

CATALONIA'S NEW SPATIAL-PLANNING POLICY

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I. Catalonia, a rapidly changing territory

The territory of Catalonia has great potential in many respects. That potential stems primarily from its geographical location, enabling it to act as a gateway or hinge connecting the Iberian Peninsula and the rest of Europe. In addition, two of the main corridors of economic life in the Iberian Peninsula – the valley of the river Ebro and the Mediterranean Seaboard – converge on Catalonia, which also has two of the Mediterranean's chief ports: Barcelona and Tarragona. While it is true that Catalonia is lacking in major natural resources, its physical factors – a mild climate and a variety of terrains – have combined with a persistent humanisation of the area to offer a territory featuring a rich and varied landscape, which is the basis for a thriving tourist industry¹.

These advantages of location are backed by others stemming from a potent urban structure. The metropolitan region of Barcelona, with its population of four and a half million, is the sixth-ranking metropolitan region in Europe in terms of population, and along with Madrid it tops the ranking for Spain's urban system². Moreover, that metropolitan region is home both to a central area of barely 500 square kilometres in which three million people live and to an array of medium-sized towns (Mataró, Granollers, Sabadell, Terrassa, Vilanova and Vilafranca), many of which have over 100,000 inhabitants. Metropolitan consolidation has driven growing functional and economic integration in Catalonia, though without annihilating the rest of the urban system. Quite the contrary: the territory has a sizeable number of medium and small towns – chief among them being Figueres, Girona, Vic, Manresa, Igualada, Tarragona, Reus, Tortosa and Lleida – which, as centres for economic enterprises and services, articulate the territory of Catalonia as a whole.

Lastly, ever since democracy was restored at the end of the 1970s, the work of district councils and the restoration of autonomous government (in the form of the Government of Catalonia – the Generalitat) have resulted in a notable contribution being made to improving facilities as regards urban infrastructures and services, to such an extent that some of the urban-development work undertaken – particularly but not exclusively in the city of Barcelona – have even attracted international attention. It can thus be asserted that in general Catalan towns and cities today are far better organised and

¹ Two classic interpretations of the structure of the territory of Catalonia and how its potential has become interwoven with its historical evolution are: Pau Vila (1937), *La fesomia geogràfica de Catalunya*, Barcelona, Generalitat de Catalunya; and Pierre Vilar (1964), "El medi natural", in *Catalunya dins l'Espanya moderna. Recerques sobre els fonaments econòmics de les estructures nacionals*, Barcelona, Edicions 62 (Vol. I, pp. 215-426).

² See Josep Serra et al. (2002), "Grandes aglomeraciones metropolitanas europeas", in *Papers. Regió Metropolitana de Barcelona*, 37 (pp. 7-161) and Oriol Nel·lo, "¿Cambio de siglo, cambio de ciclo? Las grandes ciudades españolas en el umbral del siglo XXI", in *Ciudad y territorio. Estudios territoriales*, XXXVI, 141-142, autumn-winter 2004 (pp. 523-542).

equipped than they were when they emerged from Franco's dictatorship some three decades ago³.

Over that same period, the Catalan economy has undergone a very significant structural transformation, which has resulted in the share of industrial employment as a percentage of employment as a whole dropping from over 40.3% in 1977 down to 24.3% in 2004, while the service sector over the same period climbed from 41.6% to 62.1% as a percentage of all employment. This trend towards modernisation and the rise of the tertiary sector in the economic base has brought a sharp rise in income: since Spain joined the European Union in 1986, Catalonia has risen from having average per capita income levels that were equivalent to 86% of the average European level to a comfortable five per cent above the average (EU-15). Today, while Catalonia's 6,813,319 inhabitants account for 15.8% of the population of Spain, the total share of Catalonia's GDP and exports account for 24% and 26% respectively of the totals for Spain. The potential and the evolution of the territory of Catalonia have proved to be at once the driving force behind and a consequence of this highly significant social transformation.

Nevertheless, certain territorial trends have asserted themselves over the last few decades that could detract from this picture and threaten the potential we have been discussing if they were to prove enduring⁴. The first of those tendencies is no doubt the dispersion of urban development around the territory. The current structure of the Catalan territory is the result of a long history of population and activities becoming concentrated in the main urban nuclei, a history whose origins go back at least to the modernisation of agriculture and trade in the eighteenth century, and which lasted down to the end of the third quarter of the twentieth century. However, from that time on, a fast-moving trend set in towards the decentralisation of the population around the territory, as in other large European cities, and that trend soon turned into dispersion. As a result, the growth of the densest and most heavily populated nuclei in the chief urban areas has been checked or, as in the case of Barcelona and its hinterland, has even suffered very severe net losses in favour of smaller settlements nearby with a more widely dispersed population. Since these developments, driven by improved infrastructures, the growing use of motor vehicles and trends in the housing market, have often taken the form of very low-density urban development (residential, industrial and tertiary), they have resulted in rampant land occupation, with the attendant deterioration of landscape quality, fragmentation of natural areas, rising service costs and growing energy consumption⁵.

Territorial integration and the dispersion of urban development have come hand in hand with each local area becoming more specialised in functional terms with respect to the

³ For an appraisal of the first two decades of the work of democratic town and city councils in Catalonia, see for example the collective work *Vint anys d'ajuntaments democràtics. Elements per a un balanç i una reflexió de futur*, Barcelona, Federació de Municipis de Catalunya, 1999 (378 pp.). Regarding city-planning projects in Barcelona, on which the bibliography is extremely large, works for consultation include Francesco Indovina (ed), *Barcellona: un nuovo ordine territoriale*, Milan, Franco Angeli, 1999 (251 pp.) and Tim Marshall (ed), *Transforming Barcelona*, London-New York, Routledge, 2004 (263 pages).

⁴ We analysed those trends in *Cataluña, ciudad de ciudades*, Lleida, Milenio, 2002 (160 pp).

⁵ For an analysis of the trend towards urban dispersion and its effects over the last quarter of a century in the metropolitan hinterland of Barcelona, see Francesc Muñoz, *La producció residencial de baixa densitat*, Barcelona, Diputació de Barcelona, 2005 (152 pp.).

whole. Thus residential, commercial, productive and leisure uses have tended to separate out over the territory on the basis of their capacity to compete in the land market. This is to some extent a natural consequence of the growing integration of the Catalan territory, though when exacerbated by market tensions and, in some cases, by the intransigent application of hidebound urban zoning principles, it has entailed a drastic decline in the municipal districts' ability to retain within themselves the mobility thus generated, an increase in the residents' travel needs, the overloading of communications networks, and quite frequently the impoverishment of urban life and the down-grading of the landscape through diminishing diversity⁶.

Lastly, it must be noted that this functional specialisation risks becoming bound up with a growing social specialisation that is stemming from the segregation of social groups within the territory. The fact is that in a property market in which home-ownership is by far the predominant mode of tenure and in which subsidised-housing policies are weak and prices high, very large sectors of the population are experiencing considerable difficulty in finding a way into the housing market. Chief among those sectors is the recently-arrived immigrant population, which has increased spectacularly in less than a decade: according to the official figures, it rose from just over 140,000 people in 1997 to nearly 800,000 in 2005. As in the territorial realm, these circumstances are leading from a social point of view to a specialisation trend similar to that driving the location of economic pursuits: the various social groups are tending to be separated in spatial terms on the basis of their negotiating capacity in the property market, to such an extent that some districts risk becoming full-blown ghettos⁷.

II. The principles and objectives of the Catalan Government's spatial policy

From the standpoint of this diagnosis as outlined above, we are dealing with a territory that has great potential stemming from its location, its diversity, its urban structure and its governmental capacity, but which must at the same time tackle important challenges – challenges associated with the trends towards dispersion in urban development, specialisation by functions, and social segregation, these being trends which, if they prove lasting, would increasingly make the territory of Catalonia environmentally unsustainable, functionally inefficient, and socially unsupportive.

In view of that scenario, the Government of Catalonia⁸ is taking as its basic tenet that tackling these challenges requires resolute public action, in order to channel and, where

⁶ See Oriol Nel·lo, Joan López and Joan Miquel Piqué (2002), "Las redes emergentes de articulación del territorio en la región metropolitana de Barcelona", in Joan Subirats (coord.), *Redes, territorios y gobierno*, Barcelona, Diputació de Barcelona (pp. 201-222); Joan López (2003), *La mobilitat de les persones a la regió metropolitana de Barcelona*", in *Papers. Regió Metropolitana de Barcelona*, 38 (pp. 11-27)

⁷ See Carme Trilla (2002), *Preu de l'habitatge i segregació social de l'espai a l'àmbit metropolità de Barcelona* (30 pp.).

⁸ The current government of the Generalitat of Catalonia is led by Pasqual Maragall, who was in fact the mayor of Barcelona during the most decisive period of the city's development (1982-1997). The government, which took office in December 2003, is made up of a coalition led by the Catalan Socialist Party (Partit dels Socialistes de Catalunya) together with the environmental and socialist party (Iniciativa per Catalunya-Verds), a left-wing nationalist party (Esquerra Republicana de Catalunya), and independent members. This progressive coalition came to power after twenty-three years of uninterrupted rule by the centre-right in Catalonia, and almost simultaneously with the victory of José Luis Rodríguez Zapatero's

necessary, to counter some of these current trends. Accordingly, in the teeth of the assertion that has become so fashionable over recent years to the effect that greater deregulation is needed in the fields of planning provisions on housing, land-use and the territory as a whole, the Government of Catalonia stands by the need for a stronger collective commitment and better public intervention, in order to make sure that the market can assure greater economic efficiency, more enduring environmental sustainability, and greater social equality.

Defending these values necessarily entails reining in some of the territorial trends referred to above and committing to an urban-development model that is characterised, in the words of the programme adopted by the Government as a guide for its action, by “compactness, complexity and the integrated nature of settlements, as the prime assurance for the preservation of non-building land and the landscape”⁹. Accordingly, rather than the dispersion of urban development around the territory, the Government of Catalonia champions the virtues of growth in the form of adjoining buildings, reasonably high densities, a clear distinction between built-up areas and open areas, and preserving the landscape. In other words, compact rather than dispersed development. And rather than the trend towards functional specialisation for each local area, entailing the down-grading of the landscape, the exacerbation of mobility and the downgrading of public space, the Government upholds the value of mixed uses, the richness of urban life, heterogeneity, and public space as a right and as a meeting ground. And rather than specialisation, complexity. Lastly, rather than the risk of social segregation, rather than having the people separated around the territory on the basis of their capacity to find ways into the housing market, and rather than the dangers of ghetto formation, the Government asserts that the towns and cities of Catalonia must be places for living together and for social redistribution. Rather than segregation, cohesion¹⁰.

