

TeMA

Journal of
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This special issue collects a selection of peer-review papers presented at the 8th International Conference INPUT 2014 titled "Smart City: planning for energy, transportation and sustainability of urban systems", held on 4-6 June in Naples, Italy. The issue includes recent developments on the theme of relationship between innovation and city management and planning.

Tema is the Journal of Land use, Mobility and Environment and offers papers with a unified approach to planning and mobility. TeMA Journal has also received the Sparc Europe Seal of Open Access Journals released by Scholarly Publishing and Academic Resources Coalition (SPARC Europe) and the Directory of Open Access Journals (DOAJ).

INPUT 2014

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Smart City

planning for energy, transportation
and sustainability of the urban system

SMART CITY

PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM

Special Issue, June 2014

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TeMA. Journal of Land Use, Mobility and Environment offers researches, applications and contributions with a unified approach to planning and mobility and publishes original inter-disciplinary papers on the interaction of transport, land use and environment. Domains include engineering, planning, modeling, behavior, economics, geography, regional science, sociology, architecture and design, network science, and complex systems.

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This special issue of TeMA collects the papers presented at the 8th International Conference INPUT 2014 which will take place in Naples from 4th to 6th June. The Conference focuses on one of the central topics within the urban studies debate and combines, in a new perspective, researches concerning the relationship between innovation and management of city changing.



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EIGHTH INTERNATIONAL CONFERENCE INPUT 2014

SMART CITY. PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM

This special issue of TeMA collects the papers presented at the Eighth International Conference INPUT, 2014, titled "Smart City. Planning for energy, transportation and sustainability of the urban system" that takes place in Naples from 4 to 6 of June 2014.

INPUT (Innovation in Urban Planning and Territorial) consists of an informal group/network of academic researchers Italians and foreigners working in several areas related to urban and territorial planning. Starting from the first conference, held in Venice in 1999, INPUT has represented an opportunity to reflect on the use of Information and Communication Technologies (ICTs) as key planning support tools. The theme of the eighth conference focuses on one of the most topical debate of urban studies that combines , in a new perspective, researches concerning the relationship between innovation (technological, methodological, of process etc..) and the management of the changes of the city. The Smart City is also currently the most investigated subject by TeMA that with this number is intended to provide a broad overview of the research activities currently in place in Italy and a number of European countries. Naples, with its tradition of studies in this particular research field, represents the best place to review progress on what is being done and try to identify some structural elements of a planning approach.

Furthermore the conference has represented the ideal space of mind comparison and ideas exchanging about a number of topics like: planning support systems, models to geo-design, qualitative cognitive models and formal ontologies, smart mobility and urban transport, Visualization and spatial perception in urban planning innovative processes for urban regeneration, smart city and smart citizen, the Smart Energy Master project, urban entropy and evaluation in urban planning, etc..

The conference INPUT Naples 2014 were sent 84 papers, through a computerized procedure using the website www.input2014.it . The papers were subjected to a series of monitoring and control operations. The first fundamental phase saw the submission of the papers to reviewers. To enable a blind procedure the papers have been checked in advance, in order to eliminate any reference to the authors. The review was carried out on a form set up by the local scientific committee. The review forms received were sent to the authors who have adapted the papers, in a more or less extensive way, on the base of the received comments. At this point (third stage), the new version of the paper was subjected to control for to standardize the content to the layout required for the publication within TeMA. In parallel, the Local Scientific Committee, along with the Editorial Board of the magazine, has provided to the technical operation on the site TeMA (insertion of data for the indexing and insertion of pdf version of the papers). In the light of the time's shortness and of the high number of contributions the Local Scientific Committee decided to publish the papers by applying some simplifies compared with the normal procedures used by TeMA. Specifically:

- Each paper was equipped with cover, TeMA Editorial Advisory Board, INPUT Scientific Committee, introductory page of INPUT 2014 and summary;
- Summary and sorting of the papers are in alphabetical order, based on the surname of the first author;
- Each paper is indexed with own DOI codex which can be found in the electronic version on TeMA website (www.tema.unina.it). The codex is not present on the pdf version of the papers.

SMART CITY PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM Special Issue, June 2014

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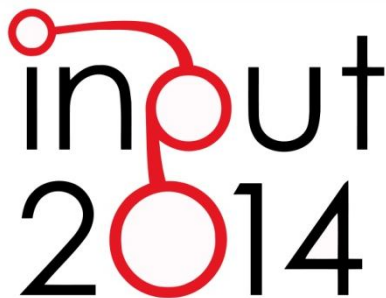
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SPECIAL ISSUE

Eighth International Conference INPUT
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of the Urban System

Naples, 4-6 June 2014

The logo for the INPUT 2014 conference. It features the word 'input' in a lowercase, sans-serif font, with the 'i' and 'n' connected by a red line that forms a loop. Below 'input' is the year '2014', where the '0' is a large red circle. The entire logo is rendered in black and red.

