

# ENSURE – European Sustainable Urbanisation through port city Regeneration

Targeted Analysis

**Annex 4.3 – Case Study Report:  
Catania (IT)**

# Case-Study Report

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## Annex 4.3 – Case Study Report – Catania (IT)

# ENSURE – European Sustainable Urbanisation through port city Regeneration

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The final version of the report will be published as soon as approved

## Table of contents

List of Maps .....	ii
List of Figures .....	ii
List of Tables .....	iii
Abbreviations .....	iii
1 Introduction .....	1
2 History and context.....	3
2.1 Scope of the case study .....	3
2.2 The history of Catania and its port.....	5
2.3 Demography and socio-economic context .....	6
3 Laws, plans, and policies .....	12
3.1 The territory under the jurisdiction of the Municipality of Catania .....	12
3.2 The port district .....	13
3.3 The consequences of regulatory planning: contributions and obstacles.....	17
4 Main stakeholders .....	18
5 From vision to realisation .....	22
5.1 Introduction .....	22
5.2 Northern area transformations.....	24
5.2.1 Old sulphur refineries regeneration .....	24
5.2.1 Ferrovie CircumEtna railway underground line .....	24
5.2.2 San Berillo regeneration masterplan.....	25
5.3 Central waterfront transformations .....	26
5.3.1 New RFI “railway bypass” program .....	26
5.3.2 The competition for waterfront port city interface .....	27
5.4 Southern area transformations .....	27
5.4.1 The Special Economic Zone .....	27
6 Regeneration process, project and outcomes.....	28
6.1 Regeneration outcomes in the Northern area .....	29
6.2 Regeneration outcomes in the Central waterfront and in the Southern area .....	31
7 Economic, social and other impacts.....	33
7.1 Attraction and integration of new inhabitants .....	33
7.2 Attraction of new functions .....	33
7.3 Preservation of city port heritage.....	33
7.4 Urban qualities.....	33
7.5 Changes in the mental maps of the city .....	34
7.6 Regional, national and international impacts.....	34
8 Challenges, risks and drivers for change .....	34
8.1 Demography and population .....	34
8.2 Environment.....	35
8.3 The planning processes, models and tools .....	35
8.4 The role of public policy and governance .....	36

8.5	The role of public policy: infrastructure delivery .....	36
8.6	The involvement of citizens .....	36
8.7	Funding opportunities and initiatives .....	36
9	Conclusion and lessons learned .....	38
	References .....	40
	Annex 1: The Research Framework.....	41

## List of Maps

Map 2.1.	Main urban functions in waterfront area .....	4
Map 2.2	NUTS3 perimeter concerning Catania .....	7
Map 4.1.	Stakeholders, real estate and properties.....	20
Map 4.2.	Public and private stakeholders in Catania waterfront .....	21

## List of Figures

Figure 2.1	Map of Sicily, zooming on the Eastern coast, Ionian Sea .....	3
Figure 2.3.	Eruption from Etna in 1669, as painted by Giacinto Platania .....	5
Figure 2.5.	Age Pyramid, Municipality of Catania population (2018) .....	8
Figure 3.1.	Comune di Catania, Piano regolatore generale, edited in 1964: in dark violet the industrial areas that were modified by local variants for changing of planned land uses starting from '80s and in violet the port area. ....	13
Figure 3.2.	Comparative map of old Port Plan (1978 and in force) in grey and green; in red the planned PRP (2002 and not approved). ....	16
Figure 5.1.	General plan of San Berillo project by Marcio Cucinella Architects, 2012.....	25
Figure 5.2.	"Porto 3" solution for Catania railway hub (2018) .....	26
Figure 6.1.	"Le Ciminiere" expo centre. (photo: Daniele Ronsivalle, 2019) .....	31
Figure 6.2.	The new FCE Underground Station Giovanni XXIII (in front of Central Station) and "Le Ciminiere" expo centre. (photo: Daniele Ronsivalle, 2019) .....	31
Figure 6.3.	The interior courtyard of the Old Customs transformed in public space that introduces to the waterfront (photo: Daniele Ronsivalle, 2019) .....	32
Figure 6.4.	The pedestrian area in Corso Martiri della Libertà, as a part of the San Berillo regeneration project.....	32

## List of Tables

Table 1.1. Research Framework .....	2
Table 2.1. Administrative definitions of Catania and its greater area (from larger to smaller) ..	6
Table 2.2. Population and surface area of different administrative levels.....	7
Table 2.3. Citizenship of inhabitants in Municipality of Catania .....	8
Table 2.4. Unemployment rate in central City and FUA .....	8
Table 2.5. Employment per sectors in Catania City and FUA (2011 census and 2016 inter-census data) .....	10
Table 2.6. Gross weight of goods handled in Port of Catania by direction - annual data .....	10
Table 2.7. Air passenger transport by Catania Airport in each reporting country .....	11
Table 3.1. Timeline of regulatory planning with potential effects on port city regeneration ....	17
Table 4.1. List of relevant stakeholders.....	18
Table 5.1. Plans and projects on the waterfront area by programme and year of starting .....	22
Table 6.1 Overview of the objectives and outcomes of the regeneration of waterfront area ..	28

## Abbreviations

AMT	Azienda Metropolitana Trasporti – Catania
BCA	Regione Siciliana – Soprintendenza Beni Culturali di Catania
DIMT	Regione Siciliana – Dipartimento infrastrutture, mobilità e trasporti
EC	European Commission
ENSURE	European Sustainable Urbanisation through port city Regeneration
ESPON	European Territorial Observatory Network
ESPON EGTC	ESPON European Grouping of Territorial Cooperation
EU	European Union
FCE	Ferrovia CircumEtna
ISTAT	Istituto Nazionale di Statistica – Italian National Statistics Institute
NUTS	Nomenclature of Territorial Units for Statistics
NOP	National Operative Programme
POT	Port Authority three-year operational plan
PRdSP	Port System strategic plan and masterplan in Italian Law
PRG	Piano Regolatore Generale – Urban masterplan in Italian Law
PRP	Piano Regolatore Portuale – Port masterplan in Italian Law
RFI	Rete Ferroviaria Italiana
SAC	Società Aeroporti Catania – Airport management company
ZES	Zone economiche speciali – Special Economic Zones

# 1 Introduction

This case study report for the port city of Catania (IT) has been prepared as a key input to the ESPON project ENSURE – European Sustainable Urbanisation through port city Regeneration.

The study consists of three tasks:

- task 1, based on statistical analysis and a survey among small and medium-sized port cities in Europe to identify the economic, social and environmental impact of port city regeneration.
- task 2, based on a case study comprising four European small and medium-sized port cities of Cork (IE), Aalborg (DK), Brest (FR) and Catania (IT) with the aim of collection and analysing the experience of the port regenerations in their territories
- task 3 based on the outcome of task 1 and 2 to develop a framework of good practice for implementing sustainable port city regeneration in small and medium-sized European cities

This case study is thus one of four case study reports of Task 2.

The purpose is here to describe and analyse the process of relocation of port activities and the regeneration of the port areas in the city of Catania (IT) and to identify main drivers and challenges of this process on the background of the specific geographical, urban, social and economic context in order to contribute to an overall assessment of what practise best suits cities like Catania.

In connection with the overall project, a research framework has been developed to indicate what are the main questions to be raised and identified answers during the project activities and the three main tasks. The main questions of the research framework are shown in the following table 1. More detailed questions are given in Annex 1.

Table 1.1. Research Framework

Questions
<b>Impact</b>
What are the impacts of port services relocation on small/medium size port cities?
What are the impacts of brownfield regeneration on small/medium size port cities?
What are the main challenges of small/medium port city regeneration?
<b>Policy and governance</b>
How can policy, support small/medium port city regeneration and mitigate challenges?
How can regulation support small/medium port city regeneration and mitigate challenges?
How can governance support small/medium port city regeneration and mitigate challenges?
What are the risks of port city regeneration?
<b>Finance</b>
What funding models support city regeneration? What works, and why?
What is the role of public finance in port city regeneration? How is value for money achieved?
<b>Implementation</b>
How can city visions for city dockland district regeneration be implemented? What works, and why?
<b>Citizens Involvement</b>
How can citizen be involved in the regeneration process? What works, and why?
<b>Catalysts</b>
What type of catalyst developments are employed to transform and provide a focus for citizens and economic activity? What works, and why?
What other important synergies should be considered?
<b>Knowledge Transfer and Lessons Learned</b>
What solutions exist to inspire/implement port city regeneration?

Source: Authors, ESPON ENSURE (2020)

On the basis of the four case studies, a synopsis will be prepared with the aim of providing an overview of similarities and differences in the experiences of the four case cities and hence to get a basis from which to develop inputs from the case studies to a framework of good practice.

The case study has been prepared on the basis of interviews with relevant stakeholders and on existing planning and other documents and literature. The process of data collection and reporting has currently been coordinated with the other case studies in order to ensure a common approach and reporting structure. The Municipality of Catania (IT) has currently been involved in the process and has read and commented a preliminary draft before submitting the final case study report.

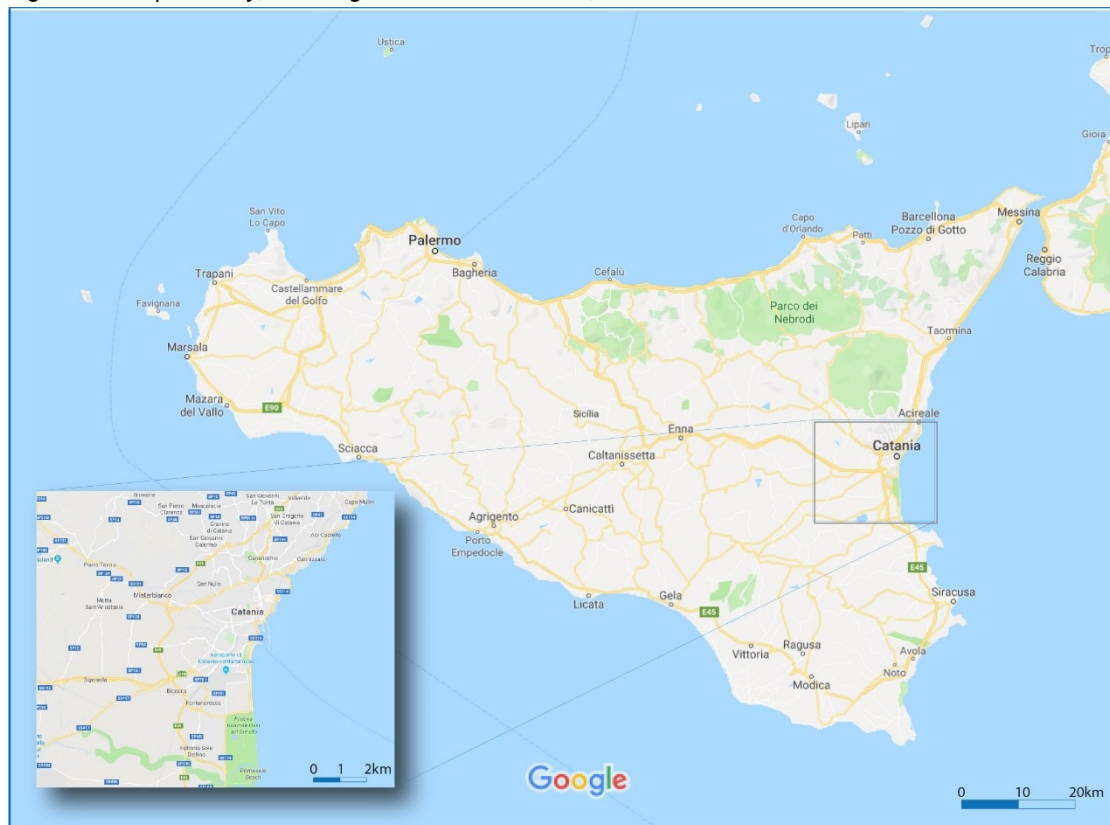


## 2 History and context

### 2.1 Scope of the case study

Catania is a medium-sized city of Eastern Sicily, the second in demographic dimension after the regional Capital city Palermo, (see Figure 2.1). It is the main city of the Metropolitan City of Catania, one of the ten biggest cities in Italy, and the seventh largest metropolitan area in Italy. The population of the urban area is 320,000 while the population of the Metropolitan City amounted to 1,116,168 inhabitants (ISTAT census 2011).

