



**Joint Call 2021**  
**Webinar on food system approach**  
**by Prof. Margaret Gill, University of**  
**Aberdeen**  
17 June 2021  
2 p.m. (CEST)

# I. Introduction to the Joint Call

## *Two ERA-NETs: SUSFOOD2 & FOSC*

The two networks launched a Joint Call for transnational research proposals based on the funds from participating countries in both networks and additional international partners.

### ERA-NET Cofund SUSFOOD2

SUSustainable FOOD production and consumption

The scope of SUSFOOD covers the entire food supply chain, with the main focus on food chain sustainability beyond the farm gate.

It covers processing, packaging, transport, retailing, food services, storage, and consumer activities.

26 partners from 15 European countries plus associated countries.

### ERA-NET Cofund FOSC

Food Systems and Climate

The main challenge/aim of FOSC is to contribute to the achievement of food and nutrition security within the context of sustainable food systems, considering the three dimensions of sustainability (social, environmental, and economic).

27 partners from Europe, Africa, and Latin America.

# II. Webinar on food system approach

## Prof. Margaret Gill

- ⇒ Emeritus Professor in the School of Biology, University of Aberdeen
- ⇒ Chair of Scottish Science Advisory Council and UKRI-BBSRC Sustainable Agriculture and Food Strategy Advisory Panel
- ⇒ Former Chair of the FACCE-JPI Scientific Advisory Board and the Fit4Food2030 EU Think Tank
- ⇒ 2014 to 2019 Chair of the Independent Science and Partnership Council of the CGIAR
- ⇒ 2006 to 2011 Chief Scientific Advisor for the Environment and Rural Affairs in the Scottish Government
- ⇒ Former CEO and Research Director of the Macaulay Institute

As an agricultural science graduate of Edinburgh University, Prof. Gill initially researched in animal nutrition and has broadened her expertise to the interactions between food systems, society and the environment.

# Food Systems approach

Maggie Gill

*Formerly involved in FACCE-JPI and FIT4FOOD2030*

# 3 parts to presentation

- High level overview of principles

*Pause for questions, discussions, sharing of thoughts*

- “Tools” and information on identifying where your research questions are positioned within the Food System

*Pause for questions, discussions, sharing of thoughts*

- Perspectives from different parts of the food system
- *Final opportunity for questions and comments*

# 3 principles for R&I required to transform Food Systems

- The **whole** system (**from farm to fork**) needs to be *considered*
- **Positioning your research** within the wider Food System
- Relevant policy and practice **communities** need to be **engaged from the start** – to help identify barriers to adoption

# What is a “*Systems*” approach to research?

“It seeks to understand and document the key interactions between a multitude of actors (individuals and communities), government levels (local, regional, national and international) and processes (production, processing, distribution, purchasing, consumption and disposal of waste)”

It aims to stimulate thinking about potential barriers to adoption of research outputs and therefore helps to ensure that research questions can be designed to have a greater probability of uptake and hence impact

# Evolution of research to think of a wider system

In the first few decades post World War 2, the focus of research was on increasing production – this was successful, but, at a long-term cost to the environment

In the 1990s and 2000s there was recognition of the importance of environmental sustainability

In the 2010s there was increasing recognition of the importance of producing a diversity of *nutritious* food at *affordable* prices, recognition of the importance of *circularity* and the need for an *enabling environment*

In the 2020s the concept of emergencies – climate and biodiversity - is supporting the need for urgency and alignment with user needs through engagement, while still considering health, nutrition, the environment.....

# Transdisciplinary, including stakeholders

- “A paradigm shift within academia towards transdisciplinary research approaches. This entails research that can help to understand and govern complex societal systems as well as system innovations within them by taking into account all different social, technological, ecological and political components and their interactions.”
- Interaction between researchers, societal actors and policy and decision makers, including stakeholders like farmers, consumers, private sector, and communities in both the process of research agenda setting and research implementation



