White Paper on Sustainability in Spanish Urban Planning

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Direction
José Fariña Tojo
José Manuel Naredo

Documenting and research
Carlos Jiménez Romera
Ángela Matesanz Parellada
Juan Jesús González Báez
Gabriela Sánchez Calvete

Independent experts
Alfonso Álvarez Mora
María Castrillo Romón
Jose María Ezquiaga
Fernando Gaja i Díaz
Luis Andrés Orive
Juan Luis de las Rivas Sanz
Luis Santos Ganges

Production and management
Agustín Hernández Aja

Coordination with Ministry of Housing
María del Rosario Alonso Ibáñez. Directora General de Suelo y Políticas Urbanas
Ángela de la Cruz Mera. Subdirectora General de Urbanismo
Eduardo de Santiago Rodríguez. Consejero Técnico
Ana Belén Moreno Inocencio. Consejera Técnica
Paloma Pozuelo Guilló. Consejera Técnica

Edition & Design
Carlos Jiménez Romera

Edited with:
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1. Introduction

The history of contemporary Spanish urban planning is, as the grounds section of the revised text of the Land Act of 20 June 2008 makes clear, one of development, particularly committed to the creation of the new city. Urban expansion, which has facilitated much of the economic growth of the country as a whole, is one of its identifying characteristics both domestically and internationally, but that does not necessarily mean that the pairing has been a good one or that we need to continue to accept it.

Rather the opposite is the case, both in Spain and in the rest of Europe, where the challenge being faced is that of urban planning which can continue to contribute towards economic growth without ignoring the requirements for sustainable urban development, i.e. by viewing land not only as an economic resource but also as one of the most valuable natural assets that we have. And regulating it calls for a combination of a whole host of diverse factors: the environment, quality of life, energy efficiency, providing services, social cohesion, etc.

1.1. The weight of the economic factor in Spain's recent past

The Spanish economy's growing needs for water, energy and materials and the consequences of ecological deterioration that have been observed during the latest growth period have contradicted the oft-repeated formulations of ecological sustainability or economic dematerialisation. With the major slump in building, this pressure on natural resources and territory has decreased significantly, showing that the system has shifted driven exclusively by the economic situation. This has largely been due to the considerable weight in the economic model that activities with large requirements for materials and territory have had, such as the real estate sector and the associated building of homes and infrastructures. This weight reached its maximum values with the housing boom which the Spanish economy experienced over the last decade, together with major public works funded in part by the EU. Building therefore became the principal driving force of the Spanish economy, with an importance compared with other sectors that was far higher than the European average, despite Spain already having more homes and kilometres of motorway per inhabitant than most other EU countries.

Specifically, over the decade between 1997 and 2007, a number of economic and social factors converged in Spain to favour the extraordinary growth of the house-building sector, including an increase in the formation of new households, in many cases caused by immigration, the choice of Spain as the place for secondary or retirement homes by many EU citizens, and, most of all, conditions favouring indebtedness, with low interest rates, competing credit agencies, the securitisation of mortgages, etc. This context, which was already favourable for an increase in prices, was overfed until 2004 by a number of economic-policy decisions and certain deregulating legislative initiatives on land-related matters between 1996 and 2003, which distorted the real estate market and stimulated processes that were highly speculative.

All these factors led to the frenzied of construction of buildings and infrastructures all over Spain for as long as the lengthy property cycle lasted. As a symbol of this process, the new Spanish landscape was one that was peppered with cranes stretching to the horizon. At the same time, the urban-planning model began to opt for urban sprawl, which not only requires greater indirect rights but is also very energy inefficient and costly.

The collapse of the speculation bubble, together with the end of the financing of the expanding building cycle, stretched people's savings to the limit and ended by financial strangling, when the international liquidity that it fed on, which has been so unusually cheap, finally failed, leaving and oversized and underused built stock, in many cases of dubious urban quality.

1.2. The specific problem of house building

One differentiating feature of the recent building boom compared with previous ones in Spain has been the greater tendency to buy homes as investments, together with the larger number of buyers from abroad. When the investment managers began to offer, in addition to other financial products, real estate products that could be bought on paper, the Spanish property market began to compete with the financial markets when it came to attrac-

ting the savings of potential investors. Thus, the stock-market crisis at the beginning of the century (2000-2003), together with successive reductions in interest rates, had a significant effect by generating large amounts of money ready to be invested in land and real estate.

Also, a great deal of housing was developed on the free market for direct investment by households, thanks to a highly developed mortgage system.

As a result, Spain has more than covered its housing deficit with respect to its population, but not the population's housing needs, if we consider that the steep increase in prices went hand in hand with a steady decrease in the amount of social housing. Spain also moved to the forefront of the countries in its region when it came to secondary and unoccupied housing.

One of the core objectives of current housing policy therefore focuses on strengthening social housing, not so much through new developments than by reusing the large stock of unoccupied and secondary housing. At the same time, setting up land reserves for residential use, at a legally determined percentage, for the specific purpose of building homes subject to public protection of some kind is also an efficient instrument for specific goals, such as fostering housing to be used rather than housing as a mere investment, favouring social housing over free-market housing and rented housing over owner-occupation.

1.3. The compact or diffuse city model and its environmental impact

For many years now, the European Union has been pushing for the model of a compact European city, warning of the serious disadvantages of sprawling or disorderly urban development. These include environmental impact, social segregation, economic inefficiency derived from the high energy, building and maintenance costs of huge infrastructures and providing public services. Key documents for understanding the importance of cities in the quest for balanced, sustainable spatial development are the European Spatial Strategy, European Sustainable Development Strategy, European Urban Environment Topic Strategy, or the European Union's Spatial Agenda. More recently, the Leipzig Charter on Sustainable European Cities, approved at the Informal Meeting of Urban Development and Spatial Cohesion Ministers held in Leipzig in 2007 marked a further step forward by considering two specific objectives: the need to include integrated approaches into urban policies, and to pay special attention to underprivileged neighbourhoods, opting once more for the development of integrated, truly multi-sector policies through horizontal and vertical coordination, creating high-quality public spaces, modernising infrastructure network, improving energy efficiency, proactive innovation and educational policies, fostering efficient, affordable urban transport, etc.

In Spain, during the period of the building boom, sprawling urban development prevailed over compact development, with many cubic metres being built on former green corridors and low-density residential or service areas. Alongside these new developments we often find a peri-urban space where parts of the city are located at distant points, attracted by major roads, in operations that are often far removed from what we understand by integrated spatial planning, because this phenomenon of urban sprawl separates urban parts and functions that are linked only by motorised means of transport, playing no role in the conservation and improvement of the city or in the city as a project for truly collective living.

Building is a highly intensive activity in terms of energy and materials, with major direct and indirect effects on territory and the environment. Also, diffuse spatial, urban and building planning models, with their associated lifestyle, are much more demanding in terms of resources and more profligate in terms of waste and ecological and environmental damage.

Ecological concerns must go beyond simple issues of pollution or the protection of species and spaces, to address the actual metabolism of the economy and spatial deterioration that is being caused by the evolution of urban systems. Quality of life is, in short, what is at stake here. With regard to urban systems, nor is it enough to call for ecological urban planning or bioclimatic building. One of Spain's major problems is how to manage a built stock, in many cases of low quality, that is underused and somewhat oversized. And this is where policies and plans for the regeneration, reuse and improvement of that stock are of fundamental relevance.

1.4. Urban regeneration and renewal

In Spain, the real estate business has mainly stemmed from exploiting the rise in the value of land when it is declared to be developable. By seeking capital gains from the reclassification and requalification of land, real estate developers have opted for new building much more than for conserving the built stock.

Thus, the rehabilitation and re-adaptation of the built stocke in land and buildings takes on considerable importance, and it also explains why this

objective has been one of the leading priorities of the Ministry of Housing since it was created in 2004.

The commitment towards the regeneration and renewal of the existing city compared with developing a new city is a fundamental challenge for today's societies. It is important to put institutional frameworks in place and put new policies into practice to avoid falling once again into errors of the past. Not only is it necessary to prefer regeneration over new developments, but also architecture that is more in accordance with the local environment and climate over the predominant universal style, profitability through earnings over capital gains, y and energy saving over the wasteful use of resources. It would also be essential to ensure that regeneration, when it is undertaken, does not tend to imitate the forms and patterns of the newly built city, which is usually developed by segregating neighbourhoods or turning them into *single crops* for certain social classes.

Making this difficult choice has continually been put off in Spain because the change of model threatened to ruin the prosperity of the system at the time of its greatest expansion, taking down real estate business and the driving force of the economy with it. Even so, to address this context, the Land Act 2007 brought about the necessary reform, explaining in its grounds section that it was essential for a new model to be adopted that considered the environmental value of rural land; for land classification, far from being indiscriminate, to correspond to a responsible choice to answer economic and social needs; and, with regard to urban land, i.e. the existing city, to preserve its «environmental value, as a collective cultural creation that is permanently being re-created», by favouring its regeneration and fostering its use.

Thus, regarding the crucial topic of spatial and urban planning, we should insist on the need to have instruments that are capable of managing the land and built stock as scarce resources, preventing their indiscriminate urbanization, which involves the destruction of pre-existing natural and building assets.

Transformation of the land for urban development and building should not only be subordinated to the existence of those unequivocal needs or demand for it, but also to the maintenance of certain qualities of the buildings or the territory itself, and achieving the type of planning considered to be desirable, as required under the national Land Act. The limitation of the land itself, with its qualities, is a reality that cannot be questioned, so it is necessary to block the path of such unbridled development, which is as impossible as it is undesirable.

Launching this process calls for new thinking about a new basis for the entire planning process, not only for the district's geographical area as a whole, but also for the region and its insertion in broader planning or strategies (national and European). There can be no room for doubt that solving problems related to global sustainability is impossible at the urban, municipal level alone, and attempting to develop planning only at that scale makes no sense.

The demographic decline that Spain is undergoing (combined with the collapse of the migratory ratio as a result of the recent recession) offers an unprecedented opportunity to overcome the dogma of growth that urban development, building and the real estate business in Spain has been based on.

The changes brought about through land legislation should serve as the basis for getting over the myth that the growth of building and urban development is natural and desirable. But such a change of viewpoint will also require housing policy and the economic and financial instruments related to it to change course too. We might point here to the path taken by the Ministry of Housing with its approval of the Housing and Regeneration Plan for the 2009–2012 period. It is no mere coincidence that, for the first time in the history of these plans, the title features the specific term *rehabilitation*, while the plan includes sustainability objectives for Integrated Regeneration Areas and Urban Renovation Areas.

This whole change in spatial and urban model is what this report is intended to contribute towards.

2. General approach

The main task of planning is to manage two primary heritage stocks as scarce resources for the whole community: land and the built heritage. Together, they shape the territory, with its ecosystems and landscapes, whether rural, urbanized or otherwise anthropised, and the urban environment, with its infrastructures and other associated services.

The objective of ecological sustainability also calls above all for these two stocks to be managed judiciously to address the population's needs, while particularly bearing in mind the vocations of the territory to conserve and even enrich a cultural heritage that brings together rural and urban ecosystems and landscapes.

In view of this, the main challenged from the angle of urban sustainability and habitability hinges not so much on improving the quality of building and urban development (which is taken as given) as, above all, on managing the city and built heritage, regenerating them and converting them on new principles, especially in countries such as Spain, where the built stock is oversized and in many cases of dubious urban and construction quality.

From a spatial point of view, the main short- and medium-term challenge is to reorient the major pools of land that has already been compromised, in many cases several times larger than the land that has already been built up, and reorganising farming areas and landscapes that are under pressure from the potential for requalification.

The primordial objective therefore requires the expansion of land occupation to give way to the reuse and regeneration of the built stock and the deteriorated urban and peri-urban environment —all with as little economic, social and ecological damage as possible.

The current recession has occurred at just the right time to make the built stock profitable again by means of income (from renting) rather than capital gains (from sales). The new land and spatial legislation contributes towards these goals, as does the setting-up of an urban information system that promises to be an effective instrument for the integrated diagnosis and monitoring of quality levels and uses of the territory and buildings, as well as the city's functioning and services and the problems of its inhabitants.

As is being recognised in the various initiatives that are already underway (such as the Urban Information System, Urban Initiatives Network and others) simple information on the urban developments planned over the territory as a whole is the first step in deactivating growth forecasts that border on the absurd: if it makes no sense for a municipal district to plan for developments that multiply its housing stock several times over until its territory is packed with buildings and infrastructures, it makes even less sense for all districts and regions to do it an the same time. This brings us to the added consideration that potentially disproportionate plans may be the first step in showing the need for them to be cut back by consensus. This is therefore the start of a policy that can allow information compiled by local authorities on the development effects of the territory in planning to be coordinated and homogenised with information on the actual occupation of the territory.

It thus appears to be a priority for criteria to be unified and this type of information to be compiled effectively. We also need to accurately determine not only the farming qualities and uses —or other uses of the unoccupied territory— but also the nature of the spaces and ecosystems whose destruction often represents an irrecoverable loss of heritage that is not recorded in standard economic accounting. Information on thresholds beyond which the exploitation or deterioration of natural resources leads to irreversible losses is essential in order to determine the territory's carrying capacity and regulate uses in accordance with the principle of caution.

Furthermore, the hierarchy of criteria invoked to regulate spatial planning and uses cannot only be subordinate to the private interests of land-owners and developers and the almost exclusive support of technical and scientific criteria. The mosaic of qualities and uses of the territory and its heritage assets to be preserved must be made specific (together with management instruments) with the agreement and support of the population at all levels. Achieving such a consensus requires the fostering of participation processes and transparent information on potential spatial scenarios, until widely accepted priorities and conservation goals and management instruments can be defined. This broad, transparent, democratic consensus, which differs from the other elitist and reserved kind that has become a virtual fixture of urban planning in Spain, must be

a fundamental objective for the new discipline for the territory and urban planning that we need.

The distribution of powers approved under the Spanish Constitution and contained in the Regional Statutes has given rise to an intricate legislative maze on this topic that must be taken into account by any policy that hopes to come up with viable proposals. This document therefore clears a path through that maze as the first step towards assessing it and attempting to offer proposals for redirecting it, as necessary. As we shall see below, the current legislative panorama presents a number of missing features, problems and limitations from he angles of sustainability and habitability. Nevertheless, this is probably not enough to address the more profound transformations that the pending change in the urban and spatial model will require. The change goes beyond the current legislative panorama and requires us to assess the gulf that is often observed between the legislation and the actual situation on the ground, which often relegates the legislation to a purely ceremonial role, while things on the ground go their own way.

In view of this we should underline that the change in the urban and spatial model that needs to be made does not affect only planning but virtually all policies and planning-related powers as well, ranging from budget and tax policies, via health, education, employment and social cohesion, to building interventions undertaken by different authorities. We therefore need an ambitious policy that judges and supports the conservation, reuse, demolition or replacement of the built stock in accordance with the population's needs, and the adaptation of buildings, infrastructures and environments to the local climate, ecological behaviour and cultural value. A policy that articulates and links the wide diversity of functions and activities that converge in urban fabrics, where proximity and habitability reduce mobility needs. One that applies new bioclimatic criteria to reinvent the use of local materials by vernacular architecture. One that turns the tide to support the utilitarian function of housing instead of its role as a luxury financial investment. One that supports greater flexibility and efficiency in the use of the housing stock, that strengthens renting as a way to make profits from property, more in line with a more function and less speculative use of the housing stock, and also publicly promoted social housing instead of the current predominance of free-market housing. Tax arrangements such that local funding does not rely so heavily on urban-development actions (either through taxes or simply through the requalification and capital gains associated with increasing the volume already built). And a tax policy that, unlike the current system, penalises capital gains derived from speculative sales and purchases and rewards income derived from renting. All these measures would unequivocally lead to greater sustainability of our urban systems.

The Spanish national government has major transversal competencies that allow it to affect all these policies, including those related to land and housing. But the change of model can only be addressed from the position of a prior integrating commitment at all levels of government, involving all the social actors and stakeholders affected, particularly the real estate sector, and with the participation of the public, based on as broad as possible consensus.

It will not be possible for these changes to be brought about unless the local, regional and national authorities responsible for undertaking the transition to this new model have the necessary effective will. Judiciously applying the existing instruments of all kinds or any new ones that take us forward towards our sustainability goals would form a key part of the transition strategy and minimal protocol described.

In this document we analyse —more specifically and following the methodology described below— the elements that could give shape to these ideas, resulting from the work done by the team that has prepared this report.

3. Methodology

A white paper on *sustainability* in *Spanish urban planning* faces two initial difficulties: the ill-defined concept of sustainability and the extreme complexity of urban planning. The usual methodology for drafting a white paper is based on consulting a group of experts on the topic, but in this case it has also been considered necessary to define and delimit the object of study to some extent as the only way to be able to contextualise and interpret the contributions made.

3.1. Sustainability vs. unsustainability

The discourse of sustainability is currently in vogue. The reason for this is probably connected to the widespread sensation among the public, technicians and political leaders that certain environmental and social dysfunctions, far from being reduced with economic development, have actually been intensified. However, when we move beyond this basic level of sensations, any trace of a consensus disappears: there is no agreement as to the causes or the solutions we should adopt to overcome these dysfunctions. Indeed, there is not even agreement on the true scope or seriousness of the symptoms. The result is that a number of expressions have been proposed, such as ''sustainable development'' and ''sustainability'', which are intended to contain the solution to all problems without in most cases defining what their substantive content might be.

The analytical part of this white paper is intended to provide an overview of these dysfunctions in relation to urban planning, while the proposals must necessarily outline some action strategies. Doing this without previously defining what we mean by sustainability may seem inappropriate, but it is in fact the most solid option. Inasmuch as sustainability is identified with the solution, it is much more appropriate and convenient to begin by describing and characterising the problem, i.e. the current unsustainability, before moving on to seeking solutions, which would appear to have a political dimension that goes beyond the scope of this document.

The description and characterisation of the unsustainability of today's cities, both in Spain and throughout the world, is a leading topic of recent urban research, and it has been touched on in the introductory chapter. For a methodological viewpoint, we will focus on analysing (breaking down) the various different aspects of this unsustainability to assess each of them in turn. By taking this approach we do not mean to suggest that a sector approach is appropriate for addressing urban unsustainability; on the contrary, it is a way of unmasking sector approaches that are disconnected from one another and have been predominant to date, since they should be coordinated to enable us to arrive at the integrated response that such a complex problem demands. Indeed, our aim is to set out a general structure, a system, into which all the individual issues are inserted, to offer a vision of all the spheres where coordinated action is needed in order to reduce urban unsustainability.

Before we go on, we should distinguish between three concepts that are often conflated under the environmental-policy umbrella:

- *Sustainability* is related to the environmental and social costs of society's metabolism and the limits that are admissible for the planet and society.
- *Environmental quality* or *hygiene* concerns the conditions of the immediate environment in which human life develops and that affect people's health (this is the environment referred to, for example, in the Spanish Constitution 1978);
- The *protection of natural spaces* refers to the conservation of things that, for reasons of sustainability, environmental hygiene or on other grounds, are protected from certain uses that could lead them to deteriorate.

The main difference between environmental hygiene and sustainability lies in the location and scope of the environmental impact; whereas the former is basically concerned with specific, localised impact (pollution) that could affect people's health, the latter assumes that any impact, near or far, that affects the biosphere's capacity for regeneration will affect people's well-being in the medium or long term. This difference is a key one, because environmental strategy in developed countries in recent decades has consisted of transferring the most pollutant activities to third-world countries, solving the immediate problem of the environmental hygiene of their citizens, but probably worsening global unsustainability. In this regard, certain environmental-hygiene

strategies may have environmental costs that are not taken into account because they are far removed in either time or space.