THE PLAN IN ADDRESSING THE POST SHOCK CONFLICTS

2009-2014. A FIRST BALANCE SHEET OF
THE RECONSTRUCTION OF L'AQUILA

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ABSTRACT

Five years after the earthquake in Abruzzo in 2009 it is possible to draw up a first balance sheet of the public actions carried out so far in relation to reconstruction. The transformations undergone by L'Aquila and the territory of Abruzzo impose a re-reading of the institutional framework and of the role that the Plan can have in addressing the conflicts deriving from the physical and social reconstruction of the regional capital. But the joint presence of many and various litigious actors makes it complex to adopt a new season of projects able to make the most of the substantial public financing and to direct this towards agreed models of urban development. Moreover a comparison with the effectiveness of public actions that may be observed in analogous cases in the urban history of L'Aquila makes the picture even more alarming.

KEYWORDS

L'Aquila, Shock, Plans, Urban history

1 INTRODUCTION

The intention of the present research is to analyze the role of the Plan in managing the conflicts that affect urban settlements after shocks of natural or human origin such as for example earthquakes, floods, landslides, wars and social or economic crises. The ensuing urban transformations may be seen as indicators of the state of health of town planning as a discipline and, specifically, of its capacity to respond effectively to the new needs. The case study of L'Aquila can be of interest because throughout its history it has undergone numerous serious earthquakes (1315, 1349, 1462, 1703, 1915, 2009) in addition to several social shocks, among which the most recent one in 1971 due to the birth of the Regions, with the consequent epiphany of the conflict between the coastal areas and the interior. Five years after the earthquake in 2009 and with the economic crisis still in full swing, it is possible to draw up a balance sheet of the ways in which the post-shock has been tackled and to make a start on overcoming the difficulties encountered from the standpoint of physical and social reconstruction in keeping with urban history and in line with the demand for new social development models in which environmental sustainability and urban technological innovation are among the possible objectives.

2 THE PLAN AND THE CONFLICTS IN THE 20TH CENTURY

It is curious, but the city of L'Aquila in the last century started and effectively completed the season of plans always after conflicts caused by the shocks that have so violently characterized social history and spatial conformation (Andreassi, 2012a). Following the earthquake in February 1915 a planning process immediately started up with the aim of managing the phase of the city's reconstruction and growth. A study commission was installed and undertook various activities of public interest on aspects of reconstruction, giving rise to a series of proposals whose partiality, while bringing about their failure, prepared the field for the drawing up of a successive more complex plan (Properzi, 2010). It was only after two years, in 1917, that the master plan drawn up by the engineer Giulio Tian was approved; he was a foremost figure in the national framework in this discipline, having also drawn up the plans for Ancona and Taranto. Management was placed in the hands of a municipal planning office which produced a series of variants to adapt it to the new post-World War I society and the subsequent authoritarian developments. The Second World War did not cause any damage to the city. The ensuing building boom in the 50's and 60's was managed mainly with the projects. The timid attempt to draw up a new master plan made by Luigi Piccinato in the 60's was undermined¹ by a society more and more intent upon the friendly management of transformation processes and did not look kindly upon the publicity of the objectives set out in the plan (Piroddi & Clementi, 1988). It was necessary for another conflict to occur, to give an effective fresh start to the planning season. Following the decision to carry out the constitutional indications regarding the country's institutional architecture², in 1971 the problem again arose³ of the birth of the Regions and, consequently, of the choice of regional

¹ The plan was adopted twice before being shelved without being finally approved. The first adoption took place on 31 July 1962, and the second one, after being examined by the Ministry of Public Works, took place on 26 July 1965.

² Law no. 108/1968 started the real constitution of the Regions with ordinary statutes.

³ In 1949 the authority of the Hon. G. Spataro from Vasto, co-founder of Christian Democracy, came into play in the commission of the Chamber of Deputies engaged in defining the regional capitals. On this occasion the contrast started between L'Aquila and Pescara, temporarily settled in favour of L'Aquila after the popular uprising and the Demochristian controversy between the Hon. E. Viola and G. Spataro.

capitals. The political and social events of the time led to the revival of the *audaciam aquilanorum*⁴ with the so-called uprisings that took place between 26 and 29 February 1971 (Petruccioli, 2011). Barricades were erected in the city along the main access thoroughfares, and the party headquarters and the houses of the foremost local politicians were set on fire, as they were claimed to be guilty of having *betrayed* the claims of local society and of having accepted the dispersion between Pescara and L'Aquila of the administrative and representative offices of the Region being constituted, while confirming the title of regional capital for the latter city. The intervention of the forces of law and order and of the army brought back a semblance of peace but nevertheless failed to subdue the general malcontent which instead came to a natural end with the starting of the planning season. It should be observed that thanks to this the political class again found and reconquered a role in society, which had been lost on the occasion of the definition of the regional institutional architecture. The plan⁵, the drawing up of which was started in 1972, just one year after the shock as on the occasion of the preceding one, was viewed as an instrument to recreate the social cohesion seriously threatened by the difference between the *realpolitik* and the claiming of past roles put forward by the city and no longer shared by the majority of the inhabitants of Abruzzo. For the drawing up process, techniques of participation were tried out, both direct, with the involvement of the district and ward councils by means of convening 250 public assemblies, and indirect, thanks to the extending to a large number of citizens of the benefits of the *graphics economy*⁶ deriving from the combined effect of the low density and the overdimensioning of requirements. Seen in this light, the PRG (Land Use Plan of the Municipality) can be regarded as a monument of the city, in bearing witness to the post-shock social reconciliation. In time however it suffers a growing deficit of effectiveness. It foreshadows a development model rapidly being outdated, being based substantially on the possibilities offered by the motorway link with Rome, by the national industrial plants shortly due to close down, and by the expectations of the revival of the mountain economy regulated by the coeval law that established the short-lived *Comunità Montane*⁷.

