

AQUARES

Interreg Europe



AQUARES Action Plan for Lombardy Region | FLA



**Interreg
Europe**

European Union | European Regional Development Fund



**Fondazione Lombardia
per l'Ambiente**

AQUARES Action Plan for Lombardy Region

Fondazione Lombardia per l'Ambiente

Contents

PART ONE GENERAL INFORMATION	3
1 AQUARES Interreg Europe	3
2 Water reuse in Italy – challenging features	4
PART TWO POLICY CONTEXT	7
3 Addressed Regional Policies for Water Reuse	7
3.1 The Regional Operational Program (ROP): general outline	7
3.1.1 <i>The Priority Axis VI: Tourism Strategy for Hinterland Areas</i>	8
3.1.2 <i>Priority axis III: Promote SME competitiveness</i>	9
PART THREE ACTIONS ENVISAGED	10
4 Emerging assets from AQUARES	10
4.1 Results from AQUARES Activities A	10
4.1.1 <i>Results from AQUARES Partnership Activities A</i>	10
4.1.2 <i>Results from AQUARES FLA Activities A and B</i>	13
4.2 Synergies with other projects	15
4.3 Challenges and priorities tackled by AQUARES	16
4.3.1 <i>Water ecosystems' protection</i>	16
4.3.2 <i>Sectorial implementation of water reuse strategies</i>	17
4.3.3 <i>Information on Water reuse and regional financing opportunities for its implementation.</i>	18
5 Actions	21
5.1 ACTION 1 - Bando "Turismo & attrattività II"	21
6 Monitoring of the Action Plan	25
7 Drafting and Support of the Action Plan	26
8 Signature of the Action Plan	26
REFERENCES	27
ANNEX I	1

PART ONE | GENERAL INFORMATION

1 AQUARES Interreg Europe

Table 1 - Summary on General information

Project:	AQUARES Water reuse policies advancement for resource efficient European regions
Partner organisation:	Lombardy Foundation for the Environment / Fondazione Lombardia per l'Ambiente / FLA
Other partner organisations involved (if relevant):	Lombardy Region / Regione Lombardia
Country:	Italy / Italia
NUTS2 region:	Lombardy Region / Regione Lombardia (ITC4)
Contact person of partner organisation:	Mita Lapi
Email address:	mita.lapi@flanet.org
Phone number	+39 02 80616112

The Interreg Europe project “Water reuse policies advancement for resource efficient European regions – AQUARES” aims at strengthening efficient water management and green growth by improving the capacity of public administrations and regional bodies to promote innovative technologies and business models for water reuse. The project will support public authorities to initiate efforts, join forces and exchange experiences to a) identify viable strategies to utilize water reuse to confront inefficient uses of water, b) make the most of EU financing tools, and c) promote public dialogue to address conflicting interests.

This Interreg Europe project brings together 10 partners from 9 countries.

1. Regional Government of Murcia, Ministry of Water, Agriculture, Livestock and Fisheries, General Direction of Water (GWD Murcia - Spain)
2. The Regional Development Agency of the Pardubice Region (RRAPK – Czech Republic)
3. Water Board of Oldenburg and East Frisia (OOWV - Germany)
4. Ministry of Environment and Energy, Special Secretariat for Water (SSW - Greece)
5. Euro-mediterranean Water Institute Foundation (FIEA - Spain)
6. Lombardy Foundation for the Environment (FLA - Italy)
7. Association “Baltic Coasts” (Baltic Coasts - Latvia)
8. Energy and Water Agency (EWA - Malta)
9. Lodzkie Region (Lodzkie - Poland)
10. The Municipality of Trebnje (Trebnje - Slovenia)

The project will achieve efficient water management through water reuse, profit from the opportunities in the water market, and secure the protection of water bodies, sharing practices/experiences between regions and actors involved in the project and integrating lessons learned into regional policies and action plans.

AQUARES expected impacts are:

- Increased capacity of 200 staff of public administrations to effectively support water reuse.
- 10+ million € investments unlocked to support projects on water efficiency and to improve the management of water bodies.
- Increased awareness and consensus building among water providers, the workforce, and citizens, to support measures for water reuse (over 1000 individuals).

The AQUARES project had been structured in two phases.

During the **first phase** the project developed:

- **Exchange of experiences**
- **Knowledge Exchange and policies' comparison**
- **Action plans**

During the **second phase** each partner will support the implementation of the developed Action Plan.

2 Water reuse in Italy – challenging features

Most of the information included in this chapter have been gathered by Lombardy Foundation for the Environment to be included in AQUARES study: Ministry of Environment and Energy General Secretariat for Natural Environment and Water. A1.1: Final Report Final Version. Comparative analysis of regional and national policies on water reuse. In AQUARES - WATER REUSE POLICIES ADVANCEMENT FOR RESOURCE EFFICIENT EUROPEAN REGIONS.

There is high agreement that renewable surface water and groundwater resources have been significantly reduced, due to abstractions for consumption, and that the availability of water in all European regions is subject to great variations, caused by climate change too (Jiménez Cisneros, B.E et al., 2014).

In the face of vulnerability, there is a dire need for adaptation and for increasing resilience (UNESCO, 2011). There exists a valuable portfolio of solutions for it; adaptive measures for the management of freshwater resources include institutional interventions (for example, updating the legal and developing financial instruments) and operational interventions (for example, introducing water reuse) which can be shaped for different economic and environmental frames (UNESCO, 2011).

Europe's freshwater resources are under increasing stress, with a mismatch between demand for and availability of resources, across both temporal and spatial scales. Nowadays, water scarcity is affecting at least 11% of the European population and 17% of the EU territory (www.eea.europa.eu).

While water reuse is an accepted practice in several EU countries, currently, just 2.4% of the treated urban wastewater effluents and less than 0.5% of annual freshwater withdrawals are reused annually. The EU potential is estimated to be much higher, almost six times the current volumes (ec.europa.eu). However, the increase in water reuse at the EU level is dependent on many local specificities and, additionally, taking advantage of this potential often requires to overcome economic barriers, information failures and unfavourable policy settings (BIO by Deloitte, 2015).

Italy is no exception.

Currently, Italian reuse rate is in the range of 5-12% of all treated wastewater. Italy reused approximately 233 Million m³ of water per year in 2016 which translates to a share of reused water in the total water consumption in the country of 0.93% (EC, 2015).

It is estimated that Italy's wastewater reuse potential could reach up to 497*106 m³/y in 2025 (Alcalde-Sanz, 2014). However, in Italy no significant increase in water reuse is expected in the future due to the high administrative burdens and the current strict national standards which create disincentives for new schemes development (EC, 2016) as explained below.

Wastewater reuse in Italy is mainly applied in the agricultural sector followed by the urban and industrial sector, at a lower extend. In the Water Reuse Europe Review (2018) have been identified 99 Italian reuse schemes that provide reclaimed water primarily for the agricultural sector. The annual amount of WWTP effluent in Italy is estimated to be only 9,770 Mm³ (in 2018). Only medium to large-sized plants (>100,000 p.e.), which produce about 60% of the treated urban wastewater, are able to meet the high-quality standards required by the national water reuse regulations at a favourable cost/benefit ratio. Indeed, Of the 2.4 million hectares of Italian irrigated agricultural area only around 4,000 ha are irrigated with reclaimed water, despite irrigation with reused wastewater is allowed for any kind of crop. The currently applicable regulatory framework in Italy is defined by the Ministry of the Environment and for the Territorial Protection; it is titled Ministerial Decree 185 and came into force in 2003. This regulation defines three categories of water reuse. All three categories are regulated with the same set of water quality parameters and therefore fall into the same single quality class. This "one size fits all" approach wants to address the environmental and health risks associated with all permitted reuse purposes, requiring a high reclaimed water quality suitable for the most strictly regulated water reuse purpose, but sometimes these constraints are not necessary.

Another financial disincentive for water reuse in Italy is the cost of upgrading the distribution networks and irrigation systems to meet the strict legal requirements for water reuse. The fragmented management of infrastructure does not increase the chance of reducing these costs. The average cost of reclaimed water was calculated by the Italian Institute for Environmental Protection and Research, through a survey of several Italian recycling plants in 2009. The cost was found to range from 0.083 to 0.48 €/m³ among the different plants and uses, with a typical value of

about 0.25 €/m³ (EC, 2016). In contrast, the cost of surface or groundwater abstraction is estimated to range only from 0.015 to 0.2 €/m³ with typical values about 0.03 €/m³.

It is not easy to gather statistics on water reuse at regional level. Knowledge of the state of water reuse is one more limit to the fostering of the use of treated water. AQUARES project is trying not only to raise the awareness on the potential and the benefits of water reuse but also to highlight, in particular to public administration, that there is the need of covering the information lacking.

What can be underlined is surely that Region Lombardy is one of the most virtuous regions in Italy. As an example, it hosts two of the most known Italian Wastewater Treatment Plants - selected by Lombardy Foundation for the Environment as two of the five Good Practices approved by the Interreg Europe policy officer to be reported under the output indicator “number of good practices identified” in AQUARES progress report.

