

# Sustainability

meaning and strategies

## What is sustainability?

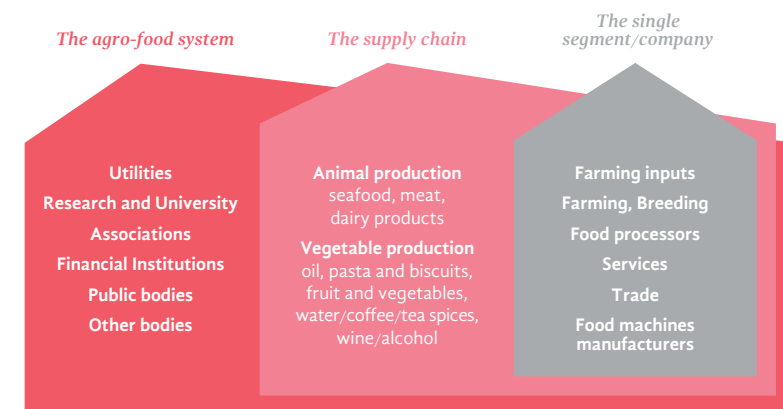
Agrofood sustainability has been analysed considering four main dimensions: *environment, economy, education, ethics*.

These dimensions can be complementary or in conflict and they are related to the issues concerning companies management and the context in which they operate, such as: innovative products and processes, optimization of logistics, waste management, product quality and safety, responsible marketing, training, efficiency of business processes, etc.

## Sustainability of organizations

"Sustainability in the corporate sector encompasses strategies and practices that aim to meet the needs of stakeholders today while seeking to protect, support and enhance the human and natural resources that will be needed in the future" (The Consumers Goods Forum, 2011).

The concept of sustainability can be related to: the whole agro-food system, the supply chain, the single segment/company.



## Code of conduct methodology

The project partners collected information for the Code of Conduct following the common template:

- Criticalities concerning sustainability in the agro-food sector
- Laws and regulations
- Policies supporting sustainability in the Mediterranean Area
- Qualitative and Quantitative Indicators
- Life Cycle Assessment (LCA)
- Certification schemes
- Education and training
- Research and Development (R&D)
- Case studies on sustainable and innovative agro-food companies
- Literature review

The contents have been rearranged in the following thematic areas: *Supply chain, Innovation, Resource management, Trade and export, Quality and consumers*.

To address Sustainable Development it is important to introduce the "Life Cycle Thinking".

# Supply chain

integrated supply chain solutions, logistics and management systems

## Recommendations

Horizontal cooperation may be better able to cope with the limited power showed by primary producers, so as to receive an improved share of the value-added

*e.g. producer organizations and associations, farmers cooperatives or consortiums.*

The competitiveness of the entire food supply chain depends on efficient coordination in the relations intra-chain and among the food players and the enabling environment

*e.g. written agreements represent a way to reorganize processes for an integrated supply chain.*

The rationalization of transport and logistics aims at reducing transport costs and at ensuring higher margins for the chain actors, granting products quality and reducing transport externalities. Logistics represent a strategic issue to improve efficiency of the chain by reducing stock and waste.

## Criticalities identified

Fragmentation and lack of coordination inside the segment (horizontal fragmentation).  
Unbalanced relationships along the supply chain (vertical fragmentation).  
Lack of integration within the agro-food system.

## Case studies

Producer organization in the tomato production and processing.  
Vertical integration of the chain in the production of dairy products.  
System of reusable and recyclable boxes, with collapsible sides, for the fruit and vegetables sector, integrated with services ensuring the optimization of logistics (reverse logistics included).

## Policies and regulatory framework

"Code of conduct" for the regional agro-food supply chains and in particular for the retailers, listing principles about: Product quality, Environmental protection, Protection of health and the rights of workers, Written contracts.

Criteria to recognize the Interprofessional Organizations.

Supporting the capacity of aggregation of companies.

Food Safety Information System.

# Innovation

innovative technology, innovation in products, processes and services

## Recommendations

Providing technology transfer tools to improve collaboration and exploitation of research results and their uptake by companies.

Providing of lifelong education and training of professionals that is a precondition for successful innovation policies.

Fostering collaborative research at transnational level through collaboration between transnational economic actors, public authorities and the research community engaged in innovation issues.

Providing smart and user friendly tools to facilitate agro-food SMEs match with the right research counterpart and get the right research support (e.g. online database of organizations).

## Criticalities identified

Limited interconnection between production and research.  
Difficulties at the launch of innovative products/processes.  
Small investments in R&D.

## Policies supporting innovation

Communication and information among scientific and market sector.  
Management of future research needs, general interest research, dissemination of results.