Compactness, complexity and cohesion are the three pillars, the three watchwords of the urban-development model that is being advocated. Nevertheless, this approach does not imply by any means relinquishing the benefits of the metropolitanisation process or rejecting the legacy of the dispersion that has already occurred, as we shall now see.

The metropolitanisation process in the context of the urban areas of Barcelona, Tarragona, Girona and, to a lesser extent, Lleida has entailed, as already mentioned, greater territorial integration, with the attendant improvement in access to services and expansion in the sphere of the labour market. However, those advances in economic

Spanish Socialist Party (Partido Socialista Obrero Español) over the Conservative party (Partido Popular) in the Spanish elections.

⁹ *Acord per a un Govern catalanista i d'esquerres a la Generalitat de Catalunya*, Barcelona, December 2003 (79 pp., multi-copy).

¹⁰ See the paper from the Secretariat for Town & Country Planning of the Ministry of Town & Country Planning and Public Works: *Criteris per al desenvolupament del programa de planejament territorial*, Barcelona, Secretaria de Planificació Territorial del Departament de Política Territorial i Obres Públiques, 2005, June 2005 (multi-copy). See also the transcripts of the speeches made in the Parliament of Catalonia by Joaquim Nadal, Minister for Town & Country Planning and Public Works, on 26 January and 9 December 2004. It is to be noticed that Mr. Nadal, who is a historian by profession, was also the mayor of the city of Girona from 1979 to 2002. The connection between the spatial policies now being applied to Catalonia as a whole and the work done in municipal town-planning departments as a laboratory for ideas and practices is significant in many respects (see for example Amador Ferrer and Joaquim Sabaté, “L’urbanisme municipal a Catalunya”, in *Papers. Regió metropolitana de Barcelona*, 32, March 1999 (143 pp.) and Amador Ferrer, “El urbanismo municipal en España”, in *Papers. Regió metropolitana de Barcelona*, 43, June 2005 (124 pp.).

efficiency and territorial equality have come hand in hand with the above-mentioned phenomena of dispersion, specialisation and segregation. Now as we see it, countering those adverse effects must not entail relinquishing those benefits in any way. Accordingly, with regard to those who would seek to negate or reverse the metropolitanisation process in a reactionary, unrealistic way (recentralising uses and populations in the central city, or attempting to build supposedly autonomous, self-supporting “urban communities”), it must be stressed that such attempts can only lead rather to further bouts of segregation and exclusion. On the contrary, the urban-development model now being advocated takes on board and exalts territorial integration; far from negating the process of metropolitanisation, the proposal is to boost it, though not through irradiation from a single point or by untrammelled dispersion but rather by integrating it through the city network. Hence the proposed model for the territory of Catalonia is based on an articulated network of cities and towns, all reasonably dense, and rich in varied functions and in civic neighbourliness. Catalonia would thus be organised as a network of high-quality urban spaces – a kind of city made up of cities, a city of cities, or a metropolitan archipelago¹¹.

For these policies to be successfully implemented, defending the metropolitan base must be pursued in parallel with fully acknowledging the real situation in the territory as it exists now. The dispersion of urban development around the territory is a phenomena that took hold in Catalonia at least three decades ago. As in so many other European regions, that trend has radically transformed the structure of settlements, the area of land occupied by them and the spatial distribution of land uses. It would thus be absurd at this juncture to design spatial policies conceived solely with the formal city in mind and completely ignoring the other features of the present situation – second-home housing estates, isolated industrial estates, large shopping centres located along the metropolitan arterial road system and sprawling residential housing developments. On the contrary, as we will be seeking to explain, the policies we are now striving to develop take as their starting point an explicit recognition of the real status quo in the territory as a whole; however, far from accepting that uncritically or resignedly, those policies are seeking to alter some of the negative traits of that status quo and to influence its future development in order to bring about greater collective wellbeing.

Making progress towards that more orderly, equitable and refined use of the territory entails providing the public authorities with appropriate instruments as regards planning and also as regards public regulations and action. The following sections will outline the initiatives that have been taken up by the Government of Catalonia over the last twenty months in spatial and urban planning and in policies concerned with land use, the landscape, infrastructures and urban rehabilitation.

III. Spatial and urban planning

As noted previously, municipal urban development has been flourishing remarkably in Catalonia over recent decades. Yet progress in the field of spatial planning for the territory as a whole has proved very limited and modest. In view of that situation, the

¹¹ This model matches to some extent the model put forward by the European Union, which has unfortunately proved to be of little practical effect, in some of its strategic spatial planning documents. Regarding the notion of the metropolitan archipelago, see Francesco Indovina, “Trasformazioni della città e del territorio all’inizio del XXI secolo: l’arcipelago metropolitano”.

Government of Catalonia decided, in January 2004, barely a month after coming into office, to create its Spatial Planning Programme¹², thus ending the long period of neglect in supramunicipal planning, both in its territorial and its urban-development facets.

III.1. Spatial Planning

Even though Catalan legislation¹³ had envisaged the drafting of a General Spatial Plan for the whole of Catalonia back in the early 1980s, it was only to be approved in 1995, and then only with a regulatory content that amounted to virtually nothing¹⁴. The approval of the Spatial Plan was meant to be followed by the drafting of a number of partial Spatial Plans – seven in all. But of those, only one was approved – the Terres de l’Ebre Plan – in 2001¹⁵, largely as a result of pressures and in response to the social movement that stirred up that area through its opposition to the project for conveying water from the river Ebro away to other regions.

It could be countered that if social and economic modernisation have arisen despite the absence of spatial planning, those instruments were perhaps not so necessary after all. The problem of course lies in the costs entailed in this progress, in their social and territorial distribution, and in the potential for coping with them in the future: through being unguided, the trend towards metropolitanisation has generated, along with its undoubted benefits, a very sharp increase in the consumption of land, an exacerbation of mobility problems, and a growing risk of social segregation. The costs of those trends, as explained above, are very high, and if they persist they could undermine the potential for development of the territory and of Catalan society from the environmental, economic and social point of view. It is evident that the trends towards dispersion, specialisation and segregation are driven by underlying trends that are clearly supralocal, and it is very difficult for municipal-level planning to respond adequately to such trends. That is why any spatial policy seeking to harness those trends in accordance with the objectives of sustainability, efficiency and solidarity requires planning instruments on a higher level: the territorial level.

Working on the basis of those premises, the Government of Catalonia has made a commitment to producing spatial plans for the territory of Catalonia as a whole during

¹² The Programme’s director is the architect Juli Esteban, who was long in charge of the urban-development studies group of the metropolitan area of Barcelona and Barcelona City Council. The creation of the Programme, under the auspices of the Secretariat for Spatial Planning, comes as part of the administrative reorganisation of the Ministry of Town & Country Planning and Public Works undertaken by the Government minister Mr. Nadal. The Department’s services come under two Secretariats: on the one hand, the Secretariat for Spatial Planning, which takes in the Directorate General for Urban Development, the Directorate General for Architecture and the Landscape and, as noted, the Spatial Planning Programme; on the other, the Secretariat for Infrastructures and Mobility, which takes in the Directorate General for Roads, The Directorate General for Ports and Transport, and the Mobility Programme.

¹³ Law 23/1983 of 21 November on Spatial Planning (*Official Gazette of the Generalitat of Catalonia*, 385, 30 November 1983).

¹⁴ Law 1/1995 of 16 March approving the General Spatial Plan for Catalonia (*Official Gazette of the Generalitat of Catalonia*, 2032, 31 March 1995).

¹⁵ Resolution of 11 July 2001 announcing the Agreement of the Government of the Generalitat of 15 May 2001 giving definitive approval to the partial Spatial Plan for the Terres de l’Ebre (*Official Gazette of the Generalitat of Catalonia*, 3440, 27 July 2001).

this term of office (2003-2007). This entails drafting six spatial plans from scratch (for the areas Alt Pirineu and Aran, Catalunya Central, Comarques Gironines, Regió Metropolitana de Barcelona, Terres de Ponent and Camp de Tarragona), and reviewing the Spatial Plan for Terres de l'Ebre and the General Spatial Plan for Catalonia, since those Plans have both proved to be scantily operational. Now indeed, after the first year-and-a-half of this term of office, draft projects have already been drafted and subjected to public inquiry for the Spatial Plan for Alt Pirineu and Aran (April 2005)¹⁶ and the Master Spatial Plan for the Empordà, which is a first contribution towards the Plan for the regions of the province of Girona (May 2005)¹⁷. The draft texts of three further spatial plans (Cataluña Central, Regió Metropolitana and Terres de Ponent) are expected to come out over the next few months.

The content of these spatial plans focuses on three subject areas, the intention being to offer strategic and regulatory guidelines on the basic territorial structure through them:

- a) The open-space system (land for agricultural, livestock and forest pursuits, areas of natural interest, biological connecting corridors, and other protected areas).
- b) The settlement system (the urban network, land for residential, industrial and tertiary uses, and urban rehabilitation and remodelling).
- c) The infrastructure system (the layout and service-provision of infrastructures for mobility – the road and railway system, ports, airports and logistics areas).

Clearly, this demarcation of subject areas leaves spheres of great territorial significance out of the plans – the water cycle, energy, waste, shopping facilities, health facilities etc. This restrictive approach comes in response to criteria of disciplinary and administrative prudence: disciplinary prudence since it would appear unrealistic to seek to regulate in a single planning initiative every aspect impinging on territorial transformation, particularly since, as we have seen, scant prior experience is available in Catalonia in matters of planning work; and administrative prudence since authority in the specific issues listed is held by diverse departments and bodies also possessing planning capacity of their own. Thus it was decided to define a basic territorial ground-plan for subsequent elaboration through sector-specific planning.

