TITLE:

Ecological-urbanism in semi-urban areas after sprawl. The case of Tirana North.

AUTHOR:
SOURCE:

PhD Researcher Dorina PAPA
Scientific journal of the Observatory of Mediterranean Basin, Volume 1/ 2015, pp. 154-161

5.3 Ecological-urbanism in semi-urban areas after sprawl. The case of Tirana North.

Dorina Papa
PhD Researcher

Introduction:

Over the last 23 years, Tirana has seen dramatic transformations. In particular, the semi-urban area of Tirana North (the area between the city and the airport) has been gradually developed without planning or even any appropriate infrastructure, by converting fertile agricultural land into informal small-scale housing sprawl. Surrounded by important infrastructure axes, but without any proper connection to the city, this area seems particularly isolated. The river, another internal boundary in the area, the presence of which is almost not perceived because of the pollution and the lack of infrastructure between the two banks of the river, causes further fragmentation of the sprawl.

On one side this has stimulated somehow the concentration of the informal developments between the main roads and the river, particularly in the semi-urban situation, where the contact with the city starts to fade, preserving a large belt on both sides of the river. On the other side, the internal fragmentation reduces the communication between parts, and creates a further internal isolation. In addition the lack of sense of community has created lots of social and public security problems.

In this context the concept of sustainability (social and environmental), applied in urban planning, should play an important role for the future sustainable development of the area and preservation of the agricultural land and environmental framework. That's why, it is necessary to think of an alternative model of settlements, improving the existing ones, making them more sustainable in social and ecological terms. This alternative model refers in particular to the eco-village in urban context, which in this case being relatively small, has the possibility to explore sustainable solutions, for an area in which landscape is one of the main issues and one of the most important features.

This article aims to understand the main impacts of the sprawl in the area and to see how a new urban planning model can contribute to reactivate after sprawl inclusive sustainable communities and provide an appropriate ecological footprint.

Environmental and social impacts of the sprawl.

The semi urban areas of Tirana north, in the current after sprawl situation from an environmental point of view (Breuste, 1998) suffers the pollution of the Tirana river (Ministria, 2004), which is the main eco-sys-
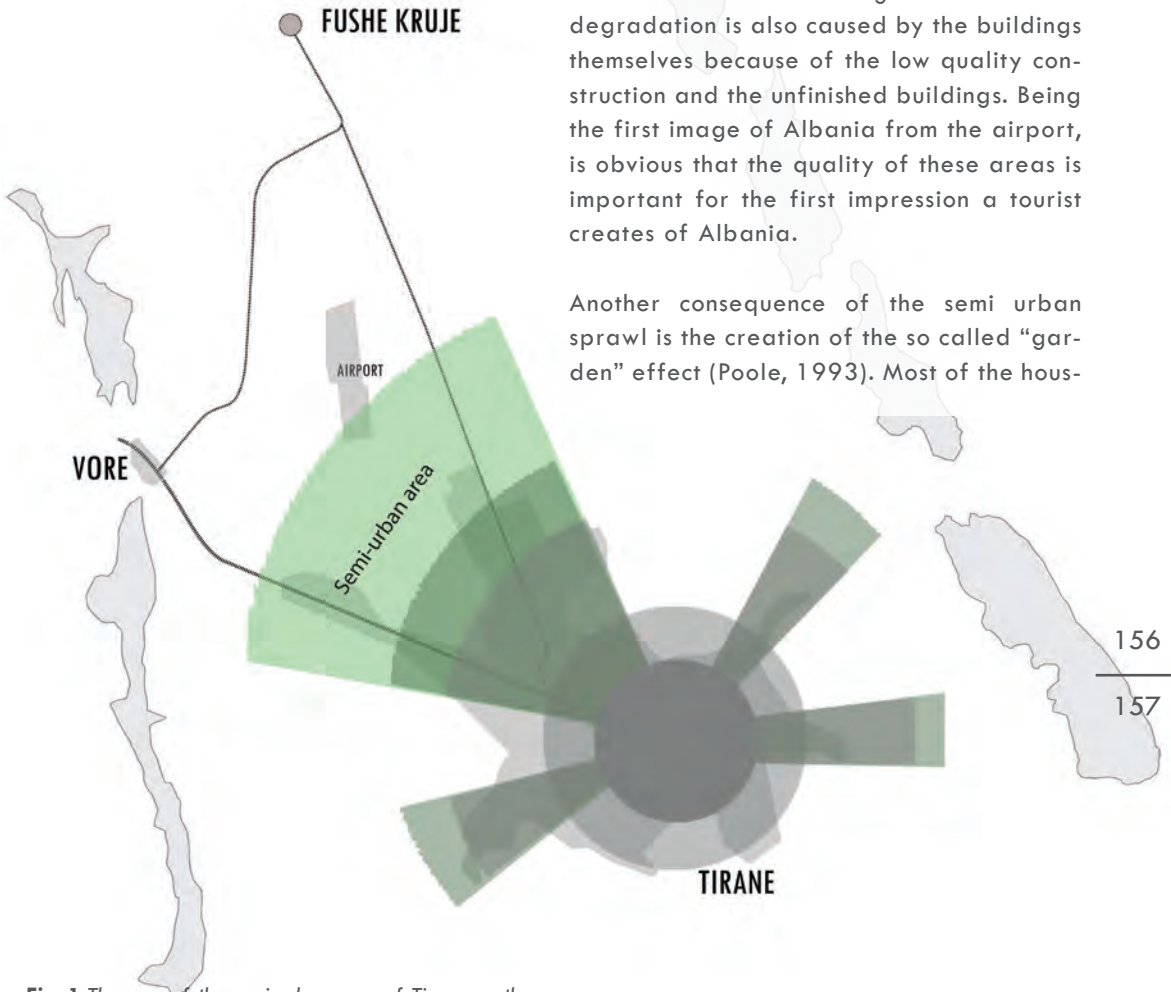
Fig. 1 *The map of the semi-urban area of Tirana north.*