Working groups to provide support and new ideas.

Adoption of new products, processes and technologies.

## Value chain activities for business cooperation

Percentages come up from the 2012 PACMAN survey involving 600 agro-food companies in the MED area.



## Related outputs of the PACMAN project

Mapping of the agro-food supply chain.

Database of agro-food organizations in the MED area.

Pilot action: "Model of governance of Med agro-food supply chain".

Global report on "Company survey for in-depth analysis of selected agro-food segment", section on "Cooperation & Networking Participation of the company in intercluster activities".

## Laboratories

25 laboratories have been identified by the project partnership starting from the segments of the food chain on which every partner has focused on. Details on the activities carried out are available on the extended version of the Code of Conduct.

## Training institutes

Training courses related to sustainability have been organized in the following thematic areas: Context concerning sustainability, Agro-food, Agriculture, Packaging, Quality/Certifications.

## Literature review

Green economy (including also agro-food) and technological scenarios; Innovation capacities for sustainable development; Applications of environmental impact assessment; Adoption of knowledge and research results from the agro-food Industry.

## Related outputs of the PACMAN project

E-Book on PACMAN agro-food clusters with a focus on innovation.

PACMAN online DB including laboratories in the MED area.

E-guide for operators.

Pilot action: "Catalogue of Innovative Technologies in the Agro-food Sector".

Global report on "Company survey for in-depth analysis of selected agro-food segment", section on innovation.



# Agrofood sustainability in the Mediterranean area code of conduct



Project leader



Partner



PACMAN Project is cofinanced by the European Regional Development Fund (ERDF)





# PACMAN Project

The Code of Conduct is intended to be a collection of recommendations concerning sustainability in the agrofood systems, identified by the project partners by exploiting the results of the activities carried out in PACMAN.

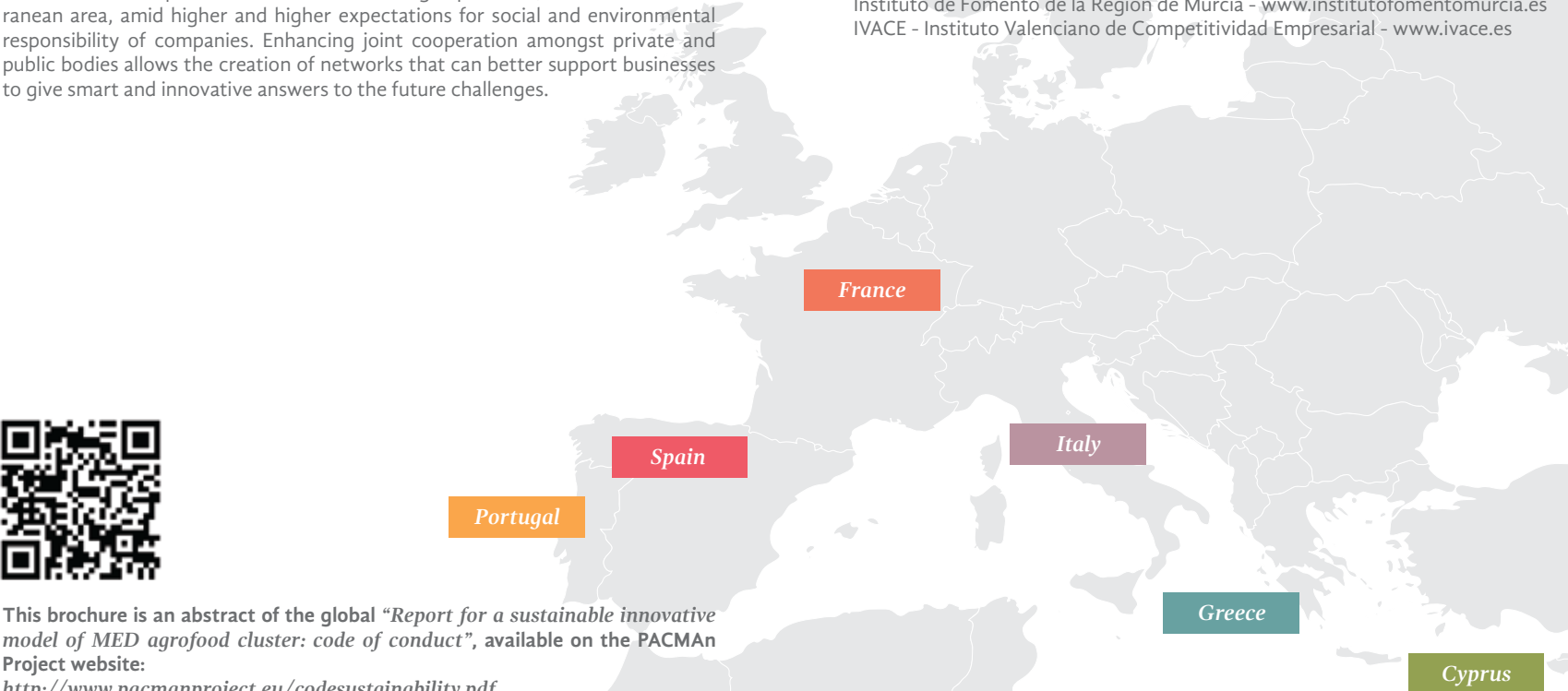
Although agrofood companies are the main target of these recommendations, the document is designed as a resource to help businesses and the supporting actors to improve the environmental, economic and social sustainability of the whole sector.

