

Short food supply chains and food safety issues: HACCP utilization, opportunities and limits

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1/ Introduction & Aim

- Throughout the **food chain**¹, **food business operators** (FBOs) are concerned with their ability to produce **high-quality goods**
- Here, we propose dividing the concept of **quality** into **five criteria** that are all of great importance for what we call **sustainable food**: safety, health, flavor, service and sustainability (see figure 1)



Figure 1 : Five proposed criteria for describing the quality of foodstuffs

- Our focus is on the **safety criteria** to which all FBOs must comply: **'Make it safe!'**, with particular interest in the operators of **short food supply chains** (SFSCs)

1. **Safety**: because food should not be poisonous
2. **Health**: because nutrition is essential for healthy growth and ageing
3. **Flavor**: because eating should be enjoyable
4. **Service**: because convenience and ease are important too
5. **Sustainability**: because everything counts nowadays, such as the environment, water, energy, animal welfare, working conditions, and corporate social responsibility (CSR)

3/ Food safety management & control

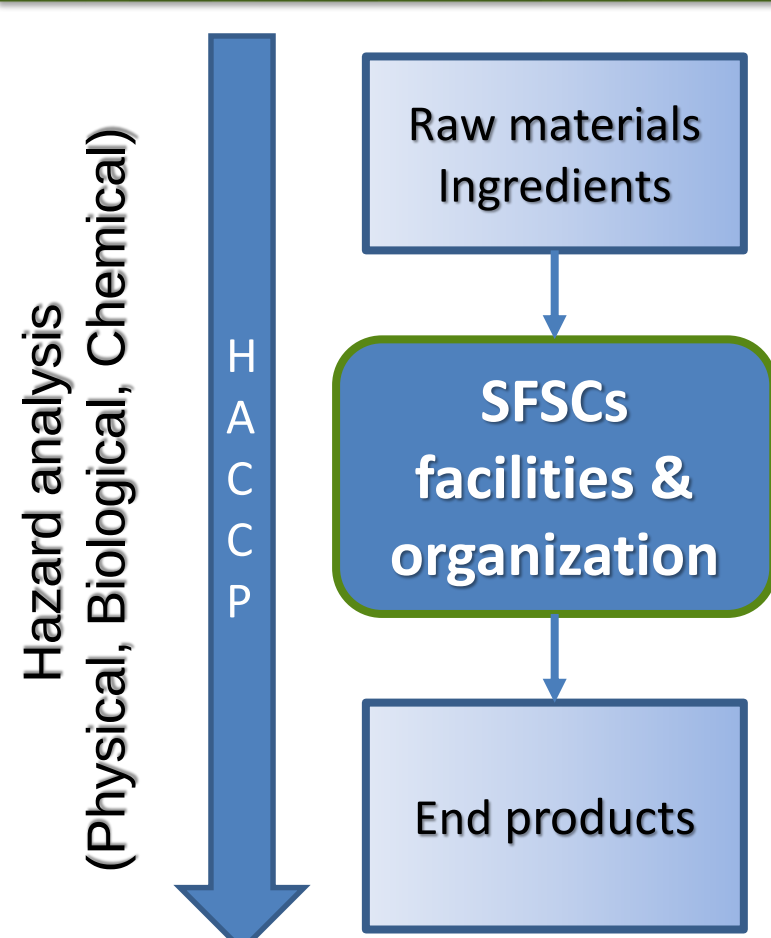


Figure 3 : Addressing food safety issues across the entire value chain is a significant challenge for SFSCs actors

- **Ensuring food safety (FS)** throughout the entire **value chain** is rather complex (see figure 3)
- **Key points** to consider:
 - **Foodstuff**: properties, composition, pH, T°C, a_w , etc.
 - **Hazards**: physical, biological, chemical, allergens: already known, emerging, unknown, etc.
 - **Processes**: technical itineraries, flowcharts, flow diagrams, etc.
 - **Good hygiene practices**
 - **Risk assessment**

5/ Conclusions & Perspectives

- Although the **HACCP methodology** sounds simple, its implementation is rather **complex**
- Due to the accumulation of different activities or jobs, managing food safety (FS) in SFSCs is **more difficult than in LFSCs**, where most actors act as a simple link
- As SFSCs develop, there is an **increasing demand** to support all SFSC operators in structuring and organizing food safety
- **Networks** grouping several areas of expertise are necessary to reach or maintain a high level of performance and safety, like the French network called **“RMT Alimentation locale”**

