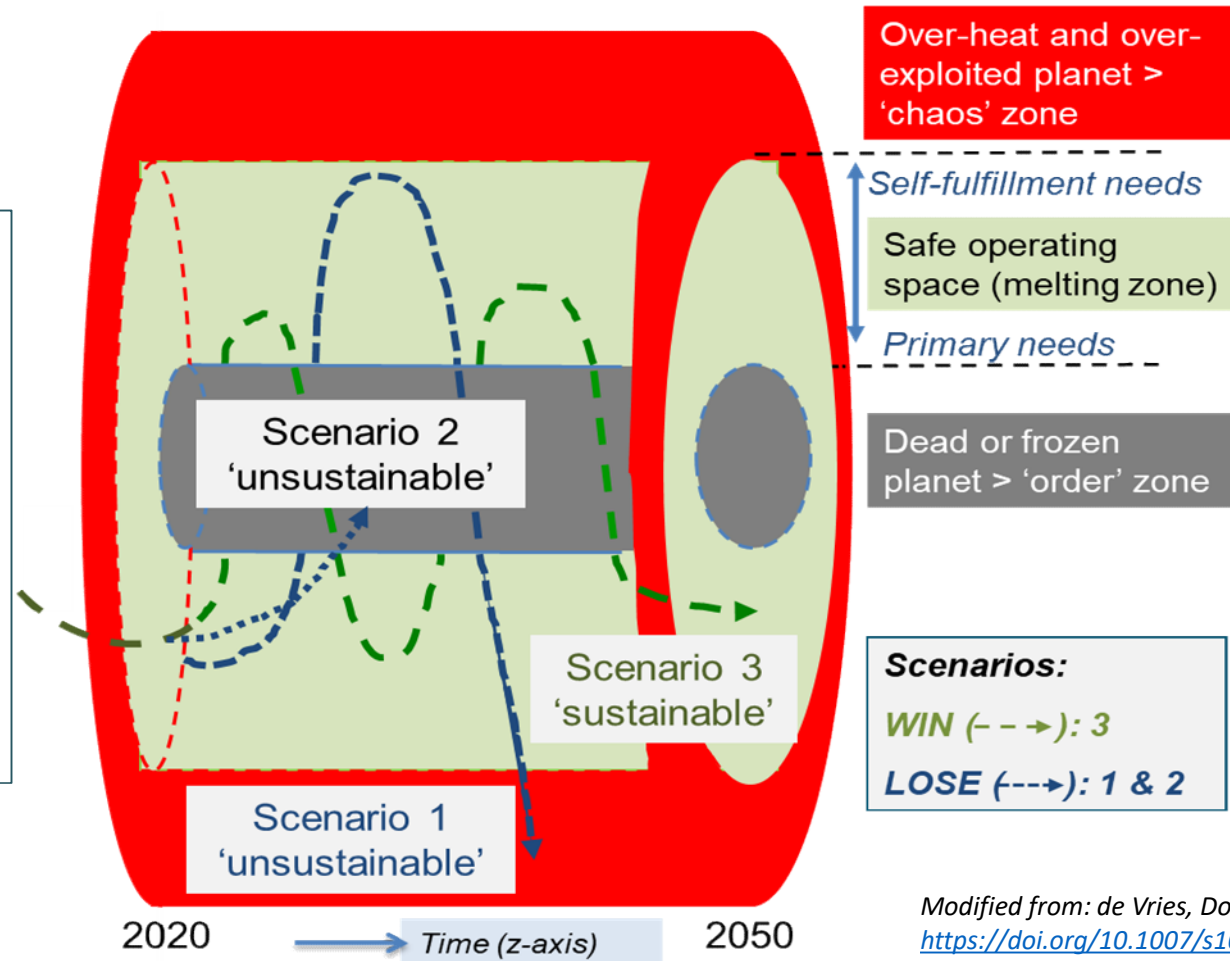
➤ With potential topics for Food Science & Technology?

