Visioning Scenarios for the Urban Eco-Region Project

A new urban phenomenon between town and countryside

In many European countries, in spaces outside cities, new forms of urbanisation are spreading. Rural areas abandoned by farmers, who moved to areas where the industrial town developed, are the destination of a progressive return of urban populations that have not forgotten their roots. Unprecedented living forms of an urban stamp are spreading in rural areas, that were once rejected by farmers as unprofitable, but now don't resist in the face of the pervasive nature of this new phenomenon. This began around bigger cities but has now reached areas around medium-sized and small cities, and even rural ones far from urban centres. A new "urban phenomenon" is spreading in a capillary fashion in places that were once called countryside, dialectically opposite to towns. A new "urban region" is being formed which is no longer countryside, but neither is it town: despite its many names, it still lacks its own identity *(Barattucci, 2004; Secchi, 2005; Indovina, 2005)*.

These transformations took place almost unnoticed following the progressive activation of individual or small group projects. They are unequivocally tied to "living" projects not only because single-family buildings prevail, but also because they are motivated by the aspirations of individuals to live outside the town. The return to rural spaces is for stable year-long residence, in areas surrounding urban areas, as well as temporary stays during free time over holidays and weekends, in farther away green residential tourism areas. Motivations are not univocal; they do not depend on social status or degree of culture but vary from place to place. Often at the basis of a move outside the town is the search for a more direct relationship with nature, or for rhythms of daily life that are less dependent on urban organisational conditioning and its dysfunctions, even if difficult to manage. The attraction of reusing non-conventional and non-standardised, old, abandoned rural buildings as residences must not be forgotten, nor must the possibility of access to house property at cheaper prices than in the town be neglected *(Kaiser, 1996; Lanzani, 2007)*.

This totally spontaneous, pervasive and capillary phenomenon does not depend on territorial public policies nor large and costly projects. It depends on the jumbled spread in current urban society of living behaviours, life models, cultural references, and life styles different from those of the past industrial society. The new processes of urbanisation call into play the search for more freedom in the choice of ways to live, a more direct responsibility in defining house projects and the space in which daily life takes place, of an identification relationship that is closer to nature, and practices of "care" of living places. Perhaps this search hides a tendency for personal affirmation through identification with places where individual activities and behaviour are carried out, differently from other areas in which, by contrast, collective identity is asserted through other activities (*Bauman, 2006; Maffessoli, 1993)*.

It is probably a phenomenon that manifests new forms of urbanism peculiar of post-industrial societies and a clear evolutionary make up is still not visible. The change is not evident since the minute and capillary transformations relate mainly to models of behaviour and living habits, that are not directly visible, rather than visible landscape forms and morphology. The landscape of the countryside has not changed greatly, but behaviours and lifestyles of inhabitants are changing; they are no longer farmers but town-dwellers living outside the town and their activities are no longer agricultural but are urban *(Donadieu, 1998; Hervieu, Viard, 1996)*.

The places, that are most hit by these transformations, are often characterised by the heritage of a lot of still partially integral building and agricultural property, that have been stratified over the centuries and testify to historical and cultural values; by precious natural environmental resources, that have often been used or wasted without taking account of the dynamics that determine their balance. In the former agricultural areas the new settlement processes intersect with dynamics of the natural environment, that are often at risk, and lead

to images of new landscapes, not only with the eyes but also with the mind. Natural, historical and knowledge heritage deposited in environmental structures and territorial organisations risks being distorted by a misunderstood return to the countryside. Often, in fact, rules and laws, that in the past governed balances between settlement processes, natural factors and "cultural" perceptions of resident communities, are unaware of this phenomenon. It is indifferent to the rules of collective behaviour, that are the basis of community life, and to the differences between new "town-dweller" inhabitants and the old "farmer" residents.
The phenomenon is ambiguous; it can present non-negligible risks, but also unprecedented potential. On one hand, driven individualism obscures collective vision, shatters community ties and does not recognise environmental and landscape values as public goods. On the other hand, the return to rural areas can be an occasion to propose new innovative development models able to contextually consider environmental, landscape and daily life problems actively involving residents in caring for their own life framework. Judgement of ongoing transformation processes can be ambivalent. They can be positive signs of a new cycle of re-territorialisation capable of producing new enhancement effects on territorial heritage (*Raffestein, 1984; Sach, 1986; Magnaghi, 2000)*. They can be seen as processes of occupation and privatisation of land, motivated by individual interests that neglect the overall and collective vision; they can have environmental and landscape effects that are uncontrolled and devastating.

