



Best practice per la gestione delle risorse idriche e la tutela dell'ambiente marino: il contributo dei progetti LIFE

Venezia, 20 ottobre 2015



Overview

1. Introduction
2. AQUA project
3. Results
 - *Tools implemented*
 - *Water savings achieved*
4. Conclusions and follow-up



1. Introduction: the problem

Water is a limited resource, which quality and quantity are jeopardized even more by climate change.

The efficient management of water resources is a crucial issue. Industry will have to face this challenge, in a difficult context of adaptation to climate and environmental change.

Industry and Agriculture water use represents an extremely relevant share of total water demand.

In Emilia-Romagna 58% of groundwater and 86% of surface water withdrawal is related to agro-industry use.

The need to improve the use of water resources in the agro-industry sector is therefore clear: water is and will be a limited resource.



2. AQUA project

AQUA is one of the 49 LIFE+ Italian projects approved in 2009

Project name	Adoption of quality water use in agro-industry sector
Beneficiary	ARPA Emilia Romagna
Partners	Legacoop Emilia Romagna Indica srl Regione Emilia-Romagna Legacoop Agroalimentare Legacoop Agrolimentare Emilia Romagna
Duration	01/01/2011 - 30/06/2013
Budget	807 720 €
EU co-financing	403 860 € (50%)



2. AQUA project

Main objectives

- Improvement of the efficiency of water management for the agro-food industry, by defining a “Water Saving Kit” to support companies;
- Spread of innovative water management technologies and techniques, based on a cradle-to-cradle approach.

Results:

- Implementation of **public-private partnerships** to engage local agro-food companies and support their **water saving actions** during their industrial processes.
- Definition of a **Water Saving Kit** (audit of water consumptions, suggestions for improvement, measurement of environmental and economic benefits) including support by an **international expert panel**
- Involvement of **local community** and cooperation with public sector to protect the common goods (such as water)