Protecting natural spaces would seem to be an appropriate strategy for either of these two objectives, but how effective it is largely depends on the criteria applied to delimit the areas in question and fix minimum conservation conditions for them. If the criteria and resources used are not appropriate, this policy may end up as mere green rhetoric, making it essentials for it to be part of a broader strategy for environmental sustainability or hygiene.

In this document we will focus on sustainability strategies, objectives and measures that in the main will coincide, include or supplement — although they also may temper or even challenge— diverse environmental-hygiene policies or specific criteria for protecting natural spaces.

Strategies to reduce unsustainability

Firstly, we need to identify the main symptoms of the current unsustainability, which may be outlined as follows:

- Resources consumed faster than they can be replaced.
- More waste produced than can naturally be reabsorbed.
- Economic and social exclusion processes, associated with differential access to resources and a healthy environment.
- Distancing of the public from decision-making processes.

In any case, one key question cannot be ignored: all these symptoms are immediately interrelated. Environmental deterioration mainly affects groups that are excluded (from the fruits of economic growth and political decision-making processes) at all scales (local, national and international).

Various strategies may be considered to address this problem, but we must always take into account that they must take on a political and dialectical dimension that incorporates the interests of all those affected (the population of a neighbourhood, city or country; humanity as a whole) and that, since the various facets of the problem are all so interrelated, we cannot adopt solutions that are only partial or isolated, or we risk merely transferring the problems from one sphere to another. Thus, despite being presented schematically, the following sustainability strategies should be understood as a set of action areas that only make sense to the extent that they are developed in a coordinated way:

- Reduce the consumption of natural resources and the production of waste.
- Conserve, recover and regenerate our natural (and built) capital.
- Strengthen and recover common spaces for coexistence, reducing social and economic segregation.
- Foster public participation in decision-making processes at all levels.

Within its abstraction, this would appear to be a simple exercise but, as we shall see, the difficulty lies in transferring them to specific fields of action.

3.2. Application to urban planning

To apply the above sustainability strategies to urban planning we must first take into account their actual field of action here and now: organising a given territory (usually a municipal district) with regard to the specific urban and building uses. From this perspective, what planning can achieve is quite limited, but it can also have significant scope and effects.

In practice, urban planning defines a model and a structure for the city onto which different urban uses are laid and developed. In this model, such issues as building types and their relationship with open spaces (roads, spaces for coexistence, green areas, etc.), the distribution of different uses and their coexistence or separation (housing, public and private facilities, tertiary and industrial uses, etc.), and their varying degrees of concentration in the space, may either help or hinder certain lifestyles that are to some degree sustainable. Of course, in a democratic society such as ours the final decision must lie with individual citizens, but it is the task of public authorities, via both planning and other ambits within their remit, to encourage individual habits that are the most beneficial for the community, by offering the most appropriate incentives and disincentives in each case. Several interrelated factors thus come into play:

- The *territory* or physical support on which the city functions, which provides a wide range of possibilities for use;
- *Society*, which makes specific use of the support available, including changing it;
- The resulting *metabolism*, with its corresponding consumption of resources and production of waste.

Urban planning is therefore responsible for shaping the city's physical support, but in doing so it necessarily influences both other spheres. And from

awareness of this capacity for influence is where sustainability strategies described above can be integrated in planning. Let us now break down the various spheres of influence of planning and the main objectives to be pursued in application of the sustainability strategies in each case:

1. Criteria for action in the city surroundings

- Preserve, maintain and protect the natural capital

2. Criteria for action in urban areas

- Define a more sustainable urban structure and model
- Foster more sustainable use of the built stock
- Foster the diversity, quality and versatility of urban public spaces
- Favour access to nature (green areas)
- Improve access to facilities

3. Criteria for action on transport

- Shorten distances
- Strengthen non-motorised means of transport
- Reduce private motor traffic by strengthening public transport

4. Criteria for action on resources

- Optimise and reduce energy consumption
- Optimise and reduce water consumption

5. Criteria for action on waste

- Reduce waste
- Manage waste to reduce its impact

6. Criteria for action on social cohesion

- Favour the cohesion of the social fabric and prevent exclusion
- Complexify the social fabric

7. Criteria for action on governance

- Foster administrative transparency
- Favour citizens' capacity building
- Integrate participation into planning

Note that the first two spheres correspond to the territory or physical support of the city. Transport (owing to its dual nature as infrastructure and flow) occupies en intermediate position between support and metabolism, while the final two enter the social sphere by two different approaches: combating social exclusion as part of the content of the planning, and fostering public participation as a key element of the planning, understood as a procedure for managing public assets.

Of course, this breakdown still has a high level of abstraction. In truth, it is incomplete, since a third level is missing: one that would bring together a set of specific measures to achieve the goals set. The full list is given in Annex 1. As an example, the first block would look like this:

Criteria for action:

1. in the city surroundings

1.0 *Preserve, maintain and protect the natural capital*

1.01 Preserve existing ecosystems (natural and artificial).
1.02 Respect and integrate into the territory.
1.03 Connect the different protected areas.
1.04 Respect the landscape.
1.05 Conserve the land (reduce consumption and preserve its productivity).
1.06 Give priority to local production.

The full list consists of seven blocks or spheres, 19 strategies or general criteria, and 93 specific criteria for action. It is not intended to be a comprehensive list of all the possible measures to favour more sustainable urban planning, but rather a structure for including different alternative or complementary measures —we should remember that one of the premises of planning is to adapt to local conditions— which may be judged and assessed according to how effective they are in line with the overall sustainability strategies. Likewise, their hierarchical character allows the problem to be approached from different levels of detail, linking overall policies with specific measures.

In any case, this list has not appeared out of nowhere. Although its overall structure has been purpose-built, most of the elements have been compiled from various guidelines and manuals published by different public authorities and academic institutions (see Annex III).

Practical use of the list of criteria

Each of the items on the list has been drafted in such a way that it can be converted directly into an assessment questionnaire that can be applied to various types of documents.

For example, based on criterion 1.03, the following questions can be raised:

- Does Act X take into account the need to or appropriateness of connecting different protected areas?
- Does regulation X regulate minimum standards for connecting different protected areas?
- Does plan X create specific reserves for connecting different protected areas?
- Does the IAE for Project X include corrective measures for connecting different protected areas?

As we can see, each document, standard or plan has specific goals that correspond to different levels of detail, but in each of them we can determine whether a given sustainability criterion has been included or whether it has been rejected on reasonable grounds. Similarly, whenever one of these criteria is included in any standard, plan or project, the specific way in which it is done can be judged in relation to the rest of the list:

- whether the overall objectives are accompanied by specific measures for achieving them;
- whether the specific measures are coordinated with one another and connected to an overall strategy;
- whether certain sector issues or questions are properly developed or contradict one another;
- whether certain sector issues or questions are simply missing.

Documentation examined

The result of urban planning, at least in part, would be a city, but its content is distributed across diverse documents that make up the corpus of planning: compulsory standards (laws, regulations, technical instructions, etc.), recommendations (guidelines, manuals, etc.) and the plans and projects that develop them and adapt them to the specific conditioning factors in each case. The most direct way of studying planning would probably be through plans (and their effects on the physical reality), but this approach clashes with the huge amount of documentation that would have to be studied, including analysing a minimum representative sample (including each administrative ambit, different ecological territories and different types of cities in terms of their size, urban model, etc.).

Another possible approach, which is the one taken here, is to study the framework within which the planning is developed, and therefore including regulations, which make certain content compulsory or apply certain procedures in the drafting of urban plans, as well as diverse technical guidelines and manuals, which make more flexible recommendations but also offer a number of more sophisticated technical instruments.

Regulatory framework

Such a trans-disciplinary activity as urban planning, even when referring to only one municipal district and its urban uses, will necessarily be influenced by a host of sector standards that regulate the various policies and activities affecting the territory. These sector regulations shape the content significantly, albeit not as much as the specific regulations on urban and spatial planning. With regard to procedures, the complexity is similar, since drafting and approving any urban plan is a complex process involving different authorities and entities delegated by them, to assure compliance with the requirements from all sectors affected by the organisation regulated by the plan, as well as the transparency of the process itself. Finally, we should remember that in Spain urban and spatial planning has been transferred to the remit of the autonomous regions, which have legislated on it to varying extents, creating specific conditions for urban planning within their respective territories.

This means as a result that a considerable amount of legislation now directly or indirectly influences urban planning in Spain. To define a significant, homogeneous sample of it all, we have opted to study all the regional laws and regulations introduced in the following ambits:

- Urban planning.
- Territorial/spatial planning.
- Protection of natural spaces.
- Management of natural resources.
- Environment and environmental quality.
- Environmental assessment.
- Housing.
- Other legislation explicitly referring to sustainability.

Annex II includes a full list of the laws and regulations studied. We consider that this selection covers a considerable part of the relevant legislation, although certain issues of undoubted significance (for both planning and sustainability) have been omitted, such as specific legislation on public works. All sections of the entire corpus selected have been studied in detail to determine which parts refer to any of the criteria for sustainability defined in the previous section of this document. Based on this data, the inclusion of each of the criteria (general and specific) in the different pieces of legislation has been determined, underlining any notable absences. A summary of the results is also included in Annex II.

Guidelines and manuals

Guidelines and manuals are basically technical in nature and may cover details and specifications that the legislation, owing to its own nature, neither can nor should touch upon. In this regard, the literature on the application of sustainability criteria to urban planning is relatively abundant. A number of guidelines that address with the issue

in particular detail have been selected as the starting point for this white paper. Annex III contains a chart that sets out the topics, criteria, goals and indicators proposed by each of these guidelines, to enable them to be compared with the list of criteria used here.

Expert consulting

Interesting though study of the documentation undoubtedly is, it only shows the legal and technical theory that lies behind urban planning. To complement this vision, a number of professionals with extensive practical experience in urban planning have been consulted, selected with a view to representing as much diversity as possible in terms of their academic backgrounds, professional experience and geographical ambits, including urban planners —not just architects— with experience working in various autonomous regions. Each of them was asked to submit a confidential report, explaining where they consider urban planning in Spain currently stands in practice, particularly in terms of the objective of sustainability. These reports have been taken into account for the drafting of this White Paper, but their views, which have been included wherever possible when they share viewpoints on certain issues, need not necessarily coincide with the overall conclusions of this paper or the analysis of the current situation, which remain the sole responsibility of the directors.

4. Urban planning in Spain

4.1. Origin of the current situation and how to improve it

Several viewpoints may help us to explain the current situation of urban planning in Spain. First, we should stress that, strictly speaking, insofar as planning is concerned (and many other issues), there is no *Spanish situation* as such, owing to the decentralisation of powers. Since the Spanish Constitution 1978, the country has basically been organised into three instances: national, regional and local. Legislative powers are separated into different fields and shared among the central and regional governments. And although local authorities have no legislative powers as such, they do have a large number of governance and management responsibilities.

Urban development and spatial planning are, like housing, entirely within the remit of the regions, and central government cannot legislate on them. Even so, generally speaking, virtually all the regions' planning instruments are derived from those set up under the Land Act 1956. As explained in more detail below, spatial planning almost always acts as a limiting framework for urban planning, based on the figure of the general urban plan, which confers rights and duties on landowners, and therefore specifies property right. These general plans are then developed into other types of plans that depend on, complete and define them. The fact that all powers, including those of legislation, correspond exclusively to the 17 autonomous regions means that any recommendations in this field must be approved by all of them —a very difficult task— or for the recovery of competencies by central government to be agreed, amending the 1978 Constitution accordingly, which is even more unlikely.

However, central government does have minimal legislative powers on environmental matters, although all other legislative competencies lie with the regions and executive powers with the regions and local authorities. This means that the job of coordinating urban planning could be undertaken from this topic field (sustainability), as has been done, for example, with legislation on environmental impact. In other words, basic planning obligations could be established on environment, approved by the Spanish Parliament, which the autonomous regions would develop to adapt in accordance with their own climatic, cultural and territorial circumstances. This approach is particularly important given the impossibility of tackling the issue from the field of urban development and spatial planning itself, as we shall see, unless the regulatory framework established under the 1978 Constitution is amended.

The current decentralisation of powers with regard to urban development should serve to adapt it to Spain's widely differing cultures, climates and territories. The settlement-related, building-related and environmental problems of people who live in Asturias are very different from those of people living in Extremadura, which, in turn, are different from those found in Catalonia, Madrid or the Valencia region. We cannot therefore speak of any across-the-board situation when discussing either problems or answers.

Although Spain's cultural diversity —with four official languages (Castilian Spanish, Catalan, Basque and Galician)— is well known, we should not ignore the country's climatic and territorial diversity. For example, from a hydrological point of view mainland Spain can be divided into two very different territories: *wet Spain*, geographically corresponding to the north and north-west, with its temperate climate and abundant rainfall, and *dry Spain*, with its quite arid Mediterranean climate.

Yet this diversity and these contrasts go beyond water- and climate-related factors, affecting many other aspects of the physical environment, to the extent that diversity is one of the key characteristics of Spain's natural resources. Indeed, the lithological and geomorphological diversity of soils and climates in Spain has given rise to a variety of environments that house a much wider range of species, ecosystems and landscapes than any of the country's European neighbours to the north. This variety of environments and landscapes also goes hand in hand with a highly varied vernacular architecture having adapted and been built into them. This vernacular architecture has now almost disappeared, having been decimated by abandonment, demolition and ruin and discarded by the unification of building typologies that has accompanied a succession of building booms. There are weighty environmental reasons for new planning to respect, restore and renew what still remains of this vernacular architecture, or to reinvent it in the name of the new

bioclimatic architecture, to address the wide range of seasonal and temperature differences found in mainland Spain, which is even greater when the Balearic and Canary Islands are taken into account. In the wet, temperate part of Spain recommendations on orientations, habitat layouts, etc., are clear and relatively easy to see. However, the interior of the Iberian Peninsula has a very hard, extreme climate, with very cold winters and very hot summers, which are a testing challenge for any attempts to design for the cold or for heat. Finally, the Mediterranean coastline, many parts of which are suffering from desertification processes, presents a mild climate in winter and a very hot one in summer. We should also mention that less traditional materials such as concrete and steel have a much larger carbon footprint than other vernacular ones, such as stone, timber, tapial or adobe.

There are even more convincing environmental reasons for managing the land stock as a scarce resource, in order to adapt uses to each territory's vocations, ecosystems and landscapes, to conserve them and even improve them. These reasons also apply to managing the large number of buildings and existing infrastructure as scarce resources, with a view to promoting the efficient use of them. To facilitate all this, as mentioned in the first chapter, it would be necessary to set up a minimal protocol to serve as the basis for reorienting urban and spatial planning in favour of sustainability and habitability.

Finally, although this White Paper focuses on urban development and spatial planning, we should underline that this situation cannot be expected to change in favour of sustainability and habitability unless overall national policy is reoriented firmly in its favour. If we consider the very limited options available under the current legal framework for central government to coordinate urban and spatial planning policies, it seems clear that changing the urban model in the direction indicated cannot occur without a solid national agreement to promote it, with the support of all government departments and all sectors. As mentioned in the introduction, a transition strategy would have to be set up in favour of sustainability and habitability, together with a minimal protocol, the drafting of which falls outside the more limited scope of this paper, which focuses on urban planning alone. Nevertheless, it should be noted that the instruments that such a strategy would have to turn to include tax and budgetary policies, which would have to make taxation and public funding conditional upon compliance with the minimal protocol by the authorities involved, thereby working around the central government's hands being tied when it comes to legislating on urban and spatial planning.

4.2. Characteristics

In the previous section we have outlined the basic features of planning in Spain, the most important of which is the fact that the autonomous regions are responsible for housing, urban development and spatial planning. As a result, central government is unable to intervene, act or legislate on these matters.

However, as we have seen, the differences between the different regions' planning systems are not that great, owing to the very strong tradition that has been in place since the Land Act 1956, and a culture of urban planning that even predates it (going back to the Local Government Act 1926) and gives it a very definite character. We may therefore speak of common elements when referring in each specific case to differential questions. Some of these common characteristics are:

A hierarchical planning system

Under the 1956 Act plans cascaded downwards from the National Plan (which was never implemented or even approved) to the urbanization project, which was the final level of planning used to define specific works with building plans. Each planning figure had to respect the one immediately above it, such that each plan on a lower level was strictly tied to whatever the one above it said. The only figure to fall outsider this arrangement was the *Special Plan*. This model continues to be repeated to some extent throughout Spain's autonomous regions, with the difference that the benchmark figure is no longer the National Plan but rather the Territorial Plan, which covers the whole of each region. However, very few regions have actually approved a plan of this type (and in most cases they have not even attempted to draft one).

Planning determines the content of property rights

This premise was developed over time from the Land Act 1956 until its maximum refinement via the Land Act 1992, which, despite almost two thirds of its content having been repealed by the Constitutional Court, has remained in effect for many years now. This is important, because the landowning-rights statute does fall within the remit of the national government, and the current Land Act refers only to this statute on land ownership and valuation arrangements. This is another of the few areas over which central government still enjoys certain room for manoeuvre. In any case, this doctrine attributing to planning the ability to determine the content of property rights (with this content remaining blank where it fails to do so and therefore not

giving rise to any compensation if it is nil) has also unanimously been adopted by all the autonomous regions.

Traditionally the successive Land Acts have divided Spanish territory into three types: urban land, developable land (*urban reserve* under the 1956 Act) and non-developable land (*rustic land* under the 1956 Act). The regions have also classified their own territories under these or similar names. Under the national Land Act 1998 *urban land* was that which is already in a condition to be built upon, either because it is equipped with all the relevant urban services and utilities (water, electricity, sewerage, road access, etc.) or because those services and utilities will be installed at the same time. *Non-developable land* was that which meets objective condition (specifically indicated in the Act) to be protected from urban development. And *developable land* was anything else. It should be noted that before the latest changes the objective conditions did not include those of achieving greater sustainability or making a coherent, compact structure. As under the previous legislation residual land was rustic or non-developable, the 1998 Act determined that all Spanish territory was susceptible to being developed except those parts of it that were specifically mentioned in the Act.

This situation was further strengthened with the coming into effect of Royal Legislative Decree 4/2000, of 23 June, on Urgent Measures for the Deregulation of the Property and Transport Sector, which eliminate the possibility of a plan classifying as *non-developable* land «any other land considered unsuitable for urban development» by removing that specific phrase from its stipulations. From then onwards, if planners wanted to make a compact city because they considered it to be more sustainable and if the district had no landscape, historical, archaeological, scientific, environmental or cultural, agricultural, forestry or livestock assets, it could not be done and the entire district would have to be declared as developable, since otherwise any private individual could challenge the plan before the courts.

Consequently, planners and authorities approving plans were obliged, even against their wishes, to declare much of their territory as developable land, meaning that any developer who wanted to, could build 15, 20 or 7 kilometres away from the town or city, resulting in *legal* dispersion over the territory that was highly unfortunate, from a sustainability viewpoint and for the protection of the natural environment or efficiency of the spatial and urban system.

This situation has been substantially changed under the current Act, which has eliminated the classification of land. In fact, the 2007 reform (and the Revised Text of the reform that was brought in the following year) introduced a number of major new features in the sense of moving towards a more sustainable system. Once again, the distribution of powers has meant that the State has been unable to explore all the planning matters dealt with in this report, although it has been able to regulate landownership rights. In any case the situation whereby urban planning determines the content of property rights continues.