Figure 2.1 Map of Sicily, zooming on the Eastern coast, Ionian Sea.



Source: Authors, based on Google Maps.

The waterfront area is divided into three sectors:

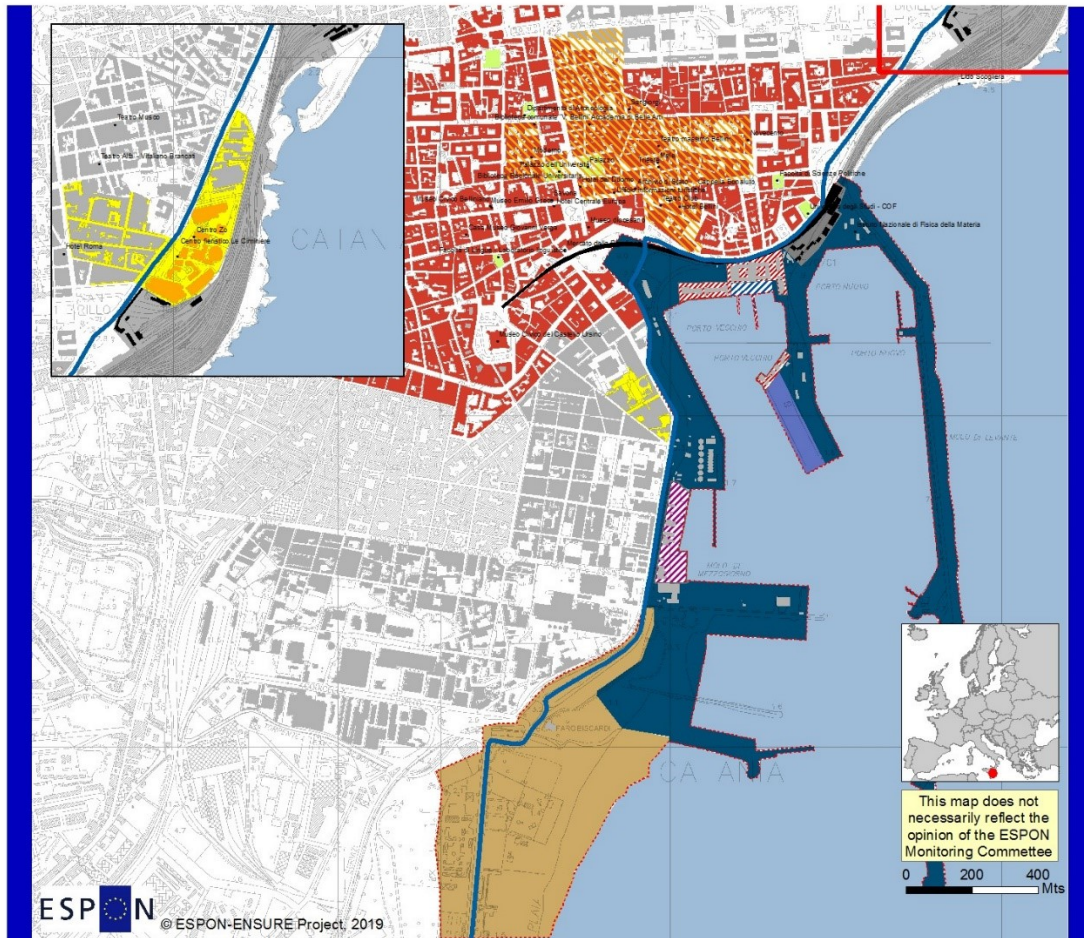
- Central waterfront, in front of the port district main areas.
- North Waterfront characterised by the central rail station and some former industrial regenerated areas.
- South Waterfront in front of the freight area, characterised by many abandoned former industrial areas.

Currently, the port entails five main functions:

- Passengers and cruises.
- Trade including multimodal container transport (ship to road), dry bulk, agricultural products trade and processing, refrigerated cargo trade.
- Little naval shipbuilding and repairs.

- Fishing.
- Maritime safety.

Map 2.1. Main urban functions in waterfront area.



### Urban functions

#### Main urban functions along the waterfront

- Historical center
- Historical villages
- Abandoned industrial areas

#### Urban metropolitan functions

- Cultural services
- Universities
- Expo center
- Historical markets
- Historical public gardens
- ▨ Cultural activities and nightlife
- "Playa" seaside touristic area
- Cliff seaside touristic area

#### Harbour functions

- ▨ Marinas
- Cruises
- Fishing
- Goods and passengers (Ro-Ro, Lo-Lo and PAX)
- ▨ Shipbuilding
- ▨ Office buildings

#### Mobility infrastructures

- Central railway station hub
- Platforms area
- ▬ Gateways to waterfront

Source: elaboration by the Authors (topographical data: Regione Siciliana, 2012)

Other functions are located in the Northern area, in particular, central rail station on the Caito cliff, an important regional expo centre called “Le Ciminiere”, some information and communication technology businesses, but with many abandoned areas and buildings.

In the Southern area, many abandoned industrial buildings, in particular, the cement plant is close to port area and it separates abandoned areas from the seaside called “La Playa”.

## 2.2 The history of Catania and its port

The city of Catania does not have a secure natural harbour. The frequent and violent storm surges eliminated any attempt to protect artificially the current site, until the XVII century project of King Alfonso de Aragon who realised a new artificial port.

The lava flow in 1669 and the earthquake of 1693 stopped the building process of the new modern port.

Starting from 1792, the so called "Zahara" project allowed to build a first arm of the outer dock, then in 1872 the "Fiocca" project was started and completed in the early 1900s with a large landfill to widen the land areas. The construction of the "south pier" (Molo di Mezzogiorno in Italian), since 1912, was completed in 1933; between 1933 and 1938 the port of Catania took on its present appearance.

*Figure 2.2. Eruption from Etna in 1669, as painted by Giacinto Platania*



Source: Riccobono F and Tempio A (2004).

## 2.3 Demography and socio-economic context

Concerning the administrative levels, the **Error! Reference source not found.** describes the current articulation in Sicilian regional context. It is one of the three metropolitan cities in Sicilian Region.

Catania port city is nested within different administrative scales as follows.

Table 2.1. Administrative definitions of Catania and its greater area (from larger to smaller).

Administrative area	Sub-administrative parts	Definitions
Insular Italy (NUTS1)	NUTS 2 regions: Sicily Sardinia	Responsible for and oversight of all levels of spatial planning and economic development.
Sicily Sardinia (NUTS2)	Sicily: Trapani, Palermo, Messina, Agrigento, Caltanissetta, Enna, Catania, Ragusa, Siracusa	Production of regional spatial and economic strategies including Metropolitan area plans The Catania NUTS3 perimeter is in <b>Error! Reference source not found.</b>
Metropolitan City of Catania	Municipalities: Aci Bonaccorsi, Aci Castello, Aci Catena, Aci Sant'Antonio, Acireale, Adrano, Belpasso, Biancavilla, Bronte, Calatabiano, Caltagirone, Camporotondo Etneo, Castel di Judica, Castiglione di Sicilia, <b>Catania</b> , Fiumefreddo di Sicilia, Giarre, Grammichele, Gravina di Catania, Licodia Eubea, Linguaglossa, Maletto, Maniace, Mascali, Mascalucia, Mazzarrone, Militello in Val di Catania, Milo, Mineo, Mirabella Imbaccari, Misterbianco, Motta Sant'Anastasia, Nicolosi, Palagonia, Paternò, Pedara, Piedimonte Etneo, Raddusa, Ragalna, Ramacca, Randazzo, Riposto, San Cono, San Giovanni la Punta, San Gregorio di Catania, San Michele di Ganzaria, San Pietro Clarenza, Sant'Agata li Battiati, Sant'Alfio, Santa Maria di Licodia, Santa Venerina, Scordia, Trecastagni, Tremestieri Etneo, Valverde, Viagrande, Vizzini, Zafferana Etnea	It has functions in coordination of local administrative units, for specific purpose.
Municipality of Catania	It is articulated in sub-local areas called "circostrizioni" for administrative proximity services to inhabitants. The port district is entirely into the municipality of Catania, but it is separated from it	Administers local government. It is responsible for spatial planning into its boundaries (port district is excluded)

Map 2.2 NUTS3 perimeter concerning Catania

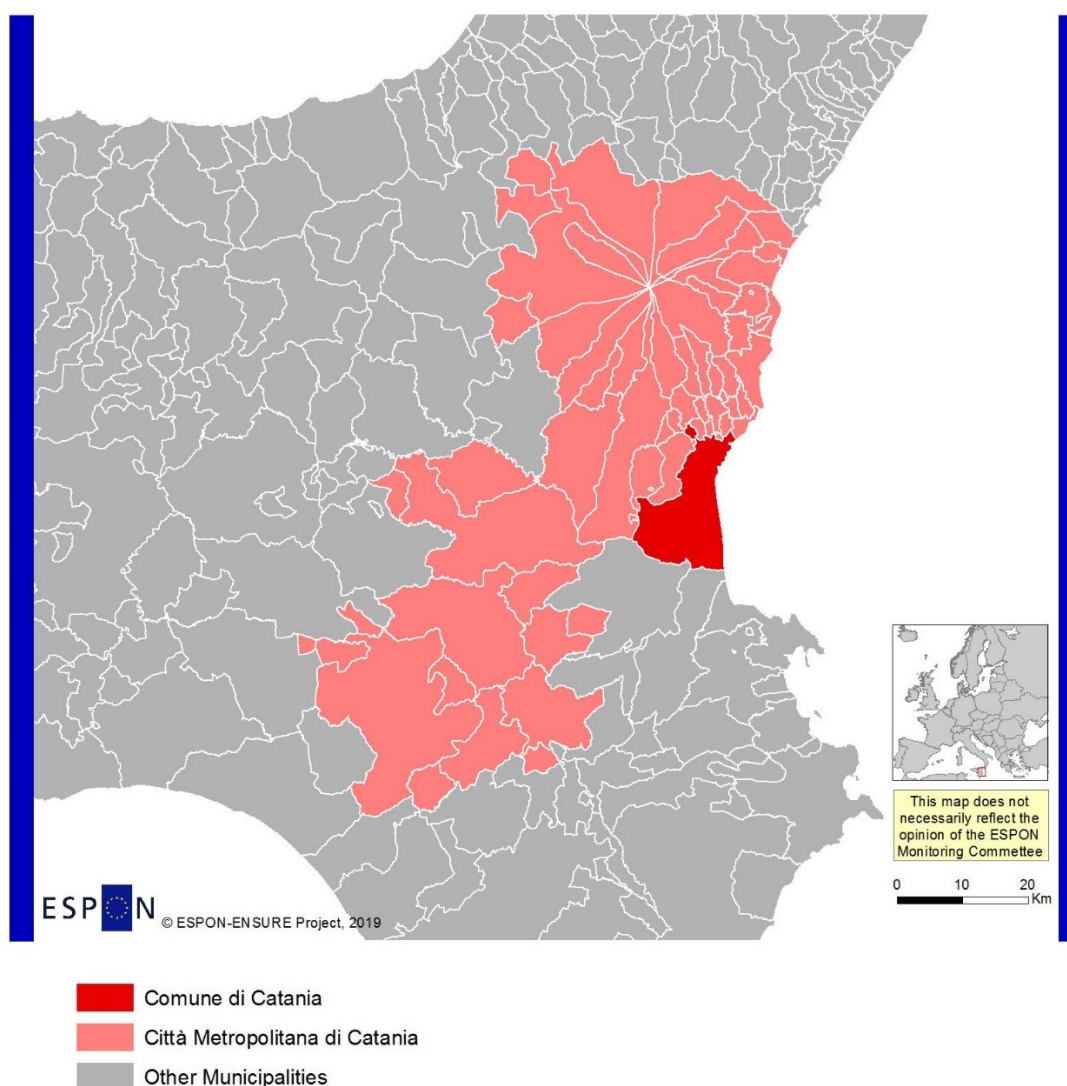


Table 2.2. Population and surface area of different administrative levels.

