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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.

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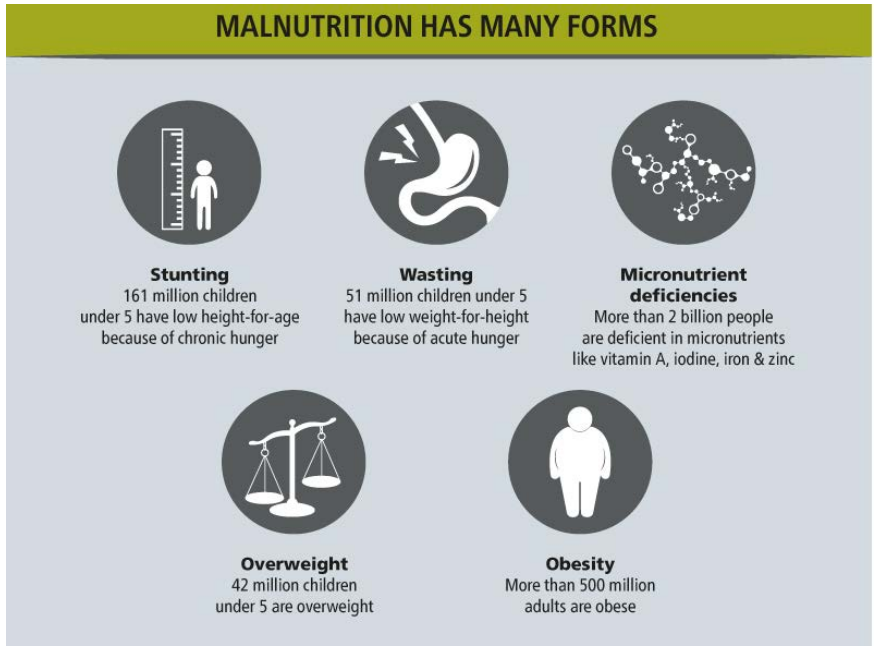
Malnutrition remains a major concern globally.



Problem: Combating malnutrition

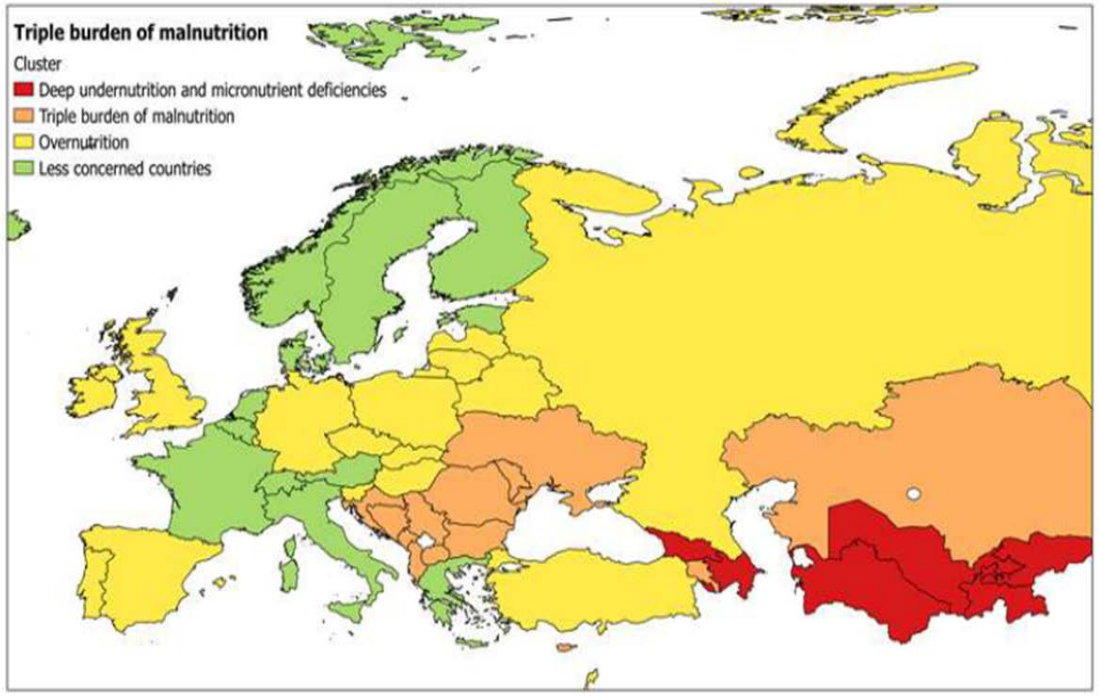
Solution: Research and innovation

Europe must consider different:

- Food systems
- Dietary intakes
- Vulnerable groups
- Supply and demand side

Food and nutrition security in Europe

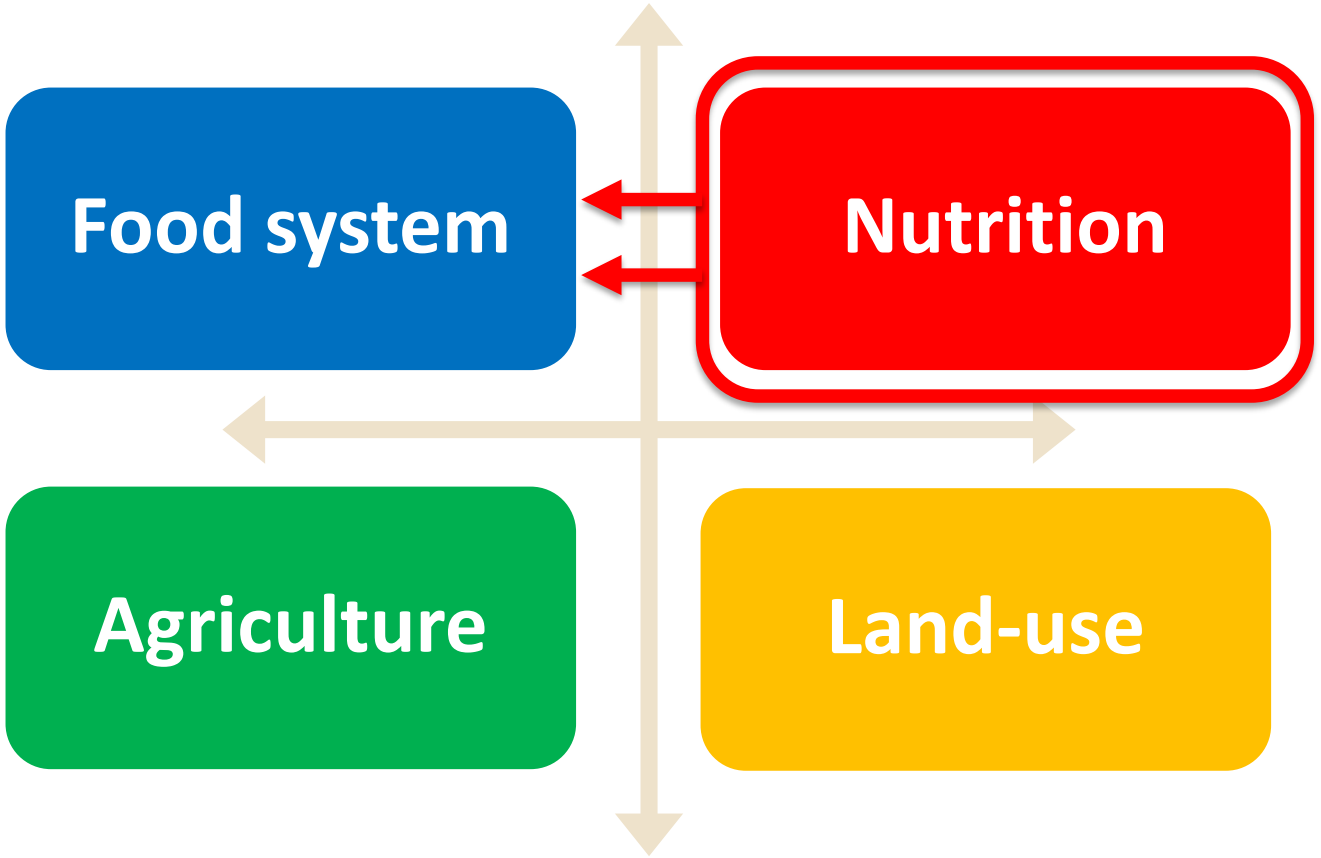
Figure 2 A classification of REU countries based on the three dimensions of malnutrition



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

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

Cross-cutting themes



Cross cutting:

1. Technology
2. “Big data”
3. Consumer
4. Sustainability

Nutrition

Agri-food systems **nutrition-sensitive**

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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

Nutrition

European **dietary guidelines**

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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

Food system

European **dietary guidelines**

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- 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

Nutrition

New technologies in nutrition

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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

Nutrition

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

Project name/website	Project objectives
Determinants of Diet and Physical Activity (DEDIPAC) Knowledge hub (www.dedipac.eu)	Studying determinants of dietary behaviour, physical and sedentary behaviours
FOODBALL (www.foodmetabolome.org)	Identifying and quantifying dietary markers using metabolomics
ENPADASI (www.enpadasi.eu)	Standardised framework for nutritional phenotype assessment and data sharing
Nutri-iCOG (www.healthydietforhealthylife.eu)	Research to address interrelation of diet and cognitive function
Intestinal Microbiomics (www.healthydietforhealthylife.eu)	Studying effects of diets on human intestinal microbiota and impact on human health

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- Challenges for PN
- Data collection standards
- Determinants of diet + lifestyle
- Data storage
- Complex data analysis

Food system

Food security includes **food safety**

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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

Nutrition

Policy connection or disconnect

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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

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- 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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EUROSCIENCE OPEN FORUM

SHARING SCIENCE: TOWARDS NEW HORIZONS

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