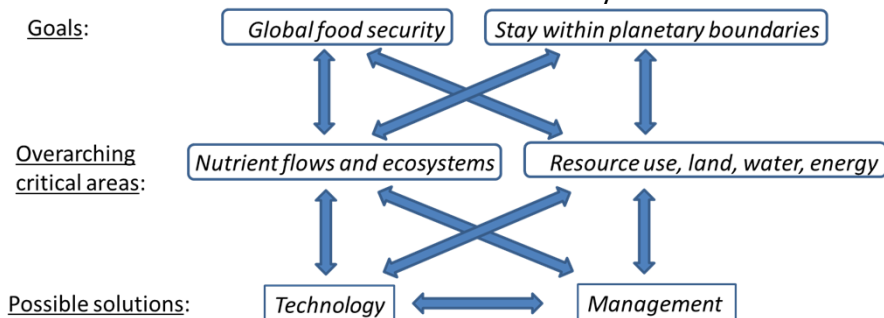


Sustainably feeding the future 9 plus billion

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Research objective:

A literature review addressing existing and emerging innovative solutions to guide strategic decisions for companies active in retailing and the food service sector toward acquiring solutions which contribute to the future sustainable food and nutrition security.



Results:

The results highlighted a selection of recent solutions addressing a sufficient supply and facilitating access in eight areas:

- Sustainable intensification and precision agriculture
- Urban farming
- Plant breeding
- Recirculation of plant nutrients
- Use of novel sources in food production
- Innovations in food processing and biotechnology
- Traceability, authenticity and food safety
- Food waste prevention



Direct findings

- A range of solutions are available, both related to technology and management
- Behavioral/management/system changes are often as important as technological options
- Novel sources play an important role
- Primary production is a critical factor
- Reducing food waste addresses all critical areas
- Local circumstances must be considered
- Novel technologies and food science are facilitating solutions in other areas

The way forward

- No quick fixes
- Trust-based collaborations between stakeholders are often a prerequisite for change, and here traceability and authenticity are crucial
- Multi-disciplinary competences are needed
- It is important to assess (environmental, economic, and social) indirect system changes caused by new solutions (technological and systems) before implementation
- Relatively large improvement potentials lie in “getting the present system working better”



Climate smart meal planning

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Introduction

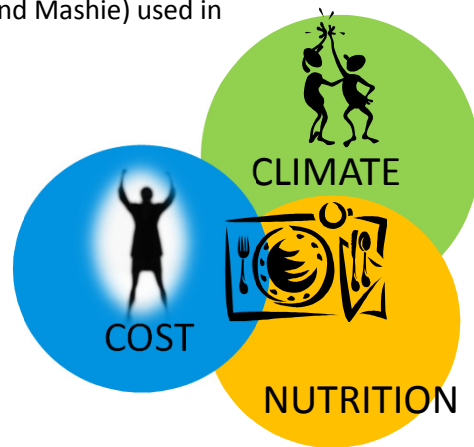
In the project “Climate data for conscious choice of food raw materials”, SP Food and Bioscience together with other project partners (see the logos below) seek to reduce the climate impact of meals served in the public sector. For this purpose, a new meal planning climate calculator has been developed to provide the public sector with information on how different ingredients and dishes affect the climate. Knowledge of raw materials' impact on the climate have long existed, but this integrated planning tool enables the food service sector to compare alternative ingredients while planning a meal not only based on nutrition and cost but also have considering climate change.

Methodology

This is facilitated through the integration of the food climate database, developed at SP using Life Cycle Assessment (LCA) to collect food climate data, into the Diet and Nutrition planning software systems (e.g. Matilda, Aivo and Mashie) used in planning meals at several public kitchens in Sweden.

Results

The integrated tool developed in this project offer the meal planners the opportunity to compare alternative solutions for a climate-conscious meal with a smart choice of resource-efficient and nutritious ingredients. This tool provides the potential to reduce the climate impact of an average meal by about 20%. Given the total amount of ca. 3 million public meals served each day in Sweden, use of this integrated tool can help reducing the climate impact over 700 ton CO₂-eq per day. Communicating the potentials to the stakeholders including consumers as well as policy makers has already raised considerable attention, thus paving the way for rolling out implementation of this tool across Sweden.



Vision

- Full exploitation of such tools in food catering in public and private sectors.
- Setting ban on the maximum CO₂-eq per average meal to promote sustainable food production

Today

Developing eco-innovative tools enabling simultaneous reduction of carbon footprint while ensuring nutrition and cost efficiency of the meals

Tomorrow

More research on incorporating the health factor as well as other environmental impacts in this tool in a way that it reflects sustainability in its totality