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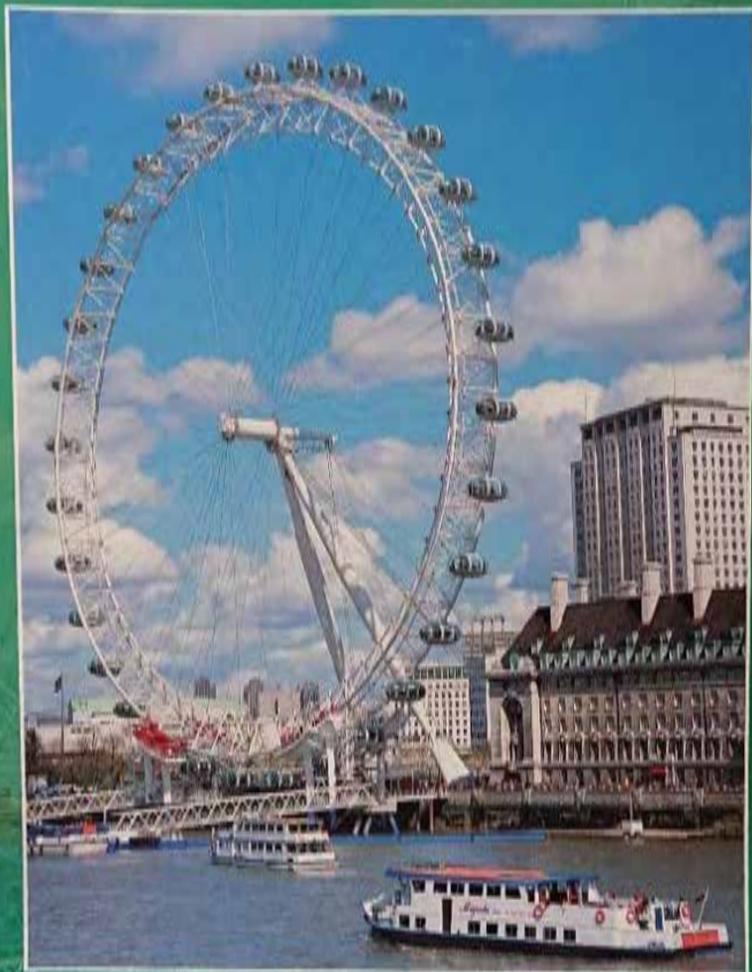