Municipal planning is the basis for urban plans

It has long been traditional in Spanish planning for the ambit of urban plans to be the municipal district. Under the name of *general plan* or something similar, the municipal plan prefigures the uses, intensities of use, design of the communications system, etc. throughout the district. It also classified land as urban, developable, non-developable. This plan is therefore of great importance from an urban point of view. The future of the land and which areas will be developed in the years to come are matters that are determined by this plan. Since in many cases the municipal plan is not framed or coordinated by any spatial planning, it is the only planning benchmark in many places. This results in such absurd situations as that found in the municipal district of Madrid and all the districts that surround it, each of which drafts its own plan without taking into consideration anything that is being done in the neighbouring districts. And without any kind of limits or setbacks other than the resistance that might be put up by sector planning (such as transport and infrastructure plans, for example, or natural resources planning). This is another of the serious problems, from the viewpoint of sustainable planning, presented by the planning situation in Spain.

Urban planning as extension planning

Ever since the first extension plans and laws, the interests of Spanish planners have focused on the extension of the city, to the extent that no instruments have ever been created that are truly of use for intervention in consolidated city centres. This lack has been intensified even further recently. The only legislation that includes instruments for inner-city intervention was the Land Act 1992. However, that Act was declared to be unconstitutional precisely with regard to all the instruments referring to planning, and none of the autonomous regions recovered them. Instead, they opted to return to the Revised Text of 1976, which was much simpler but far inferior from a technical point of view. This has led

to city centres being abandoned by the plan, because intervention in such areas is very difficult and currently depends almost exclusively on indirect instruments, such as integrated-regeneration plans. Of course, compulsory purchase, plating with distribution areas and, from the point of view of obtaining resources for specific interventions, the possibility of imposing special contributions are still available, but in any case these are secondary mechanisms that fail to address the overall problem with sufficient intensity.

Limited importance of spatial planning

The greatest differences between the autonomous regions are found precisely in spatial planning, to the extent that the first legislation generated by the regions was related to this kind of planning. However, in almost all cases all the effort has gone into legislating. One paradigmatic example is the Madrid Regional Government, which, over four successive terms, with different political parties in power, has been unable to approve the Regional Territorial Strategy Plan to which all the region's urban plans must, in theory, refer. As a result, spatial planning is almost exclusively in the hands of sector planning (for protection, roads, water, etc.) with no instrument with an integrated vision of the territory available to coordinate everything.

Limited effects of environmental-impact assessments

Yet, except in the case of some regions that are more advanced than the national government in terms of environmental legislation, impact assessments and strategic assessments of plans and programmes have little effect on any planning (sector or urban development) or development projects. This is due to various causes, including, in general terms (with exceptions in some regions) the following:

- The fact that the team of evaluators are contracted by the developer of the major project.
- The non-existence of authorised teams of evaluators or registers of them.
- The non-existence of an independent official body to control minimum conditions for assessments.
- The non-existence of audits to verify the implementation and functioning of corrective measures.
- The impossibility of public participation under these conditions.

Strategic environmental assessment has reproduced the same inefficient pattern of the assessment of projects, such that an apparently important instrument, which would significantly help to orient planning, is virtually unused. The situation in this field is, however, relatively easy to reorient to make environmental-impact assessments point effectively towards the planning of more sustainable territories and cities.

4.3. Topics for consideration in urban planning

In addition to the background issues studied in the first part of this report, certain other questions have been detected which should be considered for the design and organisation of our cities:

1.- As mentioned earlier, the great unresolved question in our cities, with direct effects on their design, is the problem of home ownership. The Spanish property model has promoted investment in house purchases, reducing the market for rented housing to the minimum. This is one of the major problems of Spain's cities from the viewpoint of sustainability. The consequences are obvious:

- Investors would rather lock up flats than rent them out, among other reasons because of the Spanish legal tradition of favouring tenants over owners.
- The labour market has become a lot more rigid because of the difficulties involved in moving, and many people prefer to commute large distances, with the inherent problems of energy consumption, pollution, etc.
- There is a major trend for people to move to the rural parts of municipal districts, for several reasons including purely economic ones (the price of land and therefore housing is much lower).

2.- Many studies have addressed the issue of diffuse or compact cities, of particular relevance for sustainability, revealing a number of dysfunctionalities. Besides conclusions on the criteria analysed, these studies, together with guidelines and recommendations published by the autonomous regions, have enabled us to observe the following:

- Over the years city planning has been characterised by generous reserves for infrastructures (particularly roads) and certain types of facilities and amenities. Among other effects, these reserves have in part contributed towards a disproportionate increase in land prices. Also, from the viewpoint of sustainability, they have the setback of little urban saturation, particularly in outlying areas (and not of course in historical centres). It is traditional, for both public movements and planning manuals, to always establish minimal criteria for facilities, amenities and, in some cases, also for infrastructures. As a result, we see metre after

metre of developed land that is practically unused or used only very sporadically (particularly in large upmarket housing developments) with a consumption of land, materials and energy that leads to very low performance in terms of quality of life. Such a situation is simply intolerable in times of planetary emergency such as this. It is probably necessary to fix certain minimum levels, particularly in some urban areas but development regulations should also be in a position to fix maximum levels that must be complied with.

- Oversized infrastructures for peak needs have had as benefits, regarding roads, for example, of fast connections and the possibility of advancing in time ahead of average traffic requirements. However, they have also created a number of serious problems, including spatial rupture of urban continuity, excessive maintenance costs, and excessive, pointless consumption of developable land, contributing towards increasing the unsustainability of the system. Alternative solutions may also be considered, such as cities that function more efficiently, by trying to avoid everybody travelling at the same time. Although this is particularly evident for road networks, designs oversized for peaks also need to be resolved in other instances. Thus, for example, we find storm drains being calculated for storms that statistically only occur every 50 years, without considering other possible solutions such as storm ponds.

- In general, large green areas afford cities a healthy appearance and significant exterior recognition. However, size can lead to three problems that are worth mentioning here: high maintenance costs, excessive water consumption and poor rates of use. The problem probably lies more in the design of green areas and the objectives set for them rather than merely in how large they are. It is now necessary to question traditional ideas about green areas, which are basically understood as landscaped areas, to replace them with networks of free spaces. We also need to stop viewing the free-space system as purely a problem of facilities. Free spaces are now not only used for people's leisure and recreation. They should also contribute (additionally, and in some cases primarily) towards reducing the city's carbon footprints. We have moved on from local responsibility to global responsibility and considerations regarding their structure, organisation and design should include stops in this direction to mitigate climate change, for example. This posture, which should be predicated for any aspect of planning, becomes critical in this specific field.

- We also need to establish a major conceptual difference between ''green area'' and ''unused free space''. The ''green area'' as a landscaped area in a city requiring constant regular care, the use of fertilisers, watering, pruning and pest-control systems, should be reduced to its essential minimum. Considerations of strict sustainability and the defence of the natural environment are combined with maintenance costs to the extent that in this case rationality goes hand in hand with the system. The cities open spaces that are not ''green areas'' (and, of course, not completely developed areas either, such as paved-over piazzas) should be called ''unused free spaces''. In other words, unused spaces would be those areas in the city that are neither paved or developed, do not require constant regular care, and, of course, have no specific use assigned to them. The functions, objectives and usefulness of the two types of spaces are different, and that means that their requirements and needs are different too. However, what should not change are their legal arrangements, because unused free spaces that are not green areas are likely to be subjected to even greater pressures than traditional green areas, and in any case they should be included in the major network of free spaces that really, together with the built-up areas, go to make up the fabric of the city.

- Low residential concentration and low use in part of the built city. In some cases, and as a result of large facilities reserves, the over-sizing of communications routes, extensive green areas and, as we shall see, a relatively low gross density in the consolidated city, together with strict dependence on the zoning system of planning (particularly in new city extensions), areas arise that are excessively fragmented both spatially and socially. That said, we must admit that they do have a certain identity of their own and are undoubtedly healthy and hygienic.

- The natural order seems to be perfectly adapted to the planet's cycles, which means that its maintenance is probably more economical. Indeed, over the centuries certain reserves have built up (energy or pollution sinks, for example), which today's cities are now living on. The same is not true of the urban order, however. Its maintenance requires high energy consumption and produces amounts of waste that are almost impossible to recycle. All those areas where we have managed to maintain the natural order will not increase urban consumption levels; indeed, in certain cases they will decrease them. The problem is that there are now very few places left that can be preserved from urban development because they are

already almost entirely developed. Under these conditions it is essential to use what has been developed completely so that it is not necessary to develop any more territory, or at least so that development can be restricted to minimum essential levels. To make maximum use of the current city in its entirety it must be adapted to the needs of our society. That is why it is essential for parts of our cities to be regenerated, reused and renewed.

- Errors in the standardisation of lighting levels. As part of the generous urban development described above, and as a specific example, we would cite this question, because of its clear implications for sustainability. The justification for higher urban lighting levels is, in many cases, the need for security. However, sometimes, this is mere justification. Excess lighting occurs because of the *uniformity* of the levels required in different parts of the city. If the objective were security, it would probably be necessary to lower it in the safest areas and increase it in the most unsafe ones. Proof that this is not the case is that the safest areas in other circumstances, such as concentrations of people, police presence, etc., are where these levels are actually increased. Under this thinking, a high (*quality*) minimum is fixed and extended to the whole city, and apart from contributing very little towards differentiating and identifying urban areas, it is very costly from an energy viewpoint and, above all, very barely sustainable.

- Attempt to minimise maintenance costs. Very low maintenance costs usually involve lower energy consumption and the production of fewer pollutants. For example, an excessively fragmented free-space network usually involves much higher maintenance costs than those of a less fragmented network. On the other hand, it is probably closer to the local people. In most cases the most appropriate solution is to achieve a balance and design the network with all levels in mind. However, some situations are much clearer, such as the use of native or naturalised species, which usually are the ones that require the least maintenance, avoiding lawns because of their watering and cutting requirements and special topographical and soil structure, or the option of leaving significant parts of the territory without any kind of farming or other land use. In any case, this minimal or savings criterion should always be kept in mind by the planners and designers o specific areas, because in almost all cases it will result in a reduction in the city's ecological footprint.

- Finally, we come to the question of densities. The most striking studies, treaties, guidelines, recommendations and legislative initiatives recommend as a criterion for sustainability for future extensions (particularly in the case of the metropolitan areas of major cities) to increase the gross density over the traditional in the city's extension. In any case, this does not appear to be a problem of densities alone but rather one of the occupation and development of the territory, as well as the appropriate redesign of facilities, as explained above.

3.- The transformations and changes in Spanish society in recent years do not seem to have affected the basis for urban plant (most of the content of the major plans is the same and only ad hoc changes have been made to make major urban projects possible). These changes, which would have affected the organisation and design of our cities, include:

- The aging of the population. Over the last 20 years the age index has undergone a notable increase, from 7.91 % in 1981 to 16.6 % in 2007. This situation has led institutions to consider solutions for old people, their families and carers, although apparently any design criteria is also missing here, with the institutions focusing heavily on social programmes.

- Also, and directly related to aging, urban planning is not taking into account new family make-ups, with a notable increase in single-member nuclei and childless couples, while most of the houses built continue to be ''two or three bedrooms'', which have little to do with the requirements of these new family make-ups and the age structure referred to in previous point.

- An important part is related to the major phenomenon of immigration in recent years. Institutions seem to be aware that improving dependence rates is linked to increased immigration, although they are more or less explicit in their attempts to make it selective. Again, no measures been considered to address this issue from the viewpoint of urban design.

- Another problem that has not been tackled head on is that of security. The obsession with security has led to notable changes in the functions assigned to public space, resulting in the privatisation of many of these functions, which now take place in closed-off locations that can only be accessed by their owners. This trend not only manifests itself in the holding of new cities basically organised in closed fragments separated from one another in a clearly unsustainable way, but it is even being *exported* to the interior of the traditional city, where urban regeneration and renewal

models are copying this model. Yet the obsession with security is not accompanied by effective measures for specific problems. Thus, despite the many actions undertaken, it has not been possible to eradicate violence against women, since the number of reports of sexual assault and abuse, which fell between 1992 and 1998, have increased since then (with certain dips and peaks in the annual graphs). This clearly shows how this perception of the lack of security has reached the public. It should be noted that in the successive plans approved to fight this type of violence only social measures have been included, with none referring to urban design, as many feminist groups say they should, as mentioned at several recent conferences. What is known as *secure urban design* now has techniques (CEPTED) whose implementation should be compulsory for the drafting of urban plans. However, steps have been taken to move forward with *universal accessibility*, forcing urban plans to consider a set of conditions related to the possibility of groups with certain disabilities being able to use cities.

5. Ten-point plan for more sustainable urban planning

After compiling, studying and analysing the legislation enacted by the autonomous regions, its verification by those responsible, and in the light of the reports by outside experts, the team has identified a set of major topics that have been presented in the form of a ten-point plan for debate and discussion. These final reflections are included below with a view to putting forward a number of ideas to allow us to work towards achieving more sustainable urban planning. The current situation is a rather sensitive one, owing to the consequence of the improper use of planning and the difficulty of breaking with certain established routines, which in part seem to view urban planning with the almost discretionary assignation (in the best of cases) of the economic value of land. Achieving more sustainable cities and territories through the current urban planning mechanisms will necessary require some of the key components of the current system to be changed first.

1. Urban planning and environmental legislation

On specific problem in Spain, which was particularly noticeable in the legislative analysis carried out, is the wide range of approaches to urban planning in each of the autonomous regions from the viewpoint of sustainability. This is quite surprising, given the great similarities between the administrative ambits that regulate, control and prepare planning and the systems and types of plans themselves. This diversity range is a complex question, because in many cases the simple administrative border line that separates the regions does not correspond to environmental or functionally differentiated areas. Of course, this situation is not unique to Spain, as it is also found in other EU countries. That is why it would seem to be important for the organisation responsible for drafting and monitoring the plan and observing the territory to transcend political and administrative divisions and plot divisions themselves. However, the question does not affect only this issue but should also be considered within the legislative ambit. From the viewpoint of environmental sustainability all the signs are that having given all the powers over urban and spatial planning and housing to the autonomous regions has not been a very positive development. The difficulties involved in reverting this situation and achieving a common basis for the planning system (of course, considering the specific characteristics of each region) for Spain as a whole are surely obvious. However, given the fact that environmental questions are not the sole responsibility of the regions, linking the two may be considered to be necessary. Addressing certain issues related to sustainable urban planning from an environmental perspective would help to resolve certain problems that are now clearly visible when we analyse different sets of regional legislation on such planning and the environmental considerations to which it is subjected. It may well be worth returning to the old idea of national legislation on land linked to environmental legislation. The need for land and environmental legislation that could condition the environmental effects of urban planning in Spain as a whole would seem to be an urgent one. And this urgency should be extended throughout the European Union, because there seems to be a need for convergence on actions linking these two concepts. There are many examples of how an inappropriate urban-planning approach as led to irreparable damage to the environment in which people live, or to a natural environment that in many cases does not only belong to a specific district or region but to the whole country or the whole of Europe.

2. Content of property rights and urban planning

It is traditional in Spanish urban planning for plans not only to prefigure the future of the territory being planned but also to determine the content of land-ownership rights. This determination is effected by enacting the law, given the impossibility of this content being fixed on a plot-by-plot basis via any general legislation. Unfortunately, these two functions of planning have seriously interfered with each other, to the extent that urban planning is sometimes seen not so much as planning for the future as a system for distributing monetary land values in a supposedly rational way (although in many cases, this depends on the pressure brought to bear by the different interested groups involved). Local authorities thus find themselves under considerable pressure, because they are believed to be able to multiply the values of certain pieces of land while

leaving others at the price of farm land. This capacity would seem to be mediated by the tutelage of the corresponding autonomous region, but usually such tutelage is regulated and unlikely to oppose most of the determinations included in the plan head on. Although it is true that there is a minimal equal distribution between small areas and that historically the transfer of urban use were an attempt to distribute burdens and benefits equally —an attempt that ultimately failed when the Constitutional Court repealed much of the Land Act 1992, and the autonomous regions failed to include that instrument in their own legislation. When local authorities set themselves up as dispensers of *handouts* in the form of increased land values, the difficulties resisting malpractice and corruption are easy enough to imagine. This is probably one of the main problems currently being faced in the management of the plan. It is essential for new systems to be invented to enable land value (determined in the last instance by the plan) to be disconnected from urban planning. This is no easy task, although the most recent Land Act has made significant headway, by eliminating the traditional classification of land, for example, and replacing it with the *status* of land. However, it will probably be necessary to make further progress along this road, coming up with solutions for the problem with varying degrees of complexity, such as granting *minimal developability* for any land, developability that will only come to fruition if the plan permits, but which can be bought or sold. Other alternatives include the obligation to return to the community any capital gains obtained (or at least a significant portion of them) from the assignation of land uses that involve an increase in the value of the land. To date the capital gains returned to the community have been merely token gestures compared with the actual benefits obtained by landowners, who only had to be such in order to obtain them. This was so because it was assumed that the rest of he capital gains would be invested in developing the land. However, what most landowners did was either sell the land to a developer or transfer the price of urban development to the sale of the end product. In any case it is essential for this problem to be tackled if we are to achieve more sustainable and fairer urban development, to deactivate the voraciousness of development and the reclassification of land for capital gains and so reduce the chance of falling into corrupt practices.

3. The administrative ambit of the plan

Given the variety of climatic, territorial and social conditions in the different regions, it is surprising how similar they are in terms of the administrative ambits that regulate, control and draft planning. This also means that any differences between different planning systems are actually rather small. Indeed, current planning requirements should be as set by the administrative ambits and units that will take them forward. However, that has not been the trend. For example, the disappearance of metropolitan areas as management units in plans has caused many more problems than it has solved. This steady disappearance of intermediate units in fact led to polarisation between regional and local government. The consideration of sustainability as a determining factor in the drafting of plans means, de facto, that a large part of strategy becomes environmental in nature. Unfortunately, the environment tends not to stick to artificially determined administrative borders, but usually either goes beyond them or fails to reach them. Under these conditions it is essential to link the administrative bodies of regulation, control and management with the natural units involved. We find a similar situation with regard to major social and economic issues when new plans are being drafted. This need for administrative and planning ambits to be flexible enough to adapt to different natural and socio-economic units and to their changing nature is key if we are to arrive at plans that are ecologically more sustainable. This need not result in a proliferation of cascaded planning instruments (the Spanish planning system having been characterised to date by its hierarchical nature) but will probably mean that only two or at the most three levels need to be considered. This proliferation of plans from the general to the most specific is not only inflexible, but also leads to considerable administrative complications and major problems resulting from the need for verification at all points. Nor does it mean that these management units for planning will become just another component in the national or regional system of political organisation, but simply that, depending on the type of ambit, they should be coordinated with the organs of constitutional power —i.e. the new plans should not only have the usual content but also include the way for them to be managed, depending on both their territorial ambit and any socio-economic and environmental factors that may come into play.