2. AQUA project

Jan 2011
– Jun 2013

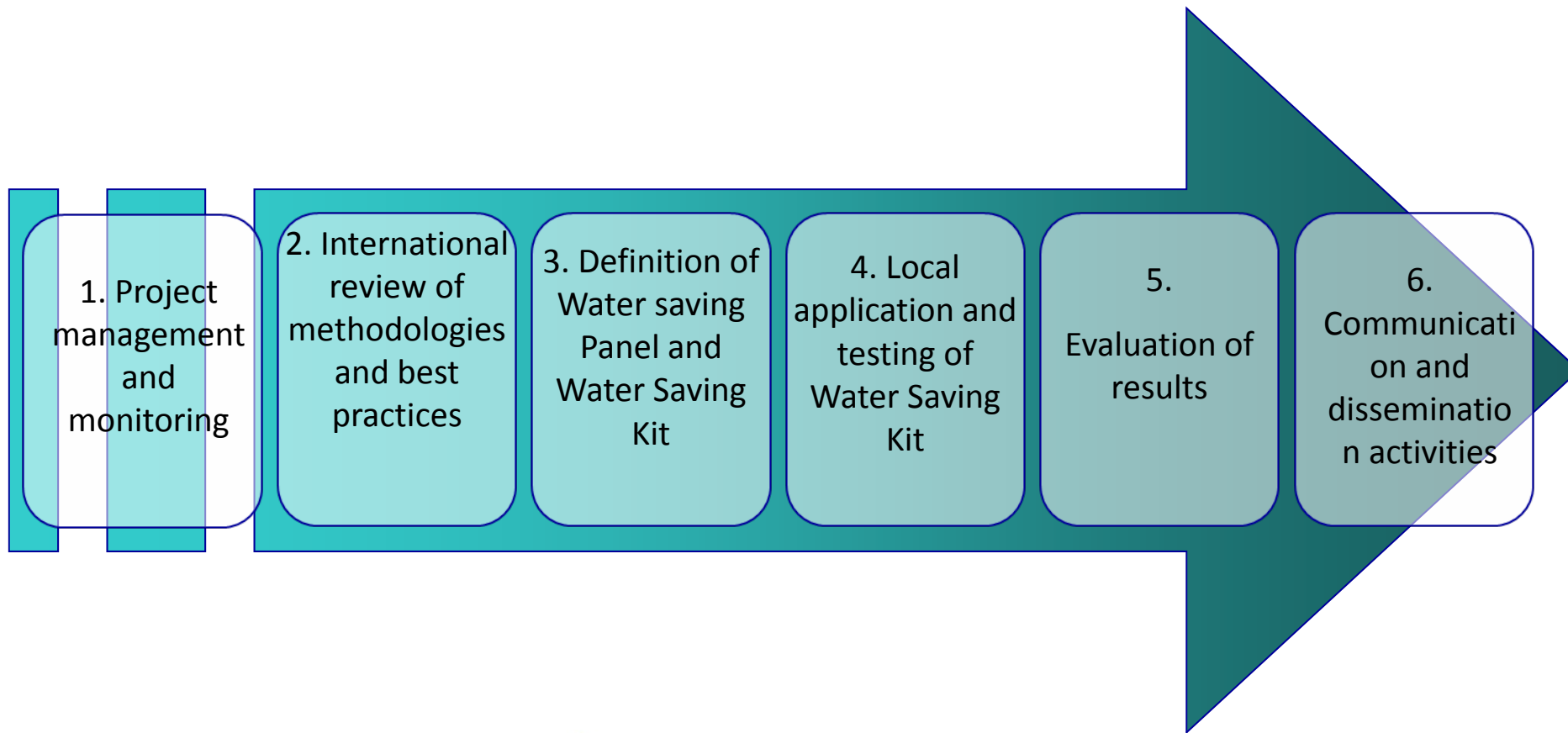
Apr 2011
– Jun 2011

Apr 2011
– Dec 2011

Oct 2011
– Oct 2012

Oct 2011
– Mar 2013

Jan 2011
– Jun 2013



1. Project management and monitoring

2. International review of methodologies and best practices

3. Definition of Water saving Panel and Water Saving Kit

4. Local application and testing of Water Saving Kit

5. Evaluation of results

6. Communication and dissemination activities



2. Results: tools implemented

***International Review (deliverable)**, to collect up-to-date background knowledge comprising the regulatory framework, management and governance tools, innovative technologies.*

***Water Alliance (milestone)** to make official the cooperation among different actors, define roles and responsibilities in order to ensure a good **public** (protection of quality and quantity, access guarantee, etc.) – **private** (development of technologies, adoption of efficiency practices, promotion along the supply and production chain) **partnership**.*

***Water Saving Kit ((deliverable)**, to guide companies in planning measures to achieve water savings.*

***Guidelines**, to allow for the replication of the AQUA project in other contexts and favour the dissemination of results.*



2. Results: tools implemented

International review

Analysis of EU regulation, management tools, water saving technologies, best practices of environmental governance in public-private partnerships, success factors of selected best practices.

The review identified 96 initiatives, classified into 5 different typologies. A detailed form is available for each initiative.



TYPE	NUMBER
REFERENCE LEGISLATION	7
INITIAL TOOL FRAME	16
MANAGEMENT TOOLS	8
PUBLIC – PRIVATE PARTNERSHIP MODELS	4
BEST PRACTICE – TECHNOLOGY	61

Document available at http://www.life-aqua.eu/files/AQUA_International_Review.pdf



2. Results: tools implemented

Water Alliance

AQUA project promoted a Water Alliance, i.e. a public-private partnership between Emilia-Romagna Region, the Regional Environmental Agency - Arpa - and the Industry sector.

The Alliance, made official by Decision of Regional Government n. 245 of 5th march 2012, is an improvement pact signed by public and private actors.

Benefits for member of the Alliance: free use of “AQUA – Mi applico (I apply my self)” logo, free participation to training events organised by the project, publication of their name on the project tools



MI APPLICO
ALLEANZA PER L'ACQUA

Various important companies signed the alliance: Azienda Cooperativa Terremerse, Granarolo, Italcarni, Fruttigel and Azienda Cooperativa Agricola Cesenate.

