

# Ecological transition and planning strategies

Stefano Aragona \*

University Mediterranea of Reggio Calabria  
via dell'Università 25, 89124 Reggio Calabria, Italy  
saragona@unirc.it

## Abstract.

Starting from environmental and social unsustainability, the paper proposes the rethinking of territorialization or reterritorialization paths. Highlight some key elements to build the ecological transition. Knowing that implementing the ecological approach takes time, remembering that the industrial city has taken over 350 years to establish itself. It highlights that planning and urban planning are increasingly land and city management and that the object of interest is the existing one, its maintenance or transformation having the common good as its guiding star.

**Keywords:** re-territorialization processes, resilience, ecological approach, integrated planning, common goods

*We destroy the beauty of the landscape because the splendors of nature,  
freely available, they have no economic value.  
We would be able to put out the sun and the stars because they don't pay a dividend*  
J.M. Keynes

## 1 Ecological Transition is much more ...

The Ecological Transition (ET) must be based on reducing the ecological footprint in anthropogenic processes i.e. of territories and cities and of the development model. This is the only way to deal with the limitation of non-renewable resources, both those used as production inputs and as land that is increasingly “consumed” or urbanized. The processes of anthropization have always used natural resources to build human spaces. With the modern city this use has grown exponentially and unsustainably in the near future. One of the main threats, global warming, is highly dependent on overbuilding and desertification. With regard to both these phenomena, territorial and urban planning can play a non-secondary role.

Digitization, together with greenery, is the other key element of ET. The reference is the *New Green Deal* of Europe, inspired by what Rifkin wrote in 2017. Capra and Mattei in the same year ask for a necessary great *Copernican revolution* in the relationship between man and nature and which also changes the legal, social and economic conditions of modern society and its spatial expressions. But even the components of digital transformation, the raw materials for its electronic components, are limited. As planners we cannot intervene on this availability, but we can and must

indicate territorial and city structures that are less dependent and fragile regarding this danger (Butera, 2021).

And the theme is much broader and concerns the use of the territory. This guides the spatial arrangements. Assets that can also be in competition with each other. One of the most important, which has always existed, is the competition between greenery and agricultural activities. Agricultural activities that are in competition with those of animal breeding for food purposes. This competition is one of the reasons for the enormous deforestation of the largest green lung on Earth, the Amazon. We are talking about activities - agricultural and livestock - which are among the main causes of both emissions that increase the greenhouse effect and water consumption. In many areas, very relevant in Amazonia, there is still another competition: that between the harvesting of wood for various purposes and the protection of green areas.

These are essential lungs of the Earth that help counteract the greenhouse effect. The current deforestation capacity is not even comparable to that which existed in the past. Thus, emblematic case, the Romans destroyed forests, transformed landscapes and made woods disappear to make building material, ships, energy, etc. but certainly they could not eliminate, in a year, as many hectares as the surface of Belgium as happened in the aforementioned Amazonia. Furthermore, those ancient transformations occurring over the centuries, however, allowed a sort of adaptation both to natural components and also to human ones: processes that were at the basis of the construction of the landscape, as recalled by the EU *Landscape Charter* (2000).

Regarding these issues, territorial and urban planning has some spaces for action. But, as required by the UN Agenda 2030, a truly integrated approach is needed. In this case e.g. hypothesize that the activities to produce agricultural products take place in vertical greenhouses and not in the field, thus minimizing the transformation of the soil, the consumption of water, and transport. On the other hand, agricultural productions no longer even offer many jobs as they are increasingly mechanized. It is no coincidence that in these activities there are many multinational companies that apply economies of scale and automation. For the most part, they use chemicals and do not respect the rotation of crops thus impoverishing the land.

Forest management is another field in which spatial planning, in a coordinated way with rural disciplines, can play a significant role. In this sense, *River Contracts* are among the instruments that can be used. The more these work well, that is, they offer economically and socially valid solutions, the more local communities can be convinced and involved not to transform the territories into pasture and not deforest them.

The basic purpose of ET must be to increase resilience on both large and local scale, considering that climate change first of all imposes a decrease in fragility at both levels. This, first of all, translates into an increase in their resilience. The reason is because natural events have no administrative boundaries. That means a reduction in hydrogeological risk and an increase in elements – such as greenery – which raise local conditions regarding the response to phenomena such as heat waves. Choices that require actions to improve the “passive” response of spaces and lifestyles.

The other important objective is the use of tools such as *Energy Communities* or *River Contracts* mentioned above and using as much as possible elements based on the “0 km” criterion. Hence opportunities for local development, construction of a circular economy, recovery and proposal of the meaning and identity of places. This

requires planning and action strategies for both the new and, above all, the existing considering that the basic assumption is “0” land consumption.