The project intends to stimulate the innovative and dynamic capacities of the agrofood sector in the Mediterranean area through the promotion of networks among local clusters, in order to increase its innovation, competitiveness, attractiveness and internationalisation.

10 project partners belonging to 6 MED countries (Italy, France, Greece, Spain, Portugal, Cyprus) with different expertise and experiences worked together to share and integrate common results. Partnership comprises regional development agencies, local authorities, universities, research bodies and chambers of commerce.

Sustainable development is an issue of increasing importance, also in the Mediterranean area, amid higher and higher expectations for social and environmental responsibility of companies. Enhancing joint cooperation amongst private and public bodies allows the creation of networks that can better support businesses to give smart and innovative answers to the future challenges.

- Cyprus**  
Cyprus University of Technology - [www.cut.ac.cy](http://www.cut.ac.cy)
- France**  
CRITT Agro-alimentaire PACA - [www.critt-iaa-paca.com](http://www.critt-iaa-paca.com)
- Greece**  
Diktyo Praxi Innovation Relay Centre Help-Forward - [www.help-forward.gr](http://www.help-forward.gr)  
Kilkis Chamber of Commerce and Industry - [www.ccikilkis.gr](http://www.ccikilkis.gr)
- Italy**  
Ervet - Emilia-Romagna valorizzazione economica territorio - [www.ervet.it](http://www.ervet.it)  
Provincia di Modena - [www.provincia.modena.it](http://www.provincia.modena.it)  
Provincia di Parma - [www.provincia.parma.it](http://www.provincia.parma.it)
- Portugal**  
ADRAL - Agência de Desenvolvimento Regional do Alentejo - [www.adral.pt](http://www.adral.pt)
- Spain**  
Instituto de Fomento de la Region de Murcia - [www.institutofomentomurcia.es](http://www.institutofomentomurcia.es)  
IVACE - Instituto Valenciano de Competitividad Empresarial - [www.ivace.es](http://www.ivace.es)



This brochure is an abstract of the global "Report for a sustainable innovative model of MED agrofood cluster: code of conduct", available on the PACMAN Project website:  
<http://www.pacmanproject.eu/codesustainability.pdf>

## Resource management

*lifecycle thinking, environmental footprint, waste management, sustainable packaging, human resources*

### Recommendations

**Optimizing of raw materials and resources uptake**  
Selection of raw materials produced in a sustainable manner; food chain integration to share resources or to develop more efficient and sustainable activities; control of inputs through contractual arrangements structured in quality assurance systems and enforced through third party audits.

**Lowering the agrofood environmental footprint**  
Find more sustainable pathways that increase crop production, while greatly reducing unsustainable use of water, nutrients and agricultural chemicals; LCA-based tools are key instruments to quantify the use of resources consumed.

**Reducing food waste**  
Packaging makes a valuable contribution to economic, environmental and social sustainability through protecting products, preventing waste, enabling efficient business conduct, and by providing consumers with the benefits of the products it contains.

### Criticalities identified

Optimization of raw materials and resources.  
Environmental impact.  
Waste management.  
Management of human resources.

### Policies and regulatory framework

**Waste Management**  
Specific targets for the recycling and recovery percentages for packaging; introduction of the Extended Producer Responsibility principle; incentives for efficient management of waste; valorisation of the agricultural plastic waste streams.

**Environmental footprint**  
Designation of NVZ zones in which the risk of nitrate pollution is high, as a result of intensive agricultural activity; support to producers as a result of the reduction in their income, due to the reduced use of pesticides; method for drawing up the national reduction program for emissions; specific targets regarding environmental footprint.

**Other**  
Biodiversity conservation and management; food quality and safety; animal wellbeing; corporate social responsibility (CSR).

