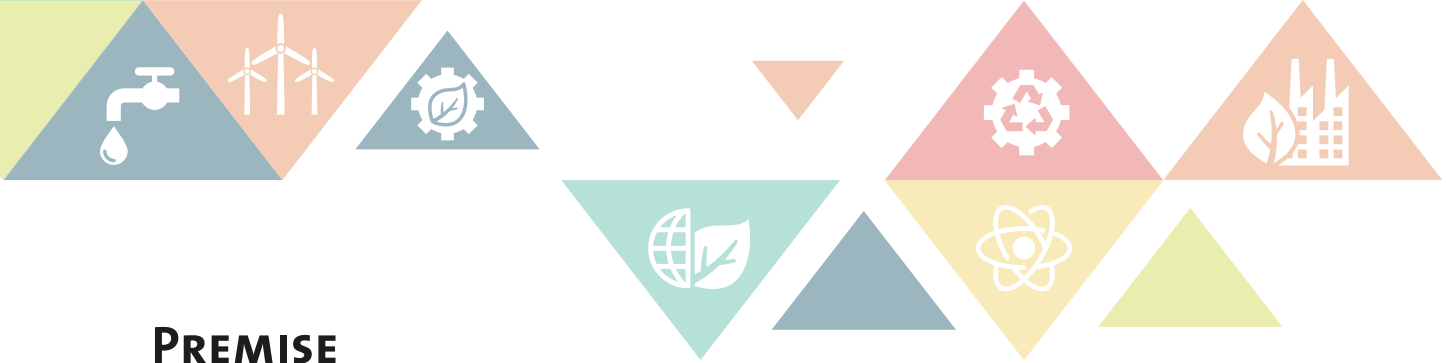




# CHARTER FOR THE GREEN CITY URBAN REGENERATION

*To get out of the crisis, after the  
pandemic, with more care for our future*





## PREMISE

The coronavirus pandemic has severely affected our ways of living in our cities, large or small, for months. It has generated a large number of victims and illness and has caused a significant economic crisis. It would be wrong to think that impacts of isolation and social distancing generated by this pandemic are destined to become permanent, when instead they will be overcome, albeit gradually, together with the contagion. However, it would also be wise to use the insights learned from this hard lesson that has showed us how vulnerable we are, how much attention needs to be paid to important topics and how we need to take better care for our future.

The quality of our living has never been the center of our attention as it has been during this pandemic. And, perhaps, until this period we have never had a first-hand understanding of the importance of the quality of the environment in which we live, the air we breathe, the livability of our buildings, of our neighborhoods, of our cities. Probably this experience will speed up some of the processes already in place, such as smart working. It will also allow us to reflect on the necessity of a greater resilience and adaptability in all of the living and working spaces, as well as give value to the intermediate spaces (courtyards, terraces, lodges, balconies, etc.) and provide “greener” features in the nearby neighborhood spaces, along with a more widespread functional mixité.

Locally each of us had to deal with the impacts of a pandemic, a global crisis that showed us how small and connected our planet is and how, on the one hand, we are linked to a common destiny and, on the other, linked to a common responsibility: what happens globally can also have significant impacts on our lifestyle and how we act locally which, in turn, can also have very widespread effects. Our cities can have an ecological footprint that becomes globally unsustainable, but they can also be part of the solution to global problems. We need cities that are more resilient, less exposed and less vulnerable in the face of far-reaching crises, such as this pandemic and another equally dangerous crisis for humanity: Global Warming.

In the face of a destructive crisis that has greatly hit our societies and our economies, the risks of giving up innovative policies and measures become high, requiring public intervention for emergency measures of dimensions never seen before – both at national and European levels – without a project that lives up to the challenges of our time. It is certainly necessary to finance measures to make our health systems more resilient to pandemics and to support the incomes of families and businesses so severely affected; but the extraordinary effort required must focus on a Green Deal: a strategic, sustainable development project able to ensure a more extensive and equally distributed well-being, which today can only be based on a decarbonized and circular economy.

A vast, adequately funded, urban regeneration program is a fundamental pillar for stimulating the recovery of the economy, especially in Italy. It would be able to set in motion a plurality of economic activities, mobilize important investments including private ones, employ substantial employment, revitalize local social and economic networks, leverage the activation of the decisive poles of Italian development: its large and small cities.

An urban regeneration that should focus, even more after this pandemic, on high ecological quality, must be based on non-contingent, long term choices, aimed at building a better future for our cities.



# 1. THE STRATEGIC FRAMEWORK OF GREEN CITY URBAN REGENERATION

Urban regeneration according to the green city approach assumes ecological quality as a strategic priority in order to ensure sustainability and resilience of programs and intervention projects in the era of the climate crisis, soil scarcity and other natural resources.

In this sense, urban regeneration in a green city calls into question both its reductive version – based on timely interventions, lacking an outline, vision and the necessary ecological quality – and the general-generic version – based on very broad contents (economic, social, cultural, settlement, infrastructure, etc.), but lacking priority and coherence with the indifferent ecological challenges and, is therefore, weak and qualitatively inadequate.

Urban regeneration, according to the green city model, aims instead to use the different and connected aspects of the high ecological quality to base effective priorities on programs and intervention projects with an integrated and multisectoral approach.

With the awareness, now widely supported by research and knowledge as well as consolidated experience of advanced good practices verified in many cities, that social objectives (quality of well-being, safety, cohesion and social inclusion) and economic development (revitalization and recovery of local economic activities and employment opportunities) in both large cities and in small municipalities, are closely connected and dependent on ecological quality: on the livability, attractiveness, recovery and rehabilitation of degraded areas and buildings. It is necessary to operate, also when acting on individual initiatives, with an organic and coherent design that aims at high ecological quality, taking into account the characteristics of the urban context and territorial diversity.

To this end, it is necessary to strengthen the guidelines and regulations, both at national and regional level, aimed at promoting urban regeneration and implemented according to the criteria of green cities, as a priority route for the revitalization and sustainable development of cities.

At local level, by activating adequate forms of consultation and participation, it is necessary to define and update the overall municipal strategy and the guidelines of municipal planning with the vision of the green city as a reference framework for urban regeneration projects and interventions. It is also necessary to define a grid of recommendations to ensure adequate ecological quality and enhancing possible integrations and synergies between the various skills and the different sectors.





## 2. STOP SOIL CONSUMPTION

Soil consumption compromises the availability of a scarce and indispensable resource, essentially non-renewable. As a city expands, it consumes new soil generating significant impacts for its quality. The high consumption of soil, found in most urban areas, has caused a loss of ecosystem services, degradation and landscape impacts, loss of natural and agricultural areas, erosion and soil sealing and increased hydrogeological risks.

Stopping soil consumption is not only a necessity but a qualifying goal for urban regeneration programs and projects. These should be supported by norms that, at a national and regional level, strengthen soil protection by reducing its artificial cover and are consistent with the European objective to set to zero the consumption of new land, not allowing the use of a free area to be simpler or less expensive.

Today, urban regeneration is the strategic choice if we want to increase the appeal of our cities with the reuse and efficient use of existing built heritage and built-up areas, with the redevelopment of public and private building and the improvement of urban quality, facing phenomena of degradation, functional decline and settlement disorder, the reconstruction of marginal spaces without consuming new soil and reducing its artificial cover.

The initiatives for regeneration must be preceded by a survey of the local needs of the already existing built-up areas available and of the degraded or unused built heritage: the neglected, abandoned and underutilized areas, the traditional former industrial areas, unplanned urban fabric with random functional mixes, former railway and other infrastructures, former settlements of minor companies and artisans, as well as degraded, abandoned buildings no longer used, abusive and incomplete buildings to be recovered if possible, or demolished with the recovery of recyclable materials.

Taking on the goal of stopping land consumption means tackling the growing demand for urban transformations in an innovative way with urban regeneration and an integrated strategy for the various sectoral policies aimed at ensuring the satisfaction of the various needs together with a high ecological functionality of the urban system with positive social and economic effects.



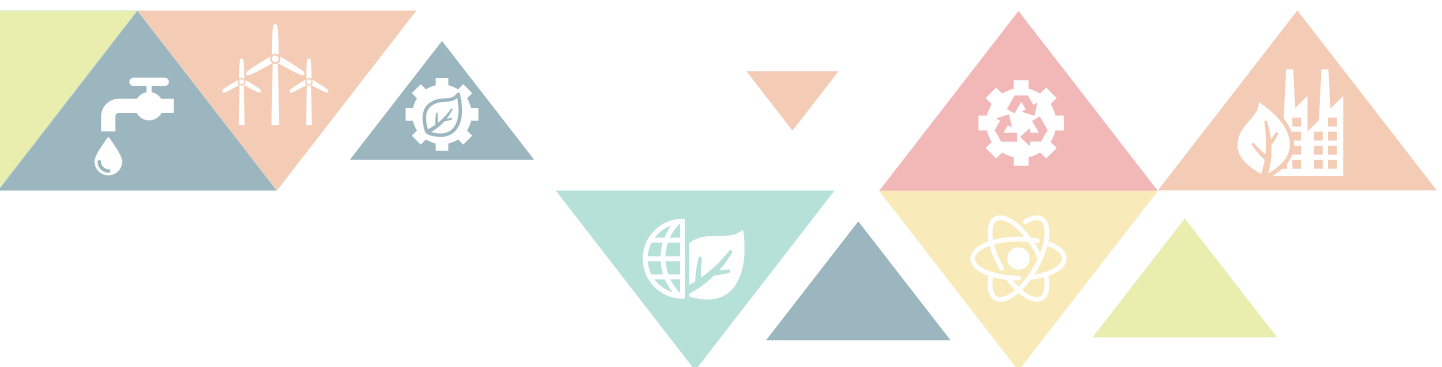


### 3. ADOPTING MEASURES FOR CLIMATE MITIGATION

The climate crisis has growing and significant impacts in cities that play a leading role in mitigation measures in order to reduce greenhouse gas emissions. In urban regeneration interventions, energy upgrading of the entire building must be promoted with the integration of active and passive solutions, thanks to both the use of innovative technologies and materials, and to the use of “nature-based solutions”. It is also necessary to promote the use of systems for assessing the energy-environmental performance of private and public buildings, building aggregates and systems of buildings and outdoor spaces in urban areas. These systems are based on indicators that highlight the most effective priorities and solutions and recover their role of climate modulators.

It is necessary to promote the diffusion of the best passive technical solutions available for the reduction of energy needs, together with the improvement of living comfort: from natural ventilation and passive cooling systems to control solar radiation, to solutions such as green roof gardens and vertical green gardens; from natural lighting to passive heating and natural humidity regulation. It is essential to reduce and manage energy demand through user-friendly monitoring systems and interfaces; promoting forms of distribution and exchange between prosumers through smart grids and local synergy mechanisms, such as the recovery of waste heat from production and tertiary activities to meet residential thermal needs, or dynamic modulation according to different needs during the course of the day, seasons or year.

It is necessary to carry out an analysis of renewable sources that can fit locally and to promote the best production technologies available and integrable in buildings and cities to incorporate the ‘positive energy’ model: active mini and micro-wind solar systems, supply systems of geothermic energy source, both surface and deep systems, systems fueled by biomass with suitable technology to reduce emissions and biomethane produced with organic waste, fuel cell systems used in urban areas, micro-cogeneration, trigeneration, the use of district heating networks, etc.





## 4. ADOPTING MEASURES FOR CLIMATE ADAPTATION

Integrated strategies must be identified and planned to prevent and reduce the vulnerability of the environment to extreme weather events and to increase resilience and mitigate its effects. In regeneration projects, specific knowledge of local climate characteristics is required to carry out technical analyses of the risks associated with climate change. The sealing of new soil must be stopped, and desealing interventions increased. Nature-based adaptation solutions must be enhanced both in the programs and in the specific urban regeneration projects, taking into account all the advantages they also generate in the long term.

With regard to the problems related to pluvial flooding, the increasingly frequent floods, and more generally the difficulties in managing water resources in emergency situations, green and blue networks and infrastructures are of great importance both as a microclimatic moderator and for controlling the outflow of rainwater. For example, squares or green areas lower than the street level can contribute to the accumulation of rainwater in the event of extreme events. The flow of particularly intense rainwater can be channeled to specially prepared areas, additionally, existing urban drainage systems must be better monitored, and it is necessary to try to ensure the separation between the sewage networks – with the related overflow spillways – and the hydrographic network of the canals and rivers, even in the case of extreme events.

Tools for analyzing and evaluating the adaptive capacities to the increasingly frequent heat waves and to the phenomenon of urban heat islands must be used. Based on these analyzes and evaluations, adaptive design, and technical and management solutions must be implemented in urban regeneration, the requalification of buildings and relevant spaces. Measures should be promoted for the bioclimatic control of buildings, for the shading and control of solar radiation, to increase natural ventilation and cooling, and to improve thermal insulation even with innovative materials. It is also useful to use and enhance green infrastructures and improve cooling by using, where possible, groundwater, surface water bodies and systems for the recovery and reuse of rainwater and gray water.

The strategic environmental assessment procedures (SEA) of urban plans and programs, or even variants thereof, must also include a suitable assessment based on the aforementioned indicators for climate adaptation.





## 5. IMPROVING URBAN QUALITY

Focusing on high urban quality of urban regeneration interventions means protecting and enhancing the wealth of historical and identity values, cultural expressions, knowledge, works and artifacts that characterize the areas involved. To this end, a systemic reading of the broad framework of relationships that characterize the urban and territorial metabolism of the areas involved in regeneration programs is essential in order to identify, protect and improve their quality, with interventions that move from the value of the identities, of the local natural and cultural capital, of its maintenance and promotion when a functional mix is absent, even when intervening in areas considered peripheral and in small municipalities.

Particular attention in urban regeneration must be paid to the redevelopment of public spaces, both in central and peripheral areas since they represent a determining factor of urban quality and have deep reflections on environmental and social quality: such as squares, streets, arcades, parks and gardens, and equipped pedestrian areas.

In the context of sustainable mobility problems in the areas subjected to regeneration programs, the availability of pedestrianized areas and/or limited access to motor vehicles, slow traffic, the availability of pedestrian paths and protected cycle paths, public transport services and improvement of the logistics system, sharing mobility, micro mobility, as well as infrastructures for charging electric vehicles must be taken into consideration.

Adequate attention must also be paid to the reorganization of extensive urban fabrics and the “hybridization” of single-function areas with the inclusion of compatible and complementary uses, including spaces for collective use, and with the promotion of functional mixité and a more widespread offer of services.

Particular attention must also be paid to intermediate spaces – courtyards, shared gardens, shared terraces, lodges, etc. – to improve the quality of living, inside and outside the houses, and neighborhood sociality. It is also necessary to ensure the maintenance and increase of soil permeability, the recovery of ecosystem functions and the development of green infrastructures.

In urban regeneration programs, the implementation of redevelopment – or new construction – of social housing interventions must guarantee, together with satisfying the demand for housing, the well-being in the home and social integration. It must also guarantee support for the construction of community of residents also with the planning of shared and open collective spaces, and also in this case with the promotion of functional mix and provision of services and intermediate spaces.





## 6. FOCUS ON THE HIGH QUALITY OF THE BUILT HERITAGE

In urban regeneration it is necessary to promote redevelopment projects and enhancement of the existing, historical, consolidated or recent construction heritage. These combine the elevation of energy and environmental performance with the improvement of the design and architectural quality and the increase in benefits for the community in order to ensure livable buildings with an enhanced sense of belonging. These projects must be integrated into the urban context, in particular by favoring the integration between building constructions, intermediate spaces and nearby open spaces with a unified architectural approach. To this end, it is good to define guidelines, criteria, good practices, indicators and standards for projects and assessments of the architectural, urban and environmental quality of urban regeneration interventions, also updating and improving existing ones. This definition must concern: the actions and interventions for the conservation and enhancement of the historical heritage, and those for the redevelopment of the architectural heritage, as well as those for new constructions that tend in any case to consume zero soil (densification, replacements, etc.), as well as for maintenance and aesthetic and functional improvements of the existing building stock. This definition can be strengthened by incorporating its qualifying contents into the municipal regulations relating to the quality of the building stock.

In urban regeneration it is also good to promote the use of high ecological quality materials and components for the construction, reusable and recyclable, in their entire life cycle.

In the redevelopment, recovery, reuse and maintenance of existing public and private built heritage, in addition to improving living comfort, it is necessary to improve energy efficiency, efficient use of water and effective and ecological management of waste; also taking into account the increased hydrogeological risk and the vast areas with high seismic risk, these interventions must be verified and integrated, when necessary, with measures to reduce vulnerability and prevent these risks.







## 7. INCREASING GREEN INFRASTRUCTURES

In urban regeneration, green infrastructures must be increased: from street trees to green walls and roof systems in buildings, from public and private gardens to urban gardens, from parks to other green areas incorporated in the urban fabric, to peri-urban green belts.

Urban green, better when connected and managed as a green infrastructure, performs various functions and provides a multiplicity of ecosystem services: improves air quality and reduces pollution, regulates the local microclimate and mitigates and adapts to climate change, protects water and control surface runoffs, protects the biodiversity of the urban environment, improves the urban landscape and contributes to the well-being and protection of citizens' health. Neighborhood green spaces also carry out an important ecosystem service for the social life of children, the elderly, families, as well as for sports and recreational activities.

The development of green infrastructures in urban regeneration requires both an active public role and the direct involvement of citizens and businesses that, as already happens in some cities, can finance and directly follow the implementation and management of some urban green areas, public and private (trees, flower beds, gardens, balconies, green walls and roofs, commercial buildings, tertiary spaces), in compliance with ecological criteria that ensure adequate quality and duration of the interventions.

Both the development of green infrastructures and, more generally, green urban regeneration, require effective communication and citizen involvement to clarify how, especially in times of crisis and in areas of greatest economic and social difficulty, these interventions are an essential part of a process of improvement of our cities and they are now indispensable to make cities more livable and attractive and therefore capable of generating new, lasting and higher quality development.





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