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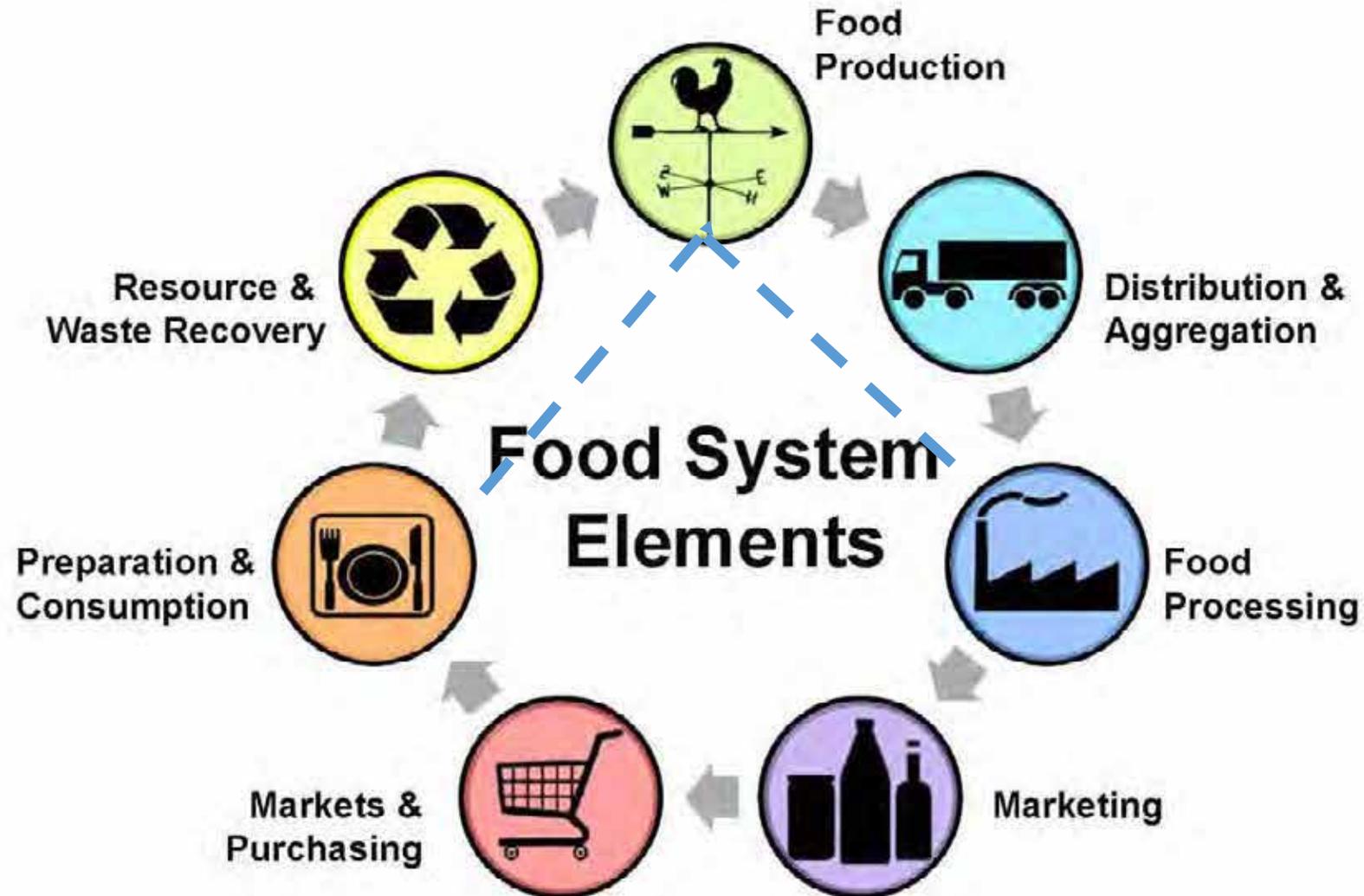