## Trade and export

*international trade, distribution and logistics, trade agreements and standards*

### Recommendations

**Enhancing of the management capabilities of the companies**  
The benefits of new markets, that can be exploited by the internationalization processes, require management capabilities of the companies.

**Introducing fair trade agreements and standards**  
Private standards may confer competitive advantage due to improved control and increased efficiency generated by the quality management systems adopted.

**Developing efficient and effective transport and logistics services**  
There is a need for better awareness of the role played by the public organizations and sectoral associations in supporting agro-food companies.

**Getting a deeper understanding on the support offered by the enabling environment**  
There is a need for better awareness of the role played by the public organizations and sectoral associations in supporting agro-food companies.

**Grouping of companies for joint internationalization activities**

**Grouping of producers to improve strategic supplies of raw materials**

### Criticalities identified

Difficulties to gain access to foreign markets  
*e.g. poor visibility of local products, new markets not explored yet, commodities price volatility, weak institutional support for internationalization.*  
Distribution as a bottleneck  
*e.g. growing attention on private labels by retailers also poses additional demands on producers and processors to satisfy high and uniform quality standards and delivery requirements.*

Surplus production  
*e.g. perishable products management.*

### Policies and regulatory framework

Support the capacity of aggregation of companies.  
Criteria to recognize the Interprofessional Organizations (IO): common rules on production, models of interprofessional agreements to be used among members, collective actions for product promotion, common services aimed at improving product quality.  
Promote "contracting agriculture" between primary sector and food processing.

## Quality and consumers

*food safety and quality, healthy lifestyles, consumer information and consumer choice*

### Recommendations

The challenge of sustainability means shifting the focus from the products to the processes through which they are obtained, and their quality with respect to the environment and the social issues. The MED agrofood systems have to face the challenges concerning food quality, safety and health.

**By improving the communication actions**  
Implementation of product labeling, according to the new European Regulation No. 1169/2011. It protects consumer health by establishing common rules on food information.

**By improving transport and logistics efficiency**  
The changing consumer preferences pose new challenges for agro-food logistics. The increasing variety of products on offer requires innovative logistics solutions.

**By promoting Mediterranean diet**  
The Mediterranean diet may represent the right path to increase agrofood sustainability, according to the facts and figures that link food to its environmental impact. The Mediterranean diet can also represent an opportunity to link promotion of local products with activities that mix tourism with education.

### Criticalities identified

Awareness of consumers about quality and sustainability of products  
*e.g. awareness about official labelling and benefits of ecologic products; investments in sustainable packaging are not always valued by the consumers, particularly if they result in an increase of the sales price.*

Strategic role of certifications  
*e.g. harmonisation of European regulations concerning EU and non EU product labelling; certification perceived as unnecessary by packaging companies' customers.*

### Laws and regulations

National Quality System with reference to Integrated pest management (IPM).  
Information system on food security.

### Why doing life cycle assessment (LCA)

It is a global analysis of the environmental impacts.  
It is a decision support tool giving feedback to the designer.  
It is crucial to achieve a life-cycle economy.  
For studying market strategies, policies or regulations.

### Literature review

Environmental impact assessment of agro-food productions and distribution;  
Models and analyses of sustainability.

### Related outputs of the PACMAN project

Report for a sustainable innovative model of MED agrofood cluster: code of conduct.  
Pilot action: "Hand e-book on food green packaging in the MED Area".

### Internationalization and sustainability

"Environmental sustainability" has been considered as a strength by 40% of the companies (PACMAN survey on 600 companies) confirming that sustainability issues can support the competitiveness of the sector rather than limit it. As concerns the other factors, product identity emerges as a main distinctive feature, followed by food safety and nutritional, dietetic and/or organoleptic characteristics of products.

### Literature review

Market opportunities for organic products; Strategies to promote sustainable products and processes.

### Related outputs of the PACMAN project

Global report on "Company survey for in-depth analysis of selected agro-food segment", section on innovation.  
Pilot Action: "Establishing a trans-national marketing cluster based on the Authentic Mediterranean concept".  
Maps to promote agro-food in the MED area.  
E-Book on PACMAN agro-food clusters.  
E-guide for operators.  
Pilot Action: "Model of governance of Med agro-food supply chain".

### Certifications in MED area

Certifications and private standards directly or indirectly related to sustainability have been identified, with a focus on food quality and safety, while specifying objectives and agro-food segments interested.

### Literature review

Organic farming and sustainable development; Quality of (traditional) local products.

### Related outputs of the PACMAN project

Pilot Action: "Establishing a trans-national marketing cluster based on the Authentic Mediterranean concept".  
E-Book on PACMAN agro-food clusters.  
E-guide for operators.