WWTP of Milano-Nosedo is one of the largest European water processing sites. It treats 50% of sewage of Milan, particularly those coming from the central and eastern area of the city; about 150,000,000 m³/year of treated wastewater is then returned to hydrographic system (Roggia Vettabbia) but also reused for irrigational purposes.

Milano San Rocco municipal wastewater treatment plant handles 40% of wastewater of the city of Milan and a part of the discharge of the municipality of Settimo Milanese (population equivalent of 1,050,000). It is located south of Milan, between the districts of Rozzano and Opera, in a protected agricultural estate. Almost all treated water can be reused for farm irrigation and additionally, its versatile structures can accommodate exceptional storm water loads.

The WWTPs contribute to the purification of wastewater showing that a solution for improving urban water management is feasible and can also be at the cutting edge: treated water from the WWTP of Milano San Rocco not only significantly exceeds the requirements of current regulations but is also in line with foreseeable legislative changes.

The wastewater used to irrigate the rural areas is a precious resource for agriculture, also from the circular economy viewpoint. The WWTP is indeed a great example of reduction of water demand from conventional sources and efficient use of water resource, even across sectors.

PART TWO | POLICY CONTEXT

3 Addressed Regional Policies for Water Reuse

Table 2 - Policy context summary

Policy context	
The Action Plan aim to impact:	<input type="checkbox"/> Investments for growth and jobs programme
	<input type="checkbox"/> European Territorial Cooperation programme
	<input checked="" type="checkbox"/> Other regional development policy instrument
Policy instrument addresses:	Lombardy Region's 2014 - 2020 Regional Operational Programme (ROP) under the European Regional Development Fund (ERDF)
Shortages of the policy instrument:	ROP ERDF 2014-2020 was already at an advanced phase when the project started in 2018. The main issue during the First Phase of AQUARES was finding a suitable space for the implementation of water reuse indications. Most of the funds available were already allocated to specific grants and the only scope for action had been the tentative of integrating measures already financed by the programme through suggestions.
Aim of the policy measures included:	ROP ERDF strategy supports a model of growth which emphasizes research and innovation (not least through the spread of new technology) and promotes an intelligent use of the Region's resources and a balanced management of its natural and cultural heritage

3.1 The Regional Operational Program (ROP): general outline

AQUARES had the initial objective of addressing one policy instrument per region. The partner Lombardy Foundation for the Environment had defined it would be the Lombardy Region's 2014 - 2020 Regional Operational Programme (ROP) under the European Regional Development Fund (ERDF).

This measure provides investment funds of almost one billion euros (€970,474,516), of which 50% are ERDF resources and 50% is co-financed (35% by the Italian government and 15% by the Lombardy regional government).

The ROP does not have a clear focus on water reuse within its several Axis. Generally, applications of the circular economy's approach are recommended whenever possible as well as sustainable uses of natural resources, such as water. Indeed, The ROP ERDF strategy supports a model of growth which emphasizes research and innovation and promotes an intelligent use of the Region's resources and a balanced management of its natural and cultural heritage. The ROP ERDF strategy lays emphasis on building an economy which uses resources efficiently, guides the development of new technologies and processes and underpins Lombardy companies' competitive advantages by making use of EU-wide networks, in line with the flagship initiative entitled "A resource-efficient Europe".

Table 3 - The six priority's axis of Lombardy ROP

Six priority axis of Lombardy ROP (excluding Axis VII - Technical assistance)		Percentage of ROP total funds
Axis I	Enhancing Research, technological development and innovation	36,00%
Axis II	Improving the access to the ICT, their use and quality	2,06%
Axis III	Promoting competitiveness of SMEs	30,36%
Axis IV	Supporting the transition towards a low carbon emission economy in all sectors	20,05%
Axis V	Sustainable urban development	6,18%
Axis VI	Tourism strategy for internal areas	1,96%

Source: ROP ERDF 2024-2020

ROP ERDF 2014-2020 was already at an advanced phase when the project started in 2018. The main issue during the First Phase of AQUARES was finding a suitable space for the implementation of water reuse initiatives. Most of the funds available were already allocated to specific grants and the only scope for action had been the tentative of integrating measures already financed by the programme through suggestions.

Given that in the period 2014-2020 the ROP ERDF had not sufficiently addressed water, the 2021-2027 ROP ERDF need to include more options for developing water reuse activities. It seems that the road taken by the new programme is in line with water protection and thus the ROP for the next period will give more space for the financing of water reuse.

However, within programme 2014-2020, the Lombardy regional administration has identified a crucial area to be improved: sustainable tourism. The sector offers the great opportunity to design integrated affordable technologies as alternatives to potable water abstractions and at the same time protect the rich water natural capital of Lombardy Region and increase the regional attractiveness. The purpose of Lombardy Foundation for the Environment, stated in the Application Form, can be mainly achieved by addressing primarily two of the Axis of the ROP ERDF 2014-2020.

3.1.1 The Priority Axis VI: Tourism Strategy for Hinterland Areas

The discussion between Region Lombardy and Lombardy's Hinterland Areas had highlighted the need to start initiatives, sustained by investments, directed to the valorisation of the rich natural and cultural capital of the territory (cultural heritage, protected areas, Nature 2000 sites), in the view of establish deeper roots for a more sustainable tourism.

Priority axis VI provides Lombardy's Hinterland Areas with the tools for redefining their tourist offerings, both in terms of infrastructure (restoration and exploitation of the local heritage), and in terms of intangibles, mainly organizational (promotional services, etc.).

All funds and measures related to Axis VI were already set at the time Lombardy Region for Environment could attempt to influence them; thus, the strategy adopted was that to direct the efforts toward another Axis of the ROP ERDF 2014-2020 which could likewise grant the reaching of already stated goals: Axis III, complementary to Axis VI.

3.1.2 Priority axis III: Promote SME competitiveness

Despite this Axis is not explicitly addressed in AQUARES Application Form, it proves to be very effective for the purpose statement of Lombardy Foundation for the Environment.

The Axis focuses on improving businesses' competitiveness from the start-up stage throughout their growth and consolidation. Priority axis III supports interventions to help SMEs in their business activities, with special attention to improving access to credit, and making the most of the Region's tourist destinations and other attractions.

Among the five specific targets and corresponding actions FLA identified the third as a potential ground for the fostering of water reuse practices.

The target aims at **Consolidate, modernize and diversify the Region's production resources and arrangements**; it is declined into three paragraphs among which, thanks to the dialog with the Managing Authority, FLA concentrated its attention on paragraph **III.3.b.2.3**: support for the competitiveness of firms in tourist destinations by action to improve the quality of the offer and introduce new products and services with strategic and organizational innovation.

The specifics on the intervention of FLA for the improvement of this ROP ERDF target ended up in the setting of ACTION 1 – Bando "Turismo & attrattività II". This ACTION is explained in Chapter 5.

PART THREE | ACTIONS ENVISAGED

4 Emerging assets from AQUARES

Table 4 - Summary of Strategic development pathway

Details of the action envisaged	
Lessons learned from the project which constitute the basis for the Actions:	<ul style="list-style-type: none"> • The 9 European regions are each characterized by specific underdeveloped fields with great potential for improvements of water reuse. • Project AQUARES not only aims at spreading the knowledge on the most diffuse practices but it also ensues the opening of water reuse technologies to less experienced fields. • The collection of regional Best Practices evidenced the opportunity of developing traditional and innovative technologies which achieve their own core objective – reuse of treated water - along with the realization of side benefits – as biodiversity safeguard or destination attractiveness improvement.

4.1 Results from AQUARES Activities A

4.1.1 Results from AQUARES Partnership Activities A

The main relevant inputs from deliverables and activities of AQUARES Interreg Europe are summarized in the following two tables - the information reported are not exhaustive of the activities carried out. Table 5 depicts the findings for each A activity which has been carried out in joint collaboration with the whole partnership.

Table 5 - Results from AQUARES A activities: Joint analysis & peer review

A1.1: Comparative analysis of regional and national policies on water reuse

Comparative policy analysis report on water reuse territorial policies

The responsible partner had developed the methodology and tools for the comparative analysis: collection of information on existing water reuse policies in Partner Countries; Application of Evaluation Indicators and Evaluation Process; identification of Appropriate Water Quality Criteria and Best Practices for Water Reuse.

Relevant findings

At the time of the drafting of Action A1.1, there was a poor legal framework for Europe as a whole. Each Member State is still following their own approach. Even though they are based on the same principles, the national water reuse regulations of EU member states differ significantly from each other and follow different approaches to classify water quality levels for different water uses. Each regulation considers different reclaimed water uses associated with different quality classes and respective definitions. This results in varying water quality classes and combinations of permitted reuse options across the different national regulations.

Overall, standards for water reuse have been developed by Cyprus, France, Greece, Italy, Spain and Portugal. Despite EU countries practice water reuse, the number and type of quality parameters monitored and the

defined limits which have to be met for each quality class vary greatly. The number of water quality parameters which are restricted by each national regulation also differs. National reuse regulations also differ with regard to the compliance requirements.