3 THE PAX ABRUZZESE

The regional institutional conformation and the Aquilan PRG contributed towards the *Pax Abruzzese* lasting from 1971 until 2009, during which period the city underwent considerable economic development inserted in that of the Abruzzo region. In the 1951-1963 period the region's net per-capita income was lower than that of the *Mezzogiorno* (Southern Italy and Islands) and almost 35 points less than the national average. In 1970 it reached 72.8% and Abruzzo continued to rise above the average south Italian value which stood at 68.9%. The establishment of heavy industry of external origin, SIV at Vasto and Siemens at L'Aquila, constituted the first great moment of severance from an Abruzzo looked upon in terms of being a reservoir of Manpower for the North and as a *poor* component of the Italian *Mezzogiorno* (Bodo & Viesti, 1997). After

⁴ A warning thought to have been incised on a scroll in the fifteenth-century castle, in its turn erected at the expense of the city as punishment for the rebellion against Spanish power.

⁵ In 1972 the first phase of government of the territory came to a rapid conclusion with the approval of the Building Programme, preparatory to the subsequent drafting of the PRG adopted in 1975 and finally approved in 1979.

⁶ A term coined by Luigi Scano intending the objective of accumulating the revenue deriving from the variation in the land regime determined by the PRG rather than being based on the profitability of the building measure, in other words profitability of the building measure, interested, that is to say, more in the increase in value derived from allowing building to take place on land than in achieving the permitted volumes.

⁷ This is Law no. 1102/1971 which imposed on predetermined municipalities the constitution of the *Comunità Montane* (Mountains Community) for the drawing up and carrying out of development programmes and of the territorial plans of the respective upland areas for the purpose of a general policy of economic and social rebalance.

1970 an acceleration occurred in the growth of the GDP which reached its highest peak in 1992, when its distance with respect to the rest of the country was down to 9.5 points. So that «putting the Italian average value at 100, the GDP increased by 33% in the span of 50 years, transforming Abruzzo from one of the last to the first Region in the Mezzogiorno as opposed to what happened in the Mezzogiorno itself, whose value remained practically unchanged» (Mauro, 2001). Feeding the region were the Community financing measures for depressed areas and the spending capacity guaranteed by State transfers (ex Objective 18). L'Aquila still lived thanks to the a-systemic growth of the University, to the over-dimensioning of the GDP, drugging both the building cycles and the processes of providing financing for the territory, the latter being amplified as from the 90's by the new town planning policies of the Municipal Council (referred to below as MC). The University followed quantitative objectives⁹ with a repeated increase of 80% on a 10-year basis of students enrolled, welcomed by the city thanks to the revenue benefits deriving from the demand of temporary rents and from the consequent housing cycles financed by the banks. The MC instead initially linked the government control of urban transformations in the carrying out of the residential part of the PRG with the boom in low-cost and council housing. Throughout the 70's and the early 80's the public housing measures and the subsidized private ones succeeded in covering 40 % of the housing demand thanks to public contributions amounting to 25 billion lire (Properzi, 2010). In the 90's the drift began with recourse to returns through municipal property taxation applied to building lands, leading to a public speculative approach with grave processes of cheap sales of agricultural land in order to cope with balance sheet demands. The PRG in fact was the object of variants both from parastatal initiatives¹⁰, and private ones as from 1995 during the period of so-called negotiated town planning¹¹. The crisis exploded at the end of the 90's when the failure of the mountain economy became apparent (CRESA, 2002) and the benefits of exogenous measures on the industrial economy deriving from state public action came to an end: neither of them fully replaced by the endogenous capacities of society and of the territory.

4 THE TWO EARTHQUAKES

In the three-year period 2009-2012 there was a double earthquake, the physical one that struck highland Abruzzo and in particular the historic centre of the regional capital, and the economic one linked to the complex process of the *spending review* which concerned all the local public agencies. Both earthquakes caused fresh conflicts, redefined the terms of territorial government and imposed a new season of projects. The earthquake of 6 April 2009 struck an area of 2387 sq. km in upland Abruzzo distributed over 57 municipalities within what is termed the *crater*, affecting a total population of 144,757 persons, about half of them living in L'Aquila. After this it was sought to tackle the problems of reconstruction with a series of disciplinary activities¹² right from the month following the quake, but there has been no response to these in

⁸ The EU pursues the objective of social and economic cohesion with actions of financial solidarity towards the most disadvantaged regions which have a per capita GDP of less than 75% of the Community average and calculated by Eurostat on the basis of the statistical territorial units. Abruzzo moved out of Objective 1 with the Inter-ministerial decree of 05/08/1994 issued by the Minister of Labour and Social Security in concert with the Minister of the Treasury, the Budget and Economic Programming.