→ Thank to : **RMT Alimentation Locale**

2/ Specificity of the SFSCs in the Food Chain

- Shortening the distance between producers and consumers is a way to address food supply challenges and to contribute to **more sustainable agri-food systems**
- Therefore, producers adapt their production and activities in order to **transform** and often **commercialize** their goods on site
- Such strategies encourage them to carry out a **variety of activities**, which are often separated within long food supply chains (LFSCs), and to take responsibility for all the expertise required to **manage and control product quality** from farm to fork (see figure 2)

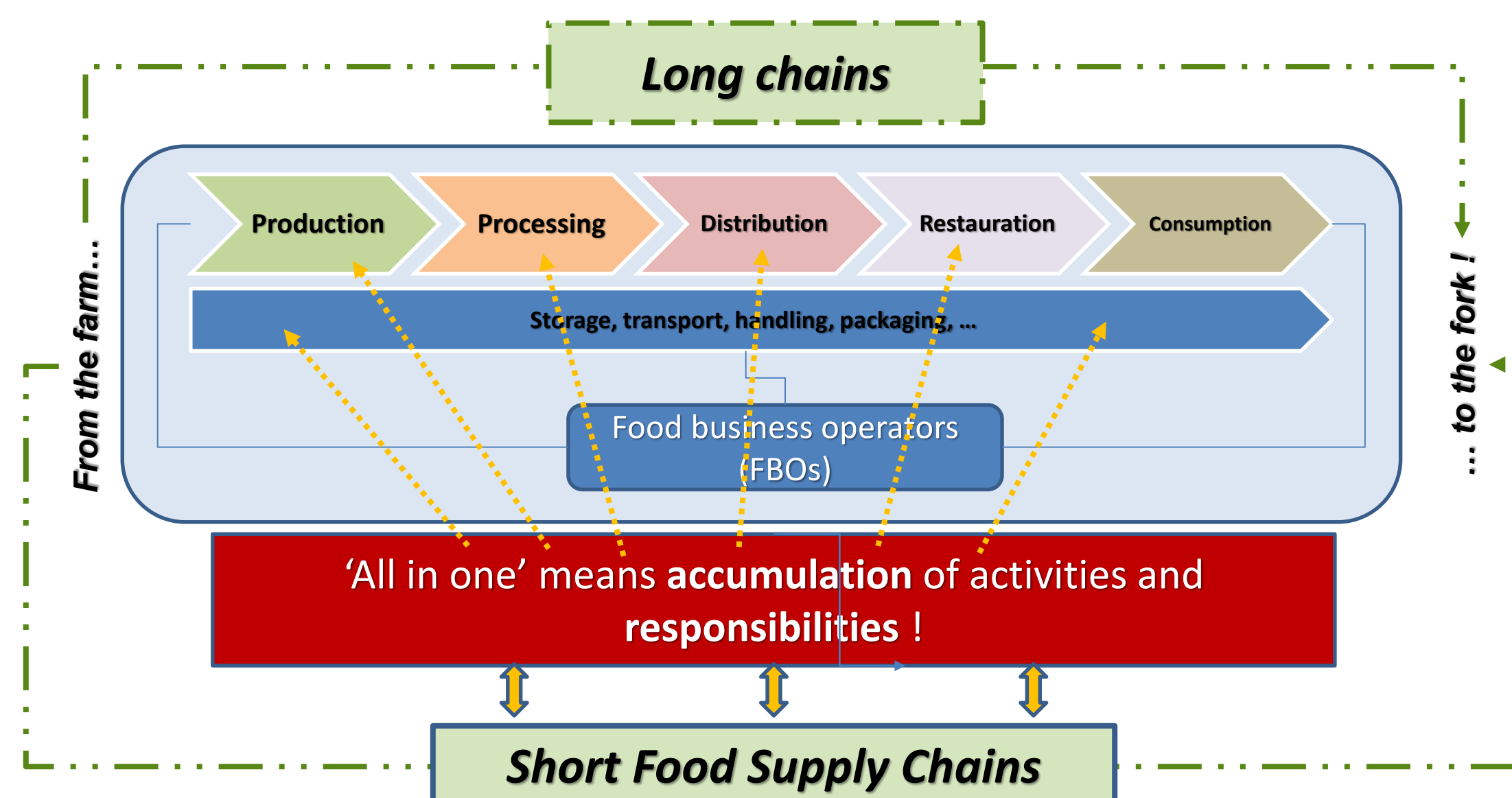


Figure 2 : SFSCs and LFSCs: different routes, same activities and lots of responsibilities

4/ Key elements for a better FS & limits ?