4. Links between spatial and urban planning

According to the analyses carried out, another situation that needs addressing as a priority is the link between spatial and urban planning. With the importance of spatial planning being recognised in much of the legislation (particularly in the explanations of reasons for most of the regulations passed on the topic) it is odd to find so few spatial plans approved in the autonomous regions. Although the

causes are varied, there is a common denominator: the extraordinary breadth of the ambit in many cases and the highly ambitious objectives being aimed for by approving the corresponding planning instrument. The Spanish Land Act 1956 also featured a national plan that never came to fruition. Many regional spatial-planning instruments are thought of as if they were national plans corresponding to the region in question. Meanwhile, urban planning has been gradually reduced to the figure of the general plan (either under that name or other equivalents in different autonomous regions). The general plan, in essence, is concerned with delimiting urban and developable land but not with managing the entire local geographical as a scarce resource, taking into account its vocations, values and agricultural or urban-industrial rights. Furthermore, the general plan is an extremely heavy instrument that is virtually impossible to amend, particularly in major cities. As a result, most Spanish cities are limiting themselves to maintaining their general plans, most of which are far from new, operating with ad hoc planning changes that are often so major that they substantially change the image considered in the plan without considering the possible repercussions on the rest of the city and its area of influence. This situation, in both spatial and urban planning, is holding back the rational planning of our territories, which are being organised and built up in accordance more with private than collective interests. This lack of a global vision of the territory and the low level of public involvement in a process that they feel no part of, has made it impossible to address anything other than the short term. In order for the link between spatial and urban planning to work in even a vaguely consistent way, the whole system would have to be simplified, with spatial planning that is far more operational with some short-term determinations and other long term ones (the former mostly economic, related to the terms of each government and annual budgets, and the latter with limitations of an environmental nature), involving the need to review only certain parts of the plan and leaving the rest untouched, i.e. urban planning with a much more flexible review system than at present. Currently the part of urban planning that determines the content of the land-ownership rights (simply for legal safety) significantly penalises the chances of it being reviewing it any kind of streamlined way. Also, in order to achieve it there must be a greater degree of public involvement in the procedures of change and an information system that will allow the status of the city or territories affected to be analysed in real time, forecasting future trends and scenarios. In most cases the drafting of a general plan may take at least five or six years, from the data-collection stage (what is know as *urbanistic information*) until the plan is approved. Under these conditions, the starting data on which the plan was based will often no longer coincide with the real data. Spatial planning should have instruments that act as a bridge with urban planning, adapting local planning to determinations specified on a broader scale (covering an area of several municipal districts, an island or a region, as the case may be), since many of today's spatial issues and incidents extend beyond municipal limits and so should be more widely contextualised. Therefore, the new planning should contain short- and long-term determinations as well as urban-planning-related ones. There also appears to be a need for urban planning to disconnect the issue of determining the content of land-property rights from the question of shaping the future image of the city, with a far more flexible review system than at present (also linked to a new spatial-planning system containing some of the basic determinations of that planning).

5. Need to change the characteristics of the urban plan

In any event, urban planning, as it is considered in most of the autonomous regions, requires some in-depth changes. The first would be to differentiate between short- and long-term goals. The need to include something like strategic planning to define the major areas for building in the city is there even before we consider the needs to make the territory being planned more sustainable. It has even been given a name: *city plan*, *strategic urban plan*, *objectives plan* or *long-term urban planning*. Many sustainability targets (mostly global sustainability ones) are long- or very-long-term ones, and many of them are intended to reverse trends. This clashes head on with the current situation, in which urban plans are usually drafted with time horizons of four or eight years. However, it is also true that it often proves to be necessary to change certain characteristics of the plan, as circumstances change, while maintaining the final goals. That is why it would appear to be necessary for urban plans to have a core consensus with proposals based on horizons of 20-30 years and other determinations on a much shorter timescale. Of course, the characteristics of the review processes for the two parts ought to be different. This system would introduce flexibility into general planning, because at present review processes (particularly in major cities and metropolitan areas) are virtually impossible to undertake. It would also allow sustainability targets to be introduced, which is not easy to do in the short term. We should underline that these sustainability targets should basically refer to what is called *global sustainability* (such as climate change, for instan-

ce) and begin to differentiate clearly between purely environmental targets with internal repercussions on the actual community on the one hand, and broader sustainability ones with wider-ranging and even planetary repercussions. Everything would be much clearer to understand if references to global sustainability were linked to the footprint of ecological deterioration caused by the territory being planned and the need to reduce it. It would also mean more appropriate systems for public participation, basically focusing on long-term targets, while the more technical details of the short-term targets would correspond to the political interests of each four-year legislature. It would also be necessary for the plans themselves to include as a key part of their content what is currently termed ''strategic environmental assessment''. The environmental assessment necessary in Spain for the issue of an official environmental-impact declaration has fallen short of the original expectations. One of the reasons (among other important ones, as mentioned above) is that true integration of assessment into projects and plans such that it constitutes an integral part of them has never been brought about. This integration into the core long-term objectives and more specific actions of the moment is necessary in order to determine their implications for the territory being planned.

6. Monitoring the plan and territorial observatories

Another basic problem consists of monitoring the development of the plan, whether inside, outside or on the margin of the planning. Given the speed with which some territories are changing these days, this issue has become a key one. In many cases it is essential to turn to what are known as *territorial observatories*, which perform ongoing real-time monitoring of the evolution of the plan in relation to the changes occurring in the territory in question as a whole (municipal district, group of districts, island, etc.) and its built stock with all the attendant rights. These observatories should have a certain decision-making capacity regarding specific determinations, for which they would have directly links not only with political and social actors but also with society itself. These means finding ways to introduce means of social participation into them, so that the decisions made are not only technical ones. Their mission should probably not be limited to monitoring but also include within their remit an educational role, such that they are the bodies responsible for explaining the plan to the public, together with its progress and the consequences of taking certain decisions. This educational mission of the observatories would be a fundamental one to ensure that the public-participation process is more than merely superficial, as it is at present. They should have a certain amount of independence, because in many cases several municipal districts would fall within their ambit of action. The could also be set up as the official entities responsible not only for monitoring and managing the plans but also for drafting tem. They would also, by means of the relevant impact indicators obtained, perform continuous assessment of the specific measures taken to achieve the long-term objectives.

7. Public participation

Three changes have been indicated as being important in order to achieve more sustainable urban planning: at the administrative core responsible for planning, in the information system through territorial observatories or similar systems, and also in the forms of participation. Of these three, participation would appear to be the key element for achieving more sustainable planning. The investment in fostering participation would have to be prioritised, as is done with infrastructures... or events. This investment should be oriented towards organising campaigns and work groups to recover the loss of public awareness that has occurred in recent years owing to a number of factors, including the authorities' lukewarm interest in encouraging it. As well as recovering the major deficit in participatory culture based on incentivising public involvement in decision-making, instead of taking it away, as has occurred on several occasions. In short, the goal is to replace the reserved, elitist consensus of property *operations* with a broad, transparent consensus. Participation also needs an essential support: information. Participation in planning makes no sense at all without appropriate, reliable information. That is why permanent observation systems in the territories being planned —ones that work properly and engage with the public— are so important. However, even if adequate, reliable information may exist, alone it is not enough, because it is essential for the information to be conveyed to lay people in such a way that it can be readily understood. However, in many cases planning includes technical details that are difficult to turn into easily comprehensible ideas for non-technicians. That is why it is so important to have an interactive educational process between technicians and members of the public with no specific knowledge of urban planning. The bodies (or single body, as the case may be) responsible for drafting and monitoring the plan and observing the territory must also assume the task of education and dissemination of issues related to urban planning. This can be done in many ways, from conferences and courses to Internet forums and information si-

tes, but in any case a dissemination and education programme should be included as an integral part of the plan itself, regardless of whether *public information* in its purely legal sense is maintained. In this way the urban plan would take on quite a different dimension from its current one, to achieve something more than merely determining the content of land-ownership rights. In any case, either as proposed in previous approaches or via similar systems, public participation in the planning process should be included as yet another component of the plan.

8. Criteria for sustainability

As explained above, from the analysis of what is being done on this topic in the autonomous regions (and also what is not being done) in terms of legislation as well as with recommendations and manuals, the reports by external experts and the assessment of the working group itself, we can identify certain factors that should be considered in order to achieve more sustainable planning and about which there is a fairly broad consensus —regardless of the legal obligations and effects derived from legislation and sector environmental planning. Some of these factors have been set out above (e.g. public participation), but others can be turned into criteria or recommendations to be included in the corresponding regulations. These criteria or recommendations should be assessed by means of indicators adapted to the specific case of each territory, and established and agreed by means of a participatory process in which not only technicians are involved but society as a whole. Examples of these indicators can already be found in some autonomous regions.

Several of the sustainability criteria that should be considered in urban planning are more territorial in nature, but the proposal of the new plan as an intermediate system means that we must take them into consideration even though this report focuses on urban planning:

- Reorganisation of agricultural uses. Highly profitable agricultural land cannot continue to be devoted to urban development, and nor can hectares of non-irrigated land be converted into irrigated land by exhausting underground aquifers, often with disastrous consequences (e.g. for wetlands).

- Strengthening nearby peri-urban farming. Most traditional farming areas around Spain's major cities are disappearing, awaiting requalification to turn the farmland into urban land, and thereby giving it a speculative value that pushes aside its value for use as farmland.

- In some cases a return to traditional grazing should be made feasible. Spain's dehesas are a well-known example —semi-cleared woodland forming a natural anthropic ecosystem that has considerable advantages from the viewpoint of the sustainability of the territory.

- It is essential to reorganise the systems for distributing and marketing farming and livestock products, particularly the wholesale sector, with a view to avoiding as much as possible the inefficiency results from the long journeys of many products. This reorganisation could be strengthened by charging an ecological tax in proportion to the number of kilometres travelled by the product until it reaches the corresponding retail outlets.

- Converting degraded farming areas into forested areas. All land that has been abandoned for farming and livestock purpose because of its greater productivity usually ends up as scrubland and, depending on the circumstances, is highly prone to erosion, ultimately resulting in desertification. If to all this land we add the land that is uncultivated or has no plant cover, we can understand the need for reforestation. This is why some of the government and EU subsidies for uncompetitive farming should begin to be diverted to creating and maintaining forested areas setting up forested areas, which would also allow surplus farm labour to be relocated.

- Hinder use of the territory for tourism based on consuming the territory. Of the many kinds of tourism that may be found in today's society, the most difficult to manage are those that are based on contact with nature with certain non-anthropic values, especially because it is essential to maintain those values to make it sustainable. In general, the carrying capacity of the territory for a use of this type is very low, and nature tourism should never be the economic base of a region, but rather function as additional income. This can be achieved in many ways, but the simplest is by controlling access. Improved communications or accommodation capacity is not always beneficial for maintenance over time. In this regard, certain autonomous regions are making considerable progress in this regard, particularly the Canary and Balearic Islands.

Another set of criteria can be grouped by having a more urban nature, and they should form the central core of the city's strategic plan. Only those about which there is a true consensus in the doctrine, legislation or reports by the experts consulted have been included here.

- Significantly reduce land consumption. Several papers have reported on the growing consumption of urban land per inhabitant. This increase does not only occur because of an increase in the built area devoted to building housing or shops. It basically occurs because of the increase in the developed area necessary to provide these homes with services, particularly communications infrastructures and facilities for free time in the countryside. In general, we may say that part of the cause lies in the fact that most of the facilities and infrastructures are over-sized and poorly located. If we except the case of green areas, which is a special one (also dealt with in this report), a significant number of facilities must meet a set of conditions that are almost never considered: minimal, small, multipurpose, managed by the local people themselves and distributed throughout the urban fabric. And with regard to infrastructures: priority for collective transport with lanes for exclusive use and a combined high-speed/few-stops and low-speed/many-stops system; design of the road network for private transport based on off-peak times and never peak times; use of the subsoil of the city in case it is compact enough.

- Avoid sprawl. The current urban layout, based on the city sprawling over the territory and only possible because of private vehicles, is disastrous from the point of view of rationality. Long journeys (in kilometres but not necessarily in time) between home and work, shops and leisure venues, cannot be covered on foot or by bicycle, resulting in higher energy consumption, higher pollution, the use of more land and greater social and spatial segregation. To achieve this it appears to be necessary to change our planning, as explained above: a framework plan, a cross between spatial and urban planning, that allows clear, lasting limitations to be imposed and specifies land from land, but in a way that is more streamlined and less permanent than current spatial planning. This would lead to far more executive development planning, requiring ongoing knowledge of the environment and its evolution via a set of indicators agreed by the public and a permanent observatory.

- Complexify developed areas. It is now over 30 years since Christopher Alexander wrote a paper titled «A City is Not a Tree». His hypothesis referred to the branching organisation of cities that has traditionally been proposed by urban planners: a city with a hierarchical structure based on a strict separation of uses and made up of a cascading succession of centres and sub-centres that are responsible for distributing facilities, infrastructures and amenities *symmetrically* throughout the city. Opposed to this is the traditional organisation of the historical city, semi-reticulated, where each component could depend on several sets or subsets at once, giving rise to a much more flexible and efficient structure. Achieving complex cities with the current system of standards is difficult but it could be attempted by increasing both the number of interactions and the variety of the components. This is virtually impossible to achieve in a fragmented city. It could be claimed that if the entire urban area is considered as a whole then there is sufficient variety; it is simply a question of scale. Different facilities, different social classes and different types of housing can always be found within six, fifteen or twenty kilometres. This would be true if there were spaces for interaction that allowed the different to mix. But even in this case the simple costs of mobility in terms of the consumption of land and energy and increase in pollution are unsustainable.

- Control standards and densities. One of the most firmly rooted traditions in planning is that of standards. Throughout the history of urban development and planning a *corpus* has been built up that basically attempts to limit congestion and the voracity of developers attempting at any cost to grab hold of collective spaces. But we have arrived at a point where fixing only one limit (indiscriminately, too, rather than on a case-by-case basis) has perverted and exhausted resources, resulting in the inappropriate sizing and lack of use of spaces and infrastructures. The same thing occurs with densities. However, a number of plans or land laws are now in place in some autonomous regions that include maximum and minimum densities, making it possible for basic collective-transport infrastructures to be feasible, for example, or allowing amenities that are used sufficiently to be installed. It is essential for services and infrastructures to be sized for people to develop their capacities but also not to waste land or resources in doing so. Therefore, in most cases it will be necessary for standards and densities to have a range of values rather than only a minimum, as has been the case until now.

- Regenerate. Making maximum use of the existing city must be a priority goal. It is often alleged that the costs of regeneration are always higher than those of new building, but that is only because people fail to take into account higher fuel costs, greater pollution or the creation of new social networks derived from a larger developed area. To make optimal use of the existing city it is

usually essential to adapt it to improve its habitability conditions. And this adaptation must meet a new requirement that was not essential the last time we returned to the traditional city, in the 1970s: efficiency. In other words, buildings must of course be regenerated with effectiveness criteria (they must make it possible to lead a high-quality modern life), but they must also do so efficiently, by doing it with as little energy consumption and pollution as possible. If we wish to have more competitive cities this requirement is an essential one. Something that was not so clear back in the 1970s when people returned to the city centres has now become crucial. We can no longer regenerate like we did before, merely with criteria of effectiveness (and in many cases arguable ones at that) that must be accepted as given, because otherwise efficiency is impossible, but imposing regeneration with sustainability criteria, which are not only criteria for improving the local environment but are also ecological-footprint criteria, i.e. related to maintaining the planet. It is also necessary to increase the quality of the urban environment. We would be wrong to assume that adapting a home or office building to the times ends at the front door. The urban environment is increasingly seen as being a prolongation of private inhabited space. However, the concept of public space is changing very quickly, and it is very difficult to generalise about it. Perhaps all we can say about an issue such as this is that the most relevant concerns about public space are now related to public security. Addressing this problem is also necessary in order to achieve more sustainable cities and planning should include criteria of this type. In short: ecological regeneration of buildings and public space.

- Renovate parts of the city. In some cases regeneration is probably not the most appropriate solution. In certain buildings (including entire urban pieces) the best solution would be to demolish and rebuild. This may be the case, for example, with tower blocks built in outlying areas when it was necessary to house in cities thousands of immigrants arriving from other smaller towns or villages, where it is very difficult to meet the minimum levels necessary for the objectives of decent housing. Even so, we are talking here about consolidated, fully anthropised urban land, where the costs of returning it to the natural environment are generally greater than the benefits. In these cases all that can be done is to demolish and rebuild with sustainability criteria. As with regeneration, this involves a number of difficult operations where there is always he danger of regeneration actually meaning replacing complex social bodies with other *equal* ones, generally corresponding to social layers with more disposable income. Implementing an urban renewal or regeneration project properly calls for extreme care by planners and it would be an error to leave its management solely in the hands of builders or developers.

- Give priority to rented housing. The problem, which has been reported many times by different authors, is that much of Spain's savings are invested in real state products, leading part of the housing stock to be made up of unoccupied, locked-up homes. Putting many of these houses on the market, if possible for rent, would relieve the pressure on major sectors of territory that are currently being eyed by builders and developers. The authorities now seem to be moving forward in this respect, having tried unsuccessfully to lower housing prices while the 1998 Act was in effect, by increasing the amount of land classified as developable. However, the evolution of types of occupation would seem to allow us to be optimistic. If in 1970 rented housing accounted for 30 % of the 8,504,326 homes in the census, in 1981 it was only 20.8 % of the stock of 10,430,895, and in 1991 only 15.2 % of a total of 11,736,376. The need to increase the amount of rented housing is a basic one from a sustainable viewpoint, not only to make optimal use of all urban areas but also because of the problems of territorial fixing that are caused by home ownership. The discrepancy between mobility at work and residential immobility inevitably results in an increase in travel, much of it in private vehicles, as many studies have confirmed.

- Design with bioclimatic criteria. This is a very important criterion for achieving more efficient cities, not only because the planet cannot withstand the constant waste of resources, but also because it has been shown that human beings respond better to built elements that are in accordance with the environment where they are located than to ones that stand out from that environment. And, of course, also for simple criteria of urban hygiene that have been proven and put into practice in answer to the problems created by the cities of the Industrial Revolution. This demand can already be seen on both a national and regional scale, and even locally, as we can see from the approval of the Technical Building Code or Bioclimatic Bylaws by various local authorities in Spain. However, it would appear to be necessary for certain autonomous regions to act more firmly, as they are tending to fall behind on this issue. It is also the case that bioclimatic design should be applied not only to buildings but also to

urban spaces. In the design of pavements, squares or green areas environmental considerations are key to achieving more sustainable cities. In particular, in the case of green areas, their consideration as landscaped areas requiring constant regular care, the use of fertilisers, catering, pruning and pest-control systems should be reduced to the essentials minimum. Besides considerations of strict sustainability and the defence of the natural environment we must add maintenance costs, and rationality must prevail. It would seem to be necessary for this way of viewing green areas to be replaced with one that has more in common with forestry and self-maintenance criteria (as indeed some local authorities are doing).

9. Foster the efficient use of an oversized housing stock that generates unused homes and people without homes

It is not enough to appeal to *ecological* urban development and *bioclimatic* building when one of the main problems to be solved is the management of a low-quality, over-sized and inefficiently used housing stock that pitches unused homes against people without homes. This is by no means an easy problem to solve and it calls for measures of several different kinds. Some are quite obvious, such as strengthening social housing, not with new developments but by reusing the enormous stock of unoccupied or secondary properties and housing for this purpose. This will require housing needs and availability to be inventoried in order to properly plan and regulate the use of unoccupied or underused housing, establishing appropriate records to end with the current statistical vacuum regarding the use and status of the housing stock and rental market (covered only by information compiled during the census every ten years). These plans for the reuse of the underused property heritage should consider both regenerating and improving that stock and demolishing illegal buildings and those that are poorly adapted to users and the environment.