The "urban eco-region" strategic project

The new urban phenomenon – submerged, unpredictable and widespread – requires a project to give an overall answer to the new instances of living and to positively resolve the ambiguities and contradictions that characterise them.
The project inherit from the past not only building structures and buildings, but also the understanding of relations among buildings and related open spaces and the knowledge that produced a balanced evolution between settlement processes and natural dynamics. Its implementation involves not only the reuse of real estate, but also necessary knowledge for new "inhabitants" to "take care" of the "rural" environment in which they live *(Besio 2002)*.
The project shirks the emphasis of the transformations produced by grand urban projects in order to co-ordinate and support transformations induced by individual, capillary, widespread and interstitial actions. It is still being formed and is largely incomplete, various, graduated, holistic and complex. It integrates in a unique design various interventions on settlement and infrastructure, on the environment and landscape, and transforms many single actors into communities of inhabitants responsible for their own frame of life *(Alexander, 1977; 2005; Habraken, 1998).*
In this case the project is not big and expensive, but innovative, plural, complex and in continuous transformation. Since it does not resolve problems once and for all and does not give immediately exhaustive answers, it requires a strategy. The strategy refers to new models of *urbanness* that re-establish the co-operative relationship between "town" and "countryside" and support new life styles that involve the responsibility of individuals in carrying out a collective living project. It orients a balanced evolution of the living project, performed by inhabitants that are no longer there, into the project of future inhabitants that are not yet there, in the context of self-sustainable and endogenous development. It aims for ecological balance between human settlement processes and natural dynamics. It selects images of the landscape and environmental structures in which virtuous relations that the resident communities establish with nature and the history of the environment where they live, are manifest. It calls into play the "territorial heritage" of natural resources, rural buildings and rural works as sediments of the history of the territory. It requires the understanding of rules, that have controled the evolutionary continuity of the inextricable pattern of community, nature and culture, and the search of the conditions in which individual

actions find it opportune to pursue more general collective interests *(Sach, 1988, Schumaker, 1978)*.

Visioning scenarios

In the uncertain prospect of a phenomenon, that has not yet been sufficiently studied and the results of which are not predictable, scenarios have been useful to imagine the potential of ongoing transformations that prelude to the "urban eco-region" project *(Vettoreto, 2003; Gibelli, 1996; Khakee, 1999)*. They give the image of a "new alliance" between town and countryside - in contact with nature and history - and a "new urbanness" – of inhabitants responsible for landscape and environmental conservation -.
They have been experimented in order to address problems of ambiguity, complexity and unpredictability that emerge with the new urban phenomenon and that cannot be tackled with just traditional urban instruments. They cancel the ambiguous ambivalence since they give "a beautiful image" that bends the future towards larger, richer and more generous living projects than those that are currently ongoing. Beginning with the current situation, they place new forms of "*urbanness*" at the centre in which individual actions and interventions are co-ordinated in a collective and public interest; they put to good use knowledge and environmental competence formed in the balanced interconnection of nature and history, integrating projects on resident buildings with projects that guarantee the survival of a rural heritage of natural resources inherited from past generations. They respond to the double principle of evolution and integration: the former to respond to the changing needs of communities of inhabitants and civil systems; the latter to consider the reasons for settlement processes together with the dynamics of natural phenomena.
Scenarios without actors are spaces empty of meaning. Since they are built on the basis of traces left by the farming world that has been bypassed, they represent plausible images of possible futures only if they take on meanings coherent with current behaviours and life-styles. To bypass the closure in space and time of relations between living and working of the past, the scenarios must acquire multiple dimensions of the contemporary world in space and time. They take account of the fact that a multiform and flexible space-temporal relationship connects living activities with producing and motivates tourism choices. Their content changes with the variation of the size of living space; living in a geographical region is different from living in a specific site. It also changes with the variation of the duration: living according to stable rhythms of daily live is different from living according to the provisional rhythms of free time.
Scenarios are not limited to proposing images that envisage future desirable states. Mere imaginary visions of the future would not suffice to orient strategic projects. They are equipped with a "structure" that integrates relations between natural and anthropic factors, keeping the morphology of land and water together with the morphology of rural settlement, land, vegetation and roads etc. Furthermore, they presuppose a process that simulates the implementation of the project by different actors, establishing roles, functions and relations among those that operate transformations – inhabitants, communities, institutions. Structures and processes determine the strategy to establish political choices, intervention priorities, available resources and privileged actors *(Virgilio et al., 2007).*

Conceptual models and paradigms

Scenarios refere to a metaphor, that evokes the mental image, both ideal and concrete, assimilating the landscape to a collective living project *(Dematteis, 1991)*. The metaphors of the "industrial town", the "linear town", the "car town" operated in a similar fashion and today

can be recognised as "scenarios" from which techniques, methods and instruments with which the project of the contemporary town was originated *(Vettoretto 2003; Secchi, 2005)*.
They are built on conceptual models and paradigms to recognise, nominate and explore ongoing reality and outline its possible evolutions; in other words to imagine what could happen in the future through the interpretation of what is happening today. In the building of scenarios the "ecosystem of human settlement" paradigm, outlined at the different levels of the "urban eco-region" and the "ecosystem of rural settlement", supplies the conceptual model, method and procedure for their operational elaboration.
In the long history of many European regions landscape communities of inhabitants that live there have constantly transformed landscape images, environmental structures and territorial organisations. The communities were hosted in a territorial space in which natural and anthropic factors intersect and conditioned projects and modes of life. But the communities, in turn, transformed the space to reflect the civil and cultural environment to which they belonged. The conceptual model that best represents the structure of relations among three factors – resident community, the natural and anthropic environment – is that of the "ecosystem of human settlement", refering to the more general paradigm of the ecosystem *(Odum, 1988; Acot, 1989; McHarg, 1971)*.
However, it is a peculiar ecosystem since the organism hosted in the environmental context is the community of inhabitants. In the transfer of the paradigm of the ecosystem from the natural world to the human world, certain adaptations are necessary. Interest moves from deterministic evolutionary processes to conscious and intentional evolutionary processes, from a consideration of biophysical factors to cultural and symbolic factors, from quantitative and numerical models of natural science to qualitative and meaning models of human sciences, from regulation of transformation of physical phenomena through standardised, quantitative and numerical parameters to the regulation of living behaviour and the normative control of settlement forms through performance parameters *(Bateson, 1979; Lynch, 1980; Capra 2004)*.
Since the community of inhabitants – organism hosted in the environmental context – is equipped with the capacity for learning and planning intentionality, it modifies the environmental context as a function of its cognitive perceptions. This changes continuously since it depends on the evolution of the cultural and symbolic system within which the community operates. But this too, in turn, is influenced by the physical environment in which it develops. The relationships between the three factors are evidently complex since mutually implicit and variable in space and time. Their development is not linear or deterministic but they interlink according to a spiral movement that has the speed of a discontinuous evolution over time *(Tiezzi 2006; Papagno, 2002)*. The community is hosted in the circumscribed space of the environmental context, but it develops relations with the surrounding area. It is open to relations with other communities at the same level or on a wider level. In its own life cycle it carries out activities that are carried out in other spaces often very far away. For this reason the relations that develop outside in a space bereft of apparent frontiers, can condition, sometimes significantly, the structure of relations internal to each ecosystem (Thom, 1972).
The paradigm of the human settlement ecosystem can be operationalised according to scenarios that are different due to the distance from which the living space is represented. The scenario of the "urban eco-region" represents the living system of a geographic region, observed from the distance of an overall scale. The scenario of the "rural settlement ecosystem" represents the living system of a single site, observed from the proximity of the local scale. From different distances you can see different things and different living characteristics make sense. The distance conditions the aims of the project since it determines the definition of elements, relations, actions and meaningful behaviour.
Scenarios of the "human settlement ecosystem" have been experimented in two case-studies in which the relationship between the resident community and life frames was observed from different distances. The scenario of the "urban eco-region" has experimented in the western area of the city of Genoa, capital of the Liguria Region. The scenario of the

"rural settlement ecosystem" has experimented in a site of a high landscape value, the Cinque Terre, on the eastern Ligurian coast.