As regards the planning method, it must be stressed that the plans are not designed as rigid documents in which the content as a whole is geared towards a visualised target outcome, as in days of old. On the contrary, the spatial plans now in the pipeline form a set of strategic orientations, territorial links, administrative actions and financial commitments aimed at attaining the established collective objectives through a process based on reaching consensus. Accordingly, as can be seen in the draft projects already unveiled, the plans are intended to be specific, rigorous and useful documents using a set of components – a report, maps, regulations and an economic-financial study – to set out the commitments made by the authorities and the rights and duties of private parties, all within a sound legal framework.

Having decided upon the thematic scope and the approach, a framework of reference was then added to ensure that it all comes across coherently. For indeed taking a

¹⁶ Through the Edict of 19 April 2005 opening for public inquiry the draft provisions for the Spatial Plan for Alt Pirineu and Aran (*Official Gazette of the Generalitat of Catalonia*, 4369, 22 April 2005). The full text of the document can be examined at www.gencat.net/ptop.

¹⁷ Edict of 6 May 2005 opening for public inquiry the draft provisions for the Master Spatial Plan for the Empordà (*Official Gazette of the Generalitat of Catalonia*, 4384, 13 May 2005). The full text of the document can be examined at www.gencat.net/ptop.

hierarchical approach to the planning would have entailed beginning the spatial planning work by reviewing first and foremost the General Spatial Plan for Catalonia and then, only when that was done and through pursuing the “planning cascade” so beloved of the old school, getting down to drawing up the partial plans. That approach was ruled out since it was thought that there would be a risk of the whole term of office being spent on discussing general strategies when what was really needed were specific, immediate regulations and proposals. It was thus decided to make a start directly on the partial spatial plans and, as we shall see later, on the urban-development master plans. However, this option left open the need to bring in common parameters for the plans as a whole in order to guarantee that they would be coherent in terms of their general criteria, socioeconomic scenarios, environmental factors, and regulatory process.

Hence certain spatial-planning Criteria were drawn up to begin with, criteria which are set out in the form of fifteen sections on the open-spaces systems, settlements and mobility infrastructures, and which spell out in detail the principles of compactness, complexity and cohesion for the territorial model as explained above. Their headings are as follows¹⁸:

- a) Concerning the Open-Spaces system
 1. Encouraging territorial diversity, maintaining the territory’s bio-physical matrix as the point of reference.
 2. Protecting natural, agricultural and non-building areas as an essential component of spatial planning.
 3. Conserving the landscape for its value to society, as a legacy, and as an economic asset for the territory.
 4. Restraining land consumption.
- b) Concerning the Settlements system
 5. Encouraging social cohesion and avoiding spatial segregation in urban areas.
 6. Protecting and boosting the urban legacy that brings structure to the territory.
 7. Encouraging an effective housing policy, one that is well integrated in urban-development terms.
 8. Encouraging the peaceful coexistence of economic activities and housing in urban areas, and rationalising the locations of industrial and service-sector estates.
 9. Bringing in regulatory and spatial-guideline measures for second homes.
 10. Encouraging new developments to be compact and continuous.
 11. Reinforcing the nodal structure of the territory through urban growth.
- c) Concerning the Mobility-Infrastructure system
 12. Organising mobility more as a right than as an obligation.
 13. Facilitating the deployment of public transport by making the settlement pattern polarised and compact.
 14. Paying particular attention to road systems that bring territorial structure to urban developments.
 15. Integrating Catalonia in the urban and transport networks of Europe.

The second point of reference embraced by the planning programme is the socioeconomic scenarios that are common to the territory of Catalonia as a whole – scenarios intended to establish demographic-growth and employment-trend forecasts

¹⁸ See *Criteria per al desenvolupament del Programa de Planejament Territorial...*, cit., presented in the Spatial Policy Coordination Commission in its founding meeting on 20 May 2005.

over a twenty-year time-scale (2026), so that land and housing needs can be quantified from them for each sphere of the planning work. It would be out of place here to go in detail into the methodology adopted for drawing up those forecasts, or to provide detailed descriptions of the results¹⁹; suffice to say the estimates confirm the existence of a major turning-point in demographic trends: the population of Catalonia, which remained substantially stable over the last quarter of the twentieth century at around six million inhabitants, has shifted into a new phase of growth that will see the population rising to eight million by 2020-2026. This increase will arise essentially through immigrant inputs, with immigrants numbering some 1.5 million by the end of the period under consideration for the estimates. As for workplaces, they would rise from the current 2.7 million to 3.6 million at the end of that period. The social and territorial implications of this growth trend, whose magnitude is comparable only with the growth experienced by Catalan society in the 1960-1975 period, are enormous, and how they are treated in spatial terms is the main objective of the spatial planning programme.

Making sure that the forecasts for population trends and economic-pursuit trends in each planning area are coherent with environmental and energy-related factors is the third point of reference in the planning programme. With that in mind, it has been established, by agreement with the Ministry of the Environment and Housing, that the plans will be subjected to the environmental strategic assessment procedure as stipulated by European regulations²⁰. The assessment will be arranged as from the early stages in the production of each plan, so that the prescriptions emerging from it may form an integral part of the process rather than being reduced to an all-too-often conflict-ridden and sterile final approval-seeking phase. The main objective of the assessment will be to establish how well the proposals for planning strategies on settlements, infrastructures and open spaces accord with the forecasts for energy, water-cycle and waste-treatment capabilities.

The fourth aspect of the framework for coherence in the spatial-planning work – and it is a decisive aspect – is the regulatory system for drafting, processing and approving it. To be effective, spatial plans must first and foremost be the result of a set of agreements: agreements between the various Ministries of the Government of Catalonia, between that Government and the municipal authorities in each of the territories, and lastly between the public authorities in general and representatives of civil society. So

¹⁹ See *Estimacions socio-econòmiques per al planejament territorial*, Barcelona, Secretaria de Planificació Territorial del Departament de Política Territorial i Obres Públiques, 2005 (multi-copy, 2 vol.). The projection method used is the one established by the architect Josep M. Carrera and the economist Maria Antònia Monés – currently the coordinator for the Metropolitan Spatial Plan, and the Director General of Economic Programming respectively. The starting point for the model is examining the demand for jobs that may result from a given trend in GDP as an independent variable. The resultant aggregate demand is then cross-related with expected trends in the population pyramid and employment rates. Next, the resident employed population is quantified, it being estimated that if the jobs are not covered with local people they will be covered by migrant workforces. This results in a quantification of localised workplaces and the resident in-employment population over the whole of the reference period for each of the spheres considered, with the attendant estimates for principal places of residence and land for economic pursuits.

²⁰ See Directive 2001/42/EC of the European Parliament and of the Council of the European Union of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (*Official Journal of the European Communities*, 197/30, of 21 July 2001). The Directive, also known as the Directive on strategic environmental assessment, is still in the process of being transposed into the legislation of Spain and Catalonia, and so the programme will be complying in advance with the provisions of the Directive.

the plans cannot be produced by a single Ministry to be pulled out of hat later on, so to speak, and thrust at the other agents involved. That would no doubt be the right recipe for quick progress from a technical point of view, but it is also a recipe for conflict and failure, the end result being plans that are neither viable nor useful. What is needed is the opposite: the process by which the plan is shaped must itself be an exercise in consensus-making. To that end, a set of rules for the drafting and approval of the spatial plan has been designed that will cover a long period and offer many assurances²¹, and in it, throughout the process and through various stages of public inquiries and information, each Ministry of the Government of Catalonia and each district council are to be consulted directly on various occasions regarding the content of the project, with various levels of participation also being created for other bodies and society as a whole. The aim is that when the process is complete, the district councils and the institutions and civil bodies in each territory come to feel that the strategic thinking, the objectives and the proposals of the plan are their own to so great an extent that they think the Generalitat ended up giving way to the plan they themselves had wanted.

III. 2. Urban-development planning

Efforts in spatial management at the territorial level must go hand in hand with urban-development action. Such action has a laudable technical and professional tradition in Catalonia, though it lacks policy guidelines, a regulatory framework and territorial engagement, and thus has all too often proved unable to counteract the detrimental aspects of the urban-development process referred to above.

To remedy this situation from the administrative standpoint, a boost has been given to the resources available to the Directorate General for Urban Development²² and the municipal authorities for drafting, processing, approving and implementing urban planning. To that end, changes have been made to the working methods of the Territorial Urban-Development Commissions (the joint bodies made up of representatives from the Generalitat, the local authorities and representatives from society) which are responsible for giving approval to the processing of most urban-development procedures: various improvements of a technical nature have been made to the way they work, and the Catalan Minister for Town and Country Planning has appointed new Commission members who are mostly from professional and academic sectors and who can put across various environmental and territorial concerns, alongside other members representing the Government and the property sector. The idea behind these measures is for discussions on any controversial issues arising to be conducted within the Commission meetings, and to achieve greater inherent legitimacy for the decisions taken.

In addition, to strengthen the capacity of the municipal authorities in producing and implementing their planning work, the Directorate General for Urban Development has set up three programmes to help with the drafting of municipal planning schemes: for authorities who intend to review or complete their planning, for those wishing to produce catalogues of buildings erected on non-building land, and for those who still do

²¹ See Decree 142/2005 of 12 July approving the Regulations on the procedure for the drafting, processing and approval of the partial spatial plans (in the *Official Gazette of the Generalitat of Catalonia*, 4432, 22 July 2005).

²² The person in charge of the Directorate General for Urban Development is the architect Joan Llorc, who has been in that post since 2000.

not have any planning instruments. For financial year 2005, no less than 5 million euros will be devoted to those programmes, and a total of 169 of Catalonia's 946 municipal districts will be joining in them.

From the standpoint of the contents of municipal planning, the definitive reorientation of urban-development schemes will not be reached until local-scale planning has been fully adapted to the provisions of the new urban-development legislation, which will be discussed below, and to the provisions of the new spatial planning, discussed above. That obviously entails a very long time scale, which is inadmissible in certain areas – especially in the context of the densest and most heavily populated urban areas, certain territories with a particularly valuable architectural or natural heritage, and areas experiencing the greatest urban-development pressures.

In order to tackle those situations without delay, the Government of Catalonia has started drafting a number of Urban Development Master Plans aimed at orienting and organising the development of certain areas. The drafting of a total of 15 regulatory instruments of that kind has been started over the last 18 months, affecting in all 300 municipal districts all around Catalonia. At the time of writing (August 2005), two of those documents have already been given definitive approval, one is at the initial-approval stage, five are in the period for institutional consultation on progress with the plan, and the others are in various initial stages in the drafting work.