The success of these plans calls for an institutional framework and policies that, unlike those that have predominated to date, deactivate corruption and lawlessness, while promoting the regeneration and efficient use of the territory and built stock compared with new building. That opt for habitability over the quest for capital gains, architecture in accordance with the environment over the reigning universal style, rented housing over home ownership, social housing over the free market. In short, the aim should be to diversify both the property model and the financial model, opening up people's limited investment options, who to date have channelled their savings into building. Such changes in the institutional framework and policies clearly go beyond the field of urban and spatial planning, calling for firm support from all the authorities involved, which can only be achieved by means of a true national agreement or pact that affirms its priority at all levels.

10. The crisis of an unsustainable property model and the need to change it

It should be openly acknowledged that the serious recession in which Spain currently finds itself also reflects the exhaustion of the property model that led to it, the collapse of which has left in its wake a number of episodes of corruption and companies in administration that further underline the need for change. The speculative nature of this model has led to a major building boom, with high consumption of land, energy and materials clashing with the interests of economic dematerialisation and ecological sustainability. Meanwhile, the resulting territorial, urban and building order has also proved to be unsustainable and barely habitable, with sprawl overlapping with the underuse of an oversized, low-quality built stock.

In view of this, we cannot expect the current model to find the path of sustainability and habitability unless it is reoriented in that direction by the sui generis institutional model and the bulk of the policies and instruments that have given shape and supported it. The very limited options available under the current legal framework for central government to coordinate and reorient urban- and spatial-planning policies in favour of sustainability and habitability show that the urban model cannot be changed without a solid national agreement behind it, supported by all government departments and all policies and instruments, as mentioned above. Also, on this issue, the cooperation of the regional governments is essential, since without their agreement and efforts any even slightly rigorous planning would be quite unthinkable. To coordinate this support it would be necessary to prepare a transition strategy and a minimum protocol to install three essential support points in order for the necessary conversion towards sustainability and habitability to be able to prosper: a responsible administrative core, an information and monitoring system, and a process of public participation and involvement interacting with the former two points. The preparation of this transition strategy, with its various plans and instruments, falls outside the scope of this report, which focuses on urban planning. But we should underline that the measures to which such a strategy should turn would include tax and budgetary policies, which should condition taxation and public funding in compliance with the minimum protocol by the authorities involved, thereby compensating for the central government's inability to fix criteria related to urban and spatial planning.

Annex I. List of criteria for sustainability

1. Criteria for action in the city surroundings

1.0. *Preserve, maintain and protect the natural capital*

- 1.01. Preserve existing ecosystems (natural and artificial)
- 1.02. Respect and integrate into the territory
- 1.03. Connect the various protected areas
- 1.04. Respect the landscape
- 1.05. Conserve the land (reduce consumption and preserve its productivity)
- 1.06. Give priority to local production

2. Criteria for action in urban areas

2.0. *Define a more sustainable urban structure and model*

- 2.01. Complexify land uses
- 2.02. Foster urban compactness (density, constructability, etc.)
- 2.03. Foster polycentrism

2.1. *Foster more sustainable use of the built stock*

- 2.11. Foster intensive and efficient use of the built stock
- 2.12. Favour rehabilitation (over new building)
- 2.13. Adopt bioclimatic criteria for urban development and building
- 2.14. Foster the diversity of housing types
- 2.15. Complexify the uses of buildings

2.2. *Foster the diversity, quality and versatility of urban public spaces*

- 2.21. Eliminate architectural barriers
- 2.22. Design multifunctional, legible spaces
- 2.23. Apply bioclimatic criteria to open spaces
- 2.24. Incorporate multipurpose urban furniture
- 2.25. Reduce typologies that favour the privatisation of open spaces

2.3. *Favour access to nature (green areas)*

- 2.31. Define a minimum size for green areas (per person, home, etc.)
- 2.32. Define criteria for the form and minimum size of green areas
- 2.33. Foster biodiversity
- 2.34. Introduce green networks on neighbourhood and city scales
- 2.35. Favour public access to green areas
- 2.36. Incorporate trees and plants into public spaces
- 2.37. Connect different green areas ecologically

2.4. *Improve access to facilities*

- 2.41. Define an appropriate supply of public facilities and services
- 2.42. Foster proximity to amenities and facilities

3. Criteria for action on transport

3.0. *Shorten distances*

- 3.01. Associate home with work
- 3.02. Establish logistics platforms for distribution in each neighbourhood
- 3.03. Reserve spaces for the sale of local products
- 3.04. Reduce the infrastructures necessary for the city to function

3.1. *Strengthen non-motorised means of transport*

- 3.11. Integrate pedestrian and cycling networks with green areas
- 3.12. Increase the space available for pedestrians
- 3.13. Build pedestrian and cycling neighbourhood networks
- 3.14. Make bicycle-parking spaces available
- 3.15. Integrate bicycles with public transport

3.2. *Reduce private motor traffic by strengthening public transport*

- 3.21. Establish an appropriate supply of public transport on an urban scale
- 3.22. Build integrated transit networks
- 3.23. Reduce the speed of private motor traffic
- 3.24. Reduce the area devoted to private vehicles
- 3.25. Restrict the use of private vehicles
- 3.26. Limit parking spaces for private vehicles

4. Criteria for action on resources

4.0. *Optimise and reduce energy consumption*

- 4.01. Foster energy savings and efficiency
- 4.02. Adapt the urban morphology to bioclimatic conditions
- 4.03. Make use of sunlight and wind for housing and outdoor spaces.
- 4.04. Urban structures compatible with central-heating systems
- 4.05. Foster the use of renewable energy sources
- 4.06. Foster local energy production

4.1. *Optimise and reduce water consumption*

- 4.11. Reduce losses from mains networks
- 4.12. Foster building types with lower water demands
- 4.13. Foster efficient irrigation and watering systems
- 4.14. Incentivise rainwater collection systems in buildings
- 4.15. Use systems to retain and filter rainwater
- 4.16. Treat and recover natural watercourses
- 4.17. Foster the use of permeable paving

4.2. *Minimise the impact of building materials*

- 4.21. Reduce earthworks
- 4.22. Foster the use of local materials
- 4.23. Use building techniques that facilitate reuse
- 4.24. Foster the use of easily recyclable materials
- 4.25. Foster the shared use of service networks

5. Criteria for action on waste

5.0. *Reduce waste*

- 5.01. Foster selective collection and separate sewerage networks
- 5.02. Users' proximity to collection systems
- 5.03. Promote reserves for composting and plant-waste processing
- 5.04. Use systems to reuse wastewater
- 5.05. Foster recycling and reuse

5.1. *Manage waste to reduce its impact*

- 5.11. Make hazardous-waste treatment compulsory
- 5.12. Management of building and demolition waste
- 5.13. Build environmentally non-aggressive treatment systems
- 5.14. Reduce pollutant emissions and dumping

6. Criteria for action on social cohesion

6.0. *Favour the cohesion of the social fabric and prevent exclusion*

- 6.01. Foster grassroot movements
- 6.02. Reserve spaces for non-profit entities
- 6.03. Foster social complexity
- 6.04. Foster people's identification with their surroundings (cultural heritage)
- 6.05. Favour access to housing

6.1. *Complexify the social fabric*

- 6.11. Foster a mix of uses in each neighbourhood
- 6.12. Improve the supply of and access to services and facilities in each neighbourhood
- 6.13. Incentivise economic exchange with the rural areas
- 6.14. Promote a minimum percentage of proximity activities
- 6.15. Incentivise activities that favour a diversity of uses

7. Criteria for action on governance

7.0. *Foster administrative transparency*

- 7.01. Provide access to information (including technical data and reports)
- 7.02. Provide channels for the two-way flow of information
- 7.03. Establish procedures for cooperation between administrative bodies

7.1. *Favour citizens' capacity building*

- 7.11. Devise specific educational materials
- 7.12. Organise courses, workshops and debates on urban planning
- 7.13. Foster environmental education and awareness-building
- 7.14. Support the preparation of Agenda 21 programmes

7.2. *Integrate participation into planning*

- 7.21. In the diagnosis process
- 7.22. In strategic decision-making
- 7.23. In drafting the plan
- 7.24. In approving the plan
- 7.25. In the process of monitoring and supervising the plan
- 7.26. Integrate Agenda 21 programmes into planning

Annex II. Assessment of normative framework

Legislation examined

España

Real Decreto legislativo 2/2008, de 20 de junio, por el que se aprueba el texto refundido de la ley de suelo.
Real Decreto 2159/1978, de 23 de junio, por el que se aprueba el Reglamento de Planeamiento Urbano.
Real Decreto 2187/1978, de 23 de junio, por el que se aprueba el Reglamento de Disciplina Urbanística para el desarrollo de la Ley sobre Régimen del Suelo y Ordenación Urbana.
Real Decreto 3288/1978, 25 agosto, que aprueba el Reglamento de Gestión Urbanística.
Ley 10/2003, de Medidas Urgentes de Liberalización en el Sector Inmobiliario y Transportes.
Real Decreto legislativo 1/2008, , de 11 de enero, por el que se aprueba el texto refundido de la Ley de Evaluación de Impacto Ambiental de proyectos.
Ley 9/2006, sobre evaluación de los efectos de determinados planes y programas en el medio ambiente.
Ley 42/2007, del Patrimonio Natural y de la Biodiversidad.
Real Decreto 2066/2008, de 12 de diciembre, por el que se regula el Plan Estatal de Vivienda y Rehabilitación 2009-2012.
Real Decreto 47/2007, por el que se aprueba el Procedimiento básico para la certificación de eficiencia energética de edificios de nueva construcción.
Real Decreto 314/2006, de 17 de marzo, por el que se aprueba de Código Técnico de la Edificación.
Ley 38/1999, de Ordenación de la Edificación.
Ley 45/2007, para el desarrollo sostenible del medio rural.
Ley 27/2006, por la que se regulan los derechos de acceso a la información, de participación pública y de acceso a la justicia en materia de medio ambiente.
Ley 30/1992, de Procedimiento Administrativo.

Andalucía

Ley 7/2002, de Ordenación Urbanística.
Ley 1/2006, de modificación de la Ley 7/2002, de 17 de diciembre, de Ordenación Urbanística.
Ley 1/1994, de Ordenación del Territorio.
Decreto 225/2006, por el que se aprueba el Reglamento de Organización y Funciones de la Inspección de Ordenación del Territorio, Urbanismo y Vivienda.
Ley 7/2007, de Gestión Integrada de la Calidad Ambiental.
Ley 8/2003, de la flora y la fauna silvestres.
Ley 2/1989, por la que se aprueba el inventario de Espacios Naturales Protegidos.
Ley 13/2005, de Medidas para la Vivienda Protegida y el Suelo.
Ley 2/2007, de fomento de las energías renovables y del ahorro y eficiencia energética.

Aragón

Ley 1/2008, de 4 de abril, por la que se establecen medidas urgentes para la adaptación del ordenamiento urbanístico a la Ley 8/2007, de 28 de mayo, de suelo, garantías de sostenibilidad del planeamiento urbanístico e impulso a las políticas activas de vivienda y suelo en la Comunidad Autónoma de Aragón.
Ley 5/1999, de 25 de marzo, urbanística.
Ley 11/1992, de 24 de noviembre, de ordenación del territorio de Aragón.
Ley 1/2001, de 8 de febrero, del Gobierno de Aragón, de modificación de la Ley 11/1992, de 24 de noviembre,de Ordenación del Territorio.
Ley 7/1998, de 16 de julio, por el que se aprueban las Directrices Generales de Ordenación Territorial para Aragón.
Ley 7/2006, de 22 de junio, de protección ambiental de Aragón.

Ley 8/2004, de 20 de diciembre, de medidas urgentes en materia de medio ambiente.
Ley 9/2004 , de 20 de diciembre, de reforma de la Ley 24/2003, de 26 de diciembre, de medidas urgentes de política de vivienda protegida.
Ley 24/2003, de 26 de diciembre, de medidas urgentes de política de Vivienda Protegida.
Ley 30/2002 de protección civil.
Ley 4/2004.

Asturias

Decreto 1/2004 de Asturias, por el que se aprueba el Texto Refundido de las disposiciones legales vigentes en materia de ordenación del territorio y urbanismo.
Ley 2/2004 de Asturias, de medidas urgentes en materia de suelo y vivienda.
Decreto 278/2007, de 4 de diciembre, por el que se aprueba el Reglamento de Ordenación del Territorio y Urbanismo del Principado de Asturias.
Decreto 92/2005, por el que se aprueba el Reglamento en materia de Vivienda de la Ley del Principado de Asturias 2/2004, de 29 de octubre, de Medidas Urgentes en Materia de Suelo y Vivienda.
Ley 5/1991, de proteccion de los espacios naturales.
Ley 3/2004, de montes y ordenación forestal. Rectificación de errores.
Ley 6/2002, de 18 de junio, sobre protección de los ecosistemas acuáticos y de regulación de la pesca en aguas continentales.
Ley 2/1993, de pesca maritima en aguas interiores y aprovechamiento de recursos marinos.
Ley 2/1989, de caza.
Ley 8/2006, de carreteras.

Baleares

Ley 8/2003 de Baleares, de Medidas Urgentes en Materia de Ordenación Territorial y Urbanismo en las Illes Balear.
Ley 14/2000 de Baleares, de ordenación territorial.
Ley 4/2008 de Baleares, de medidas urgentes para un desarrollo territorial sostenible en las Illes Balears.
Ley 10/1989 de Baleares, de sustitución del Planeamiento Urbanístico Municipal.
Ley 6/1999 de Baleares, de las Directrices de Ordenación Territorial de las Illes Balears y de Medidas Tributarias.
Ley 2/1992 de Baleares, de modificación de la disposión final primera de la Ley 10/1990, de 23 de octubre de disciplina urbanística.
Ley 10/1990 de Baleares, de disciplina urbanística de las Illes Balears.
Ley 6/1997 de Baleares, del suelo rústico de las Islas Baleares.
Ley 11/2006 de Baleares, de evaluaciones de impacto ambiental y evaluaciones ambientales estratégicas en las Illes Balears.
Decreto 123/2002 de Baleares, sobre la implantació de l'Agenda Local 21 als municipis de les Illes Balears.
Ley 5/2005 de Baleares, para la conservación de los espacios de relevancia ambiental (LECO).
Ley 1/2000 de Baleares, de modificación de la Ley 1/199 1, de 30 de enero, de Espacios Naturales, por la que se amplía el ámbito de algunas áreas de especial protección.
Ley 1/1991 de Baleares, de Espacios naturales y de regimen urbanístico de las Áreas de Especial protección de las Isalas Baleares.
Decreto Ley 1/2007, de medidas cautelares hasta la aprobación de normas de protección de áreas de especial valor ambiental para las Illes Balears valor ambiental para las Illes Balears,.
Ley 7/1992 de Baleares, de Modificacion de determinados articulos de la Ley 1/1991, de 30 de Enero, de Espacios naturales y de Regimen urbanistico de las areas de Especial proteccion de las Islas baleares.
Ley 2/2005, de comercialización de estancias turísticas en viviendas.
Decreto 35/2001, por el que se establecen medidas reguladoras del uso y mantenimiento de los edificios.
Decreto 2/1996, Regulación de capacidades de población en los instrumentos de planeamiento general y sectorial, que implanta un nuevo parámetro para control de capacidades de población.
Ley 6/1993, sobre adecuación de las Redes de Instalaciones a las condiciones Histórico-ambientales de los núcleos de población, que establece medidas sobre las infraestructuras en los ámbitos urbanos con valores paisajísticos.

Canarias

Decreto 1/2000 de Canarias, por el que se aprueba el Texto Refundido de las Leyes de Ordenación del Territorio de Canarias y de Espacios Naturales de Canarias.
Ley 19/2003 de Canarias, por la que se aprueban las Directrices de Ordenación General y las Directrices de Ordenación del Turismo de Canarias.
Ley 11/1990 de Canarias, de prevención del impacto ecológico.
Ley 4/2008 de Canarias, 12 noviembre, por la que se introduce en la legislacion canaria sobre evaluacion ambiental de determinados proyectos la obligatoriedad del examen y analisis ponderado de la alternativa cero.
Decreto 35/1995 de Canarias, por el que se aprueba el Reglamento de contenido ambiental de los instrumentos de planeamiento.
Ley 2/2003, de 30 de enero, de Vivienda de Canarias.
Decreto 138/2007, de 24 de mayo, por el que se establece el régimen de adjudicación de las viviendas protegidas de promoción pública de titularidad del Instituto Canario de la Vivienda.
Ley 1/2006, de 7 de febrero, por la que se modifica la Ley 2/2003, de 30 de enero, de Vivienda de Canarias.
Ley 1/2001, sobre construcción de edificios aptos para la utilización de energía solar.

Cantabria

Ley 2/2001 de Cantabria, de Ordenación Territorial y Régimen Urbanístico del Suelo de Cantabria.
Ley 2/2003, de Establecimiento de Medidas Cautelares Urbanísticas en el Ámbito del Litoral y Creación de la Comisión Regional de Ordenación del Territorio y Urbanismo.
Ley 5/2002, de medidas cautelares urbanísticas en el ámbito del litoral, de sometimiento de los instrumentos de planificación territorial y urbanística a evaluación ambiental y de régimen urbanístico de los cementerios.
Ley 2/2004, del Plan de Ordenación del Litoral.
Ley 17/2006, de Control Ambiental Integrado.
Ley 4/2006, de Conservación de la Naturaleza de Cantabria.
Ley 2/2002, de Saneamiento y Depuración de las Aguas Residuales.
Ley 4/2000, de Modernización y Desarrollo Agrario.
Ley 10/1998, de Residuos.
Ley 3/2006, del Patrimonio de la Comunidad Autónoma de Cantabria.

Castilla-La Mancha

Decreto Legislativo 1/2004 por el que se aprueba el Texto Refundido de la Ley de Ordenación del Territorio y de la Actividad Urbanística.
Ley 12/2005, de modificacion del decreto legislativo 1/2004.
Ley 7/2005, de modificacion del decreto legislativo 1/2004.
Decreto 248/2004 por el que se aprueba el reglamento de planeamiento.
Decreto 242/2004, por el que se aprueba el reglamento de suelo rústico (decreto 242/2004).
Ley 4/2007, de evaluación ambiental.
Ley 9/1999, de conservación de la naturaleza.
Ley 9/2007, por la que se modifica la ley 4/1990, de 30 de mayo, de patrimonio histórico.
Ley 3/2008, de montes y gestión forestal sostenible.
Ley 2/2002, por la que se establecen y regulan las diversas modalidades de viviendas de protección publica.
Ley 12/2002, reguladora del ciclo integral del agua.
Ley 4/2004, de la explotación agraria y del desarrollo rural.

Castilla-León

Ley 4/2008, de medidas sobre urbanismo y suelo.
Ley 5/1999, de Urbanismo.
Ley 10/1998, de Ordenación del Territorio.
Ley 14/2006, de modificación de la Ley 10/1998, de 5 de diciembre, de Ordenación del Territorio.
Ley 3/2008, de aprobación de las Directrices Esenciales de Ordenación del Territorio.
Ley 11/2003, de Prevención Ambiental.

