

Food Systems, Nutrition and Health IAP Project: Perspectives in Europe

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Challenges for food and nutrition security

- Malnutrition (undernutrition, micronutrient deficiencies, overweight/obesity) is problem worldwide, including EU
- Defining the goal - to provide access for all to healthy and affordable diet that is environmentally sustainable and culturally acceptable
- Taking an integrative food systems approach covers all steps from production, harvesting, processing, distribution, marketing through to consumption and recycling of waste: inter-related issues for resource efficiency, environmental sustainability, resilience and public health
- Setting priorities for increasing agricultural production by sustainable intensification must take account of pressures on other critical resources, e.g. water, soil, energy, and avoid further loss of biodiversity



EASAC and its relationship with other regional academy networks

- European Academies Science Advisory Council is formed by the national science academies of EU Member States to enable them to collaborate in giving advice to policy makers
- Secretariat based at the Leopoldina Academy in Germany with a policy networking office in Brussels
- EASAC is the regional academy network for Europe for IAP and in this project covers some perspectives and issues wider than the EU. All four regional academy networks agreed initial template of themes as common starting point to guide analysis
- EASAC Working Group conclusions and recommendations discussed with other regional networks for input to global phase

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EASAC Working Group composition and timetable

- Joachim von Braun and Volker ter Meulen (co-chairs), Dag Lorents Aksnes, Tim Benton, Alberto Garrido, Charles Godfray, Anne-Marie Hermansson, Sander Janssen, Christian Jung, Pavel Krasilnikov, Aifric O' Sullivan, Jozsef Popp, Angelika Schnieke, Barbara Wroblewska, Claudia Canales and Robin Fears (scientific secretariat)
- Countries represented: Germany, Norway, UK, Spain, Sweden, the Netherlands, Russia, Ireland, Hungary, Poland
- Main drafting by Working Group during April 2016 – April 2017 followed by independent peer review and EASAC member academy endorsement
- EASAC report published December 2017 with Brussels discussion meeting with EU policy-makers in April 2018

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EASAC report

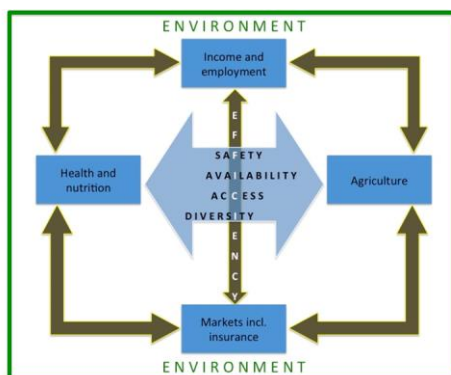
(<https://easac.eu/publications/details/opportunities-and-challenges-for-research-on-food-and-nutrition-security-and-agriculture-in-Europe>)



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Conceptual framework for aggregating research within the food systems context



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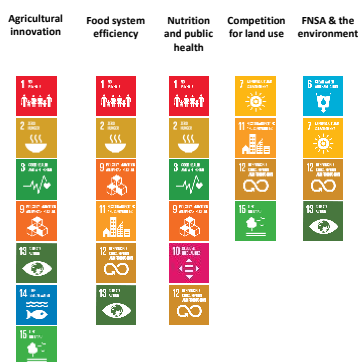
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Issues for food and nutrition security are vitally important for tackling SDGs

- The Sustainable Development Goals provide a critically important framework for understanding and meeting the challenges but require fresh engagement by science to reduce the complexities of evidence-based policies and programmes
- Science-informed analysis of interactions among SDGs can be strengthened to support coherent and effective science-policy dialogue and decision-making
- The project principal themes map onto multiple SDGs.....

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Scope of EASAC conclusions according to priority themes

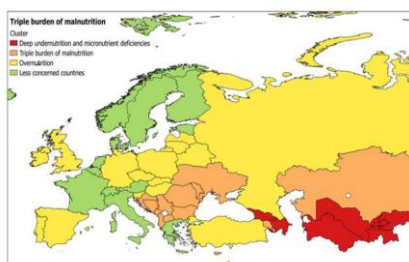
- Efficiency of food systems
- Agricultural innovation, particular focus on:
 - Precision agriculture and data analysis
 - Plant and animal breeding and need for flexible regulatory frameworks
- Nutrition, food choices and public health:
 - Critical interface with environmental sustainability
 - Focus on vulnerable groups (mothers, children, elderly, patients, migrants)
- Environmental sustainability and competition for land use
- Cross-cutting issues, e.g. sustained commitment to research, CAP reform
- Relationships between Europe and other regions

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Food and nutrition security in Europe

Figure 2 A classification of REU countries based on the three dimensions of malnutrition



Capacci, S., Mazzocchi, S., Shankar, B., Traill, W.B. (2013). FAO ECA *2010 data

- Lack of country level FNS data
- Problems for vulnerable groups
- Problem of overconsumption

Nutrition, food choices and public health: Recommendations from EASAC analysis

- Better data collection, interpretation and sharing, e.g. on food consumption patterns and links with health
- Understanding how to inform and change consumer behaviour
- Better integration of agriculture and health agendas and targets
- Capitalising on rapidly advancing science across multiple disciplines e.g. personalised nutrition, human gut microbiomics: implications for innovation, policy and practice
- Developing innovative foods and diets:
 - but how to define what is a sustainable healthy diet?
 - Implications for farming and food systems

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Food system



Food security includes **food safety**

Scientific research:

- Monitor bacteria and virus contamination (EFSA)
- Chemical contamination (e.g. packaging)
- Food authentication of origin and quality
- New technologies to stay ahead
- Food surveillance must be comprehensive

Reducing disconnects in coordinated policy framework for healthy sustainable diets

- CAP sugar price actions could incentivise increase in sugar consumption but recent sugar tax in some countries may decrease consumption: broader issues for how to develop coherent policy to manage calorie intakes and overweight
- COP 21 objectives to reduce greenhouse gas emissions from agriculture may necessitate reduction in meat and dairy intakes: may reduce NCDs if previous overconsumption but what about vulnerable groups?
- Supporting human and planetary health - how to align European policies for health, agriculture, environment and trade? Role of S&T in addressing issues for sustainability, resilience and climate-smartness

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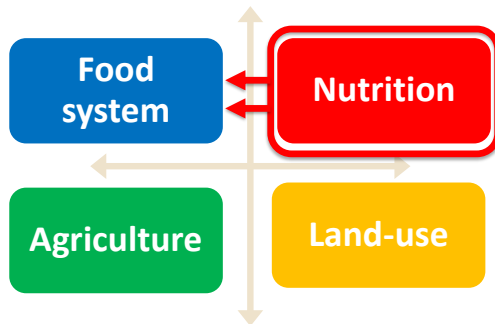
Impact of Europe on other regions

- Academies need to continue to emphasise the importance of being more ambitious in generating and using scientific information – at national, regional and global levels
- EASAC work highlights issues for inter-regional collaboration and spill over of impacts:
 - Underpinning role of basic research for discovery
 - Building inter-regional, inter-disciplinary, inter-sectoral R&D partnerships for global critical mass and sharing good practice
 - Understanding implications of European choices on agriculture for other regions e.g. use of resources, regulation of plant breeding and trade
 - Need to address concerns that efficient agriculture is driving food system fragility

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Cross-cutting themes for human and planetary health



Cross cutting themes:

1. Research and innovation
2. "Big data"
3. Consumer involvement
4. Sustainability