One initial group of those plans is aimed at managing the development of medium-sized towns in Catalonia, they having already become emerging polarities, and that will be experiencing major growth in the near future according to the forecasts of the Spatial Planning Programme. To make that growth orderly and serving to reinforce the position of those medium-sized towns as forces for articulating the territory and as centres for irradiating services, the Government of Catalonia felt that it would be advisable to provide supramunicipal planning instruments for those urban systems. Thus urban-development master plans are being drafted for the areas around the main three towns in Central Catalonia: the Conca d'Òdena (the urban area of the town of Igualada), the Pla de Bages (the urban area of Manresa) and the Plana de Vic (the urban area of Vic)²³. Work has also begun on producing the Urban-Development Master Plans for the urban areas of Figueres and Girona²⁴, and it is expected that a start will be made in the coming months on the Plan for the central area of Camp de Tarragona (Tarragona-Reus). In all cases, what is involved are urban polarities that are fundamental in achieving the desired nodal structure for the land: they all feature highly complex urban development, requiring optimised investment in infrastructures, and they will all be experiencing a significant share of future growth in residential and economic-activity terms.

²³ The teams drafting these plans are directed, respectively, by the architects Antonio Font (Igualada), Joaquim Sabaté (Manresa) and Xabier Eizaguirre (Vic), all of whom are lecturers at the School of Architecture in the Polytechnic University of Catalonia. The scope of the Master Plan for the Conca d'Òdena takes in a total of 11 municipal districts, the one for the Pla de Bages takes in 22, and the one for the Plana de Vic 18. The documents setting out the Criteria and Objectives for the first two of these entered their institutional consultation period in July 2005.

²⁴ The Urban-Development Master Plan for the urban area of Figueres, taking in 16 municipal districts, is being directed by the architects Lluís Cantalops and Ferran Sagarra, who are likewise lecturers at the Polytechnic University of Catalonia. The work of drafting the Master Plan for the urban area of Girona, taking in 12 municipal districts, will be assigned over the next few months.

The second group of urban-development master plans seeks to preserve and valorise the environmental, landscape-related, architectural and urban heritage of a number of particularly sensitive areas. Prominent among these is the Urban-Development Master Plan for Gallecs, aimed at providing definitive protection and management for an area of 774 hectares of great landscape value in the Vallès plain, lying right in the heart of the metropolitan region, and which has been the subject of various urban-development projects and controversies over the last 35 years²⁵. Another master plan that affects an area that has seen significant territorial controversy is the plan for Vall d'en Bas, Vall del Ges and Bisaura, which is aimed at managing urban growth and regulating the uses of non-building land in the sphere of influence of the new Vic-Olot axis via Bracons²⁶. The third Master Plan in this group seeks to preserve the complex of industrial colonies lying along the river Llobregat – one of the most important and best-preserved industrial-architecture complexes to be found in Spain or Europe – with a view to consolidating those colonies as spaces for residential use, for productive activity, for tourism and for conserving as a reminder of the past²⁷. Lastly, a start has also been made on the Urban-Development Master Plan for the mountain area Serra de Rodes and its environs, aimed at providing protection and urban-development management for this zone, which is a very important biological connecting corridor between Serra de l'Albera, Cap de Creus and the wetlands Aiguamolls de l'Empordà, in one of the most highly regarded and representative landscapes of the territory of Catalonia. In the near future, further plans aimed at valorising the land in terms of its heritage, environment and landscape will be added to those already approved or in the pipeline²⁸.

The third set of Urban-Development Master Plans cover some areas of the Catalan Pyrenees and the coast that are facing great urban-development pressure, mainly from tourism, and particularly as a setting for second homes. Accordingly, in line with the provisions of the Spatial Plan for the Alt Pirineu and Aran, work has begun on drafting and processing the plans for the three Pyrenees districts with the strongest urban-development dynamics: the Val d'Aran, Pallars Sobirà and La Cerdanya. The essential

²⁵ The Urban-Development Master Plan for Gallecs was given definitive approval by the Minister for Town and Country Planning and Public Works on 29 April 2005. It will enable the central area of Gallecs to be kept free of urban development, and thus be preserved as a natural space, agricultural land and a recreational area for neighbouring populations; the Plan will also definitively bring in management for urban development in the vicinity of that spot, and guarantees public administration for the area as a whole, with the participation of the local authorities and the Generalitat. The Plan affects a total of 7 municipal districts in the Vallès, and was drafted directly by the Directorate General for Urban Development, with the assistance of the Catalan Land Institute.

²⁶ The Plan is part of a resolution by the Catalan Government that was adopted at the time the decision was taken to carry on with opening up that axis, though with its layout substantially modified. Controlling the urban-development repercussions of opening up the new path was one of the main concerns of those opposing the plan. The drafting of the Plan, which affects a total of 12 municipal districts in the regions of Osona and La Garrotxa, was entrusted to a team directed by the architects Ricard Pié and Josep Maria Vilanova, with the assistance of biologists, engineers and geographers. The document setting out the Plan's Criteria and Objectives has already been through its institutional-consultation stage.

²⁷ The Urban-Development Master Plan for the Industrial Colonies of the Llobregat covers a territory of 58 square kilometres lying on both sides of the river Llobregat, between the Baells reservoir and the start of the Manresa irrigation channel. It includes part of the territory of 9 municipal districts, and is home to a total of 14 industrial colonies. The group charged with drafting the Plan is directed by the lecturers Joaquim Sabaté of the Polytechnic University of Catalonia, and Pere Salvà of the Ramon Llull University.

²⁸ The Urban-Development Master Plan for Serra de Rodes includes, in whole or in part, the territory of 7 municipal districts in the Empordà region. Its drafting was entrusted to the care of a team led by the architect Amador Ferrer.

aim of all three plans is to manage and control the pace of the urban growth that is arising in them so that it will not endanger the value of the area in environmental, heritage and landscape terms, since those factors underpin its attractiveness for tourism and thus its economic development²⁹. Also belonging to this same group of instruments are the Urban-Development Master Plans for the Catalan seaboard – the ‘Coastal System’ – which merit special mention here on account of their ambitiousness and importance.

In the evolution of the distribution of the Catalan population around the territory, as referred to at the outset, the population has tended to gravitate towards the coastal areas. This has led to major transformation and urban-development along the coastal areas, boosted decisively over recent decades by the phenomenon of tourism and by the increasing numbers of second homes. Hence nearly half the Catalan seaboard has now been developed. In view of this situation, the Urban-Development Master Plan for the Coastal System (PDUSC) is aimed at protecting and valorising the coastal areas that are still free of occupation and preventing, where possible, their urban development. Four kinds of objectives are thereby sought:

- a) Relating to urban development: avoiding the consolidation of an uninterrupted built-up area that could cover a substantial part of the coastline.
- b) Relating to heritage: conserving coastal areas on account of their value in landscape, cultural and symbolic terms.
- c) Environmental: making it possible to conserve such an especially fragile environment as the coast and ensuring its continued existence between the ecosystems of land and sea.
- d) Economic: managing the seaboard as an essential resource for economic development, and in particular for the tourism business.

To achieve those objectives, the PDUSC has identified nearly all the non-building land, and much of the non-demarcated building land, in a coastal strip lying 500 metres to 2 kilometres from the coastline, and it has established that those areas shall remain definitively excluded from urban development. The plan has thereby provided full protection for a total of 23,500 hectares located on the seafront, which amounts to an area of almost two-and-a-half times the municipal district of the city of Barcelona. The municipal authorities were informed of the criteria and objectives of the plan, which concerns a total of 75 coastal municipalities, on 5 February 2004, just forty days after the Government came into office, and the PDUSC was approved definitively by the Minister for Town and Country Planning and Public Works on 25 May 2005. It is worth noting that its processing went through with a high degree of consensus, so much so that only 670 counter-claims were lodged (i.e. barely 9 counter-claims for each of the municipal districts concerned). In terms of the area covered and the number of municipal districts affected, the PDUSC is the most ambitious supramunicipal planning exercise to have been undertaken in Catalonia since the General Metropolitan Plan of 1976³⁰.

²⁹ The Master Plans for the Val d’Aran and Pallars Sobirà are drafted by a team led by the architects Carles Llop and Sebastià Jornet. The Cerdanya Plan is being produced under the direction of Miquel Domingo and Alfredo Fernández de la Reguera, who are likewise architects. The documents setting out the Criteria and Objectives of the first two have already been sent out for institutional consultation, and the third one will shortly be joining them. In all three cases, the Plan covers the full set of municipal districts in each region.

³⁰ See the *Pla Director Urbanístic del Sistema Costaner*, Barcelona, Secretariat for Spatial Planning of the Ministry of Town and Country Planning and Public Works of the Generalitat of Catalonia, May 2005

Moreover, the process of producing the Plan revealed the importance of trying to preserve various areas of demarcated building land for which definitively approved partial planning had not been arranged, on account of their proximity to the coastline and their own intrinsic value. To that end, work has started on drafting a new plan (called the Coastal Urban-Development Master Plan for building land not covered by a definitively approved partial plan); for technical and legal reasons, processing it separately from the first PDUSC was preferred. After a detailed study of 200 areas, the Plan, which was initially approved on 25 May 2005, sets out to preserve 44 areas lying on 656 hectares of land; for 30 of those, it is proposed to have the land classed as non-building coastal land, while the others will have directives to ensure that any urban development arising in them is compatible with landscape and environmental quality.

Lastly, a constant concern in the processing of the Plan was that it should provide not only urban-development links regarding land use but also instruments for managing the areas that are intended to be kept free of urban development. For that purpose, the Ministry of Town and Country Planning set up, even before the definitive approval of the Plan, a Fund for managing non-building land on the coastal system, so that the district councils concerned and the land conservation and stewardship associations can turn to the Fund in order to finance management action in the areas concerned. The purpose of this funding is to provide finance for land acquisitions for adding to the publicly-owned stock, the building and maintenance of ring roads, improvements to pedestrian accesses, rebuilding terraces, and demolishing obsolete or illegal buildings. Two calls for applications for subsidies have already been made, corresponding to the financial years of 2004 and 2005, and a total of 24 coastal district councils have turned to them.