Ley 8/2007, de Modificación de la Ley 11/2003, de 8 de abril, de Prevención Ambiental.
Ley 3/2005, de Modificación de la Ley 11/2003 de Prevención Ambiental.
Ley 5/1994, de Fomento de Montes Arbolados.
Ley 6/1992, de regulación y protección de los ecosistemas acuáticos.
Ley 9/2008, de modificación de la Ley 6/1992, de 18 de diciembre, de Protección de los Ecosistemas Acuáticos y de Regulación de la Pesca.
Ley 8/1991, de espacios naturales.
Decreto 22/2004, de 29 enero 2004. Aprueba el Reglamento de Urbanismo
DECRETO 68/2006, de 5 de octubre, por el que se modifica el Decreto 22/2004, de 29 de enero, por el que se aprueba el Reglamento de Urbanismo

Cataluña

Decreto 1/2005 de Cataluña, pel qual s'aprova el Text refós de la Llei d'urbanisme.
Ley 23/1983, de Política Territorial **L 23/1983**.
Ley 1/1995, por la que se aprueba el Plan Territorial General de Cataluña.
Decreto Ley 1/2007, de 16 de octubre, de medidas urgentes en materia urbanística. Adaptación a la Ley del suelo estatal Ley 8/2007, de 28 de mayo, de suelo.
Decreto 305/2006, de 18 de julio, por el que se aprueba el Reglamento de la Ley de urbanismo.
Ley 10/2004, de 9 de diciembre, de la Generalitat, del Suelo No Urbanizable.
Ley 4/2004, de 1 de julio, reguladora del proceso de adecuación de las actividades de incidencia ambiental a lo establecido en la Ley 3/1998, de 27 de febrero, de la intervención integral de la Administración ambiental.
Ley 3/1998, de 27 de febrero, de la Intervención Integral de la Administración Ambiental.
Ley 13/2001, de 13 de Julio, de modificación de la Ley 3/1998 de 27 de Febrero , de la Intervención Integral de la Administración Ambiental.
Decreto 343/2006, por el que se desarrolla la Ley 8/2005, de 8 de junio, de protección, gestión y ordenación del paisaje, y se regulan los estudios e informes de impacto e integración paisajística.
Ley 8/2005, de protección, gestión y ordenación del paisaje.
Ley 6/1988, forestal de Catalunya.
Ley 12/1985, de espacios naturales.
Ley 2/1983, de Alta Montaña.
Ley 18/2007, del dret a l'habitatge.
Ley 2/2004, de 4 de junio, de mejora de barrios, áreas urbanas y villas que requieren una atención especial.
Decret 369/2004, de 7 de setembre, pel qual es desenvolupa la Llei 2/2004, de 4 de juny, de millora de barris, àrees urbanes i viles que requereixen atenció especial
Ley 20/1991, de 25 de noviembre, de promoción de la accesibilidad y supresión de barreras arquitectónicas.
Ley 9/2003, de movilidad.

Extremadura

Ley 15/2001, de de 14 de diciembre, del Suelo y Ordenación Territorial de Extremadura,.
Ley 12/2001, de 15 de noviembre, de caminos públicos de Extremadura.
Ley 8/1998, de 26 de junio de conservación de la Naturaleza y de los espacios naturales de Extremadura.
Ley 9/2006 de 23 de diceimbre, por la que se modifica la ley 8/1998, de 26 de junio, de conservación de la natrualeza, y espacios naturales de extremadura.
Ley 3/2001, de 26 de Abril, de calidad, Promoción y acceso a la Vivienda en Extremadura,.
Ley 3/1995, de 6 de abril, de fomento de las vivienda en Exrtemadura.
Ley 2/1997, de 20 de marzo,de Turismo en Extremadura,.
Ley 6/1992, de 26 de noviembre de Fomento de la Agricultura Ecológica, Natural y Extensiva.

Galicia

Ley 9/2002, de ordenación urbanística y protección del medio rural.
Ley 15/2004, de modificación de la Ley 9/2002, de ordenación urbanística y protección del medio rural.
Ley 10/1995, de ordenación del territorio.
Ley 6/2007, de medidas urgentes en materia de ordenación del territorio y del litoral.
Decreto 28/1999, por el que se aprueba el Reglamento de disciplina urbanística.

Ley 1/1995, de protección ambiental.
Ley 10/2008, de residuos.
Ley 9/2001, de conservación de la naturaleza.
Ley 5/2006, para a protección, a conservación e a mellora dos ríos galegos.
Ley 18/2008, de vivienda.
Ley 7/2008, de protección da paisaxe.
Ley 7/2007, de conservación da superficie agraria útil e do Banco de Terras.

Madrid

Ley 9/2001 de Madrid, del Suelo de la Comunidad de Madrid. (Incluye: Ley 2/2005 de Madrid, de modificación de la Ley 9/2001, del Suelo de la Comunidad de Madrid).
Ley 9/1995 de Madrid, de Medidas de Política Territorial, Suelo y Urbanismo.*parcialmente derogada por la Ley 9/2001, de 17 de julio, del Suelo de la Comunidad de Madrid.
Decreto 92/2008 de Madrid, de 10 de julio, del Consejo de Gobierno, por el que se regulan las modificaciones puntuales no sustanciales de Planeamiento Urbanístico.
Ley 2/2002 de Madrid, de Evaluación Ambiental de la Comunidad de Madrid.
Ley 10/1991 de Madrid, Protección del Medio Ambiente.
Ley 16/1995 de Madrid, Forestal y protección de la naturaleza.
Ley 7/1990 de Madrid, de protección de embalses y zonas húmedas de la Comunidad Autónoma de Madrid.
Decreto 11/2005, de 27 de enero, por el que se aprueba el Reglamento de Viviendas con Protección Pública de la Comunidad de Madrid.
Ley 2/1999 de Madrid, , de 17 de marzo, de Medidas para la Calidad de la Edificación.
Ley 7/2000 de Madrid, 19 junio. de Rehabilitación de Espacios Urbanos Degradados y de Inmuebles que deban ser objeto de preservación.
Ley 8/1998 de Madrid, Vías pecuarias de la Comunidad de Madrid.

Murcia

Decreto Legislativo 1/2005 por el que se aprueba el texto refundido de la Ley del Suelo de la Región de Murcia.
Ley 4/1992 de Murcia, ordenación y protección del territorio de la Región de Murcia.
Ley 1/1995 de Murcia, Protección del Medio Ambiente de la Región de Murcia.
Ley 13/2007 de Murcia, modificación de la Ley 1/1995, de 8 de marzo, de Protección del Medio Ambiente de la Región de Murcia, y de la Ley 10/2006, de 21 de diciembre, de Energías Renovables y Ahorro y Eficiencia Energética de la Región de Murcia, para la Adopción de Medidas Urgentes en Materia de Medio Ambiente.
Ley 7/1995 de La Fauna Silvestre, Flora y Pesca Fluvial.
Ley 8/2005,de 14 de diciembre, para la calidad en la Edificación de la Región de Murcia.
Decreto 80/2001 de Murcia, por el que se regula el Libro del Edificio en la Región de Murcia.
Ley 5/1995, de 7 de abril, de condiciones de habitabilidad en edificios de viviendas y de promoción de la accesibilidad general.
Ley 3/1987 protección y armonización de usos del mar menor.
Decreto 7/1993 sobre protección de aguas de ecosistemas interiores.

Navarra

Ley Foral 35/2002, de 20 de diciembre, de ordenación del territorio y urbanismo.
Ley Foral 24/1998, de 30 de diciembre. de medidas urgentes en materia de aprovechamiento urbanístico.
Ley Foral 17/2003, de 17 de mayo, de desarrollo rural de Navarra.
Ley foral 4/2005, DE 22 DE marzo, de intervención para la protección ambiental.
Ley foral 6/1987,de 10 de abril de 1987, de normas urbanísticas regionales para la protección y uso del territorio.
Ley Foral 2/1993, de 5 de marzo, de protección y gestión de la Fauna Silvestre y sus Hábitats.
Ley Foral 5/1998,de 27 de Abril, de modificación de la Ley Foral 2/1993, de 5 de marzo de Protección y Gestión de la Fauna Silvestre y sus Hábitats.
Ley Foral 9/2008, de 30 de mayo, del derecho a la vivienda en Navarra.

Ley foral 8/2004, de 24 de junio, de protección pública a la vivienda en navarra.

La Rioja

Ley 5/2006, de 2 de mayo, de Ordenación del Territorio y Urbanismo de La Rioja.
Normas Urbanísticas Regionales, 1978.
Decreto 111/2007, de 31 de agosto, por el que se modifica el Decreto 126/2003, de 19 de diciembre, por el que se regulan las competencias, funcionamiento y composición del Pleno y de la Comisión Permanente de Ordenación del Territorio y Urbanismo.
Ley 5/2002, de 8 de octubre, de Protección del Medio Ambiente de La Rioja.
Ley 4/2003, de 26 de marzo, de Conservación de Espacios Naturales de La Rioja.
Ley 5/2003, de 26 de marzo, reguladora de La Red de Itinerarios Verdes de La Rioja.
Ley 3/2000, de 19 de junio, de desarrollo rural de la Comunidad Autónoma de La Rioja.
Ley 8/2002, de 18 de octubre, de Vitivinicultura de La Rioja.
Ley 2/1995, 10 febrero, de Protección y Desarrollo del Patrimonio Forestal de La Rioja.
Ley 2/2007 de La Rioja, de 1 de marzo, de Vivienda de la Comunidad Autónoma de La Rioja.
Ley 2/2006, de 28 de febrero, de Pesca de La Rioja.

Comunidad Valenciana

Decreto-ley 1/2008, del 27 de junio, de medidas urgentes para el fomento de la vivienda y el suelo.
Ley 4/2004, de 30 de Junio, de la Generalitat ,de la Ordenación del Territorio y de la Protección del Paisaje.
Ley 16/2005, de 30 de diciembre, de la generalitat, urbanística valenciana.
Ley 10/2004, de diciembre. de la Generalitat, del Suelo no urbanizable.
Ley 2/2001, de 11 de mayo, de Creación y Gestión de Áreas Metropolitanas de la Comunidad Valenciana.
Ley 5/2004, de 13 de Julio, de la Generalitat, de modificación de la Ley 2/2001, de 11 de Mayo, de Creación y Gestión de áreas metropolitanas de la comunidad valenciana.
Ley 2/1989, de 3 de marzo, de Impacto Ambiental.
Ley 2/2006, de 5 de mayo de Prevención de la Contaminación y Calidad Ambiental Ley 2/2006.
Ley 3/2004, de 30 de junio, de la Generalitat , de Ordenación y Fomento de la Calidad de la edificación (LOFCE).
Ley 8/2004, de 20 de Octubre, de la Generalitat ,de la Vivienda de la Comunidad Valenciana.
Ley 2/1997, de 13 de junio, de la Generalitat Valenciana, de modificación de la Ley de Generalitat Valenciana 4/1992, de 5 de junio, de suelo no urbanizable respecto al régimen de parcelación y de construcción de viviendas aisladas en el medio rural l2/2001, de 11 de Mayo, de Creación y Gestión de áreas metropolitanas de la comunidad valenciana.
Ley 9/2006, de 5 de diciembre de 2006,reguladora de los campos de golf en la comunidad valenciana.
Ley 1/1991, de 14 de febrero, de ordenación de transporte metropolitano del área de valencia.
Ley 9/2000 , de 23 de noviembre, de constitución de la entidad pública de transporte metropolitano de Valencia.

País Vasco

Ley 2/2006 de País Vasco, Suelo y Urbanismo.
Decreto 105/2008 de País Vasco, de 3 de junio, de Medidas urgentes en desarrollo de la Ley 2/2006, de 30 de junio, de Suelo y Urbanismo.
Ley 4/1990 de País Vasco, Ordenación del territorio del País Vasco.
Decreto 28/1997 de País Vasco, por el que se aprueban definitivamente las Directrices de Ordenación Territorial de la Comunidad Autónoma del País Vasco.
Decreto 183/2003 de País Vasco, por el que se regula el procedimiento de evaluación conjunta de impacto ambiental.
Ley 1/2005 de País Vasco, Prevención y corrección de la contaminación del suelo.
Ley 16/1994 de País Vasco, conservación de la naturaleza del País Vasco.
Ley 3/1998 de País Vasco, General de protección del medio ambiente del País Vasco.
Ley 1/2006 de País Vasco, de Aguas.
Ley 10/1998 de País Vasco, de Desarrollo Rural.

Results of assessment

Criteria for action in the city surroundings

1.0 Preserve, maintain and protect the natural capital

1.01. ***Preserve existing ecosystems (natural and artificial)***

This criterion has been considered for cases in which specific reference is made to natural environments, habitats for natural species, ecological values, biodiversity and ecosystems in general. In Asturias, Cantabria, Catalonia and Rioja this point includes any mention of «environmental conservation» or «environmental protection» without being any more specific, so these have been reviewed in parallel.

1.02. ***Respect and integrate into the territory***

The few cases making reference to topography or hydrography as questions to be taken into account for management of the territory or urban growth in particular have been considered, as have those that specifically mention integration into the territory. In some cases allusions to integration, despite seeming to be related more to infrastructures than to the land itself, have also been included (as is the case in Spain, the Balearic Islands, the Canary Islands, the Madrid Region, the Murcia Region, the Basque Country, Aragon, Extremadura, Navarre and the Valencia Region).

1.03. ***Connect the various protected areas***

Besides specific references to *connecting* different protected spaces, questions related to *livestock trails*, which are very important in Spain, have also been included. Given the possibility that confusion could arise over *Connect different green areas ecologically* criterion (corresponding to *Favour access to nature (green areas)* section), both criteria have been reviewed in parallel.

1.04. ***Respect the landscape***

Any reference to the landscape, including those to natural monuments, to *picturesque values* and aesthetics in general, whether in a natural or urban landscape. There is considerable diversity, with some very generic articles and other more specific ones.

1.05. ***Conserve the land (reduce consumption and preserve its productivity)***

The references are almost invariably to protecting land from pollution (together with *Reduce pollutant emissions and dumping* criterion corresponding to the *Manage waste to reduce its impact* section) and erosion, via forestry or farming uses or simply by conserving vegetation. Also includes any mentions, in general somewhat dubious ones, from which a reduction in land consumption could be reduced. Mainly in Spain, the Balearic Islands, the Canary Islands, the Madrid Region, the Murcia Region and the Basque Country.

1.06. ***Give priority to local production***

Refers to any mention of protecting, subsidising or fostering traditional economic uses in the territory, and specifically traditional activities around protected spaces.

Discussion

In general we find that there is a clear disparity of ways in which this criterion is considered. As it is closely related to purely environmental issues (and more specifically to the consideration of protected areas), national legislation has more to say on the topic, under the corresponding minimal competencies. However, in some regions —the Balearic and Canary Islands, the Madrid Region and the Basque Country, in particular— the topic is dealt with in considerable depth. Of the six specific criteria, those in which interest is lowest are *connecting the different protected areas* and *favouring local production*, both of which are of great importance if sustainable territories and societies are to be achieved. In particular, attention should be paid to the European Union's recommendation for the few European areas that have barely been anthropised yet not to be left isolated as independent relicts. The question of local production is equally important in order to avoid the excessive displacement of materials and goods, leading to excessive consumption and pollution differentials.

With regard to the criterion on *respect for the landscape*, virtually all the Spanish regions address it via their urban-planning or impact-assessment legislation, and in hardly any cases (Catalonia and the

Valencia Region being the only exceptions) has any specific legislation on this been enacted. However, the current situation is only temporary, because ratification of the European Landscape Convention has led many of the regions to begin to draft their own specific laws.

There are also very few references to *respect and integration in the territory* (despite the flexibility with which this indicator has been considered), with considerable attention being paid to the preservation of existing ecosystems. This is probably due to the leftover effects of the former Natural Space Conservation Act 1989 (now replaced by the Natural Heritage and Biodiversity Act 2007), which has done so much to preserve Spain's natural heritage. In many cases, this Act, and in particular Natural Resources Plans, have been the only limit reining in the uncontrolled growth of the urban-development process. The scant attention paid to natural and human risks (a key component of this criterion) is surprising, particularly the question of flood-prone areas, which ought to be a primary-level conditioning factor in the drafting of planning.

Another criterion of great interest that is barely reflected in the legislation is the one on *soil conservation* (except in the Balearic and Canary Islands and the Basque Country). In a country where the process of desertification advances year after year, with the added circumstance of climate change worsening the problem, the few legislative references found on this matter came as something of a surprise, and those that are in place tend to be too generic. And as for the need to reduce developable land, indirect mentions can be found on regeneration and on fixing not only maximum but minimum densities to allow a certain urban population concentration and make urban facilities and collective-transport systems socially and economically viable.

Criteria for action in urban areas

2.0 Define a more sustainable urban structure and model

2.01. ***Complexify land uses***

This places the attention on any reference to making the land uses diverse or to imposing a minimum land space reserved for *compatible uses*.

2.02. ***Foster urban compactness (density, constructability, etc.)***

It has always been considered that maximum densities have been on the agenda, taking a certain amount of care when these level were clearly insufficient in order to speak of density or compactness. In addition those articles in which an effort was made to control the expansion in the territory by encouraging growth next to already consolidated centres or the re-utilisation of already existing centres were included. There may be mentions of examples of minimum constructability or minimum densities, principally in Spain - the Balearic Islands, the Canary Islands, the Madrid Region, the Murcia Region, the Basque Country, Asturias, Cantabria, Catalonia and Rioja, even though they were included with some hesitation.

2.03. ***Foster polycentrism***

This is a complicated criterion due to the fact that an excess of polycentrism may lead to a loss of vitality in urban life. However this is an objective to be achieved in the greater part of urban sustainability system indicators and therefore it has been treated very carefully (the reason for the few references to it in the list).

Discussion

In reality references to the three criteria are very scarce in the legislation. In the most cases these references are doubtful and when they do appear they generally refer to urban regulations. This is probably due not to a lack of interest but rather to the fact that most of the laws relating to planning criteria are directly inherited from the Land Act 1956, conceived to give content to property rights rather than to arrange the future image and face of the city. In particular, the direct and indirect references to the need to complexify the use of land and to foster polycentrism (even with the reservations mentioned above). The reference to diverse and complementary uses for urban land is especially direct in Castile-La Mancha Regional Act DL-1/2004. And polycentrism appears in a very clear but implicit form in Canary Islands Regional Act 19/2003.

2.1 Foster more sustainable use of the built stock

2.11. ***Foster intensive and efficient use of the built stock***

Appears very rarely in the legislation. There are references to empty residences and to the regeneration of the built stock. Furthermore, there are a few mentions of the reuse of buildings and in some cases to the revitalisation of centres in those cases in which physical regeneration appears to be linked to new activities.

2.12. ***Favour rehabilitation (over new building)***

Any mention of building rehabilitation has been included here; just as with the landscape, the references are very diverse in terms of quality and quantity and therefore the indicator has not been treated as one of the most reliable, above all if the fostering of the regeneration comes up against (or is at the expense of) new building.

2.13. ***Adopt bioclimatic criteria for urban development and building***

This is manifestly important in order to achieve greater efficiency in the system. For this reason an effort has been made to be stricter on this point than on the rest. However, the scarcity of the references to the matter is surprising, although the legislation referring to it is quite precise and is not limited to general principles: it gets down to concrete details.

2.14. ***Foster the diversity of housing types***

The difficulty to legislate on this matter is understandable and the greater part of the Communities do not pass laws, rather they publish guidelines or recommendations where they indicate the necessity to work to achieve this diversity.

2.15. ***Complexify the uses of buildings***

A commentary very similar to the previous one could be applied to this case, although the responsibility would have to be shared between the planning and the approval of City Hall orders on this question.