## 2 Difficult changes for the territory in Ecological Transition

In the windows of time that open between one peak and another of the various variants of Covid, many are hoping and asking for “going back” to before the pandemic. But they do not consider that already, when it begins in 2019, the paradigm – using the term used by Khun in 1962 for scientific revolutions – of development manifested great problems both environmental and social. The reason is at the root of it.

In recent decades, international and national organizations have focused on large urban centres so that they become the main engines of a globalization which, according to *neo-liberal* theories, had to redistribute wealth on a planetary level. This is done using *economic efficiency* as a key element. And the growth of GDP and per capita income were the essential indicators, in fact the only ones, even if since the Rio Conference in 1992 – if not since 1972 with *The Limits to Growth* – the question of environmental and social sustainability has always been more and more emerging.

Europe chooses to face globalization with strategies resulting from this overall vision. Thus proposes the *European Space Development Scheme* of 1999 and launches the transport policy based on the *Transeuropean Network for Transport, TEN-T* with High Speed, between large European urban and metropolitan areas. Since this choice, in many cases, was not accompanied by the reinforcement of local public transport, the result was to “bring closer who are far away”, that is the already strong poles and “make farer those who are closer”, that is the smaller centres and/or internal areas. The situation is even worse in Italy where in 1992 there was the so-called “dry branches cutting” in rail transport which meant cutting off networks and services especially for what will later be defined as “internal areas”.

*EU Urban Agenda* is the attempt to focus on some European cities to create poles capable of competing on a global level. The economic function of urban centres is also one of the essential components of them. They are born for security reasons, to have trading markets and places of production. They are one of the three *territorial invariants* – together with the areas and networks – well identified by Raffestin (1985). Their weight changes in relation to the different societies/eras. With the modern city, formed with the industrial revolution and engine of growth, then with the metropolis (Gottman, 1961; Gottman, 1982; Sassen, 1991; McKinsey, 2011; Glaser, 2013), but from the beginning of the '70 of the twentieth century there is the progressive withdrawal of politics.

Initially this happens in Great Britain (the era of M. Thatcher), then in the United States (the years of Regan and then Clinton), and gradually throughout Europe with liberalization and privatization. They are increasingly vast and have led to the transformation of many services, previously considered rights, into goods to be purchased. The city is left in the hands of the economy, global digital companies and large international finance (Rodrik, 2011; Crouch, 2019). Attention to balanced territorial and social development disappears. The integrated planning strategies between rural, urban, small, medium, large, metropolitan areas, required the Leipzig Charter in 2007, are almost everywhere forgotten.

These neoliberal policies have been particularly negative from a social, territorial, and environmental point of view. On the one hand, in the large cities have increased their economic competitiveness - for the advantage of few actors -, on the other, the rest of the territory has lost its attractiveness, wealth and population (Roses and Wolf, 2019; Rodriguez-Pose, 2018). The large megalopolises have shown a strong increase in the various types of emissions, pollution and related diseases (WHO, 2016), a great growth in forms of social inequity (Harvey, 2007, 2012), all with an ever greater loss of identity and sense of places (Augè, 1992, 1999). The set of these consequences - social, environmental, and spatial - is absolutely consistent with the development philosophy of neoliberal thought. The bases of which are to consider: a) work as a production input to be purchased and which can be "moved" or where there is a need, or demand, for labor; b) the territory as another production input, "quarry" for materials; c) a development that means aiming at the expansion of the demand for goods including those consisting of real estate and material infrastructures.

In Italy they have determined an increase in territorial vulnerability to disasters (PCM, 2017), a loss of infrastructure safety (remember the Morandi bridge disaster in Genoa), the deterioration of a landscape unique in the world (Munafò, 2020).

This development model, consolidated over more than thirty years, "exploded" with the Covid 19 pandemic of 2020. It first hit health systems severely weakened in their resilience (Olazabal et al., 2012): in previous years in Italy many hospitals have been closed. There have been and are devastating consequences on people's lives as well as on cities, with their *forms, networks and behaviours*.

Lockdowns and social distancing have "demolished" the foundations of the modern "mass city" built on economies of scale and agglomeration (Weber, 1909/22). The large business centres, the shopping centres, the Quaternary areas and all the service activities connected to them, the tourist centres, etc., have lost much of their dominant position and their even symbolic attractiveness. The overall arrangement of the space, the growing urban concentration seems to be useful to avoid. Thus, the forecasts of urbanization of about 70% of the world population forecast for 2050 from multiple WTO, World Bank, UN sources, and supported by these with strategies and policies, need to be revised and modified.

