

# parlons graphiques

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## A Food System Transformation Framework

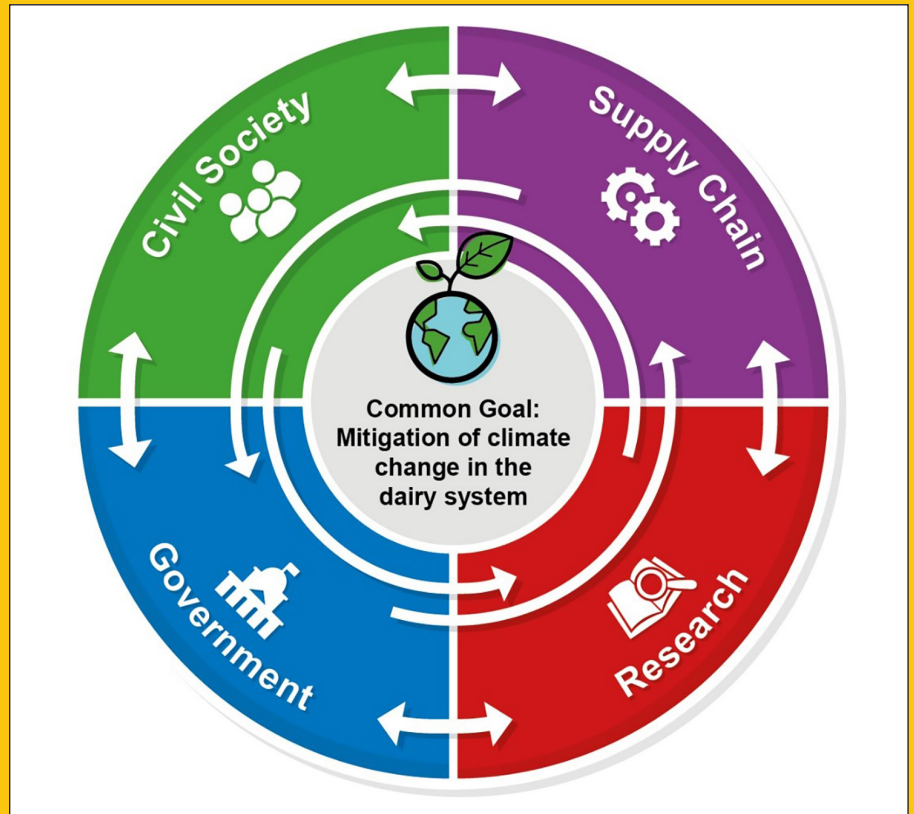
Un réseau de transformation du système alimentaire

Ein Rahmen zur Transformation des Agrar- und Ernährungssystems

Food systems are responsible for about one third of global greenhouse gas (GHG) emissions (Crippa *et al.*, 2021), and the need to reduce these emissions is urgent. We developed a transformation framework outlining how climate change mitigation can be facilitated in the food system.

Figure 1 centres around climate change mitigation in the food system as a common goal, which requires all actors to undertake necessary actions to achieve this goal. All food system actors (represented in four segments – research, government, civil society and supply chain) need to contribute and interact, and lack of involvement from any one segment limits overall progress. The detailed transformation framework is shown in Figure 2 and is described in the following.

**Figure 1: An overview of the transformation framework, this includes the different actor segments and the overall goal**



### Research

The research segment includes universities, research institutes and private industry with ideas, data and results being shared among them. This segment aims to generate knowledge and innovations in food production, making achievement of the common goal feasible. It receives funding and information in the form of data from other segments. If cooperation from this segment deteriorated, further