⁹ Number of students enrolled in degree courses in the Academic Year: 1980-81, 4118; 1990-91, 7884; 2000-01, 14.772; 2010-11, 25.224. Data provided by L'Aquila University – Statistical Observatory sector.

¹⁰ By way of example, prisons, barracks and university sites are being built in valuable agricultural areas, thanks to art. 81 of DPR (Presidential Decree) 616/1977.

¹¹ Variants are observed to implement hotel capacity, for the development of industrial and commercial areas, and for the opportunities offered by the PRUSST and Integrated Plans

¹² See the Manifesto of Town Planners published by INU in May 2009, the conference entitled *After the emergency towards reconstruction* organized at L'Aquila by INU on 23 September 2009, the book ed. by

public actions due more to deafness than to aphonia. On the other hand considerable publicistic activity has started on the question of reconstruction¹³ and in this a number of contributions have been meekly inserted, on the following themes:

- the relation between the emergency and right to the city (Andreassi, 2012a);
- delegitimization of the Plan following neo-liberalist approaches typical of *laissez faire*, and the provision of financing for the territory (Andreassi, 2012b);
- increased financing of the system of historical and architectural values (Andreassi, 2012c);
- the role of the big public patrimonies (Andreassi, 2012d);
- the role of public spaces (Andreassi, 2013a; Andreassi & Di Lodovico, 2013b);
- the relation between memory and risk (Andreassi & Aristone, 2013c).

The earthquake in April 2009 accelerated the economic decline, modified the social and economic imbalances¹⁴ and destructured the characteristics of the physical city through the urbanization of the agricultural territory, indifference to the landscape aspect and through numerous public and private delocalization processes not governed by local public action, bringing about the disarticulated relocation of the rare functions without verifying their effects on the urban structure. The report dated 8 June 2010 states for the municipality of L'Aquila 31,590 inhabitants assisted of a total of 73 thousand residents, equal to 43%. The report of 5 March 2014 mentions 19,001 inhabitants still receiving assistance equal to 26% of the total population, but in relation to just the assisted population, there is a reduction of barely 37%. In other terms in these last four years only 12,589 inhabitants out of 31,000 receiving assistance have gone back home, whereas the population not assisted has increased by 17%, hence the permanence of temporary housing which can become definitive.

Even more dramatic is the ineffectiveness of the governance adopted to cope with the emergency and the ensuing commissarial phase of the reconstruction governed by law no. 77/2009. In the initial emergency phase which ended on 31 January 2010 operations were carried out by the *Protezione Civile* (Civil Defence), advised by the local councils. Subsequently, until 31 August 2012, the regional Commissioner in charge of reconstruction took over. To date 77 ordinances have been produced by the Prime Minister's Office and 143 decrees of the Commissioner, totalling 220 administrative acts, but there has not been a single regional law on reconstruction. In addition there have been 57 Reconstruction Plans¹⁵ as imposed by law no. 77/2009, which however concern only the historic centres, while the reconstruction of the settled areas outside of these takes place through simple building processes carried out with private law procedures, in which the

LAURAQ, INU, ANCSA, *Dio salvi L'Aquila. Una ricostruzione difficile* containing the proceedings of 8 workshops on a single theme with the participation of 150 experts who addressed the theme of reconstruction in various aspects. Following this two conclusive forums and two design workshops have been organized, the first one in 2011 and the second one in 2014, whose scanty effect stems from the unaccepted participation of expert knowledge in the first phase of reconstruction.

¹³ Reference is made to the archive of the *Deputazione di Storia Patria degli Abruzzi*, born with the objective of compiling a list, as complete as possible, of the exceptional scientific, divulgative and critical publicistic activity produced by the Abruzzo earthquake.

¹⁴ The productive structure is characterized by the presence of multinational companies operating in the chemical, pharmaceutical and electronic sectors and, on the other hand, by small specialized enterprises mainly of family type and operating in the commercial, agricultural and building sectors. The earthquake had effects on the productive cycle, determining three types of costs: direct, caused by the destruction of the capital; indirect, deriving from the suspension of working activities; and induced, deriving from the impacts caused in the entire economic system.

¹⁵ At 27 February 2014 of the 57 municipalities in the Crater availing themselves of the Reconstruction Plan, the situation is: 11 with an approved RP; 14 with the RP in the process of being approved; 21 with an RP adopted; 9 with the RP drawn up; and 2 with the RP yet to be drawn up.

