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Linking food products, diets and regional agro-food systems sustainability: preliminary insights from Apulia region, south-eastern Italy

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Agro-food systems

Diets

Food products

Methodological relations and linkages between agro-food products, sustainable diets and SFS.

Assessment of their sustainability and providing a tentative application in the case of Apulia region, south-eastern Italy

Agro-food systems

A **food system** gathers all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food and the outputs of these activities, including socio-economic and environmental outcomes (HLPE, 2014)

A **sustainable food system** (SFS) is a food system that delivers **food security and nutrition** for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised (HLPE, 2014)

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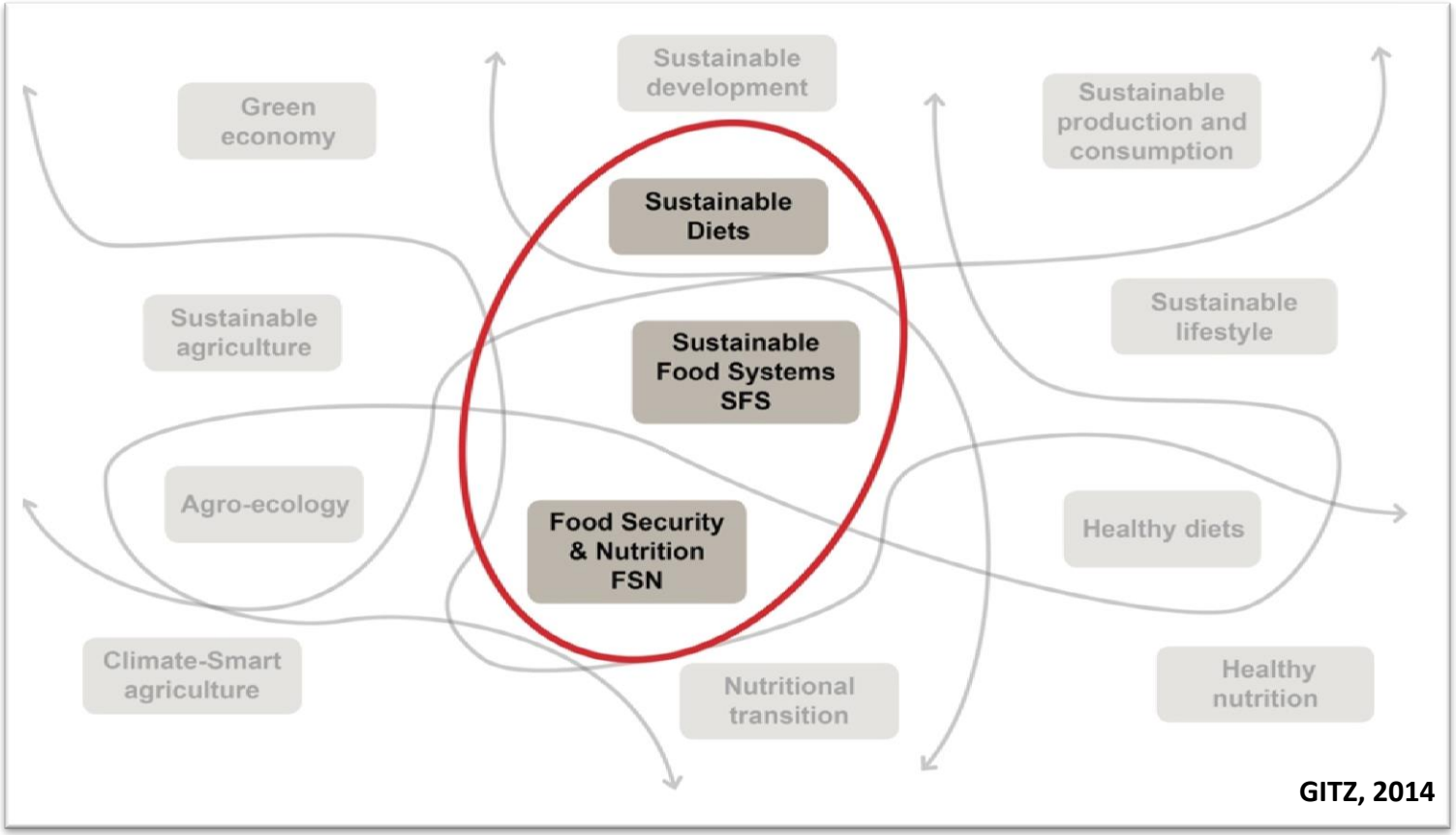
The **unsustainability of food systems** is the main reason for the existence of **food insecurity and malnutrition**.