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# Position your research question within that bigger picture



*Adapted by Christy Shi, Center for Environmental Farming Systems.*

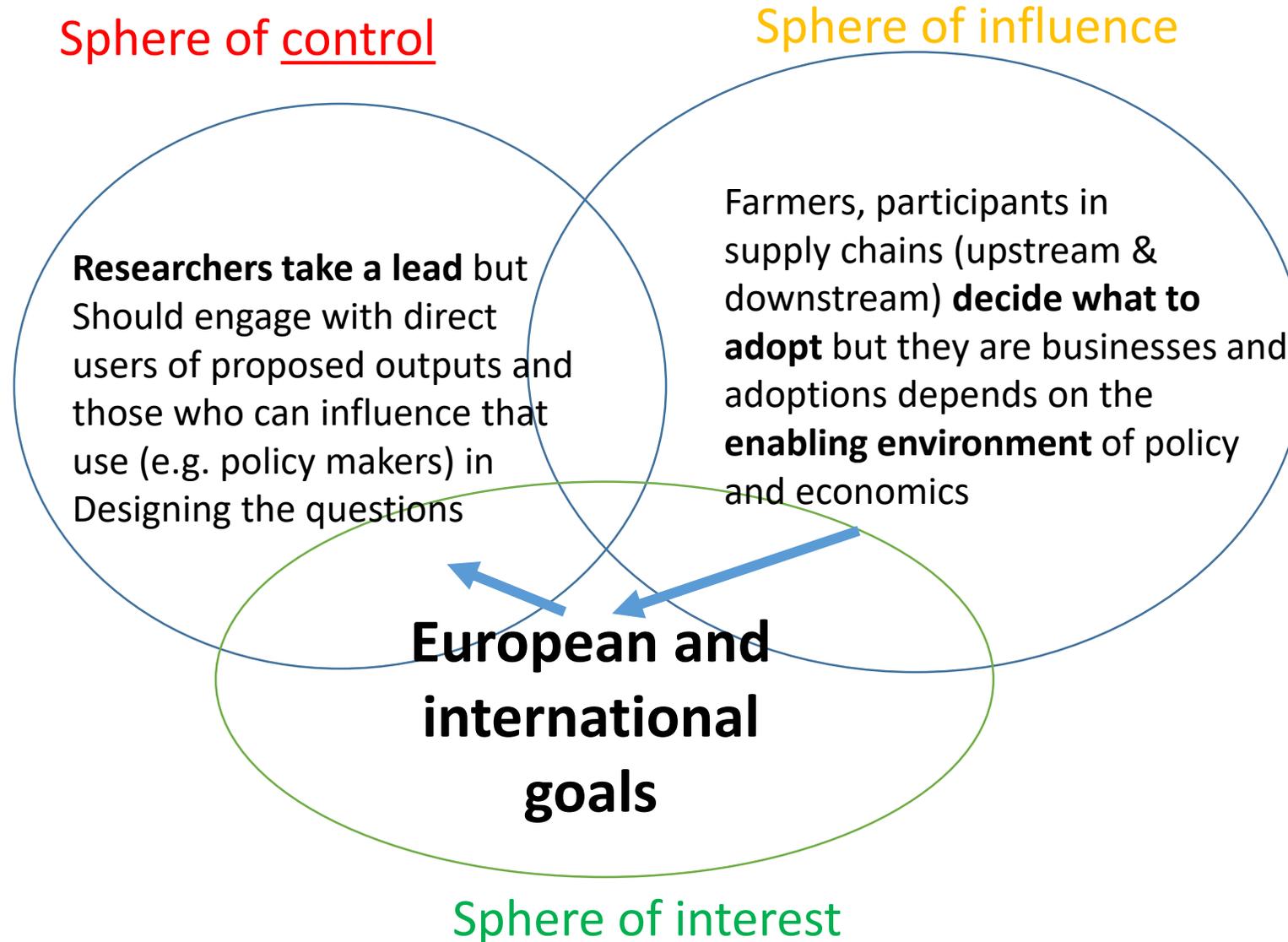
*From: Wilkins, J. and Fames-Sheavly, M. Discovering the Food System; An experiential learning program for young and inquiring minds.*

