

PROSPERA regional report – Municipality of Reggio Emilia In collaboration with CRPA

*An analysis of the peri-urban area that surrounds the Municipality of
Reggio Emilia*

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More information? See the project's website: www.interregeurope.eu/prospera/

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Objective and outline of this report

This regional analysis report was developed within **the Interreg Europe project PROSPERA, PROMoting Sustainable development and regional attractiveness through PERi-urban Areas**. The project's overall objective is to improve regional policies on protection and promotion of natural heritage by tackling loss of ecosystem services and to improve sustainable development in peri-urban areas threatened by urban sprawl. The ultimate aim of PROSPERA is to prevent biodiversity loss, soil consumption and further degradation of natural assets, by in parallel leveraging on those challenge as a way to favor regional attractiveness and economic sustainable development. To that extent, PROSPERA sets up a process of interregional learning that includes study visits and knowledge exchange sessions.

To provide sufficient and adequate background throughout the interregional learning process, each region that is involved in PROSPERA, developed a regional analysis report. In other words, each regional analysis report aims to inform the own stakeholders as well as stakeholders from other partner about the characteristics of and the challenges in their local peri-urban area. As such, **the present report is a guide for all PROSPERA partners and their local stakeholders when visiting or interacting with the territory of Reggio Emilia**. The information in the regional analysis report is not exhaustive but specific to the objective and rationale of the PROSPERA project. The regional analysis reports were developed in the first year of PROSPERA via a step-by-step process, including surveys and a workshop on the regional analysis report.

The report consists of different parts. **In the first part** of this report Reggio Emilia **sketches its general context**. This part includes information on the geographical location of the PROSPERA region, the local demography and the built environment.

The second part of this report analyses the economic development of the local peri-urban area, whereas a third part focuses on the natural heritage, both PROSPERA core themes.

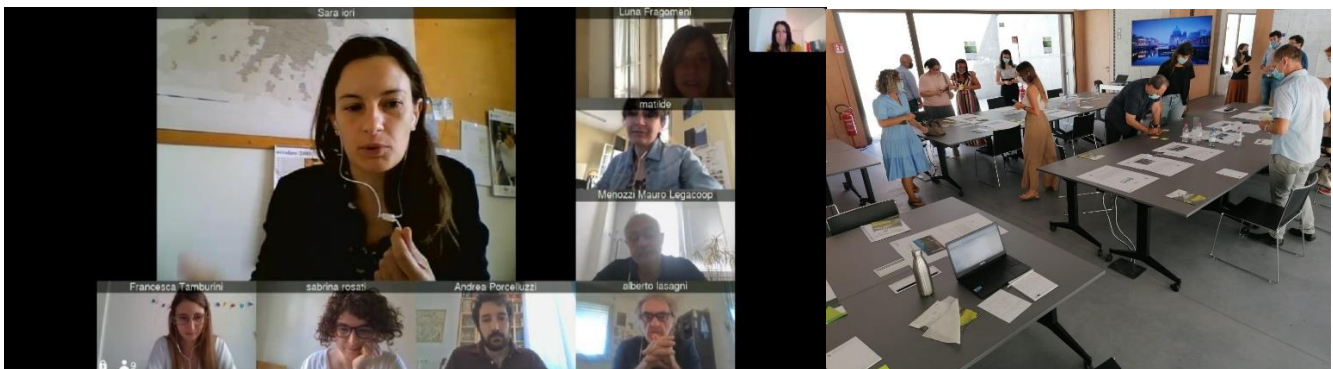
The fourth part of this report describes the policy instrument "Emilia-Romagna Region Regional Operational Programme ERDF 2014-2020- Axis 3 - Competitiveness and attractiveness of the productive system". In accordance with the project's outline, the Municipality of Reggio Emilia and CRPA selected a specific policy instrument to be subject of PROSPERA. The underlying idea is that PROSPERA could provide support to improve this policy instrument.

Finally, **the last part** of this regional analysis report **identifies local good practices already in place**. These good practices are as a source of inspiration for other peri-urban regions dealing with similar challenges.

Setting the scene

In the local context of Reggio Emilia, main challenges concerning the governance of peri-urban areas are related to the capacity to foresee the risks and optimize the opportunities of these areas, intended as places of geographic, demographic and economic transition. The cornerstone of the PROSPERA approach is to build a shared vision with local stakeholders about the most relevant issues for the sustainable development of peri-urban areas. It becomes therefore paramount to have a deep comprehension of the constraints, potentialities and expectations of the actors involved.

The composite nature of Reggio Emilia's Local Stakeholder Group (LSG) reflects the complexity of the peri-urban context: the LSG includes representatives from the relevant departments of the Municipality; representatives of agriculture, industry and SMEs associations; public and private education and research centers, schools and university; other local public bodies; and the Emilia Romagna Region as Managing Authority of the policy instrument to be addressed by the project. Themes identified within PROSPERA's project were presented and discussed in the LSG, and the common understanding was that, although they are all relevant and deeply interlinked, Reggio Emilia's strategic approach towards peri-urban should be focused primarily on **natural heritage and environment, food production and social innovation**. This resulted particularly true after the outburst of COVID-19 epidemic and the consequent socio-economic crisis, which made it even more evident the emergence of some pressing local needs connected to the above-mentioned priorities. The Municipality of Reggio Emilia, E35 Foundation and CRPA organized 7 virtual round tables with restricted groups of local stakeholders in order to collect inputs on the new needs and challenges emerged during the pandemics in peri-urban areas, as well as the opportunities and expectations linked to the implementation of PROSPERA project at local level. At the end of this process, a plenary meeting was organized with all stakeholders to sum up the main inputs from the round tables and match them with the good practices presented by the other European partners. This long path of discussion with local stakeholders represented a very important moment for the local implementation of the project, as it shed a light on how Reggio Emilia could learn from the experiences of the other partners to develop some innovative solutions to old and new challenges.



Environment still represents one of the key challenges of Reggio Emilia, mainly concerning innovative ideas and approaches to support a quality coexistence with natural resources and spaces. Environmental challenges are mainly linked to air pollution and to the mitigation of the climate change impact. In this framework, there is the need to shape innovative connections between inner city and the surrounding spaces, building up effective and sustainable ties between the two areas. The theme of **mobility** is thus interconnected with the environment, as local population moves almost exclusively by car with negative consequences on air quality. The challenge in this field is to find innovative strategies to tackle traffic congestion and discouraging private car use in favor of more sustainable means. **Natural heritage** asset is also an important factor in Reggio Emilia

peri-urban areas. The link with environmental sustainability is self-evident: valorization of natural heritage in peri-urban areas could lead to a compensation in Co2 emission, for example through the plantation of new trees and the protection of ecosystem services. To guarantee the sustainability of natural heritage promotion, a key strategy should be to increase the added value of this asset in terms of leisure, education and tourism opportunity. “Greenways” and nature-based paths are considered innovative tools to create sustainable connections and to promote sustainable tourism in the peri-urban areas. On one hand, peri-urban areas can play an important toward community development, crossing a broad spectrum of citizens’ social demands, from local tourism/leisure to the enhancement of territorial identities and social cohesion; on another hand, **social innovation and education** in itself could be an important leverage for the development of peri-urban areas, also to boost an innovative touristic offer based on experiences and proximity.

These themes are also deeply interlinked with **food production**. One of the major challenges that emerged is to find the right balance between sustainable development and coexistence of farmers on the one hand, and citizens needs on the other. Reggio Emilia history and excellency in food production (with Parmigiano Reggiano Cheese, Lambrusco wines and Balsamic Vinegar) is coupled with a relevant tendency toward innovative practices, with several initiatives contributing to the shift towards a resilient local food system, bringing new ideas and solutions in rural and peri-urban areas. However, these experiences should be recognized, promoted and stimulated by local governance. Cross-cutting aspect of all these themes is **economic development**. On one hand, most of the SMEs are located in peri-urban areas even though, to implement cooperation and networking among SMEs, it is crucial to overcome the barrier represented by their size, that negatively affect their capability in terms of innovation and internationalization. On the other hand, food and natural heritage valorization in peri-urban areas are underrated local assets that should be further explored by start-ups and innovative SME’s to develop innovative and sustainable business models.

1. General information on the Municipality of Reggio Emilia and its surrounding peri-urban area

The following paragraphs provide some general information on the territory of the city of Reggio Emilia, case study in the PROSPERA project, with a focus on the peri-urban area. This information is not exhaustive but aims to provide sufficient background in order to enable a learning process together with local stakeholders as well as a transnational learning throughout the PROSPERA project.

1.1. Geographical location

Reggio Emilia is a medium size town situated in the Northern Italy, in the heart of the so-called “Italian Food Valley”, in the middle of the Emilia Romagna region. It is located 60 km from Bologna, 150 km from Milan and 450 km from Rome. Its territorial extension is 231 sq. km and it has a linear orography with a large flat area. The city of Reggio Emilia is located into the homonymous Province, that extends as far as the river Po, on the border with the city of Mantua. In the southern part of the provincial territory hills slowly grow, changing into mountains up to the ridge of the Tuscan Emilian Apennines.



REGGIO EMILIA

A middle sized town in Northern Italy

EMILIA ROMAGNA REGION

Population: **4.500.000 inhabitants**

Provinces: **9**

Municipalities: **348**



REGGIO EMILIA PROVINCE

Population: **530.000 inhabitants**

Municipalities: **45**



MUNICIPALITY of REGGIO EMILIA

Population: **171.879 inhabitants**



1.2. Identification of the peri-urban area

The rural area of Reggio Emilia is about 17.589 ha, which is approximately the 76% of the whole territory, and the 78% is cultivated. The rural area is divided into three types of agricultural areas:

- 1) Areas at high productive agricultural vocation (51%)
- 2) Agricultural areas with high landscape values (36%)
- 3) Peri-urban area (13%)

Figure 1 - peri-urban areas are identified in green

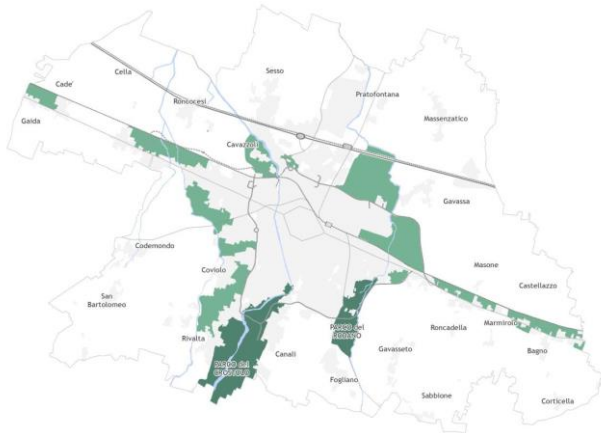
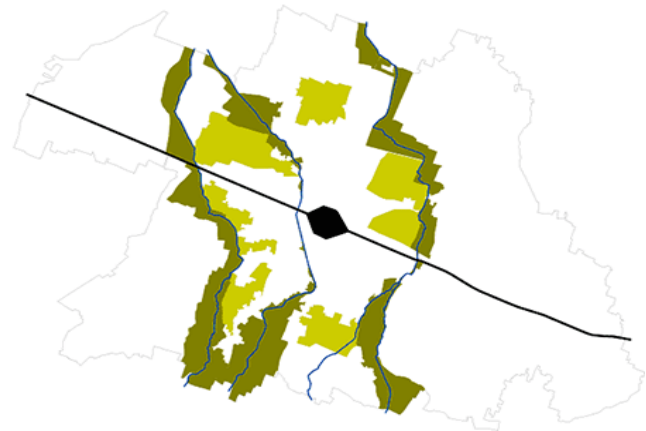


Figure 2- Reggio Emilia Green Belt



In the local development plan, peri-urban areas are identified as the parts of rural territory bordering the urban center, which play the role of transitional areas between the artificial and rural territory, where agriculture is preserved providing ecological and environmental connections with urban areas, services and functions.

In the peri-urban areas of Reggio Emilia, near the two main streams of the city, there are two areas to be enhanced and equipped as peri-urban countryside parks: the Crostolo River Park and the Rodano River Park.

Land use shows that peri-urban areas are mainly characterized by simple arable land (60%), stable meadows¹ (9%) and vineyards (4.5%). Within these areas there are also agri-zootechnical farms, mainly family-run: over 50% of farms have a size <5 ha. Some of these farms also promote the integration between productive functions and multifunctional practices, providing the urban population with multiple services, related to tourism, education and recreation.

In order to increase the social and environmental quality of the peri-urban areas, the Municipality of Reggio Emilia has identified the green wedges and river parks in the peri-urban areas as main elements of the Green Belt, a composite area connected to urban areas through a network of cycle connections (greenways). The Green Belt (figure 2) aims at promoting and preserving the landscape identity and its potential to mitigate urban environmental impact, protecting natural heritages and biodiversity.

1.3. The demographic context

The number of inhabitants is about 172.371 (2019)². From 2000 to 2002 there was a strong population increase (about 2.000 inhabitants each year). From 2013 to 2015 the population decreased (-0.7%), while from 2016 to 2019 there was a slight demographic recovery (+0.3%) but more contained than in previous years. We can thus consider the demographic evolution stable.

The major demographic challenges of the territory are:

- Ageing population
- Declining birth rate
- Emigration of youth
- Immigration

Ageing population is probably the major demographic challenge.

¹ A stable meadow is a meadow that has not undergone any ploughing or tillage, not cultivated and left to spontaneous vegetation for a very long time. Stable meadows are distinctive elements of the natural landscape in the Parmigiano-Reggiano area.

² General register office of Reggio Emilia Municipality, 2019:

[https://www.comune.re.it/retecivica/urp/retecivi.nsf/PESIdDoc/FC32221F3A5D02E7C12577EE002E7F4A/\\$file/Andamento%20e%20tassi%202019.pdf](https://www.comune.re.it/retecivica/urp/retecivi.nsf/PESIdDoc/FC32221F3A5D02E7C12577EE002E7F4A/$file/Andamento%20e%20tassi%202019.pdf)

In fact, the average age of population is currently 45,18 years for women and 43,55 for men; over 65 are the 20,67% of the population. The ageing of the population is one of the consequences of the falling birth rate, which is a demographic phenomenon at national level.

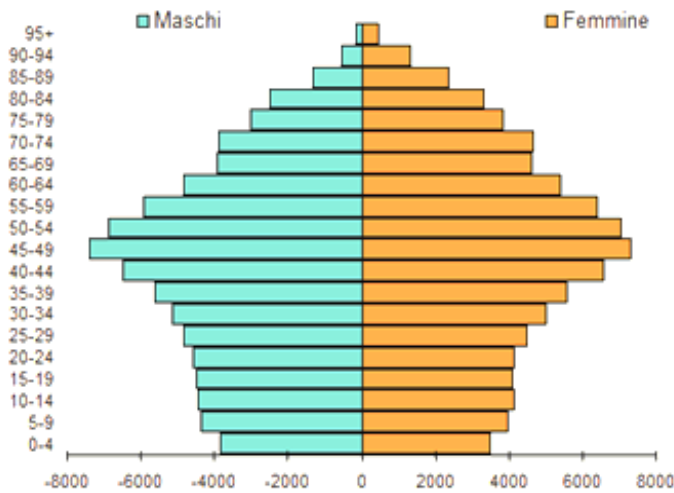
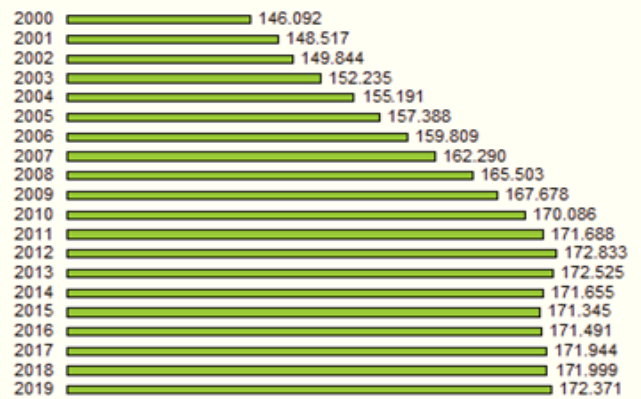


Figure 1 - Reggio Emilia inhabitants 2000-2019
Figure 2 - age

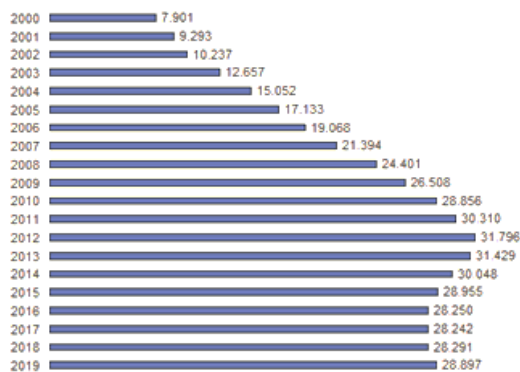


distribution

The decline of birth rate has changed the composition of families living in the area. The data show that out of 75.527 families, 42,9% are single-person households.

Another important aspect is linked to immigration rate. On 1 January 2018 migrants living in Reggio Emilia province were about 65.200, compared to 74.100 on 1st January 2013. Reggio Emilia Province goes down to 4th position for migrant rates with 12,2 percentage. Currently the Municipality counts 28.897 of immigrants. Several foreign communities are represented in the city. Although the migratory presence in the municipality of Reggio Emilia has decreased in recent years, challenges and opportunities usually related to migratory flows, in terms of cultural, economic, and social development and integration of the migrating communities are still preminent. In terms of income, Reggio Emilia has a higher income level compared to national average: the average income of local inhabitants is 26.213 Eur, compared to the national average income of 21.829 Eur.

Figure 3 - Development of foreign population 2000- 2019



In 2017, Emilia-Romagna Region reached the second position in the regional rank for income per capita (22.500 Eur). Reggio Emilia ranks ninth in the region for added value for inhabitants.

Also, the unemployment rate of the Province is below the national average (about 4,2 percent), even though young unemployment (15-24 years old) was still very high (11,2%) in 2018.

In terms of peri-urban area, in 2018 the Municipality promoted an initiative to support the **Agricultural knowledge framework for the new General Urban Plan (PUG)**³ consisting in the systematization and analysis of the various components that define the agricultural sector, starting from the mapping of enterprises and farms (see picture below). This analysis is integrated with the identification of the various activities related to the multifunctionality of the agricultural sector (accommodation, educational activities, production and marketing of products).

The analysis of land use shows that peri-urban areas are characterized by territories artificially shaped for about 17%. The settlements connected to the residential function are equal to 7%, which corresponds to about 40% of the buildings present in the peri-urban areas. About 1,5% of the population lives within these buildings.

It is assumed that the peri-urban areas have a low-density settlement pattern: in fact, considering the number of inhabitants per each building, it appears that more than 60% of the buildings are inhabited by less than 4 residents.

1.4. The built environment

It is important to point out that, while the building industry was growing steadily until 1990, with a percentage of new buildings of 48% (48 new houses every 100), nowadays, the percentage of new buildings is 23% (23 new houses every 100). In this scenario, the main challenges related to housing is to incentive the renovation of existing houses instead of building new ones, to promote the sustainability of the built environment through seismic and energy requalification and other types of interventions. In this sense, many policies instruments based on taxation bonus are used to stimulate renovation at national and local level ('seismic' bonus, deduction for property's renovation, 'facades' bonus).

In terms of built environment, the greatest challenge is to tackle the disused building stock by improving the regulations allowing its reuse and renovation (e.g. in the Municipality of Reggio Emilia a former production site called Ex Reggiane is now converted into a headquarter of new companies dedicated to R&D).

In order to encourage the regeneration of existing assets, the Municipality of Reggio Emilia, starting from 2015, started to simplify the procedures for recovering existing buildings as well as to introduce economic incentives for the renovation of homes, shops or warehouses, which resulted in a 50% reduction of urbanization costs for all building renovation and extraordinary maintenance operations. In addition to these economic incentives, new specific regulations for some territorial areas have been added to the municipal town planning tools to promote urban regeneration interventions. Depending on the urban area in which the building subject to regeneration falls, there are different regulations regarding eligible interventions and uses.

For some areas of the municipal territory, for example, the concept of temporary reuse has been introduced for decommissioned or under-decommission buildings. Building reuse was in fact encouraged by adding the possibility of making changes in the intended use for temporary activities and functions, in the framework of urban and social regeneration projects of public interest.

In order to allow the development of economic, social and cultural initiatives of significant public interest, the new phase of urban planning (PUG) will enable the extension of temporary use to disused or under disposal buildings and spaces, both private and public, located in the municipal area.

Another area which saw regeneration interventions on existing building patrimony is the production area "Mancasale Industrial Park", in particular: expansion of the volumes by 30%, as an exception to urban limits;

³ For more information about PUG: <http://www.comune.re.it/territorio>

modernization of the structures, through the unification or splitting of several units (also through demolition and reconstruction works); construction of new settlements through the amalgamation of adjacent lots.

Even the area of the historic centre has been subject to regulations aimed at encouraging the redevelopment and recovery of real estate assets, for example: more flexibility in the use of the different floors of a building and an exemption from heights for commercial and residential functions. Moreover, in order to favour residentiality, the possibility of recovering pitched terraces and setting up parking spaces in unconstrained structures has been added. The redevelopment of the facades was also encouraged, by giving the possibility of transforming the same amount of accessory surface into useful area in a non-costly way (for example by transforming the attic into a living space).

Finally, in addition to these regulations, it is worth mentioning specific projects implemented through Urban Regeneration Programs, financed with national or regional resources as well as with public-private partnerships, which target significant parts of the city (e.g. Ex Reggiane).

Thanks to this evolution towards the regeneration and reuse, **nowadays in Reggio Emilia over 97.1% of building interventions relate to the recovery of existing buildings, while only 2.9% relate to interventions on new ones** - most of which to respond to local companies' production needs.

Another important challenge is to improve the regeneration in urban and peri urban areas through private/public partnership.

In 2015, the Municipality of Reggio Emilia presented a strategic plan for the **enhancement and promotion of urban and peri-urban agriculture as a crucial economic player in Reggio Emilia**. By setting a new course on local land management policies, the Municipality has focused its efforts on reducing land consumption and limiting urban expansion, encouraging reuse and recovery on all the agricultural territory of Reggio Emilia, such as agricultural areas with high productive vocation, agricultural areas of landscape importance, peri-urban agricultural areas. The plan acts both **at level of public and private green spaces, in order to re-evaluate areas that are currently abandoned or unused, and to promote new forms of integration and social cohesion through the care of the city green and agricultural practice**. In this sense, the strategic plan foresees a series of actions with the aim of promoting urban and peri-urban agriculture, such as:

- a memorandum of understanding with the representatives of the agricultural world, aimed at promoting education and employment in the sector and, consequently, encourage the conversion from areas intended for urbanization into areas for agricultural activities;
- simplification of the procedures relating to the redevelopment of existing farms and the establishment of new farms, while at the same time safeguarding the natural, environmental and landscape value of the area;
- creation of new urban vegetable gardens and promotion of horticulture by private individuals (on balconies, terraces, roofs..) also through a "municipal urban horticulture network" to exchange good practices;
- identification and creation of new public horticultural areas, through the evaluation of eligible public and private green areas also according to the socio-demographic characteristics of the neighborhoods; the mapping of urban horticulture experiences taking place in the municipal area;
- the reuse of portions of public and private parks and gardens, or neglected green areas, for gardening and for the cultivation of vegetables and officinal plants
- the evolution of consolidated experiences, such as social gardens, through the development of a new regulation on urban gardens, with the aim of actively involving new sections of the population, as well as expanding urban gardens functions in terms of social integration and multidisciplinary (i.e. educational, didactic, social values).

The main objective of the strategic plan was to integrate agricultural space into the urban context, since it considered agriculture as an important activity both for the fight against urban decay and for the efficient use of space. In fact, the plan was intended to encourage agricultural activity even in small disused spaces within the urban fabric or on the city borders, thus becoming an effective means of use and reuse of free soils. These micro-agriculture experiences, characterized by a strong component of civic participation, could take different forms: intensive cultivation in private spaces, cultivation along the sidewalks or in garden-balconies or garden-on-roofs.

Moreover, within this strategy, in 2018 the Municipality promoted an initiative to support the **Agricultural knowledge framework for the new General Urban Plan (PUG)⁴** consisting in the systematization and analysis of the various components that define the agricultural sector, starting from the mapping of enterprises and farms. This analysis is integrated with the identification of the various activities related to the multifunctionality of the agricultural sector (accommodation, educational activities, production and marketing of products).

As far as agricultural activities are concerned, the company centers in the Municipality of Reggio Emilia were surveyed, starting from the data provided by the Emilia Romagna Region (AGREA Service). This information, in addition to the location of the company center, is useful for understanding the type of activity carried out and the extent of land associated with the farm. In fact, the Plan foresees that, according to the territory in which the farm is located and to its consistency, there are different building and urban planning regulations. The data also made it possible to know which farms have quality productions and/or organic productions to incentivize and enhance them.

The information regarding the farms was also provided by the local Health Service (AUSL - Veterinary Service). In fact, it might be interesting to know the bred species and the number of animals present in the farms, in order to evaluate any critical issues that may emerge with respect to activities and neighboring uses, as well as to promote actions that encourage animal welfare.

Finally, the data relating to multifunctionality and in particular to accommodation facilities (b&b, farmhouses, etc.) were provided by the offices of the Municipality of Reggio Emilia in charge of issuing the authorizations for economic activities, while the didactic farms were mapped on the database provided by the Emilia Romagna Region. It has emerged that in 90% of cases, accommodation or educational farm activities are linked to farmhouse activities and that some farms sell their products and offer sports activities as well (such as horse riding). The mapping of these methods of organizing production factors, which pursues both social and economic objectives beyond simple agricultural activity, is the basis for planning companies' diversification actions and cultural and touristic activities on the one hand, and actions that shorten the agri-food production and distribution chain on the other.

2. Economic development of the peri-urban region

The following paragraphs focus on economic developments and challenges within the peri-urban area of your region. The information provided in this part of the report is specific to the PROSPERA project, and consequently, not exhaustive.

2.1 Economy (industry, offices, retail, etcetera)

The economical tissue of Reggio Emilia is mainly based on **highly specialized SMEs**. Most of them are located in the peri urban area, specifically in the whole portion of the plain and in the strip of the first provincial hill. The

⁴ see chapter 1.3

SMEs are ramified in many sectors that range mainly from the mechanical industry to the agri-food, textile, ceramic and household appliance sectors.

The **tertiary sector is very advanced** and ensures the presence of services of national importance, contributing significantly to the production of provincial wealth. Historically, **many cooperatives** have been established in the province, mainly in the food, transport and service sectors, but also in other areas as financial and advanced tertiary, large-scale distribution and buildings.

Figure 4 - No of companies (2018)



It is also important to underline the role played by farms and food companies producing Parmigiano Reggiano cheese and many other internationally renowned and appreciated food products, especially balsamic vinegar and Lambrusco wine.

Figure 5 - GDP by sector (Million Eur and %, 2016)

	2016	%
total (province of Reggio Emilia)	16.609,6	100,00%
agriculture, forestry and fishing	404,1	2,43%
Industry	6.248,8	37,62%
Manufacturing	5.298,8	31,90%
Buildings	695,6	4,19%
mining and quarrying, electricity, gas, steam and air conditioning supply, water supply, sewerage, waste management and remediation activities	254,4	1,53%
Services	9.956,6	59,95%
wholesale and retail trade, repair of motor vehicles and motorcycles, transport and storage, accommodation and food service activities	2.914,4	17,55%
real estate	2.371,7	14,28%
public administration and defence, compulsory social security, education, health and social work	1.733,0	10,43%
professional, scientific and technical activities, administration and support services	1.426,4	8,59%
financial and insurance activities	809,4	4,87%
arts, entertainment and recreation activities, repair of household goods and other services	450,2	2,71%
information and communication services	251,5	1,51%

Source: Chamber of Commerce

Major challenges in terms of economy are linked to the small and medium dimension of the companies.

There is the need to:

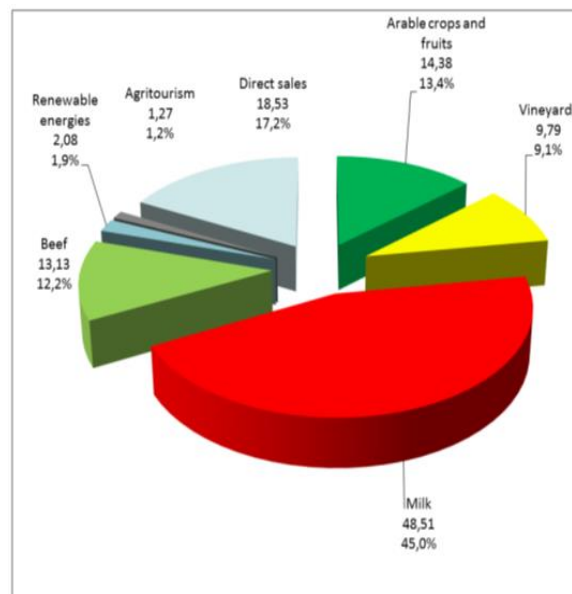
- Increase **technology and research** innovation in terms of products and services
- Increase capacities and **attitudes of SMES to internationalise**
- Increase capacities of SMES to work in **consortium and cluster**
- High number of SMES has a **familiar management structure** – most of them need to overcome generational change
- Better match the **demand for technical skills** (i.e. lack of engineers in the job market)

2.2 Food production

The primary production sector is an important part of the Reggio Emilia economic market also due to the upstream and downstream agriculture. A comparison with the other provinces shows that Reggio Emilia agriculture is among the richest and most advanced in the Emilia-Romagna region. In the last decades the technological innovations introduced have given a noticeable productive impulse to the resources employed in agriculture and this has determined on one hand a decrease of the employed labor force and on the other a remarkable leap forward of the agricultural production.

The characteristics and peculiarities of the territory have created the conditions for the development of an agriculture that is mainly based on a zoo technical-forage direction. **Milk production for Parmigiano-Reggiano** cheese has always been the cornerstone of Reggio agriculture. The third productive branch is viticulture and can also boast ancient origins. The specialization of viticulture in the production of **Lambrusco** is the pride and history of Reggio Emilia agriculture. Plant productions, not re-used as feed in animal husbandry but intended for direct sale on the market, occupy a minor position in the province as well as minor agricultural and livestock activities such as horticulture, fruit-growing and sheep farming. In 2000 there were 11.357 farmers in the Reggio area: in 2010 the Agricultural national census updated the figure to nearly 9.000 farmers.

Figure 6 – Value of agricultural production in Reggio Emilia by farming activity (2015)

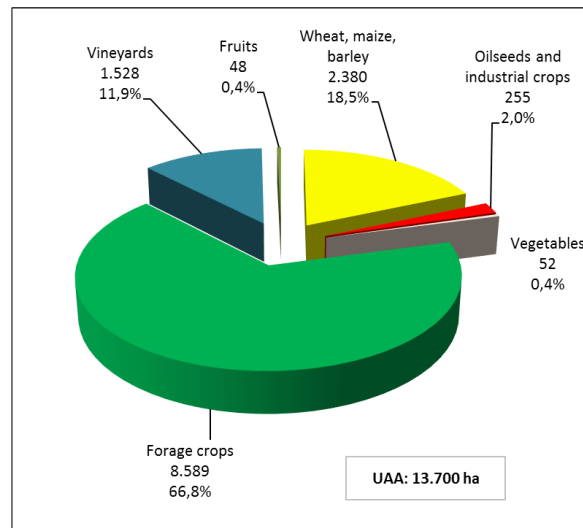


The main farming activity is the cattle farming (**dairy cattle**). As already described, out of total land area of 23,158 ha which composes the Municipality of Reggio Emilia, **76% is rural territory (about 17,590 ha)**. The Municipality for its planning makes a distinction between the following sub-areas:

- Areas at high productive agricultural vocation (AVP): 51%
- Agricultural areas with high landscape values (ARP): 36%
- **Peri-Urban Agriculture (AAP): 13%**

The total amount of utilized agricultural areas within the Municipality rural area is 13.720 ha in which are operating 1.118 farms. The average size of farms is 12,27 hectares.

Figure 7 - agricultural land use



In 2018 the area dedicated to agriculture (and based on agricultural plans) was about 13.000 ha: 12% of this area was certified (biological and to be converted). This percentage was doubled if compared with this in 2017 (certified area was about 6%). Besides the increase of area dedicated to biological agriculture, it is relevant to highlight the number of farmers producing and processing biological products (117 in the Municipal area of Reggio Emilia). It is also relevant the number of farms using sales channels directly connecting producers with consumers: among these, there are Market of the farmer, the Reko Group and the shopping directly into the farming. These new marketing models are key to increase sustainability, since they make shorter the value chains, increase the visibility of the products and farmers, offering a good service for citizens and enforcing the market for sustainable products.

Another distinctive element of the agri-food value chain in Reggio Emilia is the network of balsamic vinegar producers, wine cellars, Parmigiano Reggiano factories, dairy farms, as dedicated places within the territory where to guarantee food processing. More than 90% of these activities is part of consortium aiming at protecting typical products from Reggio Emilia territory such as wines, Lambrusco, balsamic vinegar, Parmigiano Reggiano cheese. This element makes the value chain a cluster acknowledged at international level, matching tradition and innovation.

Considering the city-region food system as a whole, the main challenge is to implement **an explicit and dedicated governance strategy, improving integration between the governance levels** (municipality, province, region). Also, in order to build effective policies, the **knowledge of the local food system dynamics should be improved**, gathering the existing data and insights about the flows of resources from rural to peri-urban to urban and vice versa, but also collecting new ones. Eventually, to promote the profitability and sustainability of food production in peri-urban and marginalised areas, a strategic approach should **include also a specific focus on local demand, improving their access to local sustainable food and enhancing consumers behavioural changes** toward a healthy and responsible food consumption.

Municipality of Reggio Emilia intend to tackle the challenges of the local food system adopting a systemic approach to reach the following objectives:

- **resilient local food value chain**
to increase the environmental and social sustainability of food production in peri-urban and rural areas, generating jobs and decent incomes for farmers in peri-urban (city) and marginalized areas (province) by promoting multifunctional agricultural activities.
- **sustainable food consumption**
to improve the consumption of safe, healthy, high quality and affordable food produced in the local area, with a focus on socially vulnerable groups of the population, by assessing local demand and involving local active citizens as co-innovators.
- **circular economy**
to promote circular economy in the local food cycle, by reducing food waste, packaging and enhancing recycling systems through innovative technical solutions and consumer education activities.

To reach these objectives, the key strategy is **to improve connectivity between urban and rural areas**. The strategic approach should **focus on the optimization of the flows of tangible and intangible resources** that are exchanged (not limited to the food asset), by improving the local physical, economic, political and socio-cultural conditions in which the food is purchased, obtained and consumed.

Regarding peri-urban areas, the **main challenge is to promote sustainable rural enterprises, with a recognizable added value in term of natural heritage protection as well as social and environmental sustainability**.

The transformation aims to rethink conventional agriculture towards a "service agriculture" with a diversification of activities (multi-function) that integrates sustainable functions, additional services for the benefit of the community with the aim of obtaining both benefits for landscape, environment and economic benefits for farms.

2.3 Tourism

Reggio Emilia is part of Emilia Tourist Destination (*Destinazione Turistica Emilia*), an association of public local authorities (Reggio Emilia, Parma e Piacenza) dealing with the promotion of the area.

In 2018, Emilia Destination Tourist has hosted 1.390.300 tourist, which is 12% of total amount of tourist acomodated in Emilia Romagna Region. Among the three provinces, Reggio Emilia is the Province's municipality that has hosted most tourists, with nearly 368,000 attendances: this trend has grown by 4.5% from 2017 to 2018, although there are many opportunities for further growth.

Figure 8 - touristic flow in Reggio Emilia (2007-2017)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
428.873	422.231	498.504	360.339	298.991	299.084	321.048	321.048	299.223	336.620	360.540

According to Destinazione Turistica Emilia, tourism in Reggio Emilia is mostly based on business and single individual; most frequented periods are spring and autumn.

The main touristic and recreational hot spots in Reggio Emilia are:

- International Center Loris Malaguzzi (Reggio Emilia Approach and early childhood education)
- Collezione Maramotti
- Tricolour Museum
- Theaters and Aterballetto
- European Festival of Photography

Another important asset of the City in term of Tourism is the High-Speed Train Station. Designed by the Architect Santiago Calatrava, it became an iconic element of the city landscape. Strategically located in the middle of the

Pianura Padana, it allows to reach several main Italian cities in short time (Milan: 45 minutes – Rome: 2 hours – Turin: 2 hours – Florence: 1 hour).

The main challenges for Destinazione Turistica Emilia and Reggio Emilia are to:

- Increase the number of tourists visiting the city for leisure and not just for business
- Increase the quality and the touristic offer of the city, since there are several constraints linked to spaces accessibility (i.e. openness of spaces and availability during evening and weekend)
- Increase the number of tourists all over the year
- Increase touristic opportunities offering “experiential tourism”: Reggio Emilia should leverage on tourism based on experiences and life-styles giving value to eno-gastronomy path, community life, small medium and high quality lifestyle
- Invest on schools and young tourists
- Invest on families and children touristic offers

The Municipality of Reggio Emilia is also aiming to increase the attractiveness of natural and cultural heritage of peri-urban areas as a leverage for tourism. Within this framework, the Municipality has decided to apply in 2020 to MAB Unesco Programme. (see also chapter 3.1).

2.4 Mobility

In terms of mobility, the mode of transport that inhabitants mostly use is car. In 2016, the number of cars was 111.804 per 171.491 inhabitants. As far as commuters, outbound daily are 17.293 (85% working 15% studying) inbound are 33763 (76.9% working and 23,1% studying).

In terms of modal share, Bike sharing “free floating mobike” promoted by the Municipality and managed by private operator “Mobike”.

Users registered for the service until **31/12/2018** are around **16.552**, and the withdrawals are **102.722**.

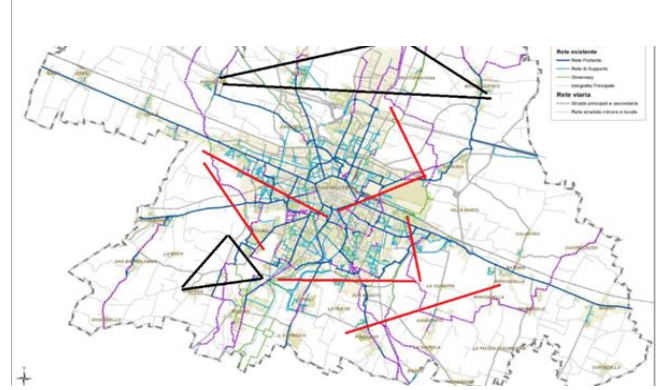
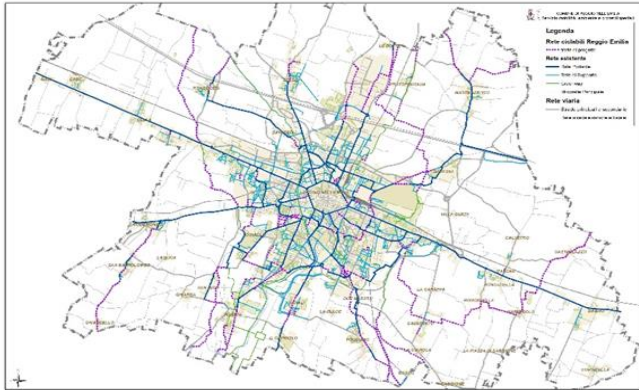
As regional policy, those who have an annual and monthly rail pass over 10 km, with departure and/or destination from one of the 13 cities of Emilia-Romagna with more than 50,000 inhabitants, can travel free of charge on the city buses of the same cities.

Reggio Emilia is located on the main axis of the country's infrastructure, along the highway and railway linking Milan to Rome. Considering urban mobility as part of a holistic effort to improve urban life, since over a decade Reggio Emilia is fully committed in raising the well-being of the inhabitants by building a better mobility system.

Traffic pollution and low use of public transport are the most import challenge for the mobility. At regional level, the government is trying to tackle car traffic through initiatives for encouraging the use of public transport. Those who have an annual and monthly rail pass over 10 km, with departure and/or destination from one of the 13 cities of Emilia-Romagna with more than 50,000 inhabitants, can travel free of charge on the city buses of the same cities. Another crucial challenge is **the connection between rural areas and inner city.**

At local level, over the last decade, Reggio Emilia has been fully committed in raising the well-being of the inhabitants by building a better mobility system. The City in April 2019 has adopted a new SUMP (sustainable Urban Mobility Plan) following the EC guidelines. This new plan has set ambitious targets in terms of modal split and the implementation of innovative strategies to tackle the current challenges in the field of transport. Cost efficient measures have adopted for **discouraging private car use in favor of walking, cycling and public transport**, and reduce congestion and emissions, even in terms of urban freight traffic, which is a significant generator of pollutant emissions. For instance, the Municipality is enhancing the connection between the inner city and poorly connected peripheral and peri-urban areas through the construction of cycle paths.

Figure 9 - Reggio Emilia cycling map



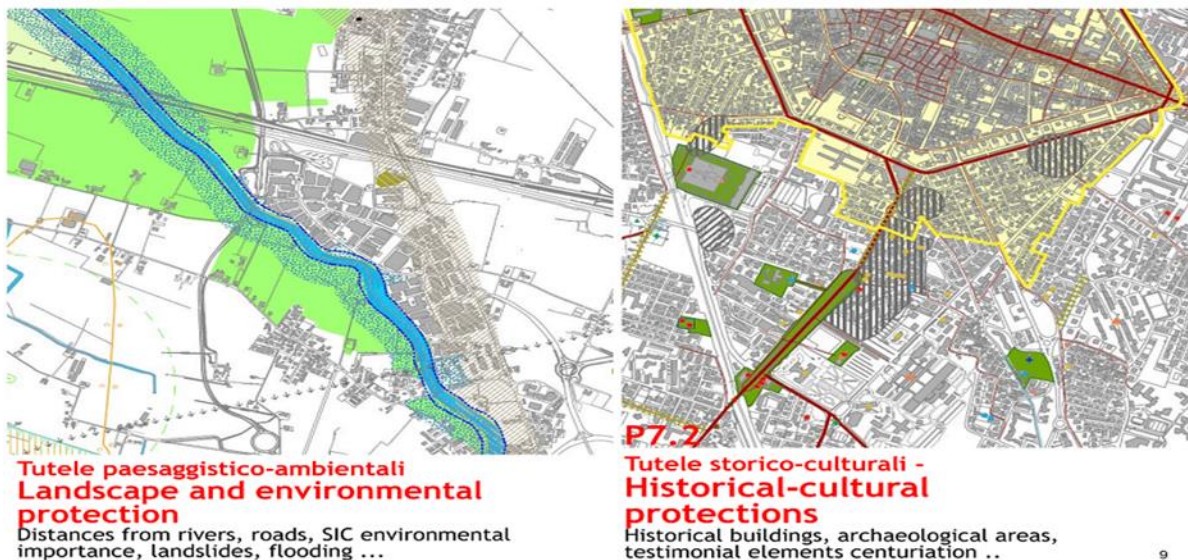
3. Natural heritage of the peri-urban region

The following paragraphs focus on natural heritage and challenges within the peri-urban area of your region. The information provided in this part of the report is specific to the PROSPERA project, and therefore not exhaustive.

3.1 Natural heritage

The landscape in the peri-urban area of Reggio Emilia is mainly composed by fluvial parks close to the three streams of the city, Rodano, Modolena and Crostolo, and by “green wedges” which are rural peri-urban areas that connect parks and fit into the urban area.

Both landscape and environment heritage linked to natural resources (rivers, lakes, mountains, trees) and historical and architectural areas (see also chapter 3.2) of high importance are legally protected: any intervention involving alteration or modification of the state of the places or the exterior appearance of the buildings must require prior authorization in accordance with national and regional laws.



The main challenges in terms of natural heritage are related to the **protection and promotion of the heritage itself (historical trees, historical buildings, traditional tree row lines) avoiding at the same time depopulation** in the interested areas.

Furthermore, the Municipality recognizes that the protection of the ecosystem services could have positive repercussions on the urban environment, for example through the planting of new trees to offset CO2 emissions. Besides, there is the idea that natural heritage includes all the natural landscape of the territory, protecting all the opportunities for citizens to enjoy natural space and outdoor areas. In this framework, the Municipality is **investing to enhance the tree’s heritage** investing on new plants and new forestation areas.

To improve and better promote natural and cultural connections, the Municipality of Reggio Emilia has decided to apply in 2020 to **MAB UNESCO Programme**.

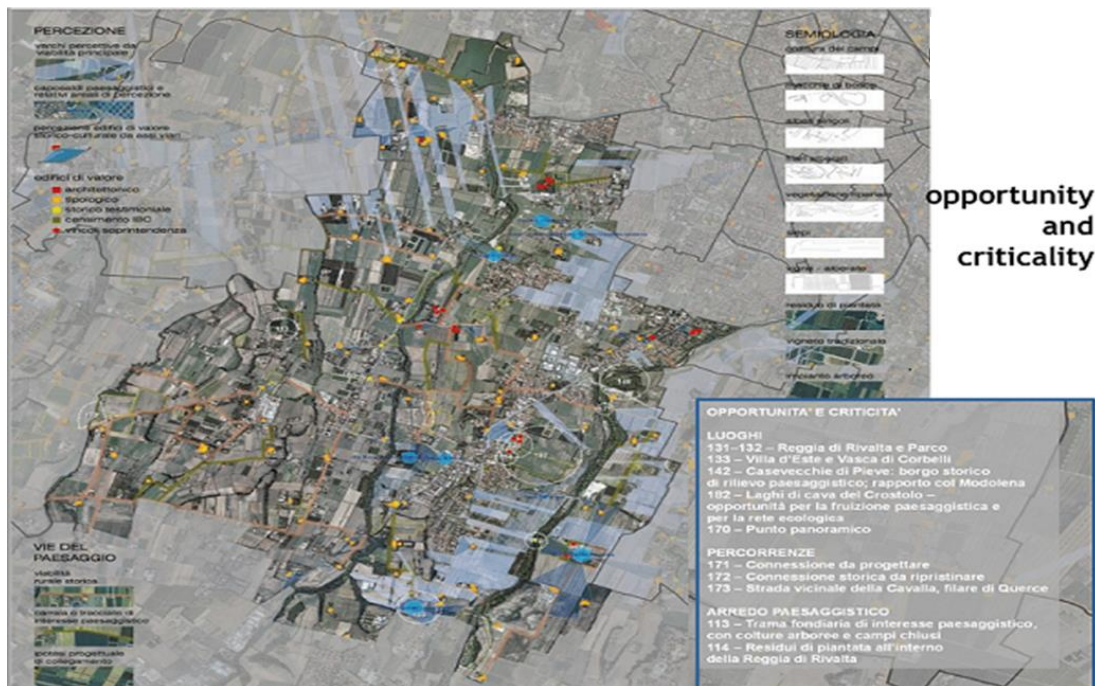
The MAB programme is an intergovernmental scientific programme that aims to establish a scientific basis for enhancing the relationship between people and their environments. It combines the natural and social sciences with a view to improving human livelihoods and safeguarding natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable. The Municipality of Reggio Emilia has decided to apply to MAB UNESCO with all the naturalistic and cultural sightseeing areas like fluvial parks close to the three streams of the city: Rodano, Modolena and Crostolo, the “green wedges” which are rural peri-urban areas that connect parks and fit into the

urban area, and other connections that linked rural and mountain areas close to the town. On regional level, the strategy is to connect the area surrounding the city of Reggio Emilia with the MAB Area in the Tuscan-Emilian Apennine National Park (<http://www.parcoappennino.it/Eindex.php>). Being part of MAB UNESCO offers to the city of Reggio Emilia the possibility both to conserve biodiversity and to contribute in building a sustainable local communities, balancing the needs of preservation and fruition of natural heritage, also in terms of touristic offers (see chapter 2.3).

3.2 Cultural heritage

Reggio Emilia was founded in the ancient ages (187 B.C.) in the Roman period. Due to its long history, the landscape is characterized by the presence of many historical and architectural buildings and connected parks, churches, bell towers, water mains, prestigious houses. These areas represent the historical heritage of the city of Reggio Emilia.

Figure 10 - cultural heritage in Reggio Emilia⁵



Traditional rural landscape, with mixed horticulture and tree planted areas, is still present in few residual areas. The municipal administration has long understood that the preservation and enhancement of the cultural heritage represents an indispensable element for the development of the territory, without underestimating the environmental implications linked to the improvement of the quality of life.

As part of cultural heritage both **tangible and non-tangible elements** should be included. Aside from the cultural heritage *strictu sensu*, as for instance historical buildings, the traditions and the creativity of the territory must be considered in a proper cultural strategy. The historical role of agriculture, food production and enogastronomic traditions, cooperative attitude and high level of “welfare culture” are all part of the local identity. As a result, the main challenges identified by the local administration in terms of cultural heritage concern several areas of intervention:

⁵ In the map, the colored dots indicate buildings and sites of value that, depending on their categorization, are submitted to different level of legal protection (national or municipal).

- **to recover and reuse historical built heritage** to be made efficient for residential purposes but also for other compatible uses (small craft, recreational/cultural and touristic activities)
- **active protection of the built heritage**, subject to particular vulnerability and fragility (protection, enhancement and reuse)
- The recovery of an identity proper to the **agricultural tradition** which can also be a leverage for economic and tourist growth, to be implemented through active preservation of the rural environment;
- the **enhancement of social and solidarity values** proper to the community of Reggio Emilia and historic asset of the success and acknowledge of experiences promoted by the city (Reggio Emilia Approach for education, cooperatives movement, health care system, community system).

About the peri-urban areas surrounding the city, particularly prominent are the issues related to the rural heritage, both in terms of abandoned/ruined rural building and to the maintenance of rural landscape.

3.3 Environment

The main challenges in terms of environment are related **to air pollution**, whose main sources are motor traffic, **house heating** and **ammonia** generated by livestock farming, while industry it is not one of the main causes. There is a strong connection with the other PROSPERA themes: challenges related to mobility, intensive livestock farming linked to food production, and preservation of the natural heritage must be addressed to positively impact on the local environment .

As a cross-cutting strategy to improve environmental protection and sustainable development of natural resources, Reggio Emilia is further implementing a **circular economy** approach.

Reggio Emilia is the first city in Emilia-Romagna to have activated **the urban wastewater recovery** for their irrigation reuse, irrigation of 2,000 hectares. A concrete example of symbiosis between the city and surrounding countryside, as well as a typical circular economy pattern and adaptation option to climate change. Furthermore, is under development a **new bio-methane plant** using organic waste from the surroundings to produce energy and fertilizer by-product (composted digestate).

At the end of 2019, the Municipality of Reggio Emilia has launched a project that foresees the **planting of 50,000 new trees** through a synergy between public and private actors. In fact, over the last years, the Municipal Administration experimented different methodologies to involve local private and public actors in initiatives aimed at enriching the city's tree heritage and improving air quality and microclimate. A first experimental phase took place in the autumn of 2019 with a tender to assign the forestation and a 3-year management contract of a public park, which was very poor in terms of trees but still very popular among neighborhood's families.

Moreover each year, according to a national law, Regions donate to Municipalities a number of trees equal to the number of children born and adopted the previous year. At the end of 2019, on the International Tree Day, the Municipality decided to organize a collective planting event of 1065 trees in a public park within a very populated and completely tree-free residential neighborhood. Thanks to the planting, it was possible to improve the area's livability, as well as to involve the whole community (citizens, associations, etc.) in the planting itself.

Nowadays, the Municipality is working on two other different strategies of involvement. The first one addressed to private companies, based on the promotion of a call of interest for the concession of 9 areas of the city. Participating companies are required to submit forestation and redevelopment projects for the areas in question and, in case of adjudication, they will also obtain the management of the areas for 3 years.

The second strategy, which will be implemented in the upcoming months, will focus on the implementation of a procedure that can make other 87 green areas of the city available not only to companies, but also to groups of

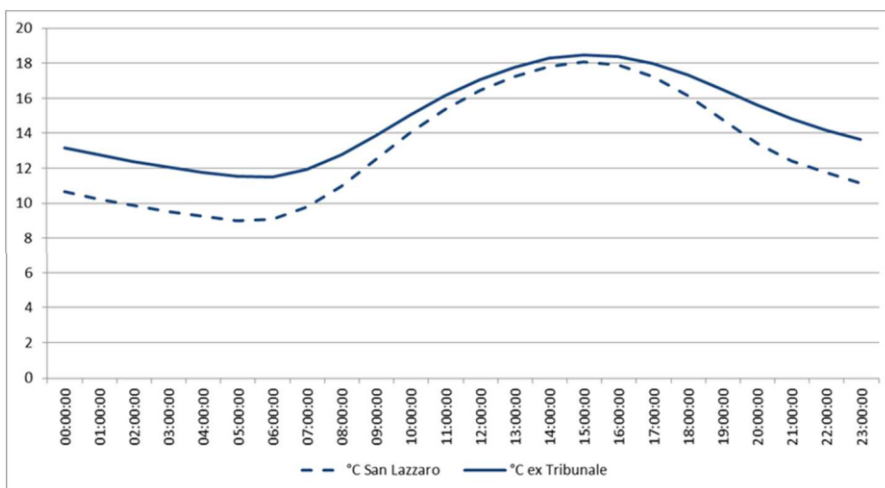
citizens and associations. As for the latter, the Municipality is verifying the possibility of using supporting tools such as crowdfunding.

3.4 Climate change

The Municipality of Reggio Emilia has been committed to climate change since 2009, by implementing climate mitigation actions; in 2015 it also started to work on adaptation to climate change.

Since 2015, the Municipality of Reggio Emilia work together with **ARPAE (Regional Agency for Environment Protection and Energy)** to analyse historical weather-climate data concerning Reggio Emilia. Thanks to this research, it was possible to draw up a first Local Climate Analysis, an exhaustive report showing climate changes from 1960 to 2014. According to this analysis, the current administration is working on define future climate possible scenarios and Evaluation of Risks and Vulnerability Report to develop a Local Adaptation Strategy. The main challenges in terms of climate change are **the peri-urban heat island** and **drought**. The Local Climate Analysis shows how maximum and minimal temperatures are particularly increased in the last few decades, and not only during the summer season. From 2005 to 2014 minimum temperatures have seen variations from 1,5° to 3,5° comparing to 1961-1990. Moreover, maximum temperatures are quite different from city center to peri-urban areas especially during the coolest hours of the day (till 2,5°). This difference is less relevant during the warmest hours of the day. During summer, the number of heat Island phenomena increase, such as duration of that phenomena.

Figure 11 Islands and heat waves in Reggio Emilia - Differences between the temperatures measured at the same time at two different stations (2007-2014) - summer season



At the end of 2019, the Municipality of Reggio Emilia has developed a questionnaire to assess the perception, knowledge and interest of the citizens of Reggio Emilia on the topic of climate change.

The current municipal administration is expanding the wooded area of the municipal peri-urban territory by planting trees based on scientific surveys and analyses, with the aim of increasing the overall biomass in the city, to counteract the production of CO2 and encourage the mitigation of the micro-climatic phenomenon of heat islands. The areas chosen by the Municipality, which are public, have been selected on the basis of:

- scientific studies conducted by the IUAV University of Venice on the city's heat islands as part of the LIFE project UrbanProof
- database on public green areas held by the Environment Service of the Municipality (GDWH)
- citizens' requests for shaded areas (collected through social media)
- open laboratories and online surveys.

The trees planted during the interventions have been supplied by the Emilia-Romagna Region, according to the National Law "One tree for every child born". On the other hand, trees are purchased also by private individuals participating in the tender called by the Municipality to make public areas available for 3 years to forestry projects presented by citizens, associations and individuals.

4. Policy instrument “Emilia-Romagna Region Regional Operational Programme ERDF 2014-2020 - Axis 3 Competitiveness and attractiveness of the productive system”

The fourth part of this regional analysis report describes the policy instrument “Emilia-Romagna Region Regional Operational Programme ERDF 2014-2020 - Axis 3 Competitiveness and attractiveness of the productive system”. The Municipality of Reggio Emilia chose to review, improve and implement this particular policy instrument throughout the PROSPERA project. In accordance with the ambitions of PROSPERA, the focus lies on the protection and promotion of natural heritage by enhancing the sustainable development of peri-urban areas.

In the next paragraphs attention is given to what extent the selected policy instrument is currently responding to the challenges identified in the region, as described in part 2 and 3 of this report. Furthermore, attention is given to the governmental context and the analysis has been then extended, taking also into consideration other policy instruments that are relevant for the PROSPERA themes.

Furthermore, a window of opportunity is identified to improve this particular policy instrument supported by the PROSPERA project.

4.1. General information

The policy instruments name that we will be working on in the PROSPERA project is:

Regione Emilia Romagna - Programma Operativo Regionale FESR 2014-2020
Emilia-Romagna Region Regional Operational Programme ERDF 2014-2020

Asse 3 - Competitività e attrattività del sistema produttivo
Axis 3 Competitiveness and attractiveness of the productive system

Obiettivo Specifico 3.3: consolidamento, modernizzazione e diversificazione dei sistemi produttivi territoriali
Specific Objective 3.3 Consolidation, modernisation and diversification of productive territorial systems.

Misura 3.3.2 Supporto allo sviluppo di prodotti e servizi complementari alla valorizzazione di identificati attrattori culturali e naturali del territorio anche attraverso l'integrazione tra imprese delle filiere culturali, turistiche, sportive, creative e dello spettacolo e delle filiere dei prodotti tradizionali e tipici
measure 3.3.2 Support to the development of services and products complementary to the valorization of identified natural and cultural attractors, also through the integration between enterprises from culture, tourism, creative value chains, and traditional and typical products.

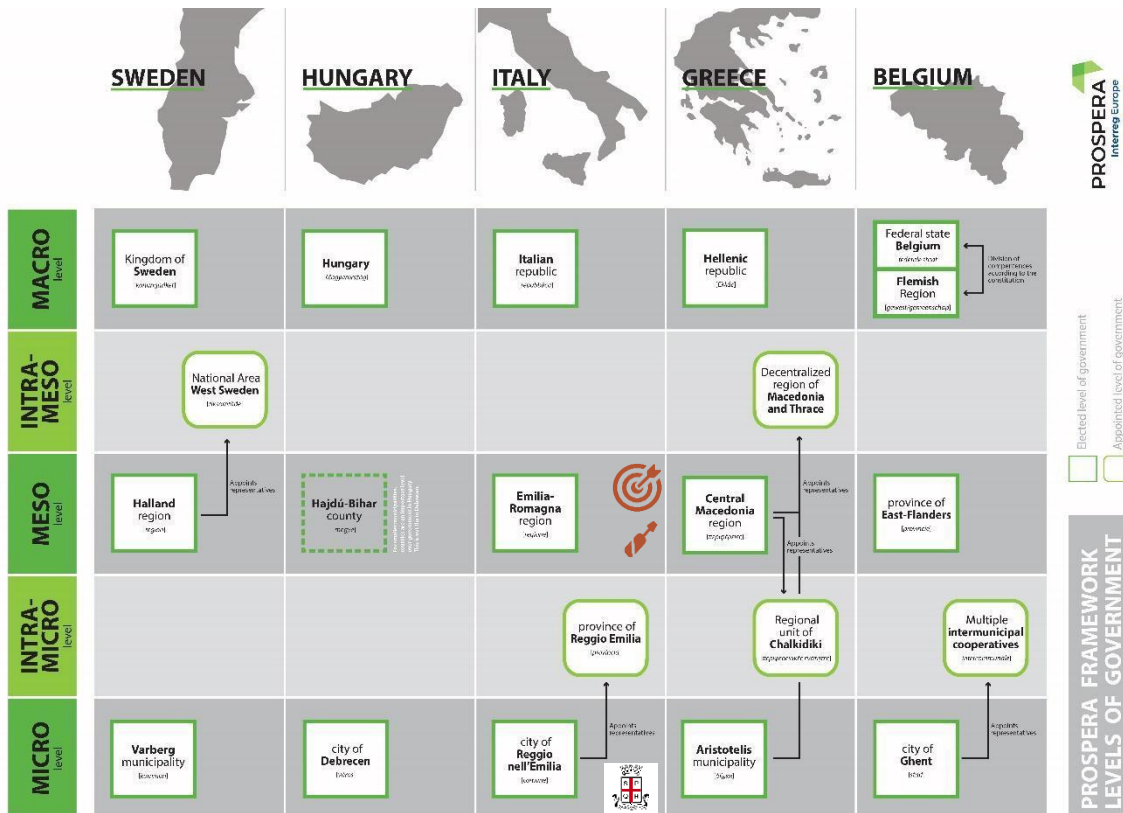
The geographical action radius of the policy instrument corresponds to the administrative boundaries of the MESO level: Emilia-Romagna Region.

The aim originally set in the PROSPERA project was to innovate the PI by improving its governance. Up to date, regional cities and stakeholders representing the 2 dimensions (rural & urban) are not formally recognised as interlocutors when it comes to defining policies and priorities that affect the protection of environment in peri-urban areas; even more, peri-urban areas are still not considered as an area worth for protection and promotion. Improved governance of the ROP should lead to an update of the way the calls under this measure are designed and selected valorising proposals targeting peri-urban areas; this improvement can be achieved for instance including also the potential impact on peri-urban areas in the evaluation of the project

proposals, or involving municipalities and other relevant stakeholders in the consultation and monitoring of the measures.

The main barrier toward this objective is that – since we are almost at the end of the working period of this Policy instrument - it will be hardly possible to be on time to influence it with PROSPERA Local Action plan.

4.2. Governmental context of the policy instrument “Emilia-Romagna Region Regional Operational Programme ERDF 2014-2020 – Axis 3, measure 3.3.2”



Municipality of Reggio Emilia together with CRPA will address this policy instrument since they intend to improve policies to protect and promote natural heritage by leveraging on the creation of new jobs and businesses oriented to the safeguard and promotion of ecosystem services. The main idea is that – according to measure 3.3.2 - the integration between enterprises from culture, tourism, creative value chains and traditional products is a key lever to support the valorization of natural heritage. The PI addressed also foresees a connection with the valorization strategy underlying the priority 5 (Cultural and natural resources) and 6 (Attractive cities).

Reggio Emilia is not the Managing Authority of this PI, but the partners are recognized, on different level, as interlocutors by the Emilia Romagna region, and they can have a role in the development and the assessment of the regional policies.

The Municipality of Reggio Emilia is member of the ROP Monitoring Committee. It is not directly involved in the design and implementation of the PI, but it can have an influence on the way the Region will manage it, especially as far as governance is concerned.

Besides, since CRPA is officially recognized by Emilia Romagna region as research organizing body (law 28/98), it is requested to propose priorities for drafting Multiannual Plan of Services, basis for programming structural

funds, including ERDF. CRPA has been also involved in decision making process of 3S regional strategy (overall policy strategy informing the whole ERDF regional programme as quoted in OP). It is member of the High Technology Network of Emilia Romagna (Technopoles) directly linked to MA and PI through CRPA Lab. It is also formalized member of Agrifood Platform and Energy and Environmental Platform (Agri-food and Green-tech clust-ER) the instrument used by ERDF Managing Authority to collect and discuss stakeholders proposals to design, monitor and update ERDF regional strategy.

In term of operationalisation at Municipality level, there are several departments involved:

- Planning and monitoring Department in charge for planning, balance sheet and European Funds
- Sustainability, Environment and Agriculture dealing with protection of environment and natural heritage
- Urban Regeneration Department dealing with urban planning and land management
- Economic development dealing with SMEs support and innovation
- Policies for participation, engagement and active citizenship

4.3. The challenges addressed by policy instrument “Emilia-Romagna Region Regional Operational Programme ERDF 2014-2020 – Axis 3, measure 3.3.2”

The policy instrument addressed is cross-cutting several themes relevant to the scope and the objectives of PROSPERA.

Figure 12 - targeted PROSPERA themes by the PI



Theme 1 ‘economy’

Axis 3 aims to boost the strengthening of the international competitiveness of regional productions through innovation, so as to mitigate the downward pressure on costs, and in particular on wages, to improve regional attractiveness factors for investments and qualified skills.

Theme 2 ‘natural heritage’, Theme 3 ‘cultural heritage’, Theme 4 ‘food production’

The focus of the selected policy instrument is primarily on SMEs competitiveness. However, the underlying strategy is to promote the integration between enterprises and the territorial attractors, such as the natural and cultural heritage, the creative value chains and local and traditional products (PDGO/PGI food).

The valorization of these linkages through innovative products and services is at the same time an opportunity to chase and a challenge to tackle. This is specifically the focus of measure 3.3.2 “Support to the development of services and products complementary to the valorization of identified natural and cultural attractors, also

through the integration between enterprises from culture, tourism, creative value chains, and traditional and typical products". As for these themes, The PI addressed also foresees a connection with the valorization strategy underlying the priority 5 (Cultural and natural resources) and 6 (Attractive cities).

Theme 5 'tourism'

In an increasingly competitive market, the quality of the touristic offer and the significant presence of cultural and creative supply chains represent an important added value for the Emilia Romagna region. Even so, at the beginning of the current programming period it has been noticed a decrease in the average duration of tourist arrivals (from 4.4 in 2009 to 4.1 in 2012), which inevitably had a negative impact on the profitability of the sector. The result to be achieved is therefore to reverse this trend and increase the profitability of the sector, supporting the innovation of the touristic industry to improve the services offered in terms of quality and sustainability, but also considering new assets from territories in terms of touristic offers.

4.4. Related policy instruments

There are other policy instruments addressing the PROSPERA themes and, although mainly indirectly, the issues related to peri-urban development.

At meso level (ERR region):

The Emilia-Romagna Regional Operational Programme 2014- 2020 -Axis 5 - Art, cultural and natural heritages: *Main themes: cultural and natural heritages*

The Axis 5 of the Emilia Romagna Regional Programme aims at promoting arts, cultural and natural heritage as leverages to build an integrated territorial system looking to "wider areas", including both urban dimension than rural ones. The main aim of Axis 5 is to overcome fragmented interventions favoring overall and integrated actions. In this framework, urban areas/cities should enhance services to people and SMEs whereas internal areas should be better linked to improve cohesion and connections. One of the two aims of this Axis is to promote and enhance opportunities from natural heritage, increasing accessibility and fruition, focusing on smart solutions.

In details, this axis aims at designing "specific products" concerning the whole territorial system, leveraging on natural and cultural attractors of the Region (Networks of the Parks, Museums, etc). The goal is to improve the fruition and accessibility of such local attractors enhancing integration among cultural, social and economic frameworks. This axis identifies strategic areas/attractors of the Region: Romagna Coast, Apennines and National Park, Po river area, network of Arts Cities.

In this framework, specific objective is linked to improve opportunities and standards in enjoying natural heritage offers and attractiveness. In particular, the Axis supports interventions for: 1) protecting and enhance some strategic areas in the Region, in order to enforce development process; 2) supporting communication and awareness activities based on new and innovative services and ICT benefits for promoting opportunities coming from natural heritage

The other aim of Axis 5 is to protect and enhance the cultural offer linked to the arts and cultural heritage of the Region. Some specific areas in the Region have been selected as relevant cultural attractors for tourism.

In this framework, specific objectives are linked to improve opportunities and standards in enjoying cultural heritage offers and attractiveness. In particular, the Axis supports interventions for: 1) protecting and enhancing material and immaterial cultural heritage as leverage to local development 2) supporting awareness and communication about cultural heritage through innovative services and ICT opportunities and benefits.

Regarding Emilia Romagna Region Operational Plan- Axis 5, PROSPERA overall areas of interventions could be:

- to widen the targeted areas, allowing to include, as potential object of interventions for the valorization of natural and cultural heritage, also areas that are surrounding the prioritized territories (i.e. the coast,

the Apennines's) and which can be promoted as connecting spaces, such as green corridors or interlinked urban, peri-urban and rural touristic routes;

to address an enlarged definition of "cultural heritage" issues linked to style life, community's values, tradition, sustainability, rural handicrafts. In particular, the idea is to consider culture not an asset just linked to big events/performances/architecture/monuments but a more embedded dimensions taking inputs from the field and from local communities and experiences of the territory.

ERR Rural development Programme

Main themes: environment, food production

The RDP addresses the theme of the interconnections between agriculture, enhancement of the regional territory and peri-urban areas. The RDP identifies as one regional development opportunities the *"high and diversified potential for the development of multifunctional activities on farms in rural areas, starting from the function of territorial control in mountain areas, to the growth of activities with social and cultural recreational, cultural functions in rural and peri-urban areas"*.

In the RDP classification of the regional territory, provincial capital municipalities with population density higher than 150 inh./sq km are classified as urban and peri-urban areas (zone "A"). Regarding urban and peri-urban farming, the challenge is to promote the presence and diffusion of peri-urban agriculture activities, also with social and cultural functions.

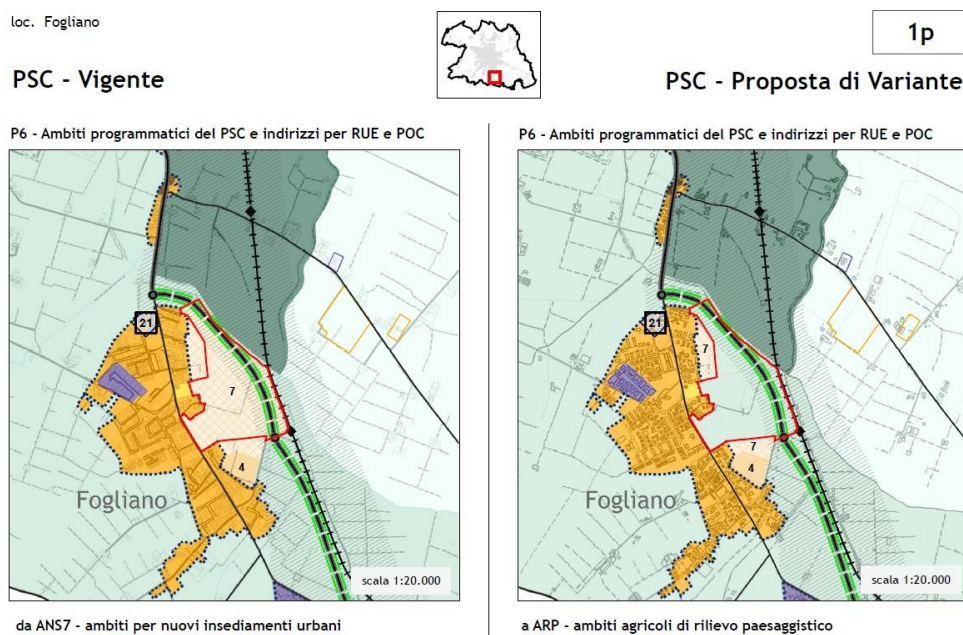
The urban network of Emilia-Romagna has 13 cities with more than 50,000, thus presenting a marked Polycentrism. Near these larger centres, peri-urban agriculture is subject to considerable pressure. The number of farms has been greatly reduced and this phenomenon severely affects urban and peri-urban areas. Conversely, the anthropization of the territory is increasing. The maintenance of agricultural activity in peri-urban areas allows the mitigation of phenomena related to urbanization. At the same time, it can also provide new social and cultural functions, for example through the spread of educational farms (still carried out by a small percentage of regional farms). In fact, it is precisely urban polycentrism that offers interesting opportunities to peri-urban farms capable of exploiting the proximity of markets characterised by growing consumer sensitivity towards certified, quality and local production.

To reach this objective, a key element is to promote an innovative approach within the farming system. This is the reason why one of the policy instruments specifically addressing the challenge described above is under the Measure 16, that is the RDP policy tool supporting process and product innovation in agricultural, agro-industrial and forestry farms, with a view to improve the quality and quantity of production combined with a reduction in production costs and a greater compliance with environmental sustainability issues, promoting energy efficiency, as well as enhancing the ethical responsibility of companies.

It is also strategic to promote the diversification and multifunctionality of farms for the creation of new income opportunities through the exploitation of by-products and waste for biotechnological purposes and/or production of services also with social content, specifically in peri-urban areas. As an example, under the measure 16, the "Edible Park" was financed, which is one of the good practice proposed by Reggio Emilia municipality and CRPA. Furthermore, a specific call under this measure directly addresses the theme of multi-functional farming (measure 16.9: support for the diversification of agricultural activities into activities related to health care, social integration, community supported agriculture and environmental and nutrition education). It is interesting also to notice that, within the call for projects financed under this measure, the evaluation score takes also in consideration projects submitted by farmers who formally join to processes of reconversion of potentially urbanized areas into agricultural areas. In relation to the urban planning variant of 2015, the interested areas covered were in most cases already used for agricultural purposes. However, these areas were identified by the

municipal urban planning as potentially urbanizable areas, or areas in which it was possible to carry out construction mostly for residential use. By eliminating them from the urban planning, they have been returned to their agricultural function, thus effectively confirming the existing methods of use and management. An example is provided by figure 14 below, referring to the municipal area of Fogliano. The figure on the left refers to the initial situation, where the red outline identifies the area being transformed and which, from the urban plan, was intended for residential expansion. The figure on the right represents the elimination of this provision and the reclassification of the area as agricultural territory.

Figura 14 – Example of area subject to planning variant - Municipality of Reggio Emilia 2015



Variante al PSC, ai sensi degli artt. 32 della L.R. 20/2000, per la riclassificazione urbanistica di aree ricomprese in ambiti urbanizzabili del PSC vigente o per le quali il RUE prospetta interventi di trasformazione

Another relevant topic where food production, natural heritage preservation and cultural heritage promotion are interlinked is the promotion of traditional products. Emilia Romagna region has 44 PDO/PGI certified products. The strategy of the Emilia Romagna region is to leverage on the promotion of the traditional products of its territory, such as the Parmigiano Reggiano cheese, which is particularly relevant for the Reggio Emilia area. A specific measure under the RDP aims to promote the creation and the promotion of certified PDO/PGI products (measure 3 - Quality schemes for agricultural products). The main beneficiaries of the RDP are enterprises active within the primary sector (i.e. farmers), that are formally excluded from the ERDF funds, and vice versa. Regarding cultural and environmental heritage qualification, the RDP deals with interventions on a smaller scale with a total cost per project of less than 500.000 euros.

In the environmental sector, the RDP carries out interventions of mere conservation and/or environmental protection. Regarding the competitiveness of SMEs, in addition to the ERDF commitment, the EAFRD targets only agricultural enterprises and non-agricultural enterprises processing products listed in Annex 1 to the Treaty into products covered by Annex 1.

Emilia Romagna Region Guidelines for Tourism (2018/2020)

Main theme: tourism

These guidelines conceive "Tourism and territory" not only for the sole accommodation supply system. They claim a tourist offer based on full involvement of all options in the area is required: craft values, those culinary, agricultural, natural and environmental resources, historical and cultural values as well as intangible symbols, sociability, the lifestyle and welfare, international brands and opportunities of movement, the options hidden and undiscovered, etc. become plus values on which work with perseverance and a symbiotic way, always in a context of open competition with products and also offers dissimilar. These guidelines are based also on Touristic Destination (public bodies formally structured by the Region) with the aim to promote tourism considering wider areas including both urban and rural dimension.

At micro level (Reggio Emilia municipality):

Main themes: cultural and natural heritage, environment, economy

Single Planning Document of the Municipality of Reggio Emilia (Documento Unico Programmatico – DUP):

DUP is the political and planning document of the Municipality of Reggio Emilia indicating strategic policies and goals of the Municipality in all its main areas of competences. This instrument regards micro level - the Municipality- and not the regional level- Emilia Romagna Region. DUP does not affect ERDF funds.

Among the strategic objectives of the Municipality of Reggio Emilia, there is the goal to take the city of Reggio Emilia to be included into the **Mab UNESCO** Area (Man and Biosphere area) included in the close Tuscan-Emilian Apennine National Park. This connection could support the creation of new ecological corridor connecting the urban city of Reggio Emilia - and its natural and environmental heritage including rivers, peri urban and rural areas - with the greater green and rural areas of the Province.

As for the economic development of the local context, in the DUP the strategic objectives which are relevant for PROSPERA scope are:

- 1) Strategic policy for economic development: the international city for innovation and creativity
- 3) Policy for territory: Sustainable and quality City'

The DUP claims for an integrated approach dealing with several dimensions concerning urban planning, social and cultural policies, economic activities. In particular, sustainability is conceived not just as environment but also economic, financial and social one. This approach aims at improving citizens' quality life, decreasing the soil consumption and relaunching soil and environment as asset to produce and increase economic impact. Within this goals, peri urban and rural areas can preserve natural heritage also offering opportunity for production and job creations. Peri-urban areas are conceived as spaces where is possible and needed to implement innovative practices toward a responsible economy. Moreover, according to Emilia Romagna Region and Reggio Emilia Smart Specialization Strategy, the DUP consider Agriculture and Food production strategic leverages for the local economy. The Municipality promotes an innovative governance system to gather all together local actors dealing with economy, environment, agriculture and food to implement jointly activities and strategies to increase economic impact on these issues. Regarding this policy instrument the focus of PROSPERA could be to highlight the role the SMEs and economic activities - together with other local actors - in preserving natural heritage and increasing the attractiveness of peri urban areas.

The DUP aims at increasing and improving the food production to recognize the agricultural activities as key functions to production, sustainability, effective management of land and soil and jobs production.

The DUP indicates as main goal to highlight the value of the integrated system of the territory including Cultural heritage widespread all over the territory, local distinctive competencies (food, education and mechatronics) and arts heritage. The touristic promotion of the City should consider jointly all these dimensions enhancing the

“Reggio Emilia” brand. This brand should be developed according to guidelines and Tourist Destination Emilia (to which Reggio Emilia belongs - see above) to promote jointly Food & Wine, Culture and Castles, Outdoor)

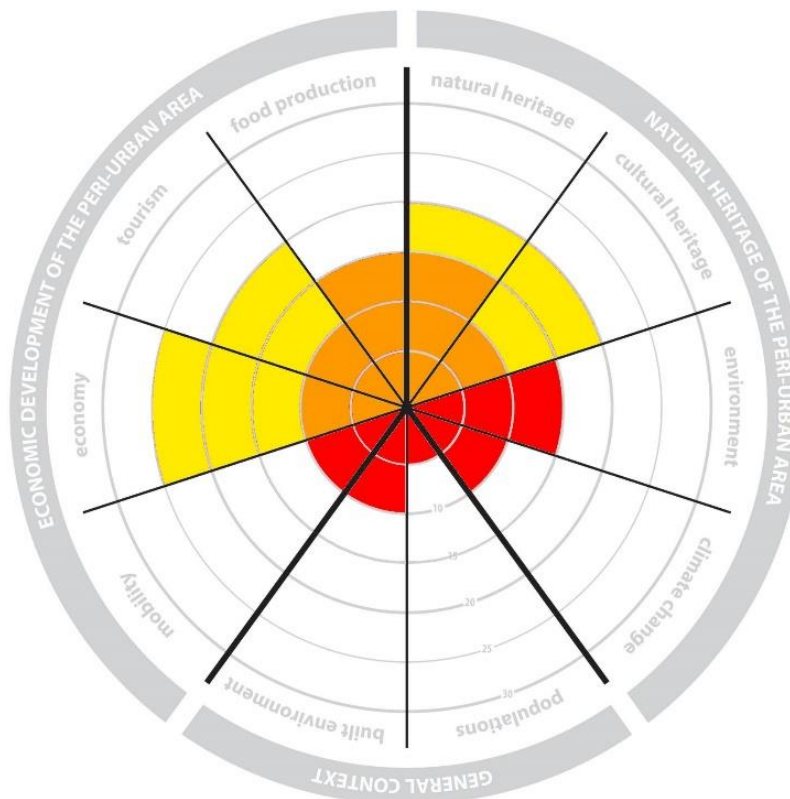
The Single Planning document relates to Micro level (Municipality) and deals with different strategic issues. PROSPERA project could influence the paradigm of “touristic opportunities” leveraging on experiences linked to peri urban and rural areas, taking into consideration “experience tourism” based on living directly some areas, meeting local communities, enjoying local environment and food.

4.5. The PROSPERA window of opportunity

In the diagram below it is visually described the overlapping (in orange) between:

- the prioritized themes concerning Reggio Emilia peri-urban areas development according to the stakeholder’s consultation (in red)
- the priorities of interventions of the selected Policy instrument, ERDF 2014-2020 – Axis 3, measure 3.3.2 (in yellow).

Figure 15 - Policy instrument and targeted themes



It stands out clearly that, while the peri-urban context of Reggio Emilia has been considered as a complex area of interventions, where all the themes are relevant and interrelated, the targeted Policy Instrument (PI), for its purpose, has a specific focus on few key themes, such as economic development, natural and cultural heritage and, as potential leverages, tourism and the valorization of local/traditional food.

However, there are two themes on which the peri-urban analysis and the PI are both converging: **food production** and **natural heritage**. These two themes are the main joined action fields on which the Local Action Plan should be implemented to maximize its potential.

Another relevant aspect of the PROSPERA framework that is shared by the targeted PI is the **pivotal role of economic development** for the implementation of the policy agenda.

On the other hand, due to the nature of the PI itself, there is **no specific attention to peri-urban economic activities nor to the environmental aspects**. With regard to this second element, it should be noticed that environmental sustainability is a cross-cutting issue of the whole Regional Operational Programme (ROP); however, it is not the main focus of the PI while it is a key element within the PROSPERA ambitions.

Neither other general themes such as **built environment or mobility** issues are directly addressed by the targeted PI, while they must be included in a local strategy for peri-urban areas, at least as external factors to deal with.

<i>Joined Action fields (FIT)</i>	<i>Missing links (MISFIT)</i>
<ul style="list-style-type: none"> in the targeted PI the relevance of economic activities such as tourism and food production for the sustainable local development is recognised 	<ul style="list-style-type: none"> The targeted PI is not directly addressing peri-urban areas
<ul style="list-style-type: none"> traditional food, natural and cultural heritage are identified as crucial assets to promote 	<ul style="list-style-type: none"> due to the nature of the PI there is no specific focus on environmental aspects

There are also other two overall factors that should be considered before implementing a Local Action Plan.

First, the recent COVID-19 outbreak has reshaped the needs but also the opportunities that peri-urban development could represent for the municipality of Reggio Emilia. For instance, it could be expected that, due to the new scenario, there will be an increase of citizens demand for local food and of the so-called “proximity tourism”. In both cases, the peri-urban areas of Reggio Emilia have an important potential to be exploited in order to meet these new needs. It should also be considered that the recent COVID-19 outbreak will accelerate changes in citizens behaviour and consumption that were already taking place, and so it is reasonable to think that these remodulation of citizens’ demands toward peri-urban assets are not just conjunctural but structural.

A second element to consider is the policy development process: due to the project timeline, when the Action plan will be developed most of the resources of the targeted PI will not be available anymore. This issue could be addressed by changing the nature of the intervention, considering for instance a follow-up evaluation of the PI, or identifying residual resources.

Summarizing, opportunities for regional policy improvement toward PROSPERA objectives could be seized by:

- Involving the Managing Authority to assess if and how there is sufficient leeway within the PI selected, and/or if it is suitable to **converge also on other regional instruments** under the ERDF programme (such as for instance the axis 5 mentioned in the previous chapter)
- Implementing a multi-level approach**, synchronizing the actions also with the local policy initiative: **MAB UNESCO** proposal as well as local **agri-food innovative projects** can become two flagship initiatives where to experience a convergence between local and regional policy development

- *reassessing among the local stakeholders the thematic priorities* after the change of scenario due to COVID-19 outbreak
- targeting the joint action fields where PROSPERA aims and the regional PI converge: **food** and **natural heritage promotion**.

Following this analysis, Reggio Emilia partners intend to focus the PROSPERA interregional exchange and consequently the Action Plan initiatives on these two main areas of intervention, in order to maximize the potential of PROSPERA toward an improvement of peri-urban governance.

5. The Good Practices of the Municipality of Reggio Emilia

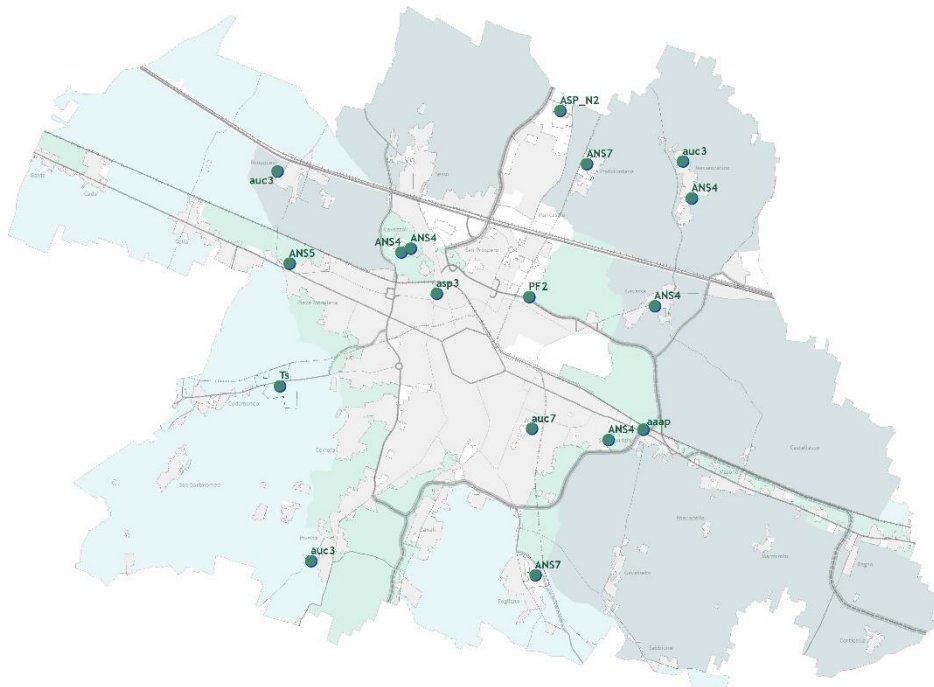
5.1. SOIL CONSUMPTION MAP

PART ONE - Characterize the selected Good Practice

What - Short summary of the practice

Variation to the urban planning tool - Municipal Structural Plan (PSC) - which provides for the cancellation of 136 hectares of potentially urbanized areas in agricultural territories - equal to 30% of the new PSC residential forecasts with a size equivalent to over 630 housing - and their reclassification in agricultural areas.

The practice falls under PROSPERA's leverages (1) *From smart to wise governance*. Also leverage (3) *Sustainable Public-Private Partnership* is relevant, as the areas subject to the "reduction" have been proposed by the owners themselves through a participatory procedure, namely an Expression of Interest, that proposed the reclassification of areas from potentially urbanized to agricultural areas.



In 2015, the Municipality of Reggio Emilia presented a strategic plan for the **enhancement and promotion of urban and peri-urban agriculture as an important economic player in Reggio Emilia**. By setting a new course on local land management policies, the Municipality has focused its efforts on reducing land consumption and limiting urban expansion, encouraging reuse and recovery. The plan acts both **at level of public and private green spaces, in order to re-evaluate areas that are currently abandoned or unused, and to promote new forms of integration and social cohesion through the care of the city green and agricultural practices**. Starting from the experiences already in progress and taking the solicitations of the community, the strategic plan provides a coordinated and integrated set of project actions, with the aim of promoting a real economy of resilience, in

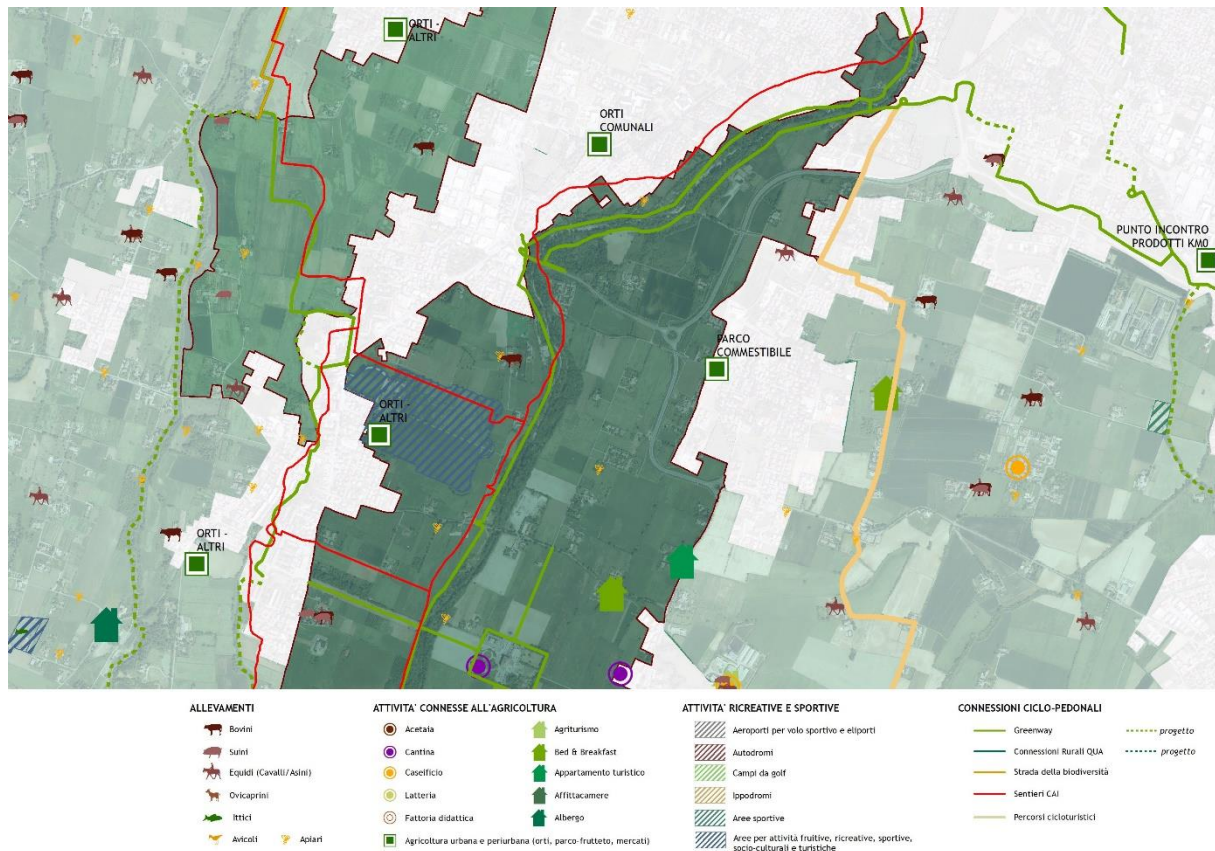
which the urban system is not limited to adapting to changes but be able to give social, economic and environmental answers that allow to face the changes in progress in the best possible way.

Synthesis of measures

- 1) A **memorandum of understanding** was promoted and signed with representatives of the agricultural world, Emilia-Romagna Region, CRPA, the Motti and Zanelli institutes, the Faculty of Agriculture, the Bonifica and Slow Food consortia, aimed at developing and implementing concrete projects and actions to promote education and employment in the sector, with the aim of encouraging the conversion of areas intended for urbanization into areas for agricultural activity.
- 2) a further variant of the urban planning regulation (Rue) was approved to simplify the procedures relating to the **redevelopment of existing farms and the establishment of new farms, also in a peri-urban context**, arranging appropriate actions which, at the same time, safeguard the natural, environmental and landscape value of the area in which these companies operate
- 3) reconversion of areas destined to urbanization into areas dedicated to **agricultural activities** as well as promotion of entrepreneurial farming
- 4) creation of new urban vegetable gardens and promotion of horticulture by private individuals, not only in gardens but also on balconies, terraces, condominium areas; encouragement of green roofs
- 5) **creation of a "municipal urban horticulture network"**, which constitutes an added value in terms of social cohesion by creating a system with the various experiences implemented on the municipal area and promoting the exchange of good practices.
- 6) **organization of events to increase awareness about rural and sustainable developments**. In particular, the Municipality promoted "**Agripride**", an event which put agriculture at the heart of the Reggio Emilia's sustainable development strategy. From tradition to scientific research, from ancient peasant wisdom to today's technological innovation, Agripride offered reflections and perspectives on the themes of agriculture, food and the environment by organizing international meetings in collaboration with research centers, the University of Modena and Reggio Emilia, CRPA - Animal Production Research Center, associations and companies in the agricultural and food sector.

Within this strategy, in 2018 the Municipality promoted an initiative to support the **Agricultural knowledge framework for the new General Urban Plan (PUG)**, consisting in the systematization and analysis of the various components that define the agricultural sector, starting from the mapping of enterprises and farms (see picture below). This analysis is integrated with the identification of the various activities related to the multifunctionality of the agricultural sector (accommodation, educational activities, production and marketing of products).

The objective is to build a systemic assessment of the elements that characterize the agricultural territory, in order to obtain a diagnostic knowledge framework to support specific management, planning, enhancement and qualification actions of the agricultural supply chain and related activities, contextualizing them according to the different vocation and peculiarities of agricultural areas.



Why – origin and aim of the practice

Land consumption

Between 2008-2013, land loss in Italy has been of 1000 square km (55 hectares/day on average). In the context of land consumption, the marginalisation and abandonment of agricultural land is a key factor. Several causes lead to this phenomenon, such as market incentives, the demographic structure of the workforce, the rules of land ownership, the accessibility of farms and the need to constantly innovate farming practices. Recent data collected by ISPRA (Higher Institute for Environmental Protection and Research) on soil consumption in the period 2003-2008 in the Emilia-Romagna plain, show the loss of some strategic soil functions, such as loss of agricultural production and increase of CO₂ emissions in atmosphere due to the loss of organic matter. The disappearance of more than 157 sq km of agricultural land at the rate of about 50 sq. m per minute led to a loss of soil functions that was estimated economically in the order of several hundred million euros.

To face this challenge, in 2017 Emilia Romagna region issued a regional law with the ambitious objective to reach a zero-balance land consumption within 2050.

Agriculture as key factor

The primary production sector of the province of Reggio Emilia is an important part of the Reggio Emilia economic market also due to the upstream and downstream agriculture. A comparison with the other provinces shows that Reggio Emilia agriculture is among the richest and most advanced in the Emilia-Romagna region. In the last

decades the technological innovations introduced have given a noticeable productive impulse to the resources employed in agriculture and this has determined on one hand a decrease of the employed labour force and on the other a remarkable leap forward of the agricultural production. The characteristics and peculiarities of the territory have created the conditions for the development of an agriculture that is mainly based on a zootechnical-forage direction. Milk production for Parmigiano-Reggiano cheese has always been the cornerstone of Reggio agriculture. The third productive branch is viticulture and can also boast ancient origins. The specialization of viticulture in the production of Lambrusco is the pride and history of Reggio Emilia agriculture. Plant productions, not re-used as feed in animal husbandry but intended for direct sale on the market, occupy a minor position in the province as well as minor agricultural and livestock activities such as horticulture, fruit-growing and sheep farming. In 2000 there were 11.357 farmers in the Reggio area: in 2010 the Agricultural national census updated the figure to nearly 9.000 farmers.

To better integrate these challenges and design innovative and effective initiatives, the Municipality has promoted the strategic plan and supported an assessment of these areas.

Where is the practices implemented

The practice involves all the agricultural territory of the Municipality of Reggio Emilia (agricultural areas with high productive vocation, agricultural areas of landscape importance, peri-urban agricultural areas).

When - duration of the practice

The procedural timing of the variation to the urban planning tool (PSC) was about 2 years, but the effects will continue over time until the new territorial government plan (PUG) is drawn up.

Regarding the mapping the practice is being prepared. A duration of 1 year is assumed for the collection and processing of data, as well as for the preparation of the Agricultural Land Development Strategy (PUG).

Who is involved in the coordination and the implementation

- Public administration
- Public bodies, including Emilia-Romagna Region (AGREA), AUSL - Local Health Unit of Reggio Emilia (Veterinary Service), Province of Reggio Emilia for the provision of data.
- Private subjects, owners of potentially urbanized areas for which the PSC outlined residential and productive transformation interventions
- Stakeholders engaged within the Memorandum of Understanding signed by the Municipality with representatives of the agricultural sector (farmers associations and business associations), Emilia-Romagna Region, CRPA, the Motti and Zanelli institutes, the Faculty of Agriculture of the University of Modena and Reggio Emilia, the Bonifica and Slow Food consortium

How – What are the resources (staff – costs)

Personnel and costs of Public Administration employees.

PART TWO - Evaluate the selected Good Practice

Evidence of success (result achieved)

Positive feedback from private subjects who have joined the Expression of Interest by expressing the desire to join the reclassification interventions proposed by the Public Administration. The Public Administration received 47 requests proposing the reclassification of 136 hectares in total.

Positive feedback from the subjects involved in the preparation of the Knowledge Framework

Number of Municipal urban gardens: 352

Which are the **core** elements /**key** elements of success?

The successful match between supply and demand. The process of confrontation between the Public Administration and private subjects showed the convergence between private interests and urban planning objectives (reduction of soil consumption and city regeneration).

Involvement of the various stakeholders in the strategy for processing / restitution of data and related information.

Multicriteria analysis.

Creation of databases using GIS software and restitution of digital geographic information through the use of automated procedures and elaboration of cartographic reports.

With regard to the specific measure of the Urban Planning Variation, a crucial external factor was the economic crisis of 2008, which affected badly the building sector, decreasing the economic profitability of new buildings. In this context, the opportunity to reduce land taxation served as a main leverage for landowners.

Potential for **learning** or transfer (already some communication material available?)

This practice can be reproduced and transferred to other territorial contexts by:

- applying it to territorial policies that foresee areas of new settlement in the agricultural field.
- by identifying the specific features and vocational characteristics of the target territory.

Challenges encountered (optional)

Further information on this Good Practice (URL) :

<https://rigenerazione-strumenti.comune.re.it/?s=riduzione>

<https://www.comune.re.it/retecivica/urp/retecivi.nsf/PESDocumentID/7E93DD5018BF0DE5C125817000422C75?opendocument&FROM=Crcscrzn1>

<https://www.comune.re.it/retecivica/urp/retecivi.nsf/DocumentID/DE113A07095D6459C1257E700041DE33?Opendocument>

5.2. GREENWAYS

PART ONE - Characterize the selected Good Practice

What - Short summary of the practice

The general objective of the good practice **Greenways – Sustainable mobility and promotion of the territory** was to jointly identify, develop and implement **sustainable** and **soft mobility solutions** with citizens living in rural villages and/or peri-urban neighbourhoods surrounding the core areas of the City of Reggio Emilia, which is featured by scattered dwellings. Depending on the specific case, they were lacking **direct and sustainable connections** either with a) core **places of social life** inside each village (parish, school, post office, sports facilities, etc.) or b) **between nearby villages** or c) with core **urban functions** located in the City centre.

The solutions to the mobility issues affecting each village/neighbourhood were identified with the concerned local communities through the so-called “**Neighbourhood Labs**” (Laboratori di Quartiere): the general objective was to complete/refurbish a dense **network of rural tracks**, comprising **river/creeks levees, cart roads of farms and other paths and tracks** in private properties, instead of planning investments in further road infrastructures.

The **greenways** were actually designed with a view to both preserve the **ecological values** and revive **social cohesion** in rural/peripheral neighbourhoods through activities and initiatives geared towards the **promotion of local heritage** (landscape, environmental, historical, cultural) as a way for **improving the liveability of peri-urban areas** for both for residents and visitors/tourists.

Being the result of a **participatory process** aimed at innovating **city governance** through the direct involvement of citizens and civil society organisations (CSOs), the specific projects of the good practice **Greenways – Sustainable mobility and promotion of the territory** are included in the so-called **Citizenship Agreements** (Accordi di Cittadinanza), detailing the respective commitments of the **Municipality, CSOs, citizens** and other **public and/or private stakeholders** willing to develop and share new model solutions for sustainable mobility.

The good practice is built upon all three leverages addressed by the PROSPERA project, with a specific focus on (3) **Sustainable Public-Private Partnership**:

(1) **From smart to wise governance** – the good practice and the specific projects thereof were the result of a **participatory process** whose fundamental goal was to **innovate traditional ways of policy-making and policy-implementation**, moving from a traditional *government model* towards a more inclusive *governance model*;

(2) **Eco-Lo(gi)cal Value Chains** –the good practice aim is to **preserve and/or restore and/or complete ecological connections** in peri-urban and rural areas;

(3) Sustainable Public-Private Partnership - Citizenship Agreements (Accordi di Cittadinanza) actually comprise the reciprocal commitments by the Municipality, on one side, and by citizens and CSOs, on the other, for implementing the projects/actions that were co-designed through the “Neighbourhood Labs” (Laboratori di Quartiere). Therefore, Citizenship Agreements provide the overall framework for single public-private partnerships for implementing shared projects/initiatives. It is worth underlying that art. 6, indent 4 bis in the Reggio Emilia City Council Regulation n.186/2017 (adopted on 11 December 2017 for updating the discipline of “Neighbourhood Labs” and “Citizenship Agreements”) provides for the conclusion of Public Social Partnerships as the suitable legal tool for implementing initiatives shared between CSOs and the Municipality.

The good practice of the Greenways can be linked to other two virtuous experiences of sustainable mobility and territorial valorization:

- **The Biodiversity Road (paths/routes/park):** The project aims to create a biodiversity road in the Modolena-Quaresimo parks, promoting healthy living in a historical-natural environment that can be reached through cycle paths and greenways. Along the way, local farms have developed a system of “assistance points”. Farms involved in the Biodiversity Road regularly release a calendar of events (guided tours, workshops, educational activities and tastings) to animate the path and increase the visibility of the project. Just like the greenways, the biodiversity road is born from a co-designing process involving neighborhoods and citizens, the so-called “Citizenship Laboratories” QUA-Comune di Reggio Emilia.
- **“Agribike” App** promoted by Coldiretti (national farmers association). Agribike is an app with GPS mapping of alternative cycling routes that, through secondary roads and paths, connect restaurants, accommodation and direct sale of agricultural products of the territory of the Coldiretti “Campagna Amica” network. The main aim of Agribike is to strengthen local economy by leveraging on the emerging interest of 'naturalistic' biking routes, thus promoting the territory and the offer of local products and services. At the moment two routes are mapped: Terre di Canossa, which crosses 8 farms, and Parco del Crostolo, which touches 5 farms. The main goal is reaching at least seven routes over the province.

Why - Origin and aim of the practice

The good practice **Greenways – Sustainable mobility and promotion of the territory** concept was formulated thanks to the participatory process “neighbourhood as commons” (QUA il quartiere bene comune) launched by the Municipality of Reggio Emilia in 2015 for innovating city governance and stimulating citizens’ active role in city management and policy formulation, by engaging citizens and Civil Society Organisations (CSOs) through the so-called “Laboratori di Quartiere” (Neighbourhood Labs) and by formalising the outcome of the process in the so-called **Accordi di Cittadinanza** (Citizenship Agreements).



Where is the practices implemented

The practice is implemented in the following neighbourhoods of Reggio Emilia:

Rural villages

- 1) Masone, Marmiolo, Castellazzo, Roncadella

Peri-urban areas and villages

- 2) Villa Sesso
- 3) Rivalta, Coviolo e San Rigo
- 4) Roncocesi, Cavazzoli
- 5) San Bartolomeo e Codemondo

When – duration of the practice

As outlined above, several different projects are comprised under the Good Practice ***Greenways – Sustainable mobility and promotion of the territory*** and are in different stages of implementation:

Rural areas

- 1) Masone, Marmiolo, Castellazzo, Roncadella – project **Participatory process for identifying rural tracks between villages** (1st Citizenship Agreement for Masone, Marmiolo, Castellazzo e Roncadella – Signed December 2015; implementation until september 2017);

Peri-urban areas

- 2) Villa Sesso – project **Paths through the history of landscape** (2nd Citizenship Agreement for Villa Sesso – signed July 2017, prolonged and still under implementation);
- 3) Rivalta, Coviolo e San Rigo – project **Greenway Stream of the Corbelli Basin – an historical-natural path for education and social wellbeing** (2nd Citizenship Agreement for Rivalta, Coviolo e San Rigo – signed July 2017, prolonged and still under implementation with further extension of the path and activities);
- 4) Roncocesi, Cavazzoli – project **Exploring historical and natural landscapes** (1st Citizenship Agreement for Roncocesi and Cavazzoli – signed december 2017- implemented until june 2019)
- 5) San Bartolomeo e Codemondo – project **Biodiversity path** (1st Citizenship Agreement for San Bartolomeo e Codemondo – signed May 2018, prolonged and still under implementation)

Who is involved in the coordination and the implementation

According to the principles and practices of multistakeholder governance, the responsibility for the implementation of the shared solutions identified through the participatory methodology underlying the initiative “neighbourhood as commons” is entrusted to one CSO, in cooperation with the other adhering organisations, institutions and/or private bodies (depending on the different projects).

The Municipality of Reggio Emilia provides a financial contribution to the projects and is responsible for the coordination of the single project with other ongoing interventions in the same areas (if any), for monitoring the correct and timely implementation of the agreed solutions and for evaluating the outcomes. Finally, the Municipality also play a crucial role in communication and awareness raising.

1) Participatory process for identifying rural tracks between villages

Responsible body: WWF Reggio Emilia

Partners: Parish Churches of Marmirolo and Castellazzo; ANSPI Community Center; Neighbourhood Social Centre Primavera, Marmirolo Primary School; Consorzio di Bonifica Central Emilia

2) Paths through the history of landscape

Responsible body: Parish Church Santa Maria Assunta

Partners: farmhouse “Il Bove”, Educational Farm “Cocconi Matteo”, Istoreco (Institute for the History of Italian Resistance and Contemporary Society), Consorzio di Bonifica Central Emilia, Pegaso Sporting Association and Comprehensive School Enrico Fermi;

3) Greenway Stream of the Corbelli Basin – an historical-natural path for education and social wellbeing

Responsible body: Association Together for Rivalta

Partners: Neighbourhood Social Centre Corbelli Basin, Bookcrossing Group, LIPU – Italian League for Protection of Birds,

4) Exploring historical and natural landscapes

Responsible body: Neighbourhood Social Centre Tasselli

Partners: Primary School Roncesesi, Consorzio di Bonifica Central Emilia, Section of the Italian Alpine Club of Reggio Emilia

5) Biodiversity path

Responsible body: Horse Club Rio Moreno

Partners: Matilde di Canossa Golf Club, Ancient Farm Emilia, Agricultural Cooperative La Collina, Free Bees Farm, Farm Bini Denny, Farm Cipolla, Acasalab farm, Biogold Farm, Section of the Italian Alpine Club of Reggio Emilia, WWF Reggio Emilia

How – What are the resources (staff – costs)

As briefly mentioned above, the projects are being implemented in partnership between the Municipality of Reggio Emilia and CSOs, Churches, Primary Schools, etc.