To address food and nutrition challenges, food systems have to undergo radical transformation for improving resource efficiency, equity and transitioning towards sustainable diets.

Sustainable Diets, Sustainable food systems (SFS) and Food security and nutrition (FSN)



GITZ, 2014

Diets

Sustainable diets: diets with **low environmental impacts** which contribute to **food and nutrition security** and to healthy life for **present and future generations**. Sustainable diets are protective and respectful of **biodiversity** and **ecosystems**, **culturally acceptable**, **accessible**, **economically fair** and **affordable**; **nutritionally adequate, safe and healthy**" (FAO & Bioversity, 2012).

Transformation of food systems towards sustainable diets is an essential part of sustainable development (Capone *et al.*, 2016).

A sustainable diets approach aims to address nutrition requirements, in terms of both energy and nutriments, and resources used for food production, including local biodiversity, used to produce traditional and local foods.

Food products

Traditional and typical foods represent the opposite of mass food production and they can be at the epicentre of the effort to preserve diversity and collective identity.

Communities and cultures that maintain their own traditional food systems are better able to conserve local food specialties with a corresponding crop and animal diversity (Trichopoulou, 2012).

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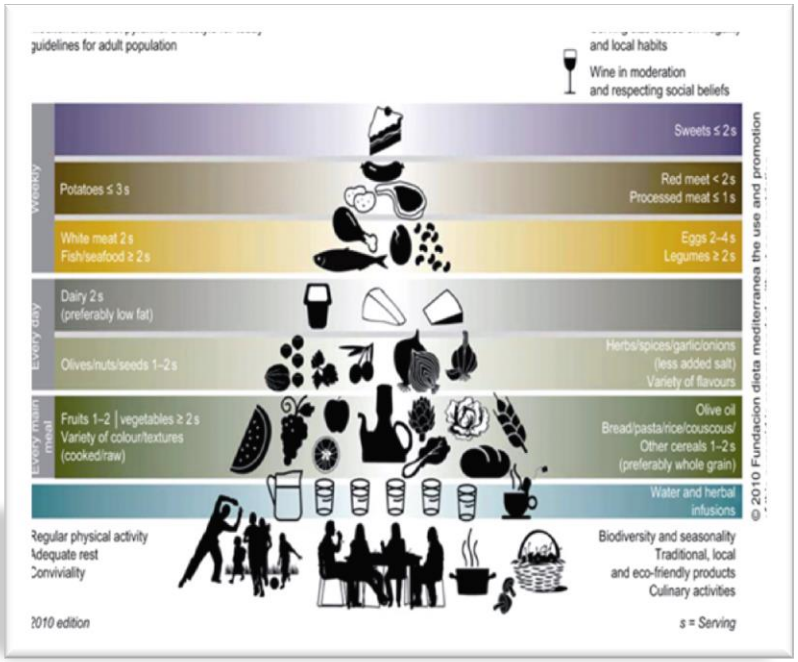
The Mediterranean diet (MD) offers a clear example since it encompasses a plethora of traditional and typical foods.

The MD is currently studied by CIHEAM and FAO as a case study for the assessment of the sustainability of dietary patterns in the Mediterranean area (Lacirignola *et al.*, 2012).