*Cornell University, Departments of Nutritional Science and Horticulture. <http://www.discoverfoodsys.cornell.edu/>*

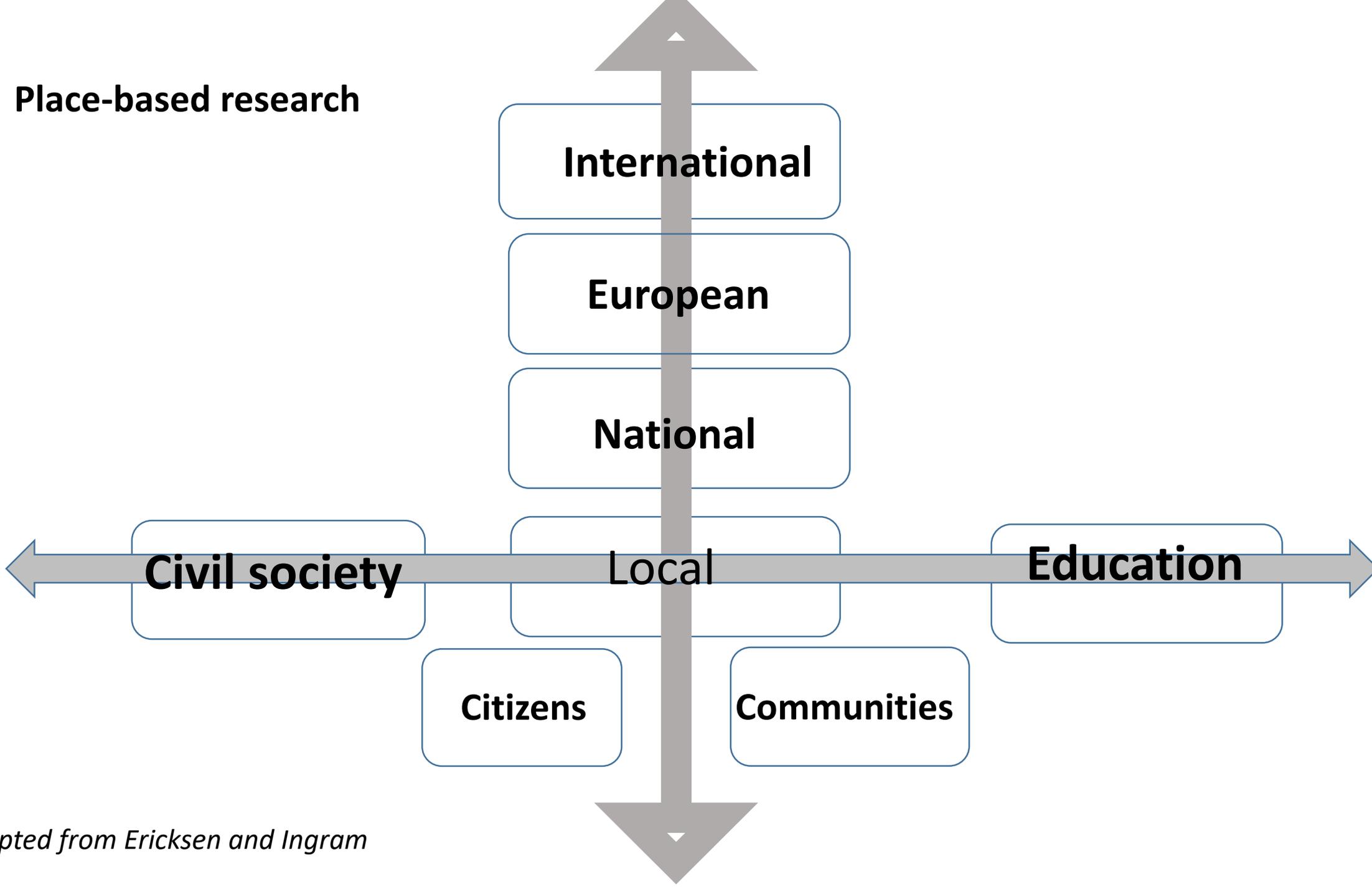
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# AN IMPACT ECOSYSTEM