Administrative level	Population size	Surface area
<b>Città Metropolitana di Catania</b>	1,109,888 inhabitants (2017)	3,553 km <sup>2</sup>
<b>Comune di Catania</b>	311,712 inhabitants (2017)	180.88 km <sup>2</sup>

Source: ISTAT, 2018

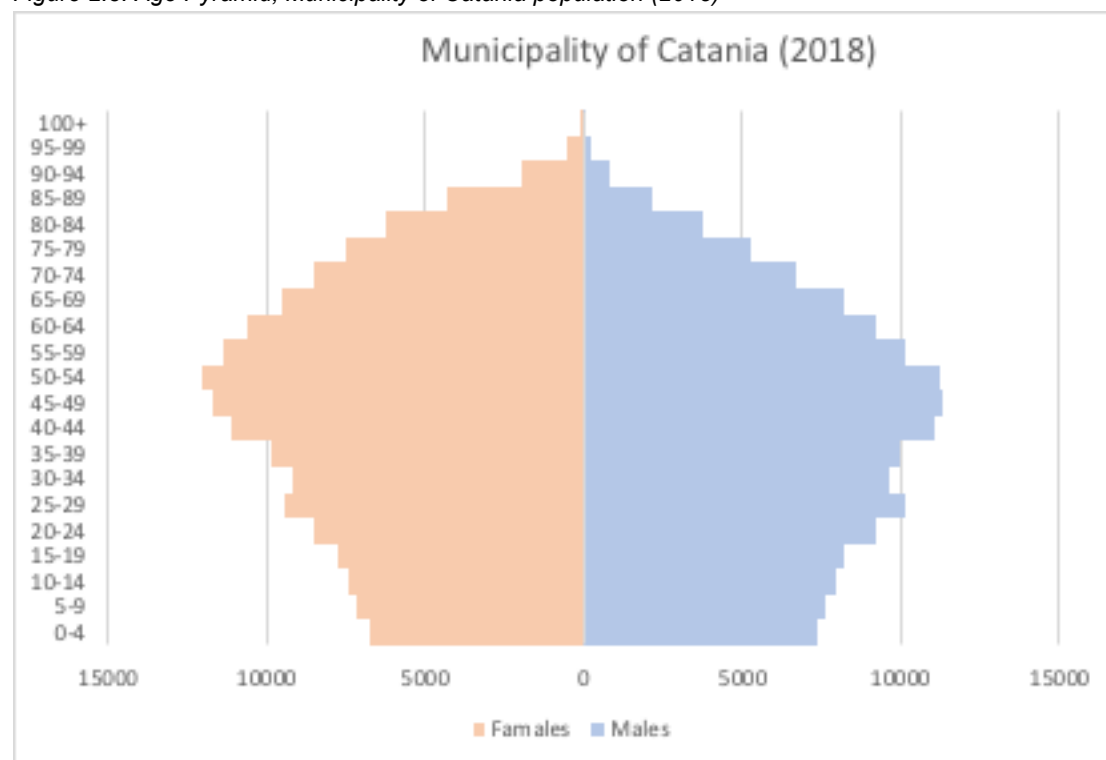
The population of the municipality has been stable for ten years, with an old demographic structure in 2018 figures. As evident in the age pyramid (Figure 2.3) the population is growing older and there is a strong socio-economic dependence on the active ages' groups.

On the other hand, the increase in foreign citizens residing in Catania is disruptive. Italian citizens increased from the 2011 census to the master data of 2018 (source EUROSTAT DB) by 5%; foreigners increase with double-digit percentages, in some cases by close to 100% as in Table 2.3.

The **real estate assets** are, as in a large part of Italy, owned by the households who live there, and this is an important indicator of general wealth and stability of the households.

Only about **17% of the workforce** has an education at university-level (levels 5, 6, 7 or 8 of the ISCED classification).

Figure 2.3. Age Pyramid, Municipality of Catania population (2018)



Source: elaboration by the Authors, from EUROSTAT DB (last update 2019/07/19)

Table 2.3. Citizenship of inhabitants in Municipality of Catania

	Catania City		
	2011	2018	Δ%
<b>Nationals</b>	284.254	298.076	5%
<b>EU foreigners</b>	1.617	3.113	93%
<b>Non-EU foreigners</b>	5.368	10.431	94%

Source: elaboration by the Authors, from EUROSTAT DB (last update 2019/07/19)

Catania has a very high unemployment rate, but has a strong tertiary and advance tertiary sector, thanks to the presence of strong players connected to information and communication technology sector (e.g. STMicroelectronics and the so called “Etna Valley”, and pharmaceutical plants and research centres in Catania City).

Table 2.4. Unemployment rate

	2011
<b>Unemployment rate</b>	27,3
<b>Unemployment rate, male</b>	24,6
<b>Unemployment rate, female</b>	31,1

*Source: elaboration by the Authors, from EUROSTAT DB (last update 2019/07/19)*

Table 2.5. Employment per sectors in Catania City and FUA (2011 census and 2016 inter-census data)

	2011, jobs	2016, jobs	Δ% 2011-2016
<b>Agriculture, fishery (NACE Rev. 2, A)</b>	n.a.	n.a.	-
<b>Mining, manufacturing, energy (NACE Rev. 2, B-E)</b>	13.032	12.290	-6%
<b>Construction (NACE Rev. 2, F)</b>	5.541	3.568	-36%
<b>Trade, transport, hotels, restaurants (NACE Rev. 2, G to I)</b>	34.068	33.427	-2%
<b>Information and communication (NACE Rev. 2, J)</b>	3.048	2.543	-17%
<b>Financial and insurance activities (NACE Rev. 2, K)</b>	3.188	3.124	-2%
<b>Real estate activities (NACE Rev. 2, L)</b>	680	843	24%
<b>Professional, scientific and technical activities; administrative and support service activities (NACE Rev. 2, M and N)</b>	12.409	14.119	14%
<b>Public administration, defence, education, human health and social work activities (NACE Rev. 2, O to Q)</b>	n.a.	n.a.	-
<b>Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies (NACE Rev. 2, R to U)</b>	8.535	n.a.	-

Source: Elaboration by the authors, from EUROSTAT DB (last update 2019/07/19)

### Trade and transport system

As regards foreign trade, in 2007 the Metropolitan City of Catania exported goods for a value over 835 million euros (73<sup>rd</sup> nationwide and second of Sicily after Syracuse) traded mainly with Europe (81.7%), Asia (6.7%) and Africa (4.3%). Imports were around 898 million euros (65-th of the Italian NUTS3 level) coming from Europe (62.7%) and Asia (24.1%). The sector of electronic hardware and components dominates the ranking of product most exported (makes up 42% of the total export). In second place we find pharmaceutical products that sell for 26.1%. No product categories are dominating the imports. The most important commodities are pharmaceutical products, (15.7%) metal products (11%), and other chemical products (7.6%). Among the first countries in the export market, we find France, Germany, the United Kingdom and Spain. As for the import, in first position we find Germany, France and the United States.

Table 2.6. Gross weight of goods handled in Port of Catania by direction - annual data

Year	Total	Inwards	Outwards
<b>2009</b>	1.283	535	748
<b>2010</b>	2.722	1.232	1.490
<b>2011</b>	2.729	1.413	1.316
<b>2012</b>	2.705	1.253	1.451
<b>2013</b>	2.812	1.294	1.518
<b>2014</b>	3.165	2.057	1.108
<b>2015</b>	3.359	1.737	1.622
<b>2016</b>	5.453	3.569	1.884
<b>2017</b>	6.090	3.929	2.161

Source: elaboration by the Authors, from EUROSTAT DB (last update 2019/07/19)



Table 2.7. Air passenger transport by Catania Airport in each reporting country

Year	National transport	Total international transport	Intra-EU	Extra-EU	Total transport
2008	4,725,277	1,358,288	1,152,622	205,666	6,083,565
2009	4,749,541	1,211,337	1,036,391	174,946	5,960,878
2010	5,068,008	1,269,108	1,068,394	200,714	6,337,116
2011	5,477,104	1,330,860	1,182,968	147,892	6,807,964
2012	4,808,872	1,406,673	1,215,311	191,362	6,215,545
2013	4,860,435	1,564,148	1,299,948	264,200	6,424,583
2014	4,833,165	2,020,954	1,753,885	267,069	6,854,119
2015	4,977,910	2,133,338	1,820,582	312,756	7,111,248
2016	5,445,229	2,472,366	2,127,698	344,668	7,917,595
2017	6,109,315	3,012,796	2,480,065	532,731	9,122,111

Source: elaboration by the Authors, from EUROSTAT DB (last update 2019/07/19)

### The quality of life

Despite the social and economic instability, the reduction in *per capita* GDP (from € 19,000 in 2008 to € 17700 in 2016 for the whole province of Catania) – and in particular the presence of crime – quality of life is perceived as acceptable, thanks to some elements that are:

- A high degree of home ownership;
- availability of a good quality environment and a favourable climate;
- proximity of the workplace (27 minutes on average from home to work in the FUA).

### 3 Laws, plans, and policies

The planning system in Italy and in Sicily – as autonomous Region – is hierarchical in nature, but the hierarchical system is not fully applied. The local authorities draw up the general town planning within their boundaries, but no regional or metropolitan plan are in force.

In Catania, the Port masterplan ("Piano Regolatore Portuale", PRP) and the General Town Plan ("Piano Regolatore Generale", PRG) are the plans that regulate the transformations of the port district (PRP) and the municipality (PRG), in an absolutely autonomous way without an integrated governance approach.

