## The Relationship between the Aniene River and the City of Rome

Current Status and Regeneration Scenarios The Aniene River is the second largest river in Rome. Its course enters the Roman metropolitan area coming from the east, and flows into the course of the River Tiber within the properly urban area.

Obviously the Tiber represents a strong historical symbol for the city of Rome in a proper and primary way, both in the collective image at a global level and in the prevailing collective imagination of citizens. But some evident and important differences between the two rivers highlight the particular and important vocations that the Aniene river, in particular, presents in the perspective of the urban and ecological-environmental regeneration of a large sector of the city, and in the full realization of the future green structure of Rome.

While the Tiber river mainly flows, in its course inside the city, through and alongside consolidated urban parts of great historical importance, the Aniene river flows in parts of the city where areas and districts of more recent formation prevail, which in different cases still require urban consolidation and full qualification or regeneration.

While the Tiber river, in its urban course, mainly flows very close to the consolidated urban fabrics of the city, the Aniene flows within areas that in the main part do not have urban fabrics very close to the river. Therefore, around the river large green areas prevail, of naturalistic interest and in any case not built on, and this shows that the river can constitute an important characterizing element of the metropolitan green structure, as a green and blue infrastructure.

At the same time, the current situation of the Aniene is characterized by a relationship between the river and the city which in some respects still appears incomplete and poorly defined, in the sense that the presence of the river in the city is still waiting to be substantially valued as a relevant and qualifying element of the urban environment, in characterizing the city and in the perception of citizens.

To highlight the characteristics and real potential of the urban roles of the Aniene river in the city, we can analyze the course of the river in its innermost section in the city, starting from the ring road of the Grande Raccordo Anulare up to its confluence with the River Tiber. This section can be divided into a series of homogeneous sections from a morphological and urban point of view, which are distinguished on the basis of the specific characteristics of the areas surrounding the river, the type of settlements and infrastructure, and the current and potential relationship between river and city.

The first section, from the motorway ring road to the Rome East purification plant, is located in the urban sector called "Tor Cervara", and is characterized by the presence of large green areas

on the sides of the river, while the built-up settlements are several hundred meters away from the river.

From an environmental and naturalistic point of view, this section is characterized by large strips of green river margin mainly in the spontaneous state and of naturalistic interest on both banks, but also by the confluence from the north into the river of the important Pratolungo stream, and by the nearby presence of some historic areas of disused quarries in which equipped green areas and stretches of water have been set up for sport fishing.

Next to the northern section of the river runs the historic Via Tiburtina, along which the most important and extensive production area of the city is located. The Tiburtina industrial area includes equipment for various important productive activities, also of national strategic and high-tech interest, and this has determined the well-known denomination of "Tiburtina Valley", but also a significant share of now disused productive activities, among which in particular the massive and degraded complex of the former "Penicillina" along the Via Tiburtina.

The green corridor in which the river flows also has important continuous green branches towards the Marcigliana nature reserve, in a north-easterly direction.

Continuing further along the course of the river, a substantial change in the river and urban landscape occurs in correspondence with the second section where the vast Rome East purification plant and the large PEEP settlement of "Colli Aniene – Tiburtino Sud" stand on one bank; on the other bank there is the social housing district INA Casa "Ponte Mammolo".

At the important purification plant, on the south bank of the river, the Tor Sapienza ditch flows into the river from the south, ducted and used for technological use in that section, while the PEEP district of "Colli Aniene – Tiburtino Sud", designed with a typically functionalist design in the years 1965-66 as part of the first PEEP plan of Rome, constitutes one of the largest social housing settlements in the city (37,000 total inhabitants envisaged by the original project).

On the north bank of the second section, the "Ponte Mammolo" district (1959-62) has a valuable characteristic design of the Roman popular districts of the time, and can be accessed directly from Via Tiburtina, along which is the underground line B ("Rebibbia" station) and a bus junction corresponding to this.

A subsequent third homogeneous section is characterized by the crossing of the river by the ancient bridge "Ponte Mammolo", on which Via Tiburtina runs, by the presence near the bridge of one of the major transport interchange nodes of the city (the infrastructural node of Ponte Mammolo, with the underground station B, the urban and regional bus stations, vast exchange car parks), and due to the nearby presence of two districts also created as part of the first PEEP (Tiburtino Nord, Rebibbia).

The Ponte Mammolo infrastructural node constitutes a very important place of accessibility for the entire eastern urban sector, which will in the future be further served by the tramway scheduled along Via Togliatti, which has its own attestation here.

This homogeneous section is also characterized by large green areas located around the river and the interchange node in which the General Master Plan provides for the construction of a future "Centrality of metropolitan rank", with mainly tertiary and service functions, with a view to the vision of a polycentric urban layout planned for the metropolitan area. Furthermore, in the Rebibbia district there is an archaeological area and a thematic museum focused on the particular history of the area.