Findings indicate also that there is a **multitude of treatment options**, including engineered and managed natural treatment processes, which can address and eliminate contaminants in reclaimed water in a safe and reliable manner. In order to meet set water quality criteria they need however to be implemented with a fixed legislative framework.

Furthermore, the **inclusion of standards appropriate for non-irrigation end uses** would contribute to the promotion of treatment technologies and opportunities that can accelerate water reuse uptake and should be strongly encouraged.

The greatest obstacle to reuse is **public perception**, and perceptions of technology risk only change slowly, through lengthy trust-building between the general public and its government. Gradual change, promoted by the provision of detailed information on risks and benefits, awareness campaigns, transparency in all relevant processes, public consultations, and provision of incentives can help in achieving the end goal of reuse technology uptake and implementation. It is believed that is essential to avoid over-complicated standards confusing the public and creating a false perception that reuse is environmentally dangerous or a health hazard. At the same time, the high quality requirements of the reclaimed water, if appropriately communicated, could improve public acceptance.

The main tool however in all this is the development of suitable policies that establish a reliable framework for the application and monitoring of reuse schemes.

A1.2: Analysing the needs of AQUARES regions in water reuse

AQUARES regions' needs and opportunities in water reuse

Relevant findings

Water Supply. Overall, water reuse rates in AQUARES territories (with the exception of Malta) are particularly low even though the potential is rather high. The great majority of treated wastewater is used as processing and cooling water in industrial and power production processes respectively, and to address agriculture irrigation needs.

Wastewater Treatment. Most AQUARES territories have a modern and developed public sewerage system fitted with secondary and tertiary wastewater treatment methods that allow for complete removal of inorganic compounds and nutrients, as well as advanced sludge treatment. In total, over 5,500 WWTPs are currently operating in partnership territories.

Water Pollution. The main sources of pollution are untreated municipal wastewater, agricultural pollutants and industrial discharges.

Sectors with Water Reuse Potential. When it comes to water reuse opportunities, the sectors that demonstrate the highest water reuse potential in AQUARES territories are agriculture, manufacturing and power production. These sectors combine significant vulnerability to water scarcity, high water consumption and wastewater generation, intensive economic activities and substantial environmental footprint. Lower but still significant water reuse potential has been also found in tourism, food industry and groundwater recharge.

Barriers to Water Reuse. The main barriers to the implementation of water reuse, as drawn from the present study, are firstly the lack of legal framework governing water reuse together with the lack of standards and requirements for the utilisation of reclaimed water in different uses, and secondly water pricing structures that shift demand towards freshwater.

A1.3: Evaluation of water reuse technologies and practices across different sectors and regions

Evaluation report on water reuse technologies and practices in AQUARES regions

The scope of this technology application guide is to (i) identify the best technologies to be applied in priority areas for the application of water reuse and (ii) provide suggestions to promote and support the application of the most appropriate water reuse technologies.

Relevant findings

The provision of safe and reliable water reuse systems relies heavily on technologies that are demonstrated to be responsive and resilient to the dynamics of diverse sources of water for potential reuse and needs of various use applications. When selecting the appropriate technology for water reuse, certain parameters should be taken into account including the operational scale, the desired end use of the treated water, the economic feasibility, the environmental impact, the social perspective, and local/regional customs and practices.

A list of technology identified per country is provided in the document.

A1.4: Identification of best practices for monitoring, assessing and ensuring compliance with water reuse standards

Evaluation of best practices for monitoring, assessing and ensuring compliance with water reuse standards

The AQUARES results revealed a divergence amongst EU member states in terms of regulations on water reuse but also in terms of existing wastewater treatment infrastructure. Implementing water reuse monitoring may not only be problematic due to a lack of time to implement the new regulations, but also because of the different levels of wastewater treatment in terms of level of treatment (primary, secondary, tertiary), the connectivity of people to the sewer system, the level of willingness to invest in new infrastructure, and the pricing of reused water compared to freshwater.

The Regulation No. 2020/741 of the European Parliament and the Council of 25 May 2020 on minimum requirements for water reuse is based on the JRC guidelines and introduces a regulatory framework in order to homogenise current water reuse practices across the EU. Effective water reuse monitoring standards should be conformed to the EU regulation, be flexible, practicable and cost-efficient. An effective monitoring is essential to safeguard public and environmental.

A3.3: Site visits exchange to match make desired water reuse initiatives with appropriate technologies and business models

The partners identified 54 Good Practices of water reuse, which is a bit more than the target of the project (45, that means 5 per partner).

Category	GPs
Methods & Technologies of treatment	15
Applications of water reuse	19
<i>Agricultural applications</i>	4
<i>Recharging aquifers</i>	2
<i>Industrial uses</i>	6
<i>Leisure uses</i>	1
<i>Domestic applications</i>	6
Governance Measures	7
Restoration of landscapes + wetlands	7
Valorisation of wastes and recovery of N and P	3
Harvesting rain reuses	1
TOTAL	55

AQUARES lead partner made a match-making matrix as a proposal to organise the project study visits and linked it to the partner that potentially will attend. Murcia GDW had the highest number of chosen good practices, mainly because GDW have identified 15 best practices, together with FLA, this is merit considering that they have identified only 5 BPs; The FLA Lombardy's five good practices have been chosen almost 20 times.

4.1.2 Results from AQUARES FLA Activities A and B

Table 6 highlights A and B activities carried out by Lombardy Foundation for the Environment during the First Phase of the Project. When a date for the activity is defined that has been reported, otherwise an indication of the semester when the activity was completed is provided (ex. 1s = first semester).

Table 6 - AQUARES A and B activities carried out by FLA

Action / Deliverable	Inputs (keywords / short sentences)
A1: Joint analysis & peer review	
A1.1: Comparative analysis of regional and national policies on water reuse	2s: FLA has collected data on territorial water reuse policies to be included into the comparative analysis report on water reuse policies.
A1.2: Analysing the needs of AQUARES regions in water reuse	1s: Application of methodology & tools for identifying and analysing sectoral & cross-sectoral areas for investing in water reuse due to a) their negative environmental impact, and b) their short pay-back periods. 2s: FLA provided input on territorial attributes and investment opportunities to be included in the needs analysis report, enabling policy makers to identify priority areas to which to proceed so as to unlock investments in water reuse.
A1.3: Evaluation of water reuse technologies and practices across different sectors and regions	1s: Application of methodology and tools for identifying & assessing current and future technologies used in water reuse applications in different sectors (agricultural, industrial, urban, recreational).
A1.4 Identification of best practices for monitoring, assessing and ensuring compliance with water reuse standards	1s: Application of methodology and tools to identify best practices for the assessment of the compliance with water reuse standards of actors across different sectors (agricultural, urban, industrial recreational) and territories. The Good Practices identified by FLA are San Rocco WWTP; Nosedo WWTP; Constructed Wetlands Gorla Maggiore; CSO-CW for Carimate WWTP; Water reuse at the building level – Condominio di via Sassetti 2s: FLA has conducted the desk research on water reuse standardisation issues at national level
A2: public dialogue	
A2.1: Regional stakeholders' meetings	Every semester FLA organised 1 stakeholder meeting and drafted a summary reports on gathered experience for dissemination & further learning. FLA mobilised its contacts, inform regional & national actors about the project and invite them in the stakeholder meeting. The aim is to motivate key stakeholders to get involved in joint studying activities that take place, whilst securing their involvement in the implementation of the action plans to be developed. 1 RSM - 28/11/2018: involved key stakeholders, such as members of the Italian Ministry of the Environment, the government of the Lombardy Region as well as academic institutions and reclamation consortia. The agenda included the point of view of Member of the European Parliament Simona Bonafè, rapporteur of the EU's water reuse. 2 RSM – 28/05/19: involved members of the Lombardy Region, informing them on our progress and understanding their priorities on water reuse. This meeting has been successful in providing FLA with more suitable tools to redirect its efforts towards the priorities of Lombardy's government policies in relevant fields of action (agriculture, tourism and SMEs). FLA shared with our partners the summary report of the event. 3 RSM – 28/10/2019: FLA organized a seminar whose topic was water reuse applications at the building level. This event was organized in Pavia in support of

	<p>an ERFD project, “Comunità Ospitali” which aims at renovating some buildings located in Oltrepò Pavese, one of the doughiest areas of the Lombardy Region</p> <p>4 RSM – 19/03/2020: The Lombardy Foundation for the Environment proposes a remote meeting with the Regional Institutions to inform them about the progress of the European project INTERREG AQUARES and to discuss of the foreseen Action Plan.</p> <p>5 RSM – 23/11/2020: The focus of the meeting were cost recovery instruments and financing opportunities. One specifically invited expert has explained that regional opportunities for financing water reuse project are indeed available as the regional innovation strategy for smart specialisation (RIS3) refers to water resources too. He presented one of these measures in details.</p> <p>The event could enjoy the contribution of the Managing Authority of ROP ERDF 2014-2020 giving his own contribution.</p> <p>6 RSM – (May 2021) focuses on Regulation and Policies of Water Reuse.</p>
A2.2: Public consultation meetings on policy options for water reuse.	<p>3s – 30/06/2020: FLA has organised a public consultation meeting in own territory based on common guidelines for the organisation of all public consultation meetings to promote public dialogue on issues that require consensus. For this public consultation FLA organised a seminar whose theme was “Industrial scale savings, reuse and recycling of water resources” with a specific focus on the presentation of “AL VIA” -Bando ROP ERDF 2014-2020 given by a technician of Region Lombardy, responsible for the grant.</p> <p>5s – 20/11/2020: FLA has organised a public consultation meeting in own territory. For this Public Consultation FLA focused on “Opportunities and barriers of water reuse”. A workshop has been organized to share the results from a questionnaires investigation and discuss them with few stakeholder experts. The meeting was broadcasted in streaming within the first Regional Forum for Sustainable Development organized by Region Lombardy and was followed by ~250 people.</p>
A3: capacity building	
A3.1 Interregional workshop on how to plan and unlock public and private investments	<p>2s – 25/03/2019: FLA participated in the interregional workshop on how to unlock public and private investments in water reuse, based on an input study that a) detail financial and legal incentives at regional level, and b) provide guidelines on how to setup PPPs. FLA diffused the lessons learnt through internal reporting meetings and during the second regional stakeholder meeting.</p>
A3.2: Interregional workshop on water reuse technology and standards	<p>1s: FLA developed an input study with thematic and organisational guidelines for organising a workshop about how to apply the appropriate technologies water reuse across the agricultural, industrial, urban and recreational sector of each region. The study has been shared with all project partners.</p> <p>2s – 20/05/2019: FLA organized an interregional workshop on water reuse technologies. The event was attended by partners as well as by Italian stakeholders (around 60 participants). Participants had the opportunity to make a site visit to the WWTP Milano Nosedo.</p>
A3.3: Site visits exchange to match make desired water reuse initiatives with appropriate technologies and business models	<p>25/03/2021: FLA conduces the site visits based on the guidelines for site visits exchange to match make desired water reuse initiatives with appropriate technologies and business models and prepared summary reports.</p>
A3.4: Study visits to transfer experiences on AQUARES success stories	<p>3s – 15-18/10/2019: FLA participated in the 1st study visit in Poland to transfer experience on water reuse implementation and monitoring issues.</p> <p>4s - 25/09/2020: FLA participated in the 2nd study visit in Czechia.</p>
A4: development and validation of transferable tools and resources	
A4.1: Water reuse policies development toolkit	<p>4s: FLA reviewed the online water reuse investment evaluation toolkit a) online learning resources for best management practices, b) water reuse source investment analysis tool, c) water reuse project financing decision support tool, and d) interactive field sensitive databases for best water reuse practices, to ensure its functionality & capacity to assess water reuse investments.</p>

A4.2: Implementing the sustainability strategy	1s: FLA provided data for prospective stakeholders' repositories to be involved during & post project for the development of a strategy for the project's sustainability and long- term impact regarding partners' activities and project's outcomes towards the proliferation of water reuse.
A5: policy instruments impact	
A5.1 Joint development of action plans	6s: FLA developed an Action Plan with guidelines on how to improve the policy instrument addressed by each partner, defining the actions to be implemented, the timetable of actions, the stakeholders to be involved and any costs or funding needed, using the common methodology and roadmap developed in semester 5.
B1: Planning of communication activities and tools	
B1.1 Fine-tuning of the communication strategy	1s: FLA contributed to the communication plan; it provided input about its target groups and goals.
B2: Development of communication materials	
B2.1 Development and updating of the project's web resources	From 2s: FLA contributed to updates for the website and make posts and interacted with target groups and stakeholders on AQUARES own and third party social media pages.
B2.2 Development of electronic newsletters, poster, brochure and press releases	From 2s: FLA translated and disseminated e-newsletter and press release in own region.
B3: Implementation of communication activities	
B3.1 Dissemination online campaign	FLA implemented online campaign to reach their target groups, via e-mail & social media, to disseminate 2nd semester project activities and results, the aim is both to attract experts' interest of and to disseminate their results.
B3.2: Organisation of the dissemination events	4s - 18/12/2019: FLA hosted a "Saving water" infoday in Lombardy region (at the University UNIPV), to disseminate AQUARES results, and improvements envisaged, aiming to raise awareness and motivate target groups to participate in the implementation phase. 6s (April-May 2021): FLA hosts a "Water Policy" awareness event in Lombardy region, to disseminate AQUARES policy implications at territorial level, aiming to motivate target groups to participate in the implementation phase.
B3.3 Participation in 3rd party events	21/10/2020: FLA had participated to the 8th Annual Conference of the Italian Society for Climate Sciences (SISC). The event called "ClimRisk2020: Time for Action! Raising the ambition of climate action in the age of global emergencies" had gathered experts to present and discuss different aspects of climate change, its impacts and related policies. FLA participate to a Poster Session with its Poster "Climate change adaptation: water reuse practices identified by AQUARES Interreg" highlighting the vulnerability of Europe's freshwater resources and the dire need for adaptation and for increasing resilience to water stress.

4.2 Synergies with other projects

INVALIDIS Interreg Europe - Protecting European Biodiversity from Invasive Alien Species

The First Phase of the project has been characterized by a parallel coordination between AQUARES and INVALIDIS projects; the experience exchange allowed to fix a common interest: the support and safeguard of the natural capital characterizing the territory of Region Lombardy.

Lombardy is full of attractive and biodiversity rich wetlands, rivers, lakes and minor canals which need to be protected and granted a good ecological status; one channel to do it is the application of water

reuse and efficient water management techniques that can alleviate pressures on water ecosystems and safeguard the native species and local biodiversity hosted in those habitats.

Indeed, biological invasions, addressed by the territorial authorities involved in INVALIDIS, are considered among the greatest threats to the biodiversity and natural ecosystems. Alien Species (IAS) can act as vectors for new diseases, cause native species' extinction, change ecosystem processes, and reduce the value of land and water for human activities.

Reduction in potable water abstraction – realized through the implementation of water reuse – is a strategy which complements the goals of INVALIDIS, and vice-versa.

Specifically, the projects have coordinated the activity which started in the semesters of the First Phase of both projects, directed to the integration of a measure already financed by the ROP-ERDF 2014-2020 (see ACTION 1 – Bando “Turismo & attrattività II” explained in Chapter 5.).

The projects have parallelly, submitted a proposal – detailed in chapter 5 – aimed at obtaining a betterment of tourism sustainability objectives included in the grant. The sustainability characteristics proposed have been declined, respectively, in terms of the primary aim of each project.

TOUREST Interreg Adrion Europe - Tourism water management for sustainable adrion coastal areas

The First Phase of the project has been characterized by a parallel cooperation between AQUARES and TOUREST projects; the experience exchange allowed to fix a common interest: to increase water efficiency.

In particular:

- AQUARES team participated to TOUREST Online-Conference held on 30th June 2020.
- TOUREST team participated to AQUARES 5th Regional Stakeholders Meeting held on 23rd November 2020.

Through the events, it has been possible to carry out a fruitful exchange of information between AQUARES and TOUREST projects. AQUARES team had enhanced the challenges of water consumption in the tourist sector. Indeed, it realized that under the pressure of tourism, water demand strains supply capacity, negatively affecting the maintenance of natural heritage. Seasonal tourist demand places significant pressures on local water supplies highlighting the need to further develop regional tourism's efficient water management. AQUARES has thus developed a more comprehensive understanding of a sector which is not developing water reuse as it potentially can and decided to further elaborate the possibilities of improvements. It promoted water reuse practices with application in tourist infrastructure and succeeded in influencing a regional grant dedicated to tourist SMEs.

4.3 Challenges and priorities tackled by AQUARES

4.3.1 Water ecosystems' protection

As stated in the Application Form of AQUARES there is a need for preserving the natural capital present in Lombardy territory (in protected areas and in the Natura 2000 network) as it characterizes the region's attractiveness.

Lombardy is full of attractive wetlands (rivers, lakes, canals) and applying water reuse and efficient water management techniques through ROP ERDF projects, can alleviate pressures on their water balance and at the same time can provide alternative supply of water for the energy, industrial, urban, agricultural and tourism sector too.

Water reuse can improve Lombardy's branding as a water efficient destination and incentivise water efficiency initiatives.

Sustainability improvements in tourism through efficient water management and reuse can be strengthened via the following changes in ROP ERDF 2014-2020 governance:

- Improve the selection process for funding new projects in tourism, to include water efficiency and reuse criteria.
- Improve data management in tourism to identify locations needing more efficient water management.
- Promote actor networks to overcome the atomistic logic that prevents sustainable development in the tourist sector.

4.3.2 Sectorial implementation of water reuse strategies

Italy has more than one distinctive example of wastewater treatment plants (WWTPs) as introduced in Chapter 2. The WWTPs allows for excellent results of water reclamation but mainly in agriculture.

The Regulation (EU) 2020/741 sets out a policy background which promotes but also clarifies a set of roles on this specific water reuse instrument paving the way for its application.

However, in addition to the most applied methods for water reuse, is worth noticing how less widespread local technologies play an important role in reducing communities' dependence on water. All partners in the project have indeed expanded the range of water reuse practices by promoting local scale schemes with agricultural, industrial, leisure and domestic applications. Examples from them are sewer-mining decentralized wastewater reuse technologies whose output can be used for local non-potable uses, on-site technologies enabling the recovery of treated wastewater in textile factories or ultrafiltration membrane treatment systems that enables the release of bathing quality water into resorts natural environment and the irrigation of golf courses (Euro-Mediterranean Water Institute Foundation A1.3).

These, and other examples that could be added, show that at such smaller scales, an increased rate of water reuse could significantly contribute to reduce water scarcity, as demonstrated in the regions that already use this alternative supply solution (BIO by Deloitte, 2015).

It is even more important considering these opportunities in a country where the territorial pattern is mainly organized on small scale, as Italy is. The contribution of water reuse to address water stress, needs to be analysed at a national, regional and river basin scale to take account of geographical characteristics (for example, the distance between offer and demand) (BIO by Deloitte, 2015).

Also, in the view of climate change effect on water availability, the implementation of different adaptation strategy, would be more beneficial if these different approaches, will be implemented into all sectors.

Lombardy Foundation for the Environment, with the aim of keeping the attention focused on sectorial application of water reuse, has highlighted local water reuse practices in the Poster “Climate change adaptation: water reuse practices identified by AQUARES Interreg” presented to the 8th Annual Conference of the Italian Society for Climate Sciences (SISC) which took place on October 21st - 23rd but furthermore, it managed to identify a best practice within Region Lombardy territory as a good example of domestic application of water reuse which have been approved by the Interreg Europe policy officer to be reported under the output indicator “number of good practices identified” in AQUARES progress report.

In front of the new building of the Region and next to the registry office of the municipality of Milan, the condominium of Via Sasseti has been renovated following the philosophy of energy saving reduction in potable water demand.

Redi S.p.a. has installed a recovery system of greywater (water from the shower, washbasins and bidets) and whitewater (rainwater from gutters) obtaining a 50% reduction in drinking water consumption. Through different levels of filtration and sterilization, water is returned to a state suitable for subsequent reuse, for example for garden irrigation or toilet flushing.

This practice has gathered the interest of different AQUARES Project Partners.

4.3.3 Information on Water reuse and regional financing opportunities for its implementation.

AQUARES had decided to translate one of the barriers to water reuse identified during the project's First Phase into a priority.

Lombardy Foundation for the Environment had pursued a strategy of information dissemination with the aim of spreading the knowledge on regional financing opportunities for the implementation of water reuse strategies. Indeed FLA had recognised that despite there exists two types of regional financing grants they are not widely known:

- Grants which explicitly allow the candidacy of water reuse dedicated projects (for example Grant “Turismo & Attrattività II”¹)
- Grants which allow indirectly the financing of water reuse strategies (for example Grant “AL VIA”²)

¹ *Bando turismo & attrattività II - Sostegno alla competitività delle strutture ricettive alberghiere e delle strutture ricettive non alberghiere all'aria aperta (Decreto n. 3521 del 29/03/2017).*

² *Agevolazioni Lombarde per la Valorizzazione degli Investimenti Aziendali (Decreto n. 6439 del 31/05/2017)*

The process of awareness raising and information dissemination has been characterized by the following steps:

01.03.2020	Participation to the regional meeting of Interreg Europe Projects (I e II call) summoned by the Managing authority ROP ERDF 2014-2020 which allowed to receive a detailed explanation on the inbound financing measures (Axis I, III, VI) suitable for external suggestions.
4 th and 5 th Semesters	FLA has enhanced the grant "Turismo e Attrattività II" of the Priority Axis III of the ROP ERDF. FLA has also formally requested with a specification on the efficient management of water resources and water reuse. The request was sent to Region Lombardy. The integration had been formally adopted in the renewal of the financing measure.
30.06.2020	During the First Public Consultation "Industrial scale savings, reuse and recycling of water resources" FLA invited a representative from the Lombardy Region to share detailed information with project stakeholders about the regional ROP ERDF 2014 2020 call "Bando AL VIA" which provides founding for local industries, including technological solutions to reuse water.
June 2020	Lombardy Foundation for the Environment has started the drafting of communication materials aimed at spreading the knowledge on the above mention grants "Turismo & Attrattività II" and "AL VIA".
14.10.2020	Lombardy Foundation for the Environment has sent a Brochure (ANNEX I) dedicated to grants. The Brochure has been sent to Entrepreneurial Association, Association of Workers, Sectorial Organizations and all organizations with a potential for deliver the message to as many industrial and touristic SMEs as possible. The organizations were: ASSOCIAZIONE PMI, CONFARTIGIANATO, CONFINDUSTRIA, ASSOLOMBARDA, CONFESERCENTI, CONFCOMMERCIO, FEDERALBERGHI, AGRITURIT, FAITA.
20.11.2020	Lombardy Foundation for the Environment had organized a Public Consultation - based on questionnaires investigation - on the local/regional needs and opportunities for water reuse (based on AQUARES A1.2) which confirmed that such a strategy is essential for water reuse fostering.

The Public Consultation questionnaire was designed to offer respondents the opportunity to provide information about their views in a coherent and organised way. It was sent to:

- general public/everyday citizens to guarantee that even the most diverging views were taken into account

- target groups (Public administrations, Environmental NGOs/agencies, Cluster organisations, Universities and research institutions) providing feedback beyond the usual knowledge of members of the public.

FLA received back 50 compiled questionnaires whose answers have been analyzed and shared with the public at the event AQUARES (5th Regional Stakeholders' Meeting), broadcasted in streaming on the 20th November 2020, within the first Regional Forum for Sustainable Development organized by Region Lombardy.

The following are some of the questions and answers which deserve specific attention:

According to you, which are the possible benefits of water reuse?

The respondents indicate that, mostly for private companies, they can have side-benefits in addition to the principal (efficient management of water resource): innovation potential and return of image.

According to you, which are the possible barriers of water reuse?

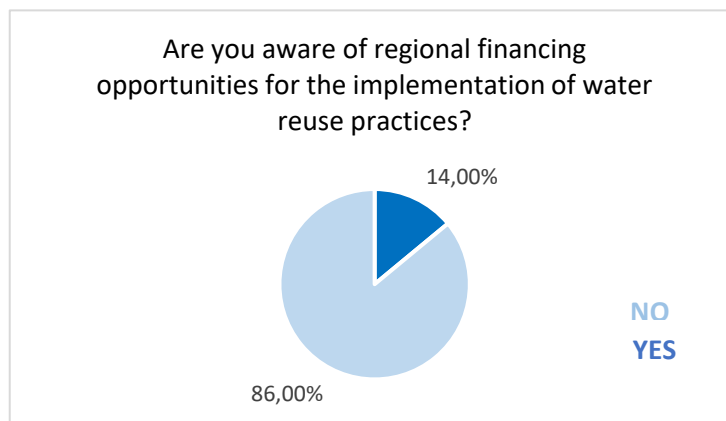
Knowledge and information, costs and legislation.

Which strategies could be adopted to spread the knowledge of the costs and technologies of water reuse?

Education is believed to be a priority element which anyway require investments too. In the view of following this advice there may be the need for specific financing opportunities.

Are you aware of regional opportunities for financing water reuse strategies?

14% of respondents does not know the regional financing opportunities for water reuse. However, the same sample believes that precisely the regional financing opportunities are the most efficient strategies for supporting water reuse.



The Public consultation confirmed that it is necessary to spread the knowledge on water reuse and particularly on financing opportunities dedicated to it. FLA wants to committ to ehnhance the existing regional grants in the subsequent semesters of the project and initiated this strategy expecting the following as positive impacts:

- Increased knowledge
- Pave the way for water reuse application in unexplored sectors: introduction of existent technologies or adaptation of diffuse technologies
- Pave the way for new calls including water reuse
- Innovation potential and return of image: opportunities for the SMEs to increase their strategic positioning
- Reduce the demand for potable water: encourage the SMEs to supply their water demand from alternative sources
- Long run: SMEs awareness of this sources for next calls

5 Actions

5.1 ACTION 1 - Bando “Turismo & attrattività II”

The financing measure “Turismo e Attrattività II”, belonging to ROP ERDF 2014-2020 – Priority Axis III - Action 3.b.2.3, was defined before a V Reprogramming of ROP ERDF 2014-2020 has been endorsed. The activities described in detail in the table below have been realized before the publication of the measure on Region Lombardy Official Gazette, Ordinary Serie n. 28 of 10th July 2020.

The V Riprogramming of ROP ERDF 2014-2020 has introduced changes to the programme which had influenced the Priority Axis addressed by AQUARES.

According to Regional Resolution n. XI/3596 Session 28.09.2020:

1. The financing of Action I.1.b.6.1, required a shift of 193.502.377,80 million € coming also from the sources previously allocated to initiatives already started within the Axis III, IV e V (185.306.892,66 €), whose expenditure framework will be realized in the period of conclusion of programme period 2014-2020.
2. The already planned and started initiatives of Axis will be realized in the period 2021-2023, and concluded before 31.12.2025 with financial resources made available according to art. 242 comma 2 of Law-Decree n. 34 of 19 may 2020³;
3. The changes carried out have been the object of a written consultation of the members of Surveillance Committee of ROP ERDF 2014-2020, carried out between July and August.
4. Region Lombardy has communicated to European Commission the adopted changes for the final approval on the 5th August 2020.
5. The European Commission, on 11th September 2020, with Executive Decision C(2020) 6342 final, has adopted the reprogrammed ROP ERDF 2014-2020 of Region Lombardy.
6. Region Lombardy on 28.09.2020 has noted the approval through Regional Resolution n. XI/3596.

<i>FLA ACTION 1 – Bando Turismo & Attrattività II</i>	
The background	
Challenge	ACTION 1 aims at promoting efficiency in water management through the implementation of water reuse strategies in tourism facilities.
Foundations	<p>FLA had the initial objective of reshaping the ROP ERDF Priority Axis VI. Despite this was not feasible, as explained in the chapter 3, FLA has anyway attained the proposed goal through the intervention on an alternative axis of ROP ERDF 2014-2020: Priority Axis III. Its targets include the support for the competitiveness of firms in tourist sector by improvements on the quality of the offer (products and services) with strategic and organizational innovation. Yet, AQUARES project advocate the need to ensue coaction among measures of Axis VI and AXIS III.</p> <p>Specifically, ACTION 1 aim at executing one of the clues included in the Application Form. In the document FLA stated that the sustainability improvements in tourism, related to</p>

³ **Art. 242 Contributo dei Fondi strutturali europei al contrasto dell'emergenza - Covid-19**

Comma 2. Le risorse erogate dall'Unione europea a rimborso delle spese rendicontate per le misure emergenziali di cui al comma 1 sono riassegnate alle stesse Amministrazioni che hanno proceduto alla rendicontazione, fino a concorrenza dei rispettivi importi, per essere destinate alla realizzazione di programmi operative complementari, vigenti o da adottarsi.

	<p>efficient water management and water reuse strategies, can be achieved also through the funding of new project if the selection processes include water efficiency and reuse criteria.</p> <p>Moreover:</p> <p>As specified in chapter 4.2 the First Phase of the project has been characterized by an exchange of information between AQUARES and TOUREST projects; under the pressure of tourism, water demand strains supply capacity, negatively affecting the maintenance of natural heritage. Seasonal tourist demand places significant pressures on local water supplies highlighting the need to further develop regional tourism's efficient water management.</p> <p>As specified in chapter 4.2 the First Phase of the project has been characterized by a parallel coordination between AQUARES and INVALIDIS projects; the experience exchange allowed to fix a common interest: the support and safeguard of the natural capital characterizing the territory of Region Lombardy. Again, this is an issue already addressed in the AF: Lombardy is full of attractive and biodiversity rich wetlands, rivers, lakes and minor canals which need to be protected; one channel to do it is the application of water reuse and efficient water management techniques that can alleviate pressures on water ecosystems and safeguard native species.</p>												
<p>Relevance of First Phase activities of FLA</p>	<table border="1"> <tr> <td data-bbox="371 987 544 1077"><i>1st – 5th</i></td> <td data-bbox="544 987 1468 1077">During the semesters of First Phase there has been an active dialog between the AQUARES partner FLA and the functionaries of Region Lombardy.</td> </tr> <tr> <td data-bbox="371 1077 544 1167"><i>18.12.2018</i></td> <td data-bbox="544 1077 1468 1167">Participation to the presentation of regional policy ROP ERDF 2014-2020, organized by Region Lombardy.</td> </tr> <tr> <td data-bbox="371 1167 544 1391"><i>01.03.2020</i></td> <td data-bbox="544 1167 1468 1391">Participation to the regional meeting of Interreg Europe Projects (I e II call) summoned by the Managing authority ROP ERDF 2014-2020 which allowed to receive a detailed explanation on the inbound financing measures (Axis I, III, VI) suitable for external suggestions. For what concerns “Turismo e Attrattività II”, the measure has been said to fit well with an a-posteriori monitoring of beneficiaries’ characteristics.</td> </tr> <tr> <td data-bbox="371 1391 544 1615"><i>19.03.2020</i></td> <td data-bbox="544 1391 1468 1615">At the 4th Regional Stakeholders Meeting (organized by FLA) the Managing Authority stated that the projects financed by the Interreg Europe program can have relevant results both when they influence programs and measures already financed by ROP ERDF and when they contribute to the release of funds for grants. His suggestion was to explore Axis III, namely the Axis involving “Turismo e Attrattività II”.</td> </tr> <tr> <td data-bbox="371 1615 544 1783"><i>30.03.2020</i></td> <td data-bbox="544 1615 1468 1783">FLA has formally requested the integration of the financing measure “Turismo e Attrattività II” of the Priority Axis III of the ROP ERDF with a specification on the efficient management of water resources and water reuse. The request was sent to Region Lombardy.</td> </tr> <tr> <td data-bbox="371 1783 544 1904"><i>10.07.2020</i></td> <td data-bbox="544 1783 1468 1904">The integration had been formally adopted in the renewal of the financing measure. The reshaped Bando “Turismo e Attrattività” has been published on Region Lombardy Official Gazette, Ordinary Serie n. 28 of 10th July 2020.</td> </tr> </table>	<i>1st – 5th</i>	During the semesters of First Phase there has been an active dialog between the AQUARES partner FLA and the functionaries of Region Lombardy.	<i>18.12.2018</i>	Participation to the presentation of regional policy ROP ERDF 2014-2020, organized by Region Lombardy.	<i>01.03.2020</i>	Participation to the regional meeting of Interreg Europe Projects (I e II call) summoned by the Managing authority ROP ERDF 2014-2020 which allowed to receive a detailed explanation on the inbound financing measures (Axis I, III, VI) suitable for external suggestions. For what concerns “Turismo e Attrattività II”, the measure has been said to fit well with an a-posteriori monitoring of beneficiaries’ characteristics.	<i>19.03.2020</i>	At the 4 th Regional Stakeholders Meeting (organized by FLA) the Managing Authority stated that the projects financed by the Interreg Europe program can have relevant results both when they influence programs and measures already financed by ROP ERDF and when they contribute to the release of funds for grants. His suggestion was to explore Axis III, namely the Axis involving “Turismo e Attrattività II”.	<i>30.03.2020</i>	FLA has formally requested the integration of the financing measure “Turismo e Attrattività II” of the Priority Axis III of the ROP ERDF with a specification on the efficient management of water resources and water reuse. The request was sent to Region Lombardy.	<i>10.07.2020</i>	The integration had been formally adopted in the renewal of the financing measure. The reshaped Bando “Turismo e Attrattività” has been published on Region Lombardy Official Gazette, Ordinary Serie n. 28 of 10 th July 2020.
<i>1st – 5th</i>	During the semesters of First Phase there has been an active dialog between the AQUARES partner FLA and the functionaries of Region Lombardy.												
<i>18.12.2018</i>	Participation to the presentation of regional policy ROP ERDF 2014-2020, organized by Region Lombardy.												
<i>01.03.2020</i>	Participation to the regional meeting of Interreg Europe Projects (I e II call) summoned by the Managing authority ROP ERDF 2014-2020 which allowed to receive a detailed explanation on the inbound financing measures (Axis I, III, VI) suitable for external suggestions. For what concerns “Turismo e Attrattività II”, the measure has been said to fit well with an a-posteriori monitoring of beneficiaries’ characteristics.												
<i>19.03.2020</i>	At the 4 th Regional Stakeholders Meeting (organized by FLA) the Managing Authority stated that the projects financed by the Interreg Europe program can have relevant results both when they influence programs and measures already financed by ROP ERDF and when they contribute to the release of funds for grants. His suggestion was to explore Axis III, namely the Axis involving “Turismo e Attrattività II”.												
<i>30.03.2020</i>	FLA has formally requested the integration of the financing measure “Turismo e Attrattività II” of the Priority Axis III of the ROP ERDF with a specification on the efficient management of water resources and water reuse. The request was sent to Region Lombardy.												
<i>10.07.2020</i>	The integration had been formally adopted in the renewal of the financing measure. The reshaped Bando “Turismo e Attrattività” has been published on Region Lombardy Official Gazette, Ordinary Serie n. 28 of 10 th July 2020.												
<p>First Phase Interregional</p>	<p>A3.3 Only one Best Practice identified by AQUARES falls under the category of leisure applications. FLA and the partnership realized that - despite tourism is not the most</p>												

<p>exchange learning</p>	<p>demanding sector for alternative water sources – it is an underdeveloped field with great potential for improvements.</p> <p>A1.3: Some practices identified through the collection of EU technologies touch the themes of tourism and leisure. In particular, the <i>Cap d’Agde international golf course project</i> (France), the <i>Alpine hut “Casera-Bosconero”</i> (Italy) and <i>“I Malatesta” mall</i> (Italy) are rare examples of the integration of water reuse technologies into unexplored sectors. Indeed, the project AQUARES not only aim at spreading the knowledge on the most diffuse practices – as WWTPs or agricultural reuse - but it also ensues the opening of water reuse technologies to less experienced fields.</p> <p>Both A1.3 and A3.3 heighten the remarkable potential of water reuse technologies at the building level. Technologies of this type - <i>Residential building water treatment and reuse system</i> (Italy), <i>SKANSKA Botanica K</i> (Czech Republic) - are suitable for in tourist facilities such as hotels, B&B and similar.</p> <p>Both A1.3 and A3.3 and the collection of regional Best Practices evidenced the opportunity of developing blue and green infrastructures (Nature-Based Solutions) which achieve their own core objective along with the realization of side benefits. The BP <i>CW-CSO of Gorla Maggiore</i> (Italy, Lombardy), <i>Molina</i> (Spain) or <i>Arturówek</i> (Poland) show how a natural water treatment can preserve water ecosystems and promote local biodiversity conservation too.</p>
<p>The Action</p>	
<p>Description and role of FLA</p>	<ol style="list-style-type: none"> 1. AQUARES project has contributed to the renewal of grant <i>“Turismo e Attrattività II” Sostegno alla competitività delle strutture ricettive alberghiere e delle strutture ricettive non alberghiere all’aria aperta (Decreto n. 7917 del 06/07/2020)</i>⁴. FLA had developed one specific guideline to support the revision of the call, in order to guarantee the integration of criteria able to strengthen the aspects of environmental sustainability. FLA, through a formal letter, proposed the following reference integration: <i>“Gestione efficiente dell’acqua attraverso sistemi per il risparmio idrico sia sistemi di monitoraggio dei consumi di acqua, sia impianti di riuso delle acque grigie, sia soluzioni per il recupero e il riuso dell’acqua piovana.”</i>⁵ 2. The sharped financing measure has provided financial support for: the realization or renovation of structures and facilities or complementary units related to tourist activity; the purchase and installation of furniture, machineries and technologies at service of the tourist SMEs. The action is dedicated to tourist micro, small and medium enterprises (hotels and other accommodation facilities such as residences, diffuse hotels; condhotels) and SMEs on open air too (tourist villages, campings, caravan rest areas). Candidate projects are evaluated on different perspectives and compared on a score of maximum 30 points. Among these, 5 points are dedicated to social and environmental sustainability objectives. Through FLA specification, successfully included, the SMEs could also be recognised for their commitment to efficient management of water resources realized through water saving technologies and the solutions for the reuse of rainwater:

⁴ At the webpage <https://www.finlombarda.it/finanziamentieservizi/turismoattrattivita2> is possible to find all documentation and updated version of the Grant – (2020 edition Annex I: https://www.finlombarda.it/c/document_library/get_file?p_l_id=35567619&folderId=35567855&name=DLFE-293504.pdf).

⁵ “Efficient management of water through water saving systems and water consumption monitoring systems, as well as technologies for greywater reuse and rainwater collection and use”.

	<p><i>“Per l’attribuzione dei punteggi in tema di sostenibilità ambientale saranno considerati i seguenti elementi:</i></p> <p>[...]</p> <p><i>- la riduzione del consumo di energia e risorse, attraverso soluzioni per migliorare l’efficienza energetica e idrica (ad esempio macchinari e attrezzature ad alta efficienza energetica e idrica, tecnologie per l’automatizzazione e il monitoraggio dei consumi, soluzioni per il recupero e il riuso dell’acqua piovana, ecc.);”⁶</i></p> <p>3. FLA has actively promoted the opportunity through its stakeholders’ channels as explained in Chapter 4.3.3 .</p>
Players involved	<ul style="list-style-type: none"> ● Lombardy Foundation for the Environment ● Regional government <ul style="list-style-type: none"> ○ Managing Authority ROP ERDF 2014-2020 ○ Environmental Authority ● Entrepreneurial association and consortia ● Tourists SMEs
Timeframe	<p>Publication on Region Lombardy Official Gazette: 10.07.2020</p> <p>Open window for candidacy: 21.07.2020-15.10.2020</p> <p>Monitoring up to 2023.</p>
Funding support	<p>The regional financial support covers a maximum of 50% of the total eligible costs of proposed interventions (with a minimum total eligible investment of not less than 80.000,00 euro and a maximum total eligible investment of not more than 200.000,00 euro).</p> <p>Total financial allocation is 17.000.000,00 €</p>
Funding sources	<p>ROP ERDF 2014-2020 – Priority Axis III - Action 3.b.2.3</p>
Impact	<p>Main positive impacts:</p> <ul style="list-style-type: none"> ● Increased tourism sustainability: strengthening tourist SMEs with strategies which decrease their impact on water resources. ● Pave the way for water reuse application in tourist sector: introduction of existent technologies in tourist sector or adaptation of diffuse technologies for the purpose of touristic activities or implementation of uncharted solutions (as NBS). ● Green marketing: opportunities for the SMEs to increase their strategic positioning. ● Alleviate the pressure on sensitive water ecosystems: protecting water resources by reducing the abstraction from local wetlands, rivers and lakes. ● Reduce the seasonal demand for potable water: encourage the SMEs to supply their water demand from alternative sources. ● Long run: SMEs increased efficiency in terms of costs. ● Long run: decreased vulnerability of tourist SMEs to climate change impacts (water scarcity).
Monitoring	<p>The monitoring Phase is subsequent to the V Reprogramming of ROP ERDF 2014-2020, as described in the introductory paragraph to ACTION 1.</p> <p>AQUARES monitoring activities will evaluate the success of Action 1 through the assessment of Application Form indicators as well as indicators specific for Action 1.</p>

⁶ “For the attribution of evaluation points based on sustainability features, will be considered the following elements: [...]

-energy and water efficiency (for example machineries and tools with high energy and water efficiency, technologies for the automation and monitoring of consumption, solutions for the collection and use of rainwater)”

6 Monitoring of the Action Plan

AQUARES monitoring will be based on the results as determined by the implementation of the ACTION 1 clearly identified in the present project (in coordination with Managing Authority).

The monitoring process will allow to identify the progress of AQUARES action and priorities implementation during the second phase of the project. The monitoring process will involve the AQUARES regional key stakeholders in activating dialogues (meetings), to discuss the impacts and benefits of Action and Priorities identified, as well as to present and share the results and progress from the monitoring process.

The table below summarises main measurable targets and indicators, data sources and assessment period.

Yearly report on the obtained result for each considered action will also be provided.

Table 7 - Action Plan monitoring: main measurable targets and indicators, data sources and assessment period

FLA ACTION 1 – Bando Turismo & Attrattività II			
AQUARES Second Phase			
Monitoring	The monitoring Phase is subsequent to the V Reprogramming of ROP ERDF 2014-2020, as described in the introductory paragraph to ACTION 1.		
	AQUARES monitoring activities will evaluate the success of Action 1 through the following indicators:		
	% increase new calls for projects in the agricultural, urban and industrial sector of touristic areas with provisions for water reuse (as indicated in the AF)	Data source: Region Lombardy dedicated system for assessing candidate projects to grants.	Assessment period: June 2021 – AQUARES project end
	N° of candidate projects which included water reuse strategies as part of their project goals (N° of project awarded with 1 to 5 sustainability evaluation points)	The monitoring activities will be supported by Region Lombardy technicians which will provide useful data.	
N° of project and amount of financial support granted to SMEs selected for receiving the funding.			

Additional monitoring actions focus on the strategy of dissemination, pursued by FLA, during Phase 1, as explained in Chapter 4.3.3.

The aim is that of improve the information and communication for the stakeholders, on regional financing opportunities for the implementation of water reuse strategies.

FLA recognised that it is necessary to spread the knowledge on water reuse and particularly on financing opportunities dedicated to it. FLA wants to committ to ehnanche the existing regional grants in the subsequent semesters of the Project.

7 Drafting and Support of the Action Plan

The Authors of the Action Plan:

Mita Lapi	Project Manager
Lorenzo Cozzi	Project Manager
Alessandro de Carli	External Expert
Sara Zanini	Project Manager Assistant
Antonio Ballarin Denti	FLA Scientific Coordinator

8 Signature of the Action Plan

The Managing Authority of ROP ERDF 2014-2020 of Lombardy Region herewith agrees to support and promote the implementation of the actions detailed in the present Action Plan.

I confirm that I have the required authority of my organization to do so and the required authorization process of my organization has been duly carried out.

<p>Dario Sciunnach Managing Authority – ROP ERDF 2014-2020 - Lombardy Region</p>
<p><i>Date:</i></p>
<p><i>Signature:</i></p>
<p><i>Stamp of the organisation (if available):</i></p>

REFERENCES

Alcalde-Sanz, Gawlik (2014) Water reuse in Europe.