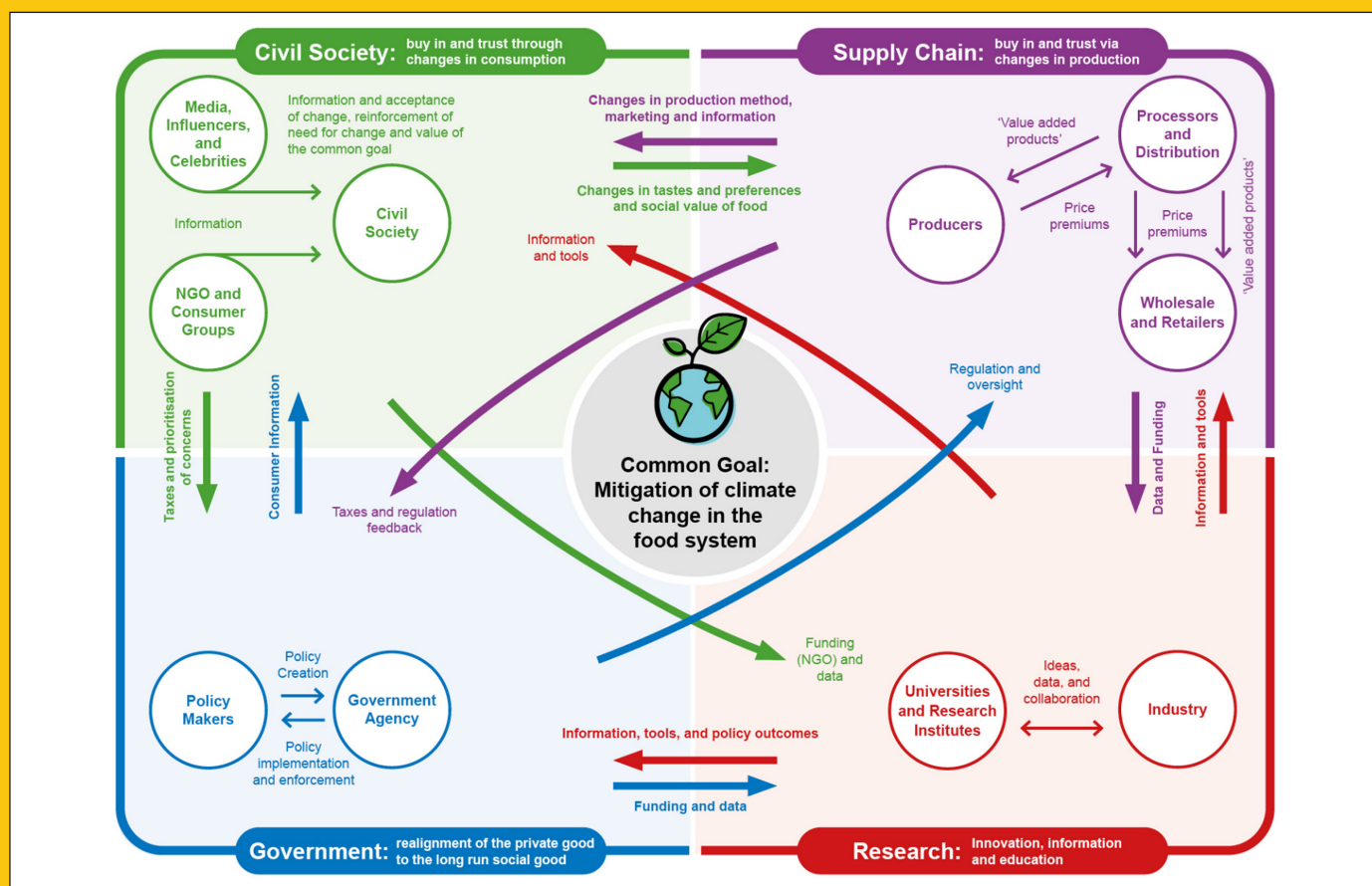
innovation would be hindered, limiting progress towards the common goal.

### Government

The governmental segment provides organisation for collective action towards food system climate change mitigation. This includes policies, such as regulations and financial

support for agricultural producers, and public education, for example in relation to sustainable food choices. The government's role is to align the private good (i.e. consumption) with the public good, e.g. climate change mitigation. In turn, the government receives feedback about the effectiveness of regulation and support policies, and the prioritisation

Figure 2: The detailed transformation framework which includes interactions between and within actor segments



of concerns within the common goal. Lack of cooperation from this segment leads to ineffective or harmful regulations and support policies, mistrust from the public, and misalignment of research effort towards the public good.

### Civil society

Civil society includes consumers, consumer groups, NGOs, as well as media, influencers and celebrities, focused on food system topics. They influence behaviour change in relation to food choices. Cooperation within civil society can lead to changes in food demand and therefore initiate more sustainable food production

methods. The civil society segment can call for a focus on climate change mitigation in the food system in policy and research agenda.

### Supply chain

This segment includes all entities from farm to fork. Trust in innovation from research leads to adoption of climate change mitigation technologies and practices and improves production sustainability. Implementing governmental recommendations and responding to demand signals from the public requires belief in those signals to steer production to a more sustainable supply chain.

### Conclusion

Each of these four segments in the food system has a unique role to play in achieving progress within the framework. Without the cooperation of each, the framework would fracture and render the mitigation of climate change in the food system unachievable.

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## Further Reading

- Crippa, M., Solazzo, E., Guizzardi, D. Monforti-Ferrario, F, Tubiello, F. N. and Leip A. (2021). Food systems are responsible for a third of global anthropogenic GHG emissions. *Nature Food*, 2: 198–209.

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