Discussion

Of all the criteria that could give an idea of the state of play of this topic, the fostering of rehabilitation stands out because of the number of references and in terms of the legislation (Housing Plans, etc). For Galicia, Catalonia, Castile & León and the Canary Islands this is especially true. However the references to the rest of the criteria are very scarce if we make an exception of the adoption of bioclimatic criteria in national law and in the law of Galicia (technical code and Regional Act 9/2002 respectively). In order to obtain a clearer idea of the state of play on the question it is enough to say that that there is not even one mention of the fostering of the intensive use of the building heritage in 9 (of 17) communities. In 13 communities there is no reference to fostering diversity in housing types, and in 14 communities there is no mention of complexifying the use of the buildings. Therefore with reference to fostering a more sustainable use of the building heritage the situation is not especially favourable. Up to a certain point it is normal that one criterion for local characteristics is state level legislation (and not in all the criteria) and it is the most involved in the key question of global sustainability, and more specifically, in some of the elements which condition climatic change. However the paradox is that these same questions are directly related to local efficiency and with the possibility of making the cities which adopt these elements more competitive. Despite this, these questions hardly appear and when they do, as is the case with Galicia, they generate significant tensions.

2.2 Foster the diversity, quality and versatility of urban public spaces

2.21. ***Eliminate architectural barriers***

In spite of first impressions it is possible to legislate on this matter. In fact, both the Spanish state and some autonomous regions have adequate legislation on this matter. For some time now the criteria for integration, and the fight against social exclusion, have constituted an excellent indicator of the social health of a community and whether it is to remain as such.

2.22. ***Design multifunctional, legible spaces***

Logically this is one of the clearest examples of the difficulties the legislators come up against in converting criteria for planning into regulations. This should be the field for manuals and recommendations.

2.23. ***Apply bioclimatic criteria to open spaces***

This is of manifest importance for achieving a more efficient system and greater quality of life in

cities. However, it is surprising there are so few references to the matter, and they are limited to general principles; they do not go down to details. The obligation to justify the design of a street and square, not only basing it on functional or aesthetical criteria, should appear in the legislation.

2.24. ***Incorporate multipurpose urban furniture***

Probably this topic should be included in the guidelines and recommendations rather than in the regulations. Whatever the case, it is a good practice for the local institutions to aim at.

2.25. ***Reduce typologies that favour the privatisation of open spaces***

The privatization of the most important elements of the citizen's life is the basic cause behind the loss of functions of the traditional public space, and therefore, by extension, of significant changes in the city's efficient functioning. And this privatization is happening very significantly in typologies such as closed blocks with interior gardens or facilities that substitute public spaces inside them. The loss of urban life quality brings with it a negative element to city planning. However, even in this case the difficulties for legislating are evident.

Discussion

It has already been mentioned that the criterion related to architectural barriers is the unique in this section that can be partly governed by legislation. Therefore this has been done both by state legislation and by some communities of Spain (among others, Cantabria, Catalonia, Extremadura and the Murcia Region). However, for other criteria there are only a few indirect mentions. This is not due to the low importance of these criteria but rather that the most suitable control means for urban planning and design is not the legal framework. In this topic it is possible to see the importance of the existence of design manuals and recommendations, which can be made almost obligatory but allow the planner to step outside their limits provided they can justify their differences and convince the office in charge of the virtues of a design distinct from the recommended one. This practice, still extremely restricted in Spain, allows the necessary flexibility for design and is incompatible with a legal framework. The alternative is to leave it completely in the hands of the project designer and thus to less social control, with the consequent danger this could cause to the urban situation.

2.3 Favour access to nature (green areas)

2.31. ***Define a minimum size for green areas (per person, home, etc.)***

This is a question of making it compulsory to respect a minimum standard for green areas. For example it can depend on the number of homes, of inhabitants or the built up area in square metres.

2.32. ***Define criteria for the form and minimum size of green areas***

Any requirement to the shape of green areas should be included in this section. As it is a design indicator the difficulty of legislating on this matter can be understood.

2.33. ***Foster biodiversity***

Although with some hesitation any article in which mention is made of biodiversity without specifying the city or nature is included, as when it is linked directly to nature it is included in point 1.01. There are very few mentions related to urban land as, apparently, its consideration is not very important in the case of cities compared to the magnitude of biodiversity in natural areas less influenced by humans. Although this is an evident error denounced by many authors: the introduction of diversity in buildings, in trees and plants (for example) is a necessary and prior step in order to achieve complexity in the cities.

2.34. ***Introduce green networks on neighbourhood and city scales***

Frequently confusing scale arrangements make it impossible to create green networks, where their different natural constituents would require specific care.

2.35. ***Favour public access to green areas***

In some cases in this section quite varied references to green areas have been introduced and therefore this criterion is probably not very reliable.

2.36. ***Incorporate trees and plants into public spaces***

As is the foregoing case with this indicator varied references to green areas and trees and plants have been introduced. Therefore this criterion is probably not very reliable.

2.37. ***Connect different green areas ecologically***

As there could be some overlapping with the point *Connect the various protected areas* of the *Connect*

the various protected areas section it was decided to revise the two areas together. The problem is especially likely to appear in peri-urban spaces where there may be protected zones already considered when analyzing the first point. In any case this parallel revision has shown that the said overlapping in reality did not exist as there are very few mentions in the legislation to this topic.

Discussion

With exception of the case of the criterion related to defining a minimum standard for green areas there are very few mentions of this criterion in the legislation. As for a minimum green surface area it is not surprising that this issue does not come up in the majority of Community legislations. It has been a very traditional standard in this country since the earliest urban planning legislation. The problem is that the definition of *standard* has become merely a consideration of the minimum space dedicated to green areas without relating this space to the type of green area or its characteristics. No demands are made for certain conditions of sustainability, for example, water consumption, or relating the green area to the climatic conditions or land area. In certain cases it would be recommendable if the standard not only referred to a minimum space but that also it dealt with maximums, unless certain sustainability conditions were imposed, for example that these areas were designed with more self-sustaining forestation criteria rather than just gardening criteria. In special climatic zones (such as the semi-arid part of our country) the understanding that a green area is in reality a *green carpet* made up of grass should lead to limitations on its maximum size being imposed.

For the rest of the criteria of this section the references in the legislation are very scarce, with the possible exception of state legislation and the laws of the Canary Islands and, in part, the Valencia Region. This is because in some communities they are considered as questions of design, to which we have referred to in other sections, and in other communities because they have not even been considered worthy of mention.

2.4 Improve access to facilities

2.41. ***Define an appropriate supply of public facilities and services***

This indicator has come to be understood in terms of minimums, maximums and thresholds. It is highly traditional in Spanish urban planning laws and nowadays is very present in Community legislation.

2.42. ***Foster proximity to amenities and facilities***

This is a question of considering other requirements, above all related to proximity and the distribution of amenities and facilities within the city.

Discussion

There are quite a number of references to this last section of the second sphere (criteria for action in urbana areas), especially true for the first of the two criteria, related to an adequate offer of public amenities and facilities. Above all, this is because the criterion has been interpreted as the establishment of thresholds and percentages suitable for their introduction into the legal framework. In contrast, the second criterion, referring to fostering the proximity of the amenities and facilities, warrants few mentions, probably due to the clear difficulty in exactly defining it. However, due to its importance from the viewpoint of sustainability (many in-city trips generated are caused by poor localization and distribution of amenities and facilities) they should be re-conceived in terms of ease of use and not simply in quantitative terms. It is also feasible to try out planning of the type: sports installations at a maximum distance from residential buildings. Whatever the case it seems vital that there is a new approach to all the legislation related to public amenities and facilities. The traditional scheme, the hierarchical Alexander tree form, should be replaced by a new set up compatible with the complex character of historic cities.

Criteria for action on transport

3.0 Shorten distances

3.01. ***Associate home with work***

One of the most important causes generating journeys is getting to work, and this leads to interest in this criterion as a possibility for improving sustainability within the city. As the transport sector is one of the greatest contributors to so-called diffuse contamination (directly related to the climate change question) this should appear in a good part of the legislation, and of course in the guidelines and recommendations. The scarcity of the mentions and general references in guidelines and recommendations leads to the suspicion that this endeavour faces difficulties. However, it is a criterion that should be related to the complexity of land uses (already studied in the previous section) and with the fostering of rented housing. The complexity of the use of land should allow the existence of jobs near homes and a sufficient supply of homes to rent would allow the two elements to be brought closer.

3.02. ***Establish logistics platforms for distribution in each neighbourhood***

The retail selling of products and their distribution on both wholesale and retail levels is one of the outstanding challenges for urban planning. From the viewpoint of the system's sustainability it is fundamental to shorten the distances products and provisions must travel to reach the consumer. Even from the perspective of pure economic efficiency it is urgent to introduce these type of considerations into sustainable urban planning.

3.03. ***Foster polycentrism***

This criterion could be treated as a special case of the foregoing one; however it has specific issues which work against this consideration. The case of fruit and vegetables is a quite symptomatic example. Over time the peri-urban agricultural tradition has been tending to disappear in face of the advance of urbanization to such an extent that city planning did not even consider its continued existence (sometimes it did not even recognize it). However there are many reasons for the need to keep these areas alive and operating, from the complexity they introduce to their contribution to reducing the products' delivery distance. There are also psychological factors, such as bringing the city dweller closer to agriculture and not only to areas of protected nature, controlled to a greater or lesser degree.

3.04. ***Reduce the infrastructures necessary for the city to function***

Above all, but not exclusively, an aim is to reduce the infrastructures necessary for communication. The increase in urban space per inhabitant, which has increased almost geometrically as shown by the multiple studies carried out (see Naredo and Gascó on the Madrid Region), is essentially caused by the increase in the number of roads and the spaces given over to leisure and free time activities. Specifically the square metres destined to infrastructures are relatively straightforward to quantify (there are studies from the beginning of the last century, including those of Unwin in his manual on urbanism) and therefore it does not appear to be very complicated to legislate for both maximums and minimums.

Discussion

It is clearly dispiriting that such an important criterion as the one being analyzed is left blank in 90 % of the legislations. If we leave out the case of the Canary Islands with its 6/1999 Act (in the same conditions) and a few other isolated references it would have to be said that the indicators measuring this criterion are at a minimum.

3.1 Strengthen non-motorised means of transport

3.11. ***Integrate pedestrian and cycling networks with green areas***

Both if the pedestrian and cycling routes are used for obligatory journeys in the city or for leisure the fact that they can be separated off from road traffic in a special bike or walking lane is always a positive design criteria and the urban planner should try to achieve it. As this is basically a design indicator it is complicated to legislate on it, or even to set an example in the guidelines, therefore the most suitable option would be to include it in a catalogue of recommendations.

3.12. ***Increase the space available for pedestrians***

Over many years the space set aside traditionally for pedestrians has gradually been reduced and

given over to motorised means of transport. It seems this tendency is being inverted in such a way that now many urban centres, above all the historic ones, are being turned into pedestrian zones with the consequent increase in the space available to people on foot. However, this situation is not being formalised in any Community urban planning legislation —there are a few indirect mentions— despite it being relatively straightforward to establish standards for square metres dedicated to pedestrians in relation to the number of inhabitants, the constructed area or the square metres of road for motorised transport.

3.13. ***Build pedestrian and cycling neighbourhood networks***

It is evident that these networks must be built if an effort is to be made to create a neighbourhood for the residents. These networks are also a key part of the city's organization.

3.14. ***Make bicycle-parking spaces available***

There is already a consolidated standard in Spanish urban planning legislation which sets out a minimum number of parking places for motor cars. This is a perversion in terms of promoting the use of collective transport. However, there is no legislation for bicycle parking, which, in contrast, makes a positive contribution to improving the sustainability of journeys.

3.15. ***Integrate bicycles with public transport***

This indicator should be associated with the list of conditions necessary for the granting of licenses for collective transport and it should be a factor to be considered by the managers of these means of transport. However, it would also be possible to legislate, making it obligatory for the transport operators (or the government bodies themselves) to reserve space in the system which allowed bicycles to be transported in buses, trams and trains.

Discussion

This section is in the same state of play as the foregoing one. We could even say worse. There are only 11 references to it, almost all of them indirect, and this seems a poor result for the importance given to the criterion analyzed. Moreover, with the exception of the first criterion (integrating the pedestrian and cycling networks with the green areas), very related to the design, and the last oner (integrating bicycles with public transport), the other indicators can be transformed into standards and are relatively easy to introduce into laws and regulations.

3.2 Reduce private motor traffic by strengthening public transport

Overall, they are very general references to public transport. In the cases of Asturias, Cantabria, Catalonia and La Rioja, in this point the general references to ''sustainable mobility'' are included, while in the rest of the cases it was included in the foregoing point.

3.21. ***Establish an appropriate supply of public transport on an urban scale***

This criterion seems to be more of a desire. However, in the way in which it has been analyzed, seeking out references relating public transport to the different city scale and the obligation for there to be a suitable offer, this aim is no longer a mere desire. For example, in a metropolitan city three types of transport necessities should be considered: between neighbourhoods, between districts and public transport to other cities.

3.22. ***Build integrated transit networks***

Here also the references to the link up and connection points between the different transport networks have been included.

3.23. ***Reduce the speed of private motor traffic***

Although this is one of the most straightforward criteria to introduce into the regulations it would seem it is more appropriate to include it under City Hall regulations. As these regulations (by-laws) have not been analyzed it is probable that this criterion is not well-represented. In fact, some cities, for example Barcelona, are making this speed reduction obligatory for reasons of sustainability: it reduces petrol consumption and pollution. However, this criterion was introduced, and is maintained, to bring attention to a relatively straightforward and cheap, though unpopular, system for increasing the city's efficiency. Therefore the city planner should consider it when designing the road network. Projects conceived for high speeds are no longer necessary, especially in terms of the high cost they involve. On the contrary, it seems that ways of reducing traffic speeds are beneficial, for example in that they result in less intense traffic.

3.24. ***Reduce the area devoted to private vehicles***

This criterion is directly related to the previous section (increase the space available to the pedestrian).

3.25. ***Restrict the use of private vehicles***

In general terms this aim can remain as no more than a mere recommendation or desire. However, there do exist methods, such as the imposition of charges for circulating in the inner parts of cities, which allow city regulations to achieve this objective, taking it beyond mere recommendations or stated desires. However, in this case too it is probable that the most suitable tool is not state or community level legislation. In addition, the already mentioned restriction on the number of parking spaces is another possible deterrent measure.

3.26. ***Limit parking spaces for private vehicles***

This is another typical case which illustrates the necessity in some cases to not only set standards for maximums and minimums but also to set a spread between them. This is also true of traffic densities, the space dedicated to garden green areas and the square metres dedicated to road infrastructures.

Discussion

The results of the legislation seem as poor as in previous cases although some criteria for this section (establishing an adequate offer of public transport in relation to the urban scale, reduce the motorised traffic speed and restricting the use of private vehicles) seem to be better suited to being specifically dealt with by City Hall regulations. Even so in the laws of Asturias, Canary Islands, Cantabria, Castilla-León, Catalonia, Valencia and the Basque Country some references to these measures have been found, though almost all of them indirect.

Criteria for action on resources

4.0 Optimise and reduce energy consumption

4.01. ***Foster energy savings and efficiency***

This is the most general principle for evaluating this criterion and can be used to gauge the level of interest in the subject. It was hoped that several references would be found, although of varying quality and precision.

4.02. ***Adapt the urban morphology to bioclimatic conditions***

This is also a factor of design and is therefore difficult to consider in a legislative text. Neither does it appear explicitly in the guides and recommendations consulted. However, it is necessary that the planner provides those who are going to build the city with the necessary means for constructing bioclimatic buildings and outdoor areas that are adapted to the local environmental conditions. Inadequate planning can often hinder this. As an example, we can cite the urban-planning regulations which permit the same building depth on all four sides of a closed block, this means that the south, north, east and west sides would have to have their own specific requirements.

4.03. ***Make use of sunlight and wind for housing and outdoor spaces.***

This criterion appears to be very closely related to the previous one and is therefore also a design parameter and as such is difficult to consider in a legislative text. However, in this case it can be considered to be a fairly precise indirect regulation, at both a national (Technical Building Code) and regional level. Nevertheless, these indirect references have not been considered as they are already included under other points.

4.04. ***Urban structures compatible with central-heating systems***

There is no doubt about the energy saving potential of centralised heating systems and the need to start acquiring this type of feature. However, in many cases this is not possible, or is very complicated to achieve, if the necessary space, pipes and connection systems have not been stipulated in the town planning documentation.

4.05. ***Foster the use of renewable energy sources***

Through solar panels, biofuels and other systems. This has been analysed alongside criterion 4.06 (*foster local energy production*) as, in some cases, the use of solar panels has been considered as local

energy production while in others it has not. This fostering of the use of renewable energy resources can be easily included in the regulations.

4.06. *Foster local energy production*

Solar panels, mainly in buildings. Those energy sources that are understood to be installed nearby. The need for a parallel analysis of both points has already been mentioned in the previous point. In any case, this increase in local energy production that, apparently, fits easily with the regulations, could in practice entail some problems in terms of interference with certain urban design regulations. This is the case, for example, with the Catalan Landscapes Law regarding solar panels being placed undercover or on building fronts.

Discussion

Despite a number of references to these criteria in the regulations (with the exception of the points: *Adapt the urban morphology to bioclimatic conditions*, *Make use of sunlight and wind for housing and outdoor spaces.* and *Urban structures compatible with central-heating systems*, more typical of guidelines and recommendations due to its being a question of urban design), this has not been the case. From a generic point of view (section 4.0) there are a number of references, but not under the individual criteria. This is probably due to the problem being new or to the difficulties being more precise within such a varied case.

4.1 Optimise and reduce water consumption

4.11. *Reduce losses from mains networks*

Water supply companies ought to be obliged from now on to reduce losses occurring during transportation by imposing maximum loss limits. This is a complicated principle as it would in some cases entail the need for renovation of supply facilities. Furthermore, these companies are not usually private organisations, but depend on local agencies, who would find their impartiality compromised. In spite of such a complex solution, it is vital to commence work right away as, more often than not, the profits from being more efficient are anecdotal in comparison to network losses.

4.12. *Foster building types with lower water demands*

In this case, more so than with the general regulations, the principle is related to design and local laws. This does not imply that demands cannot be imposed on housing facilities. For example, dual-flush lavatory cisterns or, wherever possible, substitution of bathtubs with showers.

4.13. *Foster efficient irrigation and watering systems*

This applies especially to parks and public places. Regarding private individuals, setting up awareness campaigns and penalty charges per cubic metre of water (for example through local water rates) would help to avoid excessive consumption.

4.14. *Incentivise rainwater collection systems in buildings*

Again, this is a question of architectural design based on guidelines and recommendations rather than compulsory legislation.

4.15. *Use systems to retain and filter rainwater*

In the case of unitary systems, this helps to alleviate the pressure on treatment plants that very often discharge water without first purifying the channels due to the inability to absorb peaks. In the case of selective sanitation systems, these contribute to a more efficient system design and helps to replenish groundwater levels, etc. The planner should be required to include this type of system on the plans.

4.16. *Treat and recover natural watercourses*

Any specific reference to the conservation of aquatic ecosystems. Other more generic ones that aim to favour the water cycle. It has been analysed in relation to the point *Respect and integrate into the local environment* corresponding to criteria 1.0, given the strong similarities between the two.

4.17. *Foster the use of permeable paving*

This type of flooring allows peaks to be reduced, groundwater levels to be recharged and lets floors *breathe* by allowing evapotranspiration to improve. A minimum legal percentage could be introduced in relation to the surface area of the conventional flooring installed. Especially in new areas of serviced land . This presents more difficulties in inner cities. Not just aesthetic difficulties but also functional difficulties which may lead to problems in the foundations of older buildings.

