IAP & SDGs: Food and Nutrition Security and Agriculture Project - 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 report

Food and nutrition security in Europe

- Lack of country level FNS data
- Problems for vulnerable groups
- Problem of overconsumption
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.....
SDG interactions (ICS Guide 2017)

- All SDGs interact and are fundamentally interdependent: what is potential for synergies, trade-offs and disconnects in targets and indicators?
- Continuing role for academies to clarify interactions, this EASAC focus:
  - SDG 2-3 food quantity and quality - health
  - SDG 2-13 agricultural GHGs and impacts of climate on food systems
  - SDG 3-13 climate change impacts on health
- Other relevant interactions for food systems:
  - SDG 2-14 agriculture – marine resources
  - SDG 2-15 agriculture – land ecosystems
  - SDG 2-7 agriculture - energy

What is the progress of EU countries in tackling SDGs: sources of information

- Eurostat 2018:
  - Most significant progress on SDG 3
  - SDG 2 in EU context focuses mainly on agricultural sustainability
  - SDG 2 agricultural R&D investment is declining
  - Common concern for SDG 2 and 3 is obesity
  - SDG 13 data coverage is inadequate to assess climate impacts and adaptation, some data on mitigation (energy consumption)

- SDG Index and Dashboard Report 2018 ([www.sdgindex.org](http://www.sdgindex.org))
- OECD 2017
Relative progress in EU on SDGs according to Eurostat 2018

Profile of OECD countries 2017
Key FNSA actions for bridging SDGs 2 and 13

- SDG 2.4 “ensure sustainable food production systems... that strengthen capacity for adaptation to food production
- SDG 13.2.1: “adapt to adverse impacts of climate change...... in a manner that does not threaten food production”
- And also SDG 12.3 – reduce food losses/waste by half
- Therefore, what is needed is:
  - Understanding climate change impacts on food systems
  - Developing climate-smart food systems to adapt to change
  - Understanding food systems’ contributions to GHG emissions
  - Mitigating these contributions – with potential health co-benefits

EASAC analysis of climate-food systems-health relationships -1

- Impacts of climate change on food systems:
  - Mediated by temperature, precipitation, carbon dioxide, pests and diseases: will vary across region
  - Impact on cereal yield, fruit and vegetable vitamin and mineral content, fisheries e.g.s WHO scenario that southern Europe could experience 25% food production loss; drought in 2018 caused most severe problems in EU fruit and vegetable sector for 40 years
- Opportunities for adaptation:
  - Biosciences research and plant breeding for climate resilience resistance to biotic and abiotic stresses
  - Social sciences research for understanding farmer behaviour
EEA 2017 projections for water-limited crop yield for wheat, maize, soybean: comparing 2050 versus 1961-1990

EASAC analysis of climate-food systems-health relationships - 2

- Agriculture’s contribution to GHG emissions:
  - Agri-food systems worldwide account for about 30% GHGs
  - Animal-based foods responsible for about 75% European agricultural land use and high proportion of GHGs
- Mitigation – sustainable, healthy diets:
  - Requires combination of measures – reduction in food waste, improvement of farming practices, change in diets
  - Changing diets can also bring health co-benefits (for obesity, NCDs)
  - Issues for vulnerable groups and how to influence consumer choice
EASAC analysis of climate-food systems-health relationships – mitigation continued

- Sustainable, healthy diets: estimated that adoption of WHO dietary guidance could reduce mortality by 10% and food-related GHGs by 70% by 2050 – but there is need for EU data
- Meat alternatives:
  - Innovative foods include cultured meat, insects, algae, seaweed.....
  - Lab-grown meat has reached proof-of-principle on palatability and, potentially, economics, but environmental advantages are controversial and would be impacts on rural communities
  - Food value of lab-grown meat could be controlled to optimise nutritional content

Impact of Europe on other regions

- Academies need to continue to emphasise the importance of being more ambitious in generating and using scientific information to address SDGs – at national, regional and global levels
- EASAC work on FNSA highlights some issues for inter-regional collaboration and spill over of impacts, both geographically and across SDGs:
  - 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
  - Europe must not try to address its SDGs by exporting problems of sustainability to rest of world
How has EASAC emphasised SDG issues in dissemination and follow-up activities?

- As part of engagement about integrated EASAC FNSA outputs, e.g.
  - G20 academies Agriculture meeting, Rosario, July 2018
  - World Health Summit, Berlin, October 2018
- During SDG-focused events, e.g.
  - IAP project on policymaking/SDGs, regional event, Halle, September 2018
  - UNECE discussion on SDG 13, Geneva, March 2019
- Highlighting SDG issues in media communication and scientific commentaries, e.g.
  - IAP fifth report media launch webinar, November 2018
  - Lancet Planetary Health commentaries 2018-2019
- New report “Climate change and health” to be published May 2019