only assessment indicator of possible substitution is of financial and not urban planning type¹⁶. Furthermore the single MAs are entitled to decide whether the Reconstruction Plan is of urban planning or strategic type on the basis of an uncertain *judgment of suitability* of the PRG in force with regard to reconstruction aspects. Hence strategic plans are drawn up for minor historic centres with 300-500 inhabitants, whereas the MA of L'Aquila does not consider that the earthquake caused damage in the city sufficient to warrant revising the current PRG of 1975 and making the Reconstruction Plan an urban planning one. Remaining in force are outdated, paradoxical norms foreseeing for instance that the value of buildings depends on geography, which means that those located in Zone A of L'Aquila are subject to building restoration, while those in Zone A in the outlying districts undergo transformations permitted for building restructuring works. With law no. 134/2012 the governance changed, oscillating from the privatistic model of law 77/2009 aimed at experimentation of new, improbable operative structures of the state in which the emergency is likened to great events, to a pseudo-publicistic centralistic model. Now apparently without a Commissioner, management again became of ordinary type by the MC and two special offices were set up for the administrative, technical and accounting management of reconstruction. The first one (USRA) is concerned solely with the municipality of L'Aquila and the second one (USRC) deals with the other municipalities in the crater. Two sets of parameters were issued, one valid for L'Aquila and the other one for the remaining municipalities, with the objective of controlling the reconstruction of each single housing unit coming under the Reconstruction Plan with measures that regard its pre-project physical aspect. The aim is to predetermine the contribution that can be granted using parametric data. To analyze a building in the municipality of L'Aquila consisting of 10 housing units, for example, it is necessary to insert 618 elements. Slightly fewer for the centres in the rest of the crater¹⁷. In this way the deforming effects are measured on the public management of the post-shock conflict, an administrative approach being preferred to a problem in reality primarily of town planning type.

The reconstruction process has almost been completed in the peripheries: at L'Aquila 90% of all private buildings have been completed, in the other centres in the crater the percentage is somewhat lower, up to 70%, but the prevailing solution has been substantially the same considering that in the agenda of public actions there are no town planning problems, only financial ones. Thus a city has been reconstructed with a building construction approach, again proposing the same town planning problems: insufficient porosity, the absence of a functional and morphological mix, autistic public spaces, absence of neighbourhood units, incompleteness of infrastructures, absence of slow mobility, non-thematization of open spaces and broken-up spatial conformation. The financial approach has moreover permitted the loss of many buildings of architectural value and built as from the 50's. Lacking any regulation they have been demolished and replaced by a poor type of ordinary buildings or ones irremediably altered:

- the Ina Casa neighborhood of S. Barbara and of S. Francesco both built in the 50's at the neorealistic design of Enrico Lenti and others (substituted);
- the Lawcourt, designed by Enrico Lenti and Elio Piroddi and others in 1962. In/Arch Award 1966 (altered);
- the Iacp houses designed by Luisa Anversa and others in 1981. In/Arch Award 1985 (substituted);
- the terraced houses designed in 1989 by the Luigi Jordan, In/Arch Award 1990 (substituted);

¹⁶ The open letter of 09/04/2014 addressed to the Mayor of L'Aquila by the President of INU, Silvia Viviani.

¹⁷ The buildings in the historic centre of L'Aquila, excluding churches, number 1910, and for the other districts the number increases to 2754. It is not yet possible to know the total number of buildings in the rest of the crater for which the form has to be compiled. It is presumed there must be 15 thousand.

- the head office of Inail, built in 1940 according to the rationalist design of Luigi Ciarlini. This is a building of historical value whose demolition was authorized with a faithful reconstruction in its external perception.

In conclusion, the post-shock management of the conflict has led to a galaxy of instruments without any overall rationality as to territorial governance and the development model to be pursued. The reconstruction that has prevailed was carried out with public funds but without any effective public coordination, without a specific regional law¹⁸ and without any area plan for the crater. Instruments of technical-administrative assessment of the building process have increasingly prevailed rather than those of urban planning assessment of the reconstruction of a city. In other words the public actors have preferred the excessive production of acts that have proved ineffectual in creating a framework for balanced public policies according to the necessary neo-contractual criteria (sharing of rules) and ones of neo-utilitarian type (shared objectives). Lastly the effectiveness of the public actions that characterized the city-shock-plan relationship in the last century has been betrayed.

In 2010 the region suffered a second earthquake, this time of economic type, and the consequent echo of the 2008 crisis. The enforced reduction in public spending has given rise to numerous regroupings of the health units (ASL)¹⁹, of the *Comunità Montane*²⁰, of the Provinces (in itinere)²¹ and of other linked or instrumental agencies in the Region which simultaneously takes over their functions and human, financial and instrumental resources²², also with operations of rearrangement and mergers²³; but the objectives of reducing public spending and of the tax burden, as well as the new weights and the new roles of the towns and of the territory disconcerted by the normal processes of polarization of urban functions, make the current instruments of planning territorial governance outdated²⁴.

4 RETURN TO THE GOVERNMENT

In this framework the central government intervened with law no. 134/2011, announcing a review of the role which the State has in the event of calamities which call for its financial intervention. On the basis of the principle of its responsibility and transparency to Italian taxpayers it intervened in a direct manner in the configuration of development models and planning choices foreshadowing central substitutive measures, in view also of the ineffective nature of local public actions. It is interesting to observe this return to *government* processes in which central state organs take action in determining specific objectives and in the project-making of local agencies by virtue of the power stemming from being the body that disburses the

¹⁸ Several times requested by INU and by a number of regional councillors.