However, in addition to the fundamental thrust due to the aforementioned competitiveness, there are other reasons related to sustainability and the use of resources in favour of the "compact city". It is the least expensive compared to travellers. So, the denser it is, the less resources are needed to accomplish them. Land consumption is also lower since the connecting infrastructures serve more users and are therefore more efficient in terms of use. But the higher the concentration of the population, the more there is a situation of fragility as shown by the ongoing Covid2 Sars pandemic. It is no coincidence that research on the quality of life (Mercer, 2017) shows that at the top of the charts there is a city like Vienna, ca. 2 million inhabitants and not megacities,, and it was made before the pandemic.

Very often gentrification mechanisms are associated with urban concentration. The increase in the density of demand and the increase in spending capacity are the basis of these urban and social transformations. They are made through changes of use or transfer of ownership of residences. This logic also guides the various service sectors: water, electricity, sewage networks, both physical – as mentioned above – and intangible communications. The latter are a particularly sensitive element since

they are the basis of what is now called *digital divide* and which, in 1985, Goddard and Gillespie had defined as a *competitive disadvantage*. A condition highlighted in relation to the increasingly important role that the so-called *value-added services* were playing. They are born thanks to the new opportunities of remote telecommunication means, i.e. *telematics*: word composed of the suffix “tele” that is “distance” and “matics” from “informatics” (Aragona, 1993). Thus advanced networks and services have been offered only where the demand is densest and with the highest spending capacity, i.e. the main centres. The creation of these is absolutely convenient for network and service providers: the higher and richer the demand per square meter, the lower the unit investment costs and the higher the profits (Aragona and Pietrobelli, 1989).

These considerations also concern networks for water, sewage, gas etc. Regarding these services, it is important to highlight that, despite the failure of neoliberal policies, in Italy the recent (2021) Competition Bill under art. 6 of the Government Draghi calls into question the public and social function of the Municipalities. It reduces them to the role of entities solely responsible for putting on the market the public services of their own ownership, with serious prejudice to their duties as guarantors of the rights of the reference community. And this despite being the fundamental resolution of the UN General Assembly of 2010 on the universal right to water and, in our country, the 27 million Italian citizens who in 2011 expressed themselves in the referendum saying that the water had to go out of the market and that no profit can be made on this good.

These considerations are analogous to those regarding natural resources in their aspect as an opportunity to be energy sources: the current National Recovery and Resilience Plan (PNRR) allocates a significant part of the funds to many of them, i.e. 59.47 billion euros out of the total of 191, without considering the additional ones of REACT-EU and national programming. However, the beneficiaries and the primary actors of these opportunities must be the local communities and the inhabitants. In wind power, which has also been present in Italy for years, the income was mostly in the hands of a few, in various cases even in illegal situations.

However, the problem of the consumption of materials to build equipment for the use of renewable energy remains. Materials that in large part, also in this case, are not renewable. This is the main reason for having the diffusion of the circular economy and “closing cycles” as well as focusing on the use of natural elements as basic components: see the example of research on the use of vegetables for photovoltaic panels. And this is because the paper focuses on the *resilience increasing* on a large and local scale, that is, on reducing the *ecological footprint*.

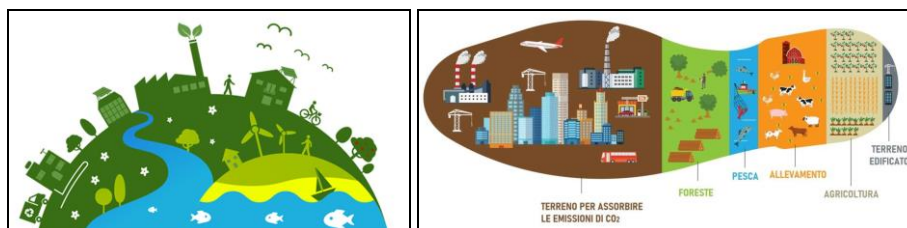


Figure 1: The ecological footprint (source: Redazionale Ecosviluppo, 2021)

There are consolidated economic interests that would like to hinder this philosophy. They argue that technology will solve those limitations. They do not understand, or do not agree, to admit that what is needed is “cultured technology” (Del Nord, 1991). Thus, in the Call of the PNRR relating to the Energy Communities it is desirable that these aspects are taken into due consideration.

### 3 Ecological planning strategies

With the spread of the pandemic, scenarios and new opportunities open up to propose an ecological, socially and environmentally more sustainable approach (Morin, 2020) for the territory and the city. that supported for years in Italy by various scholars and in particular by the school of territorilists (Magnaghi, Paloscia, 1992). Based on the integration of the different areas that contribute to the different qualitative and quantitative aspects of urban quality as proposed by ISTAT-CNEL, 2013, with the *BES - Fair and Solidarity Well-being* and as it arises from the monitoring of land consumption by of the National Environmental Protection System - ISPRA (Munafò, 2020). Recovering also the proposals for sustainable urban development that emerged a few years ago (Camagni, 1996) in a very different framework.