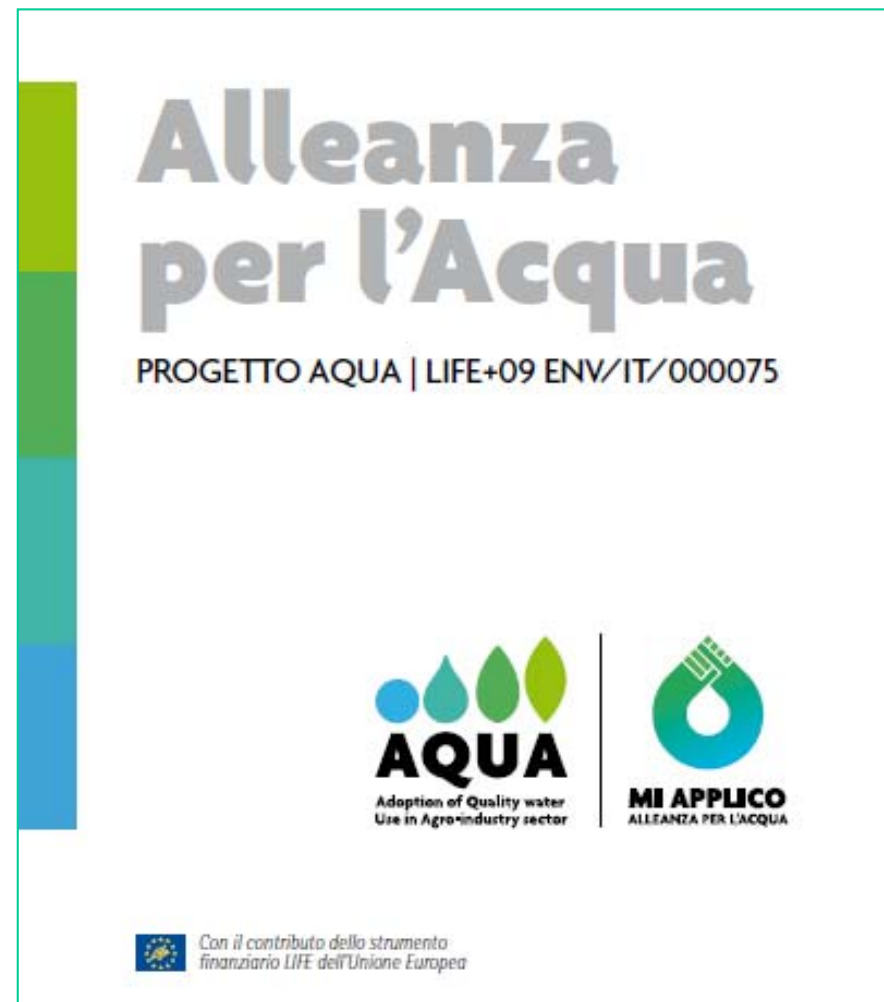


2. Results: tools implemented

Document available at:

http://www.life-aqua.eu/files/AQUA_Water_Alliance.pdf

Interested companies can be member of the Water Alliance by signing the “Statement of commitments”





2. Results: tools implemented

The Water Saving Kit

The Water Saving Kit (WSK) guides agro-food companies on a path towards efficiency and water savings.

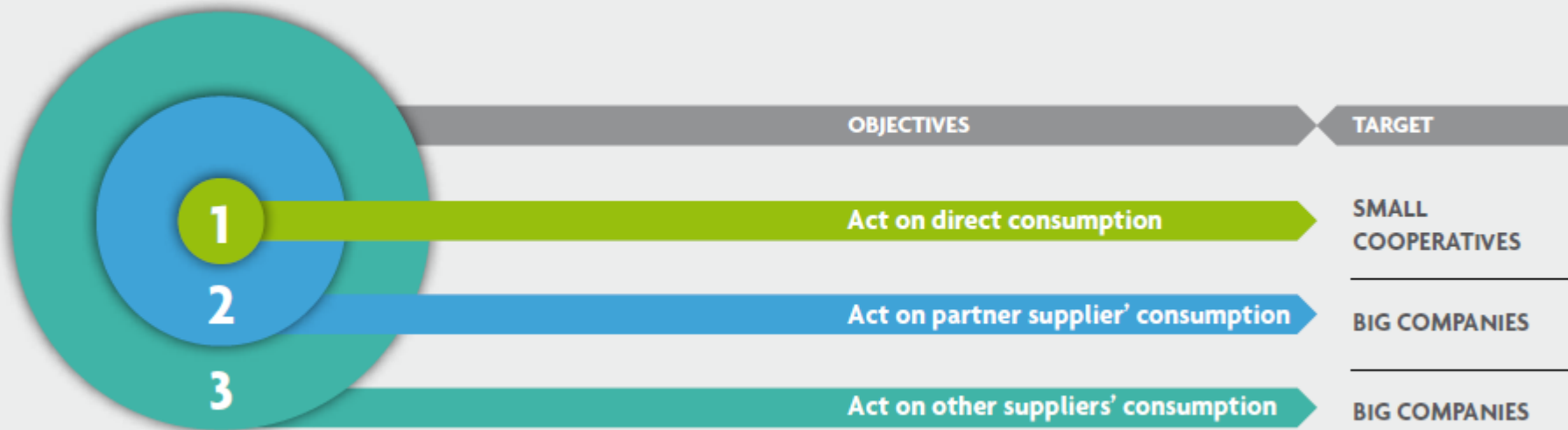
WSK includes:

- an auto-assessment questionnaire for regulatory compliance;
- an excel sheet to audit water consumption, with reference benchmark per sector;
- a description of processes and water plants related to the agro-food chains analysed (fruit and vegetables, meat, milk and cheese, wine, seed);
- 2 excel sheets to evaluate suggested improvement measures and to calculate the break-even period;
- a set of technologies / best practices / available measures to save water in industrial processes;
- a template to draft one's own action plan.



2. Results: tools implemented

THE WATER SAVING KIT: A TOOL FOR SUPPLY CHAIN EFFICIENCY AND PRODUCT QUALIFICATION





2. Results: tools implemented

WSK available at:

<http://kit.life-aqua.eu/>

(sign-up required to download the WSK)

Visita il sito del progetto AQUA

AQUA
Adoption of Quality water Use in Agro-industry sector

La gestione efficiente delle risorse idriche, è una delle sfide del XXI secolo

Il Water Saving Panel ha validato la rilevanza scientifica e metodologica degli strumenti nel kit

Kit per il risparmio idrico

La salvaguardia delle risorse idriche coniuga sostenibilità ambientale e promozione della competitività territoriale, perché l'acqua è diventata una risorsa scarsa nei processi produttivi. Per questo nell'ambito del progetto Life AQUA è stato creato un kit per il risparmio idrico nella filiera agroalimentare. Se sei un'impresa, testa subito gli strumenti del kit e definisci una tua strategia per il risparmio idrico!

[Guida all'utilizzo del kit »](#)

- 1** Valutazione della conformità normativa
Valuta quanto la tua impresa è conforme alla normativa in materia di risorse idriche. Otterrai le linee guida per migliorare la conformità
- 2** Autodiagnosi sul consumo idrico
Calcola un set di indicatori di gestione, di eco-efficienza e strategici utili per tenere monitorati i consumi idrici e confrontarli con le medie di settore
- 3** Processi e impianti idrici delle filiere agroalimentari
Filiera per filiera, l'utilizzo degli impianti idrici durante i processi produttivi delle filiere agroalimentari



2. Results: tools implemented

Guidelines

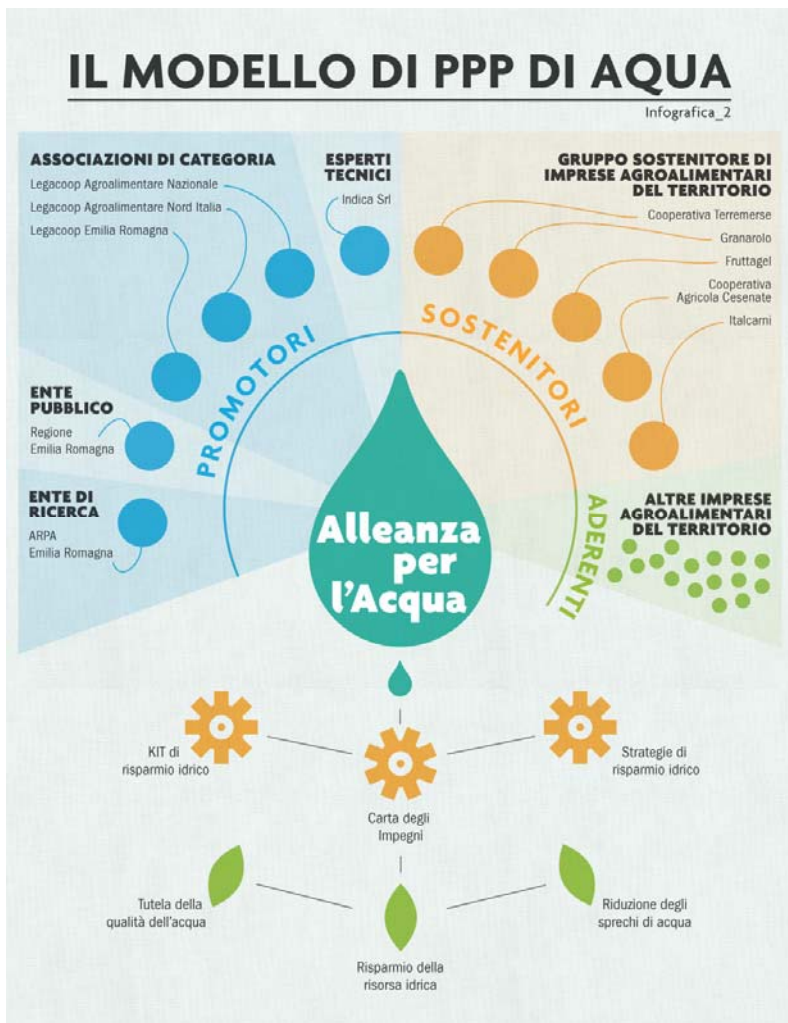
The Guidelines describe the pilot process developed during AQUA (objectives, steps, tools and results) to allow for the replication of the project in other contexts and favour the dissemination of its findings.