#### 3.1 The territory under the jurisdiction of the Municipality of Catania

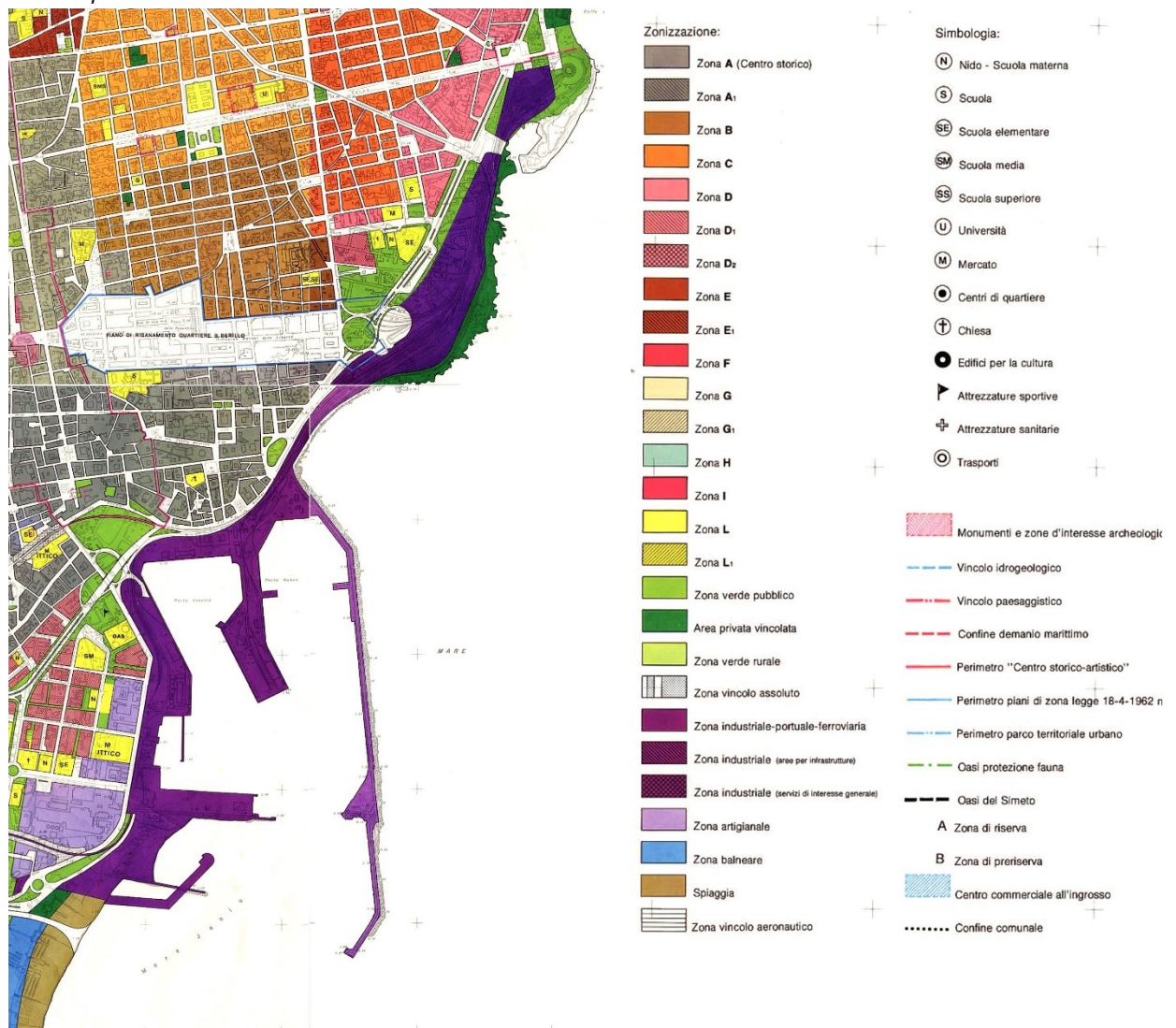
The Catania PRG was drafted in the 60s by Luigi Piccinato, master of Italian urban planning, and approved by the Sicilian Region in 1969 (see Figure 3.1).

This plan, even though it was very far-sighted in its initial formulation, is undeniably obsolete, and after 50 years it is being revised by the planning office of the municipality of Catania.

On July 16<sup>th</sup> 2019, the Mayor of Catania presented the strategic document (called in Italian law "**Direttive generali**") of the new PRG to the City Council. This is the first institutional step of the approval path. All the planning activities in municipal district of Catania are drawn starting from the Piccinato's PRG, but some specific partial revisions occurred in last thirty years:

- in the northern waterfront area near the central rail station, specific partial revisions to the Piccinato's PRG have been drawn up for the redevelopment of some areas by negotiations closed with a local variant.
- In the southern area, a partial revision of the PRG for improving the tourist activities and seaside functions of the "Playa" was drafted (approved in 2005 and updated in 2015), and then stopped for lack of interest by local investors.

Figure 3.1. Comune di Catania, Piano regolatore generale, edited in 1964: in dark violet the industrial areas that were modified by local variants for changing of planned land uses starting from '80s and in violet the port area.



Source: Comune di Catania (2019)

### 3.2 The port district

The current Port Masterplan approved in 1978 is in force within the Port District, approved before the establishment of the Port Authority of Catania pursuant to Law 84 of 1994.

The uncompleted review process of a new Catania PRP, in force of the Law 84/1994, was started before the issuing of the guidelines by the Ministry of Infrastructure, and it never reached the agreement stage.

The proposed PRP aims at a multifunctional layout, exceeding the forecasts of the plan of 1978. In 1998, waiting for a new PRP, two improvement projects were approved by the "Consiglio Superiore dei Lavori Pubblici" (ministerial council for infrastructures and public works). They

provide for a new dock south of the “Molo di Mezzogiorno” for commercial activities at the service of Ro-Ro traffic and containers.

In December 2003, the Port Committee (composed of all economic stakeholders working within the port district) approved the general outline of the new PRP.

The main transformations envisaged are:

- The extension of the Crispi pier for goods traffic;
- Renovation of the docks to the East and West of the "Sporgente centrale" mooring intended to accommodate cruise traffic;
- The construction of a maritime terminal to accommodate the cruise traffic on the same "Sporgente centrale" mooring;
- The extension of the quay of the Old Port to allow the construction of an underground new urban road to cross the area;
- Expansion of the Eastern pier.

Furthermore, a very strong building intervention is planned for service activities and housing, not connected with port activities and in competition with the city.

The plan envisages a port city interaction area. The strategic objective was to make port areas and infrastructures fully accessible to the city, where they do not need to be enclosed within the customs walls, and destined for urban uses, pleasure boats, fishing vessels, etc.

The sub-area Playa, on the other hand, is located in the south, with the dual function of a) integrating and supporting the marina and b) constituting a junction and a transition between the port and the Playa beach.

The functional categories identified in the three functional sub-areas of the Playa are related to:

- sports activities (with a predominant function of sports facilities),
- mobility (with the predominant function of parking),
- service activities with cultural and exhibition functions, recreational and leisure activities, hotels, trade and catering, tourism reception and promotion, residence, private offices and parking lots with a maximum new construction volume of 120,000 cubic meters.

Finally, in the southern area, where the 1978 plan envisaged the construction of a fishing port, the construction of a tourist port is now envisaged, defined as an autonomous territorial area. The new tourist port plans to accommodate about 700 pleasure boats with an average length of 12 meters.

Overall, the maximum volume allowed for new buildings within the marina is 164,700 m<sup>3</sup> which, added to the other volumetric indexes provided in the other two areas, determines an overall maximum volume increase of 1,109,150 m<sup>3</sup> on an area of 171,200 square meters.

After the drafting, a long period of political discussion on the new PRP ends with a stalemate, caused by a substantial unavailability of the Port Authority to modify the project, by reduction of the volumes and acceptance of the concerns by the stakeholders.

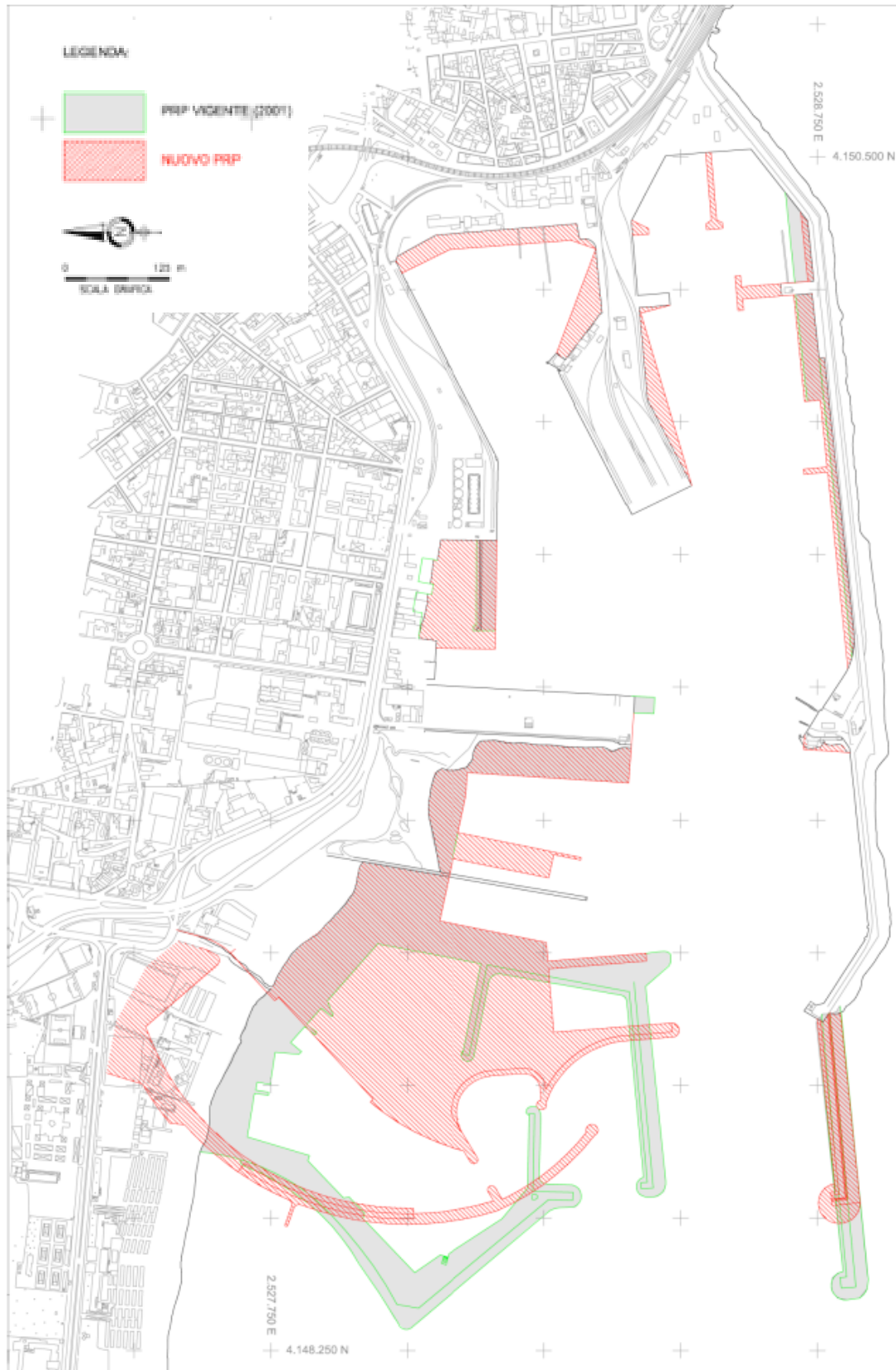
In 2012 finally, the Port Authority decided to accept some of the requests of the Municipality that prepared a new resolution to submit to the City Council.

Among the key points of the agreement, we can mention:

- the scaling down of the maximum volume and heights allowed in the Merchant, Playa and Waterfront sub-areas (about 50% less) than the original expected volume;
- the elimination of residence in the context of city-port interaction replaced by commercial, cultural and leisure functions;
- the definition of urban planning standards (highness, distances, volumetric parameters) identical to the maximum ones allowed in the municipal area;
- the specification that any new work, even urgent ones, must always comply with the plan;
- the attention of the project to the needs expressed by non-profit-making recreational-sport associations;
- greater attention to the hydro-geological situation of the Acquicella stream that flows into the port basin.

In 2013 this new version of the PRP was sent to the Catania City Council for the administrative evaluation. The Catania City Council did not respond positively because it was considered that the PRP provided for a general excess of new planned buildings. Currently the process of drafting the new PRP is suspended.

Figure 3.2. Comparative map of old Port Plan (1978 and in force) in grey and green; in red the planned PRP (2002 and not approved).



Source: Autorità di Sistema Portuale del Mare di Sicilia Orientale draft Port Plan, release 2002

### 3.3 The consequences of regulatory planning: contributions and obstacles

The described regulatory planning components are not able to produce a coherent and effective regeneration and it works by variants and projects.

The below Table 3.1 describes in detail how many plans and programmes were designed (approved/not approved) and what type of contents they have in the areas of the port and the city.

Table 3.1. Timeline of regulatory planning with potential effects on port city regeneration

Phase	Year	Plan or development program	Competence district	Adoption status	Main contents in port city areas
1 <sup>st</sup> phase: industrial and commercial expansion	1969	Piano Regolatore Generale (PRG) – Comune di Catania by Piccinato	Municipality	Approval	It defined industrial areas in the north waterfront
	1978	Piano Regolatore Portuale–Porto di Catania (PRP)	Port district	Approval	Masterplan of the commercial port
2 <sup>nd</sup> phase: starting regeneration	1984	Variation to Piccinato’s PRG for “Le Ciminiere” Exhibition Centre	Municipality	Approval	New Exhibition centre in the former sulphur refineries
	2002	Variation to PRG “San Cristoforo sud”	Municipality	Approval	Regeneration plan of near commercial port south area
3 <sup>rd</sup> phase: expansive redevelopment plans	2002	New Piano Regolatore Portuale – Porto di Catania (PRP)	Port district	Rejection by City Council	Complete re-design of the port district
	2005	Variation to PRG “Catania costa sud”	Municipality	Approval	Empowerment of tourism facilities in the southern area
4 <sup>th</sup> phase: working for consistent planning	2015	Plan of Use of the Maritime State Property, outside the port district	Municipality	To be approved	Detailed plan for Maritime State Property for tourism, sport and fishery activities outside the port district
	2019	New Piano Regolatore Generale (PRG) – Comune di Catania	Municipality	Strategic document adoption	New general strategy for regeneration

Source: authors

## 4 Main stakeholders

Table 4.1 clearly shows that public stakeholders are prevalent in the port city area.

The public sector comprises state-owned agencies and regional government departments. Each could have different roles and areas of expertise in relation to the regeneration of Catania waterfront. The main stakeholders are the Municipality, the Metropolitan City, the Port Authority and the state transport company RFI, that have the large areas along the port city.

The private property is composed on average by smaller areas, except in the case of ISTICA spa, that is the landowner of the San Berillo abandoned area, and in the case of Italcementi spa, that is the landowner of the abandoned cement plant (see map 4.2).

Table 4.1. List of relevant stakeholders

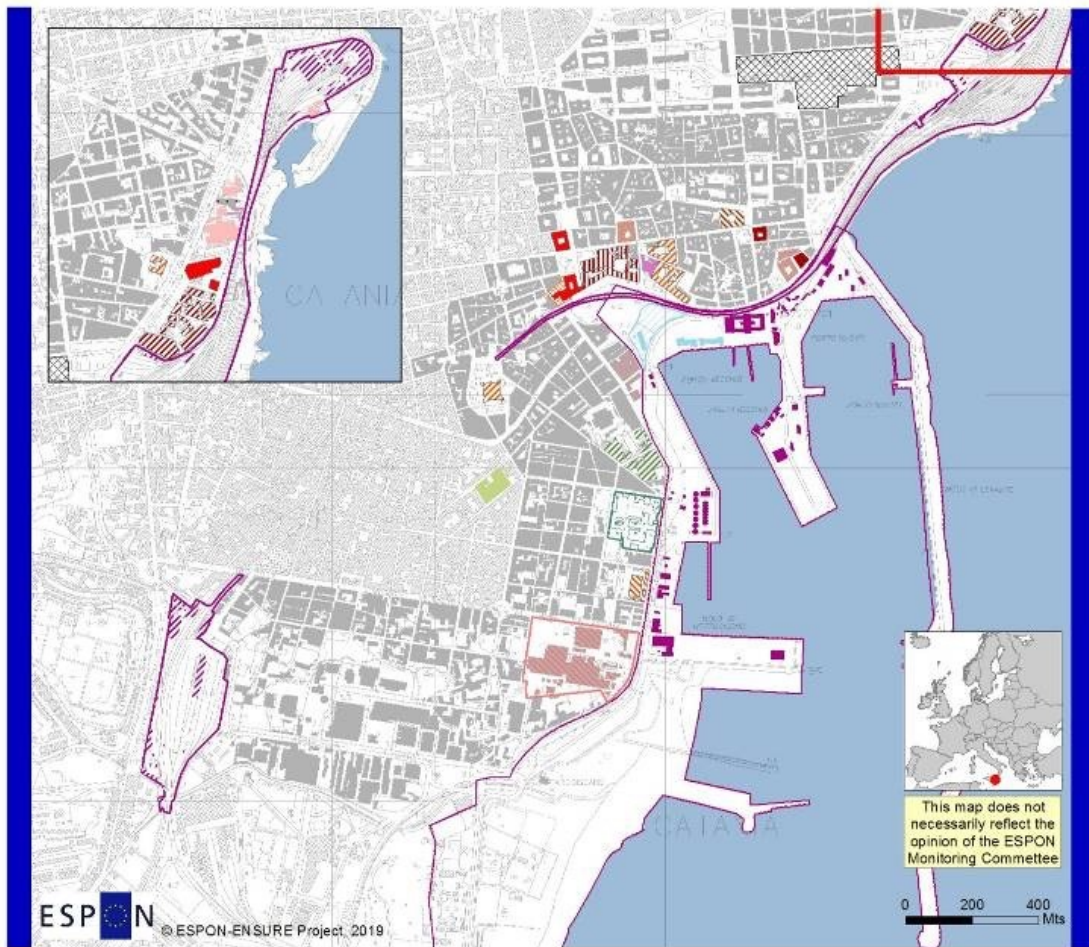
Stakeholder grouping	Name of the organisation	Organisation type	Role in relation to the port/city
<b>Public bodies</b>	Municipality / Comune di Catania	Local authority	Urban planning and policies In the waterfront area it manages the historical building of the town hall, the historical market “La pescheria” and the cultural department (House of Culture)
	Metropolitan City / Città Metropolitana di Catania	Local authority	Large scale and metropolitan territorial institution It manages “Le Ciminiere” Exhibition Centre
	Port Authority / Autorità di Sistema Portuale	Public body	Port authority management
	Regione Siciliana - Soprintendenza Beni Culturali di Catania (BCA)	Regional government body	Cultural Heritage protection
	Regione Siciliana – Dipartimento infrastrutture, mobilità e trasporti (DIMT)	Regional government body	Regional management of transport system
	Marina Militare - Capitaneria di Porto	Military body	Navy activities and SAR
	Guardia di Finanza	Military body	National Customs Police
	University of Catania	Public body	Research
<b>Semi-public companies</b>	Rete Ferroviaria Italiana – RFI	State transport company	Railway infrastructures
	Trenitalia	State transport company	Carrier for railway service
	Ferrovia CircumEtna – FCE	State transport company	Metropolitan transport system (subway, local railway and transport by road)
	Azienda Metropolitana Trasporti - AMT	Local transport company	Urban public transport carrier by road
	Società Aeroporti Catania - SAC	Commercial semi-state body	CTA airport management company
	Etna Hightech consortium	Commercial semi-state body	ICT consortium
	ASEC	Semi-public company	Energy company



Stakeholder grouping	Name of the organisation	Organisation type	Role in relation to the port/city
<b>Private sector</b>	Archbishopric of Catania	Religious body	It manages the sacred cultural heritage and in particular the museum of sacred art
	Fondazione Marella Ferrera	Private	Cultural foundation
	Fondazione Brodbeck	Private	Cultural foundation
	Fondazione Puglisi Cosentino	Private	Cultural foundation
	Associazione ZO	Private	Cultural foundation
	Etna Hightech consortium	Commercial body	ICT company consortium
	Wind telecomunicazioni	Private	TLC company
	ISTICA spa	Private	Property development company
	Acqua Marcia Antica Pia Real Estate	Private	Property development company
	Italcementi	Private	Controls significant land interests in south area

Source: authors

Map 4.1. Stakeholders, real estate and properties



**Stakeholders**

**Municipality of Catania**

- City hall
- Culture department
- Local Economies dpt.
- Historical market "La pescheria"

**Mobility and transportation**

- Port Authority
- Navy - Coast Guard
- RFI - national railway
- FCE - local railway and subway

**Other public stakeholders**

- Guardia di Finanza - Custom Police

**Cultural Institutions**

- Convitto Nazionale Cutelli
- Le Ciminiere expo center
- University of Catania
- Catania Archbishopric
- Other public owner

**Cultural organisations and foundations**

- Fondazione Marella Ferrera
- Fondazione Brodbeck
- Fondazione Puglisi Cosentino
- Associazione ZO

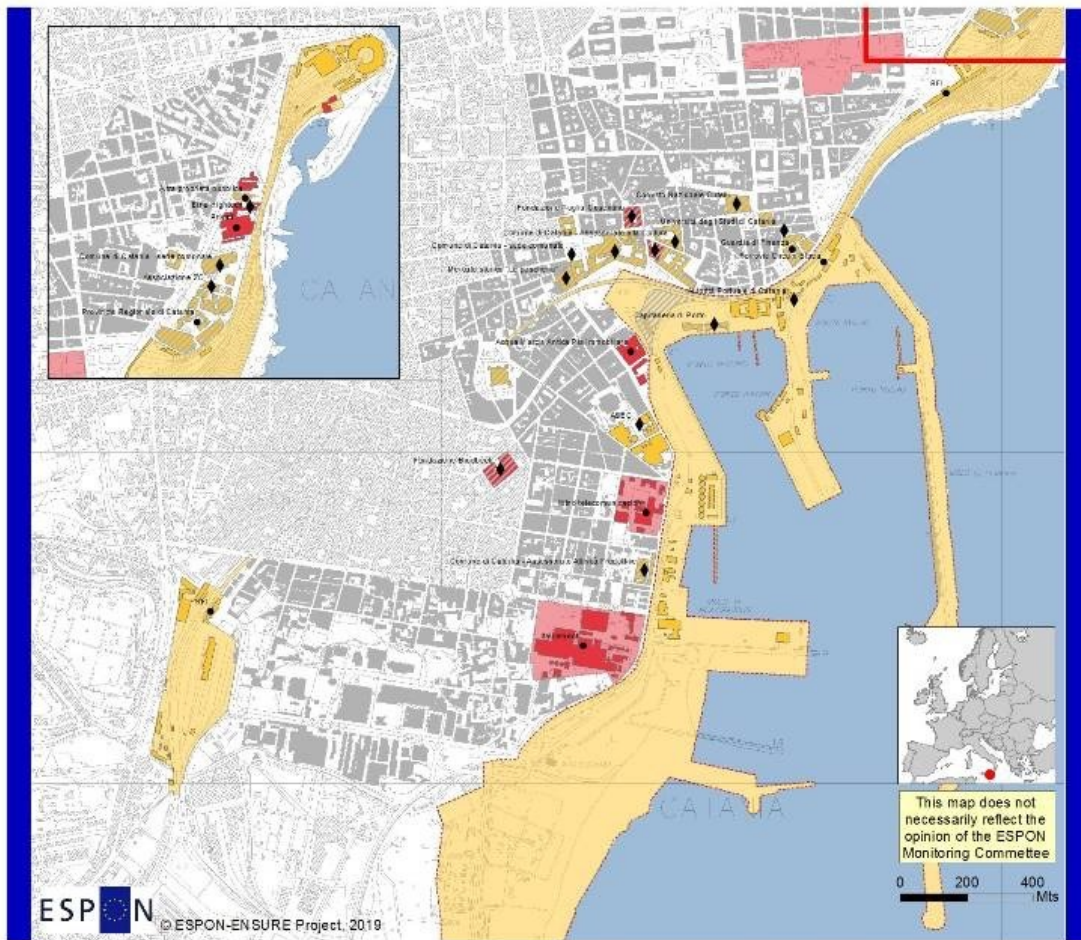
**Energy and ICT**

- ASEC
- Wind telecomunicazioni
- Etna Hightech

**Other stakeholders**

- ISTICA spa
- Acqua Marcia Antica Pia Real Estate
- Italcementi
- Altri privati

Map 4.2. Public and private stakeholders in Catania waterfront



Stakeholders type		Stakeholders headquarters	
<span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span>	Private stakeholder	<span style="display: inline-block; width: 10px; height: 10px; background-color: black; border: 1px solid black;"></span>	Headquarter
<span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span>	Public stakeholder	<span style="display: inline-block; width: 10px; height: 10px; background-color: black; border: 1px solid black; border-radius: 50%;"></span>	Local site
<span style="display: inline-block; width: 15px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); border: 1px solid black;"></span>	Non profit organisation		

## 5 From vision to realisation

### 5.1 Introduction

Renewed planning activity by Municipality of Catania – after the approval of the strategic document of General Town Plan – might be the condition for successful regeneration, but this is contingent on three key issues being addressed:

- The realisation times of the planned transformations are very long;
- Planned and realised transformations are often the result of specific variation of the in-force plan due to use funding opportunities or linking to great local development programs or projects
- Many projects are planned, but often uncoordinated.

However, regeneration in Catania produced some important outcomes:

- **“Le Ciminiere” expo centre**, realised in the ‘90s.
- The **new FCE underground** line that is active, and in continuous upgrading, across waterfront and city centre, recently opened after a long working period.
- The restoration of the **Old Customs building** regenerated in a multifunctional commercial space.
- **A new handling area** in the south area of the port district.

Taking into account all the incepted or planned project, we can define a general development trend with three main topics:

- The transformation of brownfield areas both industrial and residential ones with new housing and urban facilities.
- The development of mobility infrastructure along the northern area and the central waterfront.
- The development of a special economic zone.

For a complete state of the art, Table 5.1 shows a chronological list of programmes and projects of relevance for the waterfront area realised or not realised.

*Table 5.1. Plans and projects on the waterfront area by programme and year of starting*

Waterfront context	Original plans and functions	Adjustment program/project	Contribution to new vision	Status	year
Northern Area	Railway, port, industrial area by PRG 1969	“Le Ciminiere” expo centre and Centro ZO	Expo centre	Active	1984
		FCE underground line	Conversion of the FCE narrow-gauge railway line to underground line	Active	1986 (starting up)

Waterfront context	Original plans and functions	Adjustment program/project	Contribution to new vision	Status	year
		New judicial offices	Refurbishment of the former Poste Italiane headquarters in Viale Africa	Incepted / not implemented	2018
		Talent garden project – creative ecosystem	Conversion of the former Agricultural Consortium into a creative ecosystem	Incepted / not implemented	2019
	Recovery and development plan in “San Berillo” (San Berillo Plan 1957)	Mario Cucinella Architects regeneration project	Creation of services and public spaces and reduction of the residential volume foreseen by the original recovery and development project	Planned / not implemented	2012
Central Area	Railway port industrial area. No interaction with the historic city center (PRG, 1969)	EU Urban Program – Catania	Social policies and urban regeneration activities in support of physical restoration of the historic center of Catania	Completed	1994-1999
	Maintenance and development of commercial and industrial port system (Piano del Porto 1978)	National regeneration program “Porti&Stazioni”	Integration between the port, the railway and the city for the enhancement of urban facilities	Planned / not implemented	2005
	Maintenance and development of the railway line on the viaduct “Archi della Marina” (first project RFI 2002)	New RFI “railway bypass” program – final project	Moving from viaduct to the underground level of railway line from Central Station to Acquicella Station, including new underground Port railstation	Planned /in definitive design	2018
	Development of commercial and industrial port (Piano del Porto 1978)	Update of Port Authority policies	Restoration and new function of the Old Customs building in multifunctional commercial space	Active	2011
			New handling area	Active	2016
			Strengthening and specialization of the ports of Catania and Augusta	Incepted as general policy / Not planned	2016
			New public spaces in the city-port border areas	Incepted / not implemented	2016
Southern Area	New railway line connecting the central station, the port and the “Acquicella” freight station along via Domenico Tempio and via Acquicella-porto (first project RFI 2002)	New RFI “railway bypass” program - final project	Moving from viaduct to the underground level of railway line from Central Station to Acquicella Station, including new underground Port rail station	Planned	2018

Waterfront context	Original plans and functions	Adjustment program/project	Contribution to new vision	Status	year
	San Cristoforo artisan activities area (PRG 1969)	“San Cristoforo” regeneration plan	Improvement of the housing quality in degraded contexts	Planned / not implemented	2002
		ZES Catania	Strengthening of the local economic activities	Planned	2019

## 5.2 Northern area transformations

### 5.2.1 Old sulphur refineries regeneration

The Northern area is characterized by a very extensive historical system of sulphur refineries, activated in the nineteenth century and connected by rail to the Central Station and the area of Caltanissetta, in the inner Sicily, where sulphur was extracted.

Completely abandoned since the mid-seventies, starting in 1984, a group of these buildings, located between Viale Africa and the northern part of the Catania Central station on the side of the railway line to Messina, were the subject of a regeneration project, developed and financed by Città Metropolitana di Catania, (former Province of Catania). The project involved a total restructuring of the area, maintaining its maximum structures and above all the tall brick chimneys, after securing them. These surviving structures provided the inspiration for the name given to the exhibition centre. The overall development, with an area of almost 25,000 square meters, has been used as a multi-purpose centre. The area is subdivided in three functions: exhibition, museum and congress.

Some dimensional data about “Le Ciminiere” expo centre: total surface 29,192 sq meters, covered surface 16,769 sq meters, expo surface 9,000 sq meters.

### 5.2.1 Ferrovie CircumEtna railway underground line

Ferrovia Circumetnea (FCE) was originally a narrow-gauge railway consisting of a ring line around Etna, which connects all the cities around the mountain.

The Catania underground line was born from the substitution project with the simultaneous burying of the urban route of the original FCE line. The first kilometres to be built, in fact, follow the old route of the FCE from the port to the Borgo station which, in the last century, was entirely on the ground level. The works started on December 13<sup>th</sup>, 1986 and on June 27<sup>th</sup>, 1999, after almost 13 years, the first section was inaugurated.

In 2000, the works started on the new Galatea-Giovanni XXIII section near “Le Ciminiere” expo centre and the Central Station.

After many years of work, the new track, crossing the waterfront area, was opened in December 2016. Thanks to this, in the last three years, FCE underground line has been having about 6.5 million passengers a year.

### 5.2.2 San Berillo regeneration masterplan

The regeneration plan in “San Berillo” has a very long history.

After the Second World War, a large area very close to the historic centre of Catania, near the archaeological area of the Roman amphitheatre in Piazza Stesicoro, was completely gutted to be rebuilt.

Finally, in the Fifties, the demolition was carried out. The promise of connecting to **the station and the sea** was partially produced, with the realisation of Corso Sicilia and Piazza della Repubblica.

This plan was not realised, and after many years and legal disputes between the Municipality and ISTICA – the development company that owns the areas – in 2004, a commission of experts was established by the Municipality to find a solution for this situation. In fact, the new laws and regulations had made the project no longer viable.

The conclusion of the commission describes the essential elements of the last version of the regeneration plan – in terms of volumes, functions and planned land uses – and the owners presented a new masterplan, signed as agreement between Municipality and ISTICA in 2008.

The final project, by Mario Cucinella Architects, was drafted in 2012.

The project foresees different uses, mainly housing, cultural (in the southern area) and commercial (in northern area) along the new tree-lined avenue of Corso Martiri della Libertà, hospitality-hotel, public green areas, and a new street market location.

The project involves the construction of underground parking lots and the next step will concern the construction of these parking lots.

*Figure 5.1. General plan of San Berillo project by Marcio Cucinella Architects, 2012*



*Source: MCA Architects 2012, official website [www.mcarchitects.it](http://www.mcarchitects.it). (accessed 2019/07/15)*

### 5.3 Central waterfront transformations

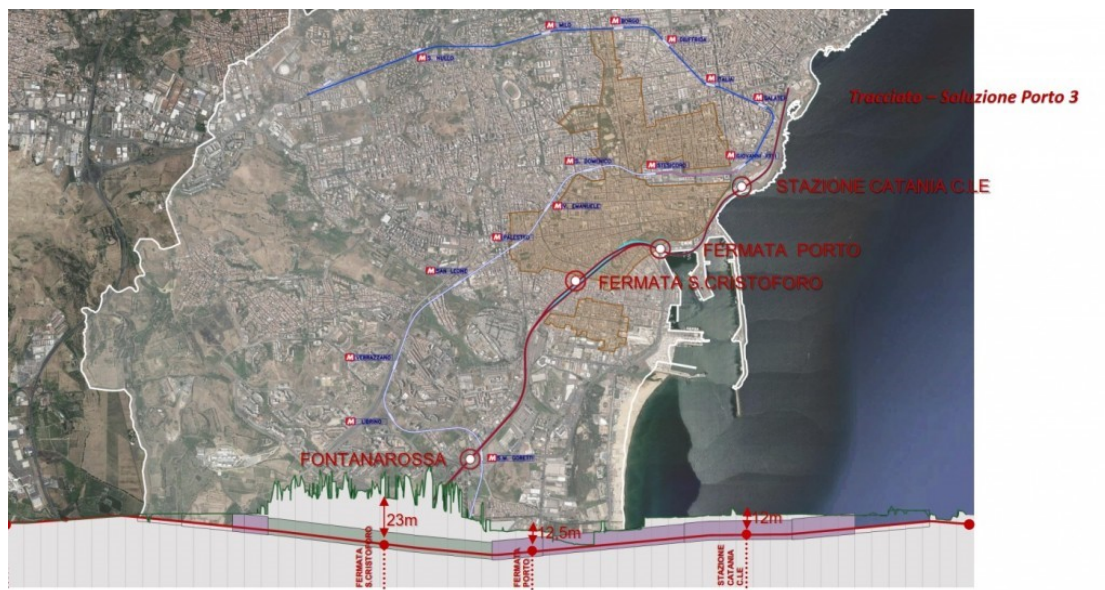
The regeneration of Central waterfront is mainly reliant on the realisation of the approved project for the railway line by-pass and the possible implementation of the results from a recent urban design competition for the regeneration of the waterfront. Furthermore, some completed interventions have not been able to trigger a regeneration of this area. These are:

- the **“Old Customs Building”, refurbished** in 2011 by Port Authority as a filter security area for cruise tourists,. The refurbishment project is not part of a plan, but only a sort of “beacon” to stimulate the transformation.
- the **“Mulino Santa Lucia” former mill building** purchased in the early 2000s by the *Acqua Marcia* group and transformed into a business centre, with offices and shops. After many legal disputes about the administrative regularity of the project, since 2016 the building has been again available to the owners, but it has suffered the action of vandals and disrepair of the last ten years, and so it is not usable.

#### 5.3.1 New RFI “railway bypass” program

With the aim of putting at least a partial remedy to the *caesura* between the sea and the historical centre, defined by the “Archi della Marina” viaduct, RFI, Rete Ferroviaria Italiana, over the last few decades, had proposed a design hypothesis, within the scope of realisation of a by-pass line, which provided for the burying the rail tracks along the Caito cliff as well as the central station. In 2013, RFI formally started working on four new planning options shared with the Municipality and finally the new solution, called "Porto 3", was approved by the City Council on May 10th, 2018.

Figure 5.2. "Porto 3" solution for Catania railway hub (2018)





Source: RFI (2018), downloaded by <http://catania.mobilita.org/opere/passante-ferroviario-nodo-di-catania/> (accessed on 2019/01/03)

The negotiation activities put in place for choosing the final solution are described by each interviewed stakeholder as an important innovation in procedures to define the project, and all stakeholders agree on the success of the negotiation process, based on a steering committee. The main aspects that characterise the new solution, in a 4,790 m long path, are strongly related with the regeneration of the port city interface area along the city wall of the historical centre:

- Improvement of the entrance to the “Duomo/Porto” stop from Piazza Paolo Borsellino;
- Transformation of the disused railway viaduct section between Piazza Borsellino and Castello Ursino into a cycle / pedestrian area aimed at favouring the continuity of the urban fabric spaces.

The new railway line and the new stations project, in the aboveground parts, will also be affected by interventions of the redevelopment of the waterfront and of the interaction areas of the city with the port and the railway.

### **5.3.2 The competition for waterfront port city interface**

The Municipality of Catania proposed for the year 2019 a call for tenders for a programme of urban redevelopment that can integrate the interaction areas of the City of Catania with the port district and the railway.

The call for tender was aimed at defining an "optimal methodology" for the redevelopment of the entire urban waterfront.