All this was emerging from the first decade of 2000 with the *National Strategy for Inner Areas - SNAI* (2013) inspired by the “place based” theory (Barca, 2009) and the *Glocal* proposals, conjugation of the global with the local (Robertson, 1995, Rifkin, 2019). *Thinking global and acting locally* was the model on which the IV Report on National Planning of the Netherlands of 1985 was inspired by the first emergence of “advanced telecommunications”, what we now call *telematics*, before mentioned. In it there was a planning of the necessary infrastructures which, starting from the 4 main centers of the “heart of the country”, then extended to a provincial and then municipal scale. In this way, over time, the digital divide was overcome and the territory developed in a more balanced way.

Integrated development also between being and becoming, between matter and energy, in a changing relationship between space and time that is the basis of information and memory, as Saragosa (2016) initially reports in *The path of Biopoli*. Development based on rethinking the relationship with nature, which must aim at the re-naturalization of cities, i.e. *Planning Cities with Nature*, text by Lemes De Oliveira and Mell I., as if it were an extension of McHarg's thought of *Design with Nature*. Texts that tend to focus attention in any case on urban development, while *Ecopoli* by Sandro Fabbro (2021) aims at a much more territorialist reading that raises very radical criticisms of the social, spatial and environmental settlement methods and suggests new tools and forms of anthropization.

But all this risks not really changing development trajectories and, once the pandemic is over, there is the danger of returning to the consolidated previous model. Some innovations were already present but they only occurred sporadically. This is the case of the tele-assistance already provided for in the *Social Master Plans*, created in 1999 to connect socio-health needs of the area (Aragona, 2003).

As from 2017 in Italy for the Municipalities of over 50,000 inhabitants, the law ask for *Green Plans*, with Project and Program managed by them (MATTM). And docu-

ments from the Ministry of the Environment, Land and Sea Protection, now Ministry for Ecological Transition, speak of the need to combine greenery with water and ecosystem services. Green and blue infrastructures have been possible for years. And only with the Conte2 government were there the first loans for reforestation experimentation in metropolitan areas (l.n.141/2019). In the PNRR there is a significant endowment in this sense – indeed together with digitization – green is the basis of the *New Green Deal*, an idea launched in 2019 by Jeremy Rifkin, and adopted by the EU just before the start of the pandemic. But then how to keep and cur it? Already the one existing in many Italian cities in the parts built from the 30s of the twentieth century onwards, under the influence first of Howard's Garden City and then Mumford and then of zoning, has grown and makes its way, indeed occupies the streets and sidewalks. New Bahuaus and New Urban Agenda, the many experiences of “nature-based solutions” indicate certainly valid paths of sustainability but how is it possible to create the city of 15 minutes if the neighbourhood shops are increasingly disappearing? They are crushed by commercial centres and by changes in use. Both of these linked to economies of scale, therefore lower prices, with the “presumption” that the quality of life of the inhabitants results, first of all, in the offer of cheapest products and not, primarily, in a wider life quality.

To reverse the situation, political choices are needed to be made through territorial and urban planning options. Certainly, it is difficult to have territorial and urban policies that are challenging the aforementioned liberalizations and privatizations. But the Region Authority and the Municipalities must take responsibility for combating the social and spatial damage, the loss of identity, which their territories are suffering also due to neoliberal choices. Otherwise, the ET cannot be realized except in exceptional, even if significant cases. Thus, the example of the 3 million trees planned by the Municipality of Milan or the creation of a public company for the management of water by the Municipality of Naples is emblematic.

The ET in historical centres is a theme that needs particular attention. Already fourteen years ago the Order of Architects, Planners, Landscape Architects, Conservators of the Province of Pistoia was trying to address this topic (Aragona, 2008) in the *Conference 3 Days of Architecture, Thematic Seminar: Population centres and energy*. The question is of great importance for Italy given the great importance and widespread presence of them. In this regard, the countries of central and northern Europe naturally have an advantage first of all because they have always required the greatest possible efficiency due to the climatic conditions: thus the use of wood has been widespread and this has implied an equally effective process in the production chain and its programming in the conservation of the resource. But also because of the conception of natural resources as common goods. It is no coincidence that in England there is the House of Commons. It is probably a legacy of the civic uses. These were created by the Romans and then had further declination in Central European lands.

There is also a difference in the relative weights of the different components of the ET between large cities and medium or small centres. Among the main differences are those related to mobility, both in relation to flows and modalities of it. As a relevant example is car-sharing or car rental which is almost absent in medium or small

cities while it is widely present in larger ones. Although it should be noted that even in the latter the service often does not cover the entire municipal territory but only the densest, central areas – that is, those where presumably the spending capacity is greater – and not the more peripheral ones, even if it is lived in these areas the majority of the inhabitants.