¹⁹ In 2010 the number of health units decreased from 6 to 4.

²⁰ By the C.R. Resolution of 29.06.2010 the number of *Comunità Montane* goes from 19 to 11.

²¹ The legislative procedure relating to the unification of the Provinces was brusquely interrupted by the end of the government (2008-13). In the present legislature the question has been taken up again although in different ways and with different times still to be defined.

²² The Regional Law of 30/2010 has closed the *Azienda Regionale per l'Edilizia e il Territorio*, that of 30/2011 has closed the *Ente Abruzzo Lavoro*, that of 32/2011 has closed the *Agenzia di Promozione Turistica Regionale*, and that of 29/2011 has closed the *Azienda Regionale per i Servizi di Sviluppo Agricolo*.

²³ The six Optimal Territorial Areas (ATO) of the water sector were merged into a single regional ATO; the seven Consortiums for Industrial Development were merged in a single Regional Enterprise for Productive Activities; and the number of *Confidi* was reduced from 78 to 10.

²⁴ The current Regional Reference Framework (QRR) in force was approved by CR no. 147/4 in 2000. The current Regional Landscape Plan was drawn up in 1990 and updated in 2004. The new landscape plan has not yet been fully authorized. The present Regional Town Planning law dates from 1983, still based on the Land Use Planning (PRG).

financing. In other terms, a *soft* modification is attempted of the principle of subsidiarity²⁵ of local autonomy in governing the territory concerned. Instrumental to this objective are two studies promoted by the Minister of Social Cohesion. The first one is intended as an aid in decision-making processes in a hoped-for strategic plan of economic development (Calafati, 2012), also aimed at a new *smart city* (OECD, 2013)²⁶, while the second one intervenes in the question of the municipal planning of L'Aquila (Oliva, 2012).

The first study confirms that even before the earthquake the city suffered from a dyscrasia between settlement processes and the framework of public actions. The processes of spatial polarization and of territorial integration that have taken place in Abruzzo since the 50's have not been accompanied by any corresponding institutional adaptations, generating the current discrepancy between functional and housing organization and territorial political and administrative organization²⁷. The phenomenon has been neglected of the formation of inter-municipal territorial systems which have acquired the character of *de facto* city, as, for example, the first Abruzzo demographic pole corresponding to the Pescara and Chieti coastal area²⁸. Wholly to the advantage of the towns considered more attractive and to the disadvantage of those, like L'Aquila, that do not succeed in introducing new rare functions, or in increasing the weight of those that exist, and are therefore incapable of increasing their competitiveness. That the city was already in decline before the earthquake of 2009 was considered a certainty by specific scientific disciplines²⁹, but not by local society which sat back and enjoyed the tranquillity offered by being an administrative city with increasing financial revenues, only partly declared fiscally, guaranteed monthly by the 9 thousand university students not local residents but permanently staying in the city³⁰. At the same time the post-earthquake situation can be understood as a resource in consideration of the substantial amounts of public financing that make the city and the crater competitive compared with other urban areas that have to overcome both the economic difficulties deriving from the country system, and those stemming from a generalized process of polarization of resources and expectations of life. For the emergency phase and for the reconstruction of the material damage alone 12 billion euro have so far been spent, out of a foreseen total of 18 billion euro, i.e. an expenditure of 124 thousand € per inhabitant.

The importance that such financing can have in defining an economic development capable of reducing vulnerability is interesting. The increased income improves the general conditions of social security (Wildavsky, 1988) and can generate an added demand for earthquake protection, thus triggering a process of self-supply qualifying the development model and reducing exposure to future calamitous events (Albala Bertrand, 1999); but in the absence of a social development model to receive public resources intended for reconstruction there is the risk that, *at the end of the day*, little of what has been spent will remain in the

²⁵ This principle was inserted in art. 118 of the Italian Constitution thanks to law no. 3/2001 entitled: Amendments to Title V of the second part of the Constitution.

²⁶ The document prepared by Calafati and others in 2012 subsequently formed part of the study for a new smart city, drawn up by an OECD research team and the University of Groningen, financed by the Department for Development and Economic Cohesion of the Ministry of Economic Development, within the National Operative Programme, Governance and Technical Assistance FESR 2007-2013, and by the Abruzzo Committee formed by the regional union representatives of Confindustria, CGIL, CISL and UIL.

²⁷ Reference may be made to the Document for the processing of the territorial projections of the DSR, edited by URBIT/INU in 2006 on behalf of the Abruzzo Region, following the convention of 22.12.2005 (no. 2099/SEGR) between the latter and MIITT.

²⁸ Between 1961-2011 the coast towns underwent considerable population increases (Pescara + 41%; Montesilvano + 309%; Spoltore + 152%; San Giovanni Teatino +201%, Francavilla a Mare + 121%, Chieti +12%) for a total in 2011 of about 280,000 inhabitants, considerably more than in the L'Aquila area (L'Aquila +29%, Scoppito +69%, Pizzoli +42%) with currently about 80,000 inhabitants.

²⁹ Reference is made to the substantial publications of CRESA.