The MD, recognized by the WHO as a healthy eating pattern and included in 2010 in the UNESCO's List of Intangible Cultural Heritage of Humanity, represents a valid tool for promoting more sustainable consumption and production patterns (FAO & CIHEAM, 2012).

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The ambition is to exploit the operational linkages existing between foods, diets and food systems while using the developed methodological approach referring to traditional and typical products in order to provide insights also into the sustainability of diets and food systems in the Mediterranean area.

Traditional and typical quality foods can be at the epicentre of the Mediterranean food systems sustainability. It is argued that the improvement of products sustainability will bring about also improvements in terms of the sustainability of diets and food systems.

These products can contribute to improve the sustainability of the MD thus contributing to its safeguarding. The promotion of quality typical MD foods along with the use of a sustainability logo can contribute to an effective sustainable development of Mediterranean rural territories such as Apulia region.

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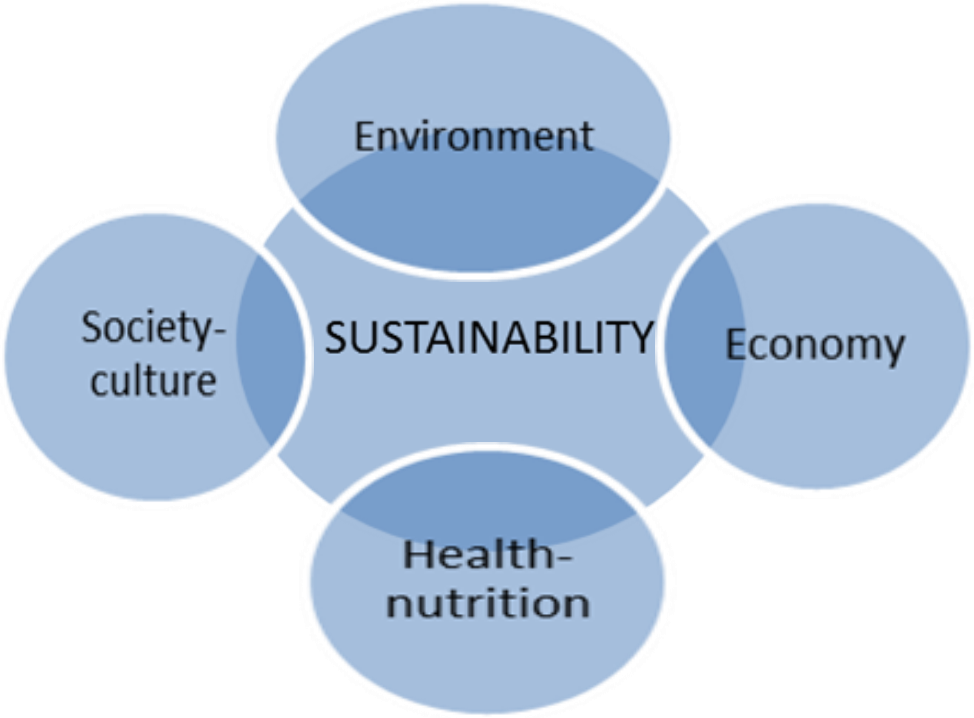
Following a series of joint CIHEAM/FAO international workshops and seminars (e.g. CIHEAM-Bari 2011, Malta 2012), a methodological approach was developed for the assessment of Mediterranean diets and food consumption patterns sustainability considering four pillars: environment, economy, society-culture and nutrition-health (Lacirignola *et al.*, 2012).



The same four pillars were considered for the assessment of the sustainability of Apulian typical agro-food products, which are the cornerstone of the regional MD and local food system (Lacirignola *et al.*, 2015).

This activity was carried out in the framework of "Agriculture & Quality", a programme of *Regione Puglia* (Regional Government of Apulia) for the qualification and enhancement of Apulian quality typical products adhering to the regional voluntary quality scheme "*Prodotti di Qualità Puglia*" (Quality products of Apulia).

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In addition to the issues of quality, CIHEAM-Bari in collaboration with many Italian institutions performed in the period 2013-2015 a pilot project to promote the sustainability of the products adhering to the regional quality scheme.