Structure of the Guidelines:

- **introduction**: scope and objective, benefits of adopting AQUA process for the territory, public policies and companies, convenience of replicating the AQUA process in one's context.
- **description of the AQUA public-private partnership (PPP)**: roles and commitments in the process, objectives of the Alliance, achievable results.
- **conclusions**: potential for applying the PPP and other participatory processes/tools in other contexts

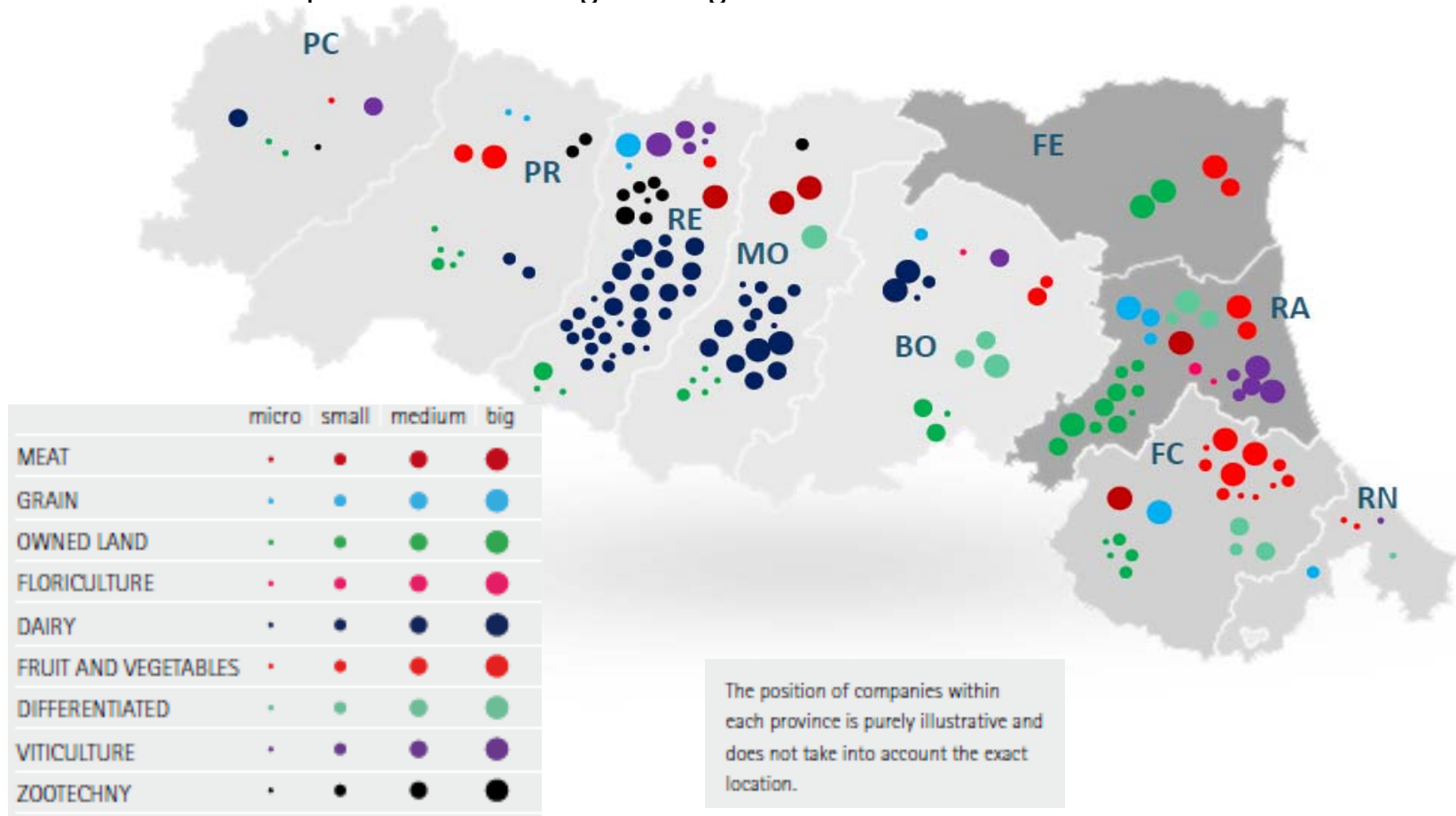


2. I risultati: gli strumenti implementati



3. Results: *Water savings achieved*

WSK has been applied to 15 companies, selected among the members of Legacoop and taking into account their importance in the regional agro-food sector



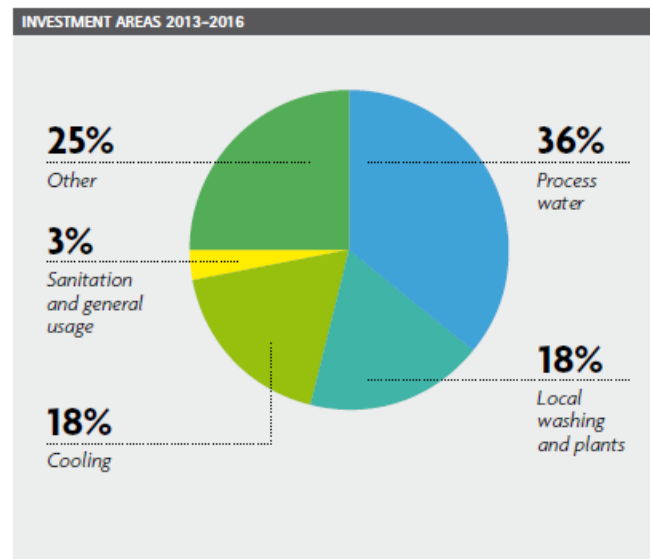


3. Results: *Water savings achieved*

The project highlighted that:

- water consumption of selected companies are in line with the average consumption of the agro-food sector;
- different time horizons for monitoring water saving targets are identified;
- investments are oriented around water recycling and innovative production techniques

Sector	Timeframe	Water savings
seed production / great cultures	2013-2016	30%
Fruit and vegetables	2013-2014	11%
Wine	2013-2016	22%
Dairy	2013-2015	11%
Meat	2013-2015	11%



Action plans adopted by the 15 companies estimate a water saving of about 400 000 m³/year or 10% of total consumption (about 3 900 000 m³/year).



4. Conclusions and follow up

- AQUA project helped agro-food companies to face the challenges of improving the sustainable use of water.
- Companies showed a strong awareness about water saving and committed themselves to put action plans into practice; the estimated water saving (400 000 m³/year) is a very important result.
- AQUA project could be regarded as a new approach to sectoral environmental policies, which integrate the **water** saving issue to the **energy saving one** (investments are oriented around energy saving techniques).
- Environmental management policies adopted, if properly supported, could lead to even higher saving; cooperation among Public bodies and Private companies, such as the Water Alliance, is fundamental.



4. Conclusions and follow up

Weaknesses:

- companies need motivation and support to “beat inertia” and undertake a process of auditing and improvement of environmental performance (even if this usually leads to economic benefits);
- production processes in the agro-food sectors are various and difficult to standardise: drafting of action plans for big companies requires specific expertise.

Strengths:

- AQUA project led to important and lasting water savings;
- the free distributed WSK represents a good basis to start a water saving strategy
- the Water Alliance is a tool intended to last and include more companies that commit themselves to adopt water saving strategies.



THANK YOU FOR YOUR ATTENTION

WEBSITE: <http://www.life-aqua.eu/>

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