³⁰ Assuming a monthly spending capacity of 600 €/student to be used mainly for board and lodging and for social life, there is a revenue for the city of 54,000,000 €/year.

city to be earmarked for post-reconstruction investments and much will be diverted to other sectors economically more remunerative. To avert this danger, in the first study (Calafati, 2012) various scenarios are proposed, starting from the strong points of the *status quo* according to an approach that links the action of the strategic plan to the city's preexisting economic vocations (administration and research). This is a work with an initial, limited approach to the problem in the sense that it does not foresee the introduction of new economic and functional variables but tends to make the most of existing ones, and at the same time inviting local bodies to recalibrate their actions on the basis of the new post-earthquake settlement pattern within the crater. The Region is invited to redefine the role and the weight of its capital with the updating of its programming, legislative and constituent documents, having considered that the polarization process under way for the last twenty years in the coastal strip around Pescara and in the mountain area around L'Aquila and Teramo, increases the level of territorial complexity and competitiveness, but at the same time brings about a review of the choices of location of the regional offices in the light of the guiding functions of each urban centre. To the Province is posed the problem of reviewing its territorial planning both due to the effects of the forthcoming institutional unification, and to the guiding role that it can meanwhile assume in drawing up territorial plans for the crater³¹. To the adjacent Municipal Councils to the regional capital, Calafati poses the problem of reviewing their administrative and planning autonomy to the advantage of a joint government of the territory, in view of the pernicious effects caused to them by the central role assumed by L'Aquila, which has drained resources and development potential from them. The MC of L'Aquila is asked to propose itself as *primus inter pares* in a territory that stretches beyond its administrative boundaries, to draw up jointly many thematic strategic plans, in which participation and sharing are present in every phase of elaboration, in which those putting forward their interests fully and jointly participate in drawing up the plan and are joint signatories of all the documents produced (initial, interim and final). Coming into this pattern is the good practice of setting up a promoting committee to receive the adhesion on a voluntary basis of the public and private bodies concerned, before starting on the actual drawing up of the plan, in which the MC may (and not must) be present. The strategic plan should therefore be a political/programming document aimed at forming coalitions around general, simple, selective choices (Mazza, 2003) and with operative commitments.

In this case, too, the MC disregarded the indications during the revision of its strategic plan, begun in 2008 and reviewed in 2012 following the effects of the earthquake³². It decided to operate autonomously and in solitude, presenting a self-referential model of a strategic plan³³, with dangerous derive foreshadowing a number of new urban spatial elements and with an equally dangerous reduction of the principle of self-determination in governance of the territory. The proposed plan is self-referential³⁴ because it is an instrument produced in solitude by the MC, adopting instruments and methods of consultation propaedeutic to the drawing up of traditional plans and not consensual processes of wide-ranging participatory plans. In fact the phase of confrontation (and not of joint drawing up) was concentrated in just three seminars which were held very close to each other, on 5, 7 and 12 March 2012 and just before the administrative elections, thereby downgrading the plan to an instrument of party confrontation. Very different instead is the

³¹ See the Methodological Document of 14.12.2011 drawn up by P. Properzi and relating to the Territorial Plan of the Province of L'Aquila, now being updated.

³² The Strategic Plan in force was drawn up by D. Iacovone, S. Pasanisi, P. Urbani, the Censis Foundation.

³³ http://www.comune.laquila.gov.it/pagina196_il-piano-strategico.html (last access 05/12/2013).

³⁴ Explicative of this self-referentiality is the declaration reported in the premise of the Strategic Plan confirming that «the programmatic contents of the document are furthermore the outcome of the constant confrontation with the Mayor Massimo Cialente».

formative process adopted in other situations, demonstrating that the strategic plan is an instrument around which a network of alliances can be constructed:

CITY	PROMOTER	NUMBER OF FOUNDER MEMBERS (YEAR)	NUMBER OF ADHERING MEMBERS IN 2014
Bologna	Promoting Committee	3 (2011)	34
Venice	Cultural Association	67 (2004)	67
Alessandria	Cultural Association	16 (2009)	63
L'Aquila	Municipality of L'Aquila	1 (2008)	1

Tab.1 Table of membership in some Italian strategic plans

The MC's plan foresaw moreover the formation of an external Consulting body which although «without overstepping the limits of the municipal organs» should interface exclusively with the Mayor and could follow the process of final drawing up, execution and monitoring, while execution is delegated to a new special office. But the will to carry out *ex post* the «coalition formation process» (Mazza, 2004) weakened its effectiveness. More complex is the spatial trend, because in spite of being aware that the regional town planning law in force does not foresee it as a conforming instrument of the territory, the strategic plan foreshadows spatial solutions with 18 urban projects located within the city walls and in its immediate vicinity, with the objective of obtaining prior consensus for the future compulsory council passages for the approval of the single variants. It was thus intended to bypass – with the consensual processes typical of the strategic plan which are of a political nature – the phase of regulation and conformation of the planning which translates into the quantitative and dimensional verification of needs, analyses of the context of the single project, and interactive ones between the single projects, as well as between these with the city and the territory. Equally complex is the reduction of the principle of territorial self-government. The MC accepted that determination of the objectives of the strategic plan are suggested by the financing government agency, destructuring in that way the urban planning DNA of the city which considers the plan the prime instrument for recomposing social cohesion from below, above all at certain extraordinary moments of its history.