BIO by Deloitte, 2015. Optimising water reuse in the EU – Final report prepared for the European Commission (DG ENV), Part I. In collaboration with ICF and Cranfield University

EC. 2016. EU-level instruments on water reuse: Final report to support the Commission's Impact Assessment. Prepared by Amec Foster Wheeler Environment & Infrastructure UK Ltd, IEEP, ACTeon, IMDEA and NTUA, October 2016; ISBN 978-92-79-62616-6

European Commission, Blueprint (2012)

Euro-mediterranean Water Institute Foundation. A1.3: Evaluation report on water reuse technologies and practices across different sectors and regions. In AQUARES - WATER REUSE POLICIES ADVANCEMENT FOR RESOURCE EFFICIENT EUROPEAN REGIONS

Jiménez Cisneros, B.E., T. Oki, N.W. Arnell, G. Benito, J.G. Cogley, P. Döll, T. Jiang, and S.S. Mwakalila, 2014. Freshwater resources. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 229-269.

Ministry of Environment and Energy General Secretariat for Natural Environment and Water. A1.1: Final Report Final Version. Comparative analysis of regional and national policies on water reuse. In AQUARES - WATER REUSE POLICIES ADVANCEMENT FOR RESOURCE EFFICIENT EUROPEAN REGIONS

Regione Lombardia, 2015. PROGRAMMA OPERATIVO REGIONALE FONDO EUROPEO DI SVILUPPO REGIONALE 2014-2020 ADOTTATO DALLA CE CON DECISIONE C(2015) 923 FINAL DEL 12 FEBBRAIO 2015.

UNESCO, 2011. The Impact of Global Change on Water Resources: The Response of UNESCO'S International Hydrology Programme. United Nations Educational Scientific and Cultural Organization (UNESCO) International Hydrological Programme (IHP), Paris, France.

Water Reuse Europe Review 2018, Water Reuse Europe © 2018

<https://www.eea.europa.eu/signals/signals-2018-content-list/articles/water-use-in-europe-2014>

<https://ec.europa.eu/environment/water/reuse.htm>

<http://www.depuratorenosedo.eu/en/>

<https://www.suezwaterhandbook.com/case-studies/wastewater-treatment/Milan-San-Rocco-wastewater-treatment-plant-Italia>

AQUARES

Interreg Europe



IL PROGETTO

Il progetto AQUARES riunisce 10 organizzazioni pubbliche di 9 diversi paesi europei con l'obiettivo di migliorare la gestione delle risorse idriche attraverso il riutilizzo delle acque.

Gli obiettivi del progetto sono i seguenti:

- Individuare strategie di riutilizzo delle acque per contrastare usi inefficienti delle risorse.
- Sostenere la protezione dei corpi idrici.
- Trarre vantaggio dagli strumenti di finanziamento UE non ancora utilizzati.
- Promuovere il pubblico dialogo per affrontare i conflitti di interesse nel settore del riutilizzo delle acque.

IL RIUTILIZZO DELLE ACQUE

Il riutilizzo delle acque può rivelarsi fondamentale per promuovere l'efficienza delle risorse nelle aree europee caratterizzate da scarsità d'acqua, traendo profitto dalle opportunità del mercato idrico in espansione e alleviando la pressione antropica sulle risorse idriche europee.



"Promozione di politiche di riutilizzo delle risorse idriche per regioni europee efficienti in termini di risorse"

I BENEFICI

AUTORITÀ PUBBLICHE

Le autorità pubbliche avranno la possibilità di migliorare l'attuazione delle politiche e dei programmi di sviluppo regionale in materia di efficienza idrica, generando opportunità di crescita verde e posti di lavoro per le imprese.

STAKEHOLDERS

Le parti interessate saranno attivamente coinvolte nell'attuazione del progetto attraverso la partecipazione a riunioni regionali, workshop interregionali, networking, campagne di sensibilizzazione e eventi di dialogo pubblico.

Il progetto permetterà agli stakeholders non solo di aumentare la propria conoscenza sulle opportunità di riutilizzo dell'acqua ma permetterà loro di beneficiare dei risultati ottenuti attraverso le azioni di progetto.

PUBBLICO

Il progetto aumenterà la consapevolezza e il consenso tra i fornitori di acqua, la forza lavoro e i cittadini in merito al riutilizzo dell'acqua, contribuendo a mitigare i conflitti.

AL VIA

Agevolazioni Lombarde per la Valorizzazione degli Investimenti Aziendali
(Decreto n. 6439 del 31/05/2017)
Sportello prorogato al 31/12/2020

Di cosa si tratta? Supporta nuovi investimenti delle PMI attraverso una Linea Sviluppo Aziendale (programmi di ammodernamento e ampliamento produttivo) e una Linea Rilancio Aree Produttive (piani di riqualificazione e/o riconversione territoriale di aree produttive).

Chi può partecipare
PMI lombarde con codice ATECO: C; F; H; J; M; N; PMI iscritte all'Albo delle imprese agromeccaniche di Regione Lombardia.

Strategie finanziabili

oggetto del bando comprendono:
- massimizzazione dell'efficienza nell'utilizzo di fattori produttivi, quali l'energia e l'acqua;
- l'ottimizzazione della produzione e della gestione dei rifiuti favorendo anche la chiusura del ciclo dei materiali.

Incentivo superiore in termini di Contributo in conto capitale, tra gli altri, ai Progetti che comprendano l'implementazione di sistemi di certificazione ambientale delle organizzazioni, dei processi produttivi e/o dei prodotti.

Dotazione Finanziaria

Finanziamento, Garanzia regionale, Contributo in conto capitale coperti dalle
• risorse a valere sull'Asse III del POR FESR 2014-2020 di RL pari a 133.500.000,00 €
• risorse per i Finanziamenti pari a 353 milioni € (Finlombarda e Intermediari Convenzionati)

Per beneficiario:

Le spese ammissibili devono essere comprese tra 53 mila euro e:
- 3 milioni €, nel caso di Regolamento di esenzione
- 5 milioni €, nel caso di Regolamento "de minimis".

Per maggiori informazioni:
<https://www.fesr.regione.lombardia.it/area/portal/77004/1138/2018/01/01/DetailBando/Agevolazioni/ai-sta-agevolazioni-lombarde>



BANDO TURISMO & ATTRATTIVITÀ II

Sostegno alla competitività delle strutture ricettive alberghiere e delle strutture ricettive non alberghiere all'aria aperta
(Decreto n. 3521 del 29/03/2017)
Rinnovato dal 21/07/2020 al 15/10/2020

Di cosa si tratta? Attua l'Asse prioritario III "Promuovere la competitività delle piccole e medie imprese" del Programma Operativo Regionale (POR) 2014-2020 di Regione Lombardia a valere sul Fondo Europeo per lo Sviluppo Regionale (FESR).

Interventi finanziabili

- Realizzazione e riqualificazione degli immobili/aree destinati all'attività ricettiva e/o delle strutture ed infrastrutture complementari;
- acquisto e installazione di arredi, macchinari e/o attrezzature anche tecnologiche.

Chi può partecipare?

Micro, piccole e medie imprese

ricettivo alberghiere (alberghi o hotel; residenze turistico-alberghiere; alberghi diffusi; condhotel)

ricettivo non alberghiere all'aria aperta (villaggi turistici, campeggi e aree di sosta)

Valutazione a graduatoria

5 su 30 punti dedicati ai temi della **sostenibilità ambientale** tra i quali:

- miglioramento dell'efficienza energetica
- attenzione all'inserimento paesaggistico e alla biodiversità
- certificazione ecologica dei servizi ricettivi e dei prodotti turistici
- gestione efficiente dell'acqua attraverso sistemi per il risparmio idrico, soluzioni per il recupero e il riuso dell'acqua piovana.

Dotazione finanziaria 17.000.000,00 €

Per beneficiario:

Agevolazione massima: 200.000,00 €
Investimento minimo: 80.000,00 €
Intensità d'aiuto massima: 50% della spesa

Per maggiori informazioni:
<https://www.fesr.regione.lombardia.it/area/portal/77004/1138/2018/01/01/DetailBando/Agevolazioni/bando-turismo-2-aree-aperte>

7 Drafting and Support of the Action Plan


The Authors of the Action Plan:

Mita Lapi	Project Manager
Lorenzo Cozzi	Project Manager
Alessandro de Carli	External Expert
Sara Zanini	Project Manager Assistant
Antonio Ballarin Denti	FLA Scientific Coordinator

8 Signature of the Action Plan

The Managing Authority of ROP ERDF 2014-2020 of Lombardy Region herewith agrees to support and promote the implementation of the actions detailed in the present Action Plan.

I confirm that I have the required authority of my organization to do so and the required authorization process of my organization has been duly carried out.

Dario Sciunnach Managing Authority – ROP ERDF 2014-2020 - Lombardy Region
Date: July 21 ST , 2021
Signature:  <small>(Dr. Dario Sciunnach)</small>
Stamp of the organisation (if available): 