Sprawl also causes the fragmentation of the open space with consequences on landscape discontinuity and degradation. The lack of a public sense of space creates the non-occurrence for the main environmental assets of the area, which is the river. The spaces of its banks become nobody's land and comprise one of the reasons for visual and environmental degradation. Visual degradation is also caused by the buildings themselves because of the low quality construction and the unfinished buildings. Being the first image of Albania from the airport, is obvious that the quality of these areas is important for the first impression a tourist creates of Albania.

Another consequence of the semi urban sprawl is the creation of the so called "garden" effect (Poole, 1993). Most of the hous-

tem in the area, the risk of damage of the biodiversity, the contamination of the soil and water, because of the destruction of the previous irrigation system and the missing sewer and wastewater infrastructure, the affection of hydrology and biochemical cycles. Over time, in absence of interventions, environmental problems will continue to expand.

Moreover, sprawl also "consumes" land (Kahn, 2000). Natural and agricultural land is used as building plot, private gardens or as space for poor infrastructure. The low-density informal urbanization occupies, without any specific criteria, a large amount of open space, whiles the community itself suffers the absence of qualitative green space and public space.

es are built in big plots, with low density and with their own garden, while the garden as public space is totally missing and the only "green" areas are the agricultural fields still not occupied by buildings.

From a social point of view, these areas lack of development standards like schools, workplaces, cafes, shops, restaurants, offices, and public buildings is one of the main reasons of the non existence of a sense of community. Unsafe roads do not stimulate walking and contribute to the reduction of social interaction.

The lack of appropriate public transport creates gated communities, further isolated which, in turn, stimulate the use of private cars thus contributing to the denigration

of social relations. Thus, the human impact caused by the sprawl leads to a society of strangers, isolating the elderly and young people, hence creating a greater tendency for depression. (Morris, 2005)

Creating an internal "Biosphere"

Semi–urban areas are areas situated between the city and the countryside and differ from rural and urban environment configurations, functions, and other characteristics, so that they cannot be called city or countryside. In many studies semi-urban areas are treated as being under the influence of the urban core (Tacoli, 1998). In contrast to this vision, referring to the case of Tirana North, moreover considering it as a strategic area, it is possible to conceive of it as partly independent from the city vision. Alfsen-Norodom defines these areas as a separate "biosphere" – a concept of seeing a landscape with dense and less dense built-up areas and generally a hybrid land use as an entirely "new form of (dynamic) landscape", with its

These suggest an integrated model of urbanism which combines nature and agriculture with the urban environment, in a green environment with sustainable energy, transportation infrastructure, dwellings, agricultural and natural and public spaces. Rather than reemploying past models based on density, we should move toward new directions.

For our area this means that it is not just a transitional area between urban and rural, but an important landscape which needs to be improved and integrated with the "independent" built environment guaranteeing future sustainability.

The overall vision of the Tirana-Airport triangle opens this area and integrates it with the city, through new infrastructure and public transport. But, it provides public transportation only in the borders, in correspondence to the main axes, with the intention of preserving the quiet character and natural landscape of the area (mainly in the semi-urban border). Thus, the infrastructure interventions in this area should be minimalistic: dual carriageway that horizontally connects

Fig. 2 *Photo of Tirana River. By Dorina Papa*

Fig. 3 *Photo of the informal area. By Dorina Papa*

own biotopes, ecosystems and landscape dynamics. (Alfsen-Norodom, 2004). In fact, this is part of the watershed of Tirana River (or Ishmi river)with environmental importance particularly regarding the flora and fauna.

This is considered to be an interesting mosaic of landscape elements (the regular grid of the ex-water channels, which are labeled strongly through row trees; the surrounding natural amphitheater created by the system of mountains and hills; the organic extension of the vegetation along the river) production (on the border) and an agricultural ecosystem (still unplanned). It attracts both rural and urban proprieties but also "semi-urban" entitles such as "urban agricultures".

the area with the main infrastructure axes in the border. These roads should have a path for bicycles and small sidewalks, which should gain importance in contact with the urban area (urban-village). Typical vegetation will be preserved along these roads like canes, for instance, which are typical along the irrigation channels. Also present are various types of trees which create interesting landscape tunnels along these roads. The improvement of the river park which is directly connected to the city, will further contribute to open these "internal biosphere" to the city and create continuity with the river natural system. The idea of an "internal biosphere" is also reinforced by the concentration of these semi-urban villages in the three main areas in order to preserve the agricultural land and green environment.

Social, environmental and landscape approach after sprawl.

1. Social approach: sustainable community

Community cohesion, interaction and participation in the planning, design and implementation process is very important for the sustainable future development of this area. Although people populating the area came from different parts of Albania, they have the same interest in activities like agriculture and share the same passion for the landscape. That is why they should be pushed to create an interaction which meets the social, environmental and economic needs.

In 1998, Roseland defines a sustainable community as a community that uses its resources to meet current needs while ensuring adequate resources for future generations. In the current situation it is clear that not only a physical change of the area is required, but also a sustainable community that should be implemented to work in a more cooperative

Community cohesion is one of the main principles related to the social approach. It encourages people to participate in decision making, making them more conscious of the preservation of the agricultural areas, environmental resources, energy, and the creation of community services, infrastructure, public spaces and green areas. This will also help in accepting the design and construction of compact eco-villages in which homes and business are densely concentrated in order to increase energy efficiency.

The same idea of a compact community, the creation of pedestrian-friendly roads, the quality of outdoor space and the common care for the environmental resources will simultaneously open up the area and make it safer. In this new condition, educated people, interested in urban agriculture will chose to live here, densifying but preserving the compactness of the area.

So, creating sustainable communities does not solely depend on the design of buildings, their location, the quality of the outdoor space and the connection to the city. Com-
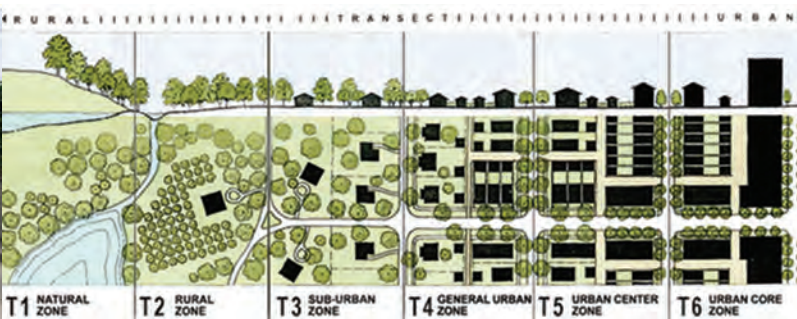
Fig.4 *The Transect,* **Source:** *Andres Duany, Elizabeth Plater-Zyberk. The Lexicon of New Urbanism. Time-Saver for Urban Design. D. Watson, A. Plattus, R. Shibley*

Fig. 5 *Photo of the natural tunnel-roads in the area. By Dorina Papa*

way. Sharing the same interests of agriculture and urban farming they should be directed towards developing their energies in symbiosis with each other, becoming competitive in terms of their products and for what this natural area can offer the city. So, accordingly, this new social system will enable the materialization of the idea of internal "biosphere" ensuring an appropriate use of resources and guaranteeing an ecological development.

In this regard, the social constitutes a strategy focused on the physical design of eco-villages[1] inhabited by sustainable communities that accommodate their needs, offer a particular care for the natural environment and provide a better system which encourages social cohesion.

1 *Intentional communities whose goal is to become more socially, economically and ecologically sustainable.*

munities are places that people like living in, with real character and cohesion. This goal will be materialized not only by buildings' concentration but also by providing communities interaction in order to have a lasting economic, social, cultural and environmental benefit.

Public space in this case is the first step in creating a sense of community and social inclusion. It should be mainly green space, with the typical vegetation of the area, easy to maintain in terms of materials and technical solutions. An eco-village community can have many of these small public spaces, which can be specialized in their functions and linked with each other through pedestrian paths. Some of them can accommodate local events, like markets, fairs, outdoor restaurants, film

shoots, but can also be used as play areas for children, meeting places for community with sitting areas, etc. Cultural activities and art performances in public space supported by the community will further vitalize the area, increasing interest from outside.

From a design point of view these spaces can be marked by the presence of the historical water towers seen as landmarks, which can be designed in order to accommodate public activity. They will also serve to preserve and distribute water contributing also the recycling of water.

These public and community interventions, will firstly increase safety in the area, forcing the removal of criminal activities from the area; thus, the community would feel free to put down their surrounding walls and use fences or vegetation as a property limit, which is the first step towards expanding the roads and creating community facilities.

This will not only enforce the sense of community, but will also create an interaction with people from the city centre, which offers benefits regarding agricultural bio-products and the leisure activities in the landscape offered along the river and in the public spaces which will also contribute in economically enriching the area.

2. Environmental approach: Eco-Village

The environmental approach, apart from preserving the landscape and the agricultural land is mainly focused in promoting and implementing the concept of eco-village.

In 1991, Robert Gilman set out a definition of an eco-village in the article entitled The Eco-village Challenge. Gilman defined an eco-village as a human-scale full-featured settlement in which human activities are integrated with the natural world in a way that is supportive of healthy human development, and can be successfully continued into the indefinite future and ensure the well-being of all life forms. (Gilman, 1991).

Eco-villages actually represent a model of sustainable living communities with the intention of implementing a more human and sustainable way of living using ecological practices.

In this sense Christian, D defines eco-villages as communities building ecological sustain-

Fig. 6 *Photo of the area: water tower . By Dorina Papa*

able housing, growing much of his own organic food, recycling its waste products and generating its own off-grid power. (Christian, 2003).

The implementation of the eco-village concept is well supported by its strategic position near the airport (specifically, between the city and the rural area), by the area's cultural background in agriculture as a result of its past as an ex- agricultural state enterprise (around which the historical villages were built) and through the presence of migrated population that has moved here from rural areas (with a particular addiction to agricultural work).

They should be planned in the main crossroads of the internal area (where a concentration of housing is noted), being sufficiently close to the main infrastructural axes and public transportation lines, but also easily accessible by people who frequent the river park or experience the internal landscape. These small communities will provide activities and receptive services for the people, who want to escape from the city atmosphere, and will represent the area's trademark. To achieve this, they integrate different aspects of ecological design: eco-housing, biological food production (organic food production) and an alternative approach towards energy.

Ecological design means transforming the area preserving the natural landscape elements and improving the river park as the main ecological system; using eco-friendly materials for buildings and also for the outdoor design of public space and parks; collecting water and reusing it for different purposes (for example to irrigate private gardens, for car washing etc.); to reuse the water towers (which will become landmarks and symbols of the eco-village) instead of private tanks; introducing alternative and

courtyards should be provided in correspondence to higher-density housing in order to offer access to food production for the entire community.

In conclusion, both these approaches will orient a sustainable development of the area in respect to the internal biosphere and environmental system. The preservation of the agricultural land and the urge to promote local products will contribute to reinforce the relations with the city in order to generate local resources. All this will contribute to a "new" image ecological image of the area.

renewable energy systems like solar panels which can be part of the built landscape; introducing green roofs enlarging the ecological footprint; introducing vegetation to separate proprieties and to screen private areas from more public areas; use natural elements as boundaries between proprieties such as planting, trees; water channels; different surface treatments, etc.

As neighborhoods will be gradually regenerated, land values will increase and the site (particularly the sites close to the main public services) will be redeveloped and densified with new typologies that stimulate social cohesion like detached houses or multiple family houses. The aim is to create a self sufficient community in contact with nature based on a local economy which should also be well integrated with the city, which will contribute to the growth of the local economy.

3. Landscape approach: Green Infrastructure.

The green infrastructure is a network of green spaces which constitutes the basis for sustainable development. In the semi-urban area of Tirana North the fluvial park and its green corridor already exists as well as the domestic gardens of the private houses and agricultural land, which constitute the green infrastructure. These are part of a multi-scale and a multi-functional mosaic of green spaces which need to be cleaned, revitalized, integrated in a systemic grid easily accessible and usable and should contain new activities in order to encourage different usages. Other equipped green areas should be provided in correspondence to the public squares of the eco-villages. They should serve as meeting places for the community and visitors and will help improve the image of these new eco-villages, branding and promoting the area. Other communal green

References:

- Alfsen-Norodom, C. (2004). *"Urban Biosphere and Society:* Partnership of Cities - Introduction",*. Annals of the new York Academy of Science* , pp. 1-9.
- Allen, A. D. (2002). Mind the gab! bridging the rural urban divide. *id21 Insights, 41.*
- Breuste, J. F. (1998). *Urban Ecology, Results of the international conference held in Leipzig, Germany, June 25 – 29, 1997.* Berlin: Heidelberg (Springer).
- Christian, D. L. (2003). *Creating a life together - practical tools to Grow Ecovillages and intentional Comunities.* gabriola Island, BC, CAN: new Society Publishers.
- Gilman, R. (1991). *http://www.context. org/ICLIB/IC29/Gilman1.htm.* Retrieved Febbrary 2014, from http://www.context. org/ICLIB/IC29/Gilman1.htm.
- Kahn, M. (2000). The Environmental Impact of Suburbanization. *Journal of Policy Analysis and Management, 19(4)* , 569–586.
- Ministria. (2004). *http://arkiva.moe.gov. al/upload/publikimet/raporte%20te%20 gjendjes%20mjedisit/Raporti%202003-2004.pdf.* Retrieved febbrary 18, 2014, from http://arkiva.moe.gov.al: http:// arkiva.moe.gov.al/upload/publikimet/ raporte%20te%20gjendjes%20mjedisit/ Raporti%202003-2004.pdf
- Morris, D. E. (2005). It*'s a sprawlworld after all: the human cost of unplanned growthand visions for a better future.* Gabriola BC: New Society Publishers.
- Poole, W. (1993). *"Preserving Urban and Suburban Gardens and Parks: The Trust for Public Land and Its Partners", in Land* Conservation through Public/Private Partnerships,. Washington, DC: (Island Press).
- Tacoli, C. (1998). "Rural-Urban Interactions: A Guide to the Literature. *Environment and Urbanisation* , 147-166.