The pandemic is also being faced thanks to the possibilities given by telematics. During the pandemics of past centuries there were no such opportunities, so Boccaccio's *Decameròn*, mid-14th century, has the narrative plot that takes place outside the city of Florence since the plague was here in 1348. Telematics can allow the breaking of the synchronicities between spaces and times, thus undermining one of the presuppositions of the industrial city, that is, of the modern city (Ernesti, 1995). As pointed out in 1983, a large part of its structure has been designed over the centuries on the basis of what were then called public services, hospitals, schools. But it, as mentioned above, can support an integrated widespread territorial development as required by the *Leipzig Charter*. The inland areas and villages can be “reserve” – idea launched by Bussone, President of the National Union of Community Municipalities and Mountain Bodies (UNCME), in 2019 at the INBAR assembly and it was before the pandemic and recently taken up by subjects like ISPRA – for territories and urban areas at risk including Paris, Manhattan in New York, Jakarta and many others built at river or sea level and which are already fighting with the current rise in water caused by the greenhouse effect. Consider that some islands of the Polynesian archipelagos have already been abandoned due to rising sea levels.

Thus, consistent with the aforementioned New Green Deal in the PNRR, another great financial endowment is for digitization, as mentioned above, i.e. 40,32 billion euros which is something less than a fifth of the total of 191 billion euros mentioned above, also here without taking in account the additional ones from REACT-EU and the national programming. But it must be used in a way that is really useful to people. Teleactivity, teleworking, requires the *overcoming of the logic of process control and to pass to product control* (Nilles, 1988). However, it seems that the current Minister of Public Administration does not share all this and is linked to the consolidated logic of control. Certainly, this passage implies the loss of control of the managers and gives more freedom to the employees. And equally certainly this requires the definition of rights and duties as the late Stefano Rodotà had already anticipated for some decades, even asking for a “Constitution of the Internet”. And there are great differences between the activities of the Public Administration and many others such as tele-teaching or tele-health.

Telework was invented by Jack Nilles, a NASA engineer in the early 1980s. The Mayor of Los Angeles said to him “Could you, who send people to the moon, help us solve the traffic problem in LA?”. The “remote work” was experienced thanks to the spatial activities between astronauts and the Earth Base. So also the “group ware”, form of remote cooperative work, was born. The many experiences of distance learning or tele-services in this year and a half of pandemic are its widespread diffusion. Around the same time, the Southern California Air Quality Commission imposed a tax on companies about the number of employees for car in downtown locations: the



minor this latter was the minor was the taxation. The aim was to reduce traffic and pollution through tele-working or carpooling. All this, of course, in a vast mobility plan for the city. The same reasons for the reduction of traffic and pollution were the motivation for the teleworking experience made in Rome in the mid-90s by the Mayor Rutelli: TraDe or Traffic Decongestion. Experimentation carried out as part of the EU LIFE Projects (Aragona, 2000) that is about Life Quality. Already in 2018 there were contracts that anticipated digitization in such as the SPC Consip framework contract in the Public Administration. Thus emblematically the Digital Agenda reported the image of Figure 2.



Figure 2. Innovation and territory (Source: Amati, 2018)

In this context there are the digital nomads. Example Vicari (CT) one of the municipalities that has sold empty houses for 1 euro and where thanks to both things the center is reborn. So UNCEM, emphasizing the possibilities that really exist, talking about PNRR asks some questions (2022) <<If ItaliaDomani, the Italian Next Generation EU, is truly capable of transforming the country. To make it more cohesive and to generate opportunities and solutions for the new generations. Without putting new debt on them. Certainly, in these first months of implementation of the PNRR we have highlighted as Uncem that there are lights and shadows. We have never made a criticism without making proposals. On some calls released so far, there are several things that we would have liked different. Starting with that on schools, in which municipalities are prevented from using the projects that had already been assembled and set up thanks to the announcement of the state planning fund, for example. Or the one on the villages in which the Regions must identify, it is not clear how, 20 villages with 20 million euros each and then another 229 villages that will have “only” 1.6 million Euros (thousands of potential candidates). It happens, for example, for the announcement on integrated development projects of metropolitan cities, that in these days a list of works is requested from the capitals to the municipalities, when instead the ratio is quite different. And the urban-centric logic actually excludes small municipalities. On urban regeneration, with the applications reopened, many make confusion with the “Integrated urban plans”. On too many components, we have so far a resource switch between budget laws and PNRR. As on urban regeneration itself, on works for municipalities, on high-speed railways. An overall change of pace is needed. But for now, we remain confident. In addition to ten, one hundred private (and non-private) subjects who are inventing an “accompaniment” for the Municipalities, UNCEMU works on the political front to avoid urban-centric drifts and a destination