Discussion

There are many generic issues to mention, but, as in the previous case, when it comes to the individual points the situation is less optimistic. To the point that only in the case of the Canary Islands, Castile & León, Valencia and the Basque Country can any references be found (in most cases these are indirect). As can be seen above under the previous topic, the adequate management of water resources with regard to water saving is an outstanding issue in Spanish town planning.

4.2 Minimise the impact of building materials

4.21. ***Reduce earthworks***

Those articles which require a specific project about earthworks are also included here; it is understood that this is one way of keeping a check on them. We have various motives for including this principle. Two of them are probably the most important. First, because of energy saving and the reduction of pollution. The second, because significant modifications to the topography of the land always leads to problems with run-off water.

4.22. ***Foster the use of local materials***

Generally associated with landscape protection (the obligation to use local materials or similar).

4.23. ***Use building techniques that facilitate reuse***

This criterion is closely related to the following one, although they do not handle the same issue. Both, however, seek to breathe new life into what has already been built or used. It is not easy to legislate for both cases and the most sensible thing to do would probably be to put them into a guide on sustainable construction or in a list of recommendations.

4.24. ***Foster the use of easily recyclable materials***

The same applies here as for the previous principle.

4.25. ***Foster the shared use of service networks***

Service galleries are the most clichéd example, although there are many more.

Discussion

The Balearic and Canary Islands and Galicia are the autonomous regions with most references to these points. The others have few or very few. It is obviously very difficult to legislate on criteria such as those in this section but there are still significant differences in terms of what they contribute.

Criteria for action on waste

5.0 Reduce waste

5.01. ***Foster selective collection and separate sewerage networks***

In many areas this is already being done in a general way. However, it is not always included in regulations. This is probably due to the difficulty in giving details of each specific locality. Again, this principle relates more to local regulations (of an ordinance) than general ones. It is, however, possible to enforce selective waste collection on a less local level, and encourage the use of operative sanitation networks in guides and recommendations.

5.02. ***Users' proximity to collection systems***

Again, this principle is a question of urban design. This should not stop maximum permitted distances between housing and collection points from being established. In any case, it is common practice in urban planning in Spain not to consider waste collection systems, except in the case of pneumatic waste collection systems. This practice must change as the balance between convenience for users, noise and discomfort, and ease of access for collection lorries must be thought out in the initial stages of town planning. Of course this is difficult not only to achieve, but also to maintain long term.

5.03. ***Promote reserves for composting and plant-waste processing***

In certain types of home (e.g. detached houses with gardens) the problem of plant waste, especially

during the pruning season, is usually left unresolved. The solution must be found during the planning stage, as floor space is needed for composting and waste treatment. Recycling is advisable so that the same thing can be achieved in surrounding areas, so that waste production routes are not lengthened unnecessarily.

5.04. ***Use systems to reuse wastewater***

The use of half-purified water is not without controversy, because of the potential effects on public health if due caution is not taken. However, most of the state and autonomous legislation does assign this the importance it warrants. It is vital to provide legislation on these cautions and not to use waste water in an indiscriminate way (especially when it comes to watering plants). Urban planning should also include the relevant plans for the reuse of waste water. This should be included in the regulations.

5.05. ***Foster recycling and reuse***

It might seem that this is simply another case of stating good intentions. However, it is necessary to qualify this statement to give it some kind of meaning. There are several ways to achieve this, from subsidies to fines.

Discussion

These criteria include the Spanish State, the Canary Islands, Cantabria and the Basque Country. We can say that in general, the autonomous regions who have introduced legislation on issues relating to these criteria have done so in practically all the points that have been considered, and those that they have not yet included do not relate to any of the points. Only four autonomous regions considered the principle of *promoting reserves for composting and plant-waste processing*, while the generic principle (considered this way) of *fostering recycling and reuse* is the one that is most commonly mentioned in the various codes of regulations. The disparate nature of most of the criteria that have been considered so far is even more apparent in the present section, so that it seems necessary to unify them, as otherwise significant discrepancies may arise between autonomous regions. When it comes to global sustainability, a common objective must be aimed for. This observation, arising from the analysis carried out to date ought not to be restricted to the Spanish state, but should be applied on a European and global level as well. This would probably involve considering relatively few criteria so that they may be agreed upon and clearly defined, measured with common points that indicate whether all parties involved in overseeing the procedures share a common aim. The need for coordination becomes more apparent with analysis, especially in relation to environmental issues that cannot be confined within the boundaries of an artificially-defined administration. Given that the concept of sustainability that we are dealing with does not differentiate between the three pillars which form the basis for study of this subject, both issues of natural capital, and social and economic aspects must be coordinated to ensure the same goal is obtained.

5.1 Manage waste to reduce its impact

This section deals not only with the generic issue of waste management, but also with generally reducing pollution and the uncontrolled dumping of waste. Waste management covers everything from legislation on packaging, to compliance with requirements for the distribution of plastic bags in shops.

5.11. ***Make hazardous-waste treatment compulsory***

The issue of hazardous waste is thoroughly dealt with in both state and regional legislation, especially where it poses a specific risk to public health. In fact, all references to hazardous waste have also been considered. This principle quite clearly illustrates the differences between local and global sustainability (local sustainability usually embraces purely environmental issues). One example is waste that produces greenhouse gases and which, if left uncontrolled, has an effect on the sustainability of the whole planet, while groundwater-level pollution, for example, has a much clearer effect on local sustainability. In general, issues relating to local sustainability, which in most cases can be included under the umbrella of environmental issues, tend to be resolved by diverting them to other places. This is usually the case with the most developed countries as these have the economic means to *buy* dumping sites and sewerage systems in poorer areas.

5.12. ***Management of building and demolition waste***

This issue is closely related to criterion 4.2 (*minimising the impact of building materials*) and the relevant points have been analysed accordingly. The moment construction of a new city seems to slow and be substituted by the redevelopment of existing urban spaces, the problem that arises is no longer

that of how to accommodate the large quantities of earth generated by construction sites, but that of waste from the demolition of parts of buildings (or even whole buildings in the case of renovation work) and for which the question of recycling of materials has not been considered during construction.

5.13. ***Build environmentally non-aggressive treatment systems***

In many cases, the purification systems that are used do not correspond to global sustainability criteria but local ones. Sometimes, they do not respond even to local sustainability issues, as their effects can be too aggressive. In any case, any reference to appropriate purification systems has been included under this principle.

5.14. ***Reduce pollutant emissions and dumping***

In this case it has also been deemed necessary to include a more general (though somewhat miscellaneous) principle under which we may consider all articles of legislation referring to waste management that do not fit with any of the other points. Furthermore, not only those that are relevant to reducing pollution, but also to improving the quality of the environment in general.

Discussion

The compulsory treatment of hazardous waste has been dealt with in a general way in state legislation, with all territories within the Spanish state being obliged to comply; therefore, some communities have not provided legislation for this due to their being covered by existing legislation. Some regions, however, have broadened the scope of state legislation (which is minimal) or have adapted it to include aspects that are relevant to their territory. The principle entitled *reduce pollutant emissions and dumping* combines the greatest number of references as a matter of course. The principle on building environmentally non-aggressive treatment systems is the one which has been considered the least, although it does not include a great deal of references to waste generated by building and demolition. It could be said that this is a rather clichéd issue of local sustainability and therefore not many people question its inclusion in the regulations. The difference between environmental clichés and those relating to sustainability becomes apparent if we recount the number of references to each. A society that defines wellbeing in terms of comfort and convenience obviously resists anything that might lower its current state for the sake of the hypothetical *sustainability of the planet*, so any environmental issues that are understood to improve local conditions in general are well received.

Criteria for action on social cohesion

6.0 Favour the cohesion of the social fabric and prevent exclusion

6.01. ***Foster grassroot movements***

This principle probably corresponds better to local budgets than to town planning. It is included because we believe that town planning should not be exclusively about rules governing land ownership rights, but should also cover genuine strategic urban planning (strategic not in the military sense of winning in combat but in the general sense of using means to achieve a goal) that should contain instructions for putting together local budgets. Seen from this angle, the plans could be instrumental in encouraging subsidies to grassroot organizations.

6.02. ***Reserve spaces for non-profit entities***

In this case and still assuming that the town planning was reserved exclusively for the allocation of ground usage and organisation of the fabric and infrastructures, then the reservation of spaces for the local associations to have somewhere to carry out their activity should also be covered within the plans. Therefore, the specific legislation that includes the terms of the plans should include standards governing this reservation. The problem with reserving spaces in anticipation of needs is that, in all probability, they will not respond to real social needs in the future. To avoid this, those reservations that certain entities express a need for in order to do their work should be included in the planning process rather than as a standard in the law. So that regulations governing the terms of the plans should in fact regulate on the topic as part of the normal procedure of citizen participation. It seems more appropriate to put down

specific rather than generic ground reservations for carrying out specific activities with the associations committing themselves to making progress with these activities.

6.03. ***Foster social complexity***

Fostering social complexity as appears in this principle is too vague an expression to be functional as a regulation. However, in this work by the fostering of social complexity we mean all those initiatives that, in one way or another, contribute to the establishment of contact between the various social strata. One possible example is the integration of protected housing in unsubsidised group buildings. Given that this fostering understood like this is very difficult to include in regulations, it ought to become a recommendation and be considered (for example) in guides on the planning of sustainable housing. In any case, this principle has also been considered from a generic point of view so all references to issues that do not fit within any of the other sections have been taken into consideration.

6.04. ***Foster people's identification with their surroundings (cultural heritage)***

This principle is also difficult to define. All references to cultural and historical heritage, whether rural or urban, have been included here. In Asturias, Catalonia and La Rioja specific reference has also been made to *quality of life*.

6.05. ***Favour access to housing***

The concepts under this criterion are also difficult to define. In this case, they have been interpreted to include all references to protected housing, despite the fact that some are too generic and others very specific.

Discussion

In spite of how it might at first seem, most of the autonomous regions (as well as the national government) have legislated quite extensively. This means that almost all points make a significant number of references which are relevant to the majority of communities. Obviously, this has something to do with how much importance is given to the issue of housing and its associated activities as social reforms derived from the fostering of association movements. Further progress should probably be made with regard not only to the associations but also with equipment and resources. In a significant number of cases equipment and resources are under- or overused, as a result of the fact that the planning process only responds to its legal obligations instead of real necessities. It should be compulsory to provide justification for the fulfilment of or failure to comply with legal standards; this should probably (in most cases) be adapted to form part of the recommendations. In addition to spaces reserved for non-profit entities, resources and equipment should also be included in social participation processes (which would probably entail some kind of negotiating). This does not mean that they should not be established in the form of very minimal indicative standards so that the participation process might be achieved providing that the community shows some commitment regarding their implementation and use.

6.1 Complexify the social fabric

6.11. ***Foster a mix of uses in each neighbourhood***

An badly thought-out zonning model has lead to a large number of areas in our cities functioning more like separate urban developments than as one, which contributes to the functional and social inefficiency of our country. In extreme cases, this tendency has contributed to most of the metropolitan areas of our cities being modelled on a tree-like network rather than semi-lattice. Planning should consider all needs (in each neighbourhood) that citizens may have, for example places for rest, work, recreation and shopping, and should satisfy any additional needs that might result from any problems they may encounter in their daily life. Any needs arising from activities which do not form a necessary part of daily life should also be addressed, to encourage people from other areas of the city so that the neighbourhood does not become an isolated enclave shut off from the rest of the city.

6.12. ***Improve the supply of and access to services and facilities in each neighbourhood***

The need to provide citizens with nearby services, facilities and resources in order to avoid their having to travel (often using private transport) means that the design and layout of amenities is one of the most important parts of the physical aspect of urban planning. In general, and in most cases, we could say that there should be a tendency towards smaller local facilities and services, managed by the citizens themselves and evenly distributed around the urban fabric.

6.13. ***Incentivise economic exchange with the rural areas***

The fragmenting of cities has meant that urban-fringe agriculture, which was an important part of the initial stages of urban development has all but disappeared. Some cities who are aware of the importance of maintaining urban-fringe agriculture and its produce are trying to bring it back. Not only to shorten the distance food has to travel between the farmer and the consumer, but also for public health and psychological reasons. This need has already been mentioned above, but this criterion covers the broader areas not only of the urban fringe but also the whole rural area surrounding the city. Direct marketing and exchange systems should be able to be managed through a strategic town plan so that both citizen and farmer can benefit from the proposal.

6.14. ***Promote a minimum percentage of proximity activities***

This criterion is closely related to that on improving the supply of and access to services and facilities in each neighbourhood. In this case, we would look to setting a minimum percentage for this type of activity. The percentage should be absolutely minimal as the need to meet the necessary requirements through a process of citizen participation has already been mentioned.

6.15. ***Incentivise activities that favour a diversity of uses***

This is a general section which includes anything that might be relevant to the fostering of a range of uses for each neighbourhood and city. These two elements must be treated separately so as not to confuse those activities specific to each neighbourhood with those pertaining to the city as a whole. In many cases this confusion, or the proliferation of centres of varying levels, reduce the vitality of city life which needs a minimum number of citizens in order to work properly.

Discussion

As in the previous section, there is an abundance of references for almost every criterion but in this case there are few. Only in the Canary Islands, Castilla-León and Catalonia is any reference made to the criteria in this case. In the other communities there are very few references, and those that are made are either indirect or rather generic. It is understandable that it is difficult to legislate on an issue that is closely related to the drawing up of plans, and it would probably be useful if these were included both in the strategic town plan and in the relevant guides and recommendations relating to planning.

Criteria for action on governance

7.0 Foster administrative transparency

7.01. ***Provide access to information (including technical data and reports)***

Any reference to access to information, including procedures for ''public information'' as well as publications in local press and in the Official State Gazette (BOE) has been included under this criterion. Access to information is a right that is regulated both by European directives and by state legislation. It would therefore not be necessary to include further clarification if it was not for the fact that it deals with issues relating to urban planning.

7.02. ***Provide channels for the two-way flow of information***

In the case of Andalusia, Galicia, Castile-La-Mancha and Castile-León, any reference to procedures through which the administration can obtain information on citizenship, including public information procedures, has been considered. In the case of Spain, the Balearic Islands, Madrid, Murcia and the Basque Country, explicit references to similar statements and procedures. In Aragon, Extremadura, Navarra, Valencia, Asturias, Cantabria, Catalonia and La Rioja article containing exclusive reference to public information has been included in previous criterion. It could be understood to be a special case of access to public information. Nevertheless, all issues relative to obtaining information from citizens have bee included.

7.03. ***Establish procedures for cooperation between administrative bodies***

Under this principle, all references to cooperation, coordination and agreements (regardless of the *distribution* of competences). In Aragon, Extremadura Navarra, Valencia, Spain, the Balearic Islands, Madrid, Murcia and the Basque Country, the distribution of competencies is included in some cases.

Cooperation between administrations is a key aspect in the working of the *public sphere*. The term cooperation between administrations is not meant here in the sense of the division of tasks and competencies as has already been established, but rather in the sense of *mutual support*.

Discussion

There are numerous references both in the aspect relating to the state and in those corresponding to the autonomous regions —particularly in Asturias, the Canary Islands and the Basque Country. In the last three cases it is essential that the necessary cooperation and coordination is achieved, due to the large number of administrative bodies involved. This cooperation translates into greater administrative transparency and a more fluid relation between those involved.

7.1 Favour citizens' capacity building

Research support is included under this point in the case of Spain, the Balearic Islands, the Canary Islands, the Madrid Region, the Murcia Region, the Basque Country, Asturias, Cantabria, Catalonia and Rioja. Furthermore, there could be some confusion between this general section and the principle relating to the fostering of education and the raising of environmental awareness in the cases of Aragon, Extremadura, Navarre and Valencia; therefore, these have been analysed together.

7.11. ***Devise specific educational materials***

Some references have been included which specifically mention the devising of specific materials for informing the public regarding urban planning (and other information). Digital educational material, particularly online, is becoming more and more important. It has become essential to adapt to new technologies by devising these educational materials which include video, 3D representations, and all systems that help remove barriers between technical specialists and the general public. They must also be materials that can be published not only by traditional means (booklets, cinema, lectures) but also online.

7.12. ***Organise courses, workshops and debates on urban planning***

This criterion could be closely related with the following one; therefore, both have been analysed together. The understanding of urban planning not as a specific act, but rather as a procedure that is carried out long term and which does not have any beginning or end, but specific points for control, means that citizens need to be educated accordingly. Otherwise, so-called *public participation* would be just talk. Hence the necessity to develop workshops, courses, debates and talks related to urban planning.

7.13. ***Foster environmental education and awareness-building***

All general references to *environmental education* and awareness-building on environmental issues have been included under this point. It ought to be made clear that this environmental education and awareness-building cannot be done without consideration of citizens' education on urban planning issues, and that both should be addressed as a whole so that technical experts may gain a clearer understanding of how the city, and the country in which it is situated, function.

7.14. ***Support the preparation of Agenda 21 programmes***

Support for the preparation of agendas 21 should be understood as support for any similar tool that allows the reflection on the city and its sustainability. To date, Agenda 21 programmes, despite their limitations, have allowed citizens to approach issues that otherwise would have not been addressed. This is why a specific means that might not be the most appropriate in certain cases and for certain situations appears as a criterion.

Discussion

It appears that, apart from Catalonia, Rioja and the Basque Country, the other regions have not for the time shown much interest in this topic if we consider the mentions that appear generically and those corresponding to the different indicators that are analysed more specifically. Also, in nearly half the cases the references that are included are quite unspecific, in most cases going no further than declarations of intent.

7.2 Integrate participation into planning

7.21. ***In the diagnosis process***

As the current planning system is conceived with a process that runs from diagnosis to the approval of the plan, it would make sense to monitor the various steps in the system with indicators. However, the current planning system has clearly been overtaken by current events. A system based on municipal plans, limited to the ambit of the administrative borders of local entities, cannot respond to problems that in most cases go beyond that ambit. At the other extreme we find spatial planning as the benchmark. The leap from spatial planning to the current urban plans appears to be far too large, making it essential to consider an alternative system to the current one to respond to the requirements of the 21st century. Also, change situations are so important that nor can plans considered as still images at predetermined moments in time respond flexibly enough. Planning will have to be considered that is based on processes with ongoing monitoring of the city and territory, with the option of more rational decision-making with continuous ad-hoc modifications of planning that is fixed in time, inflexible and awkward to change.

7.22. ***In strategic decision-making***

Strategic decision-making should be done before turning to more physical considerations of uses and functions in space. It would seem to be essential to begin with a strategic city plan that arises out of a long-term agreement between the leading actors building it and the public. In this context strategic decision-making should be not merely a simple choice of alternatives proposed by technical experts, as currently happens, but a genuine political agreement.

7.23. ***In drafting the plan***

With regard to the drafting of the plan if any references are available for the current situation. However, until not long ago they were not even considered to be important unless they were related to its approval.

7.24. ***In approving the plan***

In approval of the plan there is a long tradition of what is called *public participation*, which normally consists of an often cryptic presentation by the technicians who drafted it, featuring the opportunity to examine the plans. Although this situation has changed in part, in most *public information* on urban plans the gulf between technicians, politicians and the public is still too deep. It is hardly surprising that many references can be found to the need for *public information* in regional legislation, because the term has been directly inherited from the national Land Act 1956.

7.25. ***In the process of monitoring and supervising the plan***

This criterion includes the very few, generic provisions skating that participation should occur in the ''preparation, approval and monitoