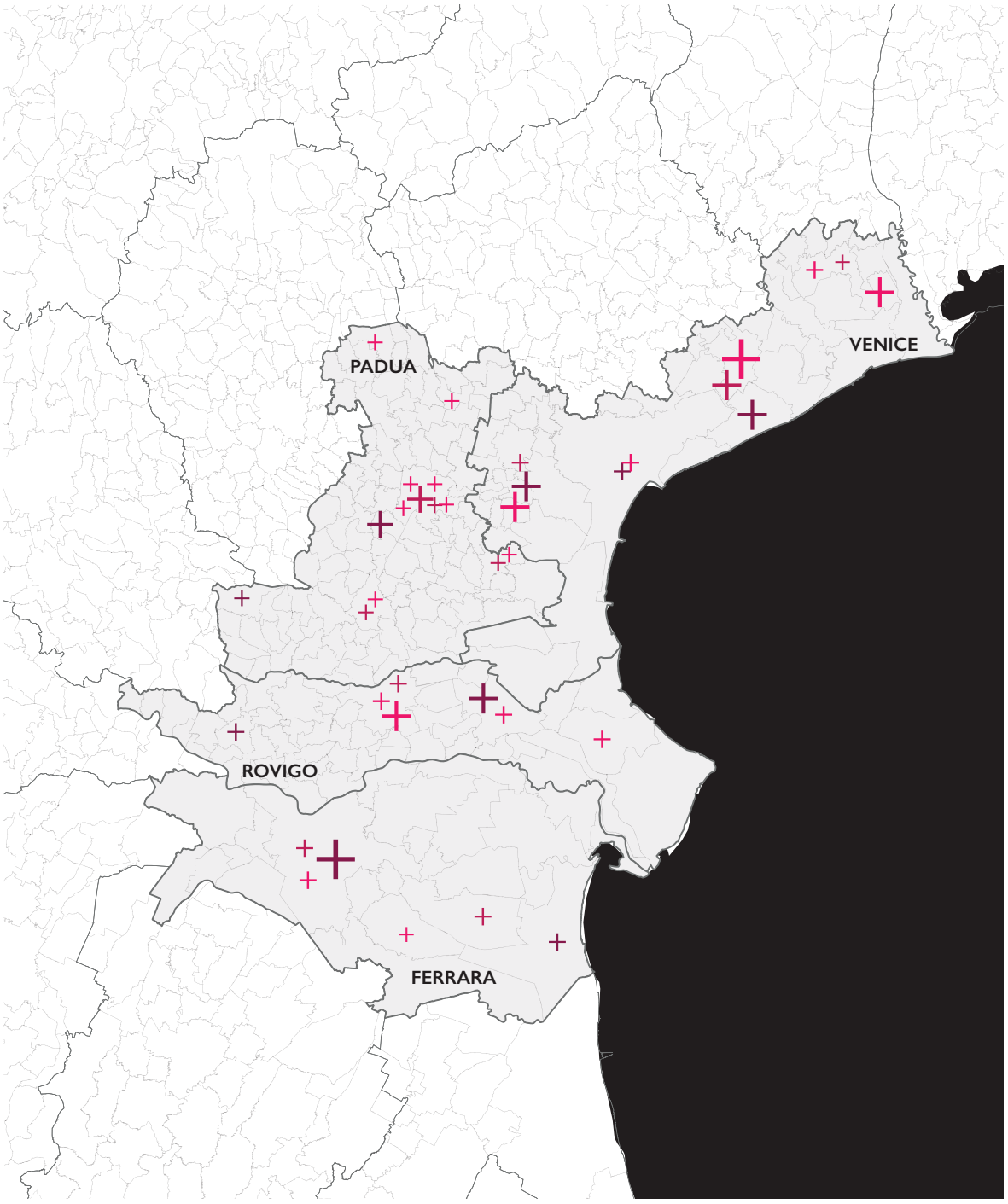


Fig. 249 Secondary education institutions in horeca, agrarian and tourism services sector (source: Provinces of Ferrara, Rovigo, Venice and Padua; elaborated by the author)

SECONDARY EDUCATION INSTITUTIONS IN HORECA, AGRARIAN AND TOURISM SERVICES SECTOR

n. of enrolled students

- \> 1000
- 500 - 1000
- 100 - 500
- < 100

FERRARA PROVINCE

total enrolled students: 35'438

- horeca sector: 1'265 / **3.5%**
- agrarian sector: 350 / **1%**
- tourism sector: 705 / **2%**

IPSAR Vergani - Ferrara:	1'065
IPSAR Remo Brindisi - Comacchio:	200
ITA Navarra - Malborghetto:	201
ITA Navarra - Ostellato:	149
IPSSCT - Portomaggiore:	20
IPSSCT Einaudi - Ferrara:	685

ROVIGO PROVINCE

total enrolled students: 9'488

- horeca sector: 1'408 / **14.8%**
- agrarian sector: 294 / **3%**
- tourism sector: 1'523 / **16%**

IPA Cipriani - Adria:	1'117
IPA Bellini - Trecenta:	291
ITA Munerati - Rovigo:	294
IPSSCT Colombo - Adria:	306
IPSSCT Marco Polo - Rovigo:	231
ITC - Porto Viro:	170
ITC De Amicis - Rovigo:	816

VENICE PROVINCE

total enrolled students: 32'889

- horeca sector: 3'851 / **11.7%**
- agrarian sector: 1'705 / **5.2%**
- tourism sector: 3'091 / **9.4%**

IT Cestari - Chioggia:	530
IPSAR Musatti - Dolo:	976
IPSAR Cornaro - Jesolo:	975
IPSSCT Corner - Venezia:	366
IPSAR Barbarigo - Venezia:	1'004
ITCG 8 Marzo - Mirano:	1'025
ITA Lorenz - Mirano:	279
ITAS Da Vinci - Portogruaro:	62
ITA Scarpa - San Donà di Piave:	339
IT Lazzari - Dolo:	664
ITC Luzzatto - Portogruaro:	574
ITC L.B. Alberti - San Donà di Piave:	1'382
IPSSCT Einaudi - Portogruaro:	471

PADUA PROVINCE

total enrolled students: 36'456

- horeca sector: 1'407 / **3.9%**
- agrarian sector: 1'644 / **4.5%**
- tourism sector: 1'750 / **4.8%**

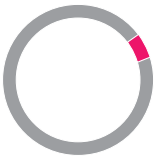
IPA Pietro d'Abano - Abano Terme:	929
IIS J. Da Montagnana - Montagnana:	478
IIS Duca degli Abruzzi - Padova:	892
IPA S.Benedetto da Norcia - Padova:	390
ITS Kennedy - Monselice:	226
IPA San Benedetto - Piove di Sacco:	136
ITE Einaudi - Padova:	452
ITE Gramsci - Padova:	186
IIS Da Vinci - Padova:	118
IIS Valle - Padova:	216
ITS Girardi - Cittadella:	172
ITS Kennedy - Monselice:	198
IIS De Nicola - Piove di Sacco:	305
IIS Newton-Pertini-Camposampiero:	103

Fig. 250 University institutions in the agricultural sector (source: University of Padua; elaborated by the author)

UNIVERSITY INSTITUTIONS IN THE AGRICULTURAL SECTOR

n. of enrolled students

- \> 1000
- 500 - 1000
- 100 - 500
- < 100



UNIVERSITY OF PADUA
total enrolled students: 57'646

agricultural sector: 3'400 / **6%**

in Legnaro:	3'228
in Conegliano:	287
in Vicenza:	355

MAIN DEPARTMENTS IN LEGNARO

Territorial management and landscape protection	326
Science and culture of gastronomy	189
Food science and technology	465
Agrarian science and technology	372
Forestry and environmental technology	414

MAIN DEPARTMENT IN CONEGLIANO

Viticultural and oenological sciences and technologies	287

MAIN DEPARTMENT IN VICENZA

Food health safety	355

QUALITY
a *multifunctional programme*

The considerations above seem to constitute a solid basis on which to move forward and propose the settlement of some activities that will be part of a *multifunctional programme of CO_2 eater activities*.
It is important to emphasize that the reasoning we are proposing below is part of a theoretical-speculative path useful for the construction of scenarios, but that, in a possible future application of the methodology within a multidisciplinary research, will have to be supported by detailed technical, economic and social analysis conducted by experts in order to better define the feasibility and size the necessary infrastructure and activities.

1. EDUCATION

The lack of educational services in the Po delta region together with a very high average rate of students enrolled in primary and tertiary sector's formation in the province of Rovigo and with the excellence of local food products seem to justify the possibility of establishing in the area of the former Polesine Camerini power plant a school complex for the secondary and university education dedicated in the horeca, agrarian and tourism promotion sectors. The considerable size of the area can encourage the establishment of experimental greenhouses for practical application and research.

2. BUSINESS INCUBATOR

The establishment of activities related to applied research in agriculture, gastronomy and tourism could generate those dynamic conditions which are normally needed to launch *business incubator programmes* for the formation of new entrepreneurs who will use a locally-generated know-how on a larger markets.

3. WELLNESS and BEAUTY

Algae's CO_2 absorption could even find concrete applications in wellness and beauty fields. In fact, as already mentioned above, the quietness of the protected landscape of the Po delta, together with a specialization in algae cultivations, could constitute an attractive tourist package that promotes body care treatments through *algae therapy* and cosmetic products derived from the same algae. In addition, some non-surgical cosmetic medicines treatment, such as *carboxytherapy*, employs injections to infuse gaseous purified carbon dioxide below the skin into the subcutaneous tissue to stimulate blood flow and improve the skin's elasticity.

4. ALTERNATIVE MOBILITY

The possibility of using carbon dioxide to make safer the process for hydrogen production and storage[3] could allow to imagine the development of an *electric hub for public mobility* with storage, recharging, service and distribution of clean energy for a full-electric public transport. An innovative hydrogen-powered and modulable mobility system could compensate the current lack of public transport in the Po delta region. The effects would not only be beneficial for our

3 see http://www.enea.it/it/Stampa/news/energia-produrre-idrogeno-in-sicurezza-sfruttando-la-co2/

study area, but would extend to the vast region of the Po delta.
The interest in developing an innovative and demand-driven system is justified by the expected increase in green jobs in Polesine Camerini linked to a new educational and tourism programme that will therefore attract more workers, students, tourists and users in general.
The main objective of *CATS (City Alternative Transport System)*[4] EU-funded project consists in developing a new generation of public transport service based on the utilization of a single modular type of vehicle for individual use, based on a self-service mode, or for collective transport, offered through a flexible composition of modules and a shuttle service.
This new hybrid public transport philosophy could prove to be useful in serving a vast territory in a more flexible way and demand-driven, trying to fill the gap between an expensive public transport service organized on a regular timetable basis which results to be economically unbearable and private motorised transports, which have a high environmental impact.
The beneficial impact of this type of alternative mobility could also affect the most important urban centres, within a radius of 50 km from the Po delta, which are located along major road or rail infrastructure, such as Chioggia, Porto Viro, Mesola and Comacchio, thus becoming intermodal hubs of exchange between the regional and national transport system and the local hybrid mobility system proposed for the Po delta region.

4 *CATS (City Alternative Transport System)* is a 5-year project (2010-2014) funded by the EU under the FP7 - TRANSPORT (see www.cats -project.org) and coordinated by a Swiss company.

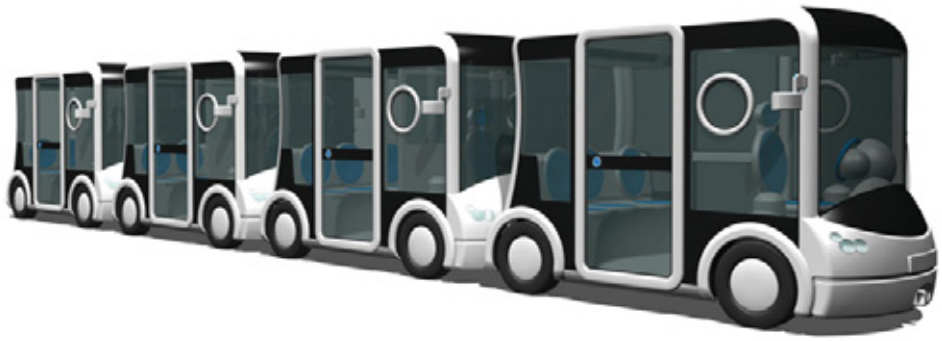


Fig. 251 CRISTAL: the hybrid transport solution developed in CATS project (source: GEA partners)

Confirming the two-stage development scenario previously seen for Ravenna industrial harbour also for this second scenario (first phase: establishment of the Eco-industrial park for the development of CCU technology; second phase: conversion of fossil fuels-based industrial activities into bio-based ones and development of hydrogen technology), we can therefore summarize as follows the synergic model between CO_2 feeders and CO_2 eaters' activities as part of a wider multifunctional programme:

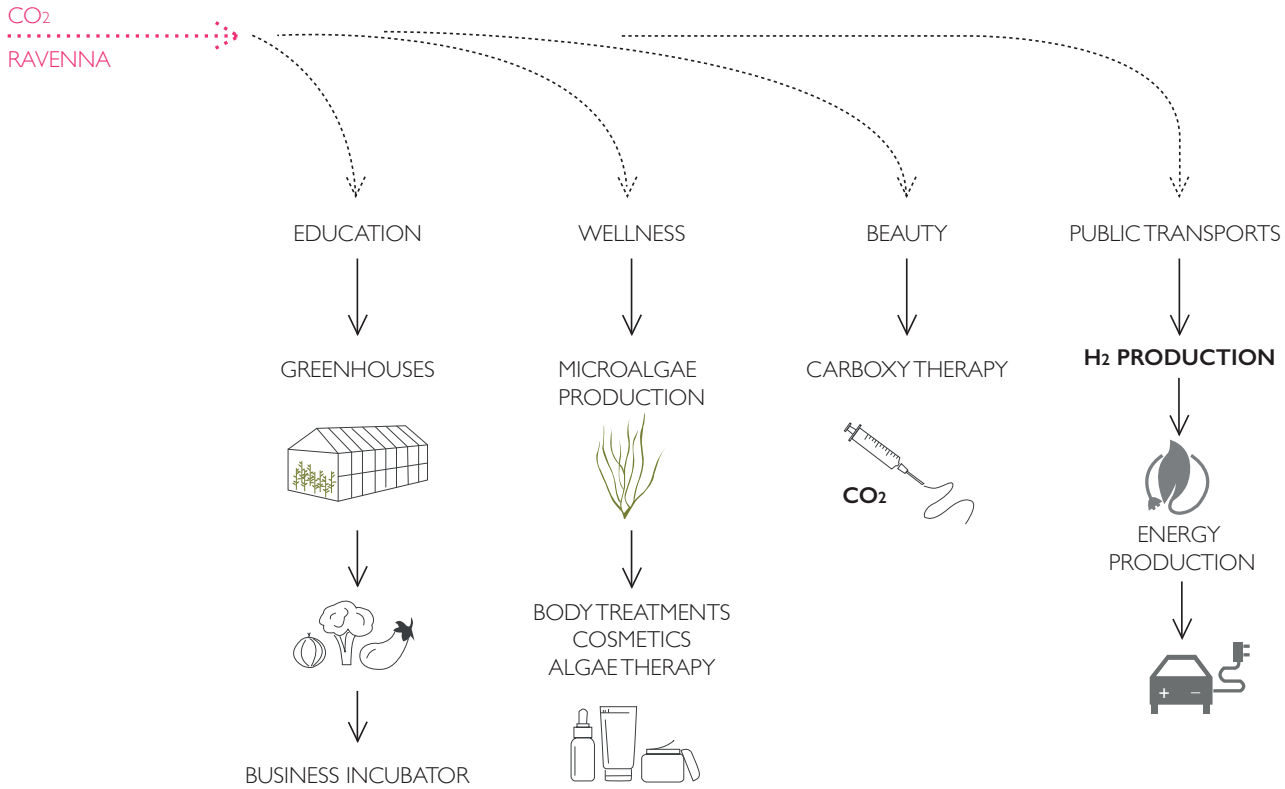


Fig. 252 Carbon neutral synergic model for a multifunctional programme (source: elaborated by the author)

QUANTITY
a *selective approach* to downsize the built-up area

The definition of the new multi-functional programme from a qualitative point of view must also address very important quantitative issues.
We cannot tackle the problem of the valorization of the site without noting that the volumes of the existing buildings that have characterized the delta landscape for almost 35 years are absolutely oversized and out of scale for any activity that is not related to energy production. Thinking about converting and entirely occupying them with a single activity is inconceivable, but even through a multifunctional program it seems to be unrealistic. In fact, steam generators and electric transformers occupy approximately 1'000'000 m^3, distributed in volumes reaching up to 35 and 60 meters in height, without taking into account the 250 m high chimney.

At first glance, these figures seem to us to be heights that we can find in metropolitan environments rather than in a natural context such as that of the Po Delta. However, we believe that the challenge is to propose a conversion of the area that reuses the existing infrastructure, which are part of the territorial palimpsest and which have been, in some way, already metabolized by the territory and by the common perception. The challenge is to reinvent the landscapes of the second industrial revolution in the light of the high value added of socio-ecological dimensions.

If we briefly analyze the energetic produtive configuration of the area, it seems clear to us that all production activities and transport flows have been concentrated in the northern area of the site, leaving the southern part for agro-industrial uses. We think that this programmatic macro-subdivision of the site can be confirmed even in the light of a multifunctional scenario. In fact, proposing a *selective strategy* based on a concentrated re-functionalization of some portions of the power plant's volumes allows to take advantage of the existing infrastructure in the urbanized part of the site.
On the contrary, a *tabula rasa approach* would erroneusly lead to considering height and grandeur of volumes as the main problem on which to intervene. This would generate a dispersion process of the activities in lower volumes scattered throughout the site in order to obtain an apparent better integration into the context. The effects of this functional dispersion would lead to a massive spread of mobility, energetic, sewage infrastructure throughout the site, being, environmentally speaking, more invasive and less sustainable than the other approach.
Thus, our scenario assumes the grandeur of the volumes as a historicized character of the landscape around which trying to invent a new narrative of the former power plant site.

A first foreseeable reorganization and volumetric reduction action could answer the question: *what are the upyclable volumes that make possible the understanding of the site's energy production past*? From our point of view, the four monumental 40x40x60 m parallelepipeds of the steam generators can act as a metaphorical connection between the industrial image of the past and their re-functionalization in a socio-ecological way. This downsizing operation would lead to a considerable cut of 600'000 m^3.

Each boiler, in fact, represents 100'000 m^3. If we consider an average floor height for public activities of 3.5 m, we might think of settling a 17-storey and 28'500 m^2 building inside a boiler volume.
Given that proposed activities require natural lighting in most of their spaces, the current boilers' depth (40 m) results to be excessive.
Generally speaking, we can imagine organizing the built-up areas around some voids which could reduce the gross surface by between 10-15%. Therefore, we can consider a maximum constructible surface area of 25'000 m^2 per boiler, thus reaching a total of 100'000 m^2, taking into account the sum of the four steam generators' volumes.

MEASURE
benchmark

If we consider as a benchmark the *Apple Park*, the corporate headquarters of Apple Inc. under construction in Cupertino (California) by Norman Foster, the building will house more than 12'000 employees in one four-storey circular volume of approximately 260'000 m^2.
Our 100'000 m^2 we were talking about would represent approximately more than one third of Apple Park's programme. Considering an average surface area of 30 m^2 per employee, our programme could house about 3'500 people.
Clearly these figures still seem unrealistic, first of all, because we are not in a dynamic environment like Cupertino, secondly, because it is not Apple that is setting up its headquarters, and thirdly, because the entire Municipality of Porto Tolle counts about 10'000 inhabitants spread over 257 square kilometres (38 inhabitants/sqkm). A further downsizing seems to be necessary.

HARD PROGRAMME
critical mass for a local development

If we want to justify the quantification of a target group of potential users on the basis of a known historical employment figure, 300 workers were employed on site during the exploitation of the area as a power plant (Caldiron, 2013).
It follows that reaching a maximum target of about 1'000 users, among workers, students and tourists, would almost tripled the previous users capacity, with the subsequent impacts on existing infrastructure that should not be underestimated.
Given the previous average surface of 30 m^2 per worker or temporary user, we can therefore imagine fixing the overall amount of constructible gross

surface area to 30'000 m^2, corresponding to about 100'000 m^3, which have to be distributed inside the four former steam generators'volumes.
This seems to us to be a considerable surface, but necessary to create that critical mass which is necessary to run the envisaged multifunctional program.

SOFT PROGRAMME
plants and algae greenhouses as CO_2 eater activities

As the four former steam generators make 400'000 m^3, the remaining three quarters of unbuildable volume could play an important role in terms of CO_2 absorption programme. In fact, they could be used to implement a *soft programme* of activities, made of removable structures, related to the applied research in new hydroponic cultivation processes and micro-algae cultivation in vertical greenhouses boosted by the injection of that CO_2 recovered from Ravenna industrial activities.
In order to obtain a mitigation of the visual impact of the four volumes, we might consider adding a further limitation that could however enrich the landscapes we are imagining: only 50% of the soft programme volume can be realized inside the steam generators' volumes, while the remaining 50% could be freely distributed in the southern part of the site, devoted to agro-industrial production.
The construction of the hard and soft programmes will have to evolve at the same time, maintaining a constant presence ratio of 1:3 on the site.

To sum it up, we can imagine that our scenario could be articulated within the following overall volumetric and dimensional constraints:

BOILERS' CURRENT VOLUME		**400'000 m^3**
HARD PROGRAMME VOLUME		**100'000 m^3**
SOFT PROGRAMME VOLUME		**300'000 m^3**
of which:	**within boilers' volume**	**150'000 m^3**
	distributed over the area	**150'000 m^3**
MAXIMUM HEIGHT		**60 m**

We could consider the four emptied boilers' volumes as the maximum overall dimensions for the simultaneous settlement of a *hard* and *soft* part of the programme, with the intent of hybridizing them and leaving however a wide volume compositional freedom.
In fact, with only the above limitations, several settlement strategies are allowed, thus leaving the possibility to intervene through superimposed floors which will not reach the maximum allowed height, as well as through lateral juxtapositions, that exploit the maximum height, but that will not completely occupy the maximum ground footprint.

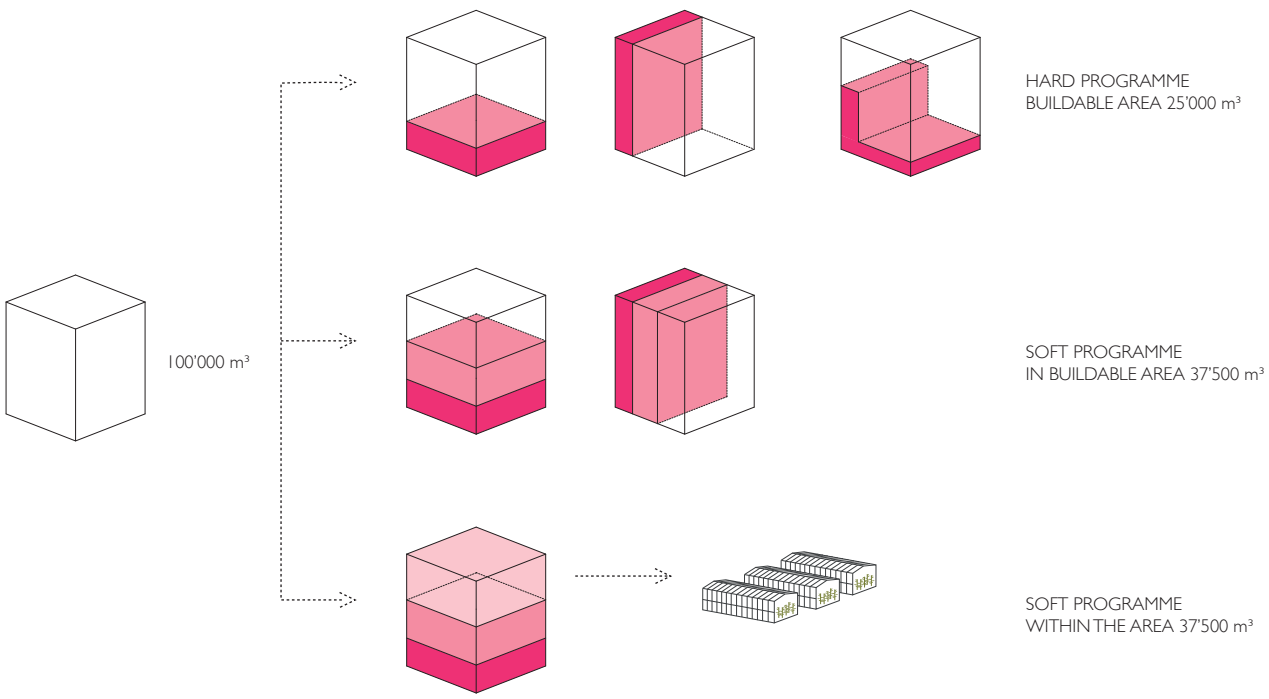


Fig. 253 The compositional freedom of hard and soft programme inside the boiler's volume outline (source: elaborated by the author)

phase 1: 2025
hard and soft programme

With regard to this scenario, we would like to test an incremental rather than typological development of the program, because we believe that a sustainable local development, economically as well as socially speaking, depends on the simultaneous settlement of the four sectors. In fact, some activities, which are socially useful to create a sense of community, are not necessarily generating an economic value added, such as services for secondary education. On the contrary, tourism-related activities related to wellness and gastronomic sectors could have a significant economic impact on the business plan from the first steps of the conversion process. At the same time, we must not forget the importance of providing an adequate public transport service that can allow users reducing the use of private motorized transport and better connect the site of Polesine Camerini to a regional transport system.

The four macro-activities will be distributed each within a boiler volume, thus allowing a necessary functional separation, but maintaining the synergic proximity which results to be necessary to operate a multifunctional program.
Spatial needs of the four macro activities are different, which is why the gross surface area does not necessarily have to be equally distributed among the four sectors. This will therefore allow to concentrate more hard and soft activities in some volumes, reducing the density of others.

The following dimensioning has been carried out on the basis of the dimensional design criteria proposed by the text:
Neufert, E. (2013). *Enciclopedia pratica per progettare e costruire.* Milano: Hoepli.

BOILER 1 - HARD PROGRAMME 30'000 m^3

EDUCATION SECTOR / University Institution and R&D

APPROXIMATELY GROSS SURFACE AREA 3'500 m^2

APPROXIMATELY VOLUME 12'500 m^3

As we have seen in the cartographies presented above, the two branches of the Department of Agricultural sector of the University of Padua, located in Conegliano and Vicenza, count approximately 300 students each.
As far as our case study is concerned, we could imagine that the formative and research activities that can be set up in Polesine Camerini could actually be seen as a detachment of the Department of Agriculture of the University of Padua which could be specialized, just to give an example, in hydroponic cultivations, cultivations in marshy environments and in algae cultivations. Since Conegliano and Vicenza are urban centres definitely better connected than our case study, we can imagine that the audience for the attendance of these activities can be lower, reaching about 150-200 units between enrolled students and researchers.

EDUCATION SECTOR / Secondary Education

APPROXIMATELY GROSS SURFACE AREA 5'000 m²

APPROXIMATELY VOLUME 17'500 m³

Secondary education institutions in horeca, agrarian or tourism services in small urban centers in the province of Rovigo count approximately between 170 and 300 students. Thus, we can imagine that the secondary school complex in the site could consist of 2 sections of 5 classes, which means approximately 250 students. Facilities related to educational complexes, such as sports hall, canteen, cafeteria, printing centre and auditorium are included in the calculation of the average surface area per student and can be shared between University, research and secondary education institutions.

BOILER 2 - HARD PROGRAMME 15'500 m³

WELLNESS and BEAUTY / Spa and therapeutic treatments

APPROXIMATELY GROSS SURFACE AREA 1'000 m²

APPROXIMATELY VOLUME 3'500 m³

The programme is designed in order to accommodate activities body well-being for 60-80 users, through a range of thermal baths, rest areas, massage areas, algae therapy areas, areas for non-surgical beauty treatments. The surrounding natural context would also make possible to implement outdoor water basins for body care treatments.

ACCOMODATION / Premium hotel / 60 beds

APPROXIMATELY GROSS SURFACE AREA 1'500 m²

APPROXIMATELY VOLUME 5'000 m³

We can imagine that the enhancement of a wellness and body care tourism could be completed by the offer of a high level 60-bed hotel which can accommodate clients for multi-day treatments.

ACCOMODATION / Youth hostel / 100 beds

APPROXIMATELY GROSS SURFACE AREA 2'000 m²

APPROXIMATELY VOLUME 7'000 m³

The site could also become a hub for a slow and ecological tourism network, which is probably more interested in the knowledge of the territory and landscape than in the wellness offer. The hospitality offer can therefore be completed by an alternative accommodation facility, such as a youth hostel, which can also be converted into a temporary accommodation facility for students and workers of the site.

BOILER 3 - HARD PROGRAMME 15'000 m³

BUSINESS INCUBATORS / Offices and laboratories

APPROXIMATELY GROSS SURFACE AREA 5'000 m²

APPROXIMATELY VOLUME 15'000 m³

Applied research activities can be supported by synergies created between university institutions, research centres and business incubator programmes, in order to develop research products and bring them to the real market.

The simultaneous presence on the site of all the necessary conditions for the launch and operativity of these kind of programmes can encourage the establishment of offices, laboratories and other connected services which can exploit a local-created know-how for a wider production. Let us assume that, initially, 200 workplaces, corresponding to more or less 15-20 small-medium entreprises, could benefit from this synergic environment.

BOILER 4 - HARD PROGRAMME 10'500 m³

ALTERNATIVE MOBILITY / Electric hub for public mobiltiy

APPROXIMATELY GROSS SURFACE AREA 3'000 m²

APPROXIMATELY VOLUME 10'500 m³

The hybrid alternative mobility system would principally need some spaces for storage, recharging, service, production and distribution of clean energy for a full-electric public transport and parking lots for modular vehicles.

Considering that each module of the CRISTAL hybrid transport solution mentioned above can carry up to 5 people in the individual configuration and up to 18 people standing in shuttle mode, we could imagine that a fleet of 30 modules could cover the transport needs for 50% of the users of the area in shuttle mode.

TOTAL PHASE 1		**71'000 m³**
BUILDABLE RESERVE		**29'000 m³**
SOFT PROGRAMME - PHASE 1		**213'000 m³**
of which	**within boilers' volumes**	**106'500 m³**
	distributed over the site	**106'500 m³**

It is worth highlighting the fact that the settlement of this multifunctional programme could allow the establishment of useful synergies between the educational programme, the accomodation and wellness services through the involvement of students during working periods and internships.

In order to complete the offer for the users of the site, some common services, (restaurants, cafés, stores) could occupy the ground floor of the four volumes.

From an energetic production point of view, there is certainly no lack of synergies in this sector: in fact, the cultivation of algae and plants in greenhouses for research activities could devote some biomass for energy purposes.

Recalling once again that the dimensioning of the activities will require more in-depth studies from an economic, financial and social point of view in the framework of a concrete multidisciplinary research, according to our assumptions based on available data and limitations, phase 1 does not fully exploit the buildable potential.
Therefore, we could imagine a temporary use of this not exploited volume for soft programme activities, thus increasing the area dedicated to vertical greenhouses.

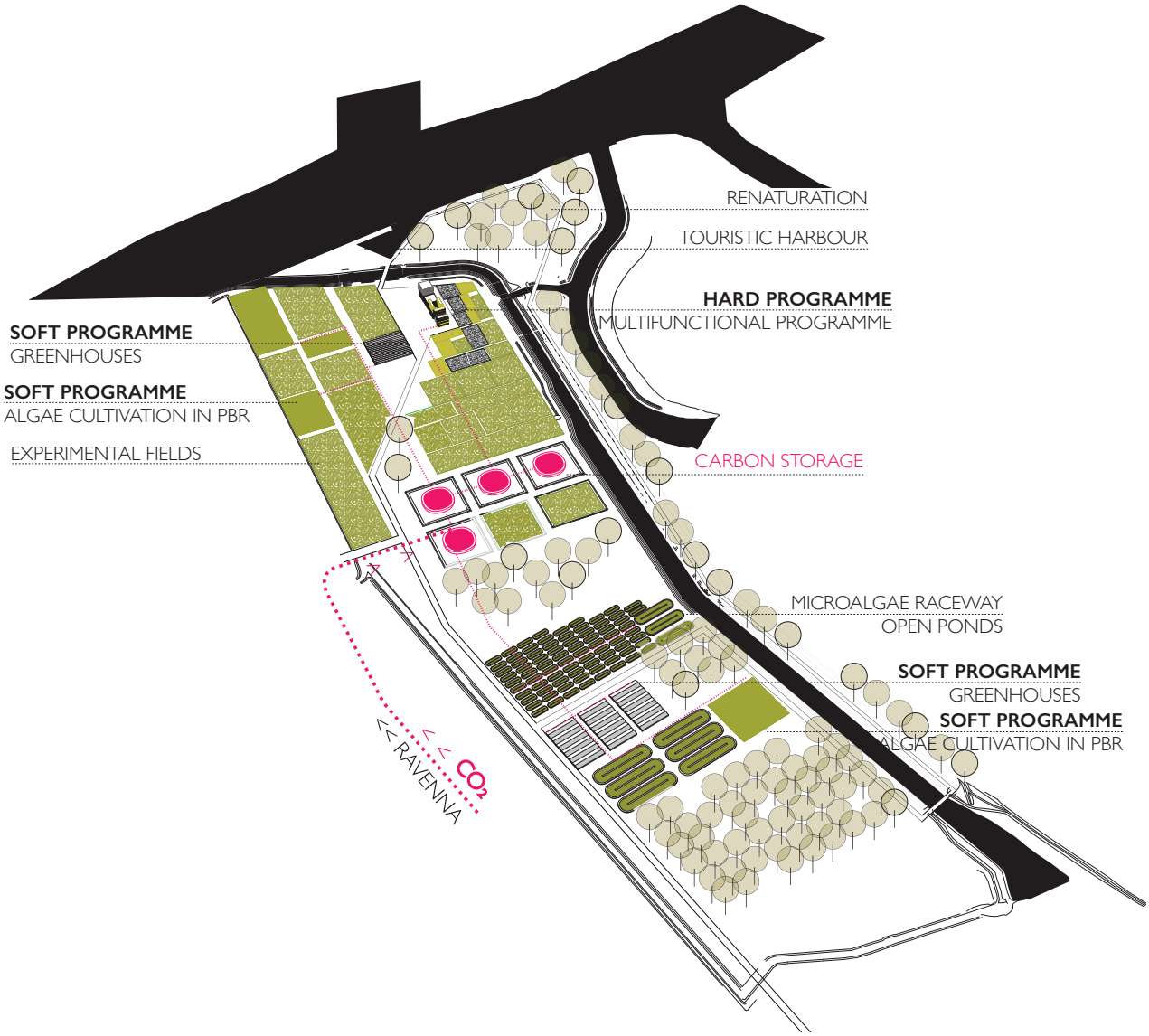


Fig. 254 Polesine Camerini power plant: hard and soft programme (source: elaborated by the author)

Fig. 255 Polesine Camerini multifunctional **OIL**AND**SCAPE***: scenario 2 (source: elaborated by the author)*

phase 2: 2040 incremental growth

Phase 2 consists of an adjusting step of spatial needs of activities and of a technological upgrading in order to improve activities' performance and reduce their environmental impact.
If necessary, the buildable volume temporarily occupied by soft programme will be redirected to hard programme activities. The trend of activities in these first operational years will allow to define the spatial needs for the extension of the hard programme. Thus, the remaining buildable volume could be used to increase accomodation tourism offer, educational and research spaces or business incubators' activities. The construction of this portion of hard programme will be followed by the settlement of the corresponding part of soft programme activities, maintaining the same volumetric ratio (3 times the volume of soft programme activities compared to the hard programme) and the same percentage of distribution within the volumes of the former boilers and outside (50%-50%).

As in the first scenario, the implementation of the microalgae cultivation technology in photobioreactors could complement the construction of our energy landscape. In this case, hydrogen production would take place directly during the phase of algae photosynthesis and would be recovered and conveyed to the electric hub for public mobility to charge hydrogen batteries for the fleet of vehicles.

TOTAL PHASE 2		**29'000 m^3**
BUILDABLE RESERVE		**0 m^3**
SOFT PROGRAMME - PHASE I		**87'000 m^3**
of which	**within boilers'volumes**	**43'500 m^3**
	distributed over the area	**43'500 m^3**

The total surface area of the soft programme represents approximately 10 hectares of experimental greenhouses, of about 5 hectares in vertical greenhouses within the boiler volumes and 5 hectares distributed on the site. The remaining land within the plot could be used, during both phases, for traditional agricultural cultivations, for the implementation of aquaculture basins and for the cultivation of algae in raceway open ponds, so as to create a diversified landscape.

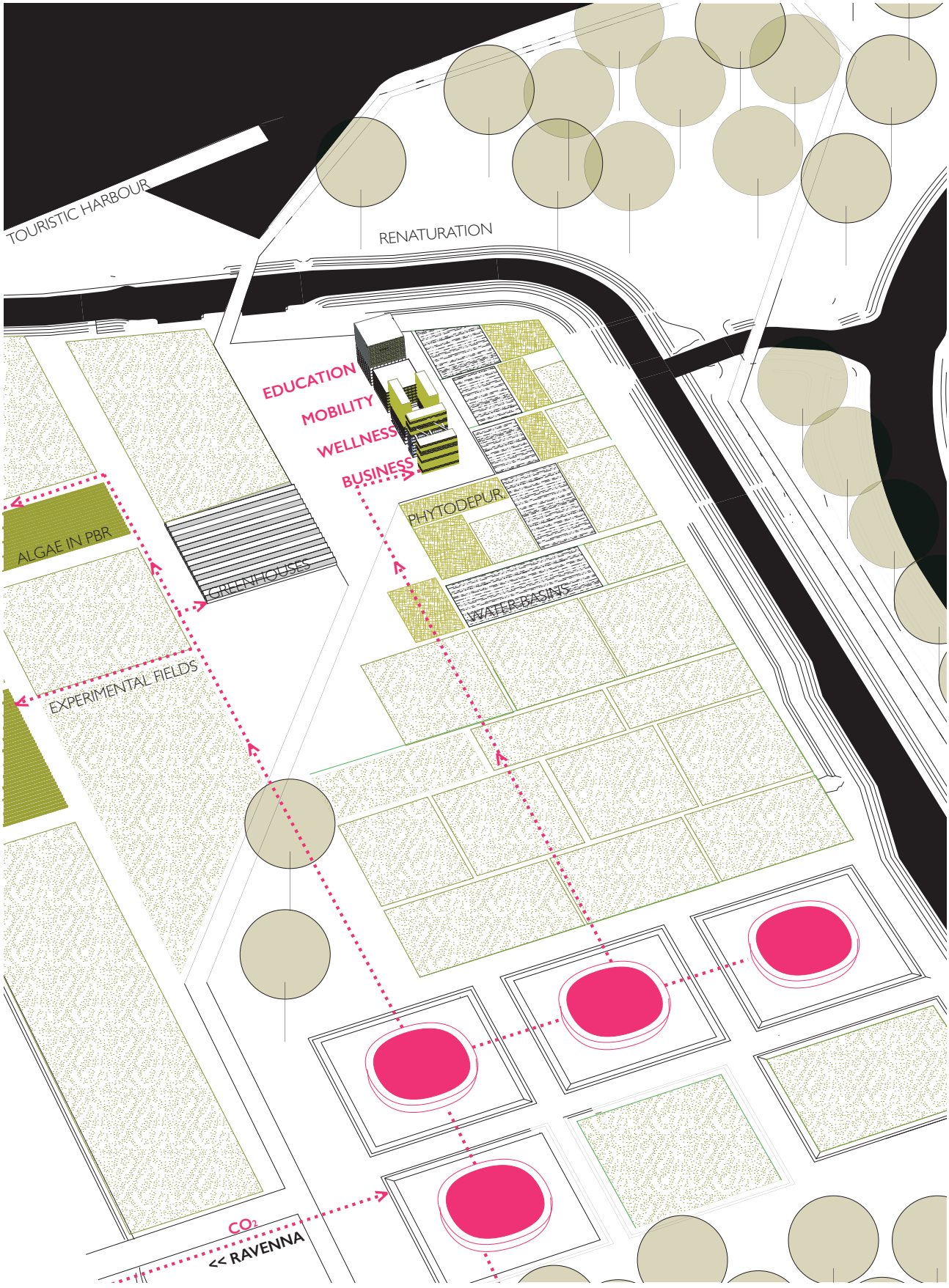


Fig. 256 Polesine Camerini hard programme (source: elaborated by the author)

Fig. 257 Polesine Camerini multifunctional **OIL**AND**SCAPE***: scenario 2 (source: elaborated by the author)*

PART VI

OILAND**SCAPES are green infrastructure**

Comparative assessment: multi criteria analysis of scenarios

scenarios as a measuring tool

The construction of scenarios, through reasoning and some simple design tools, allows different development strategies to be compared. This methodology does not aim to give a value judgment on the quality of scenarios themselves, but rather wants to provide decision-makers with useful tools for the assessment and measurement of the effects that scenarios can have on the territorial development.

If, at a first sight, scenarios' building helps decision-makers to visualize and imagine the consistency and typology of the programme for possible future developments, the assessment process cannot stop at this stage.

We are aware that territorial planning problems are complex, because they often involve many stakeholders and have to answer to relevant social, economic and environmental challenges. Thus, intuitive decisions risk to be simplistic because of the lack of a simultaneous evaluation of the interrelation among problems.

Multiple Criteria Decision-Making

Quoting what Stanley Zionts wrote in 1979 in his article *MCDM - if not a Roman numeral, then what?* [1], Multiple Criteria Decision-Making (MCDM) stands for "problem solving with multiple conflicting objectives".

Thus, in order to compare and assess the impact of scenarios in an objective way, complexity needs to be simplified and its components must be separated in objective evaluation criteria. In the light of the priorities initially defined, it will become possible for decision-makers to position themselves in front of scenario's compliance with the criteria chosen.

1 see Zionts, S. (1979). *MCDM - If not a Roman numeral, then what?*, in Interfaces, Vol. 9, No. 4, August 1979, The inStitute of Management Sciences

Decision-makers will not necessarily have to choose which one of the scenarios proposed has to be implemented. In fact, the knowledge and awareness achieved during the assessment process will allow them to propose more complete development strategies that could combine some features of different scenarios.

famlies of assessment criteria

It is generally known that the pursuit of a sustainable development aims to achieve a balance among economic, ecological and social components.
If the assessment process was defined by criteria that directly address these three aspects, we believe that the evaluation process would focus on the programmatic aspects already explored.
For this reason we are convinced that some transversal criteria, which, for example, put at the centre of the reflection the role of the stakeholders in the implementation and management process or the repeatability of virtuous processes on a long-term period would allow to give neutral judgments from a content point of view, but rather the would define objective and targeted appraisals in terms of measurable territorial effects.

We would like to set up a matrix based on three families of assessment criteria that seem to be preponderant in a decision-making process, namely:

- stakeholder involvement;
- territorial governance;
- local consensus.

1. stakeholders' involvement

The criteria for stakeholders' involvement aim to provide decision-makers with the preliminary information necessary to decide how to build the political and technical path for a territorial conversion process. On the basis of these assessments, decision-makers will be able to define the strategies and tools which will be necessary to regulate the public-private partnership, sharing common objectives of social and ecological responsibility.

1. Stakeholders' diversification

In a long-term perspective, the involvement of a wide range of stakeholders (public, private, economic and social associations of the territory) could ensure a greater programmatic resilience of the site towards socio-economic changes.

2. Local community involvement

A successful completion of the conversion operation may depend on the active participation of the local community in the definition of some programmatic aspects.

3. Site management

The management of activities, site spaces and building rights' allocation among the stakeholders could represent a very impactful aspect that should be considered from the beginning of the economic-financial perimeter of the operation.

4. Public interest

The public interest of the transformation process will be defined by the profile of the stakeholders involved.

5. Horizontal hierarchies

The establishment of a horizontal hierarchical system among stakeholders will guarantee the possibility of measuring their actions in terms of social and ecological responsibility. The coexistence of different interests should be a natural process for balancing the responsibilities of key operators towards civil society.

Territorial governance assessment criteria must provide decision-makers with the necessary tools to frame the administrative-bureaucratic path to be taken, as well as those potential synergies with superordinated planning tools.

1. Compliance with existing legislative framework

Scenarios must be analyzed from an administrative point of view, highlighting those aspects that respond to the legal framework and those that would require for derogations. The criterion should focus on procedures' timeframes as relevant information for the decision-making process.

2. Adherence of the programme to the real territorial context

There is often a great time gap between territorial planning objectives and real territorial needs. The criterion is conceived in order to relate, from a quantitative and qualitative point of view, the compliance to the regulatory framework with the usefulness of the envisaged programme in relation to the real territorial context.

3. Public-private concertation

Public-private partnerships normally increase the quality and efficiency of services. They require the definition of public-private agreements which can be operational because of their public interest.

4. Inter-territorial synergies

Planning tools generally define land uses and territorial develpment strategies on the basis of administrative boundaries, without looking at wider trans-regional synergies and opportunities. This criterion should aim to provide support to decision-makers in order to contextualize the strategy in a wider scale focusing on the possibility to take advantage of some trans-regional territorial benefits which could contribute in enhancing the local territorial development.

5. Implementation of national development strategies

National development strategies are rarely incorporated into planning tools. The criterion should provide decision-makers with the tools to focus on the possibility to integrate existing national develpement strategies into the legal framework.

3. local consensus

Local population's acceptance often determines the final outcome of territorial transformations. Decision-makers must therefore be able to assess the positive effects that transformations can have on local communities, thus focusing communication strategies on these expected benefits. Criteria are taken from the *National Strategy for Growth and Economic Development of Inner Areas* (Barca and Casavola, 2014), the Italian national programme for the enhancement of the local development in those territories which have limited access to basic public services (education, health, mobility).

1. Increase in the well-being of the local population

The beneficial effects of a local development strategy on the well-being of a local community are a key element if the know-how brought by the application of the scenario is replicable and applicable in other contexts and domains.

2. Increase in local demand for labour

The criterion should help decision-makers to assess the scenarios according to their potential to create induced labour on a larger scale and on a long term perspective.

3. Valorization of territorial capital

By *territorial capital* we mean those existing local excellences or cultural and landscape heritage which should be enhanced and on which it would be desirable to invest in order to foster a sustainable local territorial development. Decision-makers must be able to assess the potential of scenarios in involving the existing economic and cultural networks in future development strategies.

4. Reduction of the social costs of de-anthropization

Preventing the abandonment of territories could guarantee a continuous and spontaneous maintenance of the territorial infrastructure, thus preventing environmental disasters and their high social, economic and environmental costs. Policy-makers should therefore be able to assess which of the analyzed scenarios could have a better impact for repopulating processes in the medium-long term.

5. Enhancement of local development factors

The germ of the local development must be sown, but it must be allowed to sprout and contaminate spontaneous development processes. Decision-makers must interpret the scenarios in the light of this perspective, imagining how to set up a monitoring path of local development processes, with the aim not to leave territories alone as soon as the incubation phase is over.

SCENARIO 1 / STAKEHOLDERS' INVOLVEMENT

1. Stakeholders' diversfication **LOW**

The energy conversion scenario of the Polesine Camerini site does not open up to many stakeholders. Maintaining the energy-producing role of the area implies the sole involvement of national or international actors operating in the energy sector. An alternative scenario, but which does not open to more diversified scenarios, could see the *Eco-industrial Park* established in Ravenna industrial harbour for the implemetantion of CCS technology investing also in the requalification of Polesine Camerini site so as to diversify their production by reusing the waste CO_2 emitted by their main activities.

2. Local community involvement **LOW**

The high technical skills which are necessary for the development of the energy conversion process do not require the involvement of the local population in participatory processes.

3. Site management **HIGH**

It is expected that only one company or a consortium of energy sector companies will manage energy activities and their development on the site.

4. Public interest **LOW**

An activity based on a centralized energy production seems to better respond to private economic interests rather than satisfying the lack of public services which could represent an intervention which meets the public interest.

5. Horizontal hierarchies **LOW**

The concept of a centralized conversion of energy production does not open up to any kind of horizontal relationship with final consumers or even with local authorities.

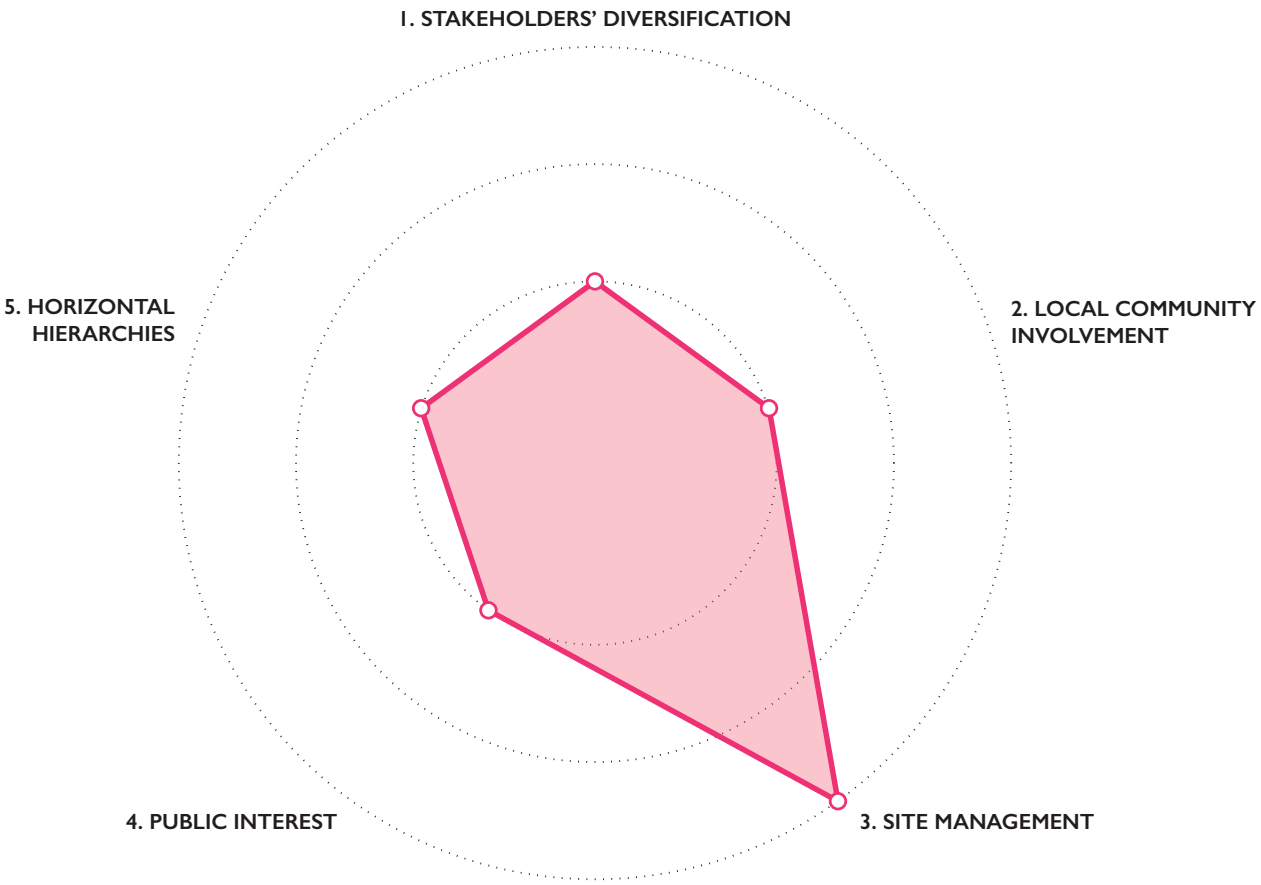


Fig. 258 Scenario 1: stakeholders' involvement assessment (source: elaborated by the author)

SCENARIO 2 / STAKEHOLDERS' INVOLVEMENT

1. Stakeholders' diversfication **HIGH**

The development of the second scenario requires the participation of a wider range of stakeholders. The presence of educational services will involve public institutions and public or private research centres, while tourism-related activities will attract private investors specialized in wellness and accomodation sector, as well as companies specialized in the sale and distribution of local Italian food products, such as Eataly. At the same time, enhancing local agricultural production and aquaculture excellences will also allow the involvement of economic and social associations of the territory. The integration of business incubator's activities could also attract already existing realities, such as H-Farm in Roncade (Treviso) which has already experienced the establishment of this kind of programme in rural contexts. Finally, activities related to alternative mobility could bring private or public-private companies involved in the provision of municipal or provincial mobility services, as well as Ferrovie dello Stato Italiane, which is the current provider of the weak bus service in the area, and could involve research centres for the implementation of electric and hydrogen vehicle technologies.

2. Local community involvement **HIGH**

The involvement of local communities could be organized under the form of participatory workshops and it represents a fundamental aspect for the definition of the scenario programme as it allows to strengthen possible synergies with the existing economic, cultural and social network.

3. Site management **MEDIUM**

Activities' management could be more complicated because of the presence of many stakeholders. The establishment of a *consortium*, that is to say a legal institute that regulates a voluntary aggregation of private or public entities for common business initiatives, could define from the beginning of the process the relations among the different operators.

4. Public interest **HIGH**

The level of interactivity of the proposed programme with the local community is high, both directly, by offering work and meeting places, and indirectly, by encouraging and enhancing existing local excellences.

5. Horizontal hierarchies **HIGH**

The necessity to focus on common interests and synergies lays the foundations

for establishing a horizontal hierarchical relationship between public and private operators. The participatory process which could be undertaken with the local population would make the horizontality of the system even more evident, thus making all the stakeholders equally responsible from a social and ecological point of view.

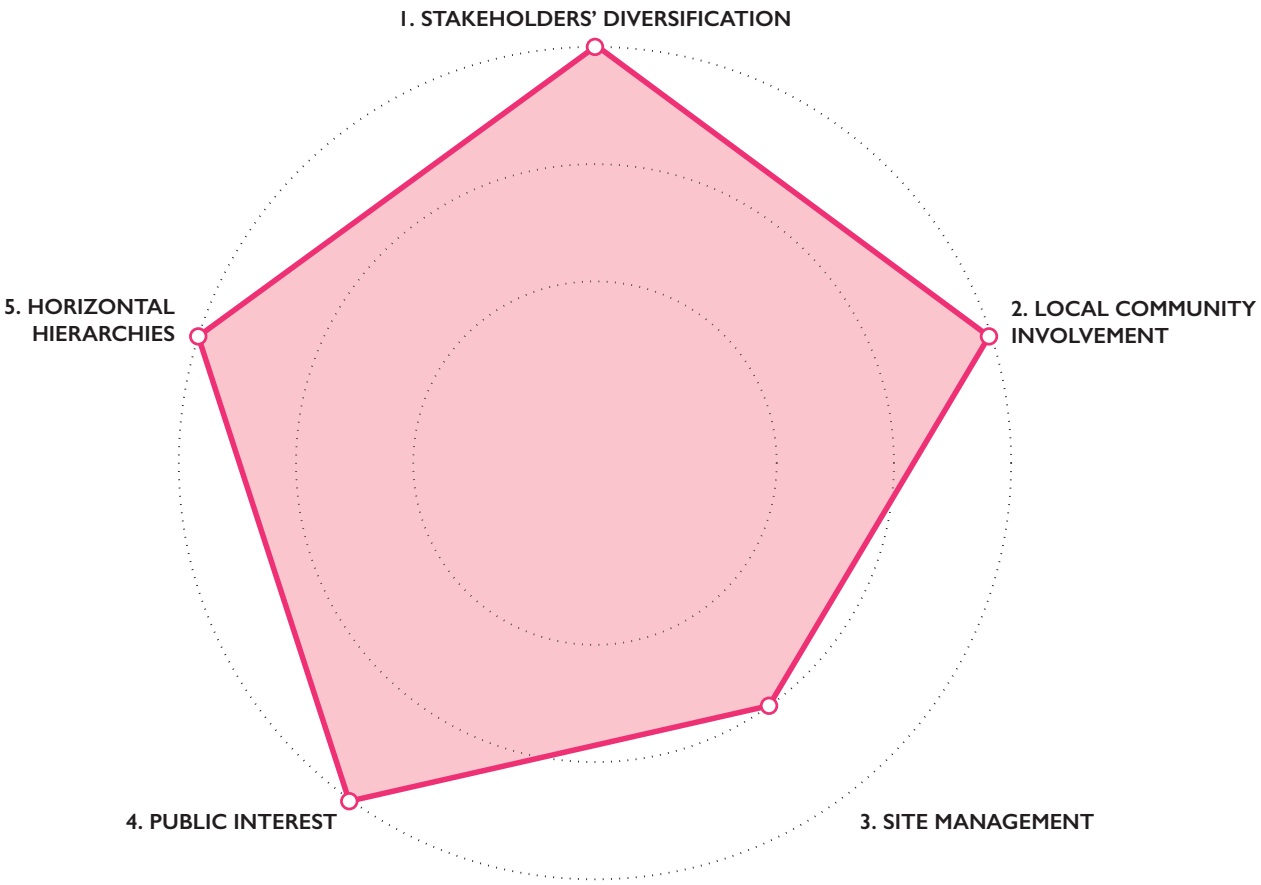


Fig. 259 Scenario 2: stakeholders' involvement assessment (source: elaborated by the author)

SCENARIO 1 / TERRITORIAL GOVERNANCE

1. Compliance with the existing legislative framework **HIGH**

The first scenario is conceived in order to comply with the municipal and provincial planning tools in force, which confirm the energy production vocation of the area. According to the Regional Law of Veneto 11/2004, art. 18 bis - *Interventions in direct application of urban planning instruments*, the conversion of the energy production technology for a reduction of the environmental impact is therefore an intervention which is always permitted.

Energy production activities are among those listed in Annex IV to Part II of the Legislative Decree 152/2006 - *Environmental regulations*, thus an Environmental Impact Assessment (VIA) is required. The aim of this procedure is to describe and assess the impacts of the project on the environment, on human health and wellbeing, as well as to identify any protective measures to eliminate or minimize the negative impacts.

2. Adherence of the programme to real territorial context **LOW**

It is impossible to avoid noticing a temporal discrepancy among the planned future of the area, current territorial needs and the projections regarding structural changes in energy production model suggested by the same owner of the area (ENEL spa).

A paradoxical situation therefore emerges: the most recent planning tools, such as the PTCP of the province of Rovigo, approved in 2012, and the PAT of the municipality of Porto Tolle, also approved in 2012, unequivocally reaffirm the energy vocation of a site that houses an oil power plant decommissioned in 2010 and whose Environmental Impact Assessment for a coal conversion project has been definitively rejected in 2011. Moreover, ENEL is promoting a non-energy use requalification of those disused power plants' sites which have completed their life cycle and Polesine Camerini is one of them (see Futur-E programme).

3. Public-private concertation **LOW**

No public-private concertation should be initiated as the operation envisaged by the scenario corresponds to territorial planning instruments and can be directly developed by private operators.

4. Inter-territorial synergies **MEDIUM**

Trans-regional synergies are limited to the exchange of resources, such as carbon dioxide via the pipeline, between Ravenna and Polesine Camerini sites.

5. Implementation of national development strategies **LOW**

The scenario for the energetic conversion of Polesine Camerini site does not integrate the local development perspectives advocated by the *National Strategy for Growth and Economic Development of Inner Areas*, which envisages the implementation of those missing services for the local community in order to pursue a long-term sustainable local development.

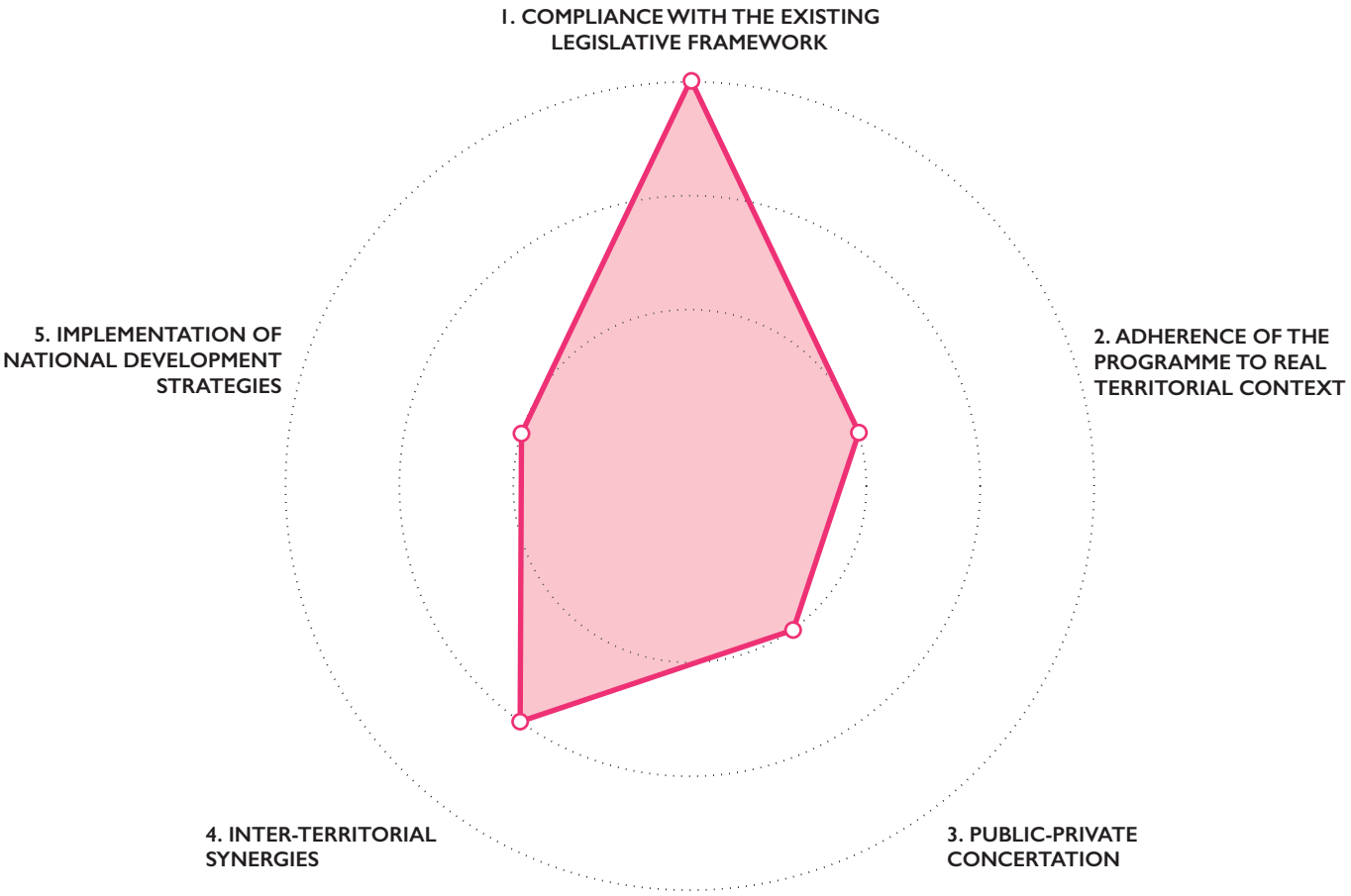


Fig. 260 Scenario 1: territorial governance assessment (source: elaborated by the author)

SCENARIO 2 / TERRITORIAL GOVERNANCE

1. Compliance with existing legislative framework **LOW**

The second scenario, exploring the possibility of converting the area of the former Polesine Camerini power plant through a mixed programme for non-energy purposes, does not fit into the current regulatory framework. For this reason, it will be necessary to modify the existing urban planning instruments in order to be able to implement the re-functionalization foreseen by the scenario. The proposed programme of activities can be considered of major public interest and involves public and private sector actors. According to art. 7 of the Veneto Regional Law 11/2004, it is possible to define and implement intervention programmes of public interest, which require the integrated and coordinated action of municipalities, provinces, regions and other public or private entities, through the stipulation of *Programme Agreements* (Accordi di Programma). Once the unanimous agreement of the participants has been verified at the *Services Conference* (Conferenza di servizi), the *programme agreement* is signed by the representatives of public or private actors participating. If the *programme agreement* doesn't comply with urban planning instruments (PTCP and PAT), the Province's approval is required and the agreement is approved by the President of the Province. Given the consistency and the typology of the planned programme (see Annex IV to Part II of the Legislative Decree 152/2006, which also includes those tourist accommodation activities which measure more than 25'000 m^3) located in a fragile environmental area of which some parts are included in the protected natural areas' list, it will be necessary to undertake the Environmental Impact Assessment procedure.

2. Adherence of the programme to real territorial context **HIGH**

The proposed programme attempts to propose an alternative local development scenario that starts with the enhancement of local excellences and with the improvement of services' accessibility of local population.

3. Public-private concertation **HIGH**

Concertation between public and private operators is a fundamental moment for the successful transformation of the area. The possible synergies between public and private activities constitute the high value added on which to build the negotiation path for the achievement of a good public-private partnership.

4. Inter-territorial synergies **HIGH**

Trans-regional synergies are not only limited to the transfer of carbon dioxide from Ravenna site to Polesine Camerini one, but they are extended, looking at

strengthening the tourist offer of the Adriatic coastal region that runs from Venice to Ravenna, to the creation of an educational, research and wellness tourism hub in Polesine Camerini which could implement the network of tourist routes on a vast area and directly relate the depressed economy of a peripheral area with more dynamic economies of poles, such as Ravenna and Venice.

5. Implementation of national development strategies **HIGH**

The scenario is fully aligned with the development and economic growth objectives of the *National Strategy for Inner Areas* and tries to make operational a strategy that has not yet been incorporated into urban and territorial planning instruments.

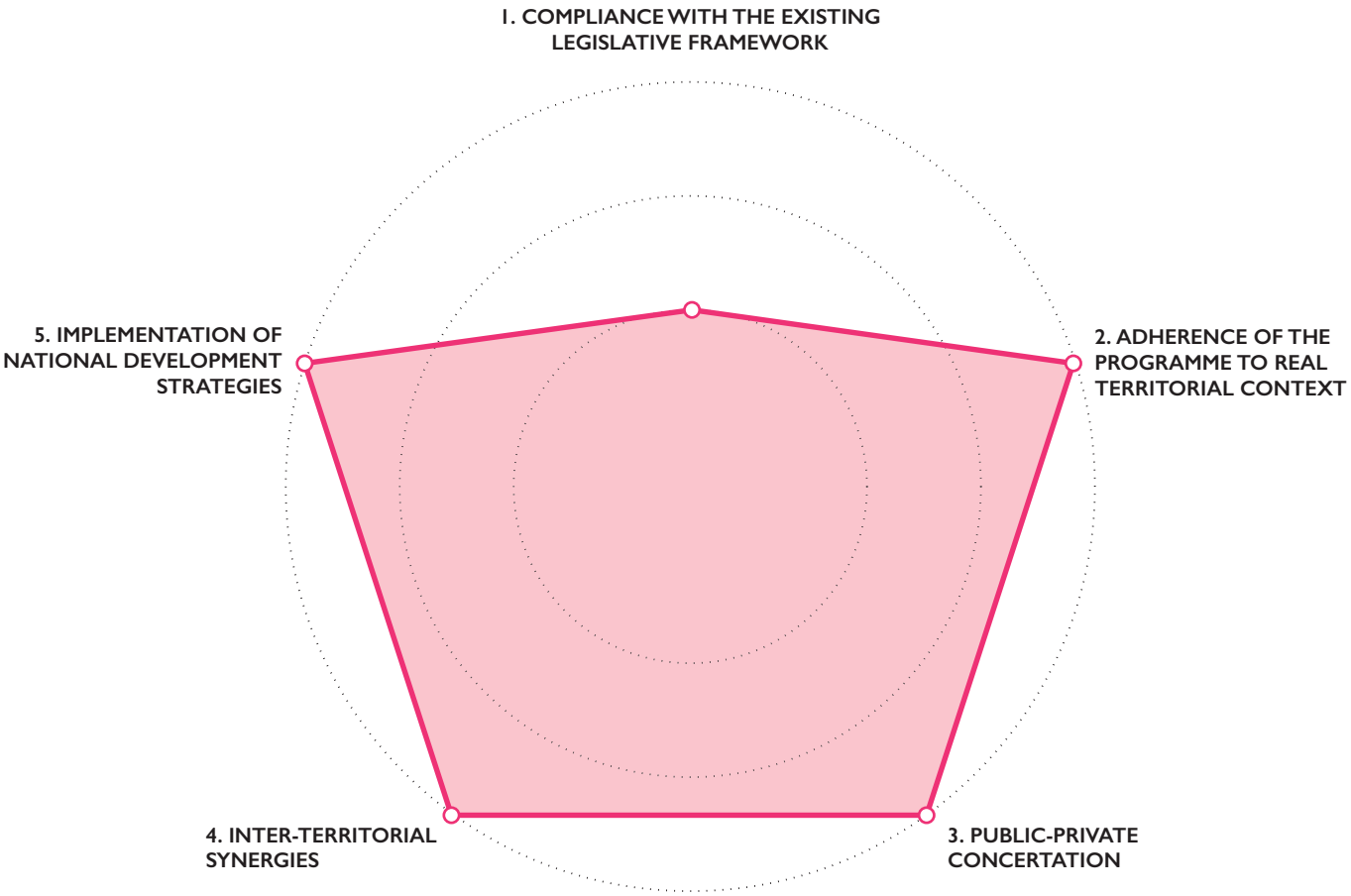


Fig. 261 Scenario 2: territorial governance assessment (source: elaborated by the author)

SCENARIO 1 / LOCAL CONSENSUS

1. Increase in the well-being of the local population **LOW**

A scenario which envisages an energetic conversion process undoubtedly brings environmental improvements, but it remains a very specialized industrial activity with a low attractiveness in terms of creating an induced working circuit that can effectively distribute a greater well-being to the population by involving other sectors (tertiary, tourism, etc.).

2. Increase in local demand for labour **MEDIUM**

During the maximum production period (1980-2010), there were about 300 people employed in the power plant processes (Caldiron, 2013). Although a more precise assessment can only be made through engineering and economic studies, the conversion of the energy production system will not generate higher employment peaks than those already experienced. There may be a light increase in indirect employment because of the necessity to locally develop some specific aspects of the production, of bio-char marketing and of plant maintenance activities, but the remoteness of the site from research and development dynamic contexts will not facilitate the dissemination of the know-how among local entrepreneurs.

3. Valorization of territorial capital **LOW**

By territorial capital we mean those local production excellences and cultural heritage with which the scenario will not create close relationships for their valorization. Tourist routes which surround the site will complete an educational or a slow-ecological touristic offer, blurring that clear separation between industry and nature that characterized landscapes of the second industrial revolution.

4. Reduction of the social costs of de-anthropization **HIGH**

The re-functionalization of the site will allow its land and water reclamation from environmental pollutants, introducing new practices of waste waster purification through micro-algae cultivation and guaranteeing the maintenance of all those hydraulic engineering works carried out to avoid natural water stagnation in the territories of the Po delta.

5. Enhancement of local development factors **LOW**

As already experienced with the closure of energy production activities in 2010, the working dependency of local communities on the industrial energy sector does not open up alternative solutions for local development, thus making the territorial destiny uniquely linked to energy industry's trend.

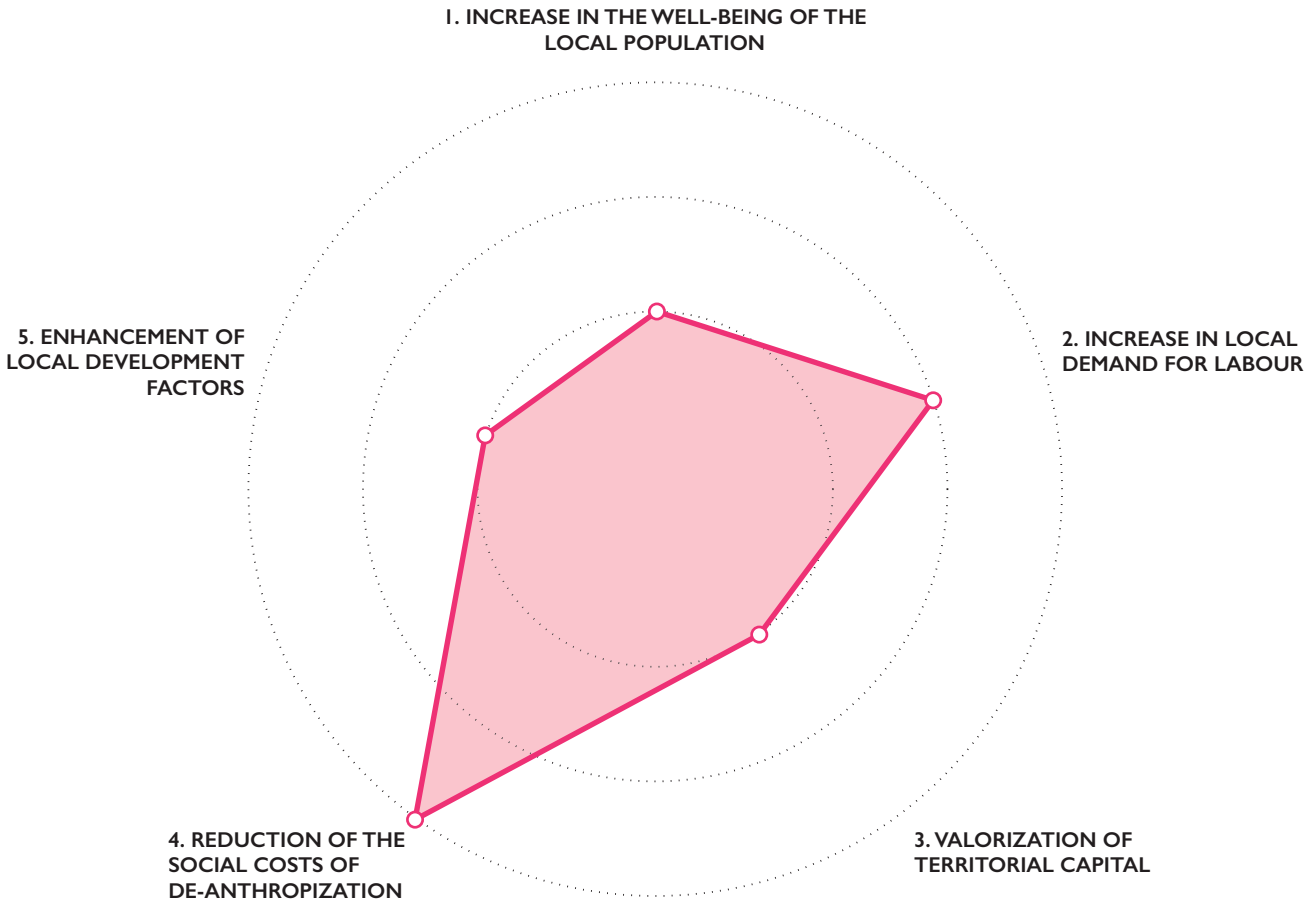


Fig. 262 Scenario 1: local consensus assessment (source: elaborated by the author)

SCENARIO 2 / LOCAL CONSENSUS

1. Increase in the well-being of the local population **HIGH**

The scenario will provide for a programme of activities that can respond to the lack of services in the territory and that can integrate the existing agricultural and tourism economic network. Predictable improvements are therefore structural and can actually have positive effects on the well-being of the population of a larger area and not only on workers employed in Polesine Camerini site.

2. Increase in local demand for labour **HIGH**

As seen in the previous part of our research, the size of the reconversion activities was calculated on the basis of 1'000 people, including staff, students and temporary users, thus tripling the work expectations of the previous use for energy purposes. In addition, benefits generated by the establishment of research, educational and tourism activities will also be reflected in the creation of a significant amount of indirect employment and of new small-medium businesses that will take advantage of synergies with the strengthened local economy.

3. Valorization of territorial capital **HIGH**

The programme has been conceived in order to enhance the valorization of local agricultural and landscape excellences on which to establish a more sustainable local development model with a high level of social and ecological responsibility.

4. Reduction of the social costs of de-anthropization **HIGH**

The re-functionalization of the site will allow its land and water reclamation from environmental pollutants, introducing new practices of waste waster purification through micro-algae cultivation and guaranteeing the maintenance of all those hydraulic engineering works carried out to avoid natural water stagnation in the territories of the Po river delta.

5. Enhancement of local development factors **HIGH**

Established activities are a reference hub for a long-term development, which must strengthen a circular economic model capable of enhancing territorial strenghts.

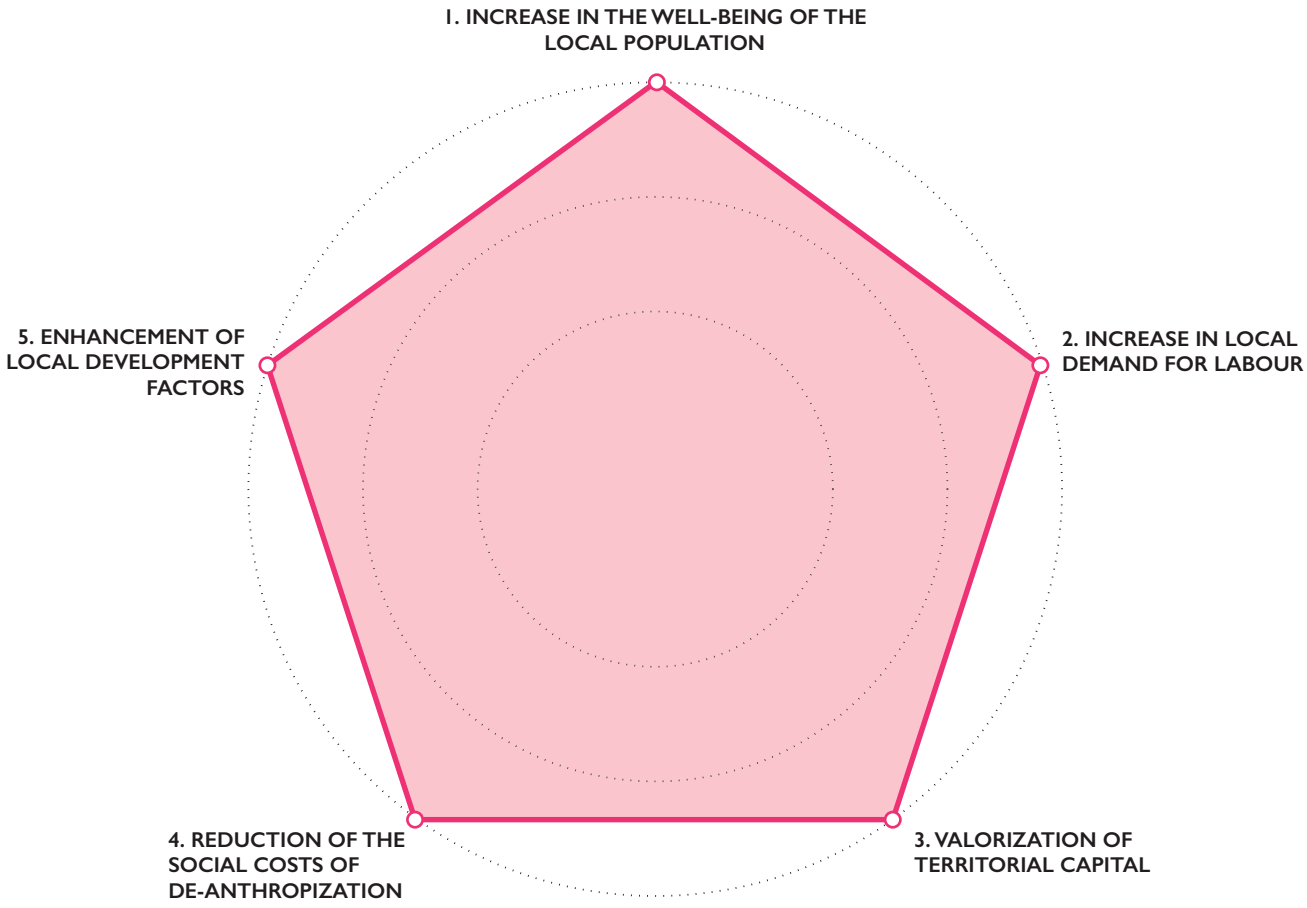


Fig. 263 Scenario 2: local consensus assessment (source: elaborated by the author)

SCENARIO 1 / COMPARATIVE ASSESSMENT

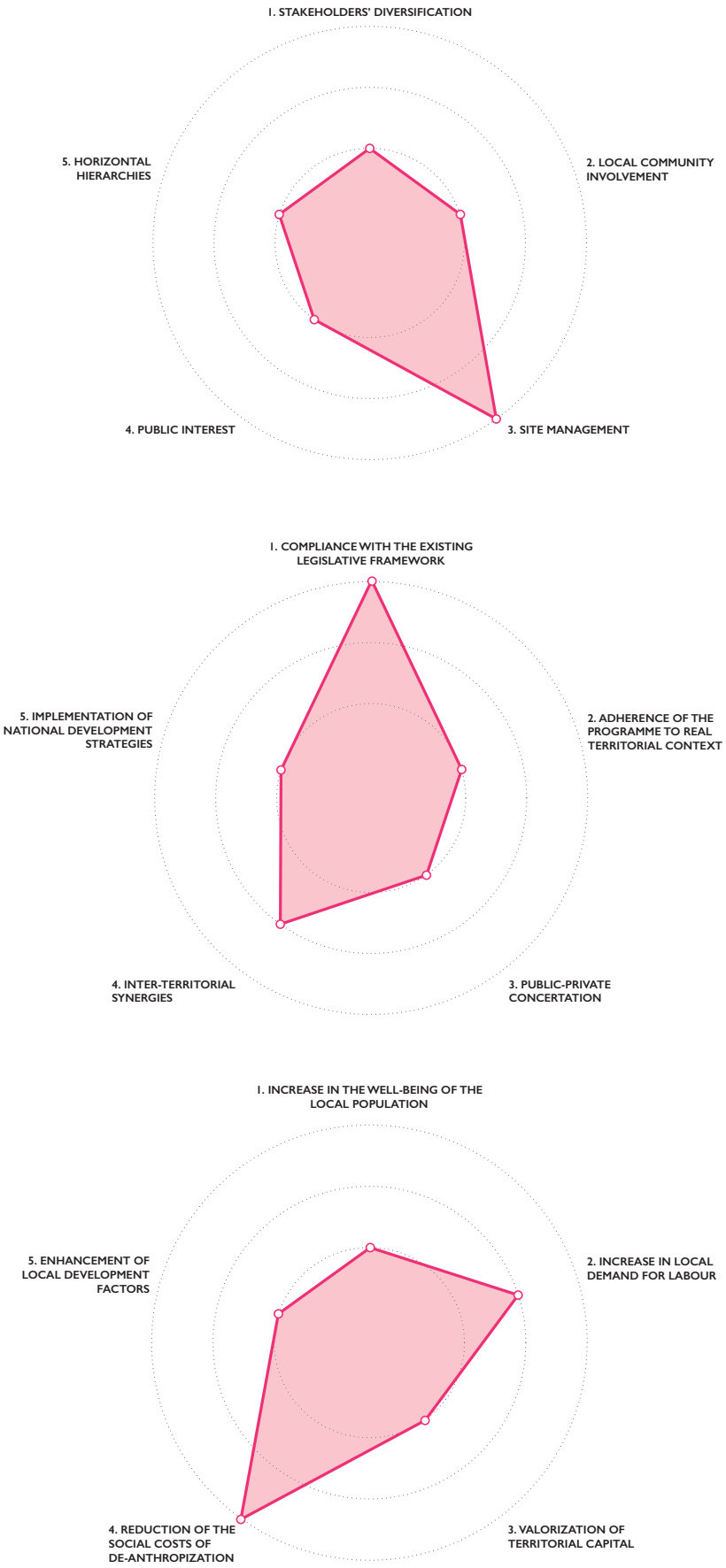


Fig. 264 Scenario 1: assessment summary (source: elaborated by the author)

SCENARIO 2 / COMPARATIVE ASSESSMENT

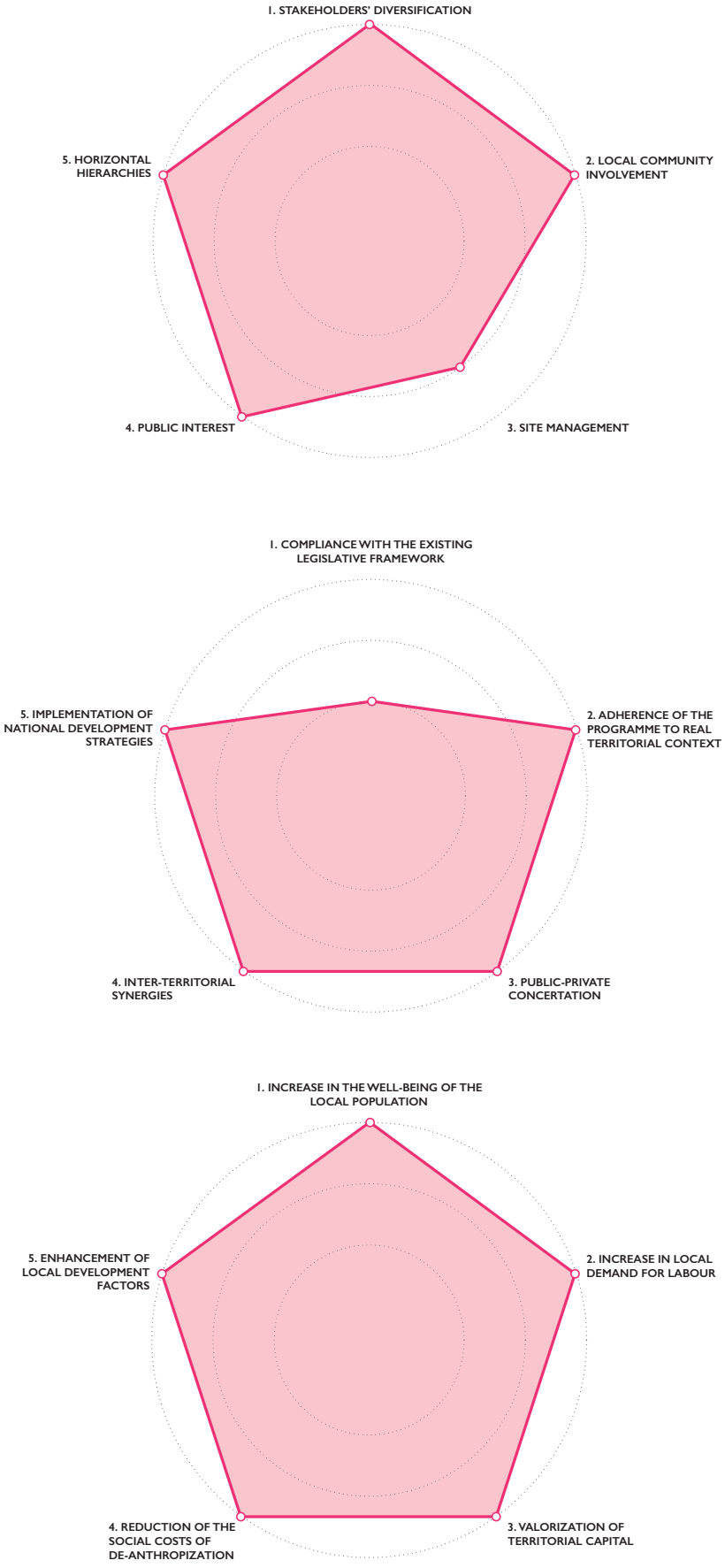


Fig. 265 Scenario 2: assessment summary (source: elaborated by the author)

The implementation of current administrative procedures

comparative assessment of the two scenarios

From a comparative assessment between the scenarios, we can conclude that:

- the first scenario, more technical and specialized, aims at optimising the circular production model for energy purposes and maximizing carbon dioxide absorption in order to have a beneficial impact in terms of global sustainability;
- the second scenario looks at a balanced local development as the primary objective for the definition of sustainable growth's criteria.

According to the selected criteria, the imbalance between the two analyzed scenarios seems to be considerable. However, the analysis does not want to define whether one scenario is better than the other in absolute terms.
On the basis of the criteria chosen, which meet priorities and expectations of a hypothetical public decision-maker, the second scenario seems to provide more effective responses if the objectives are to ensure a democratization of development processes, to guarantee the well-being for the widest range of population, to trigger territorial cohesion processes in order to pursue a balanced territorial development and competitiveness.

programme agreement

However, the complications for the development of the second scenario are evident, as it does not correspond to the existing territorial and urban planning instruments and we can imagine that long processes will be necessary for the their modification.
Programme agreements are existing instruments, regulated by regional laws for the territorial governance (in our case, the Regional Law of Veneto n. 11/2004 in art. 7 - *Programme agreements* and the Regional Law of Emilia-Romagna n. 20/2000, art. 18 - *Agreements with private entities*) that can facilitate and simplify the bureaucratic process for introducing variants to planning instruments.
Programme agreements are used to approve projects which entail the declaration of public interest and urgency of the works.
The necessity to regulate stakeholders' relationships from a planning, management and contractual point of view, *programme agreements* generally need a bigger design effort that goes beyond a mere zoning.
Their key activity is that of programming process, in order to undertake an aware project that can support the optimization of investment choices for the efficient allocation of public resources and for a conscious involvement of private funds.
Thus, the stipulation of a *programme agreement* is normally accompanied by a *feasibility study* that allows the project to be examined in depth, as well as its technical, social and economic-financial criticalities.
The document *Guidelines for the elaboration of feasibility studies* prepared by ITACA

feasibility study

(Istituto per la Trasparenza degli Appalti e la Compatibilità Ambientale - Institute for the Transparency of Tenders and Environmental Compatibility) in 2012 shows that in Italy, from the 1990s up to now, *assessment process* has not been established as a widespread good practice for programming activities of major public interest operations for two principal reasons:

- assessment has been perceived as a procedure which would have reduced the discretion of the political decision-maker;
- the absence of a clear legal framework.

Feasibility study stands for a preliminary assessment tool that, through the proposal of possible alternatives, analyzes the territorial and socio-economic context, proposing a management model that will be evaluated according to technical, financial and economic feasibility, in order to stress any critical issue in the medium-long term.

Feasibility studies appear for the first time in the Italian legal framwork with the Law on Public Works n. 109/94 (Legge Merloni) which, in art. 14, states that feasibility studies are those necessary tools to identify the technical characteristics and the economic-financial framework of public works foreseen in the three-yearly programming plan. Subsequently, in the art. 37 bis of the same law, the request to draw up a feasibility study is also envisaged for the programming of public works or for operations of major public interest carried out in public-private partnerships.

Recent changes in the legal framework are now aimed at better specifying the roles and content of feasibility studies. The third amendment to the Code of Contracts (Legislative Decree n. 152/2008) imposes their preparation in public-private operations for the realization of public works through Project Financing, both for a programming stage to apply for funding and, in a more complete form, as the basis for call for tenders.

The contents of the feasibility study in its most complete form have finally been defined in DPR n. 207/2010, art.14, c.2 as follows:

Part One - General explanatory report:

1. territorial and socio-economic framework
2. analysis of current and forecast demand
3. analysis of design alternatives
4. study of the environmental impact of possible alternative solutions

Part Two - Technical report

5. technical and functional analysis of the intervention
6. time and costs estimates
7. administrative-procedural sustainability

Part Three - Economic and financial report

8. financial feasibility (economic and financial plan)
9. economic and social feasibility (cost-benefit analysis)

programming experiences within the Futur-E programme

The conversion programme of 23 decommissioned power plants launched by ENEL in 2015 has already led to some initial procedural results.
From the programme website[1], it is possible to identify three procedural strategies that Enel has adopted until now:

- the direct sale of those plants with lower production capacity and small size for a functional valorization that could meet the needs of the territory (for example, Livorno and Carpi sites);
- a two-stage procedure for the acquisition and requalification of the site organized through:
  - a manifestation of interest;
  - a due diligence, project proposal and binding purchase offer of the site.
  The site of the Polesine Camerini thermoelectric power plant is part of this kind of procedure;
- an international ideas competition, at the moment applied only for the conversion proposal for Alessandria power plant site.

We have already mentioned that Porto Tolle urban planning tools prevent any kind of development that is not related to energy production purposes, nevertheless the two-stage tender procedure for the reconversion of Polesine Camerini power plant explicitly states that no conversion of the site for energy purposes is possible and that the second stage of the procedure consists of a binding project and economic offer for the site acquisition, which is structured on a simplified model of feasibility study.
Although the subsequent procedure is not mentioned in any part of the document, it seems plausible to think that the intention is to proceed through a *programme agreement* which would involve the participation of at least one private entity that would commit itself for purchasing the site through a project proposal assessed by a feasibility study.
The procedure should therefore derogate from the current planning instruments under the aegis of urgency and public utility to speed up the bureaucratic-administrative process.

With regard to the experience of the international ideas competition, the call explicitly states that, at the conclusion of the procedure, Enel will evaluate the start of a second phase aimed at the sale of the site.

1 see https://corporate.enel.it/it/futur-e.html

The proposal to be developed will be chosen among the award-winning projects and this one could be entrusted with the task of arranging a pre-feasibility study commissioned by the private entity interested in the development of the selected project.
The presence in the jury of a representative of the municipality and the perspective of the preparation of a feasibility study lead us to think that the objective could be starting a concerted path between public and private entities in order to define the reconversion programme of Alessandria power plant site in the form of a *program agreement*.

FUTUR-E RESULTS

Ideas competition for the reconversion of Alessandria power plant

Fig. 266 Alessandria power plant (source: Enel)

Images and texts from the website: https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html

Location

Alessandria (Piedmont, Italy)

Type of plant

Turbogas

Area extension

66'000 m^2

Gross plant power

176 MW

The plant consists of two single-cycle gas turbogas units with a capacity of approximately 90 MW each. An emergency generator set is added to the units as a back-up power supply. In the plant there are various auxiliary technological plants, necessary for the production process such as the methane gas decompression station, diesel engines launch, emergency diesel generator sets, hydraulic network and wastewater treatment plant.

Alessandria power plant was the first example of an International Ideas Competition promoted in July 2015 within the Futur-e programme to identify a new use of the site. The initiative involved 200 participants from 8 countries in Europe, Latin America and Asia. Private citizens, groups of companies, architecture firms and associations have sent their proposals, which have been selected by the jury composed of representatives of Enel, Alessandria Municipality, Polytechnic of Milan and the University of Eastern Piedmont. Three prizes have been awarded, as indicated in the call, to which two special mentions have been added.

The territory

Alessandria is a crossroads of trade, industry and handicraft as well as research and culture. The strategic position in the centre of the Turin-Milan-Genoa triangle and the traditional connection among Piedmont, Lombardy and Liguria has contributed to make the city and its province a fundamental hub of the Italian economic system.

The province of Alessandria accounts for almost 10% of Piedmont's businesses and about 1% of all Italian businesses. The business is varied and diversified: from agriculture to construction, from mining to services, with excellence in jewellery and precious processing and a strong propensity to export, particularly to France, Switzerland and Germany.

FIRST PRIZE

XXL - Xtreme Xperience Land

Sport field

Team: Recchi Engineering srl, Frigerio Design Group, Ing. Livio Dezzani, Arch. Stefano Ponzano, Ing. Ermanno Maritano

Description of the project

The winning project envisages the creation of a park dedicated to extreme sports, divided into 5 thematic areas (water, land, air, energy and nature). The two ex-tanks are reused for indoor climbing and scuba diving activities; externally, one is surrounded by areas dedicated to skateboarding, bmx, skating and parkour, the other by areas for water activities such as surfing and wakeboarding. The site has a unique, new *building-path* that extends through the area. The building contains locker rooms, a medical room, a refreshment area, specialized shops and an auditorium dedicated to formative and team building activities, which can also be carried outside.

Jury judgement

The idea enhances the industrial identity of the power plant, maintains the historical memory of the site, through the reuse of many existing structures which are converted to sports use and well integrated into the project. The idea is based on an interesting and potentially profitable business model, with positive externalities, attractiveness on the territory and beneficial employment effects for Alessandria and the surrounding areas, focused above on young people.

Fig. 267 XXL project for the reconversion of Alessandria power plant (source: Enel)

SECOND PRIZE

Anello di una storia che continua

Agri-business field

Team: Prof. Arch. Antonello Stella, Daniele Durante (Studio BV36), Arch. Guido Maurizio Urbani, Ing. Maurizio Urbani

Description of the project

The project aims to transform the site into an agricultural pole of excellence, where to combine scientific research (mainly dedicated to the creation of a germplasm bank, in which to select and preserve native seeds of valuable or endangered plant species), the production of local varieties and the consumption of local products. The site is consequently divided into three areas: the spaces intended for research/communication activities of the agricultural pole (including laboratories, greenhouses and a vertical farm) are placed in the southern part, the central area is dedicated to the cultivation of local species, while in the northern part of the site catering and market areas are set up, dedicated to the sale and consumption of local products.

Jury judgement

The project has been rewarded because it is based on innovative logics of valorization of products and agro-food excellences typical of the territory and for the high quality of the project. Particularly noteworthy are the open spaces. The project integrates some interesting existing facilities in memory of the industrial identity of the site (including ex-tanks, the former water treatment bowl and a turbogas group).

Fig. 268 Anello di una storia che continua project for the reconversion of Alessandria power plant (source: Enel)

THIRD PRIZE

Oncological research centre, social-assistance residences and rehabilitation centre

Health field

Team: Alice Bottelli (studio DBmLab Architects), Giuseppe Joi Donati (studio DBmLab Architects), Arch. Stefano Antonelli, Ing. Ferruccio Galmozzi (DIGIERRE 3 Srl)

Description of the project

The project involves the creation of an oncology research centre, a social-assistance residence, a rehabilitation centre, a church/auditorium and a University of the Third Age. The project valorizes some pre-existing structures, in particular the two tanks and a chimney.

Jury judgement

The project has been rewarded for the significant positive social impact it would generate and for the quality of the architectural project, which is well inserted within the context and integrates in an interesting way different pre-existing structures. The design concept also presents significant positive externalities for both Alessandria and its surrounding urban areas with significant employment growth's effects. The proposal is also interesting for its possible future synergies with other hospital rehabilitation centres in proximity of the area.

Fig. 269 Oncological centre project for the reconversion of Alessandria power plant (source: Enel)

SPECIAL MENTION
LIIG – LISSÄNDRIA INNOVATION GARDEN
Research field

Team: Arch. Matteo Valente, Ing. Davide Baccarin

Description of the project

The project envisages the creation of a science and technology park dedicated to small businesses with the presence of laboratories, educational areas and co-working spaces. Business incubators complete the campus together with temporary residences. The two tanks, memory of the site's industrial past, are used respectively for educational purposes and as a conference centre.

Jury judgement

The project is mentioned for the quality of the architectural project with a special focus also on technical solutions and for the potential positive effects on young people.

Fig. 270 LIIG project fot the reconversion of Alessandria power plant (source: Enel)

SPECIAL MENTION
E-CITY
Research field

Team: Arch. Luigi Centola (Centola & Associati), Arch. Mauro Piantelli (DE8 Architetti), Ing. Arch. Giovanni Zallocco (ERREGI Srl)

Description of the project

E-CITY consists in the transformation of the power plant into an electric hub for full-electric systems (for home automation and zero emission mobility). The project includes an event area, research, start-ups and co-working areas, a headquarters dedicated to exhibition/sales for electric mobility and full-electric systems for the home. The two tanks are dedicated to the storage of batteries and surrounded by a circuit of electric karts.

Jury judgement

The project is mentioned for the innovativeness of the proposed model and the attention devoted to architectural design and management of environmental, acoustic and visual impacts as well as to the logics of social inclusion in terms of involvement of citizens, entrepreneurs and young university students.

Fig. 271 E-CITY project fot the reconversion of Alessandria power plant (source: Enel)

Towards a trans-regional programming tool

incremental benefits of a systemic planning

What seems to stress the previous administrative excursus in the Italian planning scene is the use of feasibility studies only to verify and confirm planning tools, in order to evaluate technical alternatives within the superimposed regulatory framework.
The possible adaptation of planning instruments through the use of *programme agreements* for public interest reasons may correct some punctual planning delays, but due to their contingential and exceptional nature, it is not conceivable to consider using them systematically.
The risk is that punctual adjustments remain operations separately conceived, although they are developed to better respond to the renewed needs of the territory and, as in the case of the Futur-E programme, to trigger local development processes. In this sense, the incremental beneficial effect of a long-term strategic vision, which coordinates and seeks synergies among the different parts of the territorial puzzle, could be lost. It is not said that the sum of the effects of so many separate operations corresponds to the effects generated by a programmed coordination for the implementation of the same sites.

The oil mesh of our case study between Ravenna and Polesine Camerini perfectly exemplifies the above mentioned risk. As seen above, we can assume that the conversion of the Polesini Camerini site could take place through a *programme agreement* that will derogate from the planning tools in force, but no current planning tool proposes to consider in a systemic way the infrastructural connections among midstream and downstream infrastructure of the oil mesh.
By maintaining its industrial production activities, the port site of Ravenna will probably be able to evolve without needing any variation in the urban planning tools and will only implement production technologies in order to be more respectful of the environment as required by the Municipal Structural Plan (Piano Strutturale Comunale Ravenna). If green technologies could be developed on the site without necessarily involving Polesine Camerini site, this would preclude the benefits generated by the synergy between the dynamic economic environment of a pole area and the depressed one of a peripheral area.

the Piano Comprensoriale experience (Regional District Plan)

In order to test the scale of intervention of the systemic planning tool we would like to propose to manage the reconversion of oil meshes, we would like to focus on a planning experience on Polesine territories, which dates back to the 1960s and was proposed by the Italian urbanist Giuseppe Samonà (1961).
First of all, we must quickly frame the socio-economic and political-administrative context of that period in order to be able to better contextualize the disruptive

power of Samonà's planning proposal:

• from an administrative and political point of view, the decentralization of competences for territorial planning to regions and provinces had not yet occurred in the 1960s. In fact, only in 1970 ordinary Regions were established together with their competences.

If we look at the Urban Planning Law n. 1150/1942, art. 6 contemplates the establishment of Territorial Coordination Plans, but it doesn't define the territorial governance boundaries of the instrument. The same article, through c.2, states that "municipalities, whose territory is wholly or partly covered by a territorial coordination plan, are required to comply with this requirement in the respective municipal development plan". It is therefore established that local municipal planning must be subordinated to the territorial framework plan, but the law apparently allows the possibility that the latter one does not necessarily correspond to administrative borders, but rather to geographical areas.

• the Introductory Report to the *Piano Comprensoriale dei Comuni del Polesine* (Regioanl District Plan of the Municipalities of Polesine territory - Samonà, 1961) describes the Italian socio-economic context at the beginning of the 1960s: the protectionism of the Fascist years delayed the establishment of a free and competitive market, favouring the monopolistic role of some main entrepreneurial activities, thus delaying a widespread and balanced industrial development. Although during the 1960s the first significant developments in the secondary sector were registered, the ratio between the industrial product and the agricultural one was still far less than that of many European countries: the value of industrial production in Italy was 2.5 times than that of agricultural production, while in Germany it was 6 times and in England 12 times (Samonà, 1961).

In this framework, Samonà understood the necessity to define an industrial development plan on the basis of programmatic guidelines, part of a national investment plan, that must intervene in those territorial situations with serious economic and social imbalances, such as Polesine.

According to him, the criterion that was to determine the scope of such development plans should not correspond to administrative boundaries, but should allow to distinguish and unite portions of territory according to their similar economic and social characteristics, the so-called *comprensori regionali* (definition that we try to translate as *Regional Districts*), where to adopt common economic development strategies.

Samonà's intention was to propose, at a time when the decentralization of territorial planning power was not yet operational, a planning activity for public interest purposes organized on different levels and scales, from national to

municipal one, where the Municipal level had to receive, locate and implement the programmatic lines of the regional district plans and the Region had to transmit to the national level the guidelines that should have constituted the basis for the definition of the periodic programme for national investments.
In the light of what has previously been pointed out by the Urban Planning Law n. 1150/1942, *Regional District Plans* seem to correspond to those instruments for the territorial coordination prescribed by the law.
In the case of Polesine region, Samonà stated that the intention of the *Regional District Plan* was to overtake the sectoriality of those previous studies which only focused on the potential navigability of the Po river, but which considered only the mere technical-hydraulic components. Those studies forgot to assess the beneficial effects that the navigability of Po waterway would have brought to all the other activities of the territory. The objective, therefore, of the *Regional District Plan of the Municipalities of Polesine territory* was to simultaneously answer to the complexity of all Polesine territorial problems, in order to make the overall solution an economic driver for a wider national development perspective.
Samonà recognized in the widespread presence of navigable or potentially navigable watercourses the great territorial potential that would have allowed to accommodate important industrial platforms, which, at the same time, would have controlled and reduced the risk of flooding of delta territories through watercourses' canalisation.
The vision expressed by Samonà denotes a substantial difference of the cultural context and ecological conscience if compared to today: the territorial development expected in the 1960s and the search for wellbeing for local population relied on massive industrial developments that should have harnessed environmental resources to generate profit for human activities.
Although today, in the light of the failure of this model, we would no longer formulate a territorial development vision rooted on these contents, it seems interesting to see how Samonà's proposal, dating back to almost sixty years ago, represents a response to that same question stressed by the strategy for Inner Areas nowadays, namely *how we can intervene in the Polesine territory in order to limit the process of depopulation and of de-anthropization*. In addition, Samonà highlights the high percentage of illiteracy among the local labour force, a condition that does not seem to be completely resolved even today, given the difficult accessibility of school services for local communities in Polesine.
Samonà probably overestimated the order of magnitude of the role that Polesine could have played in shifting the infrastructural balances. His thesis, in fact, foresaw the establishment of a large port area that should have connected the delta of Adige river and the Po di Levante one in Rosolina. The port should have been able to accommodate ocean boats in such a way that it would have

become one of the most important river ports in Europe. The port should also have represented the intermodal interchange hub with rail and motorway infrastructure.

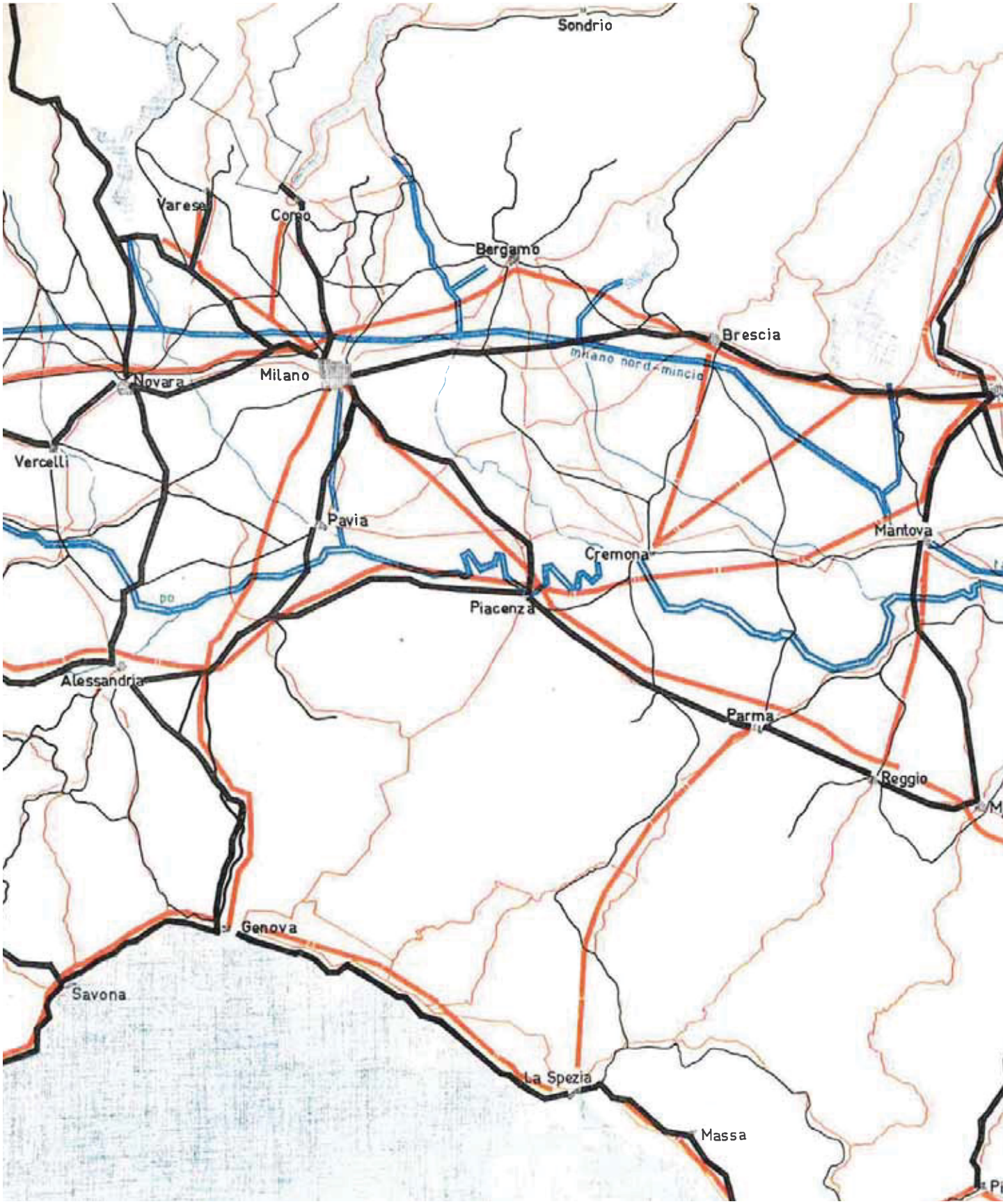
Thus, the role of that port would have forced to relocate some mobility axes of the national infrastructural planning so as to complete the Polesine development plan and lead the territory to a new economic role in the national productive dynamics.

The *Regional District Plan* proposed a branch of motorway passing through Ferrara and Adria and connected with the A13 motorway near Rovigo and with the SS Romea to the north-west of Chioggia. From this axis, two perpendicular branches should have ensured the connection with the SS Romea to the south of the port of Rosolina, creating the quadrilateral Adria-Corbole-Taglio di Po-Loreo inside which important industrial platforms should have been developed in proximity of the multimodal hub.

In order to complete the mobility infrastructure development, the realization of a major rail axis between Ravenna and Venice would have served a minor public rail transport system in the Polesine.

Remarkable is the fact that the uniqueness of the landscape and of the natural context of the Po delta area are not mentioned even once in the text, testifying the fact that territory was seen as a passive support to human infrastructure activities.

Ports and infrastructure were to become the organizers of a widespread *metropolitan ensemble*, of an *urbanized countryside*, of a *city-territory* (Samonà, 1961) organized as an open structure around decentralized industrial platforms which would have defined a new form of landscape.


Sondrio
Varese
Como
Bergamo
Brescia
milano nord-mincio
Milano
Novara
Vercelli
Pavia
Mantova
Cremona
po
Piacenza
Alessandria
Parma
Reggio
Genova
Savona
La Spezia
Massa

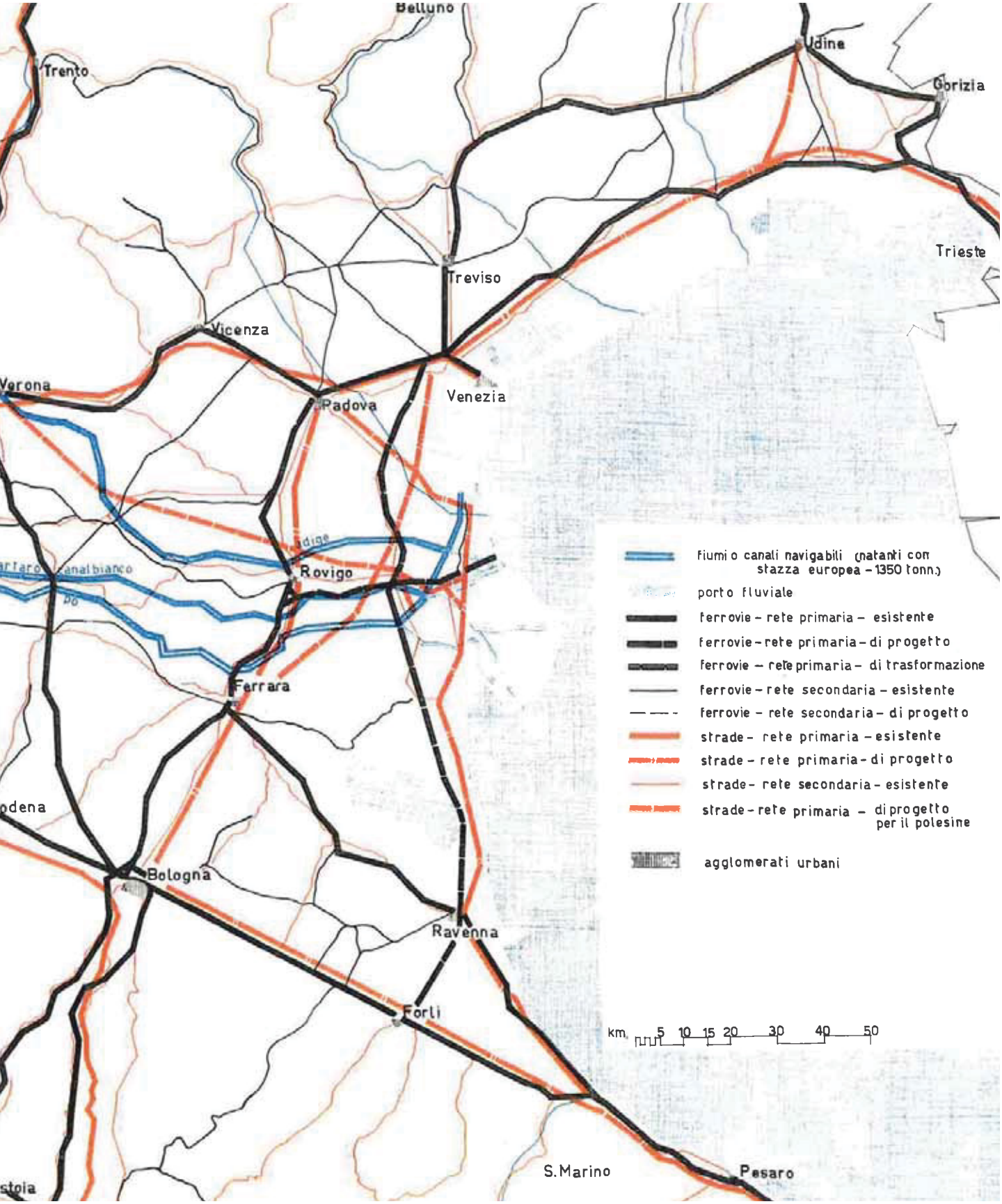


Fig. 272 The proposed infrastructural network by Samonà for the Regional District Plan for Polesine (source: Samonà, annex2)

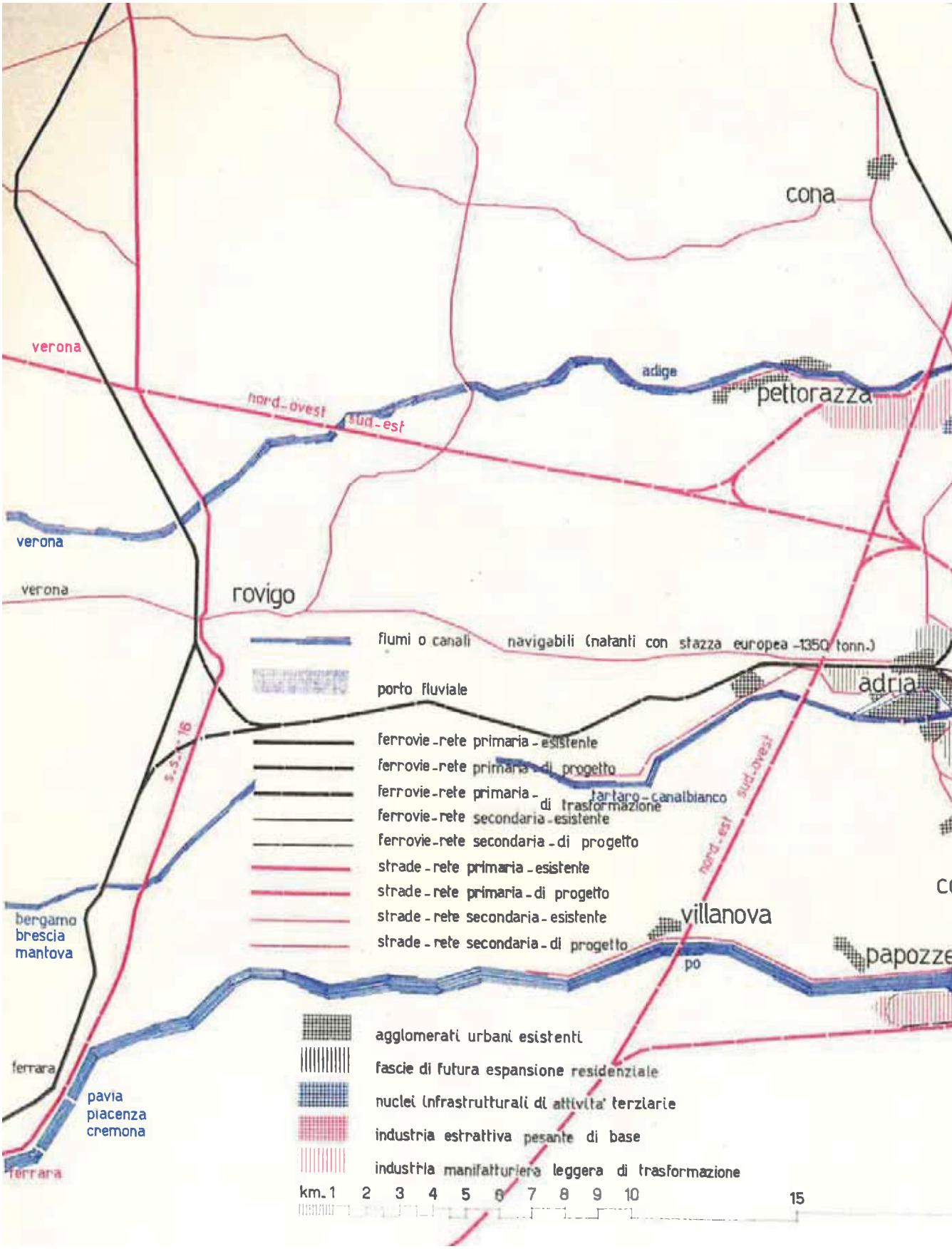

cona
verona
adige
pettorazza
nord-ovest
sud-est
verona
verona
rovigo
fiumi o canali navigabili (natanti con stazza europea -1350 tonn.)
porto fluviale
adria
ferrovie-rete primaria-esistente
ferrovie-rete primaria-di progetto
ferrovie-rete primaria-di trasformazione
tartaro-canalbianco
ferrovie-rete secondaria-esistente
ferrovie-rete secondaria-di progetto
strade-rete primaria-esistente
strade-rete primaria-di progetto
strade-rete secondaria-esistente
strade-rete secondaria-di progetto
nord-est
sud-ovest
villanova
bergamo
brescia
mantova
po
papozze
agglomerati urbani esistenti
fascie di futura espansione residenziale
nuclei infrastrutturali di attivita' terziarie
industria estrattiva pesante di base
industria manifatturiera leggera di trasformazione
ferrara
pavia
piacenza
cremona
ferrara
km. 1 2 3 4 5 6 7 8 9 10 15

Fig. 273 The main infrastructural interventions proposed by Samonà in Polesine (source: Samonà, annex2)

Retrospectively we can say that the great development of Polesine has never been implemented: the great logistical harbour has been reduced to a small tourist and fishing port in Porto Levante, road and railway infrastructure has not been built and the Romea still remains the only primary axis of the region, however far from the national motorway system. The development of industrial platforms has been partially implemented by the municipality of Porto Viro, which, near the Polesano-Padano Collector and in correspondence of the crossroads between the SS Romea and the Po di Levante, has developed small industrial areas.
Sixty years later, the regional depopulation is still the major problem that has not yet been resolved.
A critical look at Samona's planning experience leaves us with a lot of material to think about and from which to begin to define the field of intervention of our trans-regional systemic programming tool, which we would like to summarize in 5 key lessons:

1. REGIONAL DISTRICTS AS A MINIMUM PROGRAMMING UNIT

Learning from r*egional districts*' experience, it seems to be interesting to recognize a geographical area, defined for similar territorial characteristics, imbalances or dynamics, as a minimum territorial unit in which to intervene through a programming instrument aimed at its local development.
The *National Strategy for the Development and Economic Growth of the Inner Areas*, as seen in the previous part, also goes in this direction, identifying geographical areas affected by similar lacking conditions in terms of accessibility to public services in order to coordinate a coherent process of development on the whole of these weak territories, thus transcending administrative borders.

What the territorial governance of the oil meshes regional districts should try to overcome is the current lack of an interregional planning and programming level which could guide and coordinate the interventions of several public entities in the light of a shared strategic vision.

2. THE TRANS-REGIONAL PROGRAMMING LEVEL

If we wanted to try to frame interregional planning tools within the classical planning hierarchical organization, they could be assimilated to the *Sector Plans* (Piani di Settore), that is to say a facultative sub-category of the *Framework Plans*[1] (Piani Quadro) which addresses specific territroial themes. S*ector plans* are normally subordinate to *Base Plans* (Piani Base, such as the Territorial Coordination Plan), which must contain overall themes. Therefore, *sector plans* must be drawn up

1 Framework Plans (Piani quadro) are those plans which operate at a territorial scale and which set the objectives and provide the programmatic lines of the territorial development. They are normally composed of Base Plans (Piani Base, mandatory) and Sector Plans (Piani di Settore, optional).

in accordance with the indications of *base plans*, apart from *Basin Plans* (Piani di Bacino, the respect for which is indispensable to avoid dangerous natural disasters) and *Park Plans* (Piani di Parco, in order to protect natural environments) which result to be superordinate to Territorial Coordination Plans.

Precisely because of the close relationship that trans-regional oil infrastructure has with natural areas and because of the supra-regional effects of their pollution, we believe that recommendations from inter-regional planning sectorial tools should be incorporated by regional and provincial planning level.

3. THE ROLE OF INFRASTRUCTURE

The role of infrastructure in the Polesine development vision provided by Samonà would have been fundamental to support the desired economic and productive growth. The fact that the proposed *regional district planning tool* was not taken into account by national infrastructural strategy, which therefore preferred to invest in other axes and in other areas, inevitably stopped the realization of the evocative vision of the "urbanized countryside" (Samonà, 1961) organized around decentralized industrial platforms near watercourses. At the same time, the non-implementation of the envisaged mobility infrastructure permitted to preserve another type of infrastructure that would have been deeply damaged: *green infrastructure*. This is normally regulated by natural protection constraints, in fact naturalistic components are generally identified as constituent elements of the ecological network to be preserved, rather than being governed by specific instruments that investigate the type of projects that could be expected in these contexts.

We believe that green infrastructure should be conceived, designed and assessed as mobility infrastructure is.
Entering into a design domain to define the role of green infrastructure for the third rindustrial revolution's territorial restructuring would not undermine their naturalistic component and their fundamental role in preserving and promoting biodiversity, but it would allow to assess the coexistence of other possible functions, such as that of *green energy backbones* envisaged for our fossil fuel meshes. In fact, they could be incorporated within green infrastructure, as they transport green energy or sources for the production of green energy and actively participate in carbon dioxide reduction.

4. FEASIBILITY STUDY AS PROPAEDEUTIC PROGRAMMING TOOL

The environmental impact that the immense harbour between the Po di Levante river and the Adige one proposed by Samonà would have had on an important strip of wetlands cannot pass unnoticed in the light of the contemporary ecological conscience. As this experience also testifies, the tabula rasa approach reveals a threatening mismatch between the contextual reality and drawn plans.
Even if Samonà was in rupture with the Modernist planning method, we perceive in his proposal the single-function zoning approach typical of the period: heavy industrial expansion areas are identified and clearly separated from light industrial ones and from residential expansions. In a simplistic way, we could summarize the Modernist planning approach as the product of a culture *either...or...* : either you are a city, or you are countryside.
We have already seen before how much more complex contemporary reality is, and, resuming Zygmunt Baumann and his *liquid modernity* (2003), our society must learn to live together and adapt its relational systems on the equation *both... and...*, therefore on the simultaneous coexistence of a reality and its opposite: the city-territory is both city and agriculture.
Therefore, why couldn't *green infrastructure* be both natural areas part of an ecological network and, for example, green energy backbones?
The classical zoning approach conceived on the assignment of one and only one land use no longer follows the needs and possibilities of territories of the third industrial revolution.

For this reason we believe, as mentioned at the beginning of the research, that the de-engineering of fossil fuel meshes and the design of new green infrastructure must enter the fields of architecture and landscape architecture.
The in-depth knowledge of the environmental and socio-economic specificities of the green infrastructure to be designed becomes an integral and fundamental part of the design process, because standard and repeatable solutions allowed by classical zoning could be dangerous in these fragile frameworks.
The uniqueness of the naturalistic constituents of the ecological network must encourage planning domain to integrate among its instruments the *feasibility study* as a provider of contextual and specific design solutions which should be taken into account for the definition of territorial development scenarios.
The construction of plausible development scenarios and their subsequent comparative assessment from a technical, socio-economic and environmental point of view should become milestones in the

design implementation of what green infrastructure could be.
In this way, the feasibility study could become a propaedeutic tool for territorial programming tools and the knowledge generated by its application must be incorporated into higher-level planning tools.

5. CITY-TERRITORY IS A FLEXIBLE CONCEPT

It is interesting to observe that the concept of *city-territory* emerged several times in the framework of our research. Trying to reorganize the debate in a synthetic way and in a chronological order, the following theoretical approaches can be recognized:

- in the 1960s, Giuseppe Samonà used the figure of the *city-territory* in order to describe his personal vision for the development of Polesine territory, characterized by a widespread polycentric development of the *urbanized countryside* around new decentralized industrial platforms;
- between the 1980s and the 1990s, Francesco Indovina used this definition to describe the polycentric system of the central Veneto region and the consequent dispersal of public services and activities in proximity of small urban centres, where a dynamic small-medium enterprises' netwok has historically been set up;
- between the 1990s and the 2000s, Andrea Branzi approached the debate of the city-territory describing the functioning of his *weak urbanization model*, that is to say a half urban and half agricultural territory where the great potential lies in the cohabitation of intense urban spatial relations with agricultural practices and where the advent of the information technology revolution could bring new hybrid urban forms;
- from the beginning of the 2000s, Bernardo Secchi and Paola Viganò, through their *Horizontal metropolis,* and Maria Chiara Tosi and Stefano Munarin, through their notion of *territory as a new form of city,* return to the debate about the city-territory. Indovina's reflections became the starting point for interpreting the fragmentation of the territory as the real potential for a territorial restructuring. The coexistence in Veneto region of dispersed industrial fabrics, of a dense infrastructural network, of agricultural and urban environments and of shopping malls as new meeting places define new horizontal hierarchies among the territorial components that allow an extensive distribution of activities against an intensive use of the territory by each inhabitant who self-constructs his own city map according to his needs.

Although the city-territory visions differ in their physical manifestation and have evolved over time enriching the debate, the recurring and transversal element to all experiences is the presence of a dense infrastructural network, whether it

it mobility infrastructure or communication and energetic one as in the case of Branzi's weak urbanization, in order to guarantee the functioning of an open territorial system.

Considering the case of Polesine region, where it is no longer conceivable to consolidate the city-territory figure around the development of national transport infrastructure, we can however imagine that the already present infrastructure on the territory, such as that *green infrastructure in its natural and energy hybrid meaning,* could become the *infra-structuring* element of a new form for an extensive use of the city-territory.
Focusing the attention on the design of green natural and energetic backbones would provide the territory with the minimum common denominator that could admit multiple territorial and urban developments, thus leaving flexibility and adaptability of the open territorial system over time.

Green Infrastructure Systemic Programming Tool

In the light of what we have learnt from previous experiences, we would like to propose a programming tool that could be useful for the trans-regional design activity we have mentioned: the *Green Infrastructure Systemic Programming tool (GISP)*.

First of all, we would like to emphasize the choice that we have made to talk about *a programming tool* and *not about a planning one*.

In fact, its finality is not to define rigid land uses that could be coupled in a decontextualized and extensive way to *green infrastructure*, as could have been the case for classical territorial and urban planning.

The main goal, on the contrary, is to transcribe on a territorial scale the knowledge learnt through the informative use of the design scale of the feasibility study, with its construction of scenarios, that allows to explore possible green infrastructure development models, deriving from the synergic exploitation of existing infrastructural relations.

The subordinate planning tools (regional, provincial) must therefore incorporate the GISP's programmatic indications in order to bind the development of certain areas to a coordinated inter-regional programming of interventions based on the strategic vision of green infrastructure system.

In order to describe the characteristics of the GISP tool, we will outline the 5 points highlighted in the previous paragraph on the basis of an hypothetical systemic development of the oil mesh between Ravenna and Polesine Camerini which integrates the observations brought by design experience of scenario 2.

1. REGIONAL DISTRICTS AS A MINIMUM PROGRAMMING UNIT

The definition of the perimeter of our regional district is based on the desire to integrate the *Strategy for the development of Inner areas* into a territorial programming tool, which, at present, is not contemplated by current planning tools. The strategy of inner areas confirms the similarity of the territorial trends highlighted previously in cartographies presented in part IV, when these served to define the Adriatic Coastal Arc from Chioggia to Ravenna where to propose common development strategies in order to pursue a balanced territorial and economic cohesion.

In particular, it is possible to highlight how, by integrating the coastal municipalities of the province of Ferrara and the pole of the Ravenna Municipality, which therefore do not fall within the definition given for inner areas, we would like to trigger local development processes exploiting the synergic potential offered by the existing infrastructural relations among these territories and inner areas if they would be thought and designed as *green infrastructure*.

2. THE TRANS-REGIONAL PROGRAMMING LEVEL

As mentioned above, the objective of the GISP tool is to focus the programmatic attention on possible synergies that a classical planning defined by administrative borders would neglect. In fact, infrastructure, whatever its type, transcends the provincial and regional borders and links together areas on vast territories. In our case, the portions of infrastructure considered cross two regions (Veneto and Emilia-Romagna) and four provinces (Venice, Rovigo, Ferrara and Ravenna). In the same way, green infrastructure, already in their current meaning of ecological network to be preserved, do not stop at administrative boundaries but try to establish a physical continuity between different and distant natural areas in order to build a continuous mesh that extends over vast areas. Furthermore, in view of the structuring role that designing green infrastructure could play in the territorial restructuring of the third industrial revolution, their scale of influence cannot be considered sufficient if it stops at fictitious borders. Programming infrastructure necessarily means intervening on a supra-regional scale.

3. THE ROLE OF INFRASTRUCTURE

Two infrastructures cross in a north-south direction the territories of our regional district, establishing completely different relationships with the landscapes they traverse:

- the infrastructural network related to oil industry between the industrial port of Ravenna and the former power plant of Polesine Camerini;
- the SS Romea that goes from Ravenna to Chioggia.

If the conversion context of the oil mesh into a green energy backbone for CO_2 recovery has already been extensively dealt with, some integrations must be made regarding the future of the SS Romea mobility axis.

The planning of the European north-south mobility backbone E55 that goes from Helsingborg (Sweden) to Kalamata (Greece) includes the construction of a motorway section that should move and absorb the high traffic intensity of SS Romea on a route further to the west, offering a faster and safer connection between Ravenna and Venice. An east-west motorway, the Nogara-Mare one, should intersect and connect the new E55 to other strategic national motorways, such as the A22 (Brennero-Modena), the A31 (Piovene Rochetta-Vicenza) and the A13 (Bologna-Padua).

Without going into the complicated and sensitive field of risk-benefit assessments related to the construction of new mobility infrastructure that still invest in a road transport fueled by oil by-products, we decide to integrate in our scenario this infrastructural implementation and the consequent downgrading of the SS Romea as a fact.

The dual role identified in the GISP for this infrastructure (eco-tourism route and

subway surface) allows to combine two important domains for the achievement of a balanced development aimed at triggering territorial development processes in the long term: slow-tourism and public transport.

In fact, the reduction in traffic along the SS Romea could contribute to its conversion into a sort of *Regional eco-boulevard,* along which a public transport service could be structured in the form of a subway surface between Chioggia and Ravenna. The fact that along the SS Romea a mixed and disparate landscape has been concentrating, composed of small conurbations, industrial platforms, commercial areas and large agricultural areas, makes the infrastructure ideal for the development of a public transport backbone of regional importance serving the urbanized areas and becoming the main interface for a public transport exchange into a local system.

At the same time, the downgrading of the SS Romea could also lead to a rethinking of the road section which, in addition to integrating rails and stop areas of subway surface, could also include a new project of renaturation of road edges that incorporates cycle-pedestrian paths for slow ecological tourism. The presence of some cultural heritage sites, such as the abbey of Pomposa, along the Romea axis can strengthen its tourist interest.

As far as the development of a slow ecological tourism is concerned, the Ravenna-Polesine Camerini pipeline, converted into a green energy backbone in its underground route, can also contribute. In fact, its projection on the surface could turn into an additional network of cycle-pedestrian paths. According to art. 20 of the PAT of the Municipality of Porto Tolle, a buffer zone of 8.00 metres measured at the axis of the pipeline must be left free on both sides. As can be seen from Map 1 of the PAT of Porto Tolle Municipality (Fig.19, pag. 315), the pipeline route follows as closely as possible the division of agricultural plots and properties. On the basis of this indication provided by the GISP, the subordinate instruments could integrate the need, for example, to leave a small portion of the buffer zone deriving from the presence of the pipeline and in correspondence with the divisions of agricultural properties for public use, in order to create that cyclo-pedestrian network which allow to experience the real essence of the Po Delta. The deployment of these two green infrastructures would also allow many protected Nature 2000 areas to be integrated into a unique ecological network.

4. FEASIBILITY STUDY AS PROPAEDEUTIC PROGRAMMING TOOL

The knowledge acquired through the construction of scenarios as an integral part of a feasibility study process can inform GISP tool of some strategic aspects on which to build an enlarged vision for the territorial development. In fact, the choice of scenario 2 as the model for the systemic development of the Ravenna-Polesine Camerini oil mesh allows us to extend our considerations in terms of programming over a wider area. Scenario 2 left us with a double long-term proposal for the conversion of the two sites in Ravenna and Polesine Camerini:

- the industrial port area of Ravenna, in addition to becoming the main CO_2 feeder activity of the network, will convert its industrial activities related to oil downstream into bio-based industrial activities, which will operate around the chain of algae downstream that will be produced locally both for the supply of biomass and for the production of hydrogen for energy purposes;
- Polesine Camerini area will be transformed into a multi-functional centre that will offer activities and public services related to education, research in the agricultural field, wellness and ecological tourism, business incubation and a hybrid private-collective mobility hub. The cultivation of algae is the minimum common denominator among all activities and the functional link with Ravenna, allowing to use and absorb the CO_2 captured from industrial activities.

If the proposed activities are very specific to the reasoning that lies behind the scenario construction and feasibility study, we can imagine that the GISP can embrace the macro-programmatic intentions of the scenario (CO_2 absoprtion activities, tourism-related activies, hub for alternative mobility), leaving more flexibility in the definition of the specific programme of activities. Thanks to these considerations and to the intersection with green infrastructure, it is possible to identify other poles where it could become interesting to conduct specific feasibility studies to assess the effects due to the integration of further macro-programmatic intentions. For example, along the Romea subway surface axis, four stations could be identified within a radius of 50 km from Polesine Camerini (Chioggia, Porto Viro, Mesola, Comacchio) where a combined mobility hub could be developed in order to integrate the offer of a fully electric private-collective mobility service to provide the dispersed territories of the Po Delta with a flexible transport model which can compensate for the lack of a public transport service.

The simultaneous presence of the two green infrastructures in Comacchio could suggest launching a feasibility study that would permit to assess the convenience of installing CO_2 eater activities even in this location, branching the supply of

CO_2 to the former oil pipeline, thus increasing the global potential in carbon dioxide absorption of the system.

The synergic interaction among public transport, multifunctional poles, services and green infrastructure, together with the already mentioned connection with Natura 2000 protected areas and cultural heritage sites, could create considerable long-term benefits due to the strengthening of a local development focused on a renewed tourism offer in the area.

5. CITY-TERRITORY IS A FLEXIBLE CONCEPT

The concept of a *city-territory* that describes a polycentric urban development of Polesine territories remains only a Modernist mirage proposed by Samonà in the 1960s, which is no longer even imaginable today.

The so sparsely inhabited Polesine context suggests an interpretation of the functioning of the city-territory that revolves around its extensive use due to the territorial mending implemented by green infrastructure and its uses, namely a system of public transport, multifunctional poles and services, new methods of agricultural cultivation in vertical greenhouses (algae and hydroponic cultivations) and a network of energy distribution to reduce CO_2 emissions.

Unlike the polycentric system of the central Veneto city-territory, which, as seen before, responds to a development model typical of the second industrial revolution based on a massive use of motorized individual transport to connect a constellation of small urban centres and industrial areas (Indovina, 1990; Tosi and Munarin, 2001) which encourages energy and oil consumption for its extensive use, the new model of the city-territory of Polesine could lie on completely opposite development principles.

In view of the energetic transition and of the shift towards a distributed territorial energy production model, we could assume that Polesine city-territory main aim is to contain energy consumption generated by its extensive use .

Thus, the organizing green infrastructure perfectly responds to expectations:

- on the one hand, the city-territory is articulated around a north-south fully-electric public transport system, which, at the same time, may attract and optimize the settlement of some services, activities or urban developments on a regional district scale and provides for a secondary, fully-electric and flexible mobility system to reach the most remote territories;
- on the other hand, green energy backbones, combining with agricultural processes for the simultaneous production of energy sources and agricultural or algae sub-products, become that non-figurative architecture for energy production of which Branzi spoke about his weak urbanization model (2006).

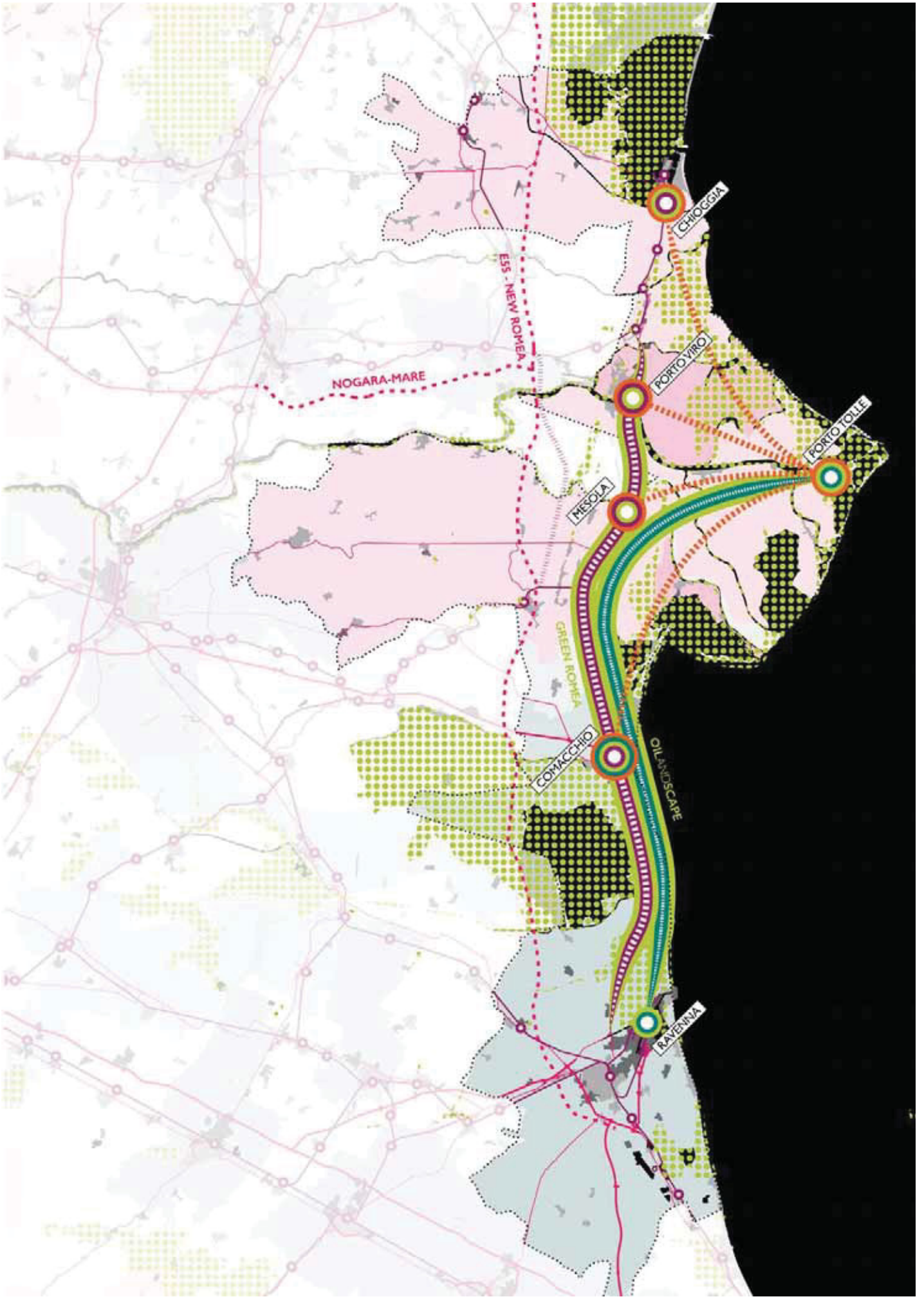

CHIOGGIA
E55 - NEW ROMEA
NOGARA-MARE
PORTO VIRO
PORTO TOLLE
MESOLA
GREEN ROMEA
COMACCHIO
OILANDSCAPE
RAVENNA

Fig. 274 The Green Infrastructure Systemic Programming tool (source: elaborated by the author)

CONCLUSIONS

Conclusions

We have finally reached the end of my PhD research experience.
The journey through the world of oil landscapes has been long, fascinating, insidious and above all very complex.
Many people during these three years of research have asked me why an architect should be interested in researching the role of infrastructure in the territory, because they belong to engineering skills in the common imagination.
In particular, energy infrastructure, due to its technological complexity and the underlying industrial processes, seems to be a field that is light years away from what is believed to be the architect's skills, that is to say, designing "beautiful but expensive" buildings while choosing energy saving materials at most.

energy issue is a cultural challenge

There is a great confusion about energy issue: the rampant culture of energy saving from a purely technical point of view, and not through the change in certain habits of life, contributes to the peroration of an image of a technocratic functioning of the world, which feeds the sectorial separation of competences resulting from the errors committed in XX century and does not encourage an interdisciplinary approach to complex problems.
Professional experiences lead me to say that the demand for photovoltaic panels on the roof has become the "mantra" of ecologically sensitive clients, the same ones that, maybe, will dress of a single t-shirt in a house heated to 26°C in winter. We, architects, will have fought to insulate the house with a very expensive insulation in natural plant fibers to reduce the total construction grey energy and will have installed the much desired photovoltaic panels on the roof, so we will

result all sensitive to the ecological issue. But only apparently.
In our opinion, energy issue is first of all a cultural problem and, as wondered by Rifkin (2011), a massive energetic transition towards a system mainly dominated by renewable energies is not only a technological issue, but it is principally an economic model challenge that has to deal with very different thinking structures from those of the second industrial revolution, namely *consumption* and *quantity*.
According to the current "on consumption" model, the consumer pays for the amount of energy actually provided by the supplier, who has no interest in promoting a reduction in consumption and improving efficiency. The previous example of overheating a house goes exactly in this direction, to the advantage of the energy provider who benefits from a bad habit leading to an unnecessary waste of energy.
On the contrary, a new economic and cultural model for the third industrial revolution could be based on criteria such as *performance* and *quality*.
In this case, the energy supplier provides a service to the consumer to ensure his well-being at a fixed price, and the economic profit margin is no longer in the volume of energy sold, but it is in the search for a maximum efficiency of the process in such a way as to avoid waste and lower the cost of the service provision. Just to give an example, the supplier could offers home heating service guaranteeing the internal comfort temperature of 21°C and it will be its care and interest to ensure that the price for the provision of this service costs as little as possible. Thus, the energy provider will be forced to regularly upgrade the installations in order to seek a better performance, lower energy dispersion and therefore a higher profit, but even a lower environmental impact. At the same time the final consumer will lose his bad habit and considerably reduce energy waste.
Even according to Rifkin (2011), the increase in the production of small quantities of renewable energy in autonomous form by the same consumers should lead energy supply companies from a production-based business to a business based on the provision of services for the maintenance of optimal performance of infrastructure needed for distribution.
If the reduction of energy waste works for the small scale of the individual residence, we can imagine that the economic model based on *performance* and *quality,* rather than on *consumption quantity*, is repeatable for other types of services (private mobility, food supplies, etc.) and also for larger scales of intervention, thus contributing to that cultural change which is necessary to switch towards innovative thinking structures that better meet the needs of the territories and of the circular economy coming from the third industrial revolution.

green infrastructure is a spatial issue

As regards green infrastructure domain, progress can also be made in the interdisciplinary approach to the issue. To my great surprise, in these years of research during which I have participated in international conferences to present some of the advancement of my research, I have often perceived a great reticence on the part of geographers and landscape planners in accepting that also architects can be interested in territorial issues.
An important research trend that I have noticed in the field of green infrastructure focuses on the quantitative analysis of natural elements in cities, bringing as research results the proposal of complicated mathematical algorithms to be applied in GIS programs for mapping. What surprised me most was the purely zenithal approach, almost disinterested in the spatial, living and programmatic component, I mean in the design aspect of green infrastructure. We were talking about green infrastructure, but we saw no image showing what we were talking about.
It is not my intention to generalize or inimicate other disciplines, but I would just focus on the fact that architects' growing interest in this field of research can be an opportunity for everyone, because skills are different but complementary. The geographical and quantitative analysis of green infrastructure becomes absolutely a fundamental tool if made available to design professionals who can interpret them and transform them into spaces where life can be housed.

the interdisciplinary structure of the research

As already mentioned in the body of the thesis, my research has consciously chosen not to deal with technical and quantitative problems linked to the energy capacity of certain solutions proposed because they are not competences that belong to the mission of architects. Starting from published research results that investigate alternative and innovative renewable energy production systems, the question that the research raises concerns how the materialization of these technologies could change the appearance of our energy landscapes, but leaves the door open to future necessary collaborations and sectorial integrations to size the actual amount of the infrastructure needed to be distributed and designed on the territory.

The generalist and coordinating approach of my research aims to highlight how complex problems must be studied and analyzed from multiple points of view and how only the enhancement of an interdisciplinary and collaborative approach can provide holistic, and not sectorial, responses.
In fact, in the first four parts of the research, the thesis has sought to read and interpret energy industry, focusing in particular on oil infrastructure, through the analytical lenses of the main disciplines that concern its functioning:

• the historical-economic analysis of oil industry presented in part I wanted to intercept, on the one hand, those dynamics that allowed oil to establish itself as the main energy source of XX century in support of an exponential growth industrialization model and, on the other one, what were, at the beginning of its crisis in the 1970s, the main theoretical arguments that founded the diffusion of an ecological thinking and of an alternative growth model which are still relevant topics in the debate on the development of contemporary territories;
• in part II, thematic analytical studies have been carried out in order to investigate the type of dependencies that have been established between oil and chemistry, oil and industrial revolutions, oil and landscape, oil and territory, oil and infrastructure, oil and nature, oil and cultural heritage;
• part III uses analytical tools from the field of urban research to interpret the effects of urban and territorial transformations caused by the energy industry during the two industrial revolutions. Also in this case, the research has tried to differentiate the types of analysis in such a way as to find synergies with other disciplines. The territorial transformations of the first industrial revolution in the Ruhr case study have been narrated through a historical literature that has allowed to define and cartographically represent the main industrialization and urbanization trends of the fundamental phases.
Later, two polycentric models, consolidated respectively during the first and second industrial revolution, were analyzed from an urban-territorial point of view in order to outline how the different organizational structure of the coal and oil energy industry has generated different territorial hierarchies that have led to different urban models. Subsequently, some foundations were laid to open the reflexion on the possible urban model of the third industrial revolution based on renewable energy sources. Some innovative renewable energy production technologies have therefore been explored, through technical and engineering literature, which have made it possible to establish the potential of using industrial waste, such as exhaust fumes, as indirect energy sources;
• part IV deals with the administrative-policy issue of managing trans-regional planning for the recovery of oil meshes, identifying in the *Regional Districts* a possible scale of territorial governance. A new narrative for oil infrastructure must federate the territories around a shared vision for their reconversion: **up-sourcing** elevates the role of previous oil meshes to *green energy backbones*.

Once the analytical part of the study has been accomplished, while stressing the complexity of the topic and the necessity to integrate multiple disciplines in order to have a global understanding of the underlying problems, the research continues in its experimental design part, that is to say the construction of such alternative development scenarios as required by the *research by design* methodology. Again, we want to stress the enrichment that other disciplines and competences could bring to the definition of the framework conditions for our scenarios:

- part V tackles the definition of the constraints and assumptions for the two scenarios, emphasizing both the common elements, namely the **up-sourcing** narrative, and the differences that will lead to the development of very different visions. Subsequently, the two scenarios will be developed and described in a comparable way through representation tools appropriate to this pre-project phase, then through functional diagrams, axonometries and evocative images of possible **OIL**AND**SCAPES**;
- the assessment process of the two scenarios is addressed in part VI, through a preliminary definition of common criteria by which the proposed scenarios are compared. Afterwards, the research examines the design role of scenarios construction within the territorial planning process, proposing to reverse the traditional use of *feasibility studies* to confirm the functioning of planning tools, and use them to inform planning tools. This shift would make it possible to focus on some potentials that may arise on trans-regional scales (that are not currently recognized by a territorial planning defined by administrative boundaries), such as the case explored of synergies between oil meshes sites. The research therefore concludes by proposing a trans-regional planning tool, that is to say the *Green Infrastruture Synergic Programming* instrument, for the integration of oil meshes within the concept and design of green infrastructure.

In the light of the above, my research aims to contribute to the desired cultural shift that allows us to consider the *energy issue* not only as a technical field, but also as a multidisciplinary research area, where also architects can provide their design skills, using the *feasibility study* as an interdisciplinary and propaedeutic tool for a more sensitive territorial planning.

As a conclusion, but with no air of presumption, I would like to quote Edgar Morin (1999) according to whom "the architect's knowledge is the result of the confluence of multiple disciplines, as architects are prepared to face hybrid, complex, interdisciplinary and multiscalar situations".

Bibliography

PART I

Bélanger, P. (2012). *Landscape infrastructure: Urbanism beyond engineering*. Lecture held on May 8th, 2012 at the EPFL in Lausanne. [Online] 8th May. Available from: http://archizoom.epfl.ch/op/edit/page-101622-en.html [Accessed: June 20th, 2016].

Bélanger, P. (2017). *Landscape as infrastructure. A base primer*. New York: Routledge.

Bhatia, N. (2013) Harvesting Urbanism through territorial logistics, in Bhatia, N., Casper, M. (eds.). *The Petropolis of tomorrow*. New York: Actar Publishers. p.273-286.

Bhatia, N. et al. (2016). *Re-wiring territories*, in Volume n. 47 (1), Amsterdam: Archis. p.79-86.

Burtynsky, E. (2003). *Manufactured landscapes: The Photographs of Edward Burtynsky*. New Have: Yale University Press.

Burtynsky, E. (2009). *Oil*. Göttingen: Steidl Verlag.

Corbellini, G. (2013). Progettare l'amnesia, in: Marini, S., Santangelo, V. (eds) (2013), *Recycland*, Roma: Aracne Editrice. p.25-29

Corboz, A. (1983). *The land as palimpsest*, in Diogène n. 121, janvier-mars 1983. p.14-35.

Corner, J. (1999). The Agency of Mapping: Speculation, Critique and Invention, in Corner, J., Bick Hirsc, A. (eds.) (2014). *The Landscape Imagination. Collected Essays of James Corner 1990-2010*. New York: Princeton Architectural Press.

Dewey, J. (1939). *Logic. The theory of Inquiry*. New York: Holt, Rinehart and Winston.

Ferrari, M., Malaguti, A., Verde, A. (2007). *TERRITORI RICOMBINANTI. Inerzie e potenzailità nei territori a basso carico antropico attarversati dal corridoio 5*. Tesi di Laurea in Architettura, Relatore: Prof. G. Franz, Co-relatore: Arch. M. Bonizzi, Anno Accademico 2006-2007, Biblioteca della facoltà di Architettura di Ferrara.

Georgescu-Roegen, N. (1971). *The Entropy Law and the Economic Process*. Cambridge, Massachusetts: Harvard University Press.

Georgescu-Roegen, N. (1970). The Entropy Law and the Economic Problem. in Georgescu-Roegen (1976). *Energy and Economic Myths. Institutional and Analytical Economic Essays*. New York: Pergamon Press.

Gorz, A. (1977). *Écologie et liberté*. Paris: Galilée.

Governa, F. (1997). *Il milieu urbano. L'identità territoriale nei processi di sviluppo*, Milano: Franco Angeli.

Gregory, S. A. (1966). Design Science, in Gregory, S. A. (ed.).*The Design Method*. London: Butterworth.

Hein, C. (2013). Between oil and water. The logistical petroleumscape, in Bhatia, N., Casper, M. (eds.). *The Petropolis of tomorrow*. New York: Actar Publishers. p.478

Illich, I. (1973). *Énergie et équité*. Paris: Éditions du Seuil.

Ivancic, A. (2010). *Energyscapes*. Barcelona: Gustavo Gili.

Latz, P. (2001). Landscape Park Duisburg-Nord: the metamorphosis of an industrial site, in Kirkwood, N. (ed.). *Manufactured Sites. Rethinking the Post-Industrial Landscape*. London & New York: Taylor & Francis.

Maugeri, L. (2006). *L'era del petrolio. Mitologia, storia e futuro della più controversa risorsa del Mondo*. Milano: Feltrinelli. p.104.

Maugeri, L. (2012). *Oil: The next revolution. The unprecedented upsurge of oil production capacity and what it means for the world*. [Online] June 2012. Available from: http://belfercenter.ksg.harvard.edu/files/Oil-%20The%20Next%20Revolution.pdf. [Accessed: 21th March 2016].

McDonough, W., Braungart, M. (2002). *Cradle to cradle. Remaking the Way We Make Things*. New York: North Point Press.

Meadows, D. et al. (1972). *The Limits to Growth*. New York: Universe Books.

Petrini, F. (2012). *La crisi energetica del 1973. Le multinazionali del petrolio e la fine dell'età dell'oro (nero)*, in Contemporanea (3), luglio 2012. Bologna: Il Mulino editore. p.445-473.

Rifkin, J. (2011). *The Third Industrial Revolution: How lateral power is transforming energy, the economy and the world*. New York: Palgrave Macmillan.

Roggema, R. (2017). *Research by Design: Proposition for a Methodological Approach,* in Urban Science 2017, 1 (1), 2, Basel: MDPI. [Online].
Available from: http://www.mdpi.com/search?q=&authors=roggema&article_type=&journal=urbansci&section=&special_issue=&volume=&issue=&number=&page=&search=Search. [Accessed: October 31st, 2017]

Ruiz, R. (2013). The Chagos Archipelago. Oil islands, in Bhatia, N., Casper, M. (eds.). *The Petropolis of tomorrow*. New York: Actar Publishers. p.68-79.

Schwab, K. (2016). *The Fourth Industrial Revolution*. New York: Penguin Random House.

Schön, D. A. (1983). *The Reflexive Practitioner*. New York: Basic Books.

Sijmons, D. (2014). *Landscape and Energy. Designing Transition*. Rotterdam: nai010publishers.

Viganò, P. (2012). *Les territoires de l'urbanisme. Le projet comme producteur de connaissance*. Genève: MetisPresses.

Waldheim, C. (2011). *Urbanism after form*, in Pamphlet Architecture 30 - Coupling. Strategies for Infrastructural Opportunism. New York: Princeton Architectural Press.

PART II

Bélanger, P. (2012). *Landscape infrastructure: Urbanism beyond engineering*. Lecture held on May 8th, 2012 at the EPFL in Lausanne. [Online] 8th May. Available from: http://archizoom.epfl.ch/op/edit/page-101622-en.html [Accessed: June 20th, 2016].

Berque, A. (1990). *Médiance. Des milieu en paysages*. Montpellier: Gip Reclus.

Bhatia N. (2013). Harvesting urbanism through territorial logistics, in: Bhatia N, Casper M.(eds). *The Petropolis of Tomorrow*. New York: Actar Publishers.

Bhatia, N. et al. (2016). *Re-wiring territories*, in Volume n. 47 (1), Amsterdam: Archis. p.79-86.

Branzi, A. (2006). *Weak and diffuse modernity: the world of projects at the beginning of the 21st century*. Milano: Skira.

Bruzzone, M. (2015). La riscoperta del Petrolio a Vallezza. Conservare e trasmettere la cultura tecnologica, scientifica e antropologia di una antica miniera, in Bruzzone, M. (ed.). *Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro.* Genova: Sagep Editori.

Bruzzone, M. (2015). Un bene comune che si chiama paesaggio. Sinergie tra luoghi e memorie per il patrimonio culturale, in Bruzzone, M. (ed.). *Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro.* Genova: Sagep Editori.

Bruzzone, M. (2015). Verso il Parco scientifico e tecnologico del Petrolio. progetti di crescita per il paesaggio, in Bruzzone, M. (ed.). *Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro.* Genova: Sagep Editori.

Castells, M. (1973). *La question urbaine*. Paris: François Maspero.

Corboz, A. (1983). *The land as palimpsest*, in Diogène n. 121, janvier-mars 1983. p.14-35.

Correa, F. (2013). Alternative Post-Oil cities, in: Bhatia N, Casper M.(eds). *The Petropolis of Tomorrow*. New York: Actar Publishers.

Dematteis, G. (1995). *Progetto implicito. Il contributo della geografia umana alle scienze del territorio*. Milano: Franco Angeli.

European Commission (2013). Commission Staff Working Document. Technical information on Green Infrastructure (GI). [Online] 6th May. Available from: http://ec.europa.eu/environment/nature/ecosystems/index_en.htm. [Accessed: 5th August 2017].

Governa, F. (1998). *Il milieu come insieme di beni culturali e ambientali*, in Rivista Geografica Italiana n.105, p.85-93.

Farinelli, F. (2003). *Geografia. Un'introduzione ai modelli del mondo.* Torino: Piccola Biblioteca Einaudi.

Giovarini, C. (2015). Il petrolio in Italia: origine e sviluppo, in Bruzzone, M. (ed.). *Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro.* Genova: Sagep Editori.

Governa, F. (1997). *Il milieu urbano. L'identità territoriale nei processi di sviluppo*, Milano: Franco Angeli.

Governa, F. (2001). La dimensione territoriale dello sviluppo socio-economico locale: dalle economie esterne distrettuali alle componenti del milieu, in Magnaghi, A. (ed.), *Rappresentare i luoghi. Metodi e tecniche.* Firenze: Alinea.

Hein, C. (2013). Between oil and water. The logistical petroleumscape, in Bhatia, N., Casper, M. (eds.). *The Petropolis of Tomorrow*. New York: Actar Publishers.

Howard, E. (1898). *To-morrow: A Peaceful Path to Real Reform*. London: Swan Sonnenschein & Co., Ltd.

Magnaghi, A. (1998). Il patrimonio territoriale: un codice genetico per lo sviluppo locale autosostenibile, in Magnaghi A. (ed.), *Il territorio degli abitanti. Società locali e autosostenibilità.* Milano: Dunod.

Massarente, A. (2015). Processi identitari nei paesaggi industriali. Modelli spaziali, strategie insediative, sviluppo locale, in Bruzzone, M. (ed.). *Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro.* Genova: Sagep Editori.

Oliva, E. (2014). *La crisi della raffinazione*. L'Indro. [Online] 18th March. Available from: http://www.lindro.it/la-crisi-della-raffinazione/. [Accessed: 6th March 2016].

Rifkin, J. (2011). *The Third Industrial Revolution: How lateral power is transforming energy, the economy and the world.* New York: Palgrave Macmillan.

Unesco (2016). *Operational Guidelines for the Implementation of the World Heritage Convention*. [Online] 26th October. Available from: http://whc.unesco.org/en/guidelines/. [Accessed: 6th August 2017].

Vergnaud-Giepp, I., Weinling, D. (2015). Il Museo Francese del Petrolio di Merkwiller-Pechelbronn, culla dell'industria petrolifera mondiale (translated by Roberta Borghi), in Bruzzone, M. (ed.). *Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro.* Genova: Sagep Editori.

PART III

Bagnasco, A. (1977). *Tre Italie. La problematica territoriale dello sviluppo economico italiano.* Bologna: Il Mulino.

Basniev et al. (2010). Underground hydrogen storage problems in Russia. In Stolten, D., Grube, T. (eds) *18th World Hydrogen Energy Conference 2010 – Proceedings of the WHEC*, May 16-21 2010, Essen. Forschungszentrum Jülich GmbH, Zentralbibliothek, Verlag. [Online]. Available from: http://juser.fz- juelich.de/record/135540/files/HS1_pp_Bas_Basniev_rev0610.pdf. [Accessed: May 19th, 2017]

Branzi, A. (2006). *Weak and diffuse modernity: the world of projects at the beginning of the 21st century*. Milano: Skira.

Branzi, A. (2010). For a post-environmentalism: seven suggestions for a new Athens Charter, in Mostavavi, M., Doherty, G. (eds.). *Ecological urbanism.* Zurich: Lars Müller Publishers.

Burlew, J. S. (1953). *Algal Culture. From laboratory to pilot plant.* Washington: Carnegie Institution of Washington Publication 600.

Calabi, D. (1979). Territorio, insediamenti e infrastrutture negli ultimi cent'anni, in Mancuso, F., Mioni, A. (ed). *I centri storici del Veneto.* Cinisello Balsamo: Silvana.

Caldiron, C. (2013). *La centrale ENEL di Porto Tolle: una storia di danno ambientale.* Tesi di Laurea in Pianificazione Urbanistica e Territoriale, Relatore: Prof.ssa Stefania Tonin, Co-relatore: Dott.ssa Claudia Guidorzi, Anno Accademico 2012-2013, Biblioteca dell' Istituto Universitario di Architettura di Venezia. [Accessed: July 14th, 2016]

Chisti, Y. (2008). Response to Reijnders: Do biofuels from microalgae beat biofuels from terrestrial plants?, in *Trends in Biotechnology*, 26(7). p. 351-352.

Corbo, P. et al. (2011). *Hydrogen Fuel Cells for Road Vehicles*. London: Springer.

De Geyter, X. (2002). *After sprawl. Research on the contemporary city*. Antwerp: NAI Publishers.

De Rita, G., Galdo, A. (2001). *Capolinea a Nordest.* Venezia: Marsilio.

Dousková, I. et al. (2009). Utilization of distillery stillage for energy generation and concurrent production of valuable microalgal biomass in the sequence: Biogas-cogeneration-microalgae-products. *Energy Conversion and Management.*

Friedman, Y. (1978). *L'architecture de survie. Où s'invente aujourd'hui le monde de demain*. Paris: Casterman.

Hötker, D. (1988). Ruhr Region, in Van Der Cammen, H. (ed.). *Four metropolises in Western Europe. Development and urban planning of London, Paris, Randstad Holland and the Ruhr region*. Assen: Van Gorcum.

International Energy Agency (2013). *Technology Roadmap: Carbon Capture adn Storage*. Paris: OECD/IEA. [Online]. Available from: www.iea.org [Accessed: June 5th, 2017]

IEAGHG (2013). *CO_2 pipeline infrastructure*. Report 2013/18. [Online]. Available from: http://ieaghg.org/docs/General_Docs/Reports/2013-18.pdf. [Accessed: June 5th, 2017]

Indovina, F. (1990). La città diffusa, in Indovina, F. (ed.) (2009). *Dalla città diffusa all'arcipelago metropolitano*. Milano: Franco Angeli. p. 47-64.

Indovina, F. (2003). La metropolizzazione del territorio. Nuove gerarchie territoriali, in Indovina, F. (ed.) (2009). *Dalla città diffusa all'arcipelago metropolitano*. Milano: Franco Angeli.

Indovina, F. (2005). La nuova dimensione urbana: l'arcipelago metropolitano, in Indovina, F. (ed.) (2009). *Dalla città diffusa all'arcipelago metropolitano*. Milano: Franco Angeli.

Latz, P. (2001). Landscape Park Duisburg-Nord: the metamorphosis of an industrial site, in Kirkwood, N. (ed.). *Manufactured Sites. Rethinking the Post-Industrial Landscape*. London & New York: Taylor & Francis.

Mazzitelli, A. (2010). *Produzione di energia ed elettricità da alghe*. Tesi di Laurea in Ingegneria Chimica, Relatore: Stefano Consonni, Correlatore: Ing. Federico Viganò, Politecnico di Milano. [Accessed: June 13th, 2017]

Mignard, D. et al. (2016). *Seasonal storage of hydrogen in a depleted natural gas reservoir*. International Journal of Hydrogen Energy, 41(12). p.5549-5558. doi: 10.1016/j.ijhydene.2016.02.036

Nagase, H. et al. (1998). Improvement of microalgal NOx removal in bubble column and airlift reactors, in *Journal of fermentation and bioengineering*, 86(4). p.421–423.

Porchia, F. (2012). *L'evoluzione del porto industriale di Marghera dalle origini al secondo dopoguerra (1917 – 1963). Insediamenti, cicli produttivi, trasformazioni territoriali tra passato e futuro*. Tesi di Dottorato in Scienze Soriche, Supervisore: Prof. Giovanni Luigi Fontana, Università degli Studi di Padova. [Accessed: January 15th, 2016]

Prossek, A. et al. (2009). *Atlas der Metropole Ruhr. Vielfalt und Wandel des Ruhrgebiets im Kartenbild*. Germany: Emons.

Rabindran, P. et al. (2011). *Intregrity Management Approach to Reuse of Oil and Gas Pipelines for CO_2 Transportation*. in Conference Proceedings of the 6th Pipeline Technology Conference held in Hannover (April, 4th-5th 2011). [Online]. Available from: https://www.pipeline-conference.com/abstracts/integrity-management-approach-reuse-oil-and-gas-pipelines-co2-transportation. [Accessed: June 20th, 2017]

Reicher, C. et al. (2011). *Schichten einer Region (Layers of a region. Pieces of Maps on the Spatial Structure of the Ruhr)*. Berlin: Jovis.

Reulecke, J. (1984). The Ruhr: centralization versus decentralization in a region of cities, in Sutcliffe, A. (ed.). *Metropolis 1890-1940*. London: Mansell Publishing Limited.

Rifkin, J. (2011). *The Third Industrial Revolution: How lateral power is transforming energy, the economy and the world*. New York: Palgrave Macmillan.

Ros, M. et al. (2014). Start of a CO_2 Hub in Rotterdam: connecting CCS and CCU. in *Energy Procedia* 63 (2014). Amsterdam: Elsevier. [Online].
Available from: https://www.researchgate.net/publication/272380887_Start_of_a_CO2_Hub_in_Rotterdam_Connecting_CCS_and_CCU. [Accessed: November 19th, 2017].

Roverato, G. (1996). *L'industria del Veneto: storia economica di un caso regionale*. Padova: Esedra.

Roverato, G. (2008). Il lungo processo dell'industrializzazione, in Longo, O., Favotto, F., Roverato, G. (eds.). *Il modello Veneto tra storia e futuro*. Padova: Il Poligrafo. p. 1-28.

Savino, M. (1998). Governare la complessità. Il Veneto come caso esemplificativo, ma non paradigmatico, in Indovina, F. (ed.) (2009). *Dalla città diffusa all'arcipelago metropolitan*. Milano: Franco Angeli. p. 65-80.

Secchi, B. (1996). Un'interpretazione delle fasi più recenti dello sviluppo italiano, in Clementi, A. (ed.). *Infrastrutture e piani urbanistici*. Roma: palombi.

Secchi, B. and Viganò, P. (2012). De horizontale metropool, in Dejemeppe, P. and Périlleux (ed.) (2012). *Brussel 2040. Drie visies voor een metropool*, Brussel: Brussels Hoofdstedelijk Gewest.

Sellari, P. (2011). *Uno sguardo alle ferrovie italiane nell'Ottocento postunitario,* in Studi e Ricerche socio-territoriali (1) Napoli.

Sijmons, D. (2014). *Landscape and Energy. Designing Transition*. Rotterdam: nai010publishers.

Steinberg, H.G. (1967). *Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes*. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.

Tosi, M.C. et Munarin, S. (2001). *Tracce di città. Esplorazioni di un territorio abitato: l'aerea veneta*. Milano: Franco Angeli.

Uttke, A. et al. (2008). *International Building Exhibition Emscher Park. The projects 10 years later*. Essen: Klartext Verlag.

Viganò, P. (2015). La métropole horizontale, in *Cahier spécial de Tracés,* supplément à *Tracés* n.21, 06 novembre 2015, Zurich: Espazium.

PART IV

Bélanger, P. (2012). *Landscape infrastructure: Urbanism beyond engineering*. Lecture held on May 8th, 2012 at the EPFL in Lausanne. [Online] 8th May. Available from: http://archizoom.epfl.ch/op/edit/page-101622-en.html [Accessed: June 20th, 2016].

Infussi, F. (1992). Giuseppe Samonà: una cultura per conciliare tradizione e innovazione. in Di Biagi, P., Gabellini, P. (eds.). *Urbanisti italiani*. Bari: Laterza.

Rifkin, J. (2011). *The Third Industrial Revolution: How lateral power is transforming energy, the economy and the world*. New York: Palgrave Macmillan.

Samonà, G. et al. (1961). *Piano comprensoriale dei comuni del Polesine. Relazione introduttiva*. Documents accessed at Archivio progetti IUAV, Venice. [Accessed: July 15th, 2016]

Tavola, M. (2013). *Analisi progettuale di un impianto mini idroelettrico inserito in un sistema di approvigionamento idrico.* Tesi di Laurea Specialistica in Ingegneria Energetica, Academic Tutor: Prof. Fabio Rinaldi, Corporate Tutor: Ing. Costantino Anghileri, Anno Accademico 2012-2013, Politecnico di Milano. [Accessed: April 25th, 2017]

PART V

Barca, F., Casavola, P. (eds.) (2014). *Strategia Nazionale per le Aree Interne: definizione, obiettivi, strumenti e governance*. Materiali UVAL n.31 (2014). Roma: Collana Materiali Uval.

Caldiron, C. (2013). *La centrale ENEL di Porto Tolle: una storia di danno ambientale.* Tesi di Laurea in Pianificazione Urbanistica e Territoriale, Relatore: Prof.ssa Stefania Tonin, Co-relatore: Dott.ssa Claudia Guidorzi, Anno Accademico 2012-2013, Biblioteca dell' Istituto Universitario di Architettura di Venezia. [Accessed: July 14th, 2016]

ENEA (2013). *Sistemi per la produzione di microalghe a fini di riciclo di digestato e fornitura di biomassa per biogas*. Report Ricerca di Sistema Elettrico - Accordo di Programma Ministero dello Sviluppo Economico - ENEA. [online] Available from: http://www.enea.it/it/Ricerca_sviluppo/documenti/ricerca-di-sistema-elettrico/biomasse/2012/rds-2013-177.pdf. [Accessed: September 24th, 2017]

ENEL (2015). *Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle*. Dossier informativo. [online] Available from: https://corporate.enel.it/it/futur-e.html. [Accessed: August 22nd, 2016]

Massarente, A. (2016). Progettando il programma Un'esperienza di ricerca progettuale per la rigenerazione urbana di un'area postindustriale. in Massarente, A., Verde, A. (eds.). *Intersezioni urbane. Indagini e proposte per la rigenerazione urbana di un'area postindustriale.* Ferrara: ArcDesPress.

Neufert, E. (2013). *Enciclopedia pratica per progettare e costruire.* Milano: Hoepli.

PAT (1994). *Norme tecniche di attuazione del Piano di Assetto del Territorio,* Comune di Porto Tolle. [online] Available from: http://www.comune.portotolle.ro.it/web/portotolle/ufficio-urbanistica;jsessionid=62B05EBBC60DDE36B34193BD2ECCC0E7.liferay1?p_p_id=ALFRESCO_MYPORTAL_CONTENT_PROXY_WAR_myportalportlet_INSTANCE_u1Iw&p_p_lifecycle=1&p_p_state=normal&p_p_mode=view&p_p_col_id=column-3&p_p_col_count=2&template=/regioneveneto/myportal/html-generico-detail&uuid=237c01b0-ffd0-4f5a-8fa2-cdd6a2e79676. [Accessed: August 29th, 2017]

PdA (1994). *Norme tecniche di attuazione del Piano d'Area Delta del Po,* Regione Veneto. [online] Available from: https://www.regione.veneto.it/web/ptrc/delta-del-po. [Accessed: August 25th, 2017]

PRG (2003). *Norme tecniche di attuazione del Piano Regolatore Generale - Centri abitati,* Comune di Porto Tolle Veneto. [online] Available from: https://sac2.halleysac.it/c029039/zf/index.php/trasparenza/index/index/categoria/168. [Accessed: August 28th, 2017]

PRG (2003). *Norme tecniche di attuazione del Piano Regolatore Generale - Zone agricole,* Comune di Porto Tolle Veneto. [online] Available from: https://sac2.halleysac.it/c029039/zf/index.php/trasparenza/index/index/categoria/168. [Accessed: August 28th, 2017]

PTCP (2012). *Norme tecniche del Piano Territoriale di Coordinamento Provinciale,* Provincia di Rovigo. [online] Available from: http://www.pianificazione.provincia.rovigo.it/nqcontent.cfm?a_id=2438. [Accessed: August 27th, 2017]

PTRC (1992). *Norme tecniche del Piano Territoriale Regionale di Coordinamento,* Regione Veneto. [online] Available from: http://ptrc.regione.veneto.it/ptrc-vigente-1992. [Accessed: August 25th, 2017]

Quaglia, T. et al. (2011). *Aree protette e sviluppo sostenibile. Un piano per la conservazione della biodiversità e lo sviluppo dell'economia locale nel delta del Po. Regione Veneto.* [online] Available from: https://www.regione.veneto.it/static/www/agricoltura-e-foreste/natreg.pdf. [Accessed: August 19th, 2017]

Sijmons, D. (2014). *Landscape and Energy. Designing Transition.* Rotterdam: nai010publishers.

Viganò, P. (2012). *Les territoires de l'urbanisme. Le projet comme producteur de connaissance.* Genève: MetisPresses.

PART VI and CONCLUSIONS

Baumann, Z. (2003). *Modernità liquida.* Roma-Bari: Laterza

Caldiron, C. (2013). *La centrale ENEL di Porto Tolle: una storia di danno ambientale.* Tesi di Laurea in Pianificazione Urbanistica e Territoriale, Relatore: Prof.ssa Stefania Tonin, Co-relatore: Dott.ssa Claudia Guidorzi, Anno Accademico 2012-2013, Biblioteca dell' Istituto Universitario di Architettura di Venezia. [Accessed: July 14th, 2016]

ITACA (2013). *Linee guida per la redazione di studi di fattiblità.* [online] Available from: http://www.itaca.org/documenti/news/LG%20ITACA%20SDF_Completo_240113.pdf. [Accessed: October 22nd, 2017]

Morin, E. (1999). *La tête bien faite.* Paris: Seuil.

Samonà, G. et al. (1961). *Piano comprensoriale dei comuni del Polesine. Relazione introduttiva.* Documents accessed at Archivio progetti IUAV, Venice. [Accessed: July 15th, 2016]

Figure credits

PART I

Fig. 1 *Ferrari, Malaguti, Verde, 2007*

Fig. 2 *Ferrari, Malaguti, Verde, 2007*

Fig. 3 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*

Fig. 4 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*

Fig. 5 *from the film "Deserto Rosso" (1964) by Michelangelo Antonioni*

Fig. 6 *from the film "Deserto Rosso" (1964) by Michelangelo Antonioni*

Fig. 7 *from the film "Deserto Rosso" (1964) by Michelangelo Antonioni*

Fig. 8 *http://www.petropia.org/info/*

Fig. 9 *http://www.petropia.org/info/*

Fig.10 *Sijmons, D. (2014). Landscape and Energy. Designing Transition. Rotterdam: nai010publishers*

Fig.11 *Sijmons, D. (2014). Landscape and Energy. Designing Transition. Rotterdam: nai010publishers*

Fig.12 *Sijmons, D. (2014). Landscape and Energy. Designing Transition. Rotterdam: nai010publishers*

Fig.13 *Sijmons, D. (2014). Landscape and Energy. Designing Transition. Rotterdam: nai010publishers*

Fig.14 *Bhatia, N. (2016). Re-wiring territories, in Volume 47 (1), Amsterdam: Archis. p.79-86.*

Fig. 15 *www.adrioninterreg.eu/index.php/about-program/cooperation-area/*

Fig. 16 *Gas and oil pipelines in Europe document, http://www.europarl.europa.eu/RegData/etudes/note/join/2009/416239/IPOL-ITRE_NT(2009)416239_EN.pdf (p.35)*

Fig. 17 *www.compoundchem.com/2014/09/01/benzene-derivatives-in-organic-chemistry/*

Fig.18 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.19 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.20 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.21 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.22 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.23 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.24 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.25 *elaborated by the author, source: Corine Land Cover 2012 - www.eea.europa.eu*

Fig.26 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*

Fig.27 *Google Earth 2017*

Fig.28 *Google Earth 2017*

Fig.29 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*

Fig.30 *Google Earth 2017*

Fig.31 *Google Earth 2017*

Fig.32 *http://www.econote.it/2015/03/06/eltjon-valle-petrolia/*

Fig.33 *Google Earth 2017*

Fig.34 *Google Earth 2017*

Fig.35 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*
Fig.36 *Google Earth 2017*
Fig.37 *Google Earth 2017*
Fig.38 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*
Fig.39 *Google Earth 2017*
Fig.40 *Google Earth 2017*
Fig.41 *© Edward Burtynsky, courtesy Metivier Gallery, Toronto / Flowers Gallery, London*
Fig.42 *Google Earth 2017*
Fig.43 *Google Earth 2017*
Fig.44 *Enel Futur-E programme, Porto Tolle documentation https://corporate.enel.it/it/futur-e/impianto/porto-tolle/porto-tolle-documentazione.html*
Fig.45 *Google Earth 2017*
Fig.46 *Google Earth 2017*
Fig.47 *elaborated by the author, source: Corine Land Cover 2012, Prospectus of hydrocarbon reserves: https://www.prio.org - Petroleum Dataset v1.2; Refineries location and productivity: http://globalenergyobservatory.org; On-shore oil fields location: Wikipedia – Oil fields in Italy, Slovenia, Croatia, Serbia, Albania, Greece*
Table 1 *European Commission (2013). Commission Staff Working Document. Technical information on Green Infrastructure (GI). [Online] 6th May. Available from: http://ec.europa.eu/environment/nature/ecosystems/index_en.htm.*
Fig.48 *www.antonini-foto.it*
Fig.49 *https://commons.wikimedia.org/wiki/File:Ticino_Ietto_Galliate.jpg*
Fig.50 *www.ilgiorno.it/pavia*
Fig.51 *https://vivoinlomellina.wordpress.com*
Fig.52 *http://www.bioecogeo.com/33206-2/*
Fig.53 *https://www.zainoo.com/it/guida-italia/veneto/rovigo/delta-del-po*
Fig.54 *www.mosevenezia.eu*
Fig.55 *www.mosevenezia.eu*
Fig.56 *http://enistoria.eni.com*
Fig.57 *http://enistoria.eni.com*
Fig.58 *http://bari.repubblica.it/cronaca*
Fig.59 *Lilia Candida - WWF Taranto*
Fig.60 *https://commons.wikimedia.org/wiki/File:Gela_zona_industriale_dall%27alto.JPG*
Fig.61 *https://commons.wikimedia.org/wiki/File:Sughereta_Niscemi06.jpg*
Fig.62 *http://siracusa.gds.it*
Fig.63 *Lamberto Rubino*
Fig.64 *https://commons.wikimedia.org/wiki/File:Kraljevica_2010_0728_02.JPG*
Fig.65 *https://commons.wikimedia.org/wiki/File:Stara_Baška.jpg*
Fig.66 *www.tportal.hr*
Fig.67 *Goran Safarek - www.balkanrivers.net*
Fig.68 *http://www.econote.it/2015/03/06/eltjon-valle-petrolia/*
Fig.69 *Enrico Porfido*

Fig.70 *https://www.flickr.com/photos/unep_dc/8900418979/in/album-72157633831209853*
Fig.71 *Alessandro Pracucci*
Fig.72 *https://zarifopoulos.com/portfolio/elpe/?lang=en*
Fig.73 *http://www.panoramio.com/photo/88755795*
Fig.74 *http://www.stager.gr/index.php/gr/works*
Fig.75 *www.tripinview.com/en/places/residential/55736/greece-attica-central-attica-aspropirgos*
Fig.76 *www.vice.com/gr/article/53z378/ta-oryxeia-tis-dei-katapinoun-xoria-stin-ptolemaida*
Fig.77 *http://mashable.com/2014/11/12/lignite*
Fig.78 *https://en.wikipedia.org/wiki/Amyntaio_Power_Plant#/media/File:Amyndeo,_Florina_prefecture,_Greece_-_Lignite_power_station_and_lignite_mines_-_01_cropped.jpg*
Fig.79 *http://blogs.agu.org/landslideblog/2017/06/13/amyntaiou-2/*
Fig.80 *http://www.musee-du-petrole.com/historique/*
Fig.81 *http://www.musee-du-petrole.com/informations-pratiques/horaires-et-tarifs/*
Fig.82 *Bruzzone, M. (ed.) (2015). Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro. Genova: Sagep Editori.*
Fig.83 *Bruzzone, M. (ed.) (2015). Paesaggi culturali e progetto. Verso il Parco Museo del Petrolio a Fornovo di Taro. Genova: Sagep Editori.*
Fig.84 *www.museodelpetrolio.it*
Fig.85 *http://doc.mode.unibo.it/content/un-parco-museo-del-petrolio-e-delle-energie-vallezza*
Fig.86 *Bhatia, N. (2016). Re-wiring territories, in Volume 47 (1), Amsterdam: Archis. p.79-86.*
Fig.87 *Bhatia, N. (2016). Re-wiring territories, in Volume 47 (1), Amsterdam: Archis. p.79-86.*
Fig.88 *Bhatia, N. (2016). Re-wiring territories, in Volume 47 (1), Amsterdam: Archis. p.79-86.*
Fig.89 *http://www.armellecaron.fr/works/les-villes-rangees/*
Fig.90 *http://www.armellecaron.fr/works/les-villes-rangees/*
Fig.91 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.92 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.93 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.94 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.95 *http://www.diva-gis.org*
Fig.96 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.97 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.98 *elaborated by the author*
Fig.99 *Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.*
Fig.100 *elaborated by the author*

Fig.101 Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.; Corine Land Cover 2012

Fig.102 elaborated by the author

Fig.103 Becher, B., Becher, H. (1971). Die Architektur der Förder- und Wassertürme. München: Prestel - Verlag München.

Fig.104 Becher, B., Becher, H. (2010). Bergwerke und hütten. München: Schirmer Mosel

Fig.105 elaborated by the author

Fig.106 www.metropoleruhr.de

Fig.107 Michael Latz http://www.landezine.com/index.php/2011/08/post-industrial-landscape-architecture/

Fig.108 Andreas Kipar, Land srl, http://www.aiapp.net/krupp-park-essen-germania/

Fig.109 elaborated by the author

Fig.110 www.route-industriekultur.de

Fig.111 Guntram Walter, www.route-industriekultur.de

Fig.112 Michael Gohl, www.route-industriekultur.de

Fig.113 Sascha Kreklau, www.route-industriekultur.de

Fig.114 Guntram Walter, www.route-industriekultur.de

Fig.115 Guntram Walter, www.route-industriekultur.de

Fig.116 http://oma.eu/projects/zollverein-masterplan

Fig.117 Anselm Van Sintfliet, http://oma.eu/projects/zollverein-kohlenwaesche

Fig.118 Thomas Willemsen, https://www.zollverein.de/angebote/sanaa-gebaeude

Fig.119 Jochen Tack, https://www.zollverein.de/angebote/werksschwimmbad

Fig.120 Amalie Wright http://architecturenow.co.nz/articles/future-park-imagining-tomorrows-urban-parks/

Fig.121 Latz + Partners https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/landschaftspark-duisburg-nord-de/

Fig.122 Latz + Partners https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/landschaftspark-duisburg-nord-de/

Fig.123 Latz + Partners https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/duisburg-nord-sinterpark/

Fig.124 Latz + Partners https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/duisburg-nord-wasserpark/

Fig.125 Latz + Partners https://www.latzundpartner.de/en/projekte/postindustrielle-landschaften/duisburg-nord-bahnpark/

Fig.126 elaborated by the author

Fig.127 elaborated by the author

Fig.128 http://www.rfi.it/rfi/LINEE-STAZIONI-TERRITORIO/Nelle-regioni/Veneto
Fig.129 elaborated by the author
Fig.130 elaborated by the author
Fig.131 elaborated by the author
Fig.132 elaborated by the author
Fig.133 elaborated by the author
Fig.134 elaborated by the author
Fig.135 Sijmons, D. (2014). Landscape and Energy. Designing Transition. Rotterdam: nai010publishers
Fig.136 https://www.espazium.ch/la-mostra-metropoli-orizzontale-alla-biennale-di-venezia
Fig.137 Branzi, A. (2006). Weak and diffuse modernity: the world of projects at the beginning of the 21st century. Milano: Skira
Fig.138 Branzi, A. (2006). Weak and diffuse modernity: the world of projects at the beginning of the 21st century. Milano: Skira
Fig.139 Branzi, A. (2006). Weak and diffuse modernity: the world of projects at the beginning of the 21st century. Milano: Skira
Fig.140 www.iea.org
Fig.141 www.iea.org
Fig.142 www.iea.org
Fig.143 www.iea.org
Fig.144 www.iea.org
Fig.145 www.iea.org
Fig.146 www.iea.org
Fig.147 www.iea.org
Fig.148 www.iea.org
Fig.149 www.iea.org
Fig.150 www.iea.org
Fig.151 www.iea.org
Fig.152 www.iea.org
Fig.153 www.iea.org
Fig.154 www.iea.org
Fig.155 www.iea.org
Fig.156 www.iea.org
Fig.157 www.iea.org
Fig.158 www.iea.org
Fig.159 www.iea.org
Table 2 Mazzitelli, A. (2010). Produzione di energia ed elettricità da alghe. Tesi di Laurea in Ingegneria Chimica, Relatore: Stefano Consonni, Correlatore: Ing. federico Viganò, Politecnico di Milano.
Fig.160 https://en.wikipedia.org/wiki/Botryococcus_braunii
Fig.161 http://www.huffingtonpost.co.uk/2016/01/07/what-is-chlorella-green-algae-_n_6940872.html

Fig.162 https://it.wikipedia.org/wiki/Dunaliella
Fig.163 http://www.seaweed.ie/aquaculture/kelp_china.php
Fig.164 https://www.researchgate.net/publication/278410003_Study_of_the_flow_mixing_in_a_novel_ARID_raceway_for_algae_production
Fig.165 https://en.wikipedia.org/wiki/Photobioreactor
Fig.166 Bing Maps
Fig.167 https://commons.wikimedia.org/wiki/File%3ASeaweed_farm_uroa_zanzibar.jpg
Fig.168 http://miraclesproject.eu
Fig.169 https://www.d-factoryalgae.eu
Fig.170 http://co2degrees.com/learn-more/resources
Table 3 IEAGHG (2013). CO2 pipeline infrastructure. Report 2013/18
Fig.171 http://co2degrees.com/learn-more/resources
Fig.172 Ros, M. et al. (2014). Start of a CO2 Hub in Rotterdam: connecting CCS and CCU. in Energy Procedia 63 (2014). Amsterdam: Elsevier.
Fig.173 Ros, M. et al. (2014). Start of a CO2 Hub in Rotterdam: connecting CCS and CCU. in Energy Procedia 63 (2014). Amsterdam: Elsevier.
Fig.174 http://co2degrees.com/learn-more/resources
Fig.175 http://www.hydrogenious.net/en/2016/04/successful-completion-network-modular-hydrogen-plant-energy-storage/
Fig.176 http://www.kbbnet.de/en/teaserwidgets/storable-energy/
Fig.177 http://www.kbbnet.de/en/teaserwidgets/storable-energy/
Fig.178 elaborated by the author
Fig.179 Bing Maps
Fig.180 Bing Maps
Fig.181 Bing Maps
Fig.182 Bing Maps
Fig.183 Bing Maps
Fig.184 Bing Maps
Fig.185 Bing Maps
Fig.186 elaborated by the author
Fig.187 elaborated by the author
Fig.188 elaborated by the author
Fig.189 elaborated by the author
Fig.190 elaborated by the author
Fig.191 elaborated by the author
Fig.192 elaborated by the author
Fig.193 elaborated by the author
Fig.194 elaborated by the author
Fig.195 elaborated by the author
Fig.196 elaborated by the author
Fig.197 elaborated by the author
Fig.198 elaborated by the author

Fig.199 *http://www.ilgiornaledelpo.it/tag/365-po-river-system/*

Fig.200 *elaborated by the author*

Fig.201 *Quaglia, T. et al. (2011). Aree protette e sviluppo sostenibile. Un piano per la conservazione della biodiversità e lo sviluppo dell'economia locale nel delta del Po. Regione Veneto.*

Fig.202 *Quaderni Ca' Vendramin - Periodico del laboratorio internazionale delta e lagune, n. 0, ottobre 2009, Fondazione Ca' Vendramin.*

Fig.203 *Quaglia, T. et al. (2011). Aree protette e sviluppo sostenibile. Un piano per la conservazione della biodiversità e lo sviluppo dell'economia locale nel delta del Po. Regione Veneto.*

Fig.204 *Quaderni Ca' Vendramin - Periodico del laboratorio internazionale delta e lagune, n. 2, ottobre 2013, Fondazione Ca' Vendramin.*

Fig.205 *Quaderni Ca' Vendramin - Periodico del laboratorio internazionale delta e lagune, n. 2, ottobre 2013, Fondazione Ca' Vendramin.*

Fig.206 *Quaglia, T. et al. (2011). Aree protette e sviluppo sostenibile. Un piano per la conservazione della biodiversità e lo sviluppo dell'economia locale nel delta del Po. Regione Veneto.*

Fig.207 *Quaderni Ca' Vendramin - Periodico del laboratorio internazionale delta e lagune, n. 2, ottobre 2013, Fondazione Ca' Vendramin.*

Fig.208 *Quaderni Ca' Vendramin - Periodico del laboratorio internazionale delta e lagune, n. 2, ottobre 2013, Fondazione Ca' Vendramin.*

Fig.209 *PTRC (1992). Norme tecniche del Piano Territoriale Regionale di Coordinamento, Regione Veneto.*

Fig.210 *PTRC (1992). Norme tecniche del Piano Territoriale Regionale di Coordinamento, Regione Veneto.*

Fig.211 *PdA (1994). Norme tecniche di attuazione del Piano d'Area Delta del Po, Regione Veneto.*

Fig.212 *PTCP (2012). Norme tecniche del Piano Territoriale di Coordinamento Provinciale, Provincia di Rovigo.*

Fig.213 *PTCP (2012). Norme tecniche del Piano Territoriale di Coordinamento Provinciale, Provincia di Rovigo.*

Fig.214 *PTCP (2012). Norme tecniche del Piano Territoriale di Coordinamento Provinciale, Provincia di Rovigo.*

Fig.215 *PTCP (2012). Norme tecniche del Piano Territoriale di Coordinamento Provinciale, Provincia di Rovigo.*

Fig.216 *PTCP (2012). Norme tecniche del Piano Territoriale di Coordinamento Provinciale, Provincia di Rovigo.*

Fig.217 *PTCP (2012). Norme tecniche del Piano Territoriale di Coordinamento Provinciale, Provincia di Rovigo.*

Fig.218 *PRG (2003). Norme tecniche di attuazione del Piano Regolatore Generale, Comune di Porto Tolle Veneto.*

Fig.219 *PAT (1994). Norme tecniche di attuazione del Piano di Assetto del Territorio, Comune di Porto Tolle.*

Fig.220 *PAT (1994). Norme tecniche di attuazione del Piano di Assetto del Territorio, Comune di Porto Tolle.*

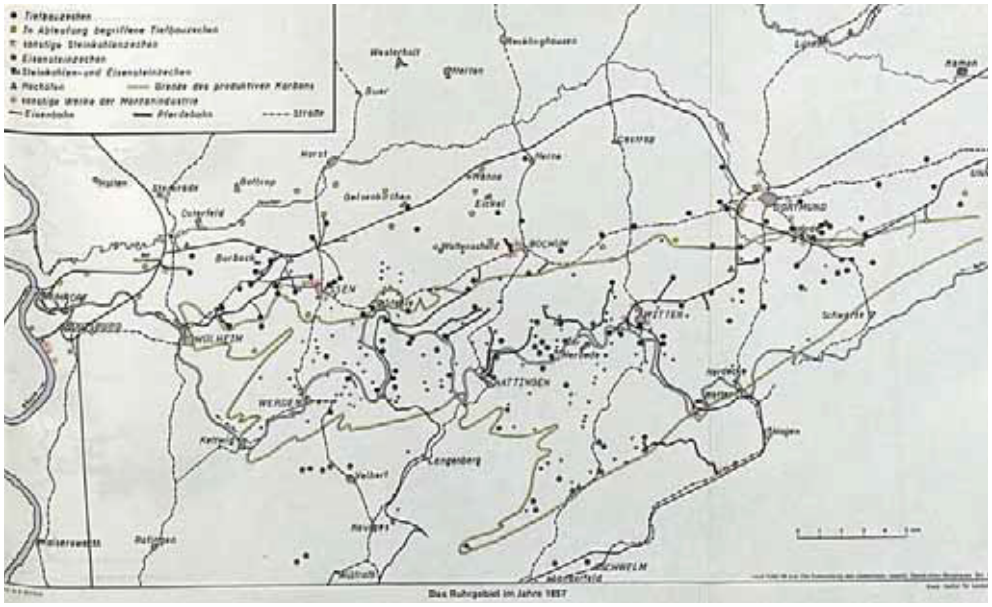
Fig.221 PAT (1994). Norme tecniche di attuazione del Piano di Assetto del Territorio, Comune di Porto Tolle.
Fig.222 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.223 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.224 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.225 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.226 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.227 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.228 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.229 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.230 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.231 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.232 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.233 ENEL (2015). Invito a manifestare interesse per la riqualificazione e acquisizione del sito industriale Enel di Porto Tolle.
Fig.234 elaborated by the author
Fig.235 elaborated by the author
Fig.236 elaborated by the author
Fig.237 elaborated by the author
Fig.238 elaborated by the author
Fig.239 elaborated by the author
Fig.240 elaborated by the author
Fig.241 elaborated by the author
Fig.242 elaborated by the author
Fig.243 elaborated by the author
Fig.244 Barca, F., Casavola, P. (eds.) (2014). Strategia Nazionale per le Aree Interne: definizione, obiettivi, strumenti e governance. Materiali UVAL n.31. Roma: Collana Materiali Uval.
Fig.245 http://www.agenziacoesione.gov.it/it/arint/; elaborated by the author
Fig.246 http://www.agenziacoesione.gov.it/it/arint/; elaborated by the author
Fig.247 http://www.agenziacoesione.gov.it/it/arint/; elaborated by the author
Fig.248 http://www.agenziacoesione.gov.it/it/arint/; elaborated by the author

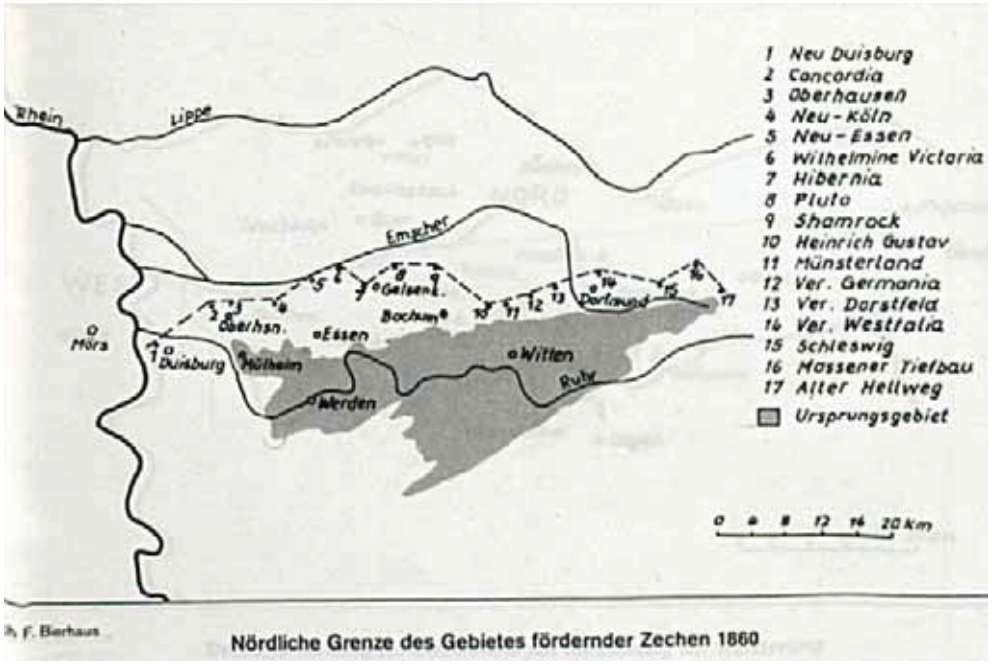
Fig.249 Provinces of Ferrara, Rovigo, Venice, and Padua websites; elaborated by the author
Fig.250 University of Padua website; elaborated by the author
Fig.251 www.geapartners.ch
Fig.252 Carbon neutral energy productive cycle during the first phase
Fig.253 elaborated by the author
Fig.254 elaborated by the author
Fig.255 elaborated by the author
Fig.256 elaborated by the author
Fig.257 elaborated by the author
Fig.258 elaborated by the author
Fig.259 elaborated by the author
Fig.260 elaborated by the author
Fig.261 elaborated by the author
Fig.262 elaborated by the author
Fig.263 elaborated by the author
Fig.264 elaborated by the author
Fig.265 elaborated by the author
Fig.266 https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html
Fig.267 https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html
Fig.268 https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html
Fig.269 https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html
Fig.270 https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html
Fig.271 https://corporate.enel.it/it/futur-e/impianto/alessandria/concordo-di-idee.html
Fig.272 Samonà, G. et al. (1961). Piano comprensoriale dei comuni del Polesine. Relazione introduttiva. Documents accessed at Archivio progetti IUAV, Venice.
Fig.273 Samonà, G. et al. (1961). Piano comprensoriale dei comuni del Polesine. Relazione introduttiva. Documents accessed at Archivio progetti IUAV, Venice.
Fig.274 elaborated by the author

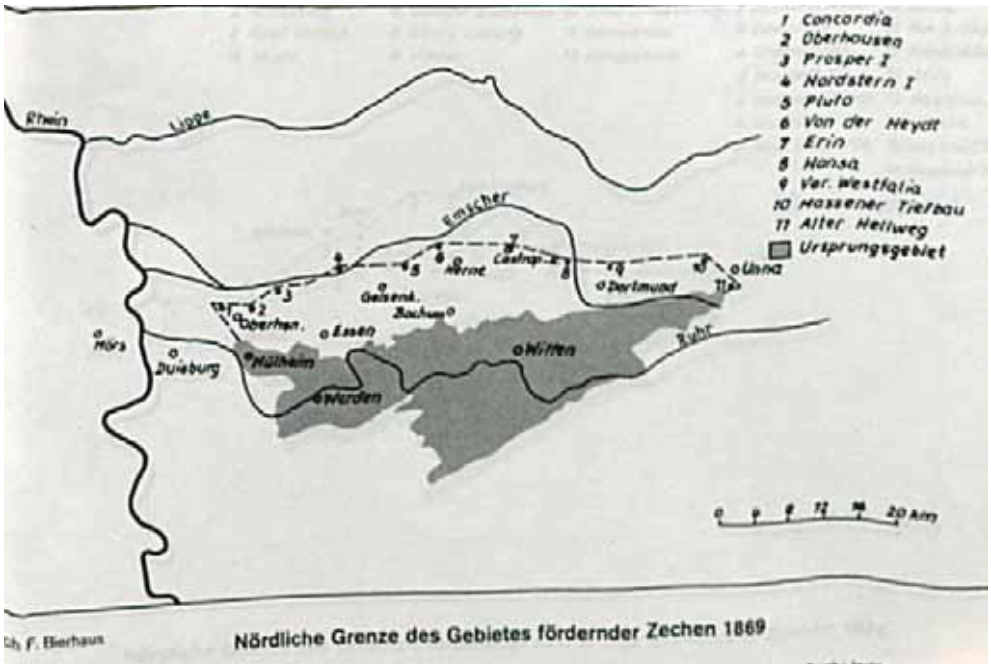
Annexes

PART I

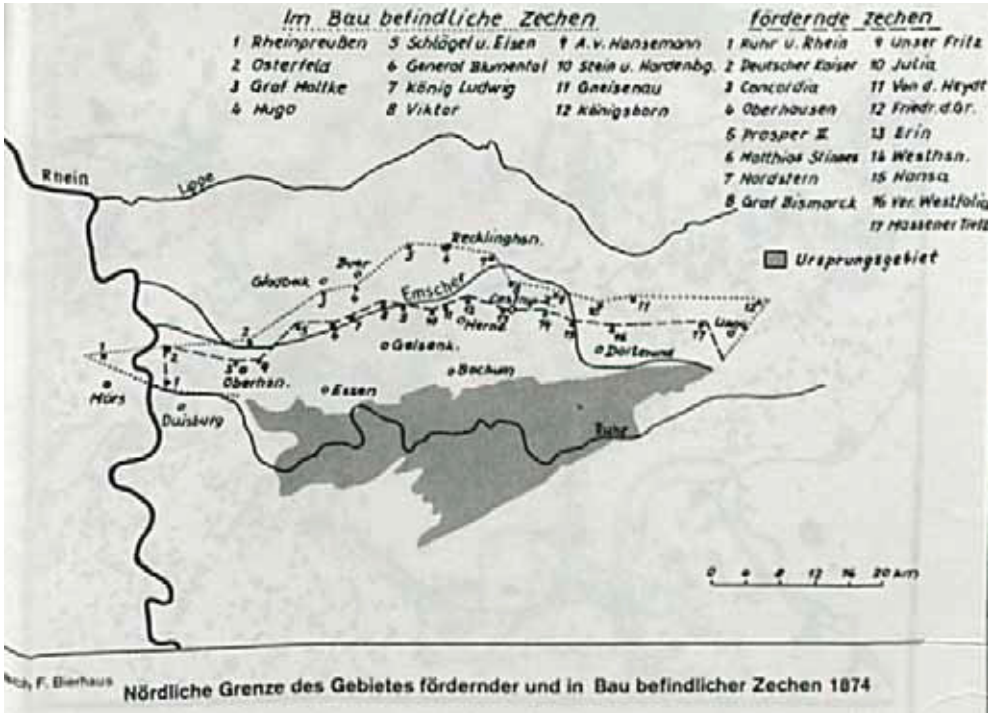
Annex I Steinberg, H.G. (1967). Sozialräumliche Entwicklung und Gliederung des Ruhrgebietes. Bad Godesberg: Bundesforschungsanstalt für landeskunde und raumordnung selbstverlag.



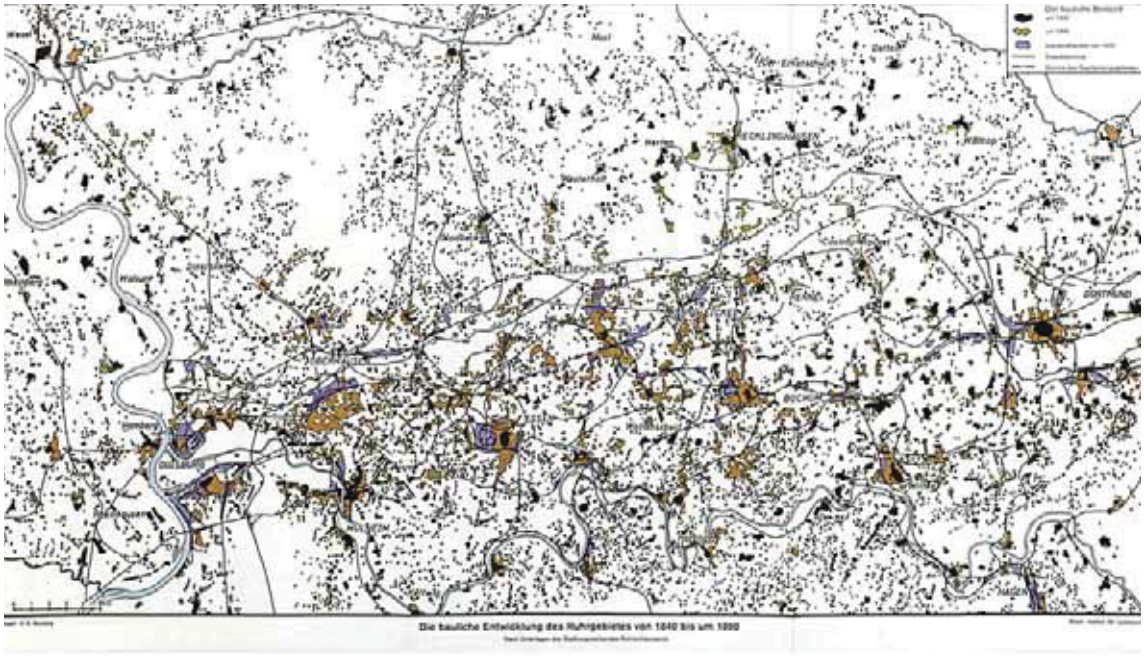




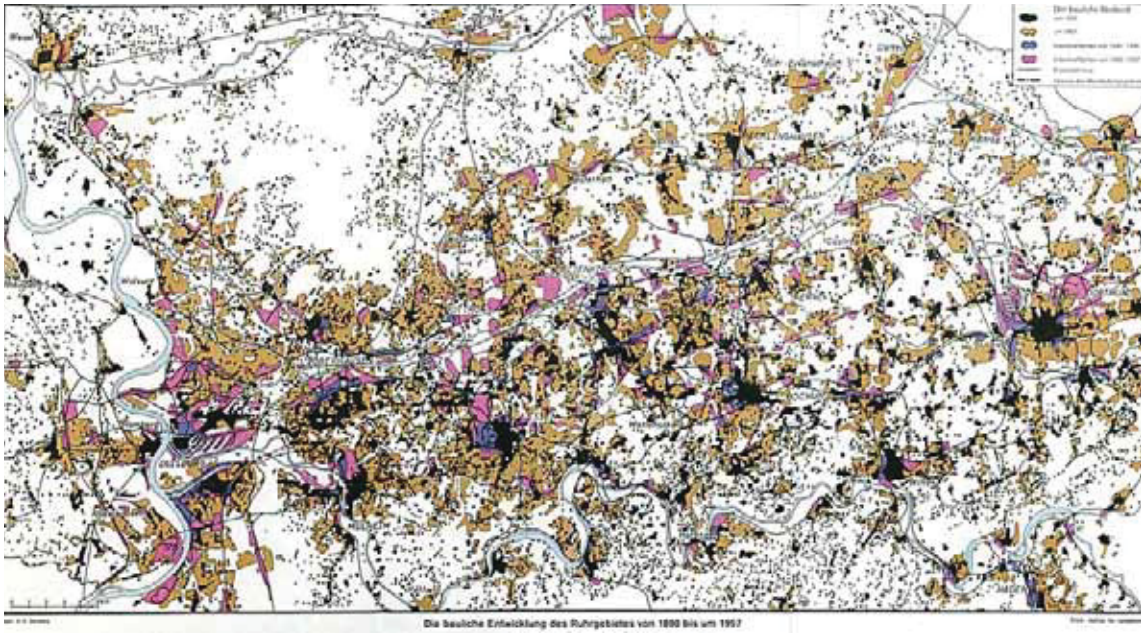
Nördliche Grenze des Gebietes fördernder Zechen 1869



Nördliche Grenze des Gebietes fördernder und in Bau befindlicher Zechen 1874



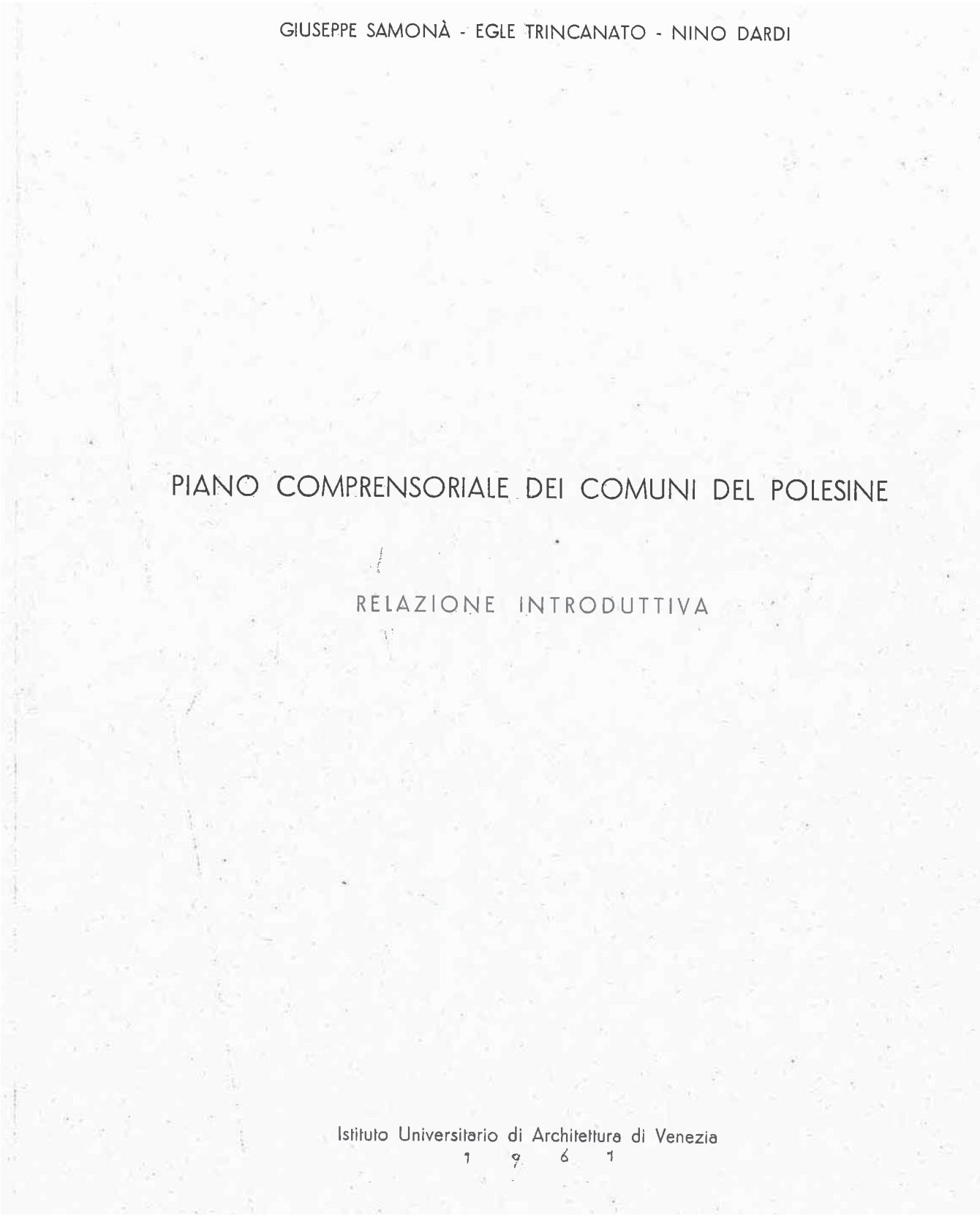
Die bauliche Entwicklung des Ruhrgebietes von 1840 bis um 1900



Die bauliche Entwicklung des Ruhrgebietes von 1900 bis um 1957

PART IV

Annex 2 Samonà, G. et al. (1961). Piano comprensoriale dei comuni del Polesine. Relazione introduttiva. Documents accessed at Archivio progetti IUAV, Venice.



GIUSEPPE SAMONÀ - EGLE TRINCANATO - NINO DARDI

PIANO COMPRENSORIALE DEI COMUNI DEL POLESINE

RELAZIONE INTRODUTTIVA

Istituto Universitario di Architettura di Venezia
1 9 6 1

La situazione dell'economia italiana sopporta ancora le conseguenze di un secolo di incertezze e spesso di errori che durante il ventennio fascista culminarono nel protezionismo delle grosse imprese operanti in un mercato artificialmente ristretto dalla rete dei dispositivi autarchici. Talchè, solo da poco tempo, nel settore industriale sono stati parzialmente rimossi taluni difetti della condizione monopolistica delle nostre principali attività imprenditoriali esasperate dal fascismo, mentre una conoscenza meno imperfetta dei parametri dell'attuale sistema economico va acquistando un prestigio sempre maggiore di forza progressiva.

I nostri mercati, soprattutto con la spinta del mercato comune, si sono già ampliati e vanno incrementando maggiormente l'attività industriale. Ma è ancora molto lungo il cammino da percorrere per conquistare una efficenza produttiva capace di equilibrare i gravi scompensi della nostra economia territoriale: La mancanza di equilibrio che ancora esiste fra reddito agricolo e reddito industriale richiede infatti altri massicci interventi in questo ultimo settore per provocare ulteriori assorbimenti di sovrapopolazione agricola da parte delle più adatte attività imprenditoriali.

Il rapporto fra prodotto industriale e prodotto agricolo è in Italia ancora di gran lunga inferiore a quello di molti altri paesi europei; bastano pochi confronti a dimostrarlo: valore della produzione industriale in Italia 2,5 volte quello della produzione agricola, in Germania sei volte, in Inghilterra dodici volte. D'altra parte una ulteriore espansione dell'industria italiana dovrebbe essere controllata da una vigile pianificazione a tutti i livelli, invece di realizzarsi come è avvenuto fino ad oggi per saltuarie e in apparenza occasionali localizzazioni di attività economiche e dei lavori pubblici conseguenti.

Occorrerebbe, infatti, che questa incrementazione delle industrie fosse avviata servendosi delle direttive programmatiche di un piano di larga massima per gli investimenti al livello nazionale nei diversi settori economici e in quello conseguente delle opere pubbliche, entrambi legati ad un esame profondo della situazione del territorio in rapporto alle gravi mancanze di equilibrio che si verificano nell'area economica e sociale. Un tale esame consentirebbe di distinguere meglio per regioni le caratteristiche economico-sociali e le zone secondo cui tali caratteristiche possono essere raggruppate e formare un certo numero di comprensori regionali con una determinata organicità di situazioni in rapporto ai criteri da adottare per il potenziamento dello sviluppo urbanistico ed economico. Tale potenziamento sarebbe affidato ai Comuni o a un loro raggruppamento, per quel che riguarda la fase risolutiva delle localizzazioni da adottare e da attuare, e sarebbe invece assimilato dal potere centrale per quel che riguarda le indicazioni orientative che, tramite la regione, dovrebbero costituire la base concreta delle decisioni del vertice per il programma periodico degli investimenti alla scala nazionale.

Purtroppo in Italia non siamo ancora pervenuti a questo livello dell'organizzazione sociale, anche se i piani territoriali di coordinamento e quelli di sviluppo economico dimostrano che, sia pur lentamente, si tende a realizzare il decentramento e la pianificazione organizzata su diverse scale, da quella nazionale a quella comunale, coordinate ai vari livelli per finalità di interesse pubblico. Dobbiamo perciò contentarci di risolvere in forma settoriale alcuni problemi ur-

genti per la società italiana di oggi, sforzandoci di vederli in un quadro più vasto possibile di interessi pubblici che eviti la saltuarietà degli interventi occasionali e consenta di realizzare senza scosse la trasformazione funzionale dai piani settoriali già predisposti ai piani comprensoriali, e a quelli della regione quando il passo più avanti nelle strutture segnate dalla costituzione potrà essere fatto.

Nell'ambito di questi concetti ci proponiamo dunque, di stabilire l'indirizzo metodologico per formare il progetto di un piano delle terre del Polesine: esso dovrebbe costituire mezzo fondamentale di rinascita e di collaborazione fra tutti i Comuni compresi in questo territorio e dovrebbe far parte integrante del comprensorio che include la regione orientale padana. In questo grande territorio sarebbe infatti possibile l'integrazione equilibrata di tutte le influenze di natura prevalentemente economica, con un piano ben organizzato, che sappia creare i presupposti perchè tali influenze agiscano da strumento moltiplicatore della attrazione naturale esercitata sulle attività industriali dal sistema idroviario della regione stessa. Per raggiungere questa finalità il piano dovrebbe progettare un programma di opere pubbliche che abbiano come cardine fondamentale il corso del Po.

In realtà esiste un certo numero di progetti che si occupano della sistemazione idraulica della regione orientale padana. Si tratta in genere di studi che legano la sistemazione del Po ad un programma economico che riguarda sia i trasporti con natanti di forte tonnellaggio per via fluviale, sia lo sfruttamento delle acque per l'installazione di centrali idroelettriche e sia, in senso più generico, la possibilità di installare sulle sponde o nelle immediate vicinanze del fiume o di canali navigabili ad esso collegati, altre attività industriali.

Tuttavia questi progetti, fra i quali alcuni assai ben studiati, si limitano a indicare la soluzione più o meno completa dei problemi idraulici per la sistemazione fluviale e le sue conseguenze economiche soprattutto nel ramo dei trasporti per via d'acqua. Alcuni di questi studi sono molto scrupolosi nella analisi dei vari aspetti di tale sistemazione e nel mostrare la misura e il limite dei vantaggi economici, in realtà notevoli, che offrono i trasporti per via fluviale rispetto a quelli per via di terra, ma trascurano ogni altro problema che esuli dalle questioni di carattere idraulico. Sono cioè progetti che, pur estendendosi a un comprensorio che abbraccia una parte della Lombardia fino a Milano, una parte dell'Emilia e una parte del Veneto fino alle foci del Po, tralasciano materialmente ogni rapporto operativo con fattori che, in questo comprensorio, potrebbero contribuire alla completezza del discorso in sede economica e sociale e alla evidenza dei suoi straordinari vantaggi in tali settori.

In sostanza questi progetti non riportano le proprie deduzioni di natura idraulica nel quadro di tutte le attività del grande territorio della regione orientale padana e della necessità delle genti che vi sono insediate. Invero alcuni progetti fanno qualche accenno alle caratteristiche di tale quadro, ma si tratta proprio di accenni generici, non portati mai al livello delle deduzioni strumentalmente utili per una attuazione realistica.

Questa attuazione, per essere realistica, dovrebbe infatti partire dal presupposto di considerare tutti i problemi del Polesine per risolverli nel loro insieme. Si potrebbero in tal modo offrire i dati e gli strumenti di una realizzazione di strutture economicamente vantaggiose anche negli sviluppi delle attività imprenditoriali.

Pertanto lo studio che ci proponiamo di fare con la collaborazione di tutti i Comuni del

Polesine, riguardo proprio questa possibilità di totale pianificazione dei problemi della zona e di presentazione della loro convenienza economica globale. Esso è perciò del tutto originale fra le proposte fatte per questo territorio. Noi vogliamo, cioè, includere tutti i problemi di questa terra depressa e risolverli con un piano che ne approfondisca i caratteri economici e urbanistici e la loro suscettibilità allo sviluppo che può essere grandissimo ed economicamente redditizio solo che i problemi stessi siano definiti nel loro valore complessivo.

La grande singolarità di questa terra, che fa parte di due regioni, consiste nel più straordinario contrasto che si possa immaginare fra le sue grandiose possibilità naturali di sviluppo produttivo e la degradata condizione della sua economia. Contrasto che deriva dal fatto che questa terra è minata proprio dagli stessi fenomeni naturali che sarebbero tanto favorevoli ad un aumentato tenore produttivo, se organizzati secondo una appropriata funzionalità e che invece, non essendo dominati per conseguire tale scopo, manifestano la loro potenza in forma distruttiva invece che produttiva, e incombono con una continua minaccia sulle popolazioni, paralizzandone le iniziative e provocando l'esodo continuo e irrefrenabile dei più giovani in altre località meno minacciate e più produttive.

Sono pertanto evidenti le ragioni di urgenza che spingono all'immediato superamento di questa situazione paradossale. Fra queste ragioni è preminente il problema dei flussi migratori che ogni anno da queste terre riversano sui grossi centri del triangolo industriale migliaia di persone in cerca di lavoro. Queste forze lavoro, in cerca di prima o di nuova occupazione, si diffondono in tutti i rami dell'attività urbana gravandone spesso non positivamente le prestazioni e impegnando ogni forma di servizio pubblico con un troppo pieno che tende a logorarne l'efficienza; mentre potrebbero essere utilmente impiegate nei luoghi di provenienza del Polesine, qualora vi si potesse sviluppare in senso favorevole quell'ampia forza naturale delle acque secondo quanto hanno dimostrato i lavori fondamentali già iniziati nei fiumi. Potrebbe in tal caso trovare soddisfacimento una situazione più generale di quella che esiste in tale zona in quanto se fosse pienamente organizzata in forma produttiva, non solo si potrebbero arrestare i flussi migratori, impegnando vantaggiosamente le classi lavoratrici del Polesine, ma si potrebbero assorbire altre forze lavoro, da località vicine, o da terre in cui è conveniente l'allontanamento di un certo numero di lavoratori che non si possono, come nel Polesine, impiegare in modo vantaggioso sul territorio in cui vivono. L'avvenire in Italia si dimostrerà tanto più favorevole ad un prospero sviluppo del benessere generale, quanto più oculate, ponderate e organizzate saranno le forme di avviamento migratorio delle classi lavoratrici da un territorio all'altro.

I provvedimenti per equilibrare questa situazione sono dunque da considerare urgenti in tutto il nostro paese, ma qui, data l'importanza del fenomeno migratorio, sono urgentissimi. Infatti, esaminando il rapporto fra i dati demografici forniti dall'ISTAT nel 1951 e quelli che abbiamo potuto avere relativi al 1961 per i 15 Comuni che potrebbero essere inclusi in un piano territoriale del Polesine (12 nella provincia di Rovigo: Adria, Ariano, Contarina, Corbola, Donada, Loreo, Papozze, Pettorazza Grimani, Porto Tolle, Rosolina, Taglio di Po, Villanova Marchesana, e 3 in provincia di Venezia: Cavarzere, Cona e Chioggia) si constata che in questo decennio si è

verificato nella popolazione globale il grave decremento di 35098 persone su 182961: cioè il 16 per cento della popolazione residente dei Comuni dal 1951 ad oggi ha abbandonato queste terre. Se vogliamo essere ancora più significativi, possiamo aggiungere che in un decennio si è raggiunta la punta massima del 33,65 per cento dei decrementi nel Comune di Cona.

Un ulteriore depauperamento di popolazioni residente sarebbe pertanto gravissimo, creerebbe cioè condizioni di vuoto, di invecchiamento e di instabilità di popolazione così estese ed imponenti, da paralizzare ogni iniziativo concreta per la riorganizzazione produttiva di questa terra. Essa non potrebbe certo più uscire dalla situazione già gravissima in cui si trova oggi, anche per le caratteristiche preoccupanti della sua popolazione, che presenta gravissime percentuali di analfabeti. Tale fenomeno non farà che aggravarsi negli anni successivi, se non si pone rimedio, operando sul posto con mezzi radicali e rivoluzionari che diano a queste genti, in queste terre, una struttura capace di mutare lo stato di disagio in benessere con le risorse di un lavoro produttivo. Se invece continuasse l'emigrazione che accoglie stabilmente solo i non analfabeti e fissa nel terreno d'origine come peso morto gli analfabeti, la popolazione stabile sarebbe caratterizzata da una percentuale sempre crescente di forze lavoro incapace di qualificarsi per mancanza dei primi rudimenti della educazione oggi indispensabile in qualunque lavoro anche non qualificato.

Questo quadro, invero, poco favorevole della situazione attuale del Polesine, è aggravato dalla insistente minaccia delle acque che nei periodi di piena tendono ancora, sia pur con minor pericolo, a debordare o a rompere le arginature come è avvenuto con quelle del Po, nel 1951, quando esse portarono desolazione e morte in una grandissima estensione di queste terre. D'altra parte, come si è già detto, l'inserimento del Polesine in un processo di sviluppo economico sarebbe notevolmente favorito dalle straordinarie condizioni naturali della zona, dove l'acqua apportatrice di distruzione se imbrigliata e giustamente incanalata potrebbe non solo garantire le genti da ogni pericolo di piena, ma assicurare la continua navigabilità del Po e probabilmente anche di un tratto del fiume Adige portando in questa terra una ricchezza che può essere solo paragonabile a quella creata dal Reno nella Germania Occidentale e nell'Olanda.

L'urgenza dei provvedimenti dipende, dunque, anzitutto, dalla possibilità di eliminare una volta per sempre ogni forma di minaccia da parte dei fiumi. Dipende altresì dal fatto che se si vuol agire pianificando integralmente questo territorio, per inserirlo in un processo di sviluppo economico tale da garantirvi l'afflusso di grossi capitali nell'attività imprenditoriale si dovrebbe dimostrare la convenienza di questo tipo di impiego e la possibilità di renderla tanto più redditizio quanto più vasto ed integrale esso si presenti nel realizzare strutture predisposte da un piano.

Tutto ciò deve far parte di un programma di opere pubbliche inquadrate nel piano stesso che ne faccia vedere chiaramente la grandiosità, la convenienza e l'attuabilità in rapporto alle esigenze reali. Queste coinvolgono i settori dell'economia più favorevoli allo sviluppo delle risorse naturali con una struttura adatta ed equilibrata alla situazione del Polesine come zona che concluda un comprensorio, una regione fluviale a cui appartiene la Lombardia, quale formidabile elemento motore di produttività con la sua potenza industriale. Se non agissimo in tempo d'altra parte non potremmo impedire che si realizzino opere pubbliche in contrasto con questi nostri inten-

dimenti. Dobbiamo tuttavia affrettarci nell'azione, se non vogliamo che, nel giro di pochi anni possano realizzarsi opere, per esempio, autostrade già schematicamente in progetto, secondo un tracciato non corrispondente alla necessità funzionali del nostro piano e delle strutture che in esso vogliamo incrementare per il futuro benessere del Polesine.

Giunti a questo, mi sembra utile accennare allo stato dei lavori per la sistemazione idraulica del fiume Po che è fondamentale, come vedremo, per qualunque progetto di piano territoriale e di sviluppo economico da proporre nel Polesine.

Riteniamo che la fonte più autorevole su questo argomento sia il Comune di Milano con la sua relazione sul problema dei canali navigabili Milano-Cremona e Ticino-Mincio, stilato dall'Ufficio Studi e organizzazione del Comune stesso. La relazione dice testualmente: «.....Sembra in primo luogo accertato l'interesse che la città di Milano e il suo Hinterland hanno alla realizzazione della idrovia padana, nella sua asta fondamentale gravitante sul Po e nella sua integrazione rappresentata dal canale pedemontano Ticino-Mincio .....»;

.....E' evidente la piena rispondenza alle esigenze del traffico moderno da parte del Po; la navigabilità del fiume è enormemente progredita negli ultimi anni, anche se, indubbiamente deve essere ultimata nel quadro dell'opera generale di sistemazione del bacino.....il Po è stato sistemato in vasta misura nel tratto di 130 Km. da foce Adda a foce Mincio. I più rilevanti problemi di sistemazione si ponevano proprio in questo tratto dove l'alveo di magra non coincideva con quello di piena, in quanto il letto di piena era larghissimo (la distanza tra gli argini toccava anche i 5 Km.) e conseguentemente quello di magra tendeva a divagare tra le sponde, corrodendo le difese e depositando sabbie vaganti. I lavori di sistemazione provvedono appunto, alla creazione di un canale largo m. 214 entro il quale il fiume mantiene una profondità costante di m. , , necessaria per il transito di natanti da 1350 tonn. Il percorso del fiume viene così reso stabile senza che ciò rappresenti una forzatura della corrente .....Contro questi lavori ormai quasi terminati fra foce Adda e foce Mincio sta il livello più arretrato delle opere nel corso a valle, dove, pur essendo i lavori di dragaggio da compiere ai fini navigatori, di modesta entità essi devono inserirsi in un complesso di opere volte a restringere l'alveo.....Per i lavori necessari nel tratto a valle si dovrà affrontare una spesa di circa 15 miliardi, mentre la spesa complessiva ancora necessaria per completare la sistemazione del tratto foce foce-Mincio ascende a 13 miliardi .....Se la navigabilità del Po sta per raggiungere in tutto il corso da Cremona a mare lo stesso grado di sviluppo, è evidente che ove il sistema idroviario padano debba gravitare sul Po è indispensabile per tutti i tratti della rete che il fiume sia reso al più presto completamente navigabile.....»

Trattando della necessità di trasformare con notevoli lavori l'arteria del Tartaro Canal bianco per renderla navigabile coi mezzi di 1350 tonn., la relazione aggiunge: «.....A parte queste difficoltà tecniche (del Tartaro) è evidente che mentre si prevede una spesa di 15 miliardi per la sistemazione del basso corso del Po ai fini di una sistemazione idraulica e conseguentemente economica, oltre che per permettere la navigabilità .....ad esso tutto il sistema idroviario padano resta legato.....»

A determinate condizioni i costi idroviari sono nettamente inferiori a quelli per via terra. Il costo del trasporto idroviario è influenzato dal nolo e dai costi a terra. Il nolo è a sua volta influenzato dalla portata del natante e dal suo grado di utilizzazione. Il tipo di natante che si è dimostrato più idoneo fino ad oggi è il tipo così detto europeo da 1350 tonn.

Tralasciando i dettagli sul problema della navigazione fluviale ci interessa mettere in evidenza le localizzazioni strutturali previste dal piano per potenziare al massimo il rendimento economico del sistema idroviario esistente, che fa perno sulla totale navigabilità del Po e sulla parziale navigabilità dell'Adige dopo le opere di sistemazione idraulica. A questo scopo bisogna, anzitutto, sottolineare la necessità di un grandioso porto canale all'imbocco del Po come quello pensato dalla Società Simpo (Sistemazione Idraulica Medio Padana Orientale). Si deve altresì tener conto che un porto di questo genere deve essere costruito in modo da avere dimensioni adeguate alla navigabilità oceanica, oltre chè a quella del Po e alla possibile industrializzazione delle sue rive. La navigabilità del Po include d'altra parte quella dei canali Mincio-Cremona e Ticino Mincio che porta sulle acque del Po una grossa quota del traffico dei trasporti industriali della Lombardia. Le dimensioni del porto devono dunque necessariamente adeguarsi alla grandiosità di questi traffici, basandoci non solo sul fattore merci trasportare per idrovia, per quanto grandioso possa essere il loro flusso, bensì anche sulle comunicazioni più veloci ed elastiche per via terra e ferrovia. Il porto canale alla foce deve dunque avere fondali capaci di accogliere i natanti oceanici di più grosso tonnellaggio. Siamo anzi disposti ad affermare che, in sostanza, solo se si concepisce un porto così grandioso ed attrezzato per tutte le funzioni che vi possono convergere, cioè un porto che possa paragonarsi ai grandi porti del nord Europa, noi avremo la possibilità di dimostrare l'efficacia e l'efficienza di qualunque impiego di capitale che possa intervenire attivamente a incrementare le strutture produttive di questo porto e le sue adiacenze industrializzate. In tal senso dunque i trasporti per via terra e ferrovia assumono a loro volta una importanza fondamentale, assicurando al porto industriale sulla foce del Po caratteristiche di elevata convenienza economica, capaci di assicurare in tutto il territorio del Polesine un processo di sviluppo economico, con una rapida ed alta efficienza produttiva, e di trasformare questa zona depressa e disertata in una terra ricca di attività industriali e commerciali.

Occorre in sostanza pensare ad una struttura generale non semplicistica, ma concepita come un insieme in cui al sistema fluviale di navigazione e al suo porto di sbocco si associno adeguate grandi linee di comunicazioni per via terra, provenienti dai gangli più importanti della vita economica italiana e una linea ferroviaria con un tracciato più razionale e completo di quello attuale. L'intelaiatura di queste grandi comunicazioni dovrebbe essere la base di partenza sia per il porto che per il sistema delle zone industriali. Esse possono infatti essere previste con l'efficienza e la grandiosità corrispondente alla notevole dimensione dei grandi trasporti idroviari, solo se anche l'intelaiatura delle comunicazioni per via terra è proporzionata alla scala di questi trasporti. Ma tutto questo, ovviamente, non basta alla vita dei Comuni del Polesine, che ha bisogno di profonde trasformazioni per adeguarsi alla granda scala dei problemi di sviluppo e a quella delle strutture e infrastrutture che ne garantiscono l'efficienza. In altri termini i 15 Comuni che fanno parte del Polesine devono tutti trovare una loro giusta integrazione con il sistema: porto, autostra-

de, ferrovia, grandi impianti industriali.

In questa terra piatta, solcata da fiumi e da canali, e malsicura, la situazione di un sistema viario che si adegui a quello delle vie d'acqua, non trova ostacoli naturali difficili per organizzare i propri tracciati nella forma più appropriata sia alle necessità della navigazione sul fiume Po, sia a quelle delle industrie che vi intestano e che possono trovare vantaggio dal sistema via acqua, ferrovia e vie di terra e sia, finalmente, alla necessità dei centri urbani dei vari Comuni, che, pur dovendo espandersi nelle direzioni più logiche in rapporto alla nuova configurazione dettata dalle grandi strutture e infrastrutture, conserveranno, in certo senso almeno, il loro fulcro principale nell'attuale sede.

Si tratta di prevedere uno schema generale di quel che potrà essere il Polesine così trasformato. Esso diventerà l'insieme di più insediamenti comunali, che tenderanno ad estendersi nel senso più organico e funzionale per formare unità organizzate intorno alle grandiose strutture del porto e del sistema delle comunicazioni. In esso confluiranno attività di ogni genere a cui la struttura industriale darà indubbiamente un carattere decisivo nella determinazione di una nuova forma di paesaggio, insieme a quelle grandiose strutture di carattere pubblico e a tutte le altre attività terziarie di questo nuovo centro urbano concepito in estensione anzichè in concentrazione.

E' necessario però che questo insieme sia organizzato, che costituisca unità attraverso i legami funzionali dei nuovi diversi elementi. Bisogna che crei un grandioso insieme metropolitano che, coinvolgendo tutti i comuni, determini una conurbazione guidata in modo che non vi si formino le dense concentrazioni delle attuali metropoli, gli addensamenti di strutture e di popolazioni che costituiscono la fase degenerativa delle attuali città. Questo addensamento caratteristico della città murata, della città chiusa e statica era il segno organico di altre civiltà. Oggi i parametri della nostra vita economica, delle nostre relazioni sociali hanno raggiunto dimensioni così vaste in tutte le zone del mondo rispetto a un solo punto di esse che le città non dovrebbero essere più chiuse come quelle di un tempo. Purtroppo esse hanno invece oltrepassato il limite di ogni ragionevole possibilità di sviluppo delle complesse attività umane per mantenere la forma accentrata e sono sempre più anacronistiche nel bisogno prepotente di spazio non soddisfatto che presentano come fattore principale di una integrazione e di una vita associata per adattamenti.

Noi nel Polesine vogliamo costituire un insieme metropolitano che non ricalchi questo errore, ripetendo una configurazione urbana assolutamente disadatta alle necessità della nostra vita presente. L'insieme metropolitano del Polesine dovrà essere uno dei primi del mondo ad offrire l'esempio di una campagna urbanizzata, cioè di una città territorio grandiosissima, ma organizzata come struttura aperta, che faccia perno su alcune grandi strutture fondamentali, talune delle quali sono state già da noi individuate in questo progetto di massima, cioè: porto, grandi arterie di circolazione; le altre saranno il frutto della ulteriore fatica della nostra progettazione. Essa dovrà mettere a punto, insieme alla localizzazione delle industrie, quegli altri legami indispensabili allo sviluppo e alle molteplici attività delle genti impegnate in esso, cioè anzitutto le attività terziarie del commercio e poi quelle di carattere tecnico e amministrativo e infine le attività culturali e di svago. Sulla ubicazione di tali strutture opportunamente decentrata e sulla loro dimensione si dovrà

pronunciare in modo fondamentale il progetto che definisce i pilastri su cui l'insieme di questo vasto programma futuro per una nuova metropoli troverà i punti di partenza per realizzarsi.

Dopo questa sintetica esposizione di concetti fondamentali bastano poche brevi note illustrative per spiegare lo schema del progetto nei grafici che fanno parte della relazione.

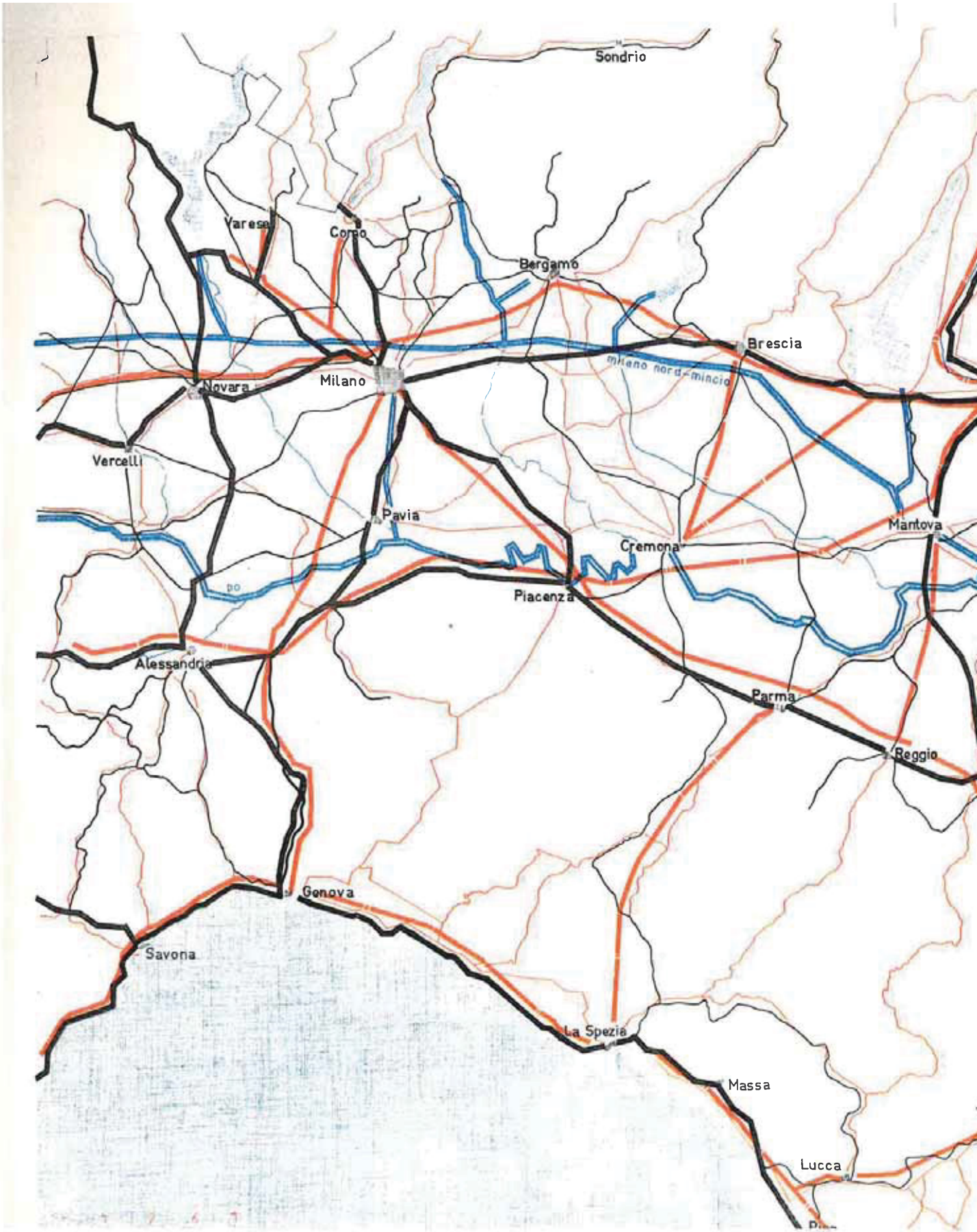
Il primo fatto strutturale importante del Piano è costituito dalle due strade fondamentali che collegano l'area del Polesine interessata dalle future attrezzature essenziali dei diversi Comuni con i gangli principali della regione veneta lombarda ed emiliana ; la prima collega il Polesine all'autostrada del Sole innestandosi in essa in prossimità di Bologna, passando tangenzialmente a sud di Ferrara, raggiunge la Romea a nord-ovest di Chioggia, la seconda s'incrocia con questa prima grande arteria, attraversa con percorso normale alla sponda adriatica le terre del Polesine e raggiunge il porto canale collegandosi a sua volta con la Romea.

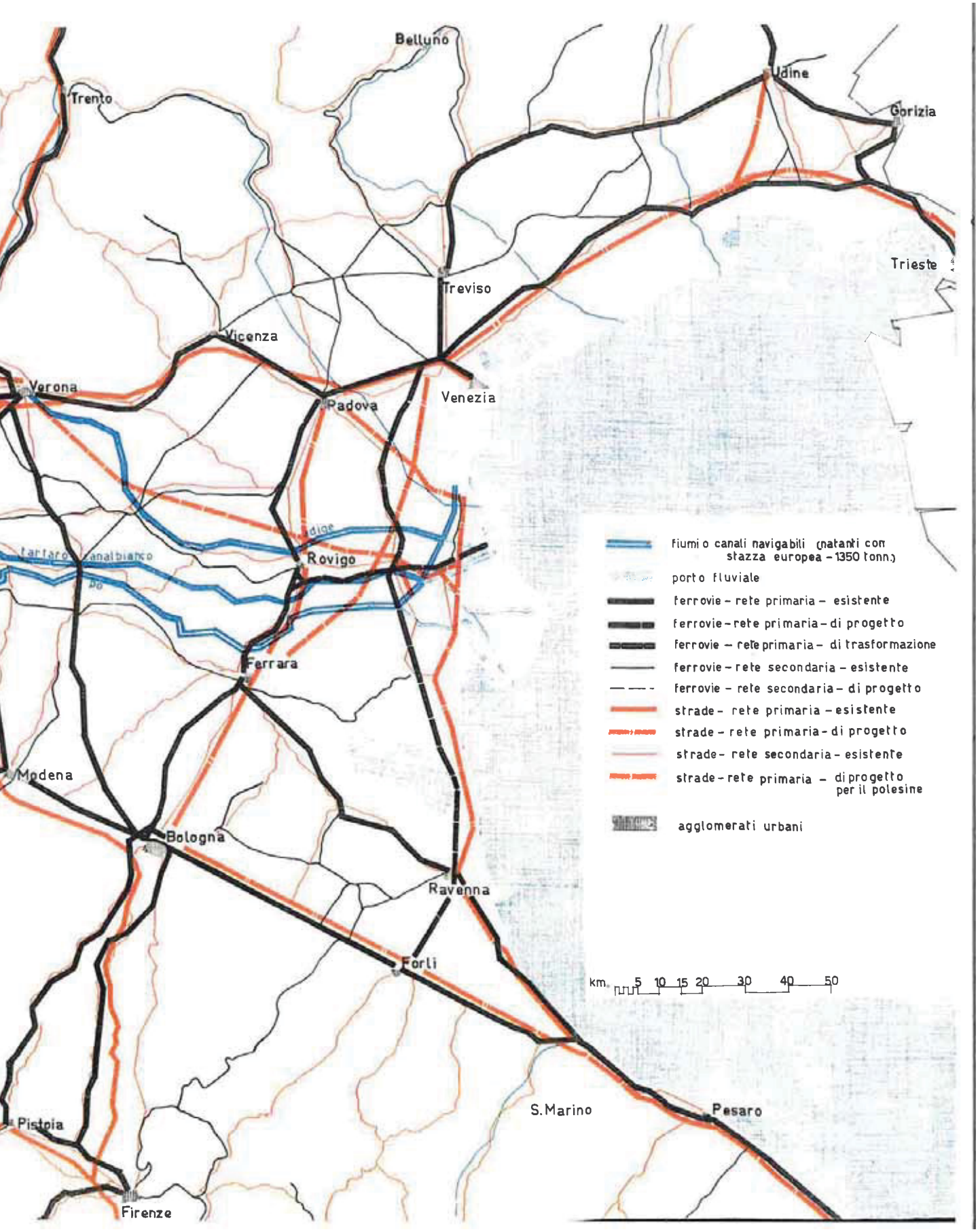
In queste trame stradali si innestano le arterie trasversali che costituiscono la rete di circolazione fondamentale della nuova grande zona metropolitana delle terre del Polesine risorto dove troveranno ragione di lavoro e di insediamento centinaia di migliaia di abitanti.

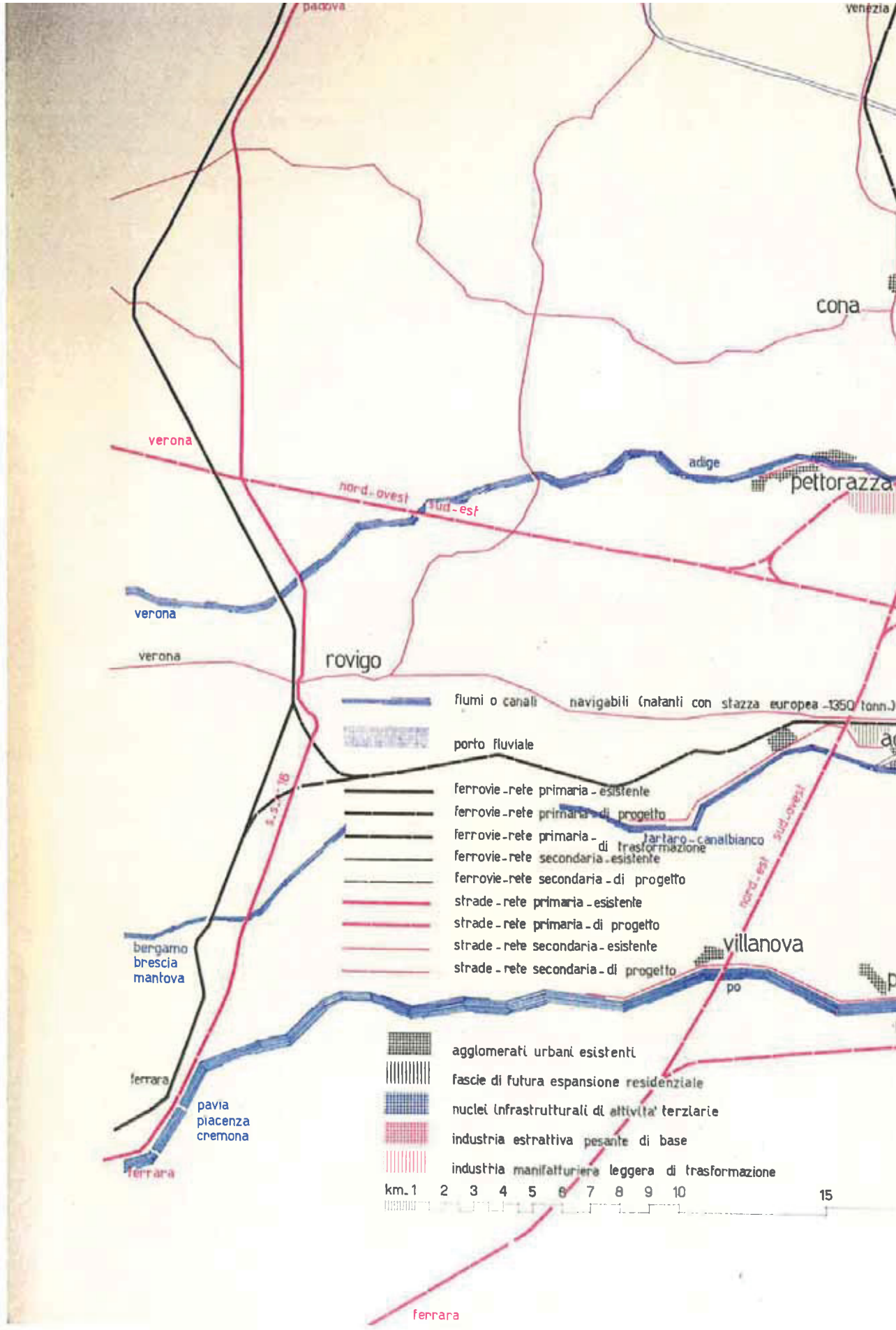
Di esse fa parte il nuovo tracciato ferroviario che oltre a collegare in maniera più funzionale i vari comuni del Polesine, fra loro, e con le grosse fascie industriali, prosegue con una nuova linea ferrata a sud collegandosi a Ravenna con la linea Adriatica. La trama principale circolatoria dunque lega questo nuovo grande territorio metropolitano del Polesine nella direzione nord-sud reciprocamente con Venezia e Ravenna creando una Venezia-Ravenna diretta che passerà per il Polesine nella direzione est-ovest, mediante canali e grandi arterie stradali, rilega il Polesine alle principali città della Lombardia, dell'Emilia e del Veneto mentre il Tartaro Canal Bianco rimane un canale interno per installazione di industrie e, in parte, bacino interno di attracco di natanti. In modo particolare crea nel Polesine il Porto di Verona con la complementarietà della strada di grande comunicazione che unisce a occidente di Verona l'autostrada Milano-Verona-Padova-Venezia, con il porto canale sul Po e con la possibilità di rendere navigabile l'Adige nel tratto Verona-Adriatico facendolo sboccare nel porto-canale suddetto del Po.

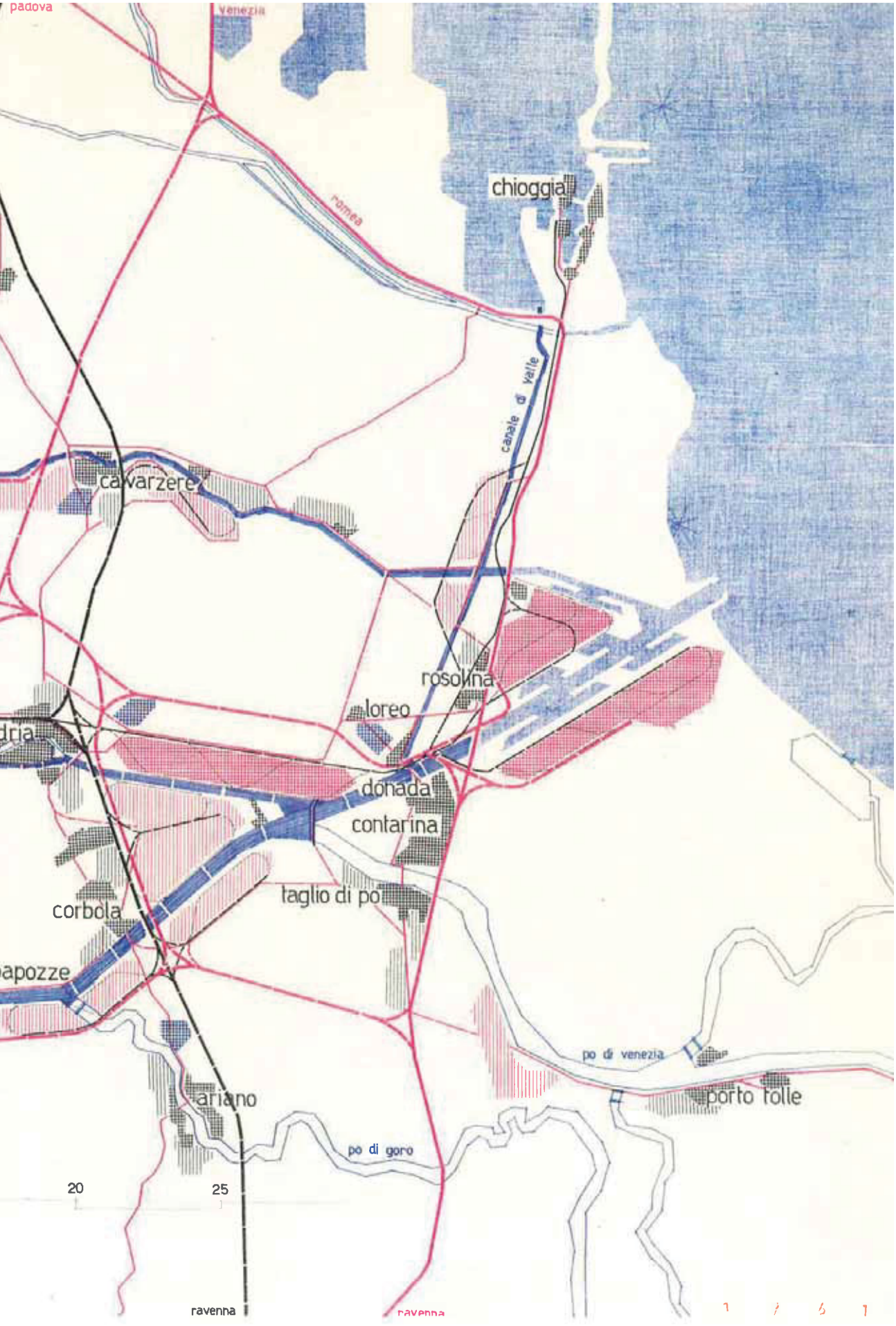
In queste terre lungo i bordi dell'Adige e soprattutto del Po e nelle adiacenze di questi corsi d'acqua, per mezzo di bacini interni e di canali, lo schema presentato indica l'ubicazione delle grosse fascie industriali che faranno parte di questa nuova grandissima città organizzata secondo una aggregazione di spazi per strutture e infrastrutture decentrate e fra loro complementari per localizzazione, aventi un particolare carattere nell'insieme del nuovo territorio metropolitano di cui dovrà essere puntualmente definita la forma e l'unità essenziale.

1 9 6 3


Sondrio
Varese
Como
Bergamo
Brescia
milano nord-mincio
Novara
Milano
Vercelli
Pavia
Mantova
Cremona
po
Piacenza
Alessandria
Parma
Reggio
Genova
Savona
La Spezia
Massa
Lucca


Belluno
Udine
Trento
Gorizia
Trieste
Treviso
Vicenza
Verona
Padova
Venezia
Rovigo
Ferrara
Modena
Bologna
Ravenna
Forlì
Pistoia
S.Marino
Pesaro
Firenze
fiumi o canali navigabili (natanti con stazza europea – 1350 tonn.)
porto fluviale
ferrovie – rete primaria – esistente
ferrovie – rete primaria – di progetto
ferrovie – rete primaria – di trasformazione
ferrovie – rete secondaria – esistente
ferrovie – rete secondaria – di progetto
strade – rete primaria – esistente
strade – rete primaria – di progetto
strade – rete secondaria – esistente
strade – rete primaria – di progetto per il polesine
agglomerati urbani
km 5 10 15 20 30 40 50


padova
venezia
cona
verona
nord-ovest
sud-est
adige
pettorazza
verona
verona
rovigo
fiumi o canali navigabili (natanti con stazza europea -1350 tonn.)
porto fluviale
ferrovie-rete primaria-esistente
ferrovie-rete primaria-di progetto
ferrovie-rete primaria-di trasformazione
ferrovie-rete secondaria-esistente
ferrovie-rete secondaria-di progetto
strade-rete primaria-esistente
strade-rete primaria-di progetto
strade-rete secondaria-esistente
strade-rete secondaria-di progetto
tartaro-canalbianco
nord-est
sud-ovest
villanova
po
bergamo
brescia
mantova
ferrara
pavia
piacenza
cremona
ferrara
agglomerati urbani esistenti
fascie di futura espansione residenziale
nuclei infrastrutturali di attivita' terziarie
industria estrattiva pesante di base
industria manifatturiera leggera di trasformazione
km. 1 2 3 4 5 6 7 8 9 10 15
ferrara


padova
venezia
romea
chioggia
canale di valle
cavarzere
rosolina
loreo
donada
contarina
taglio di po
corbola
apozze
ariano
po di venezia
porto tolle
po di goro
20
25
ravenna
ravenna

Annex 3 Statistical data obtained from ISTAT (www.istat.it) used as .csv file in QGIS program for cartographic analysis

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
27001	Annone Veneto	3998	3733	265	7	145	154	9	6	0,0	25,9	284,0	11,0	569	14,2	396	D - Intermedio	0	0	0	2008	50,2	757	18,9
27002	Campagna Lupia	7168	6556	612	9	75	82	7	9	2,6	87,6	481,0	5,5	513	7,2	423	C - Cintura	0	0	0	3774	52,7	1383	19,3
27003	Campolongo Maggiore	10478	9475	1003	11	403	444	41	10	0,0	23,6	722,0	30,6	580	5,5	350	C - Cintura	0	0	0	5567	53,1	1914	18,3
27004	Camponogara	13150	11756	1394	12	550	617	68	12	3,9	21,3	782,0	36,7	773	5,9	369	C - Cintura	0	0	0	7261	55,2	2347	17,8
27005	Caorle	11741	11801	-60	-1	78	76	-2	-2	6,9	153,8	1333,0	8,7	1025	8,7	1233	D - Intermedio	0	0	0	5274	44,9	2877	24,5
27006	Cavarzere	14404	15375	-971	-6	110	103	-7	-6	3,9	140,4	873,0	6,2	1090	7,6	413	C - Cintura	0	0	0	6631	46,0	3934	27,3
27007	Ceggia	6223	5409	814	15	246	282	35	14	6,9	22,1	350,0	15,8	695	11,2	347	D - Intermedio	0	0	0	3347	53,8	1227	19,7
27008	Chioggia	49832	51336	-1504	-3	277	265	-12	-4	6,3	187,9	3470,0	18,5	1817	3,6	547	D - Intermedio	1	0	0	24240	48,6	11442	23,0
27009	Cinto Caomaggiore	3282	3226	56	2	150	154	4	2	0,0	21,3	197,0	9,2	295	9,0	319	C - Cintura	0	0	0	1662	50,6	770	23,5
27010	Cona	2993	3252	-259	-8	50	46	-4	-8	5,0	65,1	181,0	2,8	192	6,4	432	D - Intermedio	0	0	0	1539	51,4	684	22,9
27011	Concordia Sagittaria	10445	10667	-222	-2	156	156	1	0	3,1	66,8	623,0	9,3	480	4,6	387	C - Cintura	0	0	0	5191	49,7	2530	24,2
27012	Dolo	15099	14580	519	4	604	622	18	3	2,4	24,3	1269,0	52,3	1494	9,9	528	B - Polo interc	1	1	0	7719	51,1	3586	23,7
27013	Eraclea	12494	12695	-201	-2	134	131	-3	-2	8,3	95,5	957,0	10,0	916	7,3	560	D - Intermedio	0	0	0	6182	49,5	2742	21,9
27014	Fiesso d'Artico	8075	6586	1489	23	1044	1280	236	23	1,5	6,3	675,0	107,0	930	11,5	380	C - Cintura	0	0	0	4249	52,6	1611	20,0
27015	Fossalta di Piave	4161	4227	-66	-2	434	432	-3	-1	0,0	9,6	309,0	32,1	440	10,6	476	D - Intermedio	0	0	0	2277	54,7	906	21,8
27016	Fossalta di Portogruaro	6080	5962	118	2	188	195	7	4	2,2	31,1	422,0	13,6	343	5,6	467	C - Cintura	0	0	0	3055	50,2	1471	24,2
27017	Foss˜	6972	6126	846	14	606	685	79	13	2,0	10,2	609,0	59,8	556	8,0	375	C - Cintura	0	0	0	3804	54,6	1305	18,7
27018	Gruaro	2816	2727	89	3	158	161	3	2	5,1	17,5	209,0	12,0	126	4,5	382	C - Cintura	0	0	0	1467	52,1	645	22,9
27019	Jesolo	26026	23575	2451	10	247	270	23	9	4,8	96,4	3300,0	34,2	2941	11,3	1137	E - Periferico	0	0	0	12370	47,5	5620	21,6
27020	Marcon	17268	12904	4364	34	504	676	171	34	1,7	25,5	1106,0	43,3	1169	6,8	501	C - Cintura	0	0	0	9637	55,8	2914	16,9
27021	Martellago	21494	19824	1670	8	987	1066	78	8	10,3	20,2	1322,0	65,5	1242	5,8	502	C - Cintura	0	0	1	11846	55,1	4683	21,8
27022	Meolo	6455	6415	40	1	240	243	2	1	1,4	26,6	390,0	14,7	628	9,7	431	C - Cintura	0	0	1	3448	53,4	1356	21,0
27023	Mira	38779	37672	1107	3	381	391	10	3	1,8	99,1	1935,0	19,5	3160	8,1	511	B - Polo interc	0	0	1	20519	52,9	8865	22,9
27024	Mirano	27055	26123	932	4	573	593	20	4	1,7	45,6	2100,0	46,0	1773	6,6	537	A - Polo	1	1	1	13936	51,5	6675	24,7
27025	Musile di Piave	11621	10605	1016	10	236	259	23	10	3,4	44,9	712,0	15,9	1450	12,5	432	D - Intermedio	0	0	0	6218	53,5	2310	19,9
27026	Noale	15965	15222	743	5	608	647	39	6	2,5	24,7	1141,0	46,2	1159	7,3	477	C - Cintura	0	0	1	8568	53,7	3277	20,5
27027	Noventa di Piave	6985	6191	794	13	343	388	45	13	1,5	18,0	544,0	30,2	900	12,9	514	D - Intermedio	0	0	0	3734	53,5	1291	18,5
27028	Pianiga	12252	9707	2545	26	484	610	126	26	1,2	20,1	917,0	45,7	877	7,2	442	C - Cintura	0	0	0	6949	56,7	2184	17,8
27029	Portogruaro	25219	25158	61	0	246	246	1	0	2,1	102,3	1926,0	18,8	2122	8,4	417	C - Cintura	1	0	1	12203	48,4	6206	24,6
27030	Pramaggiore	4684	4354	330	8	180	193	14	8	0,0	24,2	262,0	10,8	690	14,7	355	C - Cintura	0	0	0	2517	53,7	797	17,0
27031	Quarto d'Altino	8292	7606	686	9	270	293	23	8	1,6	28,3	564,0	19,9	910	11,0	478	C - Cintura	0	0	1	4524	54,6	1643	19,8
27032	Salzano	12778	11775	1003	9	685	744	58	9	2,2	17,2	793,0	46,1	617	4,8	326	C - Cintura	0	0	1	7193	56,3	2586	20,2
27033	San Donˆ È di Piave	41815	38072	3743	10	484	530	47	10	1,5	78,9	3543,0	44,9	4771	11,4	477	D - Intermedio	1	0	1	21587	51,6	8677	20,8
27034	San Michele al Tagliamento	11993	11779	214	2	105	105	0	0	7,7	114,4	1409,0	12,3	1142	9,5	1466	C - Cintura	0	0	0	5515	46,0	3156	26,3
27035	Santa Maria di Sala	17632	15264	2368	16	546	629	83	15	3,0	28,1	1067,0	38,0	1142	6,5	495	C - Cintura	0	0	0	10379	58,9	2751	15,6
27036	San Stino di Livenza	12955	12297	658	5	181	191	10	6	2,0	68,0	878,0	12,9	1366	10,5	375	D - Intermedio	0	0	1	6584	50,8	2827	21,8
27037	Scorz	18888	18550	338	2	557	567	10	2	1,9	33,3	1426,0	42,8	1510	8,0	479	C - Cintura	0	0	0	10590	56,1	3774	20,0
27038	Spinea	27794	24603	3191	13	1638	1858	220	13	2,6	15,0	1510,0	100,9	2704	9,7	436	B - Polo interc	0	0	1	14384	51,8	6738	24,2
27039	Stra	7680	7247	433	6	825	871	45	5	1,3	8,8	648,0	73,5	844	11,0	356	C - Cintura	0	0	0	4087	53,2	1691	22,0
27040	Teglio Veneto	2289	2093	196	9	182	200	18	10	0,0	11,4	130,0	11,4	152	6,6	320	C - Cintura	0	0	0	1221	53,3	508	22,2
27041	Torre di Mosto	4735	4516	219	5	118	125	7	6	2,3	38,0	351,0	9,2	338	7,1	406	D - Intermedio	0	0	0	2475	52,3	934	19,7
27042	Venezia	264579	271251	-6672	-2	652	636	-16	-2	2,3	415,9	22947,0	55,2	33111	12,5	611	A - Polo	1	1	1	127826	48,3	72797	27,5
27043	Vigonovo	10001	8766	1235	14	685	777	92	13	3,5	12,9	705,0	54,8	1088	10,9	376	C - Cintura	0	0	0	5698	57,0	1869	18,7
27044	Cavallino-Treporti	13553	12360	1193	10	275	303	28	10	8,3	44,7	755,0	16,9	1142	8,4	1246	E - Periferico	0	0	0	6520	48,1	2991	22,1
23001	Affi	2319	2083	236	11	211	235	23	11	2,0	9,9	392,0	39,7	160	6,9	678	C - Cintura	0	0	0	1357	58,5	404	17,4
23002	Albaredo d'Adige	5317	5138	179	3	182	188	6	3	0,0	28,3	385,0	13,6	559	10,5	385	D - Intermedio	0	0	0	2742	51,6	1104	20,8
23003	Angiari	2241	1892	349	18	141	166	26	18	0,0	13,5	172,0	12,8	129	5,8	408	C - Cintura	0	0	0	1200	53,5	454	20,3
23004	Arcole	6216	5708	508	9	303	329	26	9	5,2	18,9	453,0	24,0	699	11,2	408	C - Cintura	0	0	0	3470	55,8	1120	18,0
23005	Badia Calavena	2643	2461	182	7	92	98	6	7	2,3	26,9	174,0	6,5	164	6,2	308	D - Intermedio	0	0	0	1464	55,4	493	18,7
23006	Bardolino	7037	6377	660	10	116	123	6	5	5,0	57,3	765,0	13,3	757	10,8	1447	D - Intermedio	0	0	0	3537	50,3	1675	23,8
23007	Belfiore	3108	2746	362	13	104	118	14	13	0,0	26,4	195,0	7,4	347	11,2	368	C - Cintura	0	0	0	1687	54,3	617	19,9
23008	Bevilacqua	1783	1801	-18	-1	149	146	-2	-2	0,0	12,2	82,0	6,7	168	9,4	455	C - Cintura	0	0	0	1010	56,6	382	21,4
23009	Bonavigo	2031	1990	41	2	112	113	1	1	19,5	18,0	121,0	6,7	217	10,7	413	C - Cintura	0	0	0	1076	53,0	419	20,6
23010	Boschi Sant'Anna	1446	1369	77	6	153	161	9	6	0,0	9,0	83,0	9,3	80	5,5	402	C - Cintura	0	0	0	773	53,5	297	20,5
23011	Bosco Chiesanuova	3625	3386	239	7	52	56	4	7	4,1	64,8	328,0	5,1	309	8,5	626	E - Periferico	0	0	0	1842	50,8	779	21,5
23012	Bovolone	15867	13934	1933	14	336	384	48	14	2,6	41,3	1293,0	31,3	1864	11,7	457	C - Cintura	0	0	0	8957	56,5	2976	18,8
23013	Brentino Belluno	1421	1333	88	7	50	55	4	9	1,9	26,0	99,0	3,8	161	11,3	463	D - Intermedio	0	0	0	803	56,5	268	18,9
23014	Brenzone sul Garda	2488	2494	-6	0	50	48	-2	-3	4,7	51,6	280,0	5,4	300	12,1	633	E - Periferico	0	0	0	1275	51,2	649	26,1
23015	Bussolengo	20028	18266	1762	10	751	827	75	10	2,6	24,2	1711,0	70,6	2603	13,0	454	C - Cintura	0	1	0	11162	55,7	3669	18,3
23016	Buttapietra	7059	6195	864	14	360	409	48	13	3,9	17,3	437,0	25,3	722	10,2	373	C - Cintura	0	0	0	4157	58,9	1154	16,3
23017	Caldiero	7741	6046	1695	28	580	746	166	29	2,1	10,4	537,0	51,8	1182	15,3	402	C - Cintura	0	0	1	4419	57,1	1242	16,0
23018	Caprino Veronese	8338	7657	681	9	162	176	14	9	3,4	47,3	689,0	14,6	929	11,1	425	D - Intermedio	0	0	0	4389	52,6	1810	21,7
23019	Casaleone	5890	6010	-120	-2	157	153	-4	-3	0,0	38,6	428,0	11,1	636	10,8	378	C - Cintura	0	0	0	2990	50,8	1369	23,2
23020	Castagnaro	3770	4091	-321	-8	118	108	-9	-8	0,0	34,8	286,0	8,2	240	6,4	476	C - Cintura	0	0	0	1998	53,0	946	25,1
23021	Castel d'Azzano	11813	10825	988	9	1116	1215	99	9	0,0	9,7	814,0	83,7	1267	10,7	388	C - Cintura	0	0	0	6866	58,1	2189	18,5
23022	Castelnuovo del Garda	13018	9988	3030	30	289	378	90	31	3,9	34,4	969,0	28,1	1581	12,1	563	C - Cintura	0	0	0	7091	54,5	2266	17,4
23023	Cavaion Veronese	5783	4459	1324	30	347	448	101	29	2,6	12,9	444,0	34,4	544	9,4	474	C - Cintura	0	0	0	3195	55,2	918	15,9
23024	Cazzano di Tramigna	1552	1340	212	16	109	126	17	16	2,1	12,3	97,0	7,9	104	6,7	373	D - Intermedio	0	0	0	832	53,6	356	22,9
23025	Cerea	16456	15473	983	6	220	234	14	7	2,5	70,3	1552,0	22,1	1347	8,2	459	C - Cintura	1	0	0	8692	52,8	3514	21,4
23026	Cerro Veronese	2484	2274	210	9	224	247	23	10	5,7	10,1	191,0	19,0	268	10,8	494	D - Intermedio	0	0	0	1334	53,7	402	16,2
23027	Cologna Veneta	8699	8207	492	6	191	203	12	6	3,0	42,8	601,0	14,0	1139	13,1	403	D - Intermedio	0	0	0	4539	52,2	1844	21,2
23028	Colognola ai Colli	8582	7481	1101	15	359	411	52	14	4,7	20,9	593,0	28,4	1088	12,7	427	C - Cintura	0	0	0	4693	54,7	1586	18,5
23029	Concamarise	1082	1044	38	4	132	137	4	3	0,0	7,9	100,0	12,6	126	11,6	335	C - Cintura	0	0	0	552	51,0	220	20,3
23030	Costermano	3730	3318	412	12	196	223	27	14	4,3	16,7	357,0	21,3	255	6,8	608	C - Cintura	0	0	0	2056	55,1	617	16,5
23031	Dolc	2624	2387	237	10	61	85	24	40	3,6	31,0	261,0	8,4	369	14,1	442	D - Intermedio	0	0	0	1452	55,3	497	18,9
23032	Erb	1832	1619	213	13	102	114	12	12	0,0	16,1	109,0	6,8	230	12,6	313	C - Cintura	0	0	0	1061	57,9	339	18,5
23033	Erbezzo	759	809	-50	-6	25	24	-1	-5	3,0	32,0	69,0	2,2	44	5,8	502	E - Periferico	0	0	0	408	53,8	184	24,2
23034	Ferrara di Monte Baldo	231	216	15	7	8	9	1	7	2,7	26,9	15,0	0,6	16	6,9	1163	D - Intermedio	0	0	0	86	37,2	64	27,7
23035	Fumane	4148	3908	240	6	114	121	7	6	2,4	34,2	295,0	8,6	264	6,4	370	C - Cintura	0	0	0	2370	57,1	821	19,8
23036	Garda	4062	3815	247	6	237	283	46	19	4,6	14,4	503,0	35,0	559	13,8	1053	D - Intermedio	1	0	0	2129	52,4	927	22,8
23037	Gazzo Veronese	5412	5584	-172	-3	98	96	-3	-3	0,0	56,7	330,0	5,8	460	8,5	393	C - Cintura	0	0	0	2712	50,1	1223	22,6
23038	Grezzana	10831	10525	306	3	202	219	16	8	2,3	49,5	936,0	18,9	1061	9,8	371	C - Cintura	0	0	0	6149	56,8	2064	19,1
23039	Illasi	5331	5112	219	4	204	213	9	4	2,1	25,0	355,0	14,2	473	8,9	418	C - Cintura	0	0	0	3013	56,5	1046	19,6
23040	Isola della Scala	11575	10897	678	6	156	166	10	6	2,9	69,8	879,0	12,6	1446	12,5	386	A - Polo	1	1	1	6439	55,6	2416	20,9
23041	Isola Rizza	3286	2977	309	10	177	197	20	11	0,0	16,7	245,0	14,7	333	10,1	408	C - Cintura	0	0	0	1768	53,8	610	18,6
23042	Lavagno	8431	6222	2209	36	425	576	151	36	2,8	14,6	517,0	35,3	739	8,8	330	E - Periferico	0	0	0	5041	59,8	1284	15,2
23043	Lazise	6953	6213	740	12	96	110	14	15	5,7	63,2	794,0	12,6	652	9,4	1121	C - Cintura	0	0	0	3545	51,0	1481	21,3
23044	Legnago	25344	25181	163	1	316	320	4	1	2,0	79,3	2112,0	26,6	1983	7,8	513	A - Polo	1	1	1	12418	49,0	6282	24,8
23045	Malcesine	3728	3498	230	7	51	54	2	5	5,0	69,3	586,0	8,5	421	11,3	1444	E - Periferico	0	0	0	1978	53,1	907	24,3
23046	Marano di Valpolicella	3137	2975	162	5	160	168	9	6	2,4	18,6	231,0	12,4	139	4,4	472	D - Intermedio	0	0	0	1840	58,7	644	20,5
23047	Mezzane di Sotto	2525	1949	576	30	99	128	29	29	4,3	19,7	120,0	6,1	115	4,6	358	D - Intermedio	0	0	0	1321	52,3	576	22,8
23048	Minerbe	4671	4599	72	2	155	158	3	2	0,0	29,7	334,0	11,3	405	8,7	451	C - Cintura	0	0	0	2401	51,4	1084	23,2
23049	Montecchia di Crosara	4379	4414	-35	-1	209	208	-1	-1	2,6	21,1	263,0	12,5	517	11,8	291	D - Intermedio	0	0	0	2536	57,9	794	18,1
23050	Monteforte d'Alpone	8845	7597	1248	16	372	432	60	16	1,9	20,5	515,0	25,2	1347	15,2	363	C - Cintura	0	0	0	4695	53,1	1584	17,9
23051	Mozzecane	7503	5611	1892	34	227	302	75	33	2,2	24,9	475,0	19,1	1063	14,2	401	C - Cintura	0	0	0	4233	56,4	1091	14,5
23052	Negrar	17126	16705	421	3	412	424	11	3	2,5	40,4	1382,0	34,2	1397	8,2	349	C - Cintura	0	1	0	9434	55,1	3648	21,3
23053	Nogara	8667	8154	513	6	210	223	14	7	3,1	38,8	634,0	16,3	1433	16,5	446	C - Cintura	0	0	1	4490	51,8	1831	21,1
23054	Nogarole Rocca	3690	3088	602	19	106	127	21	20	1,8	29,1	232,0	8,0	865	23,4	435	C - Cintura	0	0	0	2030	55,0	605	16,4

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
23055	Oppeano	9813	8018	1795	22	171	210	39	23	4,7	46,7	716,0	15,3	1422	14,5	389	C - Cintura	0	0	0	5430	55,3	1587	16,2
23056	Pal	1258	1181	77	7	88	92	5	5	0,0	13,6	68,0	5,0	224	17,8	334	D - Intermedio	0	0	0	710	56,4	244	19,4
23057	Pastrengo	3060	2486	574	23	277	340	63	23	2,1	9,0	268,0	29,8	240	7,8	483	C - Cintura	0	0	0	1662	54,3	606	19,8
23058	Pescantina	17040	14096	2944	21	717	864	147	21	2,0	19,7	1301,0	66,0	1193	7,0	382	C - Cintura	0	0	0	9911	58,2	2695	15,8
23059	Peschiera del Garda	10252	9006	1246	14	511	561	51	10	5,3	18,3	997,0	54,6	1289	12,6	823	C - Cintura	0	1	1	4906	47,9	2365	23,1
23060	Povegliano Veronese	7127	6921	206	3	370	385	14	4	2,4	18,5	555,0	30,0	628	8,8	369	C - Cintura	0	0	0	4125	57,9	1309	18,4
23061	Pressana	2528	2465	63	3	139	145	6	5	0,0	17,4	148,0	8,5	313	12,4	399	D - Intermedio	0	0	0	1342	53,1	515	20,4
23062	Rivoli Veronese	2181	2033	148	7	110	118	8	8	2,2	18,4	183,0	9,9	149	6,8	369	C - Cintura	0	0	0	1196	54,8	395	18,1
23063	Ronc'	3807	3479	328	9	191	210	19	10	0,0	18,1	223,0	12,3	396	10,4	287	D - Intermedio	0	0	0	2067	54,3	681	17,9
23064	Ronco all'Adige	6089	5834	255	4	137	142	5	4	0,0	42,8	434,0	10,1	743	12,2	349	D - Intermedio	0	0	0	3356	55,1	1260	20,7
23065	Roverchiara	2756	2685	71	3	136	140	5	3	9,8	19,6	159,0	8,1	531	19,3	371	C - Cintura	0	0	0	1406	51,0	544	19,7
23066	Roveredo di Gu'	1566	1437	129	9	141	154	13	9	0,0	10,2	89,0	8,8	155	9,9	267	D - Intermedio	0	0	0	832	53,1	241	15,4
23067	Rover Veronese	2143	2129	14	1	58	59	0	0	3,2	36,5	285,0	7,8	192	9,0	423	D - Intermedio	0	0	0	1072	50,0	448	20,9
23068	Salizzole	3762	3788	-26	-1	124	123	-1	-1	4,1	30,7	285,0	9,3	283	7,5	378	C - Cintura	0	0	0	1933	51,4	769	20,4
23069	San Bonifacio	21226	18810	2416	13	555	628	74	13	2,7	33,8	1939,0	57,4	4116	19,4	446	C - Cintura	0	0	1	11140	52,5	3944	18,6
23070	San Giovanni Ilarione	5134	5067	67	1	200	202	2	1	2,0	25,4	321,0	12,6	523	10,2	345	D - Intermedio	0	0	0	2940	57,3	845	16,5
23071	San Giovanni Lupatoto	24991	22218	2773	12	1173	1315	142	12	1,6	19,0	2047,0	107,7	2706	10,8	469	C - Cintura	0	0	0	13543	54,2	5256	21,0
23072	Sanguinetto	4121	4009	112	3	294	305	11	4	0,0	13,5	319,0	23,6	412	10,0	474	C - Cintura	0	0	0	2069	50,2	963	23,4
23073	San Martino Buon Albergo	14829	13231	1598	12	375	427	52	14	1,7	34,8	1372,0	39,5	1787	12,1	440	C - Cintura	0	0	0	8132	54,8	3038	20,5
23074	San Mauro di Saline	577	570	7	1	51	51	0	0	33,6	11,2	37,0	3,3	22	3,8	423	D - Intermedio	0	0	0	289	50,1	122	21,1
23075	San Pietro di Morubio	3051	2828	223	8	177	189	13	7	0,0	16,1	216,0	13,4	255	8,4	361	C - Cintura	0	0	0	1620	53,1	629	20,6
23076	San Pietro in Cariano	12971	12624	347	3	623	641	17	3	2,7	20,2	1051,0	51,9	790	6,1	434	C - Cintura	1	0	0	7393	57,0	2830	21,8
23077	Sant'Ambrogio di Valpolicella	11756	10656	1100	10	453	500	47	10	2,6	23,5	956,0	40,7	1300	11,1	403	D - Intermedio	0	0	1	6494	55,2	2273	19,3
23078	Sant'Anna d'Alfaedo	2573	2544	29	1	58	59	1	2	3,2	43,4	206,0	4,7	193	7,5	410	E - Periferico	0	0	0	1415	55,0	508	19,7
23079	San Zeno di Montagna	1356	1328	28	2	47	48	1	2	3,1	28,2	127,0	4,5	130	9,6	785	D - Intermedio	0	0	0	661	48,7	309	22,8
23080	Selva di Progno	931	985	-54	-5	24	23	-1	-6	6,7	41,3	74,0	1,8	45	4,8	490	D - Intermedio	0	0	0	477	51,2	222	23,8
23081	Soave	7111	6800	311	5	300	313	13	4	1,7	22,7	491,0	21,6	570	8,0	419	C - Cintura	0	0	0	3972	55,9	1420	20,0
23082	Sommacampagna	14846	13799	1047	8	337	364	26	8	2,0	40,8	1122,0	27,5	1484	10,0	479	C - Cintura	0	0	0	8707	58,6	2758	18,6
23083	Sona	17687	15020	2667	18	365	430	65	18	2,3	41,1	1362,0	33,1	1715	9,7	433	C - Cintura	0	0	0	10015	56,6	2971	16,8
23084	Sorg'	3070	3031	39	1	96	97	1	1	8,4	31,5	151,0	4,8	500	16,3	354	C - Cintura	0	0	0	1657	54,0	673	21,9
23085	Terrazzo	2249	2336	-87	-4	114	110	-4	-4	0,0	20,5	147,0	7,2	208	9,2	416	C - Cintura	0	0	0	1077	47,9	584	26,0
23086	Torri del Benaco	3026	2793	233	8	54	65	11	20	4,3	46,3	356,0	7,7	396	13,1	695	D - Intermedio	0	0	0	1335	44,1	718	23,7
23087	Tregnago	4930	4862	68	1	130	132	2	2	2,5	37,3	310,0	8,3	336	6,8	411	C - Cintura	0	0	0	2666	54,1	1043	21,2
23088	Trevenzuolo	2761	2584	177	7	96	102	7	7	4,1	26,9	171,0	6,3	426	15,4	391	C - Cintura	0	0	0	1492	54,0	527	19,1
23089	Valeggio sul Mincio	14923	12118	2805	23	189	233	44	23	6,0	64,0	1005,0	15,7	2071	13,9	497	C - Cintura	0	0	0	8200	54,9	2511	16,8
23090	Velo Veronese	777	792	-15	-2	42	41	0	-1	3,5	18,9	58,0	3,1	14	1,8	423	E - Periferico	0	0	0	416	53,5	154	19,8
23091	Verona	260125	259068	1057	0	1253	1308	54	4	2,1	198,9	23714,0	119,2	37578	14,4	517	A - Polo	1	1	1	130288	50,1	64645	24,9
23092	Veronella	4966	3946	1020	26	189	238	48	26	0,0	20,9	282,0	13,5	627	12,6	349	D - Intermedio	0	0	0	2630	53,0	734	14,8
23093	Vestenanova	2607	2683	-76	-3	112	108	-4	-4	3,0	24,2	130,0	5,4	195	7,5	334	D - Intermedio	0	0	0	1416	54,3	454	17,4
23094	Vigasio	9955	7393	2562	35	240	324	84	35	1,6	30,8	568,0	18,5	1035	10,4	385	C - Cintura	0	0	0	5838	58,6	1541	15,5
23095	Villa Bartolomea	5901	5500	401	7	103	111	8	8	2,2	53,0	400,0	7,5	514	8,7	469	C - Cintura	0	0	0	3034	51,4	1375	23,3
23096	Villafranca di Verona	33246	30521	2725	9	532	580	48	9	1,8	57,3	2621,0	45,7	3586	10,8	452	A - Polo	1	1	1	18778	56,5	6542	19,7
23097	Zevio	14983	13055	1928	15	237	273	36	15	2,5	54,9	1090,0	19,9	1502	10,0	476	C - Cintura	0	0	0	8658	57,8	2567	17,1
23098	Zimella	4946	4626	320	7	230	246	16	7	0,0	20,1	325,0	16,2	698	14,1	356	D - Intermedio	0	0	0	2555	51,7	833	16,8
28001	Abano Terme	19966	18872	1094	6	875	933	58	7	4,4	21,4	1817,0	84,9	2050	10,3	723	C - Cintura	1	0	0	10243	51,3	4863	24,4
28002	Agna	3382	3239	143	4	172	180	8	5	0,0	18,8	258,0	13,7	229	6,8	376	D - Intermedio	0	0	0	1713	50,7	728	21,5
28003	Albignasego	25365	19990	5375	27	952	1199	246	26	2,0	21,2	2103,0	99,4	1588	6,3	410	C - Cintura	0	0	0	13591	53,6	4665	18,4
28004	Anguillara Veneta	4495	4766	-271	-6	222	207	-14	-6	0,0	21,7	287,0	13,2	305	6,8	324	C - Cintura	0	0	0	2180	48,5	1084	24,1
28005	Arqu' Petrarca	1856	1852	4	0	148	148	0	0	2,9	12,5	150,0	12,0	36	1,9	388	C - Cintura	0	0	0	916	49,4	411	22,1
28006	Arre	2168	2067	101	5	167	176	9	5	0,0	12,3	161,0	13,0	92	4,2	429	C - Cintura	0	0	0	1178	54,3	422	19,5
28007	Arzergrande	4765	4257	508	12	312	349	37	12	0,0	13,6	356,0	26,1	185	3,9	340	D - Intermedio	0	0	0	2640	55,4	900	18,9
28008	Bagnoli di Sopra	3627	3837	-210	-5	110	104	-6	-6	6,3	35,0	282,0	8,1	304	8,4	381	C - Cintura	0	0	0	1783	49,2	847	23,4
28009	Baone	3151	3133	18	1	128	129	1	1	2,5	24,4	180,0	7,4	48	1,5	403	C - Cintura	0	0	0	1656	52,6	704	22,3
28010	Barbona	673	765	-92	-12	89	78	-11	-12	0,0	8,6	31,0	3,6	34	5,1	266	C - Cintura	0	0	0	381	56,6	148	22,0
28011	Battaglia Terme	3928	4154	-226	-5	661	630	-31	-5	6,5	6,2	232,0	37,2	489	12,4	423	C - Cintura	0	0	1	1959	49,9	1032	26,3
28012	Boara Pisani	2597	2542	55	2	154	156	2	1	0,0	16,7	169,0	10,1	125	4,8	413	C - Cintura	0	0	0	1396	53,8	605	23,3
28013	Borgoricco	8703	7429	1274	17	363	427	64	18	1,9	20,4	688,0	33,7	1001	11,5	355	C - Cintura	0	0	0	4945	56,8	1457	16,7
28014	Bovolenta	3492	3127	365	12	138	153	15	11	3,9	22,8	291,0	12,8	265	7,6	349	D - Intermedio	0	0	0	1763	50,5	674	19,3
28015	Brugine	6994	6579	415	6	336	358	22	6	0,0	19,5	610,0	31,2	473	6,8	322	C - Cintura	0	0	0	3701	52,9	1125	16,1
28016	Cadoneghe	16264	15204	1060	7	1183	1258	75	6	3,0	12,9	1227,0	94,9	2129	13,1	410	C - Cintura	0	0	0	8820	54,2	3512	21,6
28017	Campodarsego	14608	12209	2399	20	477	568	91	19	1,6	25,7	1355,0	52,7	1381	9,5	373	C - Cintura	0	0	1	8330	57,0	2670	18,3
28018	Campodoro	2704	2490	214	9	223	241	18	8	0,0	11,2	172,0	15,3	238	8,8	333	C - Cintura	0	0	0	1629	60,2	415	15,3
28019	Camposampiero	12194	11392	802	7	541	577	37	7	1,8	21,1	1131,0	53,5	1990	16,3	440	A - Polo	1	1	1	6893	56,5	2106	17,3
28020	Campo San Martino	5772	5520	252	5	420	439	18	4	10,4	13,2	506,0	38,4	536	9,3	385	C - Cintura	0	0	0	3163	54,8	1189	20,6
28021	Candiana	2423	2468	-45	-2	111	109	-2	-2	0,0	22,3	158,0	7,1	169	7,0	312	D - Intermedio	0	0	0	1289	53,2	525	21,7
28022	Carceri	1588	1579	9	1	162	162	0	0	0,0	9,8	94,0	9,6	76	4,8	343	C - Cintura	0	0	0	830	52,3	335	21,1
28023	Carmignano di Brenta	7651	7270	381	5	494	521	28	6	3,1	14,7	550,0	37,5	784	10,2	370	C - Cintura	0	0	0	4007	52,4	1671	21,8
28026	Cartura	4666	4268	398	9	263	287	23	9	0,0	16,3	317,0	19,5	224	4,8	383	C - Cintura	0	0	0	2457	52,7	963	20,6
28027	Casale di Scodosia	4873	4840	33	1	228	229	0	0	0,0	21,3	467,0	21,9	446	9,2	371	C - Cintura	0	0	0	2556	52,5	1014	20,8
28028	Casalserugo	5437	5525	-88	-2	356	351	-5	-1	5,0	15,5	488,0	31,5	246	4,5	358	C - Cintura	0	0	0	2963	54,5	1116	20,5
28029	Castelbaldo	1572	1694	-122	-7	112	104	-8	-7	0,0	15,2	92,0	6,1	139	8,8	373	D - Intermedio	0	0	0	781	49,7	392	24,9
28030	Cervarese Santa Croce	5690	5029	661	13	287	321	34	12	6,0	17,7	466,0	26,3	332	5,8	386	C - Cintura	0	0	0	3388	59,5	1003	17,6
28031	Cinto Euganeo	2010	2104	-94	-4	107	102	-5	-5	2,4	19,8	140,0	7,1	73	3,6	319	C - Cintura	0	0	0	1002	49,9	464	23,1
28032	Cittadella	20152	19418	734	4	531	549	18	3	1,6	36,7	2109,0	57,5	1537	7,6	495	A - Polo	1	1	1	11016	54,7	4231	21,0
28033	Codevigo	6482	5901	581	10	84	93	8	10	3,0	70,0	517,0	7,4	474	7,3	370	D - Intermedio	0	0	0	3524	54,4	1177	18,2
28034	Conselve	10319	9521	798	8	393	425	32	8	1,2	24,3	890,0	36,6	955	9,3	517	C - Cintura	1	0	0	5545	53,7	2226	21,6
28035	Correzzola	5372	5506	-134	-2	130	127	-3	-2	1,7	42,3	333,0	7,9	333	6,2	306	D - Intermedio	0	0	0	2763	51,4	1152	21,4
28036	Curtarolo	7301	6775	526	8	456	496	40	9	1,8	14,7	558,0	37,9	714	9,8	363	C - Cintura	0	0	0	4054	55,5	1374	18,8
28037	Este	16581	16807	-226	-1	513	505	-8	-1	2,4	32,8	649,0	19,8	1377	8,3	561	A - Polo	1	1	1	8298	50,0	4327	26,1
28038	Fontaniva	8246	7630	616	8	370	400	30	8	2,0	20,6	616,0	29,9	977	11,8	368	C - Cintura	0	0	0	4489	54,4	1714	20,8
28039	Galliera Veneta	7105	6830	275	4	758	794	36	5	0,0	9,0	563,0	62,9	726	10,2	462	C - Cintura	0	0	0	3910	55,0	1424	20,0
28040	Galzignano Terme	4426	4261	165	4	235	243	8	4	2,9	18,2	263,0	14,4	96	2,2	387	C - Cintura	0	0	0	2358	53,3	973	22,0
28041	Gazzo	4347	3697	650	18	163	191	28	17	0,0	22,7	263,0	11,6	383	8,8	334	C - Cintura	0	0	0	2564	59,0	706	16,2
28042	Grantorto	4721	4072	649	16	289	335	45	16	4,4	14,1	301,0	21,3	609	12,9	317	C - Cintura	0	0	0	2596	55,0	872	18,5
28043	Granze	2055	1803	252	14	158	179	22	14	0,0	11,5	139,0	12,1	87	4,2	340	C - Cintura	0	0	0	1112	54,1	307	14,9
28044	Legnaro	8733	7703	1030	13	517	586	68	13	2,2	14,9	708,0	47,5	632	7,2	449	C - Cintura	0	0	0	4929	56,4	1581	18,1
28045	Limena	7874	7148	726	10	475	519	44	9	1,8	15,2	963,0	63,5	726	9,2	449	C - Cintura	0	0	0	4538	57,6	1483	18,8
28046	Loreggia	7610	6316	1294	20	332	398	66	20	1,7	19,1	623,0	32,6	1105	14,5	343	C - Cintura	0	0	0	4249	55,8	1039	13,7
28047	Lozzo Atestino	3167	3152	15	0	131	132	0	0	51,1	24,1	227,0	9,4	124	3,9	341	C - Cintura	0	0	0	1660	52,4	721	22,8
28048	Maser' di Padova	9092	8226	866	11	469	517	48	10	1,9	17,6	657,0	37,4	623	6,9	370	C - Cintura	0	0	0	5335	58,7	1572	17,3
28049	Masi	1821	1810	11	1	132	132	0	0	1,9	13,8	117,0	8,5	168	9,2	328	D - Intermedio	0	0	0	904	49,6	370	20,3
28050	Massanzago	6029	5163	866	17	391	456	66	17	2,6	13,2	452,0	34,2	699	11,6	291	C - Cintura	0	0	0	3621	60,1	727	12,1
28051	Megliadino San Fidenzio	1942	1884	58	3	120	124	3	3	0,0	15,7	139,0	8,8	161	8,3	587	C - Cintura	0	0	0	1004	51,7	388	20,0
28052	Megliadino San Vitale	2008	2002	6	0	132	132	-1	-1	0,0	15,2	125,0	8,2	224	11,2	278	C - Cintura	0	0	0	988	49,2	481	24,0
28053	Merlara	2748	2980	-232	-8	140	129	-11	-8	0,0	21,3	200,0	9,4	144	5,2	499	C - Cintura	0	0	0	1410	51,3	691	25,1
28054	Mestrino	11443	9211	2232	24	477	595	118	25	2,5	19,2	818,0	42,6	1529	13,4	374	C - Cintura	0	0	1	6629	57,9	1774	15,5
28055	Monselice	17675	17595	80	0	348	350	1	0	2,2	50,6	1680,0	33,2	1371	7,8	564	A - Polo	1	1	1	9150	51,8	4345	24,6
28056	Montagnana	9276	9397	-121	-1	209	206	-3	-1	2,4	45,0	860,0	19,1	736	7,9	470	C - Cintura	1	0	1	4716	50,8	2278	24,6

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
28057	Montegrotto Terme	11259	10598	661	6	695	733	38	5	4,1	15,4	1188,0	77,3	1017	9,0	618	C - Cintura	0	0	1	6040	53,6	2634	23,4
28058	Noventa Padovana	11257	9003	2254	25	1256	1590	334	27	1,3	7,1	1156,0	163,2	1325	11,8	461	C - Cintura	0	0	0	6321	56,2	2123	18,9
28059	Ospedaletto Euganeo	5832	5667	165	3	265	272	7	3	0,0	21,5	395,0	18,4	472	8,1	344	C - Cintura	0	0	0	3215	55,1	1171	20,1
28060	Padova	211210	210821	389	0	2271	2270	0	0	2,1	93,0	23870,0	256,6	33268	15,8	609	A - Polo	1	1	1	105325	49,9	53444	25,3
28061	Pernumia	3865	3756	109	3	285	293	8	3	0,0	13,2	305,0	23,1	226	5,8	448	C - Cintura	0	0	0	2128	55,1	790	20,4
28062	Piacenza d'Adige	1344	1371	-27	-2	74	73	-1	-1	0,0	18,5	69,0	3,7	132	9,8	531	C - Cintura	0	0	0	622	46,3	349	26,0
28063	Piazzola sul Brenta	11265	10758	507	5	260	275	15	6	3,1	40,9	815,0	19,9	944	8,4	369	C - Cintura	1	0	0	6138	54,5	2507	22,3
28064	Piombino Dese	9553	8963	590	7	304	322	19	6	3,7	29,6	752,0	25,4	1243	13,0	369	C - Cintura	0	0	1	5186	54,3	1782	18,7
28065	Piove di Sacco	19797	18019	1778	10	506	554	48	10	1,4	35,7	1982,0	55,5	2353	11,9	479	C - Cintura	1	1	0	10026	50,6	4206	21,2
28066	Polverara	3259	2555	704	28	259	331	72	28	0,0	9,8	219,0	22,2	118	3,6	306	C - Cintura	0	0	0	1809	55,5	529	16,2
28067	Ponso	2477	2435	42	2	223	228	6	2	0,0	10,8	198,0	18,3	127	5,1	360	C - Cintura	0	0	0	1326	53,5	520	21,0
28068	Pontelongo	3868	3853	15	0	356	355	-1	0	0,0	10,9	202,0	18,6	601	15,5	413	D - Intermedio	0	0	0	1994	51,6	883	22,8
28069	Ponte San Nicol"	13486	12656	830	7	937	997	60	6	1,6	13,5	1215,0	89,9	950	7,0	394	C - Cintura	0	0	0	7620	56,5	2753	20,4
28070	Pozzonovo	3628	3589	39	1	147	148	1	1	0,0	24,5	264,0	10,8	208	5,7	519	C - Cintura	0	0	0	1902	52,4	770	21,2
28071	Rovolon	4930	4207	723	17	153	178	25	17	5,7	27,7	393,0	14,2	427	8,7	374	D - Intermedio	0	0	0	2694	54,6	818	16,6
28072	Rubano	16120	14110	2010	14	969	1111	142	15	1,4	14,5	1573,0	108,4	1593	9,9	407	C - Cintura	0	0	0	8794	54,6	3233	20,1
28073	Saccolongo	4959	4538	421	9	331	359	29	9	0,0	13,8	397,0	28,8	233	4,7	365	C - Cintura	0	0	0	2711	54,7	1052	21,2
28074	Saletto	2767	2659	108	4	246	258	11	5	0,0	10,7	221,0	20,6	165	6,0	393	C - Cintura	0	0	0	1426	51,5	559	20,2
28075	San Giorgio delle Pertiche	10225	8617	1608	19	458	542	84	18	0,0	18,9	755,0	40,0	1404	13,7	342	C - Cintura	0	0	0	5953	58,2	1711	16,7
28076	San Giorgio in Bosco	6281	5966	315	5	212	222	9	4	1,3	28,4	558,0	19,7	543	8,6	312	C - Cintura	0	0	0	3532	56,2	1075	17,1
28077	San Martino di Lupari	13205	12053	1152	10	497	547	51	10	2,2	24,1	1175,0	48,7	1262	9,6	394	C - Cintura	0	0	0	7404	56,1	2435	18,4
28078	San Pietro in Gu	4523	4413	110	2	248	253	5	2	0,0	17,9	297,0	16,6	379	8,4	371	C - Cintura	0	0	0	2547	56,3	891	19,7
28079	San Pietro Viminario	3040	2680	360	13	201	228	27	14	0,0	13,3	233,0	17,5	144	4,7	403	C - Cintura	0	0	0	1653	54,4	542	17,8
28080	Santa Giustina in Colle	7232	6823	409	6	381	402	21	6	2,0	18,0	550,0	30,6	713	9,9	262	C - Cintura	0	0	0	4104	56,7	1266	17,5
28081	Santa Margherita d'Adige	2316	2308	8	0	182	182	0	0	0,0	12,7	154,0	12,1	124	5,4	476	C - Cintura	0	0	0	1216	52,5	461	19,9
28082	Sant'Angelo di Piove di Sacco	7245	6986	259	4	499	519	19	4	0,0	14,0	600,0	43,0	466	6,4	387	C - Cintura	0	0	0	4036	55,7	1401	19,3
28083	Sant'Elena	2458	1925	533	28	215	276	60	28	0,0	8,9	178,0	20,0	104	4,2	605	C - Cintura	0	0	0	1371	55,8	406	16,5
28084	Sant'Urbano	2115	2189	-74	-3	69	66	-2	-4	0,0	31,9	116,0	3,6	75	3,5	408	C - Cintura	0	0	0	1058	50,0	549	26,0
28085	Saonara	10264	9399	865	9	695	758	63	9	1,4	13,5	839,0	61,9	1039	10,1	411	C - Cintura	0	0	0	5967	58,1	1799	17,5
28086	Selvazzano Dentro	22866	21164	1702	8	1081	1171	91	8	1,6	19,5	1858,0	95,2	2253	9,9	450	C - Cintura	0	0	0	12101	52,9	5353	23,4
28087	Solesino	7085	7068	17	0	689	699	10	1	0,0	10,1	824,0	81,2	527	7,4	648	C - Cintura	0	0	0	3259	46,0	1605	22,7
28088	Stanghella	4213	4474	-261	-6	227	213	-15	-6	1,2	19,8	339,0	17,1	301	7,1	403	C - Cintura	0	0	0	2055	48,8	1047	24,9
28089	Teolo	9034	8441	593	7	271	290	18	7	7,2	31,2	732,0	23,5	501	5,5	447	D - Intermedio	0	0	0	4847	53,7	1943	21,5
28090	Terrassa Padovana	2692	2321	371	16	158	182	24	15	0,0	14,8	207,0	14,0	153	5,7	405	C - Cintura	0	0	0	1491	55,4	473	17,6
28091	Tombolo	8372	7467	905	12	673	760	86	13	0,0	11,0	736,0	66,8	1201	14,3	369	C - Cintura	0	0	0	4573	54,6	1596	19,1
28092	Torreglia	6153	5978	175	3	319	326	8	2	5,3	18,9	475,0	25,2	368	6,0	377	C - Cintura	0	0	0	3373	54,8	1316	21,4
28093	Trebaseleghe	12807	11535	1272	11	375	418	42	11	2,1	30,7	902,0	29,4	1310	10,2	349	C - Cintura	0	0	0	7292	56,9	2221	17,3
28094	Tribano	4440	4284	156	4	222	231	8	4	2,7	19,2	333,0	17,3	380	8,6	462	C - Cintura	0	0	0	2382	53,6	907	20,4
28095	Urbana	2168	2234	-66	-3	131	127	-4	-3	2,7	17,0	196,0	11,5	82	3,8	420	C - Cintura	0	0	0	1145	52,8	466	21,5
28096	Veggiano	4663	3515	1148	33	216	284	68	31	194,7	16,4	378,0	23,0	406	8,7	366	C - Cintura	0	0	0	2888	61,9	554	11,9
28097	Vescovana	1802	1601	201	13	72	81	9	13	1,7	22,2	99,0	4,4	53	2,9	397	C - Cintura	0	0	0	896	49,7	394	21,9
28098	Vighizzolo d'Este	925	926	-1	0	54	54	0	0	0,0	17,1	50,0	2,9	19	2,1	413	C - Cintura	0	0	0	490	53,0	200	21,6
28099	Vigodarzere	13001	12235	766	6	615	653	38	6	2,1	19,9	926,0	46,5	925	7,1	325	C - Cintura	0	0	0	7416	57,0	2560	19,7
28100	Vigonza	22682	20421	2261	11	613	681	68	11	3,5	33,3	2010,0	60,3	1735	7,6	443	C - Cintura	0	0	1	12650	55,8	4331	19,1
28101	Villa del Conte	5571	5249	322	6	303	321	18	6	4,5	17,3	470,0	27,1	479	8,6	289	C - Cintura	0	0	0	3163	56,8	1005	18,0
28102	Villa Estense	2243	2407	-164	-7	150	140	-10	-7	0,0	16,0	168,0	10,5	66	2,9	431	C - Cintura	0	0	0	1220	54,4	535	23,9
28103	Villafranca Padovana	10091	8522	1569	18	358	421	64	18	5,6	24,0	711,0	29,7	645	6,4	373	C - Cintura	0	0	0	5951	59,0	1665	16,5
28104	Villanova di Camposampiero	6111	5127	984	19	421	500	79	19	0,0	12,2	409,0	33,5	536	8,8	273	C - Cintura	0	0	0	3496	57,2	1076	17,6
28105	Vo'	3393	3416	-23	-1	167	167	-1	0	15,1	20,4	327,0	16,1	147	4,3	448	C - Cintura	0	0	0	1705	50,3	845	24,9
28106	Due Carrare	9065	8468	597	7	319	341	23	7	4,6	26,6	649,0	24,4	480	5,3	510	C - Cintura	0	0	0	5300	58,5	1589	17,5
29001	Adria	19962	20669	-707	-3	182	176	-6	-3	2,4	113,4	1479,0	13,0	1197	6,0	480	A - Polo	1	1	1	9659	48,4	5052	25,3
29002	Ariano nel Polesine	4369	4870	-501	-10	60	54	-6	-10	4,2	80,6	377,0	4,7	220	5,0	414	C - Cintura	0	0	0	1954	44,7	1187	27,2
29003	Arqu" Polesine	2785	2839	-54	-2	142	140	-2	-1	1,8	19,9	194,0	9,7	171	6,1	465	C - Cintura	0	0	0	1421	51,0	693	24,9
29004	Badia Polesine	10636	10719	-83	-1	241	239	-2	-1	2,1	44,5	936,0	21,0	1199	11,3	496	C - Cintura	1	0	0	5553	52,2	2349	22,1
29005	Bagnolo di Po	1332	1398	-66	-5	65	62	-3	-4	0,0	21,4	69,0	3,2	171	12,8	391	D - Intermedio	0	0	0	620	46,5	366	27,5
29006	Bergantino	2572	2612	-40	-2	144	143	-1	0	3,6	18,0	214,0	11,9	170	6,6	480	D - Intermedio	0	0	0	1227	47,7	686	26,7
29007	Bosaro	1516	1391	125	9	231	248	17	7	0,0	6,1	91,0	14,9	204	13,5	366	C - Cintura	0	0	0	796	52,5	291	19,2
29008	Calto	764	834	-70	-8	76	70	-6	-7	0,0	10,8	56,0	5,2	117	15,3	490	D - Intermedio	0	0	0	340	44,5	202	26,4
29009	Canaro	2785	2885	-100	-3	88	85	-3	-3	0,0	32,7	177,0	5,4	172	6,2	442	C - Cintura	0	0	0	1385	49,7	699	25,1
29010	Canda	969	958	11	1	67	67	1	1	0,0	14,4	64,0	4,5	132	13,6	389	C - Cintura	0	0	0	460	47,5	236	24,4
29011	Castelguglielmo	1645	1730	-85	-5	78	74	-4	-5	0,0	22,1	110,0	5,0	140	8,5	409	C - Cintura	0	0	0	750	45,6	422	25,7
29012	Castelmassa	4287	4342	-55	-1	365	362	-2	-1	0,0	11,8	265,0	22,4	606	14,1	505	D - Intermedio	0	0	0	1933	45,1	1200	28,0
29013	Castelnovo Bariano	2835	3082	-247	-8	82	75	-7	-9	0,0	37,9	149,0	3,9	325	11,5	419	D - Intermedio	0	0	0	1329	46,9	761	26,8
29014	Ceneselli	1744	1853	-109	-6	65	61	-4	-6	0,0	28,6	111,0	3,9	267	15,3	445	D - Intermedio	0	0	0	774	44,4	466	26,7
29015	Ceregnano	3683	3951	-268	-7	132	122	-9	-7	0,0	30,2	217,0	7,2	225	6,1	344	C - Cintura	0	0	0	1873	50,9	852	23,1
29017	Corbola	2461	2634	-173	-7	143	133	-11	-7	0,0	18,5	158,0	8,5	178	7,2	527	C - Cintura	0	0	0	1164	47,3	646	26,2
29018	Costa di Rovigo	2659	2886	-227	-8	180	165	-14	-8	0,0	16,1	148,0	9,2	140	5,3	479	C - Cintura	0	0	0	1337	50,3	675	25,4
29019	Crespino	1910	2111	-201	-10	66	60	-6	-9	5,9	31,9	109,0	3,4	157	8,2	386	C - Cintura	0	0	0	820	42,9	580	30,4
29021	Ficarolo	2493	2754	-261	-9	154	138	-16	-11	0,0	18,1	127,0	7,0	225	9,0	541	C - Cintura	0	0	0	1127	45,2	702	28,2
29022	Fiesso Umbertiano	4192	4207	-15	0	154	152	-2	-1	3,9	27,5	259,0	9,4	364	8,7	462	C - Cintura	0	0	0	2110	50,3	1004	24,0
29023	Frassinelle Polesine	1469	1559	-90	-6	71	67	-4	-6	0,0	22,0	82,0	3,7	66	4,5	378	C - Cintura	0	0	0	748	50,9	380	25,9
29024	Fratta Polesine	2699	2756	-57	-2	132	129	-3	-2	2,5	21,0	205,0	9,8	231	8,6	484	C - Cintura	0	0	0	1334	49,4	665	24,6
29025	Gaiba	1070	1134	-64	-6	94	89	-5	-5	0,0	12,0	89,0	7,4	73	6,8	505	C - Cintura	0	0	0	513	47,9	300	28,0
29026	Gavello	1567	1616	-49	-3	66	64	-2	-3	0,0	24,4	90,0	3,7	160	10,2	343	C - Cintura	0	0	0	778	49,6	387	24,7
29027	Giacciano con Baruchella	2171	2302	-131	-6	125	118	-8	-6	32,8	18,4	155,0	8,4	221	10,2	519	D - Intermedio	0	0	0	1010	46,5	545	25,1
29028	Guarda Veneta	1182	1151	31	3	66	69	2	3	0,0	17,2	61,0	3,5	107	9,1	363	C - Cintura	0	0	0	564	47,7	310	26,2
29029	Lendinara	11963	12188	-225	-2	220	217	-3	-1	9,3	55,1	903,0	16,4	1153	9,6	481	C - Cintura	0	0	0	5879	49,1	3023	25,3
29030	Loreo	3566	3873	-307	-8	98	90	-8	-8	6,3	39,8	236,0	5,9	200	5,6	384	C - Cintura	0	0	0	1652	46,3	877	24,6
29031	Lusia	3530	3623	-93	-3	205	200	-5	-3	0,0	17,7	230,0	13,0	351	9,9	421	C - Cintura	0	0	0	1994	56,5	748	21,2
29032	Melara	1818	1927	-109	-6	109	103	-6	-6	2,2	17,6	118,0	6,7	154	8,5	485	D - Intermedio	0	0	0	912	50,2	490	27,0
29033	Occhiobello	11915	10533	1382	13	323	369	46	14	1,3	32,3	885,0	27,4	1123	9,4	509	C - Cintura	0	1	0	6167	51,8	2478	20,8
29034	Papozze	1558	1706	-148	-9	78	72	-6	-7	2,5	21,5	82,0	3,8	75	4,8	475	C - Cintura	0	0	0	603	38,7	538	34,5
29035	Pettorazza Grimani	1607	1714	-107	-6	80	75	-5	-6	0,0	21,5	88,0	4,1	62	3,9	335	D - Intermedio	0	0	0	828	51,5	397	24,7
29036	Pincara	1203	1298	-95	-7	73	69	-4	-6	0,0	17,5	79,0	4,5	89	7,4	435	C - Cintura	0	0	0	590	49,0	288	23,9
29037	Polesella	4075	4128	-53	-1	249	248	-1	0	1,1	16,4	277,0	16,9	427	10,5	400	C - Cintura	0	0	0	2054	50,4	882	21,6
29038	Pontecchio Polesine	2209	1602	607	38	140	192	52	37	0,0	11,5	113,0	9,8	83	3,8	341	C - Cintura	0	0	0	1174	53,1	397	18,0
29039	Porto Tolle	9920	10404	-484	-5	46	39	-7	-16	7,0	256,9	1933,0	7,5	166	1,7	572	D - Intermedio	0	0	0	5194	52,4	2554	25,7
29040	Rosolina	6468	6303	165	3	86	87	0	0	8,1	74,7	801,0	10,7	296	4,6	761	D - Intermedio	0	0	0	3081	47,6	1435	22,2
29041	Rovigo	52170	50883	1287	3	469	479	11	2	1,9	108,8	4594,0	42,2	5232	10,0	601	A - Polo	1	1	1	26110	50,0	12268	23,5
29042	Salara	1188	1221	-33	-3	85	84	-1	-2	0,0	14,2	71,0	5,0	103	8,7	399	C - Cintura	0	0	0	563	47,4	317	26,7
29043	San Bellino	1153	1198	-45	-4	76	73	-3	-4	0,0	15,8	66,0	4,2	85	7,4	441	C - Cintura	0	0	0	570	49,4	262	22,7
29044	San Martino di Venezze	3994	3925	69	2	126	129	2	2	3,7	31,0	227,0	7,3	138	3,5	409	C - Cintura	0	0	0	2070	51,8	933	23,4
29045	Stienta	3305	3118	187	6	129	138	8	6	12,8	24,0	222,0	9,2	302	9,1	531	C - Cintura	0	0	0	1664	50,3	785	23,8
29046	Taglio di Po	8351	8394	-43	-1	106	106	0	0	3,1	78,7	839,0	10,7	326	3,9	433	D - Intermedio	0	0	0	4005	48,0	2076	24,9
29047	Trecenta	2810	3098	-288	-9	88	80	-8	-9	2,4	35,1	182,0	5,2	256	9,1	488	D - Intermedio	0	1	0	1307	46,5	848	30,2
29048	Villadose	5163	5303	-140	-3	163	161	-2	-1	3,3	32,1	306,0	9,5	293	5,7	431	C - Cintura	0	0	0	2508	48,6	1160	22,5
29049	Villamarzana	1191	1176	15	1	84	84	1	1	0,0	14,2	71,0	5,0	67	5,6	482	C - Cintura	0	0	0	633	53,1	280	23,5
29050	Villanova del Ghebbo	2064	2209	-145	-7	188	176	-12	-6	0,0	11,7	192,0	16,4	191	9,3	470	C - Cintura	0	0	0	1145	55,5	422	20,4

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
29051	Villanova Marchesana	964	1109	-145	-13	61	53	-7	-12	0,0	18,1	53,0	2,9	191	19,8	354	C - Cintura	0	0	0	425	44,1	266	27,6
29052	Porto Viro	14591	14449	142	1	108	109	1	1	4,2	133,8	1355,0	10,1	599	4,1	521	E - Periferico	0	1	0	6798	46,6	3415	23,4
24001	Agugliaro	1414	1314	100	8	90	96	6	7	4,6	14,7	101,0	6,9	58	4,1	225	C - Cintura	0	0	0	797	56,4	254	18,0
24002	Albettone	2079	2064	15	1	101	103	1	1	4,2	20,2	152,0	7,5	145	7,0	331	D - Intermedio	0	0	0	1146	55,1	383	18,4
24003	Alonte	1665	1435	230	16	123	149	26	21	0,0	11,1	117,0	10,5	127	7,6	318	D - Intermedio	0	0	0	1045	62,8	216	13,0
24004	Altavilla Vicentina	12084	10616	1468	14	637	723	86	13	2,0	16,7	954,0	57,0	1180	9,8	402	C - Cintura	0	0	1	7219	59,7	1952	16,2
24005	Altissimo	2252	2297	-45	-2	153	149	-4	-3	0,0	15,1	104,0	6,9	213	9,5	217	D - Intermedio	0	0	0	1357	60,3	383	17,0
24006	Arcugnano	7823	7519	304	4	181	188	7	4	2,7	41,6	656,0	15,8	285	3,6	408	C - Cintura	0	0	0	4604	58,9	1419	18,1
24007	Arsiero	3234	3439	-205	-6	83	78	-5	-6	3,3	41,4	229,0	5,5	322	10,0	314	C - Cintura	0	0	0	1655	51,2	820	25,4
24008	Arzignano	25926	24765	1161	5	723	758	35	5	3,0	34,2	2222,0	65,0	4995	19,3	380	D - Intermedio	1	1	0	14042	54,2	4892	18,9
24009	Asiago	6462	6612	-150	-2	41	40	-1	-2	4,0	162,9	836,0	5,1	274	4,2	715	E - Periferico	1	0	0	3196	49,5	1614	25,0
24010	Asigliano Veneto	866	926	-60	-6	114	107	-7	-6	0,0	8,1	54,0	6,7	64	7,4	284	D - Intermedio	0	0	0	470	54,3	169	19,5
24011	Barbarano Vicentino	4594	4224	370	9	215	236	21	10	3,4	19,5	330,0	17,0	609	13,3	373	D - Intermedio	0	0	0	2564	55,8	939	20,4
24012	Bassano del Grappa	43363	41752	1611	4	892	921	29	3	2,1	47,1	4546,0	96,6	4847	11,2	498	A - Polo	1	1	1	22030	50,8	10128	23,4
24013	Bolzano Vicentino	6547	5964	583	10	299	330	31	10	1,9	19,8	479,0	24,1	367	5,6	331	C - Cintura	0	0	0	3883	59,3	1117	17,1
24014	Breganze	8724	8315	409	5	381	401	19	5	2,4	21,8	570,0	26,2	581	6,7	351	C - Cintura	0	0	0	4974	57,0	1790	20,5
24015	Brendola	6716	6456	260	4	253	263	9	4	2,6	25,6	677,0	26,5	523	7,8	354	C - Cintura	0	0	0	3869	57,6	1424	21,2
24016	Bressanvido	3182	2972	210	7	347	377	30	9	0,0	8,4	229,0	27,1	215	6,8	367	C - Cintura	0	0	0	1826	57,4	582	18,3
24017	Brogliano	3946	3235	711	22	264	325	61	23	2,5	12,2	217,0	17,9	227	5,8	307	D - Intermedio	0	0	0	2432	61,6	568	14,4
24018	Caldogno	11327	10600	727	7	665	713	49	7	2,3	15,9	845,0	53,2	750	6,6	354	C - Cintura	0	0	0	6477	57,2	2191	19,3
24019	Caltrano	2570	2647	-77	-3	117	113	-4	-3	0,0	22,7	148,0	6,5	140	5,4	275	C - Cintura	0	0	0	1427	55,5	535	20,8
24020	Calvene	1317	1310	7	1	114	115	1	1	0,0	11,5	61,0	5,3	80	6,1	265	C - Cintura	0	0	0	679	51,6	285	21,6
24021	Camisano Vicentino	11068	9199	1869	20	307	369	62	20	2,4	30,0	860,0	28,6	1623	14,7	401	C - Cintura	0	0	0	6285	56,8	1841	16,6
24022	Campiglia dei Berici	1739	1757	-18	-1	161	158	-3	-2	0,0	11,0	138,0	12,5	63	3,6	306	D - Intermedio	0	0	0	966	55,5	338	19,4
24023	Campolongo sul Brenta	819	843	-24	-3	87	85	-2	-3	2,5	9,7	44,0	4,6	58	7,1	385	C - Cintura	0	0	0	441	53,8	187	22,8
24024	Carr	3614	3404	210	6	390	414	24	6	0,0	8,7	335,0	38,3	276	7,6	336	C - Cintura	0	0	0	2069	57,2	647	17,9
24025	Cartigliano	3809	3580	229	6	479	516	38	8	2,6	7,4	302,0	40,9	285	7,5	275	C - Cintura	0	0	0	2183	57,3	704	18,5
24026	Cassola	14692	13236	1456	11	1044	1153	109	10	1,7	12,7	1278,0	100,3	1393	9,5	391	C - Cintura	0	0	0	8183	55,7	2529	17,2
24027	Castegnero	2953	2674	279	10	230	254	24	10	3,1	11,6	178,0	15,3	325	11,0	318	C - Cintura	0	0	0	1749	59,2	490	16,6
24028	Castelgomberto	6169	5837	332	6	338	354	16	5	3,3	17,4	451,0	25,9	640	10,4	334	D - Intermedio	0	0	0	3544	57,4	1057	17,1
24029	Chiampo	12991	12578	413	3	555	575	20	4	3,0	22,6	953,0	42,2	1823	14,0	320	D - Intermedio	0	0	0	7403	57,0	2302	17,7
24030	Chiuppano	2618	2632	-14	-1	568	556	-13	-2	0,0	4,7	176,0	37,4	167	6,4	302	C - Cintura	0	0	0	1397	53,4	589	22,5
24031	Cismon del Grappa	938	1064	-126	-12	31	27	-4	-12	2,1	34,8	48,0	1,4	76	8,1	450	D - Intermedio	0	0	0	451	48,1	280	29,9
24032	Cogollo del Cengio	3294	3457	-163	-5	95	91	-5	-5	0,0	36,2	213,0	5,9	158	4,8	303	C - Cintura	0	0	0	1928	58,5	661	20,1
24033	Conco	2174	2250	-76	-3	82	81	-1	-1	2,4	26,9	182,0	6,8	73	3,4	398	D - Intermedio	0	0	0	1070	49,2	516	23,7
24034	Cornedo Vicentino	12079	11434	645	6	486	513	27	5	1,9	23,6	918,0	39,0	1138	9,4	304	C - Cintura	0	0	0	6840	56,6	2421	20,0
24035	Costabissara	7405	6039	1366	23	457	564	107	23	2,7	13,1	589,0	44,9	485	6,5	359	C - Cintura	0	0	0	4215	56,9	1313	17,7
24036	Creazzo	11281	10843	438	4	1016	1070	54	5	2,0	10,5	926,0	87,9	1270	11,3	351	C - Cintura	0	0	0	6216	55,1	2352	20,8
24037	Crespadoro	1373	1583	-210	-13	53	45	-7	-13	22,7	30,2	74,0	2,5	173	12,6	295	D - Intermedio	0	0	0	823	59,9	232	16,9
24038	Dueville	13983	13580	403	3	675	699	24	4	8,8	20,0	1128,0	56,4	1006	7,2	404	C - Cintura	0	0	1	7799	55,8	2998	21,4
24039	Enego	1717	1960	-243	-12	37	33	-4	-12	4,7	52,6	129,0	2,5	60	3,5	513	F - Ultraperife	0	0	0	701	40,8	456	26,6
24040	Fara Vicentino	3888	3910	-22	-1	256	256	0	0	3,0	15,2	281,0	18,5	172	4,4	277	C - Cintura	0	0	0	2219	57,1	772	19,9
24041	Foza	702	729	-27	-4	21	20	-1	-4	2,3	35,2	52,0	1,5	4	0,6	361	E - Periferico	0	0	0	339	48,3	135	19,2
24042	Gallio	2380	2405	-25	-1	50	50	-1	-2	4,1	47,9	206,0	4,3	49	2,1	735	E - Periferico	0	0	0	1205	50,6	513	21,6
24043	Gambellara	3419	3293	126	4	256	263	7	3	4,9	13,0	231,0	17,8	618	18,1	332	C - Cintura	0	0	0	1827	53,4	663	19,4
24044	Gambugliano	840	798	42	5	100	106	5	5	0,0	8,0	67,0	8,4	18	2,1	239	C - Cintura	0	0	0	472	56,2	138	16,4
24045	Grancona	1876	1764	112	6	144	152	8	6	0,0	12,4	123,0	9,9	113	6,0	295	D - Intermedio	0	0	0	1054	56,2	341	18,2
24046	Grisignano di Zocco	4278	4283	-5	0	252	251	0	0	1,6	17,0	346,0	20,3	495	11,6	412	C - Cintura	0	0	1	2452	57,3	829	19,4
24047	Grumolo delle Abbadesse	3801	3578	223	6	240	253	14	6	1,9	15,0	228,0	15,2	455	12,0	367	C - Cintura	0	0	0	2154	56,7	686	18,0
24048	Isola Vicentina	10141	8448	1693	20	320	383	63	20	8,2	26,5	645,0	24,4	624	6,2	335	C - Cintura	0	0	0	5598	55,2	1807	17,8
24049	Laghi	125	129	-4	-3	6	6	0	-3	0,0	22,2	6,0	0,3	2	1,6	295	D - Intermedio	0	0	0	43	34,4	44	35,2
24050	Lastebasse	215	248	-33	-13	13	11	-2	-13	6,6	18,8	12,0	0,6	6	2,8	443	D - Intermedio	0	0	0	102	47,4	65	30,2
24051	Longare	5682	5541	141	3	244	250	5	2	3,9	22,8	396,0	17,4	352	6,2	320	C - Cintura	0	0	0	3137	55,2	1220	21,5
24052	Lonigo	16309	15035	1274	8	304	330	26	8	2,4	49,4	1096,0	22,2	3223	19,8	395	D - Intermedio	0	0	1	8708	53,4	2919	17,9
24053	Lugo di Vicenza	3716	3783	-67	-2	258	255	-3	-1	0,0	14,6	223,0	15,3	303	8,2	297	C - Cintura	0	0	0	2013	54,2	834	22,4
24054	Lusiana	2691	2915	-224	-8	85	78	-7	-8	3,5	34,3	210,0	6,1	130	4,8	285	D - Intermedio	0	0	0	1381	51,3	667	24,8
24055	Malo	15021	13216	1805	14	433	492	59	14	3,3	30,5	1101,0	36,1	1434	9,5	320	C - Cintura	0	0	0	8437	56,2	2665	17,7
24056	Marano Vicentino	9622	9228	394	4	727	756	29	4	1,9	12,7	659,0	51,8	683	7,1	332	C - Cintura	0	0	0	5675	59,0	1824	19,0
24057	Marostica	13941	13279	662	5	363	382	19	5	2,2	36,5	1236,0	33,8	857	6,1	355	C - Cintura	0	0	0	7384	53,0	3015	21,6
24058	Mason Vicentino	3532	3354	178	5	280	295	16	6	3,0	12,0	264,0	22,1	158	4,5	327	C - Cintura	0	0	0	1984	56,2	649	18,4
24059	Molvena	2589	2556	33	1	345	348	3	1	2,7	7,4	194,0	26,1	73	2,8	351	C - Cintura	0	0	0	1457	56,3	530	20,5
24060	Montebello Vicentino	6601	6040	561	9	282	307	26	9	9,1	21,5	544,0	25,3	938	14,2	367	C - Cintura	0	0	1	3720	56,4	1253	19,0
24061	Montecchio Maggiore	23655	22421	1234	6	731	775	44	6	2,2	30,5	1797,0	58,8	3936	16,6	379	C - Cintura	0	0	0	12806	54,1	4550	19,2
24062	Montecchio Precalcino	5019	4825	194	4	336	348	12	3	0,0	14,4	376,0	26,1	233	4,6	329	C - Cintura	0	0	0	2801	55,8	985	19,6
24063	Monte di Malo	2907	2896	11	0	122	122	1	0	0,0	23,7	225,0	9,5	107	3,7	291	C - Cintura	0	0	0	1602	55,1	566	19,5
24064	Montegalda	3383	3198	185	6	181	194	13	7	3,5	17,4	266,0	15,3	318	9,4	316	C - Cintura	0	0	0	1813	53,6	673	19,9
24065	Montegaldella	1809	1762	47	3	129	133	4	3	0,0	13,6	92,0	6,8	120	6,6	307	C - Cintura	0	0	0	1094	60,5	322	17,8
24066	Monteviale	2753	2092	661	32	249	326	77	31	14,9	8,4	190,0	22,5	72	2,6	308	C - Cintura	0	0	0	1586	57,6	489	17,8
24067	Monticello Conte Otto	9158	9022	136	2	885	894	10	1	0,0	10,2	747,0	72,9	554	6,0	375	C - Cintura	0	0	0	5114	55,8	1974	21,6
24068	Montorso Vicentino	3209	2975	234	8	322	345	23	7	0,0	9,3	221,0	23,8	428	13,3	329	D - Intermedio	0	0	0	1795	55,9	597	18,6
24069	Mossano	1784	1710	74	4	122	127	5	4	0,0	14,0	107,0	7,6	143	8,0	402	D - Intermedio	0	0	0	929	52,1	416	23,3
24070	Mussolente	7646	7210	436	6	469	496	26	6	2,1	15,4	620,0	40,2	507	6,6	298	C - Cintura	0	0	0	4531	59,3	1311	17,1
24071	Nanto	3090	2603	487	19	179	215	36	20	0,0	14,4	198,0	13,8	275	8,9	322	D - Intermedio	0	0	0	1881	60,9	473	15,3
24072	Nogarole Vicentino	1151	1053	98	9	117	127	10	9	0,0	9,1	43,0	4,7	18	1,6	278	D - Intermedio	0	0	0	722	62,7	150	13,0
24073	Nove	5069	4978	91	2	618	622	4	1	0,0	8,2	458,0	56,2	365	7,2	370	C - Cintura	0	0	0	2768	54,6	1096	21,6
24074	Noventa Vicentina	8996	8488	508	6	369	393	24	7	2,4	22,9	743,0	32,5	1053	11,7	433	C - Cintura	1	0	0	4778	53,1	1890	21,0
24075	Orgiano	3086	3210	-124	-4	177	171	-7	-4	0,0	18,1	210,0	11,6	227	7,4	361	D - Intermedio	0	0	0	1652	53,5	700	22,7
24076	Pedemonte	779	799	-20	-3	63	62	-1	-1	0,0	12,6	42,0	3,3	20	2,6	297	D - Intermedio	0	0	0	339	43,5	243	31,2
24077	Pianezze	2155	1937	218	11	390	429	40	10	4,1	5,0	163,0	32,4	50	2,3	357	C - Cintura	0	0	0	1181	54,8	455	21,1
24078	Piovene Rocchette	8334	8029	305	4	620	646	25	4	4,1	12,9	473,0	36,6	1012	12,1	344	C - Cintura	0	0	0	4335	52,0	1840	22,1
24079	Pojana Maggiore	4368	4364	4	0	153	153	-1	0	8,6	28,6	294,0	10,3	363	8,3	372	C - Cintura	0	0	0	2426	55,5	854	19,6
24080	Posina	576	687	-111	-16	16	13	-3	-17	5,4	43,6	40,0	0,9	58	10,1	339	D - Intermedio	0	0	0	260	45,1	157	27,3
24081	Pove del Grappa	3092	2991	101	3	304	314	10	3	2,8	9,8	233,0	23,7	82	2,7	399	C - Cintura	0	0	0	1725	55,8	655	21,2
24082	Pozzoleone	2799	2655	144	5	236	249	13	6	0,0	11,3	200,0	17,8	233	8,3	369	C - Cintura	0	0	0	1581	56,5	523	18,7
24083	Quinto Vicentino	5815	4999	816	16	287	334	47	17	5,5	17,4	393,0	22,6	394	6,8	378	C - Cintura	0	0	0	3389	58,3	977	16,8
24084	Recoaro Terme	6477	7189	-712	-10	120	108	-12	-10	3,3	60,2	403,0	6,7	172	2,7	323	D - Intermedio	0	0	0	3573	55,2	1653	25,5
24085	Roana	4343	4004	339	8	51	56	5	9	8,1	78,1	406,0	5,2	252	5,8	649	E - Periferico	0	0	0	2105	48,5	957	22,0
24086	Romano d'Ezzelino	14492	14344	148	1	667	679	11	2	3,8	21,3	1108,0	51,9	1204	8,3	383	C - Cintura	0	0	0	8170	56,4	2713	18,7
24087	Ros`	14482	13216	1266	10	543	595	53	10	4,7	24,3	1239,0	51,0	1252	8,6	428	C - Cintura	0	0	0	8106	56,0	2489	17,2
24088	Rossano Veneto	8075	6968	1107	16	652	762	109	17	0,0	10,6	648,0	61,2	848	10,5	321	C - Cintura	0	0	0	4481	55,5	1514	18,7
24089	Rotzo	658	589	69	12	21	23	2	12	2,7	28,3	46,0	1,6	6	0,9	458	E - Periferico	0	0	0	336	51,1	134	20,4
24090	Salcedo	1028	1047	-19	-2	171	168	-3	-2	0,0	6,1	60,0	9,8	26	2,5	218	D - Intermedio	0	0	0	550	53,5	212	20,6
24091	Sandrigo	8496	8148	348	4	292	304	12	4	3,5	28,0	807,0	28,8	735	8,7	339	C - Cintura	0	0	0	4689	55,2	1671	19,7
24092	San Germano dei Berici	1187	1156	31	3	74	77	2	3	4,2	15,5	83,0	5,4	84	7,1	268	D - Intermedio	0	0	0	639	53,8	213	17,9
24093	San Nazario	1705	1830	-125	-7	79	74	-5	-7	3,2	23,1	72,0	3,1	201	11,8	381	C - Cintura	0	0	0	892	52,3	329	19,3
24094	San Pietro Mussolino	1639	1579	60	4	379	399	20	5	0,0	4,1	135,0	32,9	297	18,1	219	D - Intermedio	0	0	0	959	58,5	245	14,9
24095	Santorso	5859	5561	298	5	420	444	23	6	19,9	13,2	447,0	33,8	382	6,5	325	B - Polo interc	0	1	0	3146	53,7	1325	22,6
24096	San Vito di Leguzzano	3614	3645	-31	-1	598	590	-8	-1	0,0	6,1	257,0	41,9	259	7,2	337	C - Cintura	0	0	0	1990	55,1	726	20,1

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
24097	Sarcedo	5278	5290	-12	0	385	381	-4	-1	6,4	13,9	446,0	32,2	259	4,9	262	C - Cintura	0	0	0	3024	57,3	1016	19,2
24098	Sarego	6818	5840	978	17	244	285	41	17	2,3	23,9	425,0	17,8	1061	15,6	349	D - Intermedio	0	0	0	3984	58,4	1050	15,4
24099	Schiavon	2623	2439	184	8	204	219	15	7	0,0	12,0	196,0	16,3	118	4,5	455	C - Cintura	0	0	0	1531	58,4	481	18,3
24100	Schio	39443	38638	805	2	576	596	20	3	2,7	66,2	3251,0	49,1	5241	13,3	408	B - Polo interc	1	0	1	20251	51,3	9313	23,6
24101	Solagna	1937	1842	95	5	117	123	6	5	2,6	15,8	122,0	7,7	197	10,2	489	C - Cintura	0	0	0	1025	52,9	388	20,0
24102	Sossano	4427	4250	177	4	203	212	9	4	4,1	20,9	323,0	15,5	414	9,4	300	D - Intermedio	0	0	0	2448	55,3	914	20,6
24103	Sovizzo	7388	5974	1414	24	380	472	92	24	8,0	15,7	512,0	32,7	415	5,6	330	C - Cintura	0	0	0	4194	56,8	1239	16,8
24104	Tezze sul Brenta	12819	11258	1561	14	626	715	89	14	2,4	17,9	990,0	55,2	1252	9,8	423	C - Cintura	0	0	0	7419	57,9	1857	14,5
24105	Thiene	24329	21623	2706	13	1092	1235	143	13	2,8	19,7	2620,0	133,0	3702	15,2	386	C - Cintura	1	0	1	12661	52,0	4999	20,5
24106	Tonezza del Cimone	536	610	-74	-12	43	38	-4	-10	4,8	13,9	64,0	4,6	12	2,2	743	D - Intermedio	0	0	0	254	47,4	133	24,8
24107	Torrebelvicino	5974	5784	190	3	275	288	13	5	0,0	20,7	338,0	16,3	360	6,0	272	C - Cintura	0	0	0	3406	57,0	1135	19,0
24108	Torri di Quartesolo	11885	11395	490	4	611	637	26	4	2,9	18,7	1029,0	55,1	1195	10,1	461	C - Cintura	0	0	1	6842	57,6	2235	18,8
24110	Trissino	8770	8179	591	7	373	399	26	7	2,5	22,0	736,0	33,5	843	9,6	348	D - Intermedio	0	0	0	4961	56,6	1633	18,6
24111	Valdagno	26455	27483	-1028	-4	548	527	-21	-4	10,7	50,2	1519,0	30,2	2649	10,0	355	C - Cintura	1	0	0	13670	51,7	6948	26,3
24112	Valdastico	1312	1470	-158	-11	62	55	-7	-12	0,0	23,9	78,0	3,3	66	5,0	291	D - Intermedio	0	0	0	651	49,6	375	28,6
24113	Valli del Pasubio	3258	3556	-298	-8	72	66	-6	-8	1,9	49,3	188,0	3,8	110	3,4	300	C - Cintura	0	0	0	1678	51,5	796	24,4
24114	Valstagna	1829	1989	-160	-8	78	71	-7	-9	8,8	25,8	78,0	3,0	111	6,1	345	C - Cintura	0	0	0	929	50,8	494	27,0
24115	Velo d'Astico	2426	2403	23	1	109	111	2	1	2,6	21,9	135,0	6,2	178	7,3	294	C - Cintura	0	0	0	1275	52,6	504	20,8
24116	Vicenza	113599	113483	116	0	1409	1410	1	0	2,3	80,6	11625,0	144,3	18317	16,1	604	A - Polo	1	1	1	58473	51,5	26964	23,7
24117	Villaga	1928	1970	-42	-2	85	83	-2	-2	3,4	23,2	137,0	5,9	99	5,1	280	D - Intermedio	0	0	0	1079	56,0	368	19,1
24118	Villaverla	6161	5827	334	6	370	390	20	5	1,8	15,8	481,0	30,5	522	8,5	311	C - Cintura	0	0	0	3551	57,6	1059	17,2
24119	Zan	6677	6338	339	5	830	873	43	5	0,0	7,6	651,0	85,2	337	5,0	356	C - Cintura	0	0	0	3698	55,4	1353	20,3
24120	Zermeghedo	1392	1356	36	3	457	469	12	3	0,0	3,0	147,0	49,5	222	15,9	367	C - Cintura	0	0	0	829	59,6	191	13,7
24121	Zovencedo	784	863	-79	-9	95	87	-8	-9	21,8	9,0	35,0	3,9	40	5,1	275	D - Intermedio	0	0	0	433	55,2	141	18,0
24122	Zugliano	6806	6372	434	7	463	496	33	7	14,2	13,7	446,0	32,5	349	5,1	292	C - Cintura	0	0	0	3748	55,1	1342	19,7
26001	Altivole	6860	6377	483	8	291	313	22	8	2,2	21,9	610,0	27,8	721	10,5	293	C - Cintura	0	0	0	3836	55,9	1128	16,4
26002	Arcade	4471	3794	677	18	451	541	89	20	0,0	8,3	273,0	33,0	443	9,9	356	C - Cintura	0	0	0	2517	56,3	732	16,4
26003	Asolo	9116	8592	524	6	339	359	20	6	1,9	25,4	863,0	34,0	1438	15,8	291	C - Cintura	0	0	0	5008	54,9	1503	16,5
26004	Borso del Grappa	5973	5214	759	15	158	180	22	14	3,4	33,1	391,0	11,8	368	6,2	316	C - Cintura	0	0	0	3354	56,2	968	16,2
26005	Breda di Piave	7841	7082	759	11	277	304	28	10	2,3	25,8	468,0	18,2	621	7,9	310	C - Cintura	0	0	0	4498	57,4	1396	17,8
26006	Caerano di San Marco	8019	7257	762	11	600	663	63	11	2,0	12,1	629,0	52,0	1141	14,2	309	C - Cintura	0	0	0	4358	54,3	1452	18,1
26007	Cappella Maggiore	4710	4500	210	5	404	425	20	5	5,0	11,1	297,0	26,8	326	6,9	265	D - Intermedio	0	0	0	2336	49,6	1118	23,7
26008	Carbonera	11179	10575	604	6	535	562	28	5	0,0	19,9	725,0	36,5	916	8,2	328	C - Cintura	0	0	0	6331	56,6	2213	19,8
26009	Casale sul Sile	12932	11367	1565	14	423	480	57	13	6,8	26,9	894,0	33,2	676	5,2	332	C - Cintura	0	0	0	7707	59,6	2095	16,2
26010	Casier	11304	9915	1389	14	737	842	105	14	1,7	13,4	856,0	63,8	797	7,1	371	C - Cintura	0	0	0	6666	59,0	2018	17,9
26011	Castelcucco	2227	2076	151	7	236	253	17	7	3,9	8,8	143,0	16,3	253	11,4	352	C - Cintura	0	0	0	1152	51,7	429	19,3
26012	Castelfranco Veneto	33258	32831	427	1	645	644	0	0	2,4	51,6	3277,0	63,5	3404	10,2	412	A - Polo	1	1	1	17531	52,7	7225	21,7
26013	Castello di Godego	7217	6659	558	8	370	398	28	7	9,1	18,1	559,0	30,8	762	10,6	309	C - Cintura	0	0	1	3976	55,1	1243	17,2
26014	Cavaso del Tomba	2989	2917	72	2	154	158	4	2	2,8	19,0	210,0	11,1	350	11,7	309	D - Intermedio	0	0	0	1586	53,1	653	21,8
26015	Cessalto	3905	3336	569	17	118	139	20	17	2,2	28,2	205,0	7,3	680	17,4	307	D - Intermedio	0	0	0	2062	52,8	754	19,3
26016	Chiarano	3687	3462	225	6	173	185	12	7	2,8	19,9	217,0	10,9	540	14,6	334	D - Intermedio	0	0	0	2042	55,4	654	17,7
26017	Cimadolmo	3441	3479	-38	-1	196	192	-4	-2	0,0	17,9	272,0	15,2	634	18,4	375	D - Intermedio	0	0	0	1916	55,7	681	19,8
26018	Cison di Valmarino	2700	2623	77	3	91	94	2	3	1,9	28,8	181,0	6,3	333	12,3	374	D - Intermedio	0	0	0	1306	48,4	632	23,4
26019	Codogn	5320	5243	77	1	242	245	3	1	2,0	21,8	380,0	17,5	531	10,0	275	D - Intermedio	0	0	0	3021	56,8	1077	20,2
26020	Colle Umberto	5190	4900	290	6	361	382	21	6	0,0	13,6	407,0	30,0	336	6,5	346	D - Intermedio	0	0	0	2870	55,3	1049	20,2
26021	Conegliano	34963	35625	-662	-2	981	961	-20	-2	2,2	36,4	3644,0	100,2	5554	15,9	396	D - Intermedio	1	0	1	16885	48,3	9007	25,8
26022	Cordignano	7045	6888	157	2	263	268	5	2	3,4	26,2	420,0	16,0	607	8,6	339	C - Cintura	0	0	0	3910	55,5	1511	21,4
26023	Cornuda	6288	6044	244	4	488	503	14	3	10,8	12,5	556,0	44,4	917	14,6	363	C - Cintura	0	0	1	3393	54,0	1292	20,5
26024	Crespano del Grappa	4501	4501	0	0	252	253	1	0	2,3	17,8	336,0	18,9	697	15,5	363	C - Cintura	0	0	0	2331	51,8	1059	23,5
26025	Crocetta del Montello	6049	5807	242	4	220	228	8	3	2,6	26,6	432,0	16,3	643	10,6	322	C - Cintura	0	0	0	3049	50,4	1347	22,3
26026	Farra di Soligo	9014	8305	709	9	294	318	24	8	2,1	28,3	638,0	22,5	1139	12,6	346	D - Intermedio	0	0	0	4760	52,8	1848	20,5
26027	Follina	3910	3919	-9	0	162	162	0	0	2,0	24,1	315,0	13,1	462	11,8	333	D - Intermedio	0	0	0	2001	51,2	871	22,3
26028	Fontanelle	5823	5634	189	3	159	165	6	4	0,0	35,4	364,0	10,3	607	10,4	299	D - Intermedio	0	0	0	3295	56,6	1148	19,7
26029	Fonte	5992	5731	261	5	392	410	19	5	3,3	14,6	429,0	29,4	1117	18,6	310	C - Cintura	0	0	0	3125	52,2	1044	17,4
26030	Fregona	3051	3068	-17	-1	72	71	0	0	2,3	42,7	179,0	4,2	228	7,5	276	D - Intermedio	0	0	0	1611	52,8	693	22,7
26031	Gaiarine	6122	6242	-120	-2	217	213	-5	-2	2,1	28,8	498,0	17,3	696	11,4	333	C - Cintura	0	0	0	3183	52,0	1453	23,7
26032	Giavera del Montello	5182	4800	382	8	241	257	16	6	2,5	20,2	362,0	17,9	573	11,1	311	C - Cintura	0	0	0	2845	54,9	921	17,8
26033	Godega di Sant'Urbano	6054	6045	9	0	249	249	0	0	1,7	24,3	517,0	21,2	602	9,9	323	C - Cintura	0	0	1	3181	52,5	1465	24,2
26034	Gorgo al Monticano	4220	4112	108	3	152	156	4	3	0,0	27,1	259,0	9,6	583	13,8	308	D - Intermedio	0	0	0	2342	55,5	802	19,0
26035	Istrana	9330	8223	1107	13	312	352	40	13	2,1	26,5	604,0	22,8	959	10,3	293	C - Cintura	0	0	1	5262	56,4	1335	14,3
26036	Loria	9263	8446	817	10	364	398	34	9	3,3	23,3	632,0	27,2	1096	11,8	272	C - Cintura	0	0	0	5241	56,6	1384	14,9
26037	Mansu	5037	4426	611	14	164	186	22	13	3,9	27,1	293,0	10,8	1007	20,0	285	D - Intermedio	0	0	0	2931	58,2	897	17,8
26038	Mareno di Piave	9637	8583	1054	12	308	347	39	13	2,1	27,8	650,0	23,4	759	7,9	295	C - Cintura	0	0	0	5615	58,3	1784	18,5
26039	Maser	5110	4854	256	5	187	198	11	6	1,8	25,9	372,0	14,4	343	6,7	317	C - Cintura	0	0	0	2704	52,9	1059	20,7
26040	Maserada sul Piave	9357	8631	726	8	298	325	27	9	1,9	28,8	546,0	19,0	766	8,2	329	C - Cintura	0	0	0	5419	57,9	1736	18,6
26041	Meduna di Livenza	2909	2810	99	4	186	189	3	2	0,0	15,4	162,0	10,5	397	13,6	244	D - Intermedio	0	0	0	1572	54,0	615	21,1
26042	Miane	3372	3661	-289	-8	118	109	-9	-8	2,9	30,9	254,0	8,2	391	11,6	250	D - Intermedio	0	0	0	1677	49,7	782	23,2
26043	Mogliano Veneto	27720	27281	439	2	591	599	8	1	1,5	46,3	1895,0	41,0	2346	8,5	458	C - Cintura	0	0	1	14738	53,2	6666	24,0
26044	Monastier di Treviso	4250	3732	518	14	147	168	21	15	1,4	25,3	312,0	12,4	403	9,5	506	C - Cintura	0	0	0	2231	52,5	847	19,9
26045	Monfumo	1403	1447	-44	-3	128	123	-5	-4	3,5	11,5	73,0	6,4	45	3,2	278	D - Intermedio	0	0	0	763	54,4	299	21,3
26046	Montebelluna	31332	29249	2083	7	597	639	42	7	2,3	49,0	3124,0	63,7	4113	13,1	388	A - Polo	1	1	1	16702	53,3	6264	20,0
26047	Morgano	4481	3964	517	13	337	381	44	13	2,4	11,8	316,0	26,9	237	5,3	348	C - Cintura	0	0	0	2472	55,2	793	17,7
26048	Moriago della Battaglia	2749	2774	-25	-1	199	200	1	0	2,3	13,8	204,0	14,8	405	14,7	291	D - Intermedio	0	0	0	1479	53,8	571	20,8
26049	Motta di Livenza	10795	10051	744	7	267	286	19	7	2,7	37,8	928,0	24,6	1769	16,4	409	D - Intermedio	1	0	0	5906	54,7	2082	19,3
26050	Nervesa della Battaglia	6841	6948	-107	-2	195	196	0	0	2,7	35,0	505,0	14,4	679	9,9	323	C - Cintura	0	0	0	3565	52,1	1592	23,3
26051	Oderzo	20413	18706	1707	9	439	482	43	10	2,4	42,4	1832,0	43,3	2609	12,8	514	D - Intermedio	1	1	0	10902	53,4	4476	21,9
26052	Ormelle	4500	4262	238	6	227	239	12	5	0,0	18,8	278,0	14,8	735	16,3	316	D - Intermedio	0	0	0	2514	55,9	847	18,8
26053	Orsago	3877	3817	60	2	357	362	5	1	1,9	10,7	241,0	22,5	413	10,7	284	C - Cintura	0	0	0	2063	53,2	880	22,7
26054	Paderno del Grappa	2196	2103	93	4	108	112	4	4	2,9	19,5	159,0	8,1	272	12,4	347	C - Cintura	0	0	0	1147	52,2	405	18,4
26055	Paese	21996	19898	2098	11	524	577	54	10	2,4	38,1	1500,0	39,4	1938	8,8	332	C - Cintura	0	0	0	12569	57,1	3653	16,6
26056	Pederobba	7486	7285	201	3	248	274	26	10	3,1	27,3	541,0	19,8	870	11,6	354	C - Cintura	0	0	0	4055	54,2	1529	20,4
26057	Pieve di Soligo	12132	11542	590	5	607	638	30	5	1,8	19,0	1208,0	63,5	2009	16,6	358	D - Intermedio	0	0	0	6597	54,4	2355	19,4
26058	Ponte di Piave	8399	7560	839	11	230	259	29	12	3,3	32,4	606,0	18,7	1502	17,9	369	C - Cintura	0	0	0	4724	56,2	1520	18,1
26059	Ponzano Veneto	12495	10894	1601	15	492	561	69	14	2,1	22,3	905,0	40,6	960	7,7	319	C - Cintura	0	0	0	7292	58,4	1985	15,9
26060	Portobuffol	763	824	-61	-7	165	150	-15	-9	2,0	5,1	72,0	14,2	79	10,4	378	C - Cintura	0	0	0	433	56,7	158	20,7
26061	Possagno	2172	2154	18	1	178	179	1	1	2,2	12,1	161,0	13,3	356	16,4	309	C - Cintura	0	0	0	1124	51,7	483	22,2
26062	Povegliano	5228	4590	638	14	354	405	51	14	0,0	12,9	366,0	28,3	337	6,4	314	C - Cintura	0	0	0	2949	56,4	847	16,2
26063	Preganziol	16898	15921	977	6	696	732	36	5	1,6	23,1	1115,0	48,3	1298	7,7	348	C - Cintura	0	0	1	9523	56,4	3377	20,0
26064	Quinto di Treviso	9856	9390	466	5	495	518	23	5	1,7	19,0	818,0	43,0	1160	11,8	377	C - Cintura	0	0	0	5354	54,3	2026	20,6
26065	Refrontolo	1764	1820	-56	-3	139	135	-4	-3	3,0	13,0	136,0	10,4	102	5,8	316	D - Intermedio	0	0	0	922	52,3	398	22,6
26066	Resana	9517	8186	1331	16	328	382	55	17	2,5	24,9	711,0	28,6	1111	11,7	289	C - Cintura	0	0	0	5396	56,7	1412	14,8
26067	Revine Lago	2226	2190	36	2	117	118	1	1	2,5	18,8	153,0	8,1	153	6,9	254	D - Intermedio	0	0	0	1124	50,5	514	23,1
26068	Riese Pio X	11093	10181	912	9	331	362	31	9	0,0	30,6	789,0	25,7	1205	10,9	286	C - Cintura	0	0	0	6295	56,7	1650	14,9
26069	Roncade	14293	12738	1555	12	206	231	26	13	4,5	61,8	1004,0	16,3	787	5,5	357	C - Cintura	0	0	0	7920	55,4	2908	20,3
26070	Salgareda	6694	6102	592	10	224	243	19	8	0,0	27,6	395,0	14,3	953	14,2	343	D - Intermedio	0	0	0	3777	56,4	1185	17,7
26071	San Biagio di Callalta	13032	11876	1156	10	246	269	23	9	2,0	48,5	952,0	19,6	1488	11,4	343	C - Cintura	0	0	0	7284	55,9	2538	19,5
26072	San Fior	6993	6357	636	10	358	392	35	10	0,0	17,8	512,0	28,7	774	11,1	276	D - Intermedio	0	0	0	3806	54,4	1383	19,8
26073	San Pietro di Feletto	5334	5144	190	4	264	277	12	5	2,0	19,3	302,0	15,7	197	3,7	317	D - Intermedio	0	0	0	2790	52,3	1271	23,8

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
26074	San Polo di Piave	4860	4845	15	0	231	232	0	0	5,4	21,0	345,0	16,4	857	17,6	344	D - Intermedio	0	0	0	2723	56,0	958	19,7
26075	Santa Lucia di Piave	9187	7948	1239	16	399	464	65	16	0,0	19,8	554,0	28,0	1064	11,6	330	C - Cintura	0	0	0	5277	57,4	1697	18,5
26076	San Vendemiano	10104	9359	745	8	509	546	37	7	1,8	18,5	1100,0	59,4	872	8,6	418	C - Cintura	0	0	0	5580	55,2	2102	20,8
26077	San Zenone degli Ezzelini	7411	6973	438	6	349	371	22	6	3,1	20,0	549,0	27,5	1110	15,0	267	C - Cintura	0	0	0	4137	55,8	1121	15,1
26078	Sarmede	3121	3087	34	1	172	173	1	1	3,1	18,0	153,0	8,5	259	8,3	251	D - Intermedio	0	0	0	1633	52,3	646	20,7
26079	Segusino	1901	2062	-161	-8	114	104	-9	-8	0,0	18,2	134,0	7,4	179	9,4	317	D - Intermedio	0	0	0	1003	52,8	470	24,7
26080	Sernaglia della Battaglia	6244	6171	73	1	305	310	5	2	2,6	20,2	475,0	23,6	698	11,2	343	D - Intermedio	0	0	0	3270	52,4	1348	21,6
26081	Silea	10137	9767	370	4	521	535	14	3	1,7	19,0	969,0	51,1	778	7,7	422	C - Cintura	0	0	0	5383	53,1	2215	21,9
26082	Spresiano	12161	10155	2006	20	396	473	76	19	1,4	25,7	890,0	34,6	1622	13,3	356	C - Cintura	0	0	1	6357	52,3	2237	18,4
26083	Susegana	11951	11367	584	5	258	271	13	5	2,2	44,1	982,0	22,3	1818	15,2	389	D - Intermedio	0	0	0	6314	52,8	2389	20,0
26084	Tarzo	4446	4671	-225	-5	196	186	-10	-5	2,4	23,9	304,0	12,7	323	7,3	287	D - Intermedio	0	0	0	2139	48,1	1176	26,5
26085	Trevignano	10776	9562	1214	13	360	407	46	13	0,0	26,5	658,0	24,8	993	9,2	274	C - Cintura	0	0	0	6136	56,9	1802	16,7
26086	Treviso	83652	82112	1540	2	1479	1505	26	2	2,1	55,6	9437,0	169,8	11183	13,4	475	A - Polo	1	1	1	40063	47,9	21443	25,6
26087	Valdobbiadene	10527	10735	-208	-2	177	167	-9	-5	1,9	62,9	851,0	13,5	1036	9,8	378	D - Intermedio	1	0	0	5338	50,7	2646	25,1
26088	Vazzola	7001	6783	218	3	261	268	7	3	0,0	26,2	573,0	21,9	1087	15,5	307	D - Intermedio	0	0	0	3939	56,3	1347	19,2
26089	Vedelago	16831	14904	1927	13	242	272	30	13	2,6	61,8	1132,0	18,3	2057	12,2	272	C - Cintura	0	0	0	9245	54,9	2821	16,8
26090	Vidor	3798	3612	186	5	267	283	16	6	0,0	13,4	280,0	20,9	535	14,1	331	C - Cintura	0	0	0	2061	54,3	793	20,9
26091	Villorba	18009	17567	442	3	574	590	16	3	2,4	30,5	1916,0	62,7	1576	8,8	400	C - Cintura	0	0	1	9629	53,5	4107	22,8
26092	Vittorio Veneto	28408	29317	-909	-3	355	343	-12	-3	3,3	82,8	2278,0	27,5	2792	9,8	351	D - Intermedio	1	0	1	13866	48,8	7615	26,8
26093	Volpago del Montello	10187	9278	909	10	208	227	20	9	3,3	44,8	710,0	15,8	570	5,6	328	C - Cintura	0	0	0	5583	54,8	2017	19,8
26094	Zenson di Piave	1804	1771	33	2	185	190	4	2	0,0	9,5	112,0	11,8	248	13,7	362	D - Intermedio	0	0	0	996	55,2	343	19,0
26095	Zero Branco	11281	9146	2135	23	350	433	83	24	2,9	26,1	900,0	34,5	602	5,3	297	C - Cintura	0	0	0	6468	57,3	1799	15,9
38001	Argenta	22039	21971	68	0						311,7	1347,0	4,3	2300	10,4	623	B - Polo interc	1	0	1	10669	48,4	6165	28,0
38002	Berra	4954	5696	-742	-13						68,6	260,0	3,8	395	8,0	485	D - Intermedio	0	0	0	2106	42,5	1612	32,5
38003	Bondeno	14724	15579	-855	-5						174,8	748,0	4,3	1443	9,8	593	B - Polo interc	1	0	0	7187	48,8	4260	28,9
38004	Cento	35837	31475	4362	14						64,7	2154,0	33,3	4050	11,3	527	B - Polo interc	1	1	0	18840	52,6	7627	21,3
38005	Codigoro	12134	12883	-749	-6						170,0	837,0	4,9	775	6,4	682	D - Intermedio	1	0	0	5702	47,0	3656	30,1
38006	Comacchio	22744	22385	359	2						284,1	2545,0	9,0	1124	4,9	1544	B - Polo interc	1	0	0	9637	42,4	5667	24,9
38007	Copparo	16759	17859	-1100	-6						157,2	975,0	6,2	787	4,7	490	D - Intermedio	0	0	0	7786	46,5	5287	31,5
38008	Ferrara	133682	131907	1775	1						405,2	10860,0	26,8	12586	9,4	694	A - Polo	1	1	1	67414	50,4	36923	27,6
38009	Formignana	2816	2898	-82	-3						22,4	139,0	6,2	152	5,4	446	D - Intermedio	0	0	0	1318	46,8	823	29,2
38010	Jolanda di Savoia	3019	3298	-279	-8						108,3	130	1,2	197	6,5	512	D - Intermedio	0	0	0	1337	44,3	918	30,4
38011	Lagosanto	4956	4480	476	11						34,4	343,0	10,0	215	4,3	466	C - Cintura	0	1	0	2331	47,0	1237	25,0
38012	Masi Torello	2359	2355	4	0						22,7	152,0	6,7	128	5,4	430	C - Cintura	0	0	0	1204	51,0	662	28,1
38014	Mesola	7010	7331	-321	-4						84,3	604,0	7,2	319	4,6	417	D - Intermedio	0	0	0	3116	44,5	2040	29,1
38016	Mirabello	3300	3407	-107	-3						16,2	185,0	11,4	341	10,3	526	C - Cintura	0	0	0	1704	51,6	926	28,1
38017	Ostellato	6308	6762	-454	-7						173,3	363,0	2,1	382	6,1	570	C - Cintura	0	0	0	3087	48,9	1863	29,5
38018	Poggio Renatico	9921	8077	1844	23						80,2	488,0	6,1	951	9,6	426	C - Cintura	0	0	1	5297	53,4	2159	21,8
38019	Portomaggiore	12085	12158	-73	-1						126,6	759,0	6,0	1579	13,1	444	C - Cintura	0	0	1	5686	47,1	3409	28,2
38020	Ro	3291	3663	-372	-10						43,2	161,0	3,7	176	5,3	479	C - Cintura	0	0	0	1382	42,0	1061	32,2
38021	Sant'Agostino	6944	6357	587	9						34,8	386,0	11,1	637	9,2	564	C - Cintura	0	0	0	3813	54,9	1513	21,8
38022	Vigarano Mainarda	7699	6707	992	15						42,0	390,0	9,3	377	4,9	575	C - Cintura	0	0	0	4114	53,4	1860	24,2
38023	Voghiera	3781	3924	-143	-4						40,3	273,0	6,8	188	5,0	405	C - Cintura	0	0	0	1929	51,0	1121	29,6
38024	Tresigallo	4540	4709	-169	-4						20,6	268,0	13,0	365	8,0	463	D - Intermedio	0	0	0	2164	47,7	1292	28,5
38025	Goro	3828	4058	-230	-6						33,2	1197,0	36,1	55	1,4	763	E - Periferico	0	0	0	1964	51,3	961	25,1
38027	Fiscaglia	9343	9835	-492	-5						93,8	194	2,1	604	6,5	450	C - Cintura	0	0	0	4292	45,9	2713	29,0
39001	Alfonsine	12184	11739	445	4						106,8	825	7,7	1241	10,2	723	C - Cintura	0	0	0	6029	49,5	3467	28,5
39002	Bagnacavallo	16747	16169	578	4						79,6	1156	14,5	1849	11,0	633	C - Cintura	0	0	1	8336	49,8	4472	26,7
39003	Bagnara di Romagna	2423	1849	574	31						10,0	155	15,6	254	10,5	610	C - Cintura	0	0	0	1385	57,2	485	20,0
39004	Brisighella	7689	7740	-51	-1						194,3	483	2,5	724	9,4	484	C - Cintura	0	0	0	3887	50,6	2104	27,4
39005	Casola Valsenio	2671	2843	-172	-6						84,4	146	1,7	222	8,3	705	D - Intermedio	0	0	0	1368	51,2	713	26,7
39006	Castel Bolognese	9626	8659	967	11						32,4	671	20,7	1202	12,5	681	C - Cintura	0	0	1	5382	55,9	2175	22,6
39007	Cervia	29066	26858	2208	8						82,3	3366	40,9	3295	11,3	1285	C - Cintura	0	0	1	13629	46,9	6984	24,0
39008	Conselice	9869	9207	662	7						60,2	647	10,7	1557	15,8	717	B - Polo interc	0	0	1	4872	49,4	2481	25,1
39009	Cotignola	7484	6952	532	8						35,1	463	13,2	615	8,2	702	C - Cintura	0	0	0	3937	52,6	1802	24,1
39010	Faenza	58621	54749	3872	7						215,8	4815	22,3	6883	11,7	758	A - Polo	1	1	1	30866	52,7	14312	24,4
39011	Fusignano	8226	7919	307	4						24,5	553	22,5	1055	12,8	644	C - Cintura	0	0	0	4169	50,7	2205	26,8
39012	Lugo	32501	31927	574	2						117,1	2927	25,0	3844	11,8	633	A - Polo	1	1	1	15937	49,0	8887	27,3
39013	Massa Lombarda	10662	9065	1597	18						37,2	635	17,0	1850	17,4	708	C - Cintura	0	0	0	5438	51,0	2501	23,5
39014	Ravenna	158911	146989	11922	8						653,8	12435	19,0	19211	12,1	764	A - Polo	1	1	1	78379	49,3	38406	24,2
39015	Riolo Terme	5768	5441	327	6						44,3	352	8,0	620	10,7	621	C - Cintura	0	0	0	3151	54,6	1397	24,2
39016	Russi	12170	10723	1447	13						46,3	876	18,9	1377	11,3	740	C - Cintura	0	0	1	6234	51,2	3114	25,6
39017	Sant'Agata sul Santerno	2907	2284	623	27						9,4	244	26,0	302	10,4	862	C - Cintura	0	0	0	1582	54,4	629	21,6
39018	Solarolo	4472	4256	216	5						26,0	232	8,9	611	13,7	618	C - Cintura	0	0	0	2402	53,7	1090	24,4
37001	Anzola dell'Emilia	12265	11128	1137	10						36,6	1026	28,0	1322	10,8	545	C - Cintura	0	0	0	6738	54,9	2781	22,7
37002	Argelato	9799	9317	482	5						35,1	1270	36,2	755	7,7	626	C - Cintura	0	0	0	5632	57,5	2164	22,1
37003	Baricella	6931	5990	941	16						45,5	393	8,6	817	11,8	396	C - Cintura	0	0	0	3728	53,8	1504	21,7
37005	Bentivoglio	5520	4593	927	20						51,1	426	8,3	448	8,1	958	C - Cintura	0	1	0	3094	56,1	1178	21,3
37006	Bologna	386181	374425	11756	3						140,9	39723	282,0	57979	15,0	562	A - Polo	1	1	1	189064	49,0	99832	25,9
37007	Borgo Tossignano	3312	3259	53	2						29,3	177	6,0	408	12,3	618	C - Cintura	0	0	0	1856	56,0	699	21,1
37008	Budrio	18426	16167	2259	14						120,2	1300	10,8	1628	8,8	497	B - Polo interc	1	1	0	10003	54,3	4282	23,2
37009	Calderara di Reno	13271	12351	920	7						40,8	1422	34,9	1169	8,8	697	C - Cintura	0	0	0	7792	58,7	2799	21,1
37010	Camugnano	1936	2092	-156	-7						96,6	121	1,3	102	5,3	639	E - Periferico	0	0	0	879	45,4	606	31,3
37011	Casalecchio di Reno	36233	34451	1782	5						17,3	2826	163,0	4194	11,6	697	C - Cintura	1	0	1	18610	51,4	9549	26,4
37012	Casalfiumanese	3448	3129	319	10						82,0	226	2,8	323	9,4	719	C - Cintura	0	0	0	1945	56,4	754	21,9
37013	Castel d'Aiano	1898	1973	-75	-4						45,3	157	3,5	142	7,5	640	E - Periferico	0	0	0	873	46,0	559	29,5
37014	Castel del Rio	1216	1256	-40	-3						52,6	58	1,1	160	13,2	816	D - Intermedio	0	0	0	582	47,9	365	30,0
37015	Castel di Casio	3445	3266	179	5						47,3	168	3,5	223	6,5	469	E - Periferico	0	0	1	1765	51,2	884	25,7
37016	Castel Guelfo di Bologna	4489	3731	758	20						28,6	411	14,4	359	8,0	1104	C - Cintura	0	0	0	2528	56,3	818	18,2
37017	Castello d'Argile	6549	5520	1029	19						29,1	371	12,8	595	9,1	429	C - Cintura	0	0	0	4011	61,2	1170	17,9
37019	Castel Maggiore	18036	16478	1558	9						30,9	1451	47,0	1448	8,0	506	C - Cintura	1	0	0	9895	54,9	4085	22,6
37020	Castel San Pietro Terme	20821	19654	1167	6						148,4	1745	11,8	1824	8,8	793	C - Cintura	0	0	1	10968	52,7	5217	25,1
37021	Castenaso	14770	13704	1066	8						35,7	1292	36,2	896	6,1	716	C - Cintura	0	0	0	8203	55,5	3622	24,5
37022	Castiglione dei Pepoli	5739	6057	-318	-5						65,8	456	6,9	662	11,5	642	D - Intermedio	1	0	0	2952	51,4	1524	26,6
37024	Crevalcore	13504	12527	977	8						102,8	711	6,9	2091	15,5	518	B - Polo interc	0	0	1	7231	53,5	3084	22,8
37025	Dozza	6605	5886	719	12						24,2	506	20,9	620	9,4	931	C - Cintura	0	0	0	3629	54,9	1360	20,6
37026	Fontanelice	1984	1884	100	5						36,6	110	3,0	265	13,4	718	C - Cintura	0	0	0	1097	55,3	427	21,5
37027	Gaggio Montano	4914	4928	-14	0						58,7	397	6,8	505	10,3	715	E - Periferico	0	0	0	2699	54,9	1207	24,6
37028	Galliera	5427	5450	-23	0						37,2	259	7,0	766	14,1	479	C - Cintura	0	0	1	2908	53,6	1163	21,4
37029	Granaglione	2222	2257	-35	-2						39,7	147	3,7	138	6,2	548	E - Periferico	0	0	0	1097	49,4	618	27,8
37030	Granarolo dell'Emilia	11565	9008	2557	28						34,4	1077	31,3	825	7,1	728	C - Cintura	0	0	0	6423	55,5	2370	20,5
37031	Grizzana Morandi	3921	3966	-45	-1						77,4	222	2,9	403	10,3	491	D - Intermedio	0	0	1	2033	51,8	920	23,5
37032	Imola	69638	66170	3468	5						205,0	5102	24,9	7159	10,3	660	A - Polo	1	1	1	37422	53,7	17022	24,4
37033	Lizzano in Belvedere	2250	2275	-25	-1						85,4	219	2,6	215	9,6	863	E - Periferico	0	0	0	1017	45,2	673	29,9
37034	Loiano	4347	4442	-95	-2						52,4	318	6,1	380	8,7	563	E - Periferico	0	0	0	2254	51,9	1001	23,0
37035	Malalbergo	8985	7911	1074	14						53,8	598	11,1	759	8,4	480	C - Cintura	0	0	0	4967	55,3	1967	21,9
37036	Marzabotto	6813	6491	322	5						74,5	408	5,5	737	10,8	502	C - Cintura	0	0	1	3561	52,3	1485	21,8
37037	Medicina	16847	14715	2132	14						159,1	1134	7,1	1319	7,8	610	B - Polo interc	1	0	0	9488	56,3	3645	21,6