*of resources entirely towards the big cities, towards the hundred capitals. So far they are hardly recognizing the “metro-mountain” logic as the only solution to the crises (pandemic, climatic, economic). A change of pace is necessary and the municipalities together can, want and must do more.*

*Regarding “the notices published so far ... never act running run after all the calls, but according to a plan of growth, inclusion, well-being that together the Municipalities define for their territories and their communities. With a long look and the logic that “everything is connected”, and “walking together”, which we have learned in decades of collaboration between Bodies in the same valley or in the same homogeneous area.>>.*

Exemplary is what, before the pandemic and also the PNRR, the Municipality of Pegognaga (MN) proposed together with the Italian Biogas Consortium in collaboration with Energia Media. In other words, a model for the enhancement of the Italian territory ready to relaunch itself through a new spatial, social and economic vision: i.e. a Smart Land (Figure 3).



Figure 3. Smart Land proposed in Pegognaga (MN)

#### 4 Concluding suggestions in progress

The ET was born as a push to change the model which proved to be environmentally unsustainable, and which has become more and more socially unequal. For several decades now there has been an awareness of the limits regarding the relationship between man and nature and of the social effectiveness that is increasingly disappearing, crushed by technical and economic efficiency. The pandemic is making these limitations more evident and jarring. Even virtual accessibility, since its manifestation, has followed this scenario of economic efficiency and not of social effectiveness.

The ET, when it succeeds, triggers gentrification processes if it is not managed by politics. Thus the beautiful example of environmental sustainability of the High Line in Manhattan meant an increase in value in the sale or rental prices. While in San Francisco, the "sustainable" bus transport of companies in Silicon Valley to the city, solicited by the City with tax-reduction of these busses, has led to the expulsion of

residents in historic Frisco neighbourhoods and those who remain have organized themselves into struggle committees.

However, there are examples of local “resistance” and autopoiesis processes (De Rossi, 2017). As the Diversity Inequality Forum (2018) has been saying for some time, as well as the SNAI Strategy (Lucatelli, 2015) suggests, as required by UNCEM and finally also by the EU, such experiences need to be supported. By doing so accepting that the dynamics of anthropization must really go towards a passage, that is, make a transition towards an ecological approach – more than a model, a paradigm – based on an integrated vision of territories and cities, as requested by the quoted *UN 2030 Agenda*, the *EU New Green Deal*, and Pope Francis' Encyclical Letter *Laudato Be for the Care of the Common Home*.

### References

1. Amati A. (2018) “Smart city, così l’SPC Consip sta cambiando città e territori col digitale”, <https://www.agendadigitale.eu/cittadinanza-digitale/smart-city-cosi-lspc-consip-sta-cambiando-citta-e-territori-col-digitale/> (accessed 2022.01.15)
2. Aragona S., Pietrobelli, M. (1989), *Innovazione tecnologica e trasformazioni territoriali. Il caso italiano: politiche, strategie, sviluppi*, pubblicazione del Dipartimento di Tecnica Edilizia e Controllo Ambientale, Facoltà di Ingegneria, Università La Sapienza, Roma
3. Aragona S. (1993), *La città virtuale: Trasformazioni urbane e nuove tecnologie della informazione*, Gangemi Editore, Roma - Reggio Calabria
4. Aragona S. (2000), *Ambiente urbano e innovazione. La città globale tra identità locale e sostenibilità*, Gangemi Editore, Roma - Reggio Calabria
5. Aragona S. (2003), Piano Urbanistico e Piano Regolatore Sociale, in (a cura di) Bonsinetto F., Il Pianificatore Territoriale. Dalla formazione alla professione, Quaderni del DSAT, Gangemi Editore, Roma
6. Aragona S. (2008), L’evoluzione nei rapporti tra centri storici e riqualificazione energetica: possibili proposte, in 3 Days of Architecture, Thematic Seminar: Population centres and energy, Order of Architects, Planners, Landscape Architects, Conservators of the Province of Pistoia, Pistoia 11-13 September
7. Augè M. (1993), *Non luoghi. Introduzione a una antropologia della surmodernità*, elèuthera, Milano (ed. or. Non-lieux: Introduction a une anthropologie de la surmodernité, Editions Seuil, Paris, 1992)
8. Augè M. (1999), *Disneyland e altri non luoghi*, Bollati Boringhieri, Torino (ed. or. *L'impossible voyage: le tourisme et ses images*, Éditions Payot & Rivages, Paris 1997)
9. Boccaccio G., (1350), Decamerò
10. Bussone M. (2019), Speech at the meeting “Il Manifesto per la Pianificazione territoriale integrata”, National Institute of BioArchitecture – INBAr, CNAPPC, Rome, January 29th
11. Butera F. (2021), *Affrontare la complessità. Per governare la transizione ecologica*, Edizioni Ambiente, Milano
12. Capra F., Mattei U. (2017), *Ecologia del diritto. Scienza, politica, beni comuni*, Aboca Edizioni, Sansepolcro (AR) (original Ecology of Law Elsevier, Amsterdam (NL))
13. Clementi A. (1983), *Pianificare i servizi*, Casa del libro, Reggio Calabria - Roma
14. Crouch C. (2018), *The Globalization Backlash*, Polity Press, Cambridge, UK
15. De Rossi A. et al. (2018), *Riabitare l'Italia. Le aree interne tra abbandoni e riconquiste*, Progetti Donzelli, Roma
16. Del Nord R., (1991), “Presentazione”, in Mucci E., Rizzoli P., (eds.) *L'immaginario tecnologico metropolitano*, Franco Angeli, Milano

