

Agro-Cities as a Way to Counteract Urban Poverty

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1 ABSTRACT

Monterusciello represents a case of urban poverty induced by a natural disaster: the bradyseism of 1983 which shocked and drastically changed the lives of citizens residing in the historic center of Pozzuoli. The political and technical response to the natural disaster emerged through the realization of a new town providing housing for displaced persons. Monterusciello was designed as a new town alternative to the construction models of the late 70s and early 80s: in here, there are no high-density buildings or a lack of public spaces. This new town had high ambitions in terms of planning the new housing settlement, inspired by a classical *forma urbis* and a human scale architecture. Despite the intellectual and political effort to find an effective solution to a collective drama, which affected most of Pozzuoli's population, many things did not work. The current public administration is making an ambitious attempt to face and solve the many open issue linked to this serious context of urban poverty. The city of Pozzuoli (Metropolitan area of Napoli) is the only city on South-Europe that succeeded to get, in the first round of the extremely competitive call for proposal, the EU financing named UIA (Urban Innovative Action). The project has the courage to propose ground-breaking solutions for very serious and persisting problems linked to urban poverty in the Monterusciello neighborhood. Innovation is embedded in applying the methodology of the permaculture to regenerate the public land available in between buildings of Monterusciello. Thirty hectares of Municipal open areas will be transformed into farmland, developed the innovative techniques of permaculture in order to spearhead an economic process and urban growth as a means to combat poverty. This Urban Agriculture led regeneration is based on a solid participatory planning process that aims to solve the many existing problems on the ground through learning and training actions (schools and youngster as priority target groups), experimentation of production chains at km zero, use of innovative and ecologic techniques in producing goods, design of cooperativistic a business model for the financial sustainability, relevant investment in advanced design of available public land and space, with a special focus on urban landscape related questions.

This paper is presenting the urban regeneration adopted strategy in terms of ongoing and experimental planning practices, built up governance relations and creation of a sustainable (economic, socio-cultural; and environmental) development narrative for present and future development in Monterusciello.

Keywords: agro-cities, urban poverty, Pozzuoli, open areas, governance

2 A NEW TOWN DESIGNED AND REALIZED AS RESPONSE TO A CATASTROPHIC EVENT

Monterusciello is a foundation city, built between 1983 and 1986, a unique case in Italy, born shortly to respond to an emergency and almost totally public property regarding open areas, residential buildings and common ground.

Monterusciello is a district of the municipality of Pozzuoli that is, today and from its foundation, the most important center of the Campi Flegrei, a role due to its size and demographic dimension, geographical position. In the second half of the twenty century the City of Pozzuoli was hit by two important bradyseismic phenomena that led to the birth of new parts of city, far from the original historical center, with the aim of reducing the demographic weight of an area considered high seismic risk.

Bradyseism is not an extraordinary event destined to disappear, but has a cyclical pattern and can recur at any moment. An important bradyseism crisis occurred in 1983 and led to the birth of the districts of Monterusciello to welcome the inhabitants evicted from the so-called Zone A, the historical center. When the bradyseism events of 1983 caused the relocation of 20,000 inhabitants from the high-risk historic city centre of Pozzuoli to Monterusciello, this action caused the most extensive urban expansion action within the Comune, effectively building a „new town” 5 kilometres to the north of the city. This action, which led to the very swift construction of a permanent new settlement called „Monterusciello 2” (in completion to

Monterusciello 1, a development originally started in the framework of Council Houses – Law no. 167/62), allowed for a rapid build-up of around 5,000 flats to accommodate the relocated population. Monterusciello faces today many important challenges, evident from an analysis of the basic statistics of the district. The MAC Project focuses on the Monterusciello neighbourhood of Pozzuoli, an area of approx. 100 ha with a maximum elevation of about 120m. The intervention site is rather flat, and has been historically an agrarian landscape, until the events of the '80s.

This intervention was part of a larger project: considering the cyclicity of the bradyseismic phenomenon, the creation of the Monterusciello new town should set an answer to the relation between the city and its geological singularity. The same architect Agostino Renna, the designer of Monterusciello, defines the neighbourhood as "a definite part of a city", showing in these words the intention of recognising the area as an autonomous identity. Renna was inspired in the design of this new town by the ancient Greek city of Priene.

Hence, the design idea was far from the logic of creating a classic social housing settlement, but it has been thought as a new town that could become the reference point for the urbanised countryside of the western area of the province of Naples, currently the Metropolitan Area. Monterusciello is therefore conceived as a new-town, yet today it is experienced as the periphery. In the suburbs that we are used to reading today dominate the blocks, as in the nearest and well-known Scampia.

In Monterusciello it was decided to pay more and more attention to the scale of urban-rural territory: the buildings are arranged following the natural slope of the ground so that everyone can be directed to the sea, each building lot has a courtyard or green space, many primary public facilities were provided for both neighbourhood and sub-municipal services; the planovolumetric project based on a series of longitudinal axes linking the most representative locations in the neighbourhood. Although the planners' objectives during the neighbourhoods' design was to "welcome and reassure" the new inhabitants, the residents of Monterusciello never fully accepted this new condition. They have always been looking at the neighbourhood as a temporary passage and not as a definitive accommodation.

3 A CHALLENGING URBAN ACTION: MONTERUSCIELLO'S SIGNIFICATIVE FIGURES

Monterusciello faces today a few important challenges, evident from an analysis of the basic statistics of the district. From the point of view of demographics, Monterusciello had in the 2011 census a total number of 22,778 inhabitants, 28.4% of the total population of Pozzuoli (80,357 inhabitants – ISTAT). The district has been growing in population between 1991-2001 (+5,94% increase), but has plateaued in recent years, with only a 0.43% increase in population between the censuses of 2001 and 2011. In fact, the demographic trend most apparent in the project site is very pronounced aging of the population, with the median age growing higher between censuses

Between 1991-2001, youth (aged 0-15) have decreased with 33%, and the population of 65 years and over has doubled, which raises concerns for the future capacity of the local inhabitants to both make a living and care for an increasing number of elderly people.

In reference to the education level of the citizens in the MAC pilot area, the clear majority (96%) have high-school diplomas or lower learning cycle studies, while a percentage of 11% do not have studies. The proposal of Monterusciello Agro City and the opportunity to work in local agriculture could be highly beneficial to the target users, especially the ones which otherwise have limited opportunities as qualified workers in other domains.

The participation of the Monterusciello inhabitants to the workforce (rate of activity) is of 45%, of the total inhabitants aged 15 and over. With a total of 4,957 employed inhabitants, the rate of employment was, for 2011, just 26%, lower than the figures of the region. However, the unemployment rate (the „job seekers" from the total workforce) is rather low as well, of 13% in total (ISTAT, 2011), which can indicate local disinterest to actively seek a job, an aspect often encountered in disenfranchised neighbourhoods. There is a strong disparity between employment of the male workforce (39%) and employment of female inhabitants (14%).

Local opportunities are, indeed, limited – this is apparent both from the Expert Study Visit conducted on-site, and from the statistics. The Monterusciello resident population which is commuting daily into the commune was of 6,330 inhabitants, while the population commuting outside of the commune was of 2,432 inhabitants.

In total, 45% of the population aged 15 and over commutes daily, a strong indication for the need to develop local opportunities for Monterusciellans, since the neighbourhood is deprived of the normal living-related activities and facilities which represent the core of communities.

In what concerns the built environment, in 2011 there were a total number of 959 buildings, of which 739 residential buildings and 8 abandoned/not in use. It is to note that, between 2001 and 2011, the number of buildings with other uses than housing has surged, indicating a slow diversification of activities in the area, in part due to the vocational school for the hotel industry which is present on-site. The existing housing units, due to being built very rapidly and under pressure, and being meant for a median use of 25 years (temporary use of lightweight prefabricated edifices) are currently in poor conditions due to the lack of maintenance, materials degrading, improper use of dwellings or alterations by inhabitants. One of the major issues of the neighbourhood is that many dwellings are rented, by inhabitants which otherwise could not afford any investments in the building stock, and that the investment needed to transform the buildings into proper dwellings respecting today's building codes and regulations exceeds the capacity of the Pozzuoli Municipality. However, investments are being done starting with a group of 5-6 building blocks in the area, and the MAC project could contribute to the visibility of the issue as well as the expanding of opportunities for a large-scale urban renovation project.

Currently, the MAC Project area of Monterusciello retains its original semi-temporary relocation characterising in what concerns the built environment, meaning that beyond the residential prefabricated units built in the '80s and the later additions, only a few fundamental services have been brought to the neighbourhood: a town hall (municipio), schools including a vocational school for the HORECA industry, a bank, a post office, a Carabinieri and a Fire Brigade station, and an indoor sports arena. The many areas where public edifices should have been built or public spaces should have been landscaped have been left as „urban wastelands”, including some derelict structures which were built but never used (such as the Market). These open unused spaces make the object of the MAC Project; in total, their surface reaches 538,900 sqm, or approximately 54 hectares. To put the number into perspective, this huge area could mean for each of the 22,000 inhabitants, a „green living room” of 24 sqm of their own. The potential of this rather flat-surfaced, good soil quality, agriculture-prone urban area for a community lacking in amenities, opportunities and jobs is key if Monterusciello is to have a go at successfully implementing the concept of sustainable development.

4 ENVISAGED SOLUTIONS

A planning process for urban poverty reduction is going to be triggered by available public land in Monterusciello. These currently, and partially, abandoned plots of land are going to become the places for the development of urban agriculture based projects. These projects should relaunch the local economy and start to decrease the current local unemployment levels through the involvement of the residents in their implementation.

The proposed solutions aim at achieving the following aims:

- To set up an “AGRO-URBAN Center” as a visible point of the public governing institutions in Monterusciello. This point is the place for coordinating and designing specific actions in the neighbourhood and for keeping an effective daily dialogue with residents, thus introducing a „mediation level” as a part of organizational innovation within the public administration.
- To start a transformation process of the vacant public land suitable for agricultural use through the application of permaculture methodology which, while not untried within Europe before, is innovative through the approach and context of the „new town” suburb;
- Conception of a local cooperativistic approach to the development of a new local and sustainable economy based on UA led by permaculture approach (training courses, open laboratories) – creating an innovative self-sustaining system able to endogenously develop in the medium and long-term;
- Promotion of ecological cultivation processes and constructions;
- Support to creation and growth of start-ups based on km 0 and ecologic agro-business;
- Re-designing and re-qualifying the urban spaces: architectural and urban interventions will provide areas for events, food market, and walkways, constructing the new landscape for an “agro-city” and

creating a new *forma urbis* through social, technological and agricultural, economic and governance innovation.

5 SUSTAINABILITY IN THE MAC APPROACH

Monterusciello Agro City proposes a model of development which, although applied and tested in a very specific context, could represent a sound and highly transferrable methodology – provided it will validate the expected results of the project. Most regeneration projects which do not prove sustainable on the longer term fail to achieve their goals mainly because:

- (1) they provide an out-of-context solution which cannot be integrated with the actual vocation of the urban landscape;
- (2) they leverage too much on external investment and exogenous development initiatives instead of capitalizing on the potentialities within the area itself;
- (3) they fail to involve the stakeholders and gain local ownership, in which case the action is perceived as an outsider initiative and does not „take off” at local level.

The Monterusciello district, or „new town”, was built on originally agricultural land, an area which together with the neighbouring lands such as Licola started to emerge in the 70's as a tourist attraction due to the landscape quality, before the bradyseism of the 1983 claimed the land for emergency constructions. The vocation of the landscape in and surrounding Monterusciello (the vast 50 empty hectares within the built-up area), can hence be fit for vineyards, orchards and intensive urban permaculture farming, due to the high fertility of the soil. In this sense, the MAC project, through its interventions, can finally integrate the city within the territory and help mend the bond between context/landscape and town, after more than 30 years.

Moreover, from a social, cultural and economic standpoint, the district has all the characteristics of a deprived and segregated neighbourhood: lack of local economic and social opportunities, high workforce unemployment, disenfranchisement of the inhabitants due to low ownership and poor upkeep of the urban environment, virtually no territorial linkages other than the daily commuting of a large part of the active population.

There is a clear need for a project which will change the local paradigm for Monterusciello, investing and creating a new, sustainable model of development by empowering the local community. The MAC project proposes an approach which is articulating urban landscape building, social innovation, partnership and economic development in order to regenerate a historically deprived area; the action plan is synergic, meaning that the external investment provided as co-financing by the UIA for this project is used in an integrated manner, and all investment actions are transversal to the main three pillars of the project: networking/capacity building, landscape/regeneration and entrepreneurship/local economy.

Regarding the physical investments, i.e. the redevelopment of 30 hectares as permacultural productive urban landscape and developing the urban design and micro-architecture fittings which will allow the spaces to be used and enjoyed by the residents, the main sustainability aspects are related to how these spaces will function and will integrate with the existing urban tissue, in practice. The project gives a lot of importance to creating the necessary functional links between the seemingly disparate empty plots, and an important role here will be played by proper signage, a new specific identity of the sites and the pathways and bicycle lanes connecting the pilot areas. Free access to these very large areas which have been historically fenced off and out of the reach of residents will create an impact at the local level and will prompt usage, which in turn can be beneficial for the residents from multiple points of view (green therapy, spaces for socializing and meeting, outdoor sports, etc). Environmental sustainability is attained by using an experimental model, a mix of permaculture and bio-intensive techniques, linking the productive part to a marketing circuit which uses agricultural waste. The two laboratories developed through MAC (Permaculture and Ethical production/Rural Marketing) will organise a circular production system. The urban design and landscaping process will be conducted using eco-sustainable materials and recycled/recyclable products, contributing to a positive impact on the environment. Finally, in what concerns the local economy and entrepreneurial opportunities, Monterusciello Agro City focuses on both creating the supply and demand of bio agricultural products and by-products, as well as training the future entrepreneurs and researchers which will ensure that the initiative will develop locally. Sustainability and local rooting are ensured through proper selection and training of individuals in three key areas (related to permaculture, ethical production and marketing,

innovation business and start-up), through development of entrepreneurial skills in workshops and incubators, and through development of competitiveness with the help of a bonification system (scholarships and awards).

The economic model of development proposed, relying on PPPP (public-private-people-partnership) is sustainable, albeit in the longer-term alternatives to public ownership of the farmland and buildings for laboratories, the Agro-Urban Center and the Business Incubator will need to be sought. The partnership has strategically focused all these functions in a single public property structure, which is currently in a state of neglect. The Piazza Mercato building, also known as Piazza de Curtis, has been identified as Agro-Urban Center. The municipal administration has recently cleared the premises, illegally occupied for residential use. The intended destination for the covered spaces provides for social, commercial, artisanal use. This space is an unmissable opportunity to accommodate the expectations of the local community and the municipal administration forecasts. Moreover, it represents the most suitable solution for the type of function that it will have to host inside it during the implementation of the MAC project and for what it will continue to represent for the residents of the neighborhood even after.

One of the main barriers to overcome with respect to sustainability is the question of ownership; legal ownership, of the housing units and the land itself, but also psychological and social ownership of the new spaces created through the MAC Project. Monterusciello is a perfect example of the Broken Windows Theory – a city that is not maintained fails to step up and maintain itself. For the MAC to be sustainable, it needs to break this cycle and involve the residents in the regeneration process, especially for the urban design, furniture and micro-architectural elements projects, to ensure their use, a proper process of co-design should be implemented. For these reasons, the municipal administration has promoted the establishment of an Agro-Urbana Consulta, an organ aimed at proposing support indications for the participatory activities envisaged by the MAC project - Monterusciello Agro-City, representing the project stakeholders, formed by all citizens who will show their interest to take part with a specific request. The collaboration between the members of the Consulta Agro-Urbana, the Municipal Administration and the MAC Partnership is inspired by the following values and general principles: mutual trust, publicity and transparency, responsibility, equal opportunities and the fight against discrimination, informality. MAC is not a one-time investment, but a lengthy and complex process of regeneration, and as such will rely crucially on the initiative continuing and growing past the project's lifetime. The most important results of the initiative can be reaped on the medium term, hence ensuring sustainability should be regarded as the most important aspect in implementation, apart from the innovative experimentation percouse itself. As the residents' involvement is a big part of making MAC „take root”, the next steps of the project should be strongly focused on gaining local buy-in and embedding the initiative in the local civic fabric.

Permaculture differs from the traditional agricultural practices due to its systemic, integrative approach to sustainable food production systems embedded into the social and cultural lifestyles of the community. It is a practice of expanded focus, consisting of ‘consciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fibre and energy for the provision of local needs’, being as much a form of process innovation as well as organizational innovation. Traditional intensive agriculture, even in urban and periurban areas, has numerous drawbacks and ecological risks related to climate impact, soil, water, air, biodiversity and landscape effects. Permaculture is a more sustainable approach which factors in responsible farming as a circular system, reusing its by-products. When assessing new urban activities with extensive land-use – such as redeveloping 30 hectares of urban space – there are always trade-offs to consider; urban agriculture development comes against potential other uses of land, such as social housing, productive units and so on. In the Monterusciello case, due to the availability of other land options and reduced need for competing urban functions, the trade-off is a positive one. Monterusciello does not face the risks of urban permaculture which are a reality in most big cities, namely the soil contamination and lack of proper conditions (excessive shade, wind tunnels) – it is thus a logical approach to valorising extensive urban assets. The permaculture approach of Monterusciello Agro City has numerous potentialities. The most obvious of the physical and environmental ones are related to the improvement of the micro-climate, strengthening the urban-rural links, rooting the new town in its surroundings through proper zoning of the productive areas in the city, and strengthening the resilience of the city.

6 CONCLUSIONS

The Monterusciello Agro City (MAC) is not just a project promoting urban regeneration of a neighborhood using urban agriculture as a driver. It is a complex approach to the requalification and further development of a new town built in response to a catastrophic event, about 20,000 people were moved from the ancient city of Pozzuoli into the new town of Monterusciello. The displacement of an entire community, specialized in commercial and marine activities, in an internal area, predominantly agricultural, rapidly urbanized.

Working with key stakeholders and enlarging the decision makers arena is the first and the most important challenge that partners have to face in order to reduce conflicts and getting consensus around the planning process. It is essential to re-create a constructive dialogue between the institutions and the citizens: This is the fulcrum around which all other initiatives have to rotate. Over the years, dialogue between residents and institutions has severely tilted for several reasons. The most difficult task of the MAC will be to rebuild that confidence in the local population that will allow the project's partners to develop the proposed solutions. The various problems that are now being addressed through the MAC have been settling for a too long time. These are the problems that made the idea of a new town, which proposed an urban model in support of a high standard of living, to become one of the many urban suburbs. A suburb plagued by

- high levels of unemployment,
- serious housing problems, especially in flats,
- and poor services in the area,
- a number of abandoned public areas and spaces.

The families who had the opportunity, once the emergency ended, to return living in other areas of the city, immediately moved. Currently, the most disadvantaged part of the population continues to stay in Monterusciello. Problematic social conditions are combined with a difficult urban environment, for the character of emptiness, anonymity, and decay of the common spaces. A further level of “physical spatial poverty” is represented by the realized but still un-used buildings and spaces, which are slowly and inexorably going towards degradation. Monterusciello is now an “in between” settlements, it has the structure and the critical mass to be a development pole in the Naples's Metropolitan Area, but at the same time it is still in the situation of being a dormitory neighbourhood.

Starting with the above in mind, it is clear that the implementation challenges of the UIA Monterusciello Agro City will be plenty, with the most important ones revolving around fostering the growth of the network and the set-up and running of a proper open governance framework for supporting the local innovations. Co-designing and co-implementation have been two pillars of the consortium's strategy for implementation, yet they may prove difficult due to the long period of citizen-government alienation and subsequent lack of trust at local level.

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