In all, the new urban-development master plans, which already cover a third of all Catalan municipal districts, are in our view making a decisive contribution to the building of a new generation of urban-development plans in Catalonia, a new stage in which the legitimate pursuit of local autonomy in arranging municipal planning will find an appropriate framework for reference in the supramunicipal and territorial sphere.

IV. Policies for the land, mobility, the landscape, information and urban rehabilitation

Having diagnosed the trends at work in the territory and outlined the response being made to them from the spatial and urban-development standpoints, we will now look at the main features of the active spatial policies that are being adopted. Specifically, we will be referring to four spheres, the Government of Catalonia having had specific laws approved for each of them³¹ as well as various action programmes:

(multi-copy, two volumes). Serving as a commentary on its content is our article “El Plan Director Urbanístico del litoral de Cataluña: una apuesta de futuro”, in *Portus*, 8, September 2005.

³¹ The laws concerned are, by order of approval: *Law 2/2004 of 4 June on improving urban districts, urban areas and towns requiring special attention*; *Law 10/2004 amending Law 2/2002 on Urban Development, for affordable housing, spatial sustainability and local autonomy*; *Law 7/2005 amending Law 7/1993 on roads*; and *Law 8/2005 of 8 June on protecting, managing and ordering the landscape*. As for the last section, the draft laws for the following laws are going through the relevant parliamentary procedures: *Law on geographical information and on the Cartographic Institute of Catalonia* and the *Law on the Geological Institute of Catalonia*.

- a) The land and housing
- b) Mobility infrastructures
- c) Architecture and the landscape
- d) Urban rehabilitation policies
- e) Geographical knowledge and information policies

IV.1. Land and housing policies

Over recent years, property markets have been experiencing a situation that is somewhat paradoxical: in Catalonia as in Spain as a whole, house building is chalking up all-time records year after year, and yet many sectors of the population are facing serious difficulties in finding their way into the housing market. The reason for this situation, as the experts have repeatedly explained, is primarily the rigidity of the market, which is heavily dominated by home ownership (86% of families own the house they live in), since rented housing is at very low levels and thus the only way to gain access to the market in most cases is to buy³². Another characteristic that contributes to the peculiar situation in the market is the significance of second homes as a percentage of all the housing available: with one out of three houses being devoted to uses other than use as the main abode, Catalonia and Spain as a whole stand out as being very special cases on a European level³³. These factors have combined with growing demand – induced by demographic reasons, the low price of money and the situation in the financial markets – to bring about an extremely steep and long-lasting upward trend in house prices.

In this context, one of the most intense debates on urban-development subjects to have taken place in recent years was the one focusing on the availability of land and the way that this has influenced price trends. In Catalonia as in the rest of Spain, there have been two opposing stances: on the one hand, there are those who assert that the extraordinarily high price of land and housing is directly related to land-use regulations, and that consequently a drastic drop in prices would be achieved by deregulating land use; on the other hand, there are those who maintain that the trend in land prices is chiefly the result of the existence of a property market that is highly demand-driven (the demand largely originating in financial assets from stock markets moving into the property sector), and that in any case what is influencing land prices is the high price of housing rather than the other way round.

The fact that there are currently 63,362 hectares of land classed as building land in Catalonia (i.e. an area equivalent to six times the city of Barcelona), the already-mentioned fact that land occupation is proceeding at a fast pace (which the most reliable calculations estimate at 1,000 hectares a year in the metropolitan area of Barcelona alone³⁴), and the fact that we were able to build 96,000 housing units last year, taking the accumulated total for the last decade to a figure of over 600,000 units (nearly 17 times the whole city of Girona), would seem to validate the position of those who

³² Trends in the property market and housing policies in Spain are covered, for example, in our work “Las grandes ciudades españolas en el umbral del siglo XXI”, in *Papers. Regió metropolitana de Barcelona*, 42, September 2004 (68 pp.).

³³ Carme Trilla, *La política d’habitatge en una perspectiva europea comparada*, Barcelona Fundació la Caixa, 2001 (202 pp.).

³⁴ Centre de Recerca Ecològica i Aplicacions Forestals (2005), *Mapa de cobertes de sòl de Catalunya*, second edition, which can be consulted at www.creaf.uab.es/msc.

maintain that the problem lies not so much in the lack of building land as in the situation of the property market as a whole. Consequently, rather than deregulating the land market as the Partido Popular (the conservative ‘People’s Party’) sought to do when they were in office in Spain’s Central Government³⁵, what is needed instead is to manage it resolutely with a view to achieving three objectives: to obtain development land for subsidised housing; to win back for the community a substantial share in the capital gains generated by property-market activity and especially the gains stemming from public policies on infrastructures and amenities; and lastly to break down the capacity of some agents to act from positions of strength, thereby ensuring the availability of development land in the market.

It was primarily with those aims in mind that the Generalitat decided to back the amending of the urban-development legislation upon which depend vital matters in this area such as zoning regulations, urban-development planning and management, instruments for land and housing policies and the share-out of competencies among the various public authorities. Though the legislation in force, with Law 2/2002 on Urban Development approved in February 2002, had brought significant progress in many spheres, in others it had not fully succeeded in giving public authorities the instruments they needed to tackle the challenges stemming from the property-market situation and from the territorial trends we have been referring to.

Accordingly, the Government put forward and the Parliament of Catalonia approved an amendment to urban-development legislation pursuing three fundamental objectives: to generate land for affordable housing, to spell out criteria for environmental sustainability in the urban-development field, and to establish a balanced share-out of competencies among the authorities, enhancing local autonomy on the management side. It was thought fit to enshrine those three objectives right on the title page of the Law: Law 10/2004 of 24 December amending Law 2/2002 on urban development, to encourage affordable housing, territorial sustainability and local autonomy³⁶. The Law amends a sizeable number of the 240 provisions of the previous legislation, and so it was felt to be necessary to draw up a consolidated text which, after completing the relevant procedures, was finally published in July 2005³⁷. The Government has also made a commitment to approving all the supplementary regulations for the Law within 18 months from its enactment.

Making land available for affordable housing and boosting the community’s participation in the benefits of urban-development activity is, as noted, the first and most important objective of the Law. To achieve that, there is a provision to enable municipal districts with over 10,000 inhabitants, regional capitals and any other district so wishing to set aside 20% of new housing space for subsidised housing forthwith³⁸.

³⁵ Royal-Decree Law 4/2002 of 23 June 2000 on urgent liberalisation measures for the property and transport sector (*State Gazette*, 151, 24 June 2000).

³⁶ See Law 10/2004 of 24 December amending Law 2/2002 on urban development for fostering affordable housing, territorial sustainability and local autonomy (*Official Gazette of the Generalitat of Catalonia*, 4291, 30 December 2004).

³⁷ Legislative decree 1/2005 of 26 July approving the Consolidated Text of the Urban-Development Law (*Official Gazette of the Generalitat of Catalonia*, 4436, 28 July 2005).

³⁸ This is applied in practice through the approval of each general planning instrument (a Municipal Urban-Management Plan or a Municipal Urban-Development Action Programme) or planning stemming from those instruments (partial plans or urban-improvement plans with residential uses). This radically improves the situation that was prevailing under the previous legislation which, although making

This percentage can be increased by a further 10% for ‘agreed-price housing’ (the prices for which fall somewhere between the subsidised prices and the free-market prices) as soon as the housing regulations make provisions for that house-pricing scheme. It should be noted that the figure of 30% of new housing space can be expected to translate into a much higher percentage in terms of actual units of housing with some kind of subsidy (perhaps as many as 45% of all housing units), since the average size of subsidised houses is significantly smaller than the average size of free-market houses. Moreover, to prevent cases of private agents leaving their prescribed shares of subsidised housing unbuilt, the Law also contains provisions enabling the public authorities to cite as grounds for expropriation any breach of the deadline set for meeting the requirement to build such housing.

The second objective of the Law is to introduce environmental criteria into urban planning and to clarify how they are to be applied. Hence measures were established to foster more effective management of non-building land, since such land had often been regarded just as a residual land category, whereas it must in fact be actively managed in ways that are consistent with the proposed objectives of territorial sustainability. The Law thus provides that all land areas of special interest, in terms of their natural or agricultural value or their value as landscapes, forests or natural connecting corridors, must be classed as non-building land in the planning provisions. In addition, and in advance once again of the transposition into domestic law of the European Union Directive, it is stipulated that all general planning schemes and also all reviews or amendments of plans involving the re-classification of non-building land must be made subject to environmental assessment. It is also stipulated that all schemes resulting in more than 100 continuous hectares of non-building land, or 10 hectares of protected non-building land, being re-classified as building land must be subject to an environmental-impact declaration.

The third major objective of the amendment to the urban-development legislation is to respond to a long-held municipal aspiration: enabling district councils to approve the detailed plans that elaborate upon the relevant general planning provisions. While such general planning provisions require administrative consent from the Generalitat before they can be approved, on account of their evident supralocal implications affecting the general interests of society, there is no reason why district councils should not be able to approve detailed plans stemming from the general planning once the general framework has been agreed. The amendment provides that from now on all district councils possessing a planning framework that is in accordance with the new Law or whose general planning is less than six years old will be able to approve their supplementary planning provisions immediately.

As a whole and from the standpoint of land availability and spatial planning, the amendments to the urban-development regulations provide a legislative basis for complying with the Catalan Government’s expectations in the field of housing³⁹.

provisions for such reservation of land, only made it applicable by municipal districts who had produced general planning instruments after the approval of the Law. The effect of this was that practical results so far amount to virtually nothing. In the present scenario of land being needed for subsidised housing, something had to be done about the delay caused by that restriction in providing affordable housing for population groups unable to gain access to homes.

³⁹ See Decree 454/2004 of 14 December on the deployment of the Plan for the Right to Housing 2004-2007 (*Official Gazette of the Government of Catalonia*, 4281, 16 December 2004).

Nevertheless, believing as it does that regulatory provisions are necessary but not sufficient by themselves in bringing about change in land policy, the Government of Catalonia has decided to undertake a number of strategic operations aimed at ensuring that land is available for subsidised housing and for economic pursuits. For indeed it is necessary to have significant amounts of public land available in various urban areas in view of the spatial planning forecasts and in order to make sure that the expected instances of urban growth can be arranged in accordance with the desired features of physical continuity, diversity of uses and social integration.

With that in mind, the Catalan Land Institute, acting on instructions from the Ministry of Town and Country Planning and Public Works, has drawn up its Residential and Industrial Land Programme 2005-2008⁴⁰. Under that programme, in addition to its day-to-day work, the Institute will undertake a total of 32 large-scale actions regarding residential land of a strategic nature. The objective of those operations will be to provide a total of 1,400 hectares of residential land, distributed around the urban systems featuring the greatest capacity for growth, and with the potential to take 73,700 homes, 43,400 of which will be of the subsidised kind. It is intended to use that land for promoting the building of a number of new medium- or high-density districts extending out continuously from existing urban centres. In short, Catalonia's 'new towns' for the twenty-first century will steer clear of being designed as artificial, isolated schemes and instead seek to become districts of and extensions to the towns that already exist, thereby reinforcing their position in the urban system.

Thus the characteristics of the new town districts emerging from these operations will be as follows:

- a) An average density of 50 homes per hectare.
- b) Diversification in access and usage schemes in order to achieve complex, cohesive urban units:
 - 60% subsidised housing
 - 40% free-market housing
 - 10% of the housing area devoted to commercial and service uses
- c) Good accessibility to existing or planned public-transport networks.
- d) Special attention to the environmental evolution of the territory in which the new areas are sited, and to sustainability criteria in the urban-development and building work.
- e) Any existing natural features will be protected and reinforced: rivers, forest stands, hillocks...
- f) Siting public facilities and spaces in strategic locations serving to improve and reinforce the bonds between the existing nucleus and the new extensions built onto them.

With regard to land for industrial use, the prime objective of the Government of Catalonia is likewise to promote the availability of sufficient developed land so that

⁴⁰ See the *Programa de Sòl Residencial i Industrial 2005-2008*, approved by the Board of Directors of the Catalan Land Institute on 21 February 2005. The Catalan Land Institute is a public enterprise of the Government of Catalonia whose main mission is to promote the availability of land for housing and economic pursuits, and also the building of subsidised housing. From the time of its foundation in 1980 down to June 2005, the Institute was directed by the economist Antoni Paradell. Its current director, also an economist, is Emili Mas, who was moved from the manager's post he had occupied in 1995 and 2005 in the Regional Council of the Barcelonès Region.

conditions prevailing in the property markets cannot strangle the development of economic pursuits through high prices. It is also intended to rationalise the location of industrial land, doing away with the current trend in which, for reasons of economics, each municipal district tries to promote its own little industrial estate, the natural result of which is the appearance of a multitude of promotions which are very often insubstantial and low on economic, functional and territorial efficiency.

In order to make progress towards this twin objective of increasing and rationalising the industrial land available, the Programme envisages 17 new action plans to be undertaken by the Catalan Land Institute, all located in the territorial areas featuring greater demand for economic pursuits and amounting to a total area of 1,300 hectares. This will give a total of 800 hectares of net direct-promotion industrial land, meaning potential locations for 120,000 workplaces. It is also intended that many of these schemes can be run by local consortiums or cross-district boards taking in a number of municipal authorities so that the benefits and costs of each scheme may be spread over a significant territorial area, thus helping to avoid dispersed promotional initiatives, and thereby rationalising the location of economic activity within the territory.

IV.2. Policies on Infrastructures for Mobility

When we were outlining the territorial trends now at work in the territory of Catalonia, we said that they resulted in a very significant increase in the mobility requirements of people living here. Indeed, in a context in which urban areas are tending to cover ever larger areas, in which urban development is often dispersed, and in which places tend to specialise in functional terms, people find themselves forced to meet their basic needs (working, shopping, studying) over an ever-larger territory. This extensive use of the territory has led to a present-day situation in half of Catalonia's municipal districts in which half of the people in employment work outside their own districts, while in the metropolitan region, that same situation arises for four out of every five municipal districts.

The increase in mobility requirements entails an increase in the number of daily trips and in the distances involved in those trips, and as a result the costs for the individual and for the community – in economic, time-related and environmental terms – also tend to rise. As the Barcelona Metropolitan Survey showed⁴¹, the costs of this mobility are not spread evenly over the population as a whole: rather, they affect population groups with less access to private vehicles more keenly. Hence people with below-average incomes, and the women, the young and the old all have to bear a greater-than-proportional share of those costs.

In view of this situation, the policies that the government of Catalonia is pursuing are aimed chiefly at making mobility around the territory a right for the people, yet it should not be a growing duty. Obviously, such an objective cannot be attained by policies aimed solely at serving the demand for mobility: also needed are actions to direct that demand and, as far as possible, to rein in its growth. Moreover, a greater proportion of the mobility must evidently be served by collective means of transport in

⁴¹ See the reports of the Barcelona Metropolitan Studies Institute (Institut d'Estudis Metropolitans de Barcelona), *La transformació de la societat metropolitana*, Barcelona, IEMB, 1998 and *Enquesta de la Regió de Barcelona, 2000. Condicions de vida i hàbits de la població*, Barcelona, IEMB, 2003.

order to reduce the associated social and environmental costs. And these are precisely among the main justifications for the compact, complex urban-development model that is being pursued through the spatial planning programme, as previously explained: an urban-development model enabling new urban developments to be linked to the real accessibility of the territory and to the potential for serving the mobility needs generated by means of passenger transport.

Alongside these structural spatial policies, the Government of Catalonia is also fostering actions in the more specific sphere of mobility policy, in two complementary directions: on the one hand, improving road and rail infrastructures, and on the other, managing public transport. As regards infrastructures, the policy now being pursued is essentially aimed at reducing the differences now existing in the territory of Catalonia in accessibility and connectivity, and at boosting the share of passenger transport as component of mobility as a whole. To this end, an Infrastructure Plan for Transport in Catalonia has been produced which, for the first time in our land, integrates the planning work for all overland transport infrastructures, both for roads and railways⁴².

Prominent among the Infrastructure Plan's proposals for the road network is the commitment to achieving a more orthogonal system, boosting cross-branching in the local network and making a break with the excessively radial nature of the network of segregated roads. In this line, four new high-capacity road axes are scheduled for construction, with total length of 133 kilometres and entailing an investment of 518.7 million euros, in relatively peripheral areas and with a layout that is not radiocentric with respect to the capital city. The road axes concerned are Maçanet-Platja d'Aro (on the Costa Brava), Reus-Alcover (in Camp de Tarragona), Vic-Ripoll (in Central Catalonia) and Manresa-Vilanova (tangential to the metropolitan area)⁴³. In a second stage, it is planned to work on other road axes: the Llobregat (Berga-Bagà), the Ebro (Amposta-Lleida) and Barcelonès-Vallès (through La Conreria tunnel).

This wish to assert the orthogonal nature of the network is also to be seen in the planning of the railway system, both at the urban level and in the territory as a whole. In the metropolitan area, the Government of Catalonia is pushing through the building of what will be one of the longest metro lines in Europe – Line 9, as it will be called – which will be 42.5 kilometres long. It will link Barcelona airport lying outside the city at one end of the central urban area with Badalona and Santa Coloma on the other edge, and weaving together on the way, like a giant arch, all the radial metro lines that run from the outer edges of the city towards the centre. A similar ambition, though within the broader metropolitan sphere, will be pursued through what is known as the 'orbital railway' which will link up towns lying in a ring around the outside of the metropolitan area – Vilanova i la Geltrú, Vilafranca del Penedès, Martorell, Terrassa, Sabadell,

⁴² See the draft *Pla d'Infraestructures del Transport de Catalunya*, Ministry of Town and Country Planning and Public Works of the Government of Catalonia, September 2005 (multi-copy, 2 vols.). The draft plan was produced by a team led by the Ministry's Secretary for Infrastructures and Mobility, the biologist Manel Nadal, and comprised Jordi Follia, Esteve Tomàs and Jordi Julià, who are respectively the General Directors for Roads, Transport systems and the railway-infrastructure company Infraestructuras Ferroviarias de Catalunya, with the support of the Mcrit group of consultants.

⁴³ To finance these road infrastructures, a "shadow toll" system will be turned to, i.e. the work will be financed by the construction companies, who will be paid by the Government once the roads come into service. Payment will be spread over a certain period of time, and its amount will depend on the number of vehicles using the road. The introduction of this system is one of the main contributions of *Law 7/2005 amending Law 7/1993 on Roads*, which was approved in May 2005 by the Parliament of Catalonia.

Granollers and Mataró – at an investment cost of 1,226 million euros, to be borne by the central government. The orbital path thus drawn will contain within it the centre of the conurbation of Barcelona, and will link the main cities in the outer metropolitan ring directly up with each other without having to go via Barcelona.

Transposing this railway strategy onto the scale of Catalonia as a whole has resulted in what is no doubt the most ambitious infrastructure project to be undertaken by the Government of Catalonia: the building of a transversal railway to communicate Lleida with Girona, while linking up on the way, like a string of beads, the towns of Mollerusa, Tàrraga, Cervera, Igualada, Manresa and Vic. A branch line will link up the new railway axis with the Barcelona metropolitan region via the Llobregat valley. The total length of the new line will be 360 kilometres, of which 233 will be in the main line itself and the remainder in branch lines and access ways to the towns. The complexity of the route (32% of the line – i.e. 114 kilometres – will run through tunnels or over viaducts) and the high design speed (between 160 and 250 km/h for passengers and between 100 and 120 for freight) make for its substantial budget of 6,500 million euros and a minimum execution time of fifteen years⁴⁴.

Through the application of these infrastructure measures and through the subsequent detailed work on spatial and urban planning, it is expected to reduce the growth rate in forced inter-municipal mobility over the period from 2001 to 2026, getting it to increase at an annual accumulative rate of 2.3% as against the 4.2% annual rate that current trends suggest. Likewise, mobility by means of public transport is expected to increase by 120% while mobility involving the use of private transport is set to increase by 60%. To achieve these targets, plans for improving the management of passenger transport are obviously required as well as these infrastructure policies.

To that end, in the field of mobility management, the Government of Catalonia is backing the formation of transport consortiums in the urban areas of Tarragona, Lleida and Girona, along the lines of the Metropolitan Transport Authority that has existed in the metropolitan region of Barcelona since 1995. The main purpose of these consortiums will be to manage the supply of public transport, fostering intermodality and the integration of fares across the various passenger-transport modes. Similarly, in the metropolitan region of Barcelona, where fare integration has been in operation for years, a Master Plan for Mobility is being produced to boost the efficiency and use of public transport.

IV.3. Policies on architecture and the landscape

We noted at the outset that among the features of the Catalan territory offering the greatest potential are the ones that stem from the wealth and diversity of its landscapes, for the landscape in Catalonia is a prime environmental, cultural and social asset with a very direct bearing on the quality of life of the people, as well as frequently serving as a resource for economic development. Moreover, as the experts tell us, the diversity of the mosaic of landscapes contributes to preserving biodiversity and to warding off natural hazards, particularly forest fires. However, over recent decades, the

⁴⁴ See *L'Eix transversal ferroviari en el marc del pla estratègic d'Infraestructures del Transport de Catalunya*, Barcelona, Direcció General de Ports i Transports de la Generalitat de Catalunya, June 2005 (multi-copy).

abandonment of agricultural activities, the dispersion of urban development, the impact of certain rather carelessly designed infrastructures and specialisation in economic functions has frequently led to Catalan landscapes being subjected to patterns of deterioration and down-grading, a trend which, if it continues, could permanently undermine all that is of value in those landscapes.

In view of this situation, the Government of Catalonia takes the line that, apart from using planning and legislation to counter the territorial trends that have prompted landscape degradation, ways of managing the landscape must also be made available. For landscapes are perpetually changing, just like the societies that generate them, and what we must be concerned about is not so much keeping them unchanged as preventing what makes them valuable getting lost in that process of change⁴⁵. For that reason, landscape-related action must not be aimed simply at preserving its appearance, keeping it frozen as if it were a museum exhibit: rather, landscape management should aim at preserving what makes it valuable.

In order to make instruments available for work in this sphere, the Government has taken a number of administrative and legislative measures. From the administrative standpoint, the Minister of Town and Country Planning and Public Works decided to create the Directorate General for Architecture and the Landscape as part of the Ministry⁴⁶. The nature of the tasks undertaken by that Directorate General clearly shows the orientation it is wished to give to landscape policies, linking them up with heritage, environmental and quality-of-life issues. Hence far from being treated as a sector-specific or partial affair, managing landscape policies comes under the same authority that deals with the architectural heritage, with intervention in particularly sensitive areas (the coast and the mountains), and with the district-rehabilitation work that will be the subject of the next section.

From the legislative standpoint, the Government of Catalonia has brought in its Law on the Protection, Management and Planning of the Landscape⁴⁷, the purpose of which is to adopt the principles of the Landscape Charter – the agreement fostered by the Council of Europe in 2000 and which has become an international treaty since the requisite number of member States of the Council have now signed up for it. In fact Catalonia was something of a pioneer in ratifying the Charter, since the Parliament of Catalonia was the first legislative assembly in Europe to subscribe to the treaty⁴⁸. Law 8/2005 is intended to provide positive content for that adhesion-in-principle.

⁴⁵ See our “Paisatge, pla i política”, in *Espais*, 50, spring 2005 (pp. 8-14, a special issue devoted entirely to landscape issues).

⁴⁶ The Director General for Architecture and the Landscape is the architect Joan Ganyet, who was a member of the Parliament of Catalonia, a Senator in the Spanish upper house, and the mayor of La Seu d’Urgell for over twenty years (1982-2003).

⁴⁷ See Law 8/2005 of 8 June on protecting, managing and administering the landscape (*Official Gazette of the Generalitat of Catalonia*, 4407, 16 June 2005).

⁴⁸ The European Landscape Charter was approved in Florence on 20 October 2000, and the Parliament of Catalonia subscribed to it by the unanimous agreement of all its members through Resolution 364/VI of 14 December. Nevertheless, change in political circumstances had to be waited for before achieving the framing of the principles of the Charter in positive legislation. For example, under the previous Government of Catalonia, a draft law along those lines that was presented to Parliament from the opposition benches was unable to find its way onto the statute books. We have written an account of those ups and downs in our *Lletres de batalla. Política i territori a Catalunya*, Lleida, Pagès, 2003 (142 pp.).

Accordingly, the provisions set out to achieve “recognition, protection, management and administration for the landscape”, and proposes to do that through “full integration of the landscape in planning work and in territorial and urban-development administration policies”. Hence this is clearly a law for management purposes, aimed at intervening, on the basis of a holistic conception of the landscape, not only in picturesque or privileged spots but also in “the territory of Catalonia as a whole – in natural, rural, forested, urban and periurban areas, in special landscapes, and also in ordinary landscapes, whether inland or coastal”. In order to make progress towards achieving those general objectives, the Law has provided three kinds of instruments for its implementation:

- a) The *Landscape Catalogues* which, in the spirit of the European Convention, are “descriptive, forward-looking documents that classify the landscapes of Catalonia, identify what is valuable in them and how well they have been preserved, and set out quality objectives to be met”. Thus the Catalogues serve to diagnose the current state of the landscape in the territory concerned, paying particular attention to what is currently valuable and what is potentially valuable in them. In principle, the scope of each of the Catalogues corresponds to the scope of the Partial Spatial Plans, of which there are seven for Catalonia as a whole.
- b) The *Landscape Guidelines*, which take the diagnosis provided by the Catalogues as their starting point and then set out recommendations, standards and action programmes to achieve the quality objectives marked out. The Guidelines form part of the Partial Spatial Plans and thus enable landscape-related considerations to be taken into account in spatial planning.
- c) Lastly, along with the Catalogues and Guidelines, the Law proposes fostering *Landscape Charters*, which are agreements between local authorities, civic bodies and economic agents for protecting and managing the landscape in specific areas.

To institute these instruments and to launch the actions stemming from them, the Law envisages using various means. Among them is the creation of the Landscape Observatory, an institution intended to support and work with the Generalitat on all landscape-related issues, its main task being to draw up the Landscape Catalogues. In entrusting the production of the Catalogues to an institution that has a significant presence in universities, local authorities and civil society, the aim is to create the conditions necessary for the Catalogues to reflect as far as possible the feelings of society in this field⁴⁹. In addition, with regard to financial resources, the Law has set up a Fund for the protection, management and administration of the landscape, which is funded by budgeted contributions from the Generalitat and which in the future will also draw on the resources that the authorities devote to landscape projects, action on the architectural heritage, and management initiatives for non-building land in the seaboard zone. Applications for assistance from the fund may be made by local authorities and

⁴⁹ Indeed the Government of Catalonia, even before the Landscape Law was approved, set about creating the Observatory, which was brought into being in December 2004 and which takes in, alongside representatives from the Generalitat itself, all seven of the public universities of Catalonia, the four provincial councils, local-district bodies, land stewardship bodies, and nine professional associations. Work has now started on producing the first three Landscape Catalogues: the ones for Camp de Tarragona, Terres de Ponent and Terres de l'Ebre. The Director of the Landscape Observatory is the geographer Joan Nogué, who is a lecturer at the University of Girona. The Observatory's website is www.catpaisatge.net.

private groups wishing to implement action according with the Landscape Guidelines for each territorial area.

IV. 4. Policies on Urban Rehabilitation

Back in 1960, over half of the inhabitants of Spain were still living in towns of fewer than 20,000 inhabitants. However, from then on, the urbanisation trend in Spain in general and in Catalonia in particular went through the fastest spurt of growth ever seen in their histories, to such an extent that today the urban segment of the population – i.e. the segment living in towns of over 20,000 inhabitants – accounts for 64.9% of the total population in Spain and 69.8% in Catalonia⁵⁰. In quantitative terms, the sharpest phase in this trend came about between 1959 and 1975, and it thus occurred under precarious economic and social conditions, and under a political dictatorship. From the urban-development point of view, this often resulted in people getting crammed into certain districts of the existing city and in the appearance of newly developed areas which were lacking in facilities, poorly communicated and with very significant shortfalls in infrastructure, amenities and services.

Since the advent of democracy at the end of the 1970s, economic development and the work of the public authorities combined to bring about a notable improvement in living conditions in general terms in those districts. However, over the last few years, the resurgence of demographic growth associated with immigration, together with the above-mentioned situation in the property market, have once more prompted the appearance of overcrowding, deterioration of public spaces, and the concentration of social problems in certain districts – the ones where prices are a little lower than in the rest of the urban area, and thus the ones in which the less affluent demand tends to become concentrated under the present conditions of great difficulties in finding a way into the housing market. If this concentration of people with grave social needs were to have a negative impact on house-price trends, the risks of the more well-off segments of the population moving away, of territorial stigmatisation and of the appearance of conflict-ridden neighbourhoods – in a word, the risk of ghetto formation – are plain to see.

In the vast majority of cases, the problems we are referring to arise in old districts, in the housing estates built in the 1960s and 70s, and in the areas that have arisen through marginal urban-development processes. In nearly all cases, they are thus areas that have already been through situations of deterioration and very significant difficulties in the previous period, though they had been substantially improved through the work of the authorities and of the residents. This bitter return of problems that were thought to have been solved thus comes on top of complexity of the problem, thereby increasing the potential for conflict.

One of its first legislative initiatives undertaken by the Government of Catalonia was devoted precisely to tackling this situation: the Law on Improving Districts, Towns and

⁵⁰ See Fernando Terán (1999); *Historia del urbanismo en España*, Vol. III (*Siglos XIX-XX*), Madrid, Cátedra (397 pp). For the data on trends in the urbanisation process at work in the population, see also *Las grandes ciudades españolas... op. cit.*

Urban Areas requiring Special Consideration⁵¹. This Law seeks above all to send out a three-fold message. Firstly, a message for the people living in those districts, to make it quite clear that the Government will not tolerate the deterioration of living conditions and harmonious social conditions anywhere in Catalonia. Secondly, a message to the district councils, to assure them that the Government will be behind them in tackling a problem which is indeed local but which has origins and consequences of a general nature. And lastly, a signal to the market, to warn economic agents that the authorities are willing to make a number of investments that will eventually enhance the value of private property assets, for while it is advisable in Catalonia as a whole, as noted above, to achieve restraint in property prices, what is needed in these districts is in fact to encourage, boost and enhance the transparency of the market, though naturally combining that action with the provision of the pertinent stock of subsidised housing.

The most important and most innovative instrument associated with this Law is the creation of a Generalitat financial fund devoted to the rehabilitation and specific promotion of districts which, on account of their characteristics, require special consideration from the authorities. The funds come from contributions ear-marked in the Generalitat's budget, and can be utilised by district councils for financing their rehabilitation projects. The way it works is very similar, as we shall see, to the operation of the European Union's URBAN programme, and it should enable work to start during the 2004-2007 period on projects amounting to an investment of nearly 800 million euros in some sixty districts all over Catalonia.