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
37038	Minerbio	8741	8249	492	6						43,1	638	14,8	736	8,4	500	C - Cintura	0	0	0	4945	56,6	1903	21,8
37039	Molinella	15876	14700	1176	8						127,8	1094	8,6	1454	9,2	565	C - Cintura	0	0	0	8570	54,0	3601	22,7
37040	Monghidoro	3788	3905	-117	-3						48,3	307	6,4	410	10,8	818	E - Periferico	0	0	0	1800	47,5	1004	26,5
37041	Monterenzio	6028	5478	550	10						105,3	447	4,2	662	11,0	559	D - Intermedio	0	0	0	3173	52,6	1199	19,9
37042	Monte San Pietro	11029	10758	271	3						74,7	847	11,3	712	6,5	443	D - Intermedio	0	0	0	6078	55,1	2350	21,3
37044	Monzuno	6414	6003	411	7						65,0	534	8,2	642	10,0	541	D - Intermedio	0	0	1	3252	50,7	1432	22,3
37045	Mordano	4747	4379	368	8						21,5	260	12,1	548	11,5	907	C - Cintura	0	0	0	2669	56,2	1012	21,3
37046	Ozzano dell'Emilia	13449	11194	2255	20						64,9	1131	17,4	725	5,4	507	B - Polo intero	0	0	1	7488	55,7	2885	21,5
37047	Pianoro	17461	16591	870	5						107,1	1494	13,9	1348	7,7	664	C - Cintura	0	0	1	9317	53,4	4496	25,7
37048	Pieve di Cento	6997	6804	193	3						15,9	462	29,0	554	7,9	485	C - Cintura	0	0	0	3638	52,0	1713	24,5
37049	Porretta Terme	4781	4795	-14	0						33,9	403	11,9	582	12,2	536	E - Periferico	0	1	1	2460	51,5	1293	27,0
37050	Sala Bolognese	8357	7082	1275	18						45,6	597	13,1	488	5,8	546	C - Cintura	0	0	0	5030	60,2	1575	18,8
37051	San Benedetto Val di Sambro	4348	4493	-145	-3						66,5	354	5,3	375	8,6	613	D - Intermedio	0	0	1	2134	49,1	1115	25,6
37052	San Giorgio di Piano	8472	6681	1791	27						30,4	675	22,2	792	9,3	533	C - Cintura	0	0	1	4809	56,8	1782	21,0
37053	San Giovanni in Persiceto	27857	24790	3067	12						114,4	1771	15,5	2460	8,8	582	A - Polo	1	1	1	14906	53,5	6378	22,9
37054	San Lazzaro di Savena	31980	30045	1935	6						44,7	2758	61,7	2509	7,8	504	C - Cintura	1	0	0	16551	51,8	8468	26,5
37055	San Pietro in Casale	12095	10616	1479	14						65,9	663	10,1	1327	11,0	463	C - Cintura	0	0	1	6571	54,3	2582	21,3
37056	Sant'Agata Bolognese	7283	6409	874	14						34,8	368	10,6	963	13,2	609	C - Cintura	0	0	0	4180	57,4	1370	18,8
37057	Sasso Marconi	14612	14273	339	2						96,5	1230	12,8	985	6,7	562	C - Cintura	0	0	1	7681	52,6	3879	26,5
37059	Vergato	7714	7352	362	5						59,9	537	9,0	1115	14,5	509	D - Intermedio	0	1	1	3935	51,0	1899	24,6
37060	Zola Predosa	18625	16446	2179	13						37,7	1712	45,4	1324	7,1	475	C - Cintura	0	0	0	10169	54,6	4405	23,7
37061	Valsamoggia	30362	26803	3559	13						178,1	2429	13,6	3462	11,4	534	C - Cintura	0	1	0	15030	49,5	6598	21,7
35001	Albinea	8879	8121	758	9						43,9	682	15,5	567	6,4	960	C - Cintura	0	0	0	5163	58,1	1908	21,5
35002	Bagnolo in Piano	9714	8758	956	11						26,9	689	25,6	1173	12,1	679	C - Cintura	0	0	0	5325	54,8	2002	20,6
35003	Baiso	3392	3340	52	2						75,6	224	3,0	355	10,5	613	D - Intermedio	0	0	0	1705	50,3	890	26,2
35004	Bibbiano	10235	8422	1813	22						28,2	811	28,8	971	9,5	770	C - Cintura	0	0	0	5719	55,9	2004	19,6
35005	Boretto	5315	4920	395	8						18,1	291	16,1	890	16,7	769	C - Cintura	0	0	0	2857	53,8	1075	20,2
35006	Brescello	5623	4982	641	13						24,0	386	16,1	746	13,3	990	D - Intermedio	0	0	0	2965	52,7	1101	19,6
35007	Busana	1268	1350	-82	-6						30,4	118	3,9	118	9,3	731	E - Periferico	0	0	0	546	43,1	421	33,2
35008	Cadelbosco di Sopra	10610	9287	1323	14						43,6	778	17,8	1144	10,8	617	C - Cintura	0	0	0	5821	54,9	1905	18,0
35009	Campagnola Emilia	5658	5120	538	11						24,4	341	14,0	863	15,3	689	C - Cintura	0	0	0	3098	54,8	1187	21,0
35010	Campegine	5062	4694	368	8						22,6	303	13,4	777	15,3	743	C - Cintura	0	0	0	2856	56,4	1030	20,3
35011	Carpineti	4099	4257	-158	-4						89,6	325	3,6	360	8,8	782	E - Periferico	0	0	0	2063	50,3	1065	26,0
35012	Casalgrande	19160	15933	3227	20						37,7	1302	34,5	1660	8,7	773	C - Cintura	0	0	0	11032	57,6	3198	16,7
35013	Casina	4501	4423	78	2						63,8	364	5,7	332	7,4	585	D - Intermedio	0	0	0	2254	50,1	1178	26,2
35014	Castellarano	15255	13407	1848	14						58,1	1060	18,3	1106	7,3	639	D - Intermedio	0	0	0	9210	60,4	2304	15,1
35015	Castelnovo di Sotto	8411	8294	117	1						35,0	679	19,4	951	11,3	822	C - Cintura	0	0	0	4748	56,4	1856	22,1
35016	Castelnovo ne' Monti	10566	10466	100	1						96,7	966	10,0	1168	11,1	639	E - Periferico	0	1	0	5353	50,7	2642	25,0
35017	Cavriago	9810	9229	581	6						17,0	889	52,2	908	9,3	1539	C - Cintura	0	0	0	5393	55,0	2160	22,0
35018	Canossa	3854	3525	329	9						53,1	364	6,9	373	9,7	665	D - Intermedio	0	0	0	1987	51,6	866	22,5
35019	Collagna	939	1004	-65	-6						69,8	89	1,3	58	6,2	927	F - Ultraperifer	0	0	0	352	37,5	334	35,6
35020	Correggio	25905	21953	3952	18						77,5	1529	19,7	3321	12,8	897	C - Cintura	1	1	0	14421	55,7	5217	20,1
35021	Fabbrico	6787	6049	738	12						23,6	239	10,1	1134	16,7	686	C - Cintura	0	0	0	3669	54,1	1476	21,7
35022	Gattatico	5895	5462	433	8						42,1	425	10,1	582	9,9	799	C - Cintura	0	0	0	3224	54,7	1215	20,6
35023	Gualtieri	6576	6438	138	2						35,7	383	10,7	826	12,6	725	D - Intermedio	0	0	0	3478	52,9	1447	22,0
35024	Guastalla	15036	14400	636	4						52,9	939	17,7	2090	13,9	885	D - Intermedio	1	1	0	8039	53,5	3417	22,7
35025	Ligonchio	842	976	-134	-14						61,6	75	1,2	54	6,4	751	F - Ultraperifer	0	0	0	263	31,2	321	38,1
35026	Luzzara	9318	8890	428	5						38,5	462	12,0	1929	20,7	1000	D - Intermedio	0	0	0	4907	52,7	2064	22,2
35027	Montecchio Emilia	10535	9592	943	10						24,4	825	33,8	908	8,6	832	C - Cintura	1	1	0	5884	55,9	2190	20,8
35028	Novellara	13761	12793	968	8						58,1	840	14,5	2205	16,0	790	C - Cintura	0	0	0	7350	53,4	2966	21,6
35029	Poviglio	7226	6803	423	6						43,6	597	13,7	929	12,9	775	C - Cintura	0	0	0	3709	51,3	1568	21,7
35030	Quattro Castella	13116	12098	1018	8						46,3	1047	22,6	819	6,2	743	C - Cintura	0	0	0	7356	56,1	2916	22,2
35031	Ramiseto	1257	1432	-175	-12						96,3	102	1,1	82	6,5	751	E - Periferico	0	0	0	523	41,6	422	33,6
35032	Reggiolo	9176	8900	276	3						42,7	606	14,2	1152	12,6	1093	C - Cintura	0	0	0	5034	54,9	1767	19,3
35033	Reggio nell'Emilia	171655	155191	16464	11						230,7	16003	69,4	30050	17,5	703	A - Polo	1	1	1	89428	52,1	34437	20,1
35034	Rio Saliceto	6261	5632	629	11						22,6	606	26,9	928	14,8	702	C - Cintura	0	0	0	3506	56,0	1150	18,4
35035	Rolo	4143	3848	295	8						14,2	206	14,5	777	18,8	832	C - Cintura	0	0	1	2206	53,2	826	19,9
35036	Rubiera	14862	13041	1821	14						25,2	1098	43,6	1635	11,0	990	C - Cintura	0	0	0	8733	58,8	2774	18,7
35037	San Martino in Rio	8094	6990	1104	16						22,7	438	19,3	787	9,7	749	C - Cintura	0	0	0	4685	57,9	1535	19,0
35038	San Polo d'Enza	6079	5529	550	10						32,3	485	15,0	599	9,9	994	D - Intermedio	0	0	0	3191	52,5	1290	21,2
35039	Sant'Ilario d'Enza	11173	10223	950	9						20,2	811	40,1	1192	10,7	933	C - Cintura	0	0	0	6192	55,4	2403	21,5
35040	Scandiano	25389	23332	2057	9						50,0	2083	41,6	2051	8,1	764	C - Cintura	1	1	0	13578	53,5	5561	21,9
35041	Toano	4458	4443	15	0						67,3	312	4,6	523	11,7	631	E - Periferico	0	0	0	2235	50,1	1108	24,9
35042	Vetto	1876	2063	-187	-9						53,4	163	3,1	138	7,4	690	E - Periferico	0	0	0	791	42,2	627	33,4
35043	Vezzano sul Crostolo	4285	4045	240	6						37,8	323	8,5	281	6,6	703	C - Cintura	0	0	0	2351	54,9	1002	23,4
35044	Viano	3405	3247	158	5						45,0	270	6,0	175	5,1	585	D - Intermedio	0	0	0	1820	53,5	711	20,9
35045	Villa Minozzo	3787	4101	-314	-8						168,1	326	1,9	294	7,8	593	E - Periferico	0	0	0	1543	40,7	1287	34,0
36001	Bastiglia	4207	3555	652	18						10,5	282	26,9	512	12,2	569	C - Cintura	0	0	0	2331	55,4	753	17,9
36002	Bomporto	10155	8274	1881	23						38,9	604	15,5	1016	10,0	737	C - Cintura	0	0	0	5968	58,8	1634	16,1
36003	Campogalliano	8789	8044	745	9						35,7	636	17,8	1103	12,5	813	C - Cintura	0	0	0	4882	55,5	1696	19,3
36004	Camposanto	3188	3061	127	4						22,7	145	6,4	516	16,2	788	C - Cintura	0	0	0	1661	52,1	718	22,5
36005	Carpi	70419	63766	6653	10						131,5	4506	34,3	10078	14,3	500	A - Polo	1	1	1	36096	51,3	15951	22,7
36006	Castelfranco Emilia	32724	27324	5400	20						102,5	1716	16,7	4476	13,7	531	C - Cintura	0	1	1	17889	54,7	6329	19,3
36007	Castelnuovo Rangone	14850	12724	2126	17						22,4	1163	51,8	1840	12,4	732	C - Cintura	0	0	0	8250	55,6	2967	20,0
36008	Castelvetro di Modena	11306	10278	1028	10						49,8	729	14,6	1357	12,0	736	C - Cintura	0	0	0	6209	54,9	2185	19,3
36009	Cavezzo	7080	7072	8	0						26,8	361	13,5	980	13,8	765	C - Cintura	0	0	0	3816	53,9	1725	24,4
36010	Concordia sulla Secchia	8769	8813	-44	0						41,0	403	9,8	1252	14,3	660	C - Cintura	0	0	0	4588	52,3	2093	23,9
36011	Fanano	3010	2999	11	0						89,9	320	3,6	340	11,3	741	E - Periferico	0	0	0	1237	41,1	851	28,3
36012	Finale Emilia	15728	15354	374	2						105,1	649	6,2	2085	13,3	584	B - Polo intero	1	0	0	7982	50,8	3691	23,5
36013	Fiorano Modenese	17138	16433	705	4						26,2	1398	53,3	1453	8,5	840	C - Cintura	0	0	0	9869	57,6	3180	18,6
36014	Fiumalbo	1290	1335	-45	-3						39,1	152	3,9	73	5,7	459	E - Periferico	0	0	0	610	47,3	375	29,1
36015	Formigine	34272	30893	3379	11						46,7	2595	55,5	2338	6,8	604	C - Cintura	0	0	0	20047	58,5	6511	19,0
36016	Frassinoro	1923	2137	-214	-10						95,5	181	1,9	116	6,0	548	E - Periferico	0	0	0	801	41,7	648	33,7
36017	Guiglia	3974	4017	-43	-1						48,3	286	5,9	410	10,3	649	D - Intermedio	0	0	0	2013	50,7	938	23,6
36018	Lama Mocogno	2783	3004	-221	-7						63,9	274	4,3	213	7,7	760	E - Periferico	0	0	0	1234	44,3	867	31,2
36019	Maranello	17215	16216	999	6						32,6	1322	40,6	1502	8,7	793	C - Cintura	0	0	0	9616	55,9	3351	19,5
36020	Marano sul Panaro	5007	3870	1137	29						45,5	354	7,8	551	11,0	604	D - Intermedio	0	0	0	2736	54,6	1011	20,2
36021	Medolla	6312	5901	411	7						27,0	316	11,7	614	9,7	607	C - Cintura	0	0	0	3542	56,1	1358	21,5
36022	Mirandola	24035	22817	1218	5						137,1	1185	8,6	3729	15,5	705	A - Polo	1	1	1	12853	53,5	5552	23,1
36023	Modena	185148	180110	5038	3						183,7	17714	96,7	28640	15,5	701	A - Polo	1	1	1	97661	52,7	43773	23,6
36024	Montecreto	976	927	49	5						31,2	99	3,2	81	8,3	680	E - Periferico	0	0	0	374	38,3	304	31,1
36025	Montefiorino	2225	2336	-111	-5						45,3	174	3,8	128	5,8	503	E - Periferico	0	0	0	1011	45,4	738	33,2
36026	Montese	3361	3280	81	2						81,0	273	3,4	399	11,9	604	E - Periferico	0	0	0	1501	44,7	1002	29,8
36027	Nonantola	15804	13572	2232	16						55,3	734	13,3	1628	10,3	452	C - Cintura	0	0	0	8740	55,3	3154	20,0
36028	Novi di Modena	10277	10845	-568	-5						51,8	518	10,0	1543	15,0	462	C - Cintura	0	0	0	5553	54,0	2359	23,0
36029	Palagano	2238	2455	-217	-9						60,4	197	3,3	216	9,7	488	E - Periferico	0	0	0	1117	49,9	675	30,2
36030	Pavullo nel Frignano	17460	16083	1377	9						143,7	1488	10,4	2101	12,0	738	E - Periferico	1	1	0	9328	53,4	3839	22,0
36031	Pievepelago	2235	2194	41	2						76,5	244	3,2	247	11,1	673	D - Intermedio	1	0	0	994	44,5	601	26,9

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
36032	Polinago	1701	1862	-161	-9						53,7	125	2,3	200	11,8	523	E - Periferico	0	0	0	683	40,2	557	32,7
36033	Prignano sulla Secchia	3773	3571	202	6						79,7	244	3,1	232	6,1	567	E - Periferico	0	0	0	1935	51,3	814	21,6
36034	Ravarino	6223	5900	323	5						28,5	261	9,1	785	12,6	591	C - Cintura	0	0	0	3425	55,0	1238	19,9
36035	Riolunato	744	738	6	1						44,9	66	1,5	63	8,5	643	E - Periferico	0	0	0	303	40,7	221	29,7
36036	San Cesario sul Panaro	6409	5608	801	14						27,3	436	16,0	536	8,4	647	C - Cintura	0	0	0	3389	52,9	1378	21,5
36037	San Felice sul Panaro	10964	10453	511	5						51,7	438	8,5	1547	14,1	689	B - Polo interc	0	0	1	6062	55,3	2313	21,1
36038	San Possidonio	3624	3761	-137	-4						17,1	179	10,5	598	16,5	694	C - Cintura	0	0	0	1894	52,3	798	22,0
36039	San Prospero	5887	5087	800	16						34,6	270	7,8	650	11,0	661	C - Cintura	0	0	0	3473	59,0	999	17,0
36040	Sassuolo	41064	41746	-682	-2						38,4	4082	106,3	5635	13,7	737	C - Cintura	1	1	0	21630	52,7	8754	21,3
36041	Savignano sul Panaro	9257	8746	511	6						25,6	653	25,6	1272	13,7	656	D - Intermedio	0	0	0	5025	54,3	2099	22,7
36042	Serramazzoni	8244	7618	626	8						94,0	599	6,4	928	11,3	579	E - Periferico	0	0	0	4178	50,7	1657	20,1
36043	Sestola	2521	2647	-126	-5						52,5	341	6,5	193	7,7	535	E - Periferico	0	0	0	1021	40,5	785	31,1
36044	Soliera	15412	14056	1356	10						50,9	836	16,4	1451	9,4	371	C - Cintura	0	0	0	8696	56,4	3152	20,5
36045	Spilamberto	12559	11376	1183	10						29,8	947	31,8	2216	17,6	633	C - Cintura	0	0	0	6624	52,7	2851	22,7
36046	Vignola	25244	22351	2893	13						22,9	2145	93,8	4421	17,5	645	D - Intermedio	1	1	0	13205	52,3	5489	21,7
36047	Zocca	4840	4716	124	3						69,4	424	6,1	717	14,8	485	E - Periferico	0	0	0	2237	46,2	1261	26,1
40001	Bagno di Romagna	6085	6093	-8	0						233,5	590	2,5	444	7,3	587	E - Periferico	0	0	0	3076	50,6	1541	25,3
40003	Bertinoro	11165	9501	1664	18						57,3	749	13,1	864	7,7	627	C - Cintura	0	0	0	6154	55,1	2292	20,5
40004	Borghi	2854	2183	671	31						30,2	149	4,9	236	8,3	421	D - Intermedio	0	0	0	1497	52,5	479	16,8
40005	Castrocaro Terme e Terra del Sole	6445	6303	142	2						39,0	550	14,1	670	10,4	565	D - Intermedio	0	0	0	2362	36,6	1627	25,2
40007	Cesena	96885	93498	3387	4						249,5	8910	35,7	9329	9,6	706	A - Polo	1	1	1	52038	53,7	23449	24,2
40008	Cesenatico	26016	23009	3007	13						45,2	3203	70,9	2374	9,1	1067	C - Cintura	1	0	1	12915	49,6	5685	21,9
40009	Civitella di Romagna	3796	3808	-12	0						117,9	254	2,2	628	16,5	453	D - Intermedio	0	0	0	1896	49,9	922	24,3
40011	Dovadola	1661	1691	-30	-2						39,0	110	2,8	179	10,8	522	D - Intermedio	0	0	0	799	48,1	449	27,0
40012	ForlÃ¬	118255	111495	6760	6						228,2	10925	47,9	14392	12,2	756	A - Polo	1	1	1	61309	51,8	29507	25,0
40013	Forlimpopoli	13212	11994	1218	10						24,5	965	39,5	1316	10,0	557	C - Cintura	0	0	0	6972	52,8	3075	23,3
40014	Galeata	2544	2477	67	3						63,1	158	2,5	571	22,4	748	D - Intermedio	0	0	0	1424	56,0	536	21,1
40015	Gambettola	10637	9748	889	9						7,8	927	119,3	1541	14,5	595	C - Cintura	0	0	1	5916	55,6	2168	20,4
40016	Gatteo	9118	7252	1866	26						14,1	809	57,2	1120	12,3	849	C - Cintura	0	0	0	5090	55,8	1574	17,3
40018	Longiano	7066	6042	1024	17						23,6	564	23,9	546	7,7	484	C - Cintura	0	0	0	3973	56,2	1358	19,2
40019	Meldola	10052	9686	366	4						79,1	729	9,2	1352	13,5	832	C - Cintura	0	0	0	5236	52,1	2411	24,0
40020	Mercato Saraceno	6970	6442	528	8						99,3	544	5,5	800	11,5	815	D - Intermedio	0	0	0	3879	55,7	1432	20,5
40022	Modigliana	4654	4795	-141	-3						101,2	316	3,1	409	8,8	951	D - Intermedio	0	0	0	2472	53,1	1161	24,9
40028	Montiano	1704	1573	131	8						9,3	87	9,4	144	8,5	408	C - Cintura	0	0	0	900	52,8	393	23,1
40031	Portico e San Benedetto	772	829	-57	-7						61,1	59	1,0	54	7,0	681	E - Periferico	0	0	0	290	37,6	268	34,7
40032	Predappio	6419	6352	67	1						91,4	462	5,1	668	10,4	686	D - Intermedio	0	0	0	3457	53,9	1633	25,4
40033	Premilcuore	799	889	-90	-10						98,6	57	0,6	121	15,1	810	E - Periferico	0	0	0	320	40,1	277	34,7
40036	Rocca San Casciano	1953	2103	-150	-7						50,6	142	2,8	114	5,8	980	D - Intermedio	0	0	0	923	47,3	569	29,1
40037	Roncofreddo	3384	3040	344	11						51,5	195	3,8	330	9,8	444	D - Intermedio	0	0	0	1998	59,0	672	19,9
40041	San Mauro Pascoli	11587	10272	1315	13						17,3	981	56,7	1436	12,4	697	C - Cintura	0	0	0	6403	55,3	2151	18,6
40043	Santa Sofia	4175	4223	-48	-1						148,9	266	1,8	552	13,2	791	E - Periferico	0	0	0	2104	50,4	1120	26,8
40044	Sarsina	3524	3744	-220	-6						100,7	300	3,0	270	7,7	473	D - Intermedio	0	0	0	1842	52,3	897	25,5
40045	Savignano sul Rubicone	17771	15952	1819	11						23,3	1537	66,0	2839	16,0	729	C - Cintura	1	0	1	9779	55,0	3411	19,2
40046	Sogliano al Rubicone	3233	2992	241	8						93,4	216	2,3	308	9,5	471	D - Intermedio	0	0	0	1686	52,1	738	22,8
40049	Tredozio	1243	1315	-72	-5						62,2	86	1,4	64	5,1	577	D - Intermedio	0	0	0	590	47,5	395	31,8
40050	Verghereto	1918	2017	-99	-5						117,9	182	1,5	137	7,1	701	E - Periferico	0	0	0	903	47,1	547	28,5
99001	Bellaria-Igea Marina	19517	16956	2561	15						18,2	2236	123,1	2549	13,1	894	C - Cintura	0	0	1	9614	49,3	3814	19,5
99002	Cattolica	17084	16013	1071	7						6,2	2375	383,3	2019	11,8	877	C - Cintura	0	1	1	7922	46,4	4103	24,0
99003	Coriano	10429	9144	1285	14						46,8	908	19,4	728	7,0	751	C - Cintura	0	0	0	5382	51,6	1846	17,7
99004	Gemmano	1158	1144	14	1						18,9	76	4,0	86	7,4	475	D - Intermedio	0	0	0	527	45,5	247	21,3
99005	Misano Adriatico	12910	10778	2132	20						22,3	37	1,7	1206	9,3	930	C - Cintura	0	0	1	6310	48,9	2496	19,3
99006	Mondaino	1424	1486	-62	-4						19,8	99	5,0	157	11,0	465	D - Intermedio	0	0	0	680	47,8	350	24,6
99007	Monte Colombo	3451	2176	1275	59						12,1	208	17,2	247	7,2	412	D - Intermedio	0	0	0	1847	53,5	454	13,2
99008	Montefiore Conca	2272	1873	399	21						22,3	148	6,6	138	6,1	389	D - Intermedio	0	0	0	1118	49,2	395	17,4
99009	Montegridolfo	1038	960	78	8						6,9	94	13,5	86	8,3	485	D - Intermedio	0	0	0	532	51,3	219	21,1
99010	Montescudo	3326	2437	889	36						20,3	162	8,0	308	9,3	391	D - Intermedio	0	0	0	1713	51,5	528	15,9
99011	Morciano di Romagna	7026	6241	785	13						5,4	782	143,7	866	12,3	536	C - Cintura	0	0	0	3590	51,1	1399	19,9
99013	Riccione	35127	34682	445	1						17,5	4514	257,9	3626	10,3	937	A - Polo	1	1	1	16766	47,7	8641	24,6
99014	Rimini	147578	134700	12878	10						135,7	15783	116,3	18394	12,5	742	A - Polo	1	1	1	70849	48,0	34046	23,1
99015	Saludecio	3120	2625	495	19						34,3	196	5,7	299	9,6	487	D - Intermedio	0	0	0	1506	48,3	593	19,0
99016	San Clemente	5586	3609	1977	55						20,7	413	20,0	567	10,2	545	C - Cintura	0	0	0	2988	53,5	782	14,0
99017	San Giovanni in Marignano	9340	8226	1114	14						21,4	905	42,3	703	7,5	745	C - Cintura	0	0	0	4809	51,5	1972	21,1
99018	Santarcangelo di Romagna	21899	19991	1908	10						45,0	1987	44,1	1848	8,4	601	C - Cintura	0	0	1	11291	51,6	4645	21,2
99020	Verucchio	10065	9365	700	7						27,3	690	25,3	915	9,1	567	D - Intermedio	0	0	0	5411	53,8	1927	19,1
99021	Casteldelci	436	500	-64	-13						49,7	34	0,7	13	3,0	345	E - Periferico	0	0	0	174	39,9	128	29,4
99022	Maiolo	846	807	39	5						24,3	37	1,5	39	4,6	301	E - Periferico	0	0	0	382	45,2	204	24,1
99023	Novafeltria	7220	7016	204	3						41,8	589	14,1	701	9,7	625	D - Intermedio	1	0	0	3588	49,7	1742	24,1
99024	Pennabilli	2928	3145	-217	-7						69,8	198	2,8	152	5,2	405	E - Periferico	0	0	0	1350	46,1	779	26,6
99025	San Leo	3017	2998	19	1						53,1	217	4,1	338	11,2	597	D - Intermedio	0	0	0	1493	49,5	635	21,0
99026	Sant'Agata Feltria	2171	2349	-178	-8						79,7	141	1,8	135	6,2	685	E - Periferico	0	0	0	1067	49,1	581	26,8
99027	Talamello	1108	1147	-39	-3						10,6	75	7,1	89	8,0	567	D - Intermedio	0	0	0	575	51,9	221	19,9
99028	Poggio Torriana	5123	4390	733	17						34,7	409	11,8	387	7,6	697	C - Cintura	0	0	0	2764	54,0	840	16,4
20001	Acquanegra sul Chiese	2978	2997	-19	-1						28,0	221	7,9	315	10,6	404	D - Intermedio	0	0	0	1501	50,4	759	25,5
20002	Asola	10184	9640	544	6						73,5	810	11,0	1478	14,5	453	D - Intermedio	1	0	0	5328	52,3	2251	22,1
20003	Bagnolo San Vito	6000	5548	452	8						49,2	410	8,3	679	11,3	620	C - Cintura	0	0	0	3074	51,2	1372	22,9
20004	Bigarello	2118	1850	268	14						27,0	136	5,0	192	9,1	509	C - Cintura	0	0	0	1196	56,5	427	20,2
20006	Borgofranco sul Po	782	886	-104	-12						15,1	35	2,3	101	12,9	540	D - Intermedio	0	0	0	317	40,5	257	32,9
20007	Bozzolo	4231	4064	167	4						18,8	330	17,5	557	13,2	524	C - Cintura	0	0	0	2014	47,6	1047	24,7
20008	Canneto sull'Oglio	4474	4565	-91	-2						25,9	297	11,5	726	16,2	359	D - Intermedio	0	0	0	2208	49,4	1097	24,5
20009	Carbonara di Po	1313	1327	-14	-1						15,4	57	3,7	176	13,4	458	D - Intermedio	0	0	0	598	45,5	377	28,7
20010	Casalmoro	2287	2228	59	3						13,7	145	10,6	398	17,4	458	D - Intermedio	0	0	0	1230	53,8	370	16,2
20011	Casaloldo	2692	2436	256	11						16,8	218	12,9	445	16,5	402	D - Intermedio	0	0	0	1467	54,5	471	17,5
20012	Casalromano	1493	1568	-75	-5						12,0	107	8,9	195	13,1	375	D - Intermedio	0	0	0	836	56,0	287	19,2
20013	Castelbelforte	3210	2636	574	22						22,3	209	9,4	397	12,4	553	C - Cintura	0	0	0	1662	51,8	661	20,6
20014	Castel d'Ario	4762	4433	329	7						22,6	306	13,6	773	16,2	515	C - Cintura	0	0	0	2514	52,8	1054	22,1
20015	Castel Goffredo	12533	10696	1837	17						42,4	982	23,2	2444	19,5	537	D - Intermedio	0	0	0	7150	57,0	2007	16,0
20016	Castellucchio	5238	4945	293	6						46,3	360	7,8	564	10,8	767	C - Cintura	0	0	0	2643	50,5	1214	23,2
20017	Castiglione delle Stiviere	23157	20122	3035	15						42,0	1815	43,2	4953	21,4	507	C - Cintura	1	0	0	12537	54,1	3868	16,7
20018	Cavriana	3904	3804	100	3						36,9	284	7,7	373	9,6	353	D - Intermedio	0	0	0	1983	50,8	848	21,7
20019	Ceresara	2695	2544	151	6						37,3	205	5,5	228	8,5	358	D - Intermedio	0	0	0	1482	55,0	539	20,0
20020	Commessaggio	1125	1137	-12	-1						11,8	101	8,7	107	9,5	420	C - Cintura	0	0	0	557	49,5	305	27,1
20021	Curtatone	14896	12877	2019	16						67,5	939	13,9	821	5,5	556	C - Cintura	0	0	0	8095	54,3	3227	21,7
20022	Dosolo	3502	3265	237	7						25,5	228	8,9	489	14,0	532	D - Intermedio	0	0	0	1814	51,8	840	24,0
20023	Felonica	1402	1586	-184	-12						22,8	70	3,1	99	7,1	513	C - Cintura	0	0	0	596	42,5	474	33,8
20024	Gazoldo degli Ippoliti	3003	2619	384	15						13,0	217	16,7	481	16,0	378	D - Intermedio	0	0	0	1584	52,7	599	19,9
20025	Gazzuolo	2368	2450	-82	-3						22,5	198	8,8	299	12,6	410	D - Intermedio	0	0	0	1084	45,8	669	28,3
20026	Goito	10410	9927	483	5						79,2	798	10,1	1306	12,5	425	C - Cintura	0	0	0	5353	51,4	2291	22,0
20027	Gonzaga	9135	8591	544	6						49,9	425	8,5	1232	13,5	543	C - Cintura	0	0	0	4879	53,4	1810	19,8

Codice Comune	Descrizione Comune	Popolazione al 1 gennaio 2015 - Totale	Popolazione al 1 Gennaio 2005 - Totale	Differenza 2005-2015	Diff. Percentuale 2005-2015	Densità 2004	Densità 2014	Diff 2014-2004	Diff. Percentuale 2014-2004	Turismo Permanenza Media 2014	Superficie comune Km2	Imprese attive (2011)	Densità imprendit (impr.att/sup)	Pop. Resid. Straniera (2015)	% Pop. Resid. Straniera (2015)	Rifiuto totale pro capite (in Kg) 2011	Classificazione Comuni Aree Interne 2014	Ind_scuole	Ind_DEA	Ind_FS	Pendolarismo 2011	% Pendolarismo	over 65 (2015)	% over 65 (2015)
20028	Guidizzolo	6220	5454	766	14						22,4	517	23,1	1086	17,5	453	D - Intermedio	0	0	0	3346	53,8	1290	20,7
20029	Magnacavallo	1597	1793	-196	-11						28,2	54	1,9	188	11,8	447	D - Intermedio	0	0	0	746	46,7	441	27,6
20030	Mantova	48747	48103	644	1						63,8	5200	81,5	6846	14,0	513	A - Polo	1	1	1	22445	46,0	13200	27,1
20031	Marcaria	6678	7071	-393	-6						89,8	480	5,3	541	8,1	414	D - Intermedio	0	0	0	3413	51,1	1686	25,2
20032	Mariana Mantovana	730	648	82	13						8,9	49	5,5	82	11,2	583	D - Intermedio	0	0	0	401	54,9	153	21,0
20033	Marmirolo	7844	7380	464	6						42,0	532	12,7	805	10,3	451	C - Cintura	0	0	0	4065	51,8	1784	22,7
20034	Medole	4070	3386	684	20						25,7	302	11,7	527	12,9	387	D - Intermedio	0	0	0	2194	53,9	801	19,7
20035	Moglia	5699	5827	-128	-2						31,8	349	11,0	666	11,7	562	C - Cintura	0	0	0	2994	52,5	1395	24,5
20036	Monzambano	4878	4721	157	3						30,0	352	11,7	552	11,3	438	C - Cintura	0	0	0	2428	49,8	1016	20,8
20037	Motteggiana	2602	2282	320	14						24,8	135	5,4	481	18,5	434	C - Cintura	0	0	0	1406	54,0	486	18,7
20038	Ostiglia	6892	7074	-182	-3						39,8	434	10,9	1010	14,7	529	D - Intermedio	1	0	0	3311	48,0	1856	26,9
20039	Pegognaga	7218	6862	356	5						46,6	404	8,7	777	10,8	531	C - Cintura	0	0	0	3755	52,0	1617	22,4
20040	Pieve di Coriano	1069	910	159	17						12,7	42	3,3	68	6,4	601	D - Intermedio	0	1	0	537	50,2	249	23,3
20041	Piubega	1737	1722	15	1						16,6	116	7,0	165	9,5	481	D - Intermedio	0	0	0	902	51,9	399	23,0
20042	Poggio Rusco	6641	6470	171	3						42,3	359	8,5	964	14,5	431	C - Cintura	0	0	1	3377	50,9	1520	22,9
20043	Pomponesco	1714	1662	52	3						12,6	102	8,1	226	13,2	732	C - Cintura	0	0	0	921	53,7	400	23,3
20044	Ponti sul Mincio	2357	2037	320	16						11,7	179	15,3	230	9,8	439	C - Cintura	0	0	0	1163	49,3	481	20,4
20045	Porto Mantovano	16369	14521	1848	13						37,4	1147	30,6	1230	7,5	469	C - Cintura	0	0	0	8637	52,8	3533	21,6
20046	Quingentole	1217	1267	-50	-4						14,4	70	4,9	138	11,3	416	D - Intermedio	0	0	0	547	44,9	323	26,5
20047	Quistello	5705	5847	-142	-2						45,4	318	7,0	553	9,7	532	D - Intermedio	0	0	0	2726	47,8	1580	27,7
20048	Redondesco	1307	1378	-71	-5						19,0	98	5,1	108	8,3	404	D - Intermedio	0	0	0	639	48,9	350	26,8
20049	Revere	2543	2514	29	1						14,1	138	9,8	261	10,3	471	D - Intermedio	0	0	0	1221	48,0	687	27,0
20050	Rivarolo Mantovano	2576	2702	-126	-5						25,5	215	8,4	271	10,5	579	C - Cintura	0	0	0	1294	50,2	649	25,2
20051	Rodigo	5408	5177	231	4						41,6	366	8,8	503	9,3	483	C - Cintura	0	0	0	2767	51,2	1362	25,2
20052	Roncoferraro	7193	6867	326	5						63,4	445	7,0	621	8,6	449	C - Cintura	0	0	0	3680	51,2	1815	25,2
20053	Roverbella	8680	8047	633	8						63,0	602	9,6	1270	14,6	430	C - Cintura	0	0	0	4505	51,9	1881	21,7
20054	Sabbioneta	4306	4327	-21	0						37,3	289	7,8	430	10,0	494	C - Cintura	0	0	0	2141	49,7	1095	25,4
20055	San Benedetto Po	7421	7607	-186	-2						69,9	30	0,4	819	11,0	464	D - Intermedio	0	0	0	3641	49,1	1984	26,7
20056	San Giacomo delle Segnate	1680	1745	-65	-4						16,0	86	5,4	245	14,6	444	C - Cintura	0	0	0	842	50,1	436	26,0
20057	San Giorgio di Mantova	9595	8195	1400	17						24,5	616	25,1	686	7,1	473	C - Cintura	0	0	0	5458	56,9	1775	18,5
20058	San Giovanni del Dosso	1251	1229	22	2						15,4	66	4,3	179	14,3	295	C - Cintura	0	0	0	638	51,0	281	22,5
20059	San Martino dall'Argine	1748	1843	-95	-5						16,9	137	8,1	133	7,6	383	D - Intermedio	0	0	0	861	49,3	473	27,1
20060	Schivenoglia	1183	1247	-64	-5						13,0	55	4,2	115	9,7	495	C - Cintura	0	0	0	581	49,1	368	31,1
20061	Sermide	6252	6533	-281	-4						57,1	343	6,0	805	12,9	424	D - Intermedio	0	0	0	2924	46,8	1633	26,1
20062	Serravalle a Po	1559	1720	-161	-9						26,2	76	2,9	195	12,5	448	D - Intermedio	0	0	0	682	43,7	463	29,7
20063	Solferino	2590	2498	92	4						13,1	217	16,6	239	9,2	296	C - Cintura	0	0	0	1332	51,4	528	20,4
20064	Sustinente	2133	2286	-153	-7						26,3	116	4,4	176	8,3	418	D - Intermedio	0	0	0	1066	50,0	529	24,8
20065	Suzzara	21134	18551	2583	14						61,1	1124	18,4	3569	16,9	502	D - Intermedio	0	0	1	10709	50,7	4786	22,6
20066	Viadana	20023	17691	2332	13						103,8	1716	16,5	3680	18,4	515	C - Cintura	1	0	0	10457	52,2	4060	20,3
20067	Villa Poma	2042	2057	-15	-1						14,3	95	6,6	137	6,7	436	C - Cintura	0	0	0	1009	49,4	517	25,3
20068	Villimpenta	2232	2107	125	6						14,8	134	9,0	364	16,3	447	D - Intermedio	0	0	0	1039	46,6	589	26,4
20070	Volta Mantovana	7399	6915	484	7						50,5	656	13,0	651	8,8	421	D - Intermedio	0	0	0	3872	52,3	1563	21,1
20071	Borgo Virgilio	14788	13943	845	6						70,0	631	9,0	1729	11,7	437	C - Cintura	0	0	0	7720	52,2	3296	22,3

List of publications

Biancardi, M., Massarente, A., Verde, A. (2014). Paesaggi culturali agroalimentari nel territorio cordobese. in Apollonio, F. (ed.). *Il contributo italiano allo sviluppo culturale in Argentina. Nuove metodologie per la conoscenza e la valorizzazione del patrimonio*. Bologna: CLUEB. p. 66-74

Verde, A. (2015). RE-CYCLES. Transnational revitalization of dismissed industrial brownfields in post-socialist cities along the Danube. in Barcelloni, M., Cavalieri, C. (eds.). *The Horizontal Metropolis: A Radical Project*. VIII International PhD Seminar Urbanism & Urbanization / Symposium Latsis EPFL 12-14 October 2015 - Conference Proceedings. p. 356-366

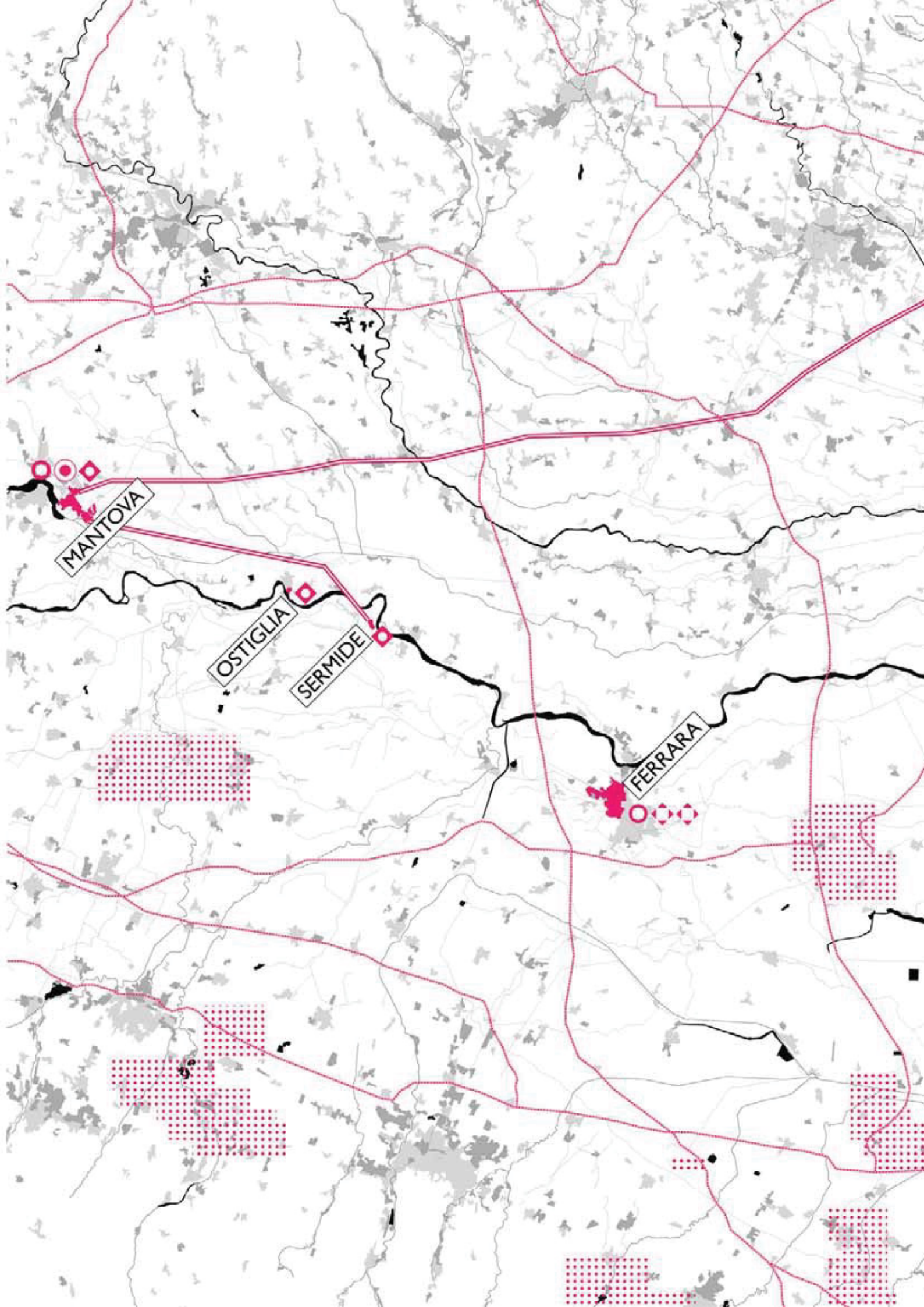
Massarente, A., Verde, A. (eds.) (2016). *Intersezioni urbane. Indagini e proposte per la rigenerazione urbana di un'area postindustriale*. Ferrara: ArcDesPress

Verde, A. (2016). Costruire scenari di rifunzionalizzazione delle aree industriali dismesse. Le analisi del mercato e il progetto di recupero urbano. in Massarente, A., Verde, A. (eds.). *Intersezioni urbane. Indagini e proposte per la rigenerazione urbana di un'area postindustriale*. Ferrara: ArcDesPress. p. 17-20

Verde, A. (2017). La resilienza come strategia di rifunzionalizzazione per i paesaggi culturali. in Fabbri, R. (ed.). *Architettura del Novecento in Argentina. Studi e applicazioni archeometriche per la conoscenza e la salvaguardia del patrimonio di origine italiana*. Roma: Edizioni Nuova Cultura. p. 201-210

Verde, A. (2017). OILAND**SCAPES**. Agro-energy parks to create social inclusion in Adriatic-Ionian oil meshes. in Amer, M., Sotoca, A., Naselli, F. Mohareb, N., Alalouch (eds.). *Energy Procedia, Volume 115*. International Conference - Alternative and Renewable Energy Quest, AREQ 2017, 1-3 February 2017 - Conference Proceedings, Amsterdam: Elsevier. p. 127-138

Verde, A., Massarente, A. (2017). OILAND**SCAPES**. The reconversion of fossil fuel meshes as "green energy backbones" for the territorial restructuring of the Third Industrial Revolution. in Ferreira, J. A. et al. (eds.). *Spaces of Dialog for Places of Dignity: Fostering the European Dimension of Planning*. AESOP Annual Congress 2017 - Lisbon, 11-14 July 2017 - Conference Proceedings, Universidade de Lisboa. p. 1233-1243


MANTOVA
OSTIGLIA
SERMIDE
FERRARA