Costs to purchase some small equipment and works, signage of paths, communication, etc. were financed by the Municipality, whereas the bodies responsible for the single projects and their partners contribute with voluntary work to the implementation of agreed initiatives.

PART TWO - Evaluate the selected Good Practice

Evidence of success (result achieved)

As mentioned above some of the projects are still ongoing. Therefore a complete picture of the results achieved is not yet available. However, the main provisional results can be summarised as follows:

- More than 80 km of alternative pedestrian and cycle paths have been refurbished and endowed with signage
- Significant increase in number and typology of users

Improved cooperation networks between different CSOs active in the same neighborhoods but in different domains have been established

Which are the **core** elements /**key** elements of success?

- High number of CSOs and other private not-for-profit organisations active in social, cultural and environmental policy domains;
- Shared identification of issues/problems to be addressed between the Municipality and citizens/CSOs and other relevant public/private institutions/bodies;
- Co-design of interventions/projects as a response to the issues/problems identified;
- Increase in networking and cooperation between all interested stakeholders;
- Targeted and coordinated communication about the initiatives to potential users/beneficiaries

Potential for **learning** or transfer (already some communication material available?)

Whereas the successful outcome of the initiatives of course depends on a number of factors - including the technical and economic-financial feasibility of the projected interventions, the willingness and capacity of CSOs and other private not-for-profit organisations to cooperate with each other and with other public and private institutions – which clearly go beyond the command of the Municipality, the potential for transfer lies in the **specific methodology developed for the purpose of guiding the participatory process.**

At present such methodology is being revised with a view to:

- take stock of lessons learned during the first experimental implementation of the “neighbourhood as commons” process in the 2014-2019 period;
- introduce a different breakdown of the Municipal territory, no more based on the 17 historical neighbourhoods of Reggio Emilia, but rather on the similarity of urban functions and features, also with a view to streamline and simplify process management and implementation;
- introduce a medium-to-long-term strategic vision that can consistently guide the design and implementation of the specific solutions/projects, and also contribute to an improved alignment of the initiatives deriving from the participatory process with the provisions of other Municipal policy instruments, first of all with the forthcoming PUG (General Urbanistic Plan).

Further information on this Good Practice (URL) : further information is available in italian language at <http://www.comune.re.it/retecivica/urp/pes.nsf/web/Mbltsstnblscprtdlrrtr?opendocument>

5.3. EDIBLE PARK

PART ONE - Characterize the selected Good Practice

What - Short summary of the practice

Edible Park is an innovative concept aiming to strengthen the integration of farming activity within the local socio-economic context. It is based on a renewed interest in agroforestry systems as sustainable production model and bring to local consumers high quality food products while stimulating societal engagement in the farming activity and considerably reducing environmental impact.

PARCO COMMESTIBILE is managed by the Operational Group (a temporary consortium made by research bodies and SMEs) "peri-urban horticulture and agroforestry", financed by Measure 16 of the RDP Emilia-Romagna Test area: a plot of one hectare in a peri-urban area owned by the Municipality of Reggio Emilia.

80 mulberry trees (agroforestry) to rebuild the traditional rural landscape (+ C sink, biodiversity) have been planted.

Organic vegetables between trees are grown by disadvantaged workers of a social cooperative. Also new short supply chain models were tested, by selling the branded "Edible Park" products (including soup preparations), such as the direct selling at Edible Park once a week, through a local REKO group and finally creating a specific corner at a local nearby supermarket..

Which PROSPERA leverages are core of this GOOD PRACTICE?

(2) Eco-Lo(gi)cal Value Chains

It is also an example of (3) Sustainable Public-Private Partnership



Why - Origin and aim of the practice

Edible Park was inspired by the Milan Urban Food Policy Pact (EXPO 2015) with the aim of developing a model of multifunctional agriculture that can serve as a link between the city and the surrounding countryside.

Specific objectives of the project are:

- spread the rural culture, increase biodiversity, improve and enhance the agricultural landscape (agroforestry);
- provide citizens with vegetables produced locally;
- support the social integration of disadvantaged people.

Where is the practices implemented

Peri-urban area of Reggio Emilia (Canali district).

When – duration of the practice

Project started in 2016 and it is still active. The RDP measure 16 financially supported it since 2019.

The Operational Group intends to continue the experience beyond the deadline of the Innovation Plan financed by the RDP, with the collaboration of the Municipality of Reggio Emilia and citizens of the Canali district.

Who is involved in the coordination and the implementation

A consortium made by:

- Centro Ricerche Produzioni Animali - CRPA S.p.A. - Capofila
- Cielo d'Irlanda Cooperativa Sociale



- Società Cooperativa Agricola Ortolani (OrtoRè)
- Fondazione CRPA Studi Ricerche
- Parma University

How – What are the resources (staff – costs)

Overall costs of the innovation project: € 272.757,98 of which 70% has been financed by RDP: (€ 190.961,59).

PART TWO - Evaluate the selected Good Practice

Evidence of success (result achieved)

1) Improvement of the environmental condition of the area
from a simple field cultivated with commodities to an agro-forestry system rich in tree and herbaceous biodiversity, with the insertion of pollinating insects (honey bees)

reduction of average nitrate values in soil retention waters:

1st half 2018 59 mg/l

1st half 2019 35 mg/l

2) Short supply chain developed and marketing channels tested
Direct selling; REKO group; involvement of GDO
reduction of fossil fuel consumption and greenhouse gas emissions by promoting manual operations and the proximity of the production site to consumers (km 0 concept of local agricultural production). Imported food have higher environmental costs in terms of energy consumption

Carbon Footprint estimation:

0.123 kg CO₂eq/kg vegetable from Edible Park, on average

0.381 kg CO₂eq/kg vegetable from global world, on average

Soup preparations specially developed in sensory lab and branded “Edible Park”.

3) Social sustainability

Involvement of social disadvantaged people

High interest of active citizens local group

Educational activities with children from schools and summer camps

Which are the core elements /key elements of success?

- many benefits within a single farm (environmental, economic, social)
- tradition and innovation are integrated
- improved linkages between urban context and agriculture
- peri-urban regeneration/revitalization vs urban sprawl

- the park is freely accessible to citizens
- organic farming
- social and educational aspects linked to the agricultural activities

Potential for **learning** or transfer (already some communication material available?)

Several materials are already available, also in English. Papers, presentations, videos...

Challenges encountered (optional)

Some elements for further improvement and fine-tuning of the original concept:

- the need of enhanced infrastructures to ensure the adequate integration of the farming activity with the surrounding socio-economic context (improvement of logistic, commercial and social connections)
- to involve more closely the citizens in the governance and development of Edible Park

Further information on this Good Practice (URL) :

www.Parcocommestibile.crpa.it

5.4. URBAN FORESTATION PLAN

PART ONE - Characterize the selected Good Practice

What - Short summary of the practice



Urban forestation plan

The good practice foresees forestation interventions to plant several thousand trees on public areas identified by the Municipality, with the aim of increasing the city's resilience to climate change and pollution effects.

The areas chosen by the Municipality have been selected on the basis of scientific studies conducted by the IUAV University of Venice on the city's heat islands as part of the LIFE project UrbanProof, the presence of a database on public green areas held by the Environment Service of the Municipality (GDWH), citizens' requests for shaded areas (collected through social media), open laboratories and online surveys.

In this sense, forestation interventions are part of a participatory co-designing process involving the residents of targeted neighborhoods, so to respect not only the territorial context and the landscape vocation of the areas, but also the needs of the different communities in terms of accessible spaces and services. This approach contributes to create comfortable habitats with positive environmental and social effects able, strengthening social cohesion and civic responsibility towards common goods.

Another important element is the involvement of private actors in forestation interventions. As an example, Kohler company planted 650 trees (1 per each employee) in a public park of the city. Following the example of this experience, an expression of interest will be published for private individuals, companies and associations interested in planting trees in 100 public areas made available by the Municipality in exchange for taking charge of the health of the specimens planted for the next three years.

Among the forestation interventions, it is worth mentioning the experimental project in the peri-urban area of the Acque Chiare park, developing an integrated greenery intervention that included also new municipal gardens

and an orchard area. A selection of ancient fruits varieties has been used, aiming to the revitalization of sustainable agriculture and the conservation of biodiversity. The project, launched in 2018, included also the creation of an “experimental grove” to analyze the effects of vegetation on temperature regulation, micro-climate mitigation and contrast to urban heat islands in the surrounding area.

Which PROSPERA leverages are core of this GOOD PRACTICE?

- (1) Wise governance
- (3) Sustainable Public-Private Partnership



Why - Origin and aim of the practice

The forestation project of the city of Reggio Emilia has among its main objectives the protection of the city from pollution and impacts of climate change, such as heat islands and flooding, thus making urban parks more enjoyable during summer months.

Through this project, the municipality foresees to plant 50.000 trees in 5 years, in order to significantly enrich the city's tree heritage and thus improve air quality and local microclimate. In terms of environment and quality of life, it means the reduction of 2,500 tons of carbon dioxide per year.

With respect to the experimental project in Acque Chiare park, it is worth noticing that ancient plants and fruits can play a decisive role in the revitalization of sustainable agriculture as well as in the conservation of biodiversity. Ancient plant breeds that have been selected have a great adaptability to climatic and parasitic adversities due to:

- high resistance to water and thermal stress such as cold, heat waves, summer droughts
- high efficiency in the use of water in the soil
- high efficiency in the absorption and use of the reduced but balanced nutritional intake
- high disease resistance
- low need for phytosanitary treatments

This project represents the first intervention of ancient orchard in Reggio Emilia, which embodies also an historical-cultural function to replicate and preserve the ancient configuration of Reggio Emilia's traditional landscape.

At the same time, the involvement of citizens and private actors in the forestation interventions has a strong social and civic function, involving citizens in the care of public spaces and stimulating new opportunities of social and touristic economy.

Where is the practices implemented

More than 100 public green areas of the city, including Acque Chiare park.

When – duration of the practice

The Urban Forestation Plan was approved by the Municipality in 2019, and it is still under development.

Who is involved in the coordination and the implementation

The project is realised through a public-private partnership which involves different local actors, such as local associations, citizens, private companies and universities.

The most consistent planting was carried out by the Municipality and CEAS - Education Centre for Environmental Sustainability, which includes important environmental associations such as Legambiente and WWF - at Acque Chiare park. The intervention saw the participation of volunteers, local associations and citizens.

How – What are the resources (staff – costs)

The trees planted during the interventions are part of the supply that the Emilia-Romagna Region provides every year to the municipalities under the National Law "One tree for every child born". The investment by the Municipality of Reggio Emilia amounts to 6 thousand euros.

PART TWO - Evaluate the selected Good Practice

Evidence of success (result achieved)

From 2014 to December 2018 more than 9,700 new plantings were carried out in municipal public areas, both through specific projects directly under the municipal administration and through projects and initiatives carried out by various associations in the area. In December 2019 - during a collective planting event – 1.065 new shrubs were planted in the Acque Chiare Park. The event was promoted by the municipal administration and the Environmental Education Centre (Ceas), with the collaboration of volunteers, associations and citizens.

As for the experimental project at Acque Chiare Park launched in 2018, the intervention foresees the planting of 60 second-size trees of 41 different varieties of ancient autochthonous fruits, which were grown in the past in the territory of Reggio Emilia and more resistant to diseases, thus requiring less maintenance.

As for the experimental grove, 108 trees of 4 different varieties have been planted since 2018 to collect information and indications for future green design. Specifically, the following parameters linked to the effect of micro-climate mitigation will be monitored:

- light intensity (shading effect)
- air temperature
- ground temperature
- relative air humidity.

5.5. ZANELLI HIGH-SCHOOL FARM

PART ONE - Characterize the selected Good Practice

What - Short summary of the practice

Agrobiodiversity conservation and didactic farm

For over twenty years, the farm of high-school “Zanelli” has been collecting and preserving in situ and ex situ tree and herbaceous plant species of agricultural interest, specifically ancient grape varieties typical of Reggio Emilia province (Ancellotta, Marani, Salamino, Grasparossa, ecc.), ancient fruits (apple, pear, stone fruit), as well as pumpkins, watermelons, melons and ancient grains.

In addition to the conservation of plant material, the farm of the high-school preserves animal species of agricultural interest, including sheeps, pigs and cattle of the traditional Reggio Emilia breed whose milk is used for the production of Parmigiano Reggiano cheese. All over the year, the farm promotes the project “Didactic farm” by involving first-cycle schools, citizens and associations in the life of the farm with specific paths related to the knowledge of good agricultural practices, bred animals and cultivated plants, guided by the students of the Institute. Agri-environmental awareness and knowledge and fragility of the territory is also spread through these activities.

Why - Origin and aim of the practice

In addition to ensuring the agrobiodiversity of the territory, the activities of the farm have also a strong educational function, involving the students of the institute in training activities with the aim of:

- Understanding the meaning and value of biodiversity in natural and agricultural ecosystems
- Getting to know the main agricultural varieties to conserve and reproduce, focusing in particular on typical species of Reggio Emilia territory
- Being able to spread knowledge and information about the value of biodiversity in agriculture

Where is the practices implemented

Coviolo, Reggio Emilia peri-urban area

When – duration of the practice

Conservation activities started more than 20 years ago and they are still under way.

Who is involved in the coordination and the implementation

The school and the farm are directly involved in the coordination and implementation of the project. Nevertheless, they also collaborate closely with different local actors:

- Cooperation with local breeder association (“Consorzio vacche rosse”) and Parmigiano Reggiano Cheese producers’ association (“Consorzio Formaggio Parmigiano Reggiano”) for the organization of visits to the farm’s cheese factory.
- Collaboration with the veterinary service of Reggio Emilia’s local health agency for the management of "Cornella bianca" sheep.
- Collaboration with the National Association of Pigs Breeders for the genetic characterization of the "Mora Romagnola" pig breed.
- Collaboration with the University of Modena and Reggio Emilia for the genetic characterization of ancient grape varieties.
- Collaboration with the Phytosanitary Consortium of Reggio Emilia for the experimentation of low environmental impact techniques in viticulture.
- Collaboration with Emilia-Romagna Region for the conservation of local varieties of pumpkins, melons, watermelons and vines at risk of genetic erosion.

How – What are the resources (staff – costs)

School staff: Director of the farm, technicians and employees of the farm, school’s teachers and students.

Personnel costs to be borne by the Italian Ministry of Education; live costs to be borne by farm and the school.

PART TWO - Evaluate the selected Good Practice

Evidence of success (result achieved)

Inclusion of local varieties in the voluntary regional repertory of indigenous agricultural genetic resources of the Emilia-Romagna Region.

Inclusion of the following local vegetable varieties in the "National register of varieties of vegetable species without intrinsic value and developed for cultivation in special conditions": “Santa Vittoria” banana melon, watermelon for mustard with beige seeds, “Ramparino” melon, Reggio Emilia’s “Cappello del Prete” pumpkin, “Santa Vittoria” watermelon, watermelon for mustard with red seeds, banana melon of Lentigione

Which are the **core** elements /**key** elements of succes?

The professionalism of school staff and the farm's employees and the synergy/collaboration with other local actors.

Potential for **learning** or transfer (already some communication material available?)

Within the didactic activity, hypertexts on ancient vines and pumpkin varieties have been delivered.

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