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To assess the sustainability of Apulian agro-food products a hierarchical approach was used for the definition of sustainability criteria for each pillar.

Environmental
- Agro-biodiversity
- Sustainable agricultural practices
- Reduction of environmental pollution
- Reduction of environmental impacts
- Responsible management of waste

Economic
- Income: the level and stability
- Labor and Employment
- Investment
- Profitability
- Productivity

SUSTAINABILITY

Socio-cultural
- Quality of life and human well-being
- Social responsibility and business ethics
- Good relations with the local community
- Promotion of local identity
- Inclusion of foreign workers
- Promotion of legality
- Animal welfare

Health-nutrition
- Healthiness and food safety
- Quality
- Traceability
- Transparency

For each criterion some indicators were identified

Product-based approach

Some indicators refer to each single product

Corporate-based approach

Most of the developed indicators refer to farms/companies , as they are not specific to single products and depend on the whole management of the agro-food company

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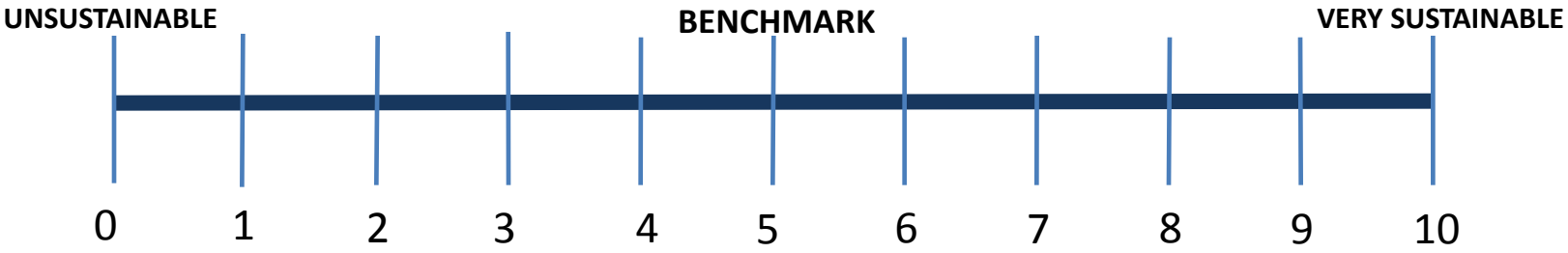
A rating and scoring system was developed for each indicator; from zero (unsustainable) to 10 (very sustainable) with 5 corresponding to sustainability benchmark value that expresses the threshold of sustainability from which a product can be considered sustainable.



Sustainability was evaluated separately for the four pillars and each pillar has the same weight as the others. A product is considered sustainable if it has a minimum average score of 5/10 for each sustainability pillar. Scores of company-based indicators were aggregated with those of product-based indicators to get the product-based average sustainability score (Capone *et al.*, 2016a).

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Sustainable food products in Apulia region will be identified with the "*additional sustainability logo*"

This logo can be considered as an innovation aimed at protecting high quality typical products via an interdisciplinary approach which takes into account not only environmental issues but also economic, nutritional and socio-cultural ones (Capone *et al.*, 2016a).

Conclusion

In this sustainability framework, consumers' choices have a relevant role.

By selecting certain types of products, producers or production processes, consumers can orient food production towards sustainability.

Communities and cultures, by maintaining their own traditional food systems, preserve better their local products.

The enhancement of sustainable food consumption can drive food production towards sustainability with the aim of fostering Sustainable Food Systems in the Mediterranean area.

Further research activities as well as pilot studies in Mediterranean territories are needed to better understand and elucidate operational linkages and to exploit such an understanding in the development of a methodological framework connecting the sustainability of products with that of diets and food systems.

CIHEAM, as an intergovernmental organisation dealing with food in the Mediterranean, can play a catalysing role in this endeavour.

Thank you for your attention