17. Encyclical Letter *Laudato Be for the Care of the Common Home* of the Saint Father Francisco, Tipografia Vaticana, Città del Vaticano, (VA)
18. Ernesti G. (1995), "Tempo pubblico e tempo della soggettività: disciplina e società oggi", *Urbanistica* n.104
19. Fabbro S. (2021), *ECOPOLI. Visione Regione 2050*, INU Edizioni, Roma
20. Forum Diseguaglianze e Diversità (2018), "Aree interne e il problema delle distanze: le proposte della SNAI", "<https://www.forumdisuguaglianzediversita.org/aree-interne-distanze-proposte-snai/>" (accessed 2018.05.15)
21. Goddard J.B., Gillespie A.E., (1986), "Advanced Telecommunications and Regional Economic Development", *The Geographical Journal*, 152
22. Gottmann, J. (1961), *Megalopolis. The urbanized northeastern seaboard of the United States*, Twentieth Century Fund
23. Gottman J. (introduction of C. Muscarà) (1982), *La città invincibile. Una confutazione dell'urbanistica negativa*, Franco Angeli, Milano
24. Harvey D. (2007), *Breve storia del neoliberismo*, Il Saggiatore, Milano
25. Harvey D. (2012), *Il capitalismo contro il diritto alla città. Neoliberalismo, urbanizzazione, resistenze*, Ombre Corte, Verona
26. Lucatelli S. (2015), *La strategia nazionale, il riconoscimento delle aree interne*, Franco Angeli, Milano.
27. Keynes J.M., Royal Economic Society (1989), *Collected Writings 1971-1989*, vol. XXI, Macmillan (London), St. Martin's Press (New York), p.242
28. Legge 12.12.2019, n.141, Conversione in legge, con modificazioni, del DL 14.10.2019, n. 111, Decreto Clima misure urgenti per il rispetto degli obblighi della direttiva 2008/50/CE sulla qualità dell'aria e proroga del termine di cui all'articolo 48, commi 11 e 13, del DL legge 17.10.2016, n. 189, convertito, con modificazioni, dalla legge 15.12.2016, n. 229.
29. Lemes De Oliveira F., Mell I (Editor) (2019), *Planning Cities with Nature: Theories, Strategies and Methods, Cities and Nature*, Springer
30. MATTM - Ministero dell'ambiente e della tutela del territorio e del mare, Comitato per lo sviluppo del verde pubblico (2017) "Strategia nazionale del verde urbano. Foreste urbane resilienti ed eterogenee per la salute e il benessere dei cittadini", [https://www.minambiente.it/sites/default/files/archivio/allegati/comitato%20verde%20pubblico/strategia\\_verde\\_urbano.pdf](https://www.minambiente.it/sites/default/files/archivio/allegati/comitato%20verde%20pubblico/strategia_verde_urbano.pdf) (accessed 2021.12.05); "Linee guida per la gestione del verde urbano e prime indicazioni per una pianificazione sostenibile", in [http://www.minambiente.it/sites/default/files/archivio/allegati/comitato%20verde%20pubblico/lineeguida\\_finale\\_25\\_maggio\\_17.pdf](http://www.minambiente.it/sites/default/files/archivio/allegati/comitato%20verde%20pubblico/lineeguida_finale_25_maggio_17.pdf) (accessed 2021.12.06)
31. Meadows H.D. (et al.) (1972), *I limiti dello sviluppo*, Club di Roma, Mondadori, Milano. Meadows, D.L. (et al.) (1972) *The Limits to Growth*, New York: Universe Books
32. Mercer 2017 *Quality of Living City Rankings* in <https://mobilityexchange.mercer.com/Insights/quality-of-living-rankings> (accessed 2021.12.27)
33. McKinsey Global Institute (2011), *Urban world: Mapping the economic power of cities*, March 1, 2011 Report, in <https://www.mckinsey.com/featured-insights/urbanization/urban-world-mapping-the-economic-power-of-cities> (accessed 2021.12.09)
34. Nilles J.M., (1988), "Traffic Reduction By Telecommuting: a Status Review ", *Transportation Research*, vol. 22a, 4
35. Olazabal M., Chelleri L., Waters J., Kunath A. (2012), "Urban resilience: towards an integrated approach", I International Conference on Urban Sustainability & Resilience, London, UK, [https://www.researchgate.net/publication/236236994\\_Urban\\_resilience\\_towards\\_an\\_integrated\\_approach](https://www.researchgate.net/publication/236236994_Urban_resilience_towards_an_integrated_approach) (accessed 2021.12.15)