District councils interested in undertaking rehabilitation projects can thus present their initiatives to a commission made up of representatives of the Generalitat, local authorities and professional associations, who come to a decision over the allocation of resources in the light of the problems existing, the virtues of the proposal, and fairness in the distribution of funds around the territory. The sums allocated range from 50 to 75% of the total cost of the projects, each of which has a cap on the total investment involved, set at 20 million euros. The district councils themselves are responsible for executing the work, which must be completed within four years. Thus the most appropriate slogan for the programme would not be "support for districts with problems" but rather "support for districts with projects".

European experience has shown that the strategy for action must be integrated to be successful, i.e. partial approaches must be abandoned and a broad array of issues must be addressed. Accordingly, the Law and the regulations elaborating upon it⁵² provide that projects can envisage action in the following fields, and that the more of these they involve the more favourably they will be viewed:

- a) Improving public spaces and creating green spaces.
- b) Rehabilitating and equipping the communal facilities of buildings.
- c) Providing facilities for collective use.
- d) Incorporating information technologies into buildings.
- e) Encouraging energy efficiency, savings in water consumption, and the recycling of waste.

⁵¹ Law 2/2004, of 4 June, on Improving Districts, Towns and Urban Areas requiring Special Consideration (*Official Gazette of the Generalitat of Catalonia*), 10 June 2004.

⁵² Decree 369/2004 of 7 September enlarging upon Law 2/2004 of 4 June on improving districts, towns and urban areas requiring special consideration (*Official Gazette of the Generalitat of Catalonia*, 4215, 9 September 2005).

- f) Gender equality in the use of urban space and facilities.
- g) Accessibility and the removal of architectural barriers.
- h) Undertaking programmes that involve social, urban and economic improvements for the districts.

A priority in the programme is to address areas that feature combined problems of urban regression, a loss of or an excessively rapid growth in population, and economic and social shortfalls. Two calls for project-funding applications have already been made by the Generalitat, each of which involved allocating 99 million euros. In the first call, sent out in 2004, aid for 13 projects was granted, with an average investment per project of 15.4 million euros. In the second call in 2005, aid to a further 17 districts was allocated, with an average investment of 11.8 million euros. Adding in the contributions from the municipal districts themselves, the total planned investment in the projects already under way amounts to 396 million euros. The territorial distribution of the projects is very varied and, while they do of course naturally tend to be concentrated in the metropolitan area, they cover nearly the whole of the territory of Catalonia.

Forty years ago, Henri Lefevbre declared that the basic rights of citizens should include, in addition to the rights to freedom, work, justice, health and education, the right to the city. In other words, the right of citizens to live in territories that are conducive to living harmoniously together and rich in a variety of usage patterns, territories in which public spaces and facilities may prove to be a factor for collective and individual development; and the right of all to enjoy a secure milieu, enhancing personal advancement, social cohesion and cultural identity. It is significant that one of the first laws brought in by the Government of Catalonia should be aimed precisely at defending that right.

IV.5. Policies for knowledge and information in relation to the territory

To round off this overview of spatial policies, reference must be made lastly to the actions undertaken to improve knowledge, studies and information relating to the space of Catalonia and on the dynamics of change at work within it. If the territory is not first subjected to surveying, description and analysis, any decisions and policies adopted in connection with it would inevitable be skewed and deficient. Accordingly, since December 2003, the Government of Catalonia has been backing a number of actions in this field, chief among them being the strengthening of the Cartographic Institute of Catalonia and the creation of the Geological Institute of Catalonia.

Catalonia has a long tradition of studies on the territory and geography of the land, a scientific tradition that has been closely bound up with the struggle for self-government throughout history. Thus it is that in modern times, the Catalan geographic school dates back to the period of the Catalan *Renaixença* (Renaissance) in the last third of the nineteenth century, a movement that was linked partly to the cultural and political movement aspiring to self-government and partly to the popular-culture and workers' associations – so much so that in the turbulent ups and downs of Catalan history during the first half of the twentieth century, the scientific and life histories of the leading lights of that school (Pau Vila, Josep Iglésies, Gonçal de Reparaz, Miquel Santaló and Eduard Fontseré) was strongly marked by their involvement in attempts to give Catalonia its own institutions, with the attendant result of their exile or marginalisation.

Those historical factors are also reflected in the fields of cartography and geology. Both during the pan-provincial *Mancomunitat* period (1914-1923) and during the Second Republic period (1931-1939), steps were taken towards the administrative institutionalisation of those disciplines through the creation of the relevant cartographic and geological institutions. In both cases, the dictatorships that ensued reversed those advances, with only a few vestiges of them remaining in the work of the Regional Council of Barcelona. Furthermore, it was only in the last third of the twentieth century, in the last days of Franco's dictatorship, that full academic recognition was given to geography and geology studies in Catalan universities. When the Generalitat Government was restored in the period after 1977, new and important steps were taken to provide the Catalan authorities and Catalan society with the instruments they need both in the field of cartography and geographical information and in the field of geology, instruments that the Catalan Government's work has now consolidated and boosted.

In the field of cartography, the Cartographic Institute of Catalonia is being reinforced. This institution, created in 1982, has since engaged in the vast undertaking of producing the fundamental series of maps, managing the integrated Catalan geodesic positioning system, intervening in territorial demarcation efforts (administrative boundaries, public-domain areas etc.), and forming the Cartographic Library of Catalonia, while also continuing with its own research, teaching and dissemination work in its specialist area⁵³. However, the incessant technological advances being made in the field of cartography and remote sensing, the strategic nature of innovation in those fields, the coming of European standards and the drive to achieve the greatest degree of interoperability in all the information available all make it necessary to revamp the legal framework of the institution in order to reinforce its structure, capacity and efficiency.

Consequently, the Catalan Government has approved, and sent on to the Parliament of Catalonia for debate and approval, the Draft Law on Geographical Information and on the Cartographic Institute of Catalonia⁵⁴. The project maintains and reinforces the nature of the Institute as a public entity pursuing its work mainly in accordance with private juristic administration and acting as the Generalitat's representative in cartographic matters with respect to Spanish, European Union and international bodies. The Cartographic Institute also takes on the functions involved in coordinating the array of cartographic activities undertaken by Catalan institutions (the Generalitat and the local authorities) through two new mechanisms: the Cartographic Coordination Commission, which brings together all the map-producing authorities of Catalonia, and the Catalan Cartographic Plan, a basic instrument in planning the Generalitat's cartographic and geographical-information work.

Of particular interest on account of its innovative and strategic nature is the drive to administer and foster existing and future geographical information systems in order to make them available to all potential users – so much so that this aim was included, as we have seen, in the very title of the Law. Accordingly, the legislation envisages the full structuring and the legal recognition of the Spatial-Data Infrastructure of Catalonia (IDEC), a computer architecture based on Internet services that facilitates exploring,

⁵³ The director of the Cartographic Institute of Catalonia is the engineer Jaume Miranda, who has held that post continuously since 1982.

⁵⁴ "Projecte de Llei de la Informació Geogràfica i de l'Institut Cartogràfic de Catalunya", *Official Records of the Parliament of Catalonia*.

using and sharing information on georeferenced data. The IDEC, the preparatory work on which began back in 2002, will thus form a pioneering practical manifestation of the provisions of the European INSPIRE Directive, based on principles of interoperability, non-duplication and shared use, and will facilitate access by the authorities, companies, researchers and interested members of the public to geographic information for reference purposes (the geodesic system, georeferenced place names, a list of administrative units and their boundaries, census data on properties, transport and service networks, hydrography and coasts etc.) and fundamental subject-specific data (the physical milieu, the air and the climate, natural resources, demography, social structure, economic activity, urban planning etc.)⁵⁵.

As regards research and information in the field of geology, at the beginning of this term of office the Ministry of Town & Country Planning and Public Works set out to strengthen the instruments it had available for use: it was decided in 2004 to double the pace of production of the sheets making up the geological map of Catalonia to achieve an output of eight sheets a year. In addition, work started that same year on extending the Catalan seismological network, which had been set up in the 1980s and which then consisted of eight monitoring stations: seven new ones were added, practically doubling the number of information points. Moreover, cooperation agreements are being arranged to make supplementary stations available in the south of France and in Andorra, and an underwater seismic station was installed in August 2005 in the Repsol-YPF Casablanca platform off the coast of Tarragona province. That station has, in addition to its seismic sensor, a pressure sensor whose uses include detecting marine waves of the kind generated by earthquakes occurring under the sea.

Coming as a corollary to this wish to foster geological studies is the draft Law on the Geological Institute of Catalonia that the Government has also sent on to the Parliament⁵⁶. The new Institute is intended to give the Geological Service its own legal status (it having previously come under the Cartographic Institute of Catalonia) in order to reinforce the authorities' capacity for action and awareness in all branches of geology and associated sciences (geophysics, seismology, geotechnics, land engineering, soil science, geochemistry etc.). Thus the main functions that the Geological Institute will perform will be:

- a) Producing the Geological Map of Catalonia on scales appropriate for spatial and urban-development planning.
- b) Creating and centralising a geology database, bringing together the databases resulting from the various work programmes of the authorities.
- c) Acting as consultant to the Generalitat on geology, geophysics and geotechnics, with particular reference to problems stemming from undertaking public works.
- d) Studying and appraising geological risks, including seismic risks, and proposing measures to prevent them and to treat them.

The great Leonardo used to say: "He who loves practice without theory is like the sailor who boards ship without a rudder and compass and never knows where he may cast". In providing the authorities and society of Catalonia with these knowledge instruments, the

⁵⁵ In this respect see the work by Josep-Lluís Colomer, *La Infraestructura de Datos Espaciales de Catalunya (IDEC): situación y perspectivas*, Barcelona, Institut Cartogràfic de Catalunya, 2005. IDEC's portal is at <http://www.geoportat-idec.net>.

⁵⁶ "Projecte de Llei de l'Institut Geològic de Catalunya", *Official Records of the Parliament of Catalonia*.

Government of Catalonia is making a resolute commitment to backing up the policies set out above with a comprehensive, rigorous technical basis.

Farrera de Pallars-Barcelona,
August-September 2005