The fourth section includes the Aniene regional nature reserve, of which the river is a structuring and central element.

As regards the free and green areas directly contiguous to the river, of particular environmental and naturalistic interest, the Reserve is partly kept in its natural state, and partly equipped with various thematic areas, which favor its active use by the local urban community: areas for sports, areas organized for urban agriculture, areas for walking and recreation, areas used for animal husbandry and grazing, areas with equipped green plantings. The progressive preparation and care of these areas and places has been the result of initiatives that have also actively involved local associations; these initiatives are dealt with specifically in other sections of this book.

The usable space of the Reserve is made accessible and practicable by some green tracks, among which a main pedestrian and cycle path stands out which is part of the green ring of urban rank called GRAB ("Grande Raccordo Anulare delle Bici"), currently in definition and progressive tooling course. A farmhouse and some little buildings, which have existed for some time in the area and which bear witness to its ancient agricultural history, characterize the area and host service and accommodation functions of the Reserve.

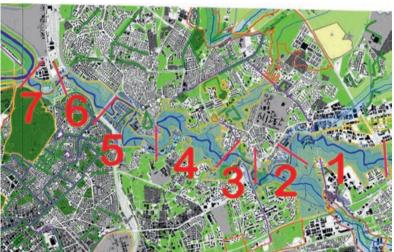
On the edge of the green area of the Reserve, two rather different urban situations can be distinguished. On the north bank of the river, beyond the Reserve and on its edge, stands the large district of Casal de' Pazzi – Nomentano, built – like Colli Aniene – on the basis of a unitary project of functionalist design within the first PEEP of Rome (1965 project, originally planned inhabitants: 21,000).

Figure 1. Synthetic diagram of the green network of the city of Rome. The Tiber River (from north to south) and the Aniene River (in the east quadrant) are highlighted.

Urban highways are highlighted in red (elaboration by A. Cappuccitti).

Figure 2. Diagram of the seven homogeneous sections of the green corridor of the Aniene river, illustrated in the chapter (elaboration by Antonio Cappuccitti, based on the graphic document "Ecological network" of the General Master Plan of the Municipality of Rome).





Similarly to other large PEEP districts of the time, the settlement is distinguished by large buildings and an articulated network of green spaces and equipment for public and private services.

On the south bank of the river, on the other hand, the urban landscape is characterized by unequipped green areas in which the massive military building complex of the "Forte di Pietralata", currently in use by the army, and the small rural-urban district of Casale Rocchi, located within a bend in the river where a set of agricultural

lots adjoining the neighborhood, are also located. The settlement of Casale Rocchi was built after the First World War, to house war veterans.

A future cycle-pedestrian bridge, the construction of which has been scheduled by the Lazio Region in 2022, will directly connect the existing green areas on the two different banks of the river, in correspondence with the regional reserve, favoring continuity and a wider and more complete use of the areas greens of the Reserve.

Continuing further, a fifth homogeneous section can be identified at a point where the river flows closer to the existing urban fabrics, squeezed between the neighborhoods of Montesacro – Città Giardino to the east, and Sacco Pastore to the west. In this section the river flows at a significantly lower altitude than in the two neighboring districts.

This stretch has two important bridges over the river: the monumental Ponte Nomentano (built in Roman times but renovated several times over the course of history; now only pedestrian), and the Tazio Bridge, built in 1924 and crossed by Via Nomentana Nuova.

The Montesacro district, originally built in the 1930s on a project by Gustavo Giovannoni and on the basis of the organic urban model of the garden city, has undergone substantial changes over time compared to the initial design idea, especially with regard to the building types, but the system of central public spaces gravitating around Piazza Sempione and a series of blocks of villas with a valuable design and original appearance are still preserved.

The Sacco Pastore district, on the opposite bank of the river, was built in the 1960s with massive residential buildings and substantially devoid of particular architectural quality, in the absence of a central structuring public space, but an equipped cycle-pedestrian itinerary runs along the perimeter of the district, parallel to the river, and public spaces and collective facilities are located along this route.

The sixth homogeneous section of the Aniene river, proceeding towards its confluence with the Tiber, can be identified by taking as extremes the "Ponte delle Valli" bridge upstream, and the bridge crossed by the Via Salaria downstream.

In this section, the Aniene river flows parallel to the two strong urban caesuras made up of two important railway tracks, located respectively north and south of the river. Furthermore, on the north bank, beyond the tracks, there is the extensive green area of "Pratone delle Valli". Before meeting the Via Salaria bridge, the river flows next to a residential neighborhood known as "Prato della Signora".

In the seventh and last homogeneous section of the river, leaving behind the Salaria bridge, the Aniene flows next to an area

Figure 3. Equipped green areas in the Aniene Nature Reserve, with the old farmhouse that actually houses the "Casa del Parco".

Figure 4. Elements of the rural-urban landscape in the Aniene Nature Reserve: thematic areas organized for urban agriculture, dirt cycle and pedestrian paths, building edges of the Casal de' Pazzi – Nomentano district with office and residential buildings.

Figure 5. The course of the Aniene river near the intermodal transport node of Ponte Mammolo.







of buildings for productive functions located along the north bank, dominated by a shopping centre, and a short distance from this it finally meets its confluence into the Tiber River.

On the southern bank of this last section, on the other hand, runs the important urban highway of Via del Foro Italico, which in this area constitutes a clear break in urban continuity. Beyond the urban highway, the green hill of "Monte Antenne" and the complex of the vast urban public park of Villa Ada.

The meeting point of the Aniene and Tiber rivers, which could potentially have great image and reference importance for Roman citizens, is in fact not visible from the surrounding streets and spaces, and is a place that citizens really do not know, as it appears, not equipped and not open to visitors and squeezed between warehouses and infrastructures.

At the end of this brief examination of the homogeneous sections into which the Aniene river can be divided along its course within the city of Rome, we can draw some conclusions regarding the current state and the potential concerning respectively the environmental continuity and the relationship with the surrounding urban fabrics and districts.

From a strictly environmental point of view, the urban sections of the Aniene river are the structuring and central elements of an extensive and almost continuous system of green areas, even where the river flows closer to surrounding districts. This continuity and environmental quality is highlighted in the provisions of both the current Municipal General Master Plan and the Regional Territorial Landscape Plan as a very important potential with a view to building and strengthening the future urban and metropolitan green network.

Today this structure of green areas is partly enhanced by a regional natural Reserve, a protected area that can be used by citizens and partly already equipped with itineraries and thematic areas, while it is partly made up of areas of high environmental interest and in a natural state.

The strengthening of the environmental value of areas in their natural state, and of their potential to form part of a cohesive and strong metropolitan green corridor, passes through a coordinated series of possible initiatives above all of a naturalistic and landscape nature: maintenance and care of river environments, creation o strengthening of wooded areas, redevelopment of green areas, ensuring functionality and hydrogeological safety.

In perspective, in particular, the major urban vocation of this system of areas is a regeneration that makes even the green areas

Figure 6. The historic Ponte Nomentano and the Aniene river, near the Montesacro – Città Giardino district.

Figure 7. Sacco Pastore district; cycle-pedestrian path and public spaces alongside the river.





currently in their natural state usable and of better landscape quality, in a continuous system of areas of high ecological and naturalistic quality, by means of planning actions of various types and suitably coordinated in a strategic framework. Some institutional initiatives are moving in this direction, which are discussed in other sections of this book.

The morphological and fruitive continuity of this system of areas can certainly be increased and favored also with the completion and expansion of the network of cycle-pedestrian itineraries, which already exists in part of the areas, and by

reconnecting the future route of the GRAB, "Grande Raccordo Anulare delle Bici".

From the point of view of the relationship with the builtup urban parts existing on the margins, the system of districts gravitating on the Aniene river well reflects a well-known peculiar character of the urban form of Rome and in particular of the periphery: its being articulated in a set of "micro-city within the city", each of which has its own morphological recognisability, urban identity, problems and vocations<sup>1</sup>.

But each of the urban parts and districts on the margin bands of the river, which we have briefly listed, was built in substantial indifference to the river itself, without providing for links and connections or morphological complementarity and visibility with respect to it.

Then the best strategy to promote an optimal relationship and correlation between the city and the river can only be to create over time entrances, paths, special itineraries, central places in the green and belvedere paths, collective equipment, public spaces that can signal and qualify the construction of these relationships, connecting the main and secondary public spaces of the neighborhoods with the thematic and equipped public areas to be set up along the river green areas, and promoting the visibility and importance of the river as the main characterizing and qualifying element of the urban environment.

In a medium-term perspective, the systems of structuring public spaces and central places of the various neighborhoods around the river, already existing or to be strengthened or created through local urban regeneration programs, will be able to be connected in physical continuity with the places and paths to be create along the river green areas and with the public thematic areas existing or feasible in them, in such a way as to achieve the environmental and morphological continuity and the fruition quality that is necessary to build the future green structure of the city.

The Aniene river has the characteristics and potential of a very strong structuring and qualifying element of the environmental system in the eastern quadrant of the city, and the strengthening of this urban role will require a strategy of regeneration programs, regarding both landscape-environmental and urban-planning objectives, which will have to synergistically involve the river green areas and neighboring districts.

The research on the Micro-cities of Rome was carried out by CRESME Ricerche in preparation for the Municipal General Master Plan of 2008, and highlighted more than 200 micro-cities in the Municipality of Rome.