ESOF 2018 Toulouse

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EASAC-IAP project on Food and Nutrition Security and Agriculture
Food Nutrition and Health

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Food and nutrition security is access for all to a sustainable, healthy and affordable diet.

Malnutrition remains a major concern globally.

**Problem:** Combating malnutrition

**Solution:** Research and innovation

Europe must consider different:

- Food systems
- Dietary intakes
- Vulnerable groups
- Supply and demand side
Food and nutrition security in Europe

- Lack of country level FNS data or vulnerable groups?
- FNS not a concern?
- Problem of overconsumption?

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

Cross-cutting themes

- Food system
- Nutrition
- Agriculture
- Land-use

Cross cutting:
1. Technology
2. “Big data”
3. Consumer
4. Sustainability
Agri-food systems nutrition-sensitive

EASAC nutrition/health considerations:

- Food and nutrition security in Europe
- Innovative foods and sustainable diets
- Behaviour change interventions
- Scientific frontiers in nutrition
- Food safety
- Policy connection/disconnect
European dietary guidelines

Scientific research:
- What is a sustainable diet
- How do we measure sustainability
- What drives demand and behaviour change
- Incentives for healthy eating
- Interventions to increase intake of novel foods
European dietary guidelines

- Incentives for healthy eating
- Interventions to increase intake of novel foods

Interfaces between nutrition, food science and technology, public sector and industry

- Consumer-driven product development
- Innovative foods for health
New technologies in nutrition

Scientific research:
• Gene-nutrient interactions
• Metabolic phenotypes
• Individual responsiveness
• Consumer focus
• “Big data”
• Personalised feedback/intervention
• Accuracy and specificity of self-collected data
• Quality control and regulation
JPI HDHL initiated to capitalise on frontiers in nutrition by coordinating research efforts

Table 2 EU projects on new scientific opportunities in nutrition, part of the JPI HDHL

<table>
<thead>
<tr>
<th>Project name/website</th>
<th>Project objectives</th>
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<tbody>
<tr>
<td>Determinants of Diet and Physical Activity (DEDIPAC) Knowledge hub (<a href="http://www.dedipac.eu">www.dedipac.eu</a>)</td>
<td>Studying determinants of dietary behaviour, physical and sedentary behaviours</td>
</tr>
<tr>
<td>FOODBALL (<a href="http://www.foodmetabolome.org">www.foodmetabolome.org</a>)</td>
<td>Identifying and quantifying dietary markers using metabolomics</td>
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<tr>
<td>ENPADASI (<a href="http://www.enpadasi.eu">www.enpadasi.eu</a>)</td>
<td>Standardised framework for nutritional phenotype assessment and data sharing</td>
</tr>
<tr>
<td>Nutri-iCOG (<a href="http://www.healthydietforhealthylife.eu">www.healthydietforhealthylife.eu</a>)</td>
<td>Research to address interrelation of diet and cognitive function</td>
</tr>
<tr>
<td>Intestinal Microbiomics (<a href="http://www.healthydietforhealthylife.eu">www.healthydietforhealthylife.eu</a>)</td>
<td>Studying effects of diets on human intestinal microbiota and impact on human health</td>
</tr>
</tbody>
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- Challenges for PN
- Data collection standards
- Determinants of diet + lifestyle
- Data storage
- Complex data analysis
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
Policy connection or disconnect

Examples:
1. CAP sugar price could incentivise an increase in sugar consumption
   - Recent changes in some member states to introduce sugar tax will increase cost to consumer
2. COP21 objectives for livestock and meat consumption
   - Potential implications for nutrient intakes, particularly vulnerable groups
Innovative, sustainable foods and diets

- Opportunities for research and innovation based on collective engagement from stakeholders to align the innovative process and its outcomes with societal needs

- How can we ensure competitive prices for healthy foods incorporating nutrition goals and sustainability objectives adequately rewarding farmers and others in food systems
Thank you

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