

# The contributions of the social sciences and humanities to the bioeconomy: implications for agriculture and food

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## 1. Introduction

There are several reasons why contributions from the social sciences and humanities (SSH) to the bioeconomy and their implications for agriculture and food should be examined. They have long been included in how the bioeconomy – including in agriculture and food – is framed from both intellectual and policy standpoints. Ongoing discussions about governance, power relations and consumer behaviours all deal with this issue. However, further exploring traditional topics in the bioeconomy with regards to agriculture and food, such as efficiency and ecological and technical innovation, will require greater consideration of the human dimension in the broad range of concerns.

Many in EURAGRI circles feel that these aspects are not sufficiently showcased in the EU's current research and policy areas. There may even be unexplored issues that could be brought into conventional discussions and insights that could be used to formulate a creative, intellectual framework to shape policy.

## 2. Framing the issues

One of the main concerns is whether the key topics for EU agro and food research are properly framed: better focus could be put on certain issues and the way central research targets are perceived could be improved. For example, research could address the following topics in greater detail:

- **The cultural roots** of a broad variety of agricultural practices, including how they are impacted by food preferences. The various agricultural practices in a specific location – which often have deep historical roots – can be framed within a cultural context. All products and services that are produced (e.g., food and other ecological services) are often a result of preferences in local markets for these products or services. Emerging ethical considerations and sustainability challenges must also be given greater attention. Finally, these cultural considerations are key when dealing with the EU regional and local contexts, where diversity is of considerable importance with regard to descriptions of practices and as well as policy constraints and possibilities. (Barthel *et. al.* 2013).
- **Institutions and the norms** they encompass. This is another major area of interest. Here, SSH contributions are significant, particularly because they have long been developed

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outside the agriculture and food industries. Findings from other fields may help shed light on practices and processes with agricultural and food applications. However, SSH contributions to the areas of agricultural and food are already visible through a wide array of interesting studies that provide fresh insight into these phenomena. However, challenges are constantly shifting (as reflected in the discussions about the Horizon 2020 programme) as is the role that SSH must play. (Svedin, 2012, 2015).

- **Considerations on social capital.** Until recently, this topic has rarely been at the forefront of agricultural and food research interests. However, it is quickly gaining ground in such fields as economics, environmental psychology and anthropology. The same holds true for the **issue of trust**, interest in which is also quickly growing, with input not only from economics or psychology but from other domains such as history, anthropology and sociology as well.
- Due to the quickly expanding **international and global dimensions** of these topics, intellectual reflections from international studies, history, futures studies and broader activities dealing with policy development are quickly growing.

### 3. Additional considerations for European research and policy

There are other related considerations to include these issues in European research and policy. They include:

- **Rising interest in the changing social situation in Europe and related challenges** (e.g., the Horizon 2020 areas of interest and similar non-EU programmes). This includes an **observation of greater interest in SSH** dealing with such issues as voiced in many strategic research papers and in foresight and futures studies.
- **Interest in exploring the embedding of SSH research** in other research themes, which is essential to finding solutions to social problems and facilitating the implementation of results and new technologies.
- **Expanding attempts to address challenges through broad cross-cutting approaches**, including through related interdisciplinary and transdisciplinary applications. Because scientific research is largely organised by discipline, research policies are needed to showcase specific policies that foster interdisciplinary research and provide the relevant resources to accomplish it.
- **An increased overall importance of SSH as a tool** to explore interactions between science and society.

### 4. The agri-food bioeconomy

Shifting strategic thinking on agriculture and food with regards to framing current issues of developing a new bioeconomy will depend on how the agri-food sector is able to respond to societal challenges related to the following:

- **Multi-level concerns** (global, continental, national, sub-national/regional, local). Bioeconomy activities operate on different scales and all levels have different requirements in terms of governance: the EU has a specific way of handling activities, as do national and regional authorities. In the agri-food sector, this is especially important to keep in mind. For example, milk production in different countries brings up issues of production efficiency as well as how the various authorities assign value to such things as animal protection rights, antibiotic risk-taking, interest in local production in relation to consumption patterns, food preferences (e.g., various types of dairy products), etc. Cross-level concerns are also significant in a political, economic and managerial sense. Taking into account the multi-dimensional needs at the various levels is crucial.
- **A broad international panorama** of concerns and how it relates to more local challenges will require considerable efforts in research and empirical testing. While globalisation is not new, it is evolving. Contributions from SSH to considering these issues is of critical importance.
- **Innovation structures and directions of reform interests.** The different innovation strategies and mechanisms that have been developed in the EU and its member countries are significant to the bioeconomy and agri-food policy. These structure must be better understood and mobilised for different policy aims, such as SDG sustainability targets or climate change mitigation.
- **The impact of technological change on daily practices.** Innovation tends to reshape sociotechnical systems to empower individuals or raise barriers. Innovation assessment often looks at the “macro” impact on productivity and growth but is not able to detect the effects it has on the deep structures of daily life.
- **Changes in consumer behaviour.** Both the food industry and the agricultural sector are under strong pressure from several directions. There are many concerns across a wide spectrum – from global to local – which involve different time frames, from short-term forecasts to long-term strategic transitions. Examples include global food security at a time of international tensions, some of which may be due to climate change and the perceived long-term development of certain constraints, including socioeconomic and demographic considerations.
- **Value considerations.** Several of the above concerns are interrelated to value considerations. For example, as long as free markets alone are not able to guarantee people’s welfare, the search for shared values and their incorporation into economic agency becomes crucial to the performance of economic systems. Related ethical issues are thus associated with strategic choices that must be further investigated and understood.

## 5. Conclusion

We must explore the European agri-food model under rapid transition conditions and draw from the SSH knowledge base to face the future in a global context. The main areas of focus should be:

- Globalisation and how it connects to local drivers
- Time ranges: how we can draw on the many futures studies in this field and in related areas (e.g., EU/SCAR efforts as well as national and international initiatives) and how these issues connect to SSH research agendas and analyses of the past and future
- Changing pressures from environmental (including climate change) conditions
- The combined panorama of threats and opportunities and the resulting need to develop a change in perspective that addresses urgent new challenges over the next few decades.

## 6. References

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