**Place-based research**

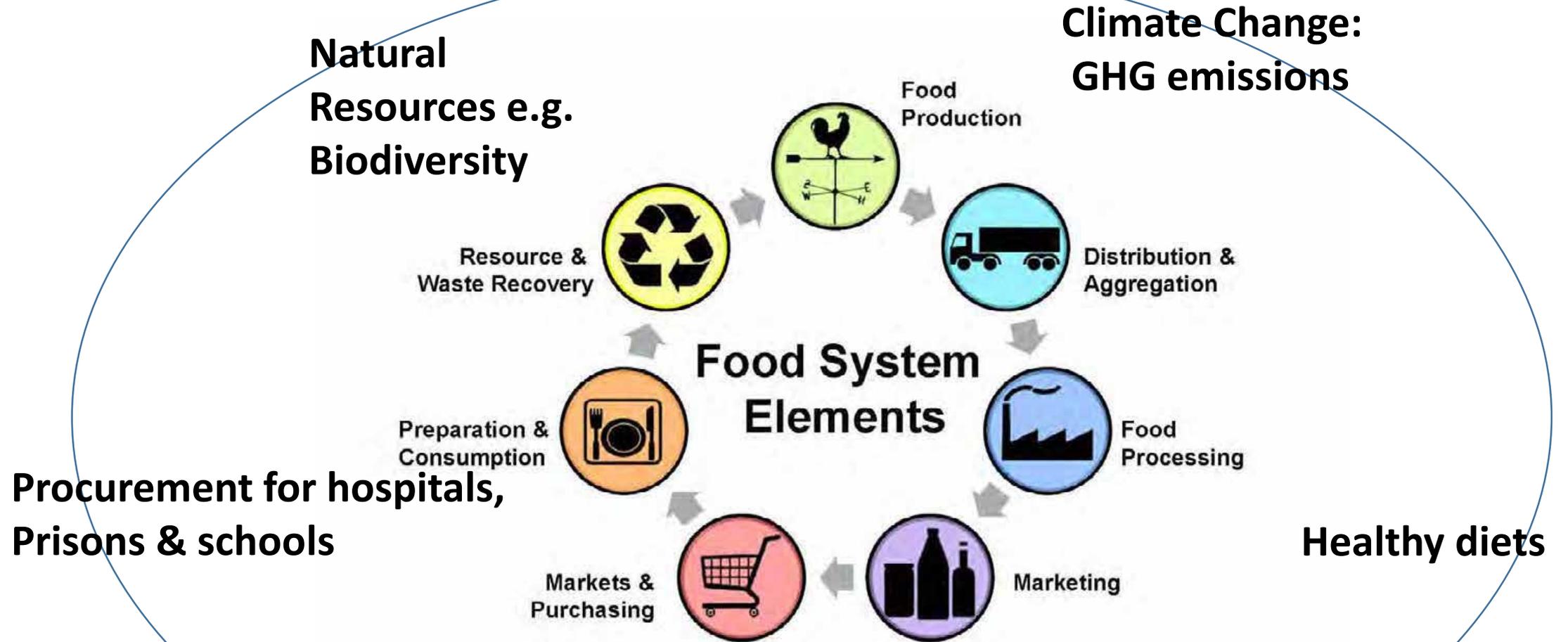


*Adapted from Ericksen and Ingram*

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# ...engage communities



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“Tools” and information on identifying where your research questions are positioned within the Food System

# Identify barriers to uptake of research outputs

- What would prevent your intended users from making use of your research outputs e.g.
  - Farmers not able to afford seeds/fertiliser required by new varieties
  - Consumers not able to afford nutritious food
- Are there any potential unintended consequences which might occur if your proposed research outputs are put into practice e.g.
  - increased energy or water requirements for processing food
  - More plastic required to decrease food waste

# How to identify barriers?

- Talk to an intended user or read up about the context.....
- Think about your assumptions.....
- Draw up a diagram of how the knowledge you intend to generate flows along an impact pathway

	<b>Outputs</b>	<b>Outcomes</b>	<b>Specific impacts</b>	<b>Intermediate impacts</b>	<b>Global impacts</b>
	Sphere of control				
<b>Assumptions outputs to outcomes</b>					
<b>Assumptions outcomes to impacts</b>					

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	Higher yielding varieties of crops	More food produced	Less hunger locally	New varieties are adapted to climate change	Contribution to SDG 2
<b>Assumptions outputs to outcomes</b>					
<b>Assumptions outcomes to impacts</b>					

	Outputs	Outcomes	Specific impacts	Intermediate impacts	Global impacts
	Higher yielding varieties of crops	More food produced	Less hunger locally	New varieties are adapted to climate change	Contribution to SDG 2
<b>Assumptions outputs to outcomes</b>	Farmers can access and afford any extra inputs required				
<b>Assumptions outcomes to impacts</b>		Poorer people can afford to buy nutritious food			

# What would remove barriers/ speed up adoption?

- Policies
- Investment/ interest from business
- Increased consumer demand
- .....

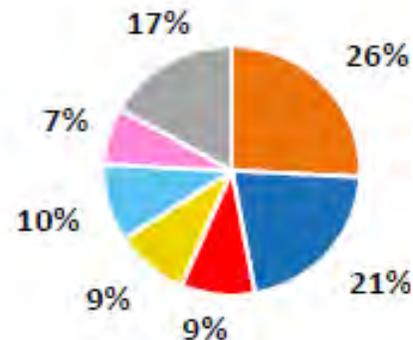
# Food Policy instruments

- **Food policy:** any government action that can affect the food system concerning production and its inputs, package, process, trade, retail and consumption, and the disposal of waste.

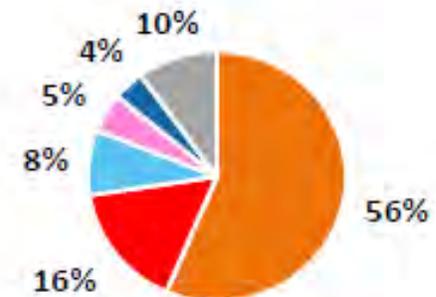
## Proportion of mapped policies by INSTRUMENT