| Challenge | SDG / Farm-to-Fork goals |
|-------------------------------------|---|
| Climate change | Climate action, CO2 neutral (GHG), clean energy |
| Biodiversity loss | Life on land/sea, zero pesticides, 25% organics, low fertilizer input,. |
| Fair access to food for all, always | Zero Hunger, no poverty, 50% less waste & nutrients loss, New safety measures, re-thinking value chains |
| One Health / Global health | Healthy & sustainable diets, healthy environments |
| Drought & salinity | Clean water, precision irrigation, salt tolerant crops |
| Crises, green-blue environment, | Reduced inequalities, trade-offs, leverage points, sustainable cities, ... |
| | ... |



➤ Final considerations about sustainable FS (I)

Systems that are not compromising future generations endlessly balance between frozen states & chaos



Modified from: de Vries, Donner, Axelos 2021:
<https://doi.org/10.1007/s10806-021-09850-7>

➤ Final considerations about sustainable FS (II)

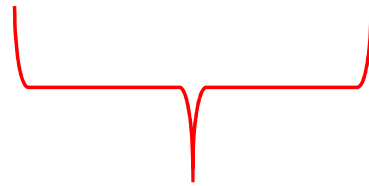
- FST contributes to the needed sustainable outcomes; why?
- If FST is overlooked in FS, who takes *responsibility* for safe food preservation schemes, reaching zero waste or water loss in closed systems, get alternative protein diets, ..?
- Saying NO to technologies, to new food products and global chains is NO OPTION to *feed the still growing world population today and tomorrow*;
- Eco-technological innovations (low in water, energy, resource usage, ...) only will not suffice; but, together with organisational and social innovations SFS may be reached.

➤ Final considerations about sustainable FS (III)

Making the healthy and sustainable choice the easy choice



Making the healthy and sustainable choice the *safe, tasteful, digestive, diverse, accessible, social, job-creating* and easy choice.



FST gives a **positive flavor** to the enormously challenging pathways ahead of us

Making the transition happen: informed choices and efficiency gains

- **The creation of a healthy food environment which makes the healthy and sustainable choice the easy choice.**
It is estimated that in the EU in 2017 over **950,000** deaths were attributable to unhealthy diets (one out of five).
A healthy and plant based diet reduces the risk of life threatening diseases and the environmental impact of our food system.
- **Food labelling to empower consumers to choose healthy and sustainable diets**
The Commission will propose mandatory harmonised front-of-pack nutrition labelling and develop a **sustainable food labelling framework** that covers the nutritional, climate, environmental and social aspects of food products.
- **Stepping up the fight against food waste**
Halving per capita food waste at retail and consumer levels by 2030.
The Commission will propose legally binding **targets** to reduce food waste across the EU by 2023.
- **Research and innovation**
EUR 10 billion under Horizon Europe to be invested in R&I related to food, bioeconomy, natural resources, agriculture, fisheries, aquaculture and environment. Knowledge transfer will be essential. The CAP's Farm advisory services and Farm sustainability data network will be instrumental in assisting farmers in the transition.
- **Promoting the Global transition**
Making European food famous for its sustainability can add a competitive advantage and open new business opportunities for European farmers.
The EU will collaborate with third countries and international actors to support a global move towards sustainable food systems. A **sustainability food labelling framework will facilitate consumer choice.**



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➤ Acknowledgments

Thanks to all colleagues, young and many years young for their inspiring, collective, actions.

*Thanks to you for your attention and good luck with your pathways towards more sustainable food systems **in Eastern Europe** (e.g. in a BIOEAST workshop on FS cases, future network of sustainable universities, ...)*

I wish you an excellent and enriching CEFOOD 2022 conference!



<https://effostconference.com/>

<https://www.inrae.fr/en> ;

<https://scar-europe.org/index.php/food> ;

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