On July 18, the results were published. Six groups participating in the call, a winning project, a second and a third classified. The results will be used by Municipality of Catania and the Port Authority as a suggestion for the redevelopment.

At the date of delivery of this report, the contents of the winning projects are not yet available for publication.

## **5.4 Southern area transformations**

### **5.4.1 The Special Economic Zone**

Nowadays, the perimeter and location of the Special Economic Zone is not yet available. The Sicilian Region approved in 2019 the Zone that will cover the southern area of the port, but the contents of the project have not been published yet.

## 6 Regeneration process, project and outcomes

Taking into account the state of realisation of the projects described in the previous chapter, there are not many outcomes, defined as direct results of the regeneration process. However, this chapter describes them and tries to define the elements necessary to complete the regeneration. For the last 25 years we have had no systematic realisation of all the outcomes of planned projects and programs. Typical reasons for the lack of outcomes are:

- A drafted project or programme has not been approved and implemented;
- A project has been stopped by judicial proceedings for supposed illicit activities;
- A building refurbishment was not completed due to external problems, for example, a funding problem.

Table 6.1 summarises the objectives and concrete outcomes of the regeneration process in the waterfront port area, articulated in Northern, Central and Southern areas. The positive outcomes are marked with a green colour, and an orange colour indicates where the objectives have not yet been met.

Table 6.1 Overview of the objectives and outcomes of the regeneration of waterfront area.

Waterfront context	Objective	Outcome
Northern Area	New Expo centre in former sulphur refineries	Le Ciminiere expo centre and ZO cultural centre. Very active cultural centres. Long-time realisation but very positive solutions for the area
	Conversion of the FCE narrow-gauge railway line to FCE underground line	FCE metropolitan underground line, in continuous upgrading, reached a very high level of use (from 500,000 passengers in 2015 to 6,5 million of passengers in 2018). In Giovanni XXIII station (near Central rail station and "Le Ciminiere" expo) it produced a first step of urban spatial regeneration.
	Refurbishment of the former Poste Italiane headquarters in Viale Africa	Still no outcomes. Waiting for accompanying actions.
	Conversion of the former Agricultural Consortium into a creative ecosystem	No outcomes. A good idea, but the owners asked for guarantees to the developers.
	San Berillo - Creation of services and public spaces and reduction of the residential volume foreseen by the original recovery and development project	Still no outcomes. The Municipality started realisation of some pedestrian areas, but the core project by private developers will start after public parking realisation.
Central Area	Restoration and new function of the Old Customs building in multifunctional commercial space	An interesting space for sharing activities between port and the city, but useful only with cruise tourism flow
	New handling area	It extended the handling surface for transshipment, but it suffers for a not extended area.
	Social policies and urban regeneration activities in support of physical restoration of the historic centre of Catania	Some outcomes produced by Urban EU programme, but only during life of the programme.

Waterfront context	Objective	Outcome
	Integration between the port, the railway and the city for the enhancement of urban facilities	Still no outcomes. Waiting for accompanying actions.
	Moving from viaduct to the underground level of railway line from Central Station to Acquicella Station, including new underground Port rail station	Still no outcomes. Waiting for accompanying actions.
	Strengthening and specialization of the ports of Catania and Augusta	Still no outcomes. Waiting for accompanying actions.
	New public spaces in the city-port border areas	Still no outcomes. Waiting for accompanying actions.
Southern Area	Moving from viaduct to the underground level of railway line from Central Station to Acquicella Station, including new underground Port railstation	Still no outcomes. Waiting for accompanying actions.
	Improvement of the housing quality in degraded contexts	No outcomes produced by the regeneration plan
	Strengthening of the local economic activities	No outcomes. ZES will start in 2019

## 6.1 Regeneration outcomes in the Northern area

In the '80s and prior to the start of the regeneration process, the waterfront area was characterised by the presence of contaminated industrial areas. The state of disrepair, in particular after the end of sulphur and cement production, made this part of the city a 'no go zone' for its inhabitant.

The security and safety necessities of the industrial and commercial area were the reasons for this physical separation between city, industrial areas and port infrastructures: it produced a mental map of the city in which inhabitants were far from the waterfront.

When the project for "Le Ciminiere" Expo centre started, it was the first main urban function of the waterfront, and Catania then started to rediscover this area: "Le Ciminiere" expo centre today is an important pole in the metropolitan and regional context for its activities throughout the year.

In the same area, since 2016 **the FCE underground line has been completed**, and the completion in the inner city is positively affected by the last funding and implementation steps. In fact, the FCE line develops the vision of a connection in the original plan for San Berillo, because it goes to Piazza Stesicoro, under Corso Sicilia towards the airport (in progress) through the inner city.

In Northern area, we can consider the "**San Berillo**" **regeneration project** as an incomplete outcome. The general vision in the '50s was to connect the city centre to the central station area by a boulevard. In the '70s only the first track (Corso Sicilia and Piazza della Repubblica)

was constructed, and in 2019 in Corso Martiri della Libertà near the rail station, four pedestrian areas and gardens were inaugurated, as the first "colony" of the second step of the project.

Figure 6.1. "Le Ciminiere" expo centre.



Source: Daniele Ronsivalle, 2019

Figure 6.2. The new FCE Underground Station Giovanni XXIII (in front of Central Station) and "Le Ciminiere" expo centre.



Source: Daniele Ronsivalle, 2019

## 6.2 Regeneration outcomes in the Central waterfront and in the Southern area

In the central area, the only realised and operating transformation is the refurbishment of "Old Customs Building", into the Port District. It is not the outcome of a complete regeneration plan, but another "beacon" produced by the Port Authority to stimulate the transformation.

This transformation produced a **security area that connects a cruise tourist area** to the city centre with a little commercial area and incoming services; it hosted the museum of local puppets theatre, called "Opera dei Pupi", but the owners decided to transfer the museum.

**In southern area**, some outcomes about the new mooring and handling area for goods and containers have been realised. This is considered as a necessary transformation waiting for the new PRP. This transformation is complete and operating.

Figure 6.3. The interior courtyard of the Old Customs transformed in public space that introduces to the waterfront



Source: Daniele Ronsivalle, 2019

Figure 6.4. The pedestrian area in Corso Martiri della Libertà, as a part of the San Berillo regeneration project



Source: [catania.mobilita.org](http://catania.mobilita.org/2019/03/29/foto-c-so-martiri-della-liberta-aperte-le-prime-aree-a-breve-il-bando-per-piazza-della-repubblica/) (available at <http://catania.mobilita.org/2019/03/29/foto-c-so-martiri-della-liberta-aperte-le-prime-aree-a-breve-il-bando-per-piazza-della-repubblica/> accessed 2019/03/30)

## 7 Economic, social and other impacts

This section considers the expected and observed impacts of the regeneration process in Catania. Impacts are here defined as the indirect, medium- and long-term results of the regeneration. Due to the timing over a long period, long-term impacts are not visible. However, the potential impacts of the planned and ongoing regeneration over the coming years are discussed below.

### 7.1 Attraction and integration of new inhabitants

The new metro line has brought **6 million passengers** to the area in the past two years. According to FCE statistics, they had never used public transport in the city before. Furthermore, the urban space generated by the new FCE metro station has produced **a new public place** in Piazza Giovanni XXIII, making the square a more friendly space for travellers and city users.

### 7.2 Attraction of new functions

"Le Ciminiere" expo centre has certainly produced the most positive and consolidated outcome as a location for culture and leisure activities.

The Old Customs Building for some years after opening has been place of many commercial and recreational activities, but remains isolated from the city centre, due to presence of the "Archi della Marina" viaduct that is cutting the transversal connection between port and the city. Other functions could be attracted in the buildings that are abandoned to date, e.g. the former mill "Mulino Santa Lucia".

### 7.3 Preservation of city port heritage

Many realised and ongoing projects (will) have impacts on port heritage. Protecting the cultural heritage will be critical to the promotion of a sense of identity and it should be a part of a further development that balances transformations with heritage protection. Like in "Le Ciminiere" expo centre and in Old Customs building, this will be relevant in "Archi della Marina" viaduct regeneration project in relation to the historical centre.

### 7.4 Urban qualities

The urban design frameworks along all the waterfront suggest that it will become a live-work-play-visit destination, but the creation of a sense of place is critical to ensure development momentum is sustained and increased.

Despite “Le Ciminiere” expo centre and the Old Customs Building, the waterfront area is still today a “peripheral place” due to many incomplete regeneration projects.

To date, the abandoned areas and buildings that are expected to be transformed, implicate negative impact, e.g. squatting, crime, etc.

## **7.5 Changes in the mental maps of the city**

All the ongoing transformation will contribute to change the mental map of the city, but in particular, we need to consider the potential effects of “Archi della Marina” viaduct transformation into a cycle / pedestrian area: it is a landmark in the waterfront area and its transformation will aim at favouring the continuity of the urban fabric spaces from the rail station to the Ursino Castle and from the harbour to the historical centre.

The changed use of the viaduct will definitively modify the mental map of the port city.

Thanks to the improvement of Augusta port and to the new Special Economic Zone areas, port activity relocation could contribute to reconnecting the central waterfront to the historical centre.

## **7.6 Regional, national and international impacts**

The programmes for infrastructural updating have produced relevant impacts on the accessibility to the city centre from the hinterland. The new FCE underground track that crosses the waterfront areas, opened in December 2016, and has been having about 6.5 million passengers a year.

The ongoing programmes about national railway and the update of port handling areas will contribute to improve the relevance of the port in EU transport policies, while the relocation of some port activities to Augusta port could change the regional relevance of Catania port.

# **8 Challenges, risks and drivers for change**

Catania has many conditions favourable to port regeneration but is also characterised by a number of key challenges. These challenges relate to the delivery of strategic infrastructure and infrastructural update, relocation of some port operations to Augusta, issues of public landownership, using of former plant sites near the port, and the property investment and development mainly in “San Berillo” regeneration project.

## **8.1 Demography and population**

The population along the waterfront is relatively low due to factors such as:



- Tourism and nightlife activities that disturb the residential life.
- A reduction of local economic activities connected to the port (e.g. fishery).
- People prefer the suburbs and the towns on the urban belt.

The presence of only tertiary and quaternary service activities increasingly reduces the presence of inhabitants and, therefore, the possibility of having the strength to positively revive relations between city and the port.

## 8.2 Environment

Environmental protection of seaside areas (cliff, port, and beach) is a very important challenge in Catania waterfront regeneration. There is not a situation of toxicity in brownfields, but the current abandonment could aggravate the environmental quality.

Catania needs to preserve the quality of the rivers that flow along the waterfront (Buttaceto River and Amenano River that flow into the port) and needs to reduce the abandonment of former industrial areas. The Special Economic Zone will contribute to improve the current status, in particular in the cement plant area.

About the environment, we must consider the earthquake, seaquake and volcanic risks, that in the centuries modified the shape of the waterfront.

## 8.3 The planning processes, models and tools

**Planning processes, models and tools** can either be effective drivers of regeneration, supporting urban planners in their ambitions; or challenges if they appear ineffective.

Mainly, the current “Piano Regolatore Generale” is not consistent with the recent needs of regeneration because it is based on a vision from the ‘60s. Finally, the new (recently approved) PRG Strategic Document will be a good plan for an integrated regeneration because it forecasts relevant waterfront regeneration actions.

Catania has a specific situation related to **real estate developers’ ambitions**, in the San Berillo regeneration project. The judicial case and the reshaping of the project from the early ‘50s with the reduction of the building volumes, led to strong tensions between the private actors and the municipality. Now the situation has improved, but the project has not been realised by real estate developers yet.

The Santa Lucia Mill is in the same situation. The development in the ‘90s produced urban and social degradation caused by the **abandonment** of the new building.

Many other buildings owned by real estate developers in the northern area are abandoned.

The uncertainties of the future plans and interventions make the investors less interested and make them choose to wait and see.

#### **8.4 The role of public policy and governance**

Nowadays, the public sector in Catania has a very strong role in driving the regeneration process due to public actors' willingness to regenerate and ability to collaborate and define a common vision for urban regeneration, and access to many planning tools as previously described. This is the central focus in the ongoing plans and programs as keys for development e.g. "Piano Regolatore Generale", infrastructural improvement and urban regeneration.

The role of the Port Authority is changing. Since 2016 the Port Authority has governed the ports of both Augusta and Catania, and as a result of a relocation of port activities to the port of Augusta, the trade activities in Catania have decreased.

#### **8.5 The role of public policy: infrastructure delivery**

The actual synergy is about the governance activities for railway transformation in Catania Central Station hub. The steering committee activated by RFI with Municipality, Port Authority and Heritage Regional Office has speeded up the approval of the new line and has answered criticism connected to archaeological and architectonic heritage protection.

On the other hand, the lack of interaction between the Port Authority and the Municipality is strengthening the separation in central waterfront area, that remains a challenge.

#### **8.6 The involvement of citizens**

In the recent past, there was usually no direct involvement of citizens in the transformation process, and this was a challenge for the port and the city.

Since 2018, the Municipality has taken serious steps to involve all groups of citizens interested in urban planning. This created interesting results that were integrated into the Strategic Document of the new PRG.

#### **8.7 Funding opportunities and initiatives**

Catania enjoys numerous lines of funding by regional, national and EU organisations, mainly in infrastructural programs: the national railway improvement, the new underground line and some improvement on port handling areas **are realised by public funding.**

In the last years **the National Operative Programme called “Città Metropolitane”** introduced new opportunities about quality of life in terms of smart accessibility, social facilities, and sustainable public transport system.

## 9 Conclusion and lessons learned

For the last 30 years, starting from “Le Ciminiere” regeneration project, the pace at which redevelopment has been occurring, has not increased and this is generally due to delays in the **urban and port planning**. The importance of an updated local planning framework that is supportive of local ambitions has become apparent in relation to Catania. In particular only the 2019 Strategic Document of General Town Plan will provide the context within which more strategic planning can now occur across the port and city district and further across the metropolitan area. The new General Town Plan strategies require that all waterfront regeneration should be in a harmony: this may be a game changer in terms of planning for the former sulphur refineries, for the rail station area, for the central waterfront and for the port district in the southern area and the former cement plant, as there is potential to put much more emphasis on brownfield redevelopment, and perhaps a sequential planning approach, as a core strategy for the city. In particular, the results of the recent architectural competition for the waterfront should be integrated into the choices in urban planning with a complete technical and economic feasibility process.

In this renewed planning activity, citizens’ involvement is no less important both in idea generation and in implementation steps. The results of involvement activities need to help ensuring an in-depth, well-timed assessment of the needs and preferences of the citizens and users for potential planning elements.

The **relationship between the Port Authority and Municipality of Catania** is critical in the unfolding of the story of regeneration, and in enabling future possibilities. In particular, regeneration of part of the central waterfront and of the southern area can only happen once a new Port Masterplan has been approved. Managing these public sector relationships appropriately is a key to enabling change, particularly when governance structures require authorities (mainly the Port Authority) to operate like a business and at the same time contribute to sustainable, social, economic, and environmental urban development. Basically, the Port Authority cannot sell the area of the port, as it is owned by the state, and therefore, an increased value of the land cannot contribute to the realisation of profit, but improvements of the port district areas may produce positive effects in the city e.g. by encouraging investments in the Special Economic Zone.

Overall, the Municipality and the Port Authority should be the key stakeholders in waterfront regeneration by a dynamic use of their veto options, for reviving the ambitions and prospects of the city. The concerted planning models (e.g. a mixed private public entity or a Memorandum of Understanding) can help the local authorities to enable the institutional relationships and to engage the stakeholders in regeneration processes.

The role of the infrastructure delivery in Central waterfront will, once completed, have significant impacts on urban identity and mental maps of the city. Managing this transformation in a way

that retains the urban design qualities of the city as well as the cultural heritage, will be a significant challenge, and one that is crucial to get right. To date, all the preliminary steps have been taken, but high-level attention is required, e.g. by continuing the activities of the steering committee composed by RFI, Municipality, Heritage Protection Bureau and Port Authority, involving citizens and associations for heritage protection, in long-term activities for stakeholder involvement.

Furthermore, the regeneration of the waterfront has important environmental ramifications. The relocation of freight areas and the reuse of former industrial areas are an opportunity to undertake key sustainability policies by remediating brownfield land near the city centre. Nevertheless, issues like earthquake, seaquake and volcanic risks or like preserving the quality of the rivers that flow into the port are the main challenges in Catania. Adequately adapting to changing environmental conditions e.g. by applying a resilience strategy framework, will be a significant challenge, particularly if long-term mitigation conflicts with short-term funding constraints. An environmental assessment framework (e.g. an Environmental and social impact assessment) integrated with the planning and implementation process could be a useful tool to address the challenge.

While there are potentially a range of funding models that can be used to drive regeneration and redevelopment, more and more the public sector should operate in a public-private funding model. Investors and real estate developers often await the support of public economic incentives, rather than making proposals to respond to community demands.. To address the challenge, land value capture (e.g. by transfer of development rights or inclusionary housing zoning) is a model to achieve win-win solutions for both authorities and investors, sharing costs and revenues.

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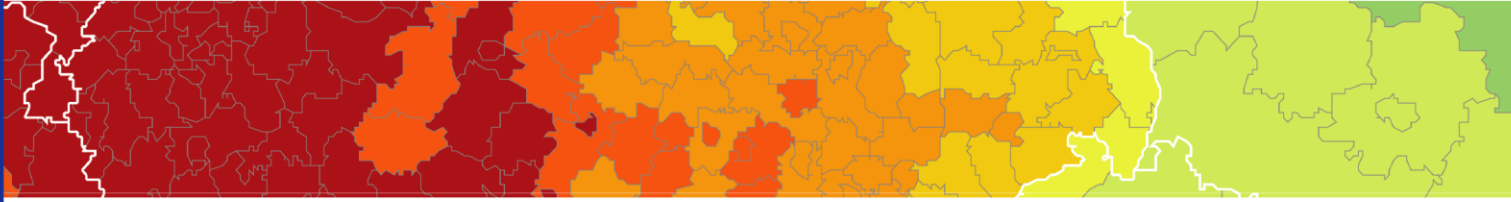
## Annex 1: The Research Framework

Questions	Subquestions
Impact	
What are the impacts of port services relocation on small/medium size port cities?	<ul style="list-style-type: none"> <li>• How have the port activities in small and medium size European cities evolved over the past decades, in a context of globalisation and concentration of the port industries on small and medium size cities?</li> <li>• Has there been a transformation or relocation of port activities? If so why, how?</li> <li>• What has been the social, economic and environmental impacts of the transformation or relocation of port activities?</li> <li>• To what extent have the transformation or relocation of port activities impacted the relationship between the ports and the cities?</li> </ul>
What are the impacts of brownfield regeneration on small/medium size port cities?	<ul style="list-style-type: none"> <li>• What is the economic impact of small/medium size port cities regeneration?</li> <li>• What is the social impact of small/medium size port cities regeneration?</li> <li>• What is the environmental impact of small/medium size port cities regeneration?</li> <li>• What is the impact of brownfield regeneration on the identity of small/medium size port cities?</li> <li>• What are the impacts on the wider region?</li> </ul>
What are the main challenges of small/medium port city regeneration?	<p>Note: among possible challenges to be addressed in the study the following are identified from the terms of reference:</p> <ul style="list-style-type: none"> <li>• Managing and balancing the identity change from harbour city to something new with the preservation of the port heritage and the related urban history</li> <li>• Overcoming the historical barriers separating the port business from the city</li> <li>• Integrating new groups of population while creating a diverse urban environment and avoiding 'gentrification'</li> </ul>
Policy and governance	
How can policy, support small/medium port city regeneration and mitigate challenges?	<ul style="list-style-type: none"> <li>• What are the urban public policies, strategies and plans for port city regeneration?</li> <li>• To what extent and under which conditions can the wider policy framework support smaller port city regeneration? Can (a lack of) policy be an obstacle?</li> </ul>
How can regulation support small/medium port city regeneration and mitigate challenges?	<ul style="list-style-type: none"> <li>• What (national, regional/local) regulations affect port city regeneration?</li> <li>• To what extent and under which conditions can regulation support small/medium port city regeneration and mitigate challenges? Can (a lack of) regulation be an obstacle?</li> </ul>
How can governance support small/medium port city regeneration and mitigate challenges?	<ul style="list-style-type: none"> <li>• Which stakeholders are involved in the regeneration process, and how do they cooperate?</li> <li>• More specifically, which public authorities are involved, and what is their specific role?</li> <li>• To what extent and under which conditions can governance support small/medium port city regeneration and mitigate challenges? Can (a lack of) governance be an obstacle?</li> </ul>
What are the risks of port city regeneration?	
Finance	

Questions	Subquestions
What funding models support city regeneration? What works, and why?	<ul style="list-style-type: none"> <li>• What funding sources and models can be used to support city regeneration?</li> <li>• How are funding streams sourced – local, regional and national levels?</li> <li>• Are there financial incentives in place to support regeneration of brownfield land and attract private funding?</li> <li>• How can funding strategies help overcome challenges and risk? What works, how, and under which conditions?</li> </ul>
What is the role of public finance in port city regeneration? How is value for money achieved?	<ul style="list-style-type: none"> <li>• What is the rationale for using public finance in port city regeneration?</li> <li>• To what extent and under which conditions does public funding effectively contribute to regeneration (e.g. in terms of attracting additional funding or ensuring coherence in the overall urban planning)?</li> <li>• To what extent and under which conditions is value for money achieved? Where and how has added value been achieved from private sector development with public sector investment?</li> </ul>
Implementation	
How can city visions for city dockland district regeneration be implemented? What works, and why?	<ul style="list-style-type: none"> <li>• What implementation strategies can be pursued to implement regeneration and realize visions? What planning models and tools can be applied?</li> <li>• Especially, to what extent and under which conditions can incremental/flexible approaches (instead of master planning) be useful? How useful is a phased approach to docklands regeneration and why?</li> <li>• Which implementation strategies help to overcome challenges and risks? What works, how, and under which conditions?</li> </ul>
Citizens Involvement	
How can citizen be involved in the regeneration process? What works, and why?	<ul style="list-style-type: none"> <li>• What is the rationale for involving citizens in port city regeneration?</li> <li>• How can citizens be involved in the regeneration process? When and in what form can they be involved? How have cities approached/achieved public consultation around port regeneration?</li> <li>• What are the social, economic and environmental benefits in the public interest, which can trigger their participation?</li> <li>• What works, how, and under which conditions? What are the good examples / best practise methods used?</li> </ul>
Catalysts	
What type of catalyst developments are employed to transform and provide a focus for citizens and economic activity? What works, and why?	<ul style="list-style-type: none"> <li>• What type of catalyst developments are employed to transform and provide a focus for citizens and economic activity?</li> <li>• How can change be triggered and managed (e.g. changes in uses, population, identity etc.)?</li> <li>• What works, how, and under which conditions?</li> </ul>
What other important synergies should be considered?	<ul style="list-style-type: none"> <li>• Interaction between various functions and uses in the area and in neighbouring areas</li> <li>• Interaction between public and private sector?</li> <li>• Interaction between public sector bodies?</li> <li>• Interaction between national, regional and local bodies?</li> </ul>
Knowledge Transfert and Lessons Learned	



Questions	Subquestions
What solutions exist to inspire/implement port city regeneration?	<ul style="list-style-type: none"> <li>• What solutions are available to inspire and implement port city regeneration (e.g. pilot projects, overarching masterplans, frontier uses, oversight board/committee etc.)?</li> <li>• How can soft drivers / catalysts be utilised to inspire and implement port cities regeneration?</li> <li>• Which solutions help overcome challenges and risk? What works successfully/well, how, and under which conditions?</li> </ul>



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