*National policies*



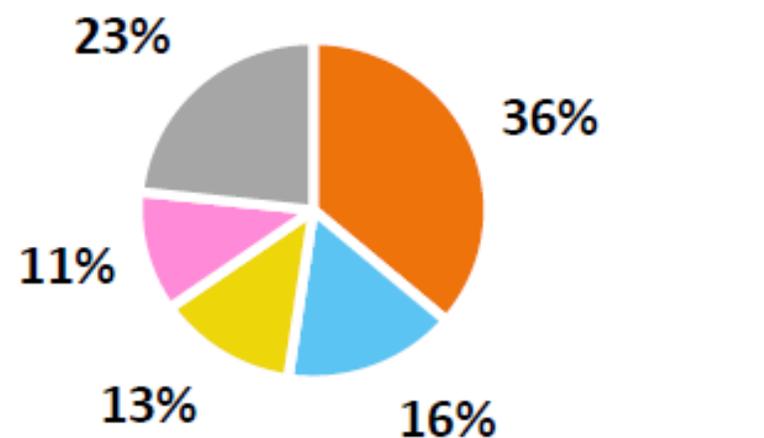
*EU policies*



<https://fit4food2030.eu/trends-in-the-food-system/>

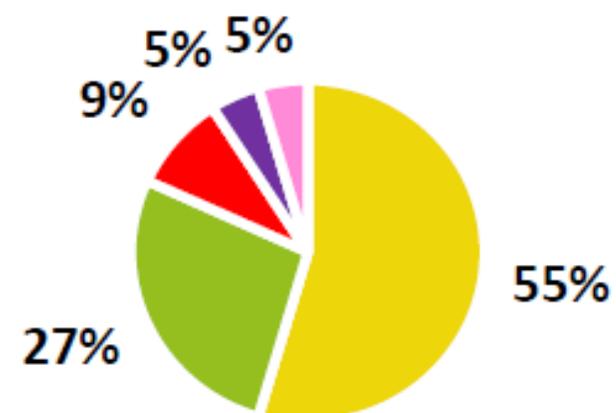
## Through which INSTRUMENTS are they implemented?

Consumers as food policies'  
*ultimate beneficiaries*



- Regulation
- Food and agricultural standards
- Information measure
- Labelling measure
- Others

Consumers as food policies'  
*primary targets*



- Information measure
- Education measure
- Income support
- Fiscal policy
- Labelling measure

# Need for Policy coherence

## **Greening opportunity**

- Sustainable production
- Carbon efficient distribution
- Energy efficient processing
- Interface between food systems and consumers
- Consumption
- Waste & circular economy

## **Policy**

- Agriculture
- Transport
- Energy & Manufacturing
- Trade & Industry
- Service industry/Tourism
- Environment

# Relevant literature on improving impact

**Food systems everywhere: Improving relevance in practice by Brouwer, McDermott and Ruben (2020)**

*Global Food Security* vol. 26 100398

...”most reports.....cannot identify policy incentives for aligning competing interests” (between different stakeholders)

....”few in-depth insights are provided in food systems governance mechanisms”

# Different perspectives on Food Systems

Taken from:

<https://playdecide.eu/playdecide-kits/167776>

# SAM, THE NETHERLANDS

All the vegetables in my supermarket were from big industrial farms so with some neighbours I joined a community-supported agriculture project. They connected us with a local farmer and we pay €15 a week for a seasonal selection of fruit and vegetables that they deliver to my place and the neighbours come and pick up their bag. It's true that in winter, we end up with a lot of cabbage! But there's a real feeling of solidarity and it's connected me with my neighbours.

# SOFIA, GREECE

I work for a big global agrochemical company in the research and innovation department. We have a significant market share and so what we do has a pretty big impact across Europe. We provide farmers with digital tools, crop protection technologies, support with plant breeding and biotechnology. There's a perception that companies like ours are only focused on maximising productivity, but in fact we are helping to innovate to make agriculture a lot more environmentally friendly too, through data analytics, herbicide-tolerant and insect-resistant systems.

# KHADIJA, LUXEMBOURG

I'm a plant physiologist at a public research institute and a lot of the work I do focuses on hydroponics - how to grow crops without soil but instead using a water solution with the exact amount of nutrients needed. For me it's an exciting technology because it means we can grow plants for food without depending on soil and weather conditions - even in cities and cold countries like Luxembourg. When I talk to friends and family about my work it can be frustrating because they often suggest that there's something unnatural about hydroponics compared to traditional farming. I don't think they see the potential it has.

# Key principles for Systems Approach

- The **whole** system (**from farm to fork**) needs to be *considered*
- **Positioning your research** within the wider Food System
- Relevant policy and practice **communities** need to be **engaged from the start** – to help identify barriers to adoption