- When taking a **food safety approach**, lots of resources are available.
- However, they all have **limitations** that can hinder the development of a strategy and its **success**

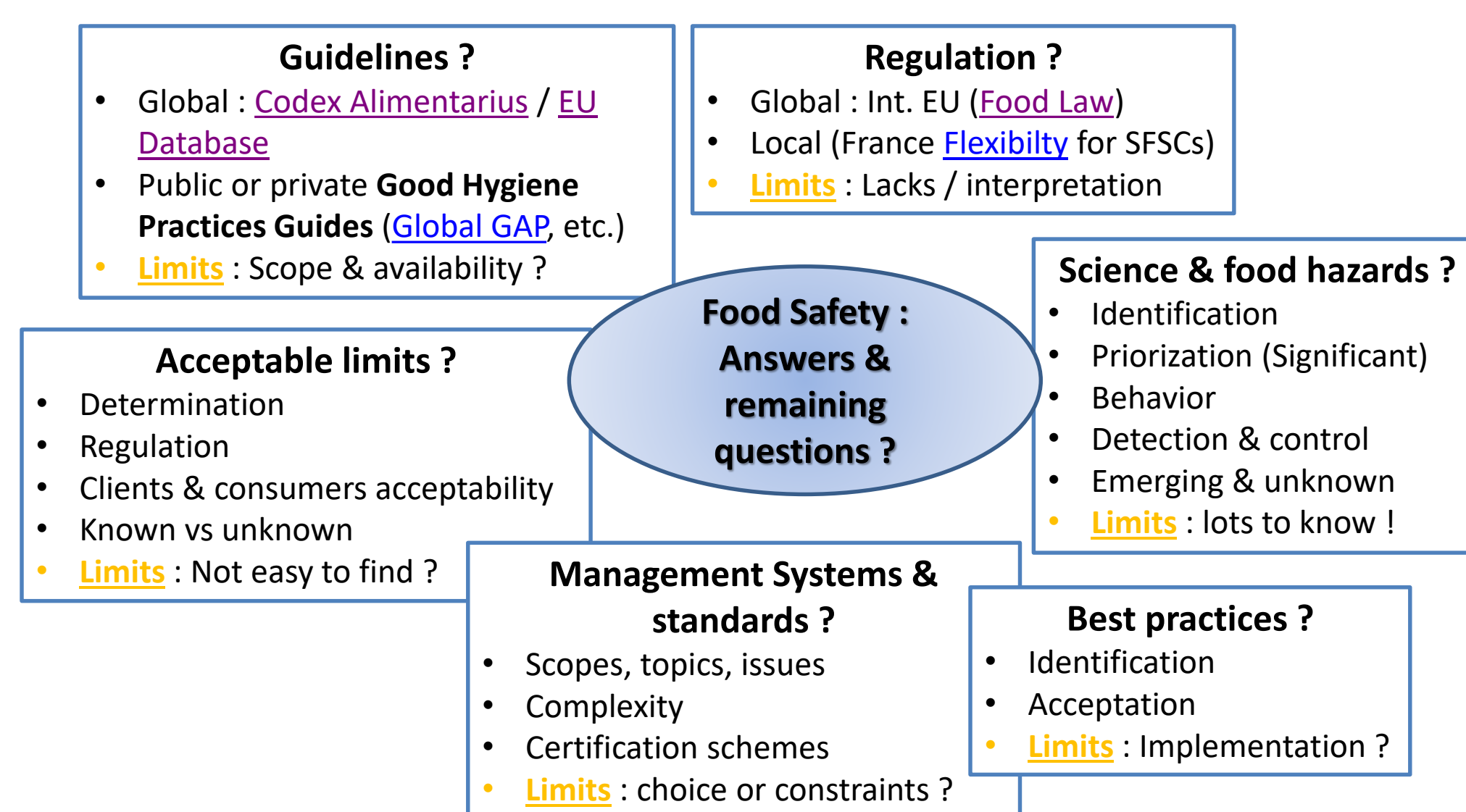


Figure 4 : Key elements to ensure a good control of the food safety in the food chain

¹ **Food Chain** (source ISO 22000:2018) : Sequence of the stages in the production, processing, distribution, storage and handling of a food and its ingredients, from primary production to consumption (This includes the production of feed and animal food, the production of materials intended to come into contact with food or raw materials and the service providers).