36. PCM - Presidenza del Consiglio dei Ministri, Struttura di Missione Casa Italia (2017), *Rapporto sulla Promozione della sicurezza dai Rischi naturali del Patrimonio abitativo*,
37. PCM - Presidenza del Consiglio dei Ministri (2021) *Piano Nazionale di Ripresa e Resilienza, #NEXTGENERATIONITALIA, Italia domani*
38. Raffestin C (1987) “Repères pour une théorie de la territorialité humaine”, Cahier n. 7, Groupe Reseaux: Parigi
39. Redazionale Ecosviluppo (2021) “Verso un mondo a impatto zero: la transizione all’economia circolare”, <https://www.ecosviluppo.it/verso-un-mondo-a-impatto-zero-la-transizione-alleconomia-circolare/> (accessed 2021.12.06)
40. Rifkin J. (2019), *Un Green New Deal Globale. Il crollo della civiltà dei combustibili fossili entro il 2028 e l’audace piano economico per salvare la Terra*, Mondadori (original edition *The Green New Deal: Why the Fossil Fuel Civilization Will Collapse by 2028, and the Bold Economic Plan to Save Life on Earth*, 2019, St. Martin's Press, New York)
41. Robertson R. (1995), *Globalization: Social Theory and Global Culture*, Sage. Newcastle upon Tyne, UK
42. Rodotà S. (2005), *Una Costituzione per Internet*, Giangiacomo Feltrinelli Editore, Milano
43. Rodriguez-Pose A. (2018), “The revenge of the places that don’t matter (and what to do about it)”, *Cambridge Journal of Regions, Economy and Society*, 11 (1), Oxford University press, Oxford, pp. 189-209
44. Rodrik D. (2011), *La globalizzazione intelligente*, Laterza, Bari (1 ed. or. *The Globalization Paradox. Democracy and the Future of the World Economy*, 2011, W.W. Norton & Company, New York, NY; 2012 Oxford, GB: Oxford University Press).
45. Rosés J.R., Wolf N. (2019), *The Economic Development of Europe’s Regions: A Quantitative History since 1900*, Routledge, London-New York
46. Saragosa C. (2016), *Il sentiero di biopoli. L’empatia nella generazione della città*, Saggi. Natura e artefatto, Donzelli Editore, Mentana, Roma
47. Sassen S. (1991), *The global city*, Princeton University Press, Princeton
48. Smart Land. Reti Governo Sviluppo, Centro Culturale Livia Bottardi Milani, Pegognaga, 25 – 26 maggio 2017, <http://www.centroculturalepegognaga.it/smart-land/> (accessed 2021.05.27)
49. UE Landscape Chart (2000), Florence
50. UNCEM, News Letter, 2022, *Piano Nazionale Ripresa e Resilienza. Riepilogo dei bandi del PNRR* usciti e in uscita, January 6th
51. Weber A. (1909/1922) *Über des Standort der Industrien*. Part. I. *Reine Theorie des Standorts*, Tübingen. Trad. ingl. Alfreds Weber’s *Theory of Location of industries* (C.J. Friedrich), The University of Chicago press
52. WHO (2016), *Ambient Air Pollution, a global assessment and exposure and burden of disease*, Geneva

Thanks to the notes and suggestions of Sandro Fabbro - University of Udine, Fabiola Fratini - University of Rome La Sapienza, Francesca Silvia Rota - CNR Turin, and Paola Pittaluga - University of Sassari, Heads of the Research Units and their members of the PRIN - Project of Relevant National Interest “ORMA - Opportunities and Risks for the New Paths of Anthropization”, led by me as Principal Investigator

\* Dipartimento Patrimonio, Architettura, Urbanistica,  
 Università Mediterranea di Reggio Calabria Via dell’Università 25 – 89124 Reggio Calabria (Italy) Tel.: +39-0965.1696402, Mobile 320.2347796, email: saragona@unirc.it