Scenarios of the "urban eco-region" in the western part of the city of Genoa

The strategic project of the "human settlement ecosystem" at the scale of geographic region calls into play the relations between consolidated densely built up urban areas, spaces that were once agricultural that are today replete with widespread urban behaviours, and uninhabited areas in which natural factors and dynamics prevail. In the scenarios of the "urban eco-region" the three environmental contexts – urban, rural and natural – are considered reciprocally interacting in a single, larger territorial system *(Geddes, 1949; Muratori, 1967; Toesca, 1994; Magnaghi, 2000).*
The scenarios, built for the western metropolitan area of Genoa – metropolitan city and capital of the Liguria Region – face a widespread return of inhabitants from the coastal "town" to the "countryside" in the inland valleys. They suggest a rethinking of the relationship between town and countryside to re-establish ties between the urban environment (coast), rural environment (hilly coast and mid-level inland valleys), and natural environment (higher up inland valleys) (Fig. 1)

Fig. 1 - The western metropolitan area of Genoa.

The scenarios structure orients integration among different urbanisation, environmental and landscape policies and among different plans that control settlement development, hydro-geological risk safeguard and landscape conservation. The process orients the co-ordination of individual projects within the design of a more general collective framework and the innovative management of primary services for daily life and accessibility.
The scenarios imagine the future of the western area of Genoa from the evolution of the present. They foreshadow an evolutionary trajectory of the current situation that considers

the strategies for feasible actions of privileged actors and the resources to be called into play to reach the desired state. They evaluate the difference between the current situation and the ideal situation. In the first one they discover evidence, interpret events, choose premonitory events of the transformations from which the desired future can originate. In the second, they measure what is missing to overcome the distance between ongoing reality and its possible evolution into a desired state. They attribute new meanings to landscape, through an imaginary "mise-en-scène" that solicits reasoning and arguments vis-à-vis actors, actions, resources, associating spatial forms to the civil processes that sustain them.
They imagine the future "urban eco-region" in which the new "ecologically" living project is implemented through a "new alliance" between town and countryside, and "new urbanity" through the responsability of local communities. They reveal how to renew the interrupted ties between town and countryside through new living forms – simultaneously both rural and urban – that stipulate new relations between nature and human settlement. They are rural but they establish a relationship between the home and open space different from that of agricultural productivity. They are urban, but recognise open spaces such as green infrastructure that must be managed as public goods for the sustainable town.
The scenarios, that regenerate the territorial heritage inherited from the past to feed the development of the future, represent the outcome of an interpretative process. In fact intermediate scenarios have considered the relationship between town and countryside in the old pre-industrial agricultural past (Fig. 2) and in the current phase of bypassing the most recent industrial past (Fig. 3).

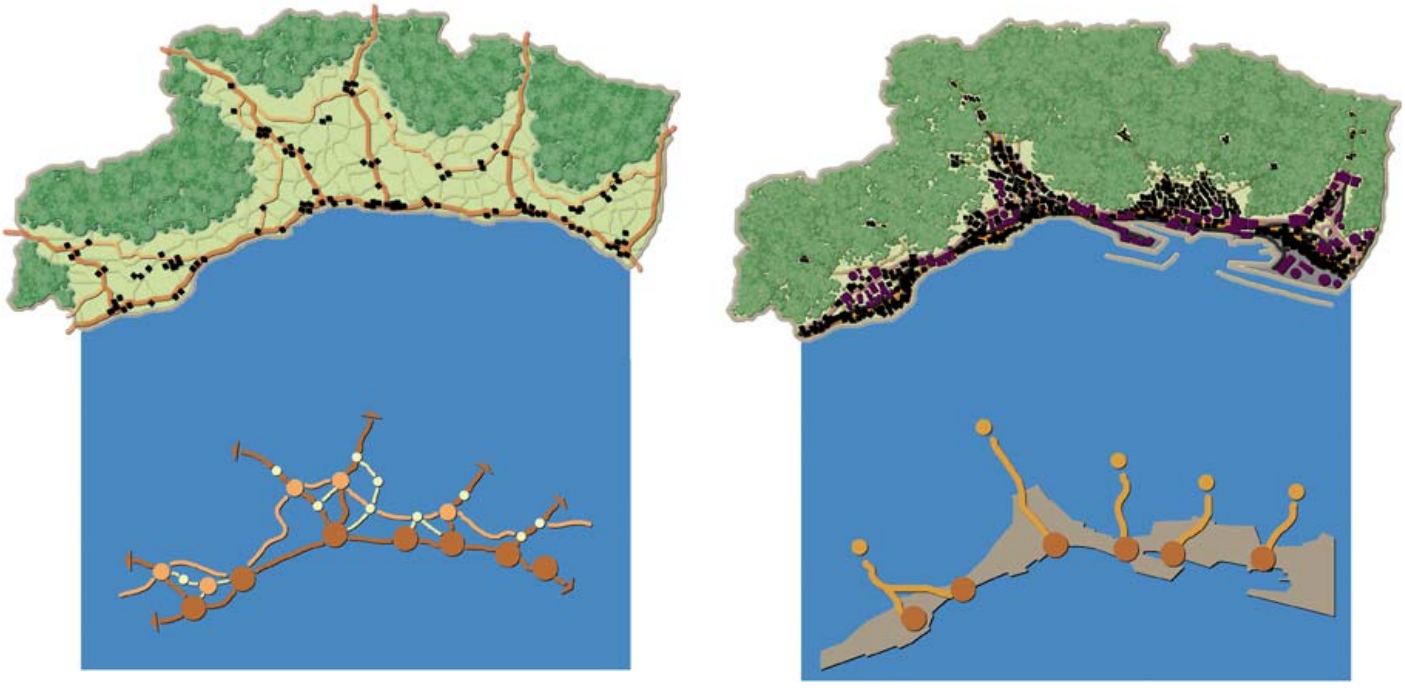

Fig. 2, 3 – The pre-industrial scenario and the recent industrial one.

In the passage from the current scenario to the future one, elements and structures that characterise the scenario of the agricultural pre-industrial past are recovered with new meanings and new roles (Fig. 4).

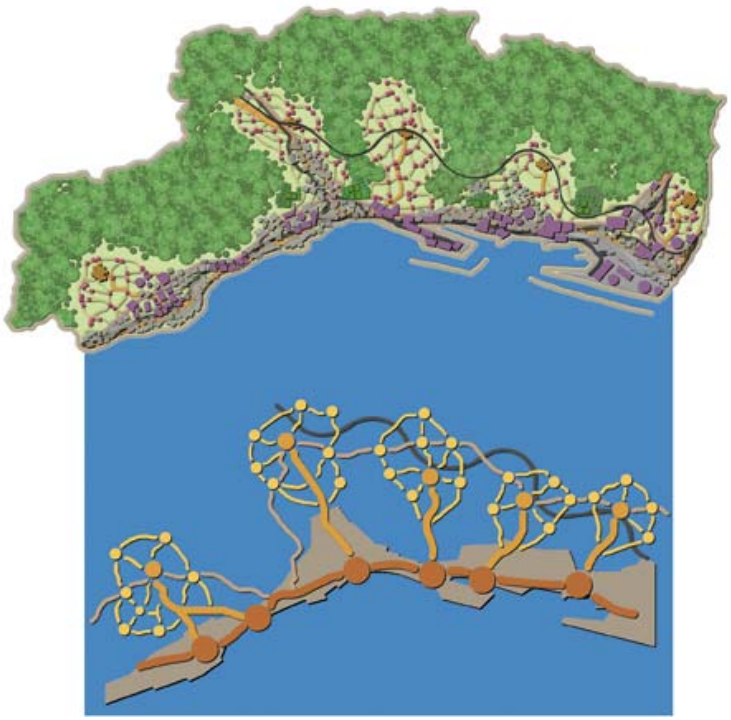

Fig. 4 – The future scenario of "urban eco-region".

The scenarios relate to what could happen following a generalised spread of new virtuous living behaviour on the hills behind and outside the consolidated town, integrate building projects to the control of the land, water and vegetation, re-establish the environmental balance among dynamics of natural factors and the development of living processes. They refer to a living community that recognises itself responsibly of a common more general interest. They rethink accessibility and services for daily use that do not foresee new structures and infrastructures but a different management. (Fig. 5)

Fig. 5 – New structures and infrastructures of the scenario of "urban eco-region".

Scenarios of the "rural settlement ecosystem" in the high landscape and environmental value territory of the Cinque Terre

The strategic project of the "human settlement ecosystem", outlined at a local scale in a circumscribed area, calls into play the rebuilding of ties among residential units, which were once agricultural but are now used for tourism, and the spaces surrounding it. The values of buildings and landscape refer increasingly more to the tourism economy and increasingly less to the agricultural one. In the past the project of living was integrated with that of land arrangement on the basis of economic needs of traditional agricultural communities. In the scenarios of the "rural settlement ecosystem", real estate, buildings and farming are integrated to sustain a multifunctional agricultural and tourism economy and communities in which town-dwellers and farmers live together *(Besio, 2002; Virgilio et al., 2007).*
The scenarios built for the Cinque Terre National Park, rural area on the eastern Ligurian coast, consider the processes of spreading green tourism in rural spaces of a high landscape value. In the hillsides where they still practice agricultural activities for wine and olive oil production, a capillary and widespread phenomenon of substituting agricultural residences with more recent tourism residences is ongoing (Fig. 6).

Fig. 6 – The area of Cinque Terre National Park.

The scenarios of the "rural settlement ecosystem" have been built for some localities situated on the hillsides in order to solicit a rethink of the relationship between rural settlement and annexed farming plots, and to suggest how to transfer the value of rural buildings and the lots from agricultural income to that of tourism. The structure involves the integration of recovery of rural buildings with landscape and environmental improvement of abandoned fields and to act as bulwark against hydro-geological risk. It associates adequate standards and environmental and landscape equalisation with the value of buildings, involving actions to conserve and enable collective use of the landscape. The process co-ordinates both

individual and public administration works, establishing financial opportunities and public services to stimulate private works.
Some alternative scenarios have been produced that have different structures and refer to different processes, since they envisage different interventions, public policies and actors. Experimentation of alternative solutions has highlighted how structures and processes are related since different spatial configurations relate to different territorial policies and different actors.
In the scenario of coastal tourism development (Fig. 7), territorial policies of public administrations prevalently support interventions on the coast. The interests of the National Park are concentrated on natural aspects of tourist use. Territorial structure is characterised by the growth of coastal centres, the creation of new tourist complexes, the abandonment of hillside building, cultivation of vines and maintenance of terraces, consolidation of coastal roads and the loss of accessibility of hillsides. Nature is taking back farming land.

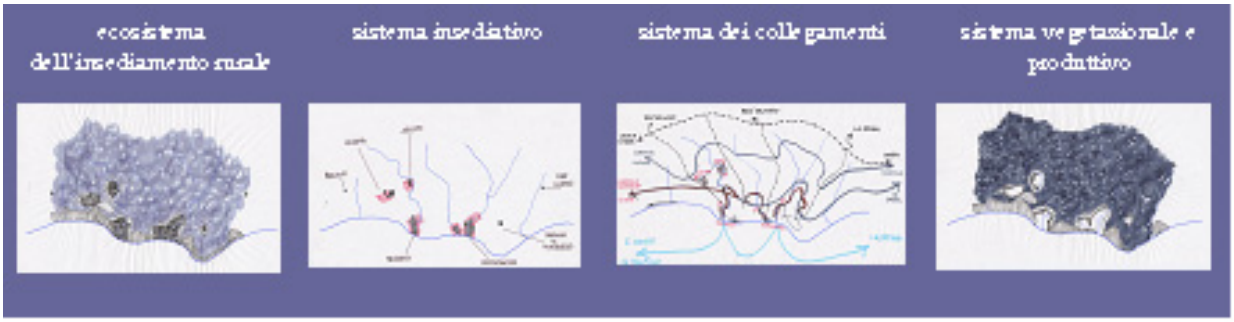

Fig. 7 - Scenario of coastal tourism development.

In the scenario of intensive recovery of agricultural land (Fig. 8) public sectorial policies support the recovery of agricultural land and niche wine production. The National Park takes on the profile of farming park. The territorial structure is characterised by the extensive replanting of new vines in the terraced areas, by the reuse of rural buildings for activities tied to farming and the improvement of accessibility to the hillsides, and by a reversal of the re-naturalisation process.

Fig. 8 – Scenario of intensive recovery of agricultural land.

In the scenario of spontaneous recovery of rural buildings (Fig. 9), green tourism is developing on hillsides, with no support from adequate public policies. The National Park limits itself to guaranteeing the legitimacy of building restoration. The territorial structure is characterised by the progressive recovery of rural buildings, tied to the occasional recovery of terraced fields limited to areas around residential buildings, and by uncontrolled spread of urbanisation network and the capillary progression of hydro-geological instability.

Fig. 9 - Scenario of spontaneous recovery of rural buildings.

In the scenario of the "rural settlement neo-ecosystem" (Fig. 10) public policies support the integrated recovery of the rural area according to eco-systemic criteria. The National Park has the role of promoter. The territorial structure is characterised by the recovery of rural buildings integrated with the recovery of cultivations and terraces in the context of eco-systemic territorial units; public interventions vis-à-vis urbanisation and utilities facilitate private multifunctional actions; urbanisation networks and mobility satisfy the criteria of environmental sustainability.

Fig. 10 - Scenario of the "rural settlement neo-ecosystem".

Conclusion

The scenarios are for the rural territories where ongoing processes of residential spread develop in traditionally rural areas, surrounding urban conurbations or that witch have a high landscape value. In the first case they are motivated by the abandonment of the town by some of the urban population, and in the second case by the onset of green tourism. In these areas we find stratified heritage of farming, building and knowledge passed from generation to generation, sometimes forgotten, and the important presence of the nature.
The processes introduce typically urban behaviour in areas that were once agricultural. They are "spontaneous", since they have individual motivations not contemplated by territorial policies of public administrations, and their overall design is not easily perceivable.
The scenarios "tell stories" of the new modes of living rural spaces, that recognise the evolutionary continuity of territorial heritage inherited from history and presage a "new alliance" between human settlement process and natural dynamics. They represent paradigmatic territorial images that emphasise the virtuous evolution from the current situation to new situations, beginning with recognised territorial values. They refer to an "eco-systemic vision of human settlement" since they bring together in a single image phenomena

that belong to human world and the natural world. They propose a "new urbanity" that assign an active role to the inhabitants in creating a new collective living project.
They are the outcome of complex cognitive procedures that produce spatial knowledge through the elaboration of morphological forms and structures of the territory.

The scenarios of the "urban eco-region" were produced in the context of research of national interest, financed by the Italian Ministry for Universities and Research in the 2003 – 2005 years; they were experimented in the case-studies of the rural spaces surrounding the city of Genoa and La Spezia and those of a high tourist vocation of the Cinque Terre, on the central and eastern Ligurian coast.

*The images in fig. 2, fig. 3, fig. 4 are from Fabrizio Esposito's doctoral thesis in Urbanism entitled, "Scenari della nuova abitabilità tra l'urbano e il rurale", XIX cycle, Roma La Sapienza

The images in fig. 5 are from Bisio L., Lombardini G., Segalerba P., (2007), "Lo scenario dell'ecoregione urbana nel ponente genovese", Magnaghi A., (editor), *La costruzione di scenari strategici per la pianificazione del territorio: metodi e tecniche*, Firenze, Alinea.**

***The images in fig. 7, fig.8, fig. 9, fig. 10 are from Roberta Blanchi's and Michele Ceccarelli's degree dissertation, "L'ecosistema dell'insediamento rurale come modello per la progettazione e la gestione del territorio", Faculty of Architecture, Genoa 2001-02

Bibliography

Acot P., (1989), *Storia dell'ecologia*, Roma, Lucarini,
Alexander Ch., (1977), *A Pattern Language. Towns, Buildings, Construction*, Oxford, Oxford University press,
Barattucci C., (2004), *Urbanizzazioni disperse. Interpretazioni ed azioni in Francia e in Italia*, Roma, Officina,
Bateson G., (1979), *Mente e natura: un'unità necessaria*, Milano, Adelphi,
Bauman Z., (2006), *Vita liquida*, Roma, Laterza,
Besio M., (2002), "Saperi scientifici e saperi del senso comune nel piano del paesaggio", *Il vino del mare. Il piano del paesaggio tra i tempi della tradizione e i tempi della conoscenza*, Venezia, Marsilio,
Capra F., (2004*), La scienza della vita. Le connessioni nascoste tra la natura e gli esseri viventi,* Milano, Rizzoli,
Dematteis G., (1991). *Le metafore della terra: la geografia umana tra mito e scienza*, Milano, Feltrinelli,
Donadieu P., (2006), *Campagne urbane. Una nuova proposta di paesaggio della città*, Roma, Donzelli,
Geddes P., (1949), *Cities in evolution*, London, Williamson & Norgate,
Gibelli M.C., (1996), "Tre famiglie di piani strategici. Uno sguardo d'assieme alle vicende internazionali", in *Urbanistica* n° 1006
Indovina F., Fregolent Laura, Savinio Michelangelo, (2005), *L'esplosione della città,* Bologna, Editrice Compositori,
Habraken N.J., (1998), *The Strucure of the Ordinary,* Cambridge Massachusset, The MIT Press,
Hervieu B., Viard J., (1996), *Au bonheur des campagnes (et des provinces),* La Tour D'Aigues, Editions de L'Aube,
Kaiser B., (1996), *Ils ont choisi la campagne,* La Tour d'Aigle, Edition de L'Aube,
Khakee A., (1999), "Scenari partecipativi per lo sviluppo sostenibile", in *Urbanistica* n° 112,
Lanzani A., 2007,
Lynch, K., (1981), *A Theory of Good City Form*, Cambridge Massachusset, The MIT Press,

Maffessoli M., (1996*), La contemplazione del mondo: figure dello stile comunitari*o, Genova, Costa&Nolan,
Magnaghi A, (2000), *Progetto locale*, Torino, Bollati Boringhieri,
Muratori S., (1967), *Civiltà e territorio*, Roma, Centro Studi di Storia urbanistica,
McHarg J., (1971), *Progettare con la natura,* Padova, Muzio,
Odum E.P., (1988), *Basi di ecologia*, Padova, Piccin,
Papagno G., (2000), *Un modello per la storia: materiale, attività, funzione*, Reggio Emilia, Diabasis,
Raffestein c., (1984), "Territorializzazione, deterritorializzazione, riterritorializzazione e informazione, in Turco A., *Regione e regionalizzazione*, Milano, Angeli,
Sachs I., (1988), *I nuovi campi della pianificazione*, Roma, Edizioni Il lavoro,
Sack R., (1986), *Human Territoriality, its Theory and History,* Cambridge, Cambridge University Press,
Schumaker E., (1978*), Piccolo è bello: uno studio di ecosistema come se la gente contasse qualcosa*, Milano, Mondadori,
Secchi B., (2005), *La città del ventesimo secolo*, Bari, Laterza,
Tiezzi E., (2006), *Verso una fisica evolutiva. Natura e tempo*, Roma, Donzelli,
Thom R., (1977), *Stabilité structurelle et morphogenese. Essai d'une teorie generale des modeles,* Brugge, W.A. Benyamin,
Toesca P., (1994), *Manuale per fondare una città,* Milano, Eleuthera,
Vettoretto L., (2003), "Scenari: un'introduzione, dei casi e alcune prospettive di ricerca", in Maciocco G., Pittaluga P., *Territorio e progetto. Prospettive di ricerca orientate in senso ambientale*, Angeli, Milano,
Virgilio D. Blanchi R., Bolgiani G., Ceccarelli M., (2007), "Uno scenario progettuale per la riqualificazione paesistico-ambientale degli ecosistemi dell'insediamento rurale delle Cinque Terre", in Magnaghi A, *La costruzione di scenari strategici nella pianificazione del territorio,* Firenze, Alinea,