Just as determination of the objectives of the strategic plan is suggested by the first study, the physical reconstruction of the city must take place with a «model of town planning operative for projects which, as moreover emerges from the various contributions drawn up in the last few months by various institutions, starting with the experts appointed by the Minister of Territorial Cohesion, appears the most suitable way of tackling the reconstruction of a city destroyed by the earthquake» (Oliva, 2012), thus foreseeing a series of precise variants pending a specific regional law. The second study thus starts from the openings of the first one, justifies the strategic nature of the Reconstruction Plan and prefigures the prospects of city development through the formation of new Plan models. It advises the Region to update the L.U.R. (Regional Town Planning Law) to introduce the tripartite planning model (structural plan, operative plan, building and town planning regulation), and the Municipality of L'Aquila to draw up, as an interim measure and pending the new L.U.R., a *master plan* understood as a plan for the reconstruction of all the urban networks, thereby confirming its programming nature and omitting the true objective of foreshadowing a new structural plan. It states that «in the period necessary to draw up the new structural town plans according to the reformed model mentioned above, an interim period that might not be a short one, when there is no coincidence between programmatic indications in the *master plan* and prescriptions of the current town planning instruments, the necessary building permits will be issued thanks to a specific variant

procedure»³⁵. Constructing a city through projects presupposes having an institutional background of knowledge in which emerge the values and risks able to guide the processes of transformation, and in this case the map of the places and landscapes of the Region of Abruzzo can be a good starting point, but also assessing each single project in terms of coherence with the urban structure and with the landscape. Also in this case the urban history of last century tells us about the way in which the project has succeeded in contributing effectively to the growth of the city, thanks also to a singular process of personalization in favour of the proponent to whom local history still recognizes paternity. It should in fact be observed that these moments have been accompanied by *leaders* who have succeeded in achieving the programmed objectives thanks to a renewed policy of alliances in favourable circumstances due to the joint presence of social and economic factors ready and willing to accept the leap forward determined by the project. Only in the recent past, L'Aquila has experienced many of these:

PERIOD 20 th century	LEADER		FUNCTION – THEME – INSTITUTION INTRODUCED
	Name	Role	
'20	Adelchi Serena	Podestà, Minister of Public Works and National Secretary of National Fascist Party	Tourism & sport
'40	Nino Carloni	Local politician	Regional Musical Institution
'50	Vincenzo Rivera	University Professor and National politician	University of L'Aquila
'60	Lorenzo Natali	Parliamentary Minister, Deputy Commissioner CEE	Motorway A24 Rome-L'Aquila
'60	Luciano Fabiani	Regional Politician	Regional Theatrical Institution
'70	Lorenzo Natali	Parliamentary Minister, Deputy Commissioner CEE	State industry
'80	Antonino Zichichi	University Professor	National Institute of Nuclear Physics

Tab.2 Table of the main projects in the 20th century

It is interesting to note that for more than 30 years the city has not incremented its rare functions, demonstrating the end of a competitive political and planning cycle. What is more, the public inefficiency shown in the handling of the shocks in the 21th century and the lack of leaders capable of rising above present short-sightedness hold out little hope for the future of the city³⁶.

5 CONCLUSIONS

The role of the Plan in the management of conflicts and consensus of the participated post-shock reconstruction processes can be an indicator in assessing the effectiveness of public action. 5 years after the earthquake of 2009 a serious slowing down is revealed in resolving problems involving 73,000 persons and

³⁵ This indication is actually surpassed in 2014 by the decision of the Municipality of L'Aquila to draft a plan of tradition by starting the general variation of the current PRG. It is expected expansion of the city to accommodate a population increase of 10% from the current one. is in contrast with the general policies for the reduction of the land to be urbanized and in spite of the decrease of the residents (ISTAT 2011). Continue aggression to agricultural land in the rural area and the interstitial free territory. As it happened in 2009 for the construction of public housing after shock.

³⁶ Is absent participatory consensus building around the PRG. Reference is made to the institutional silence towards the new PRG Preliminary Document presented in 2012 by the Association Domani L'Aquila. This document has not yet discussed by the MC.

in the requalification of the urban spatial configuration. The management models for the emergency and reconstruction have oscillated between governance and government; the various forms of the plan between those of conformative, regulatory and predictive tradition and innovative tripartite and strategic ones; the themes qualifying the city oscillate between the *smart city* and the city in expansion with low densities. Thus what comes about is a difficult coexistence in the time of actions undertaken also because of a limited participation of the actors involved and of local society. The urban history of L'Aquila shows us instead the existence of a close link between urban transformations, the plan, participation and shocks. It is to be hoped therefore that the return to the participated season of the Plan may make the reconstruction of the city coherent with its urban history, in which the policy of alliances will accompany public action in a territorial space that is more vast than the administrative area, and in certain qualifying themes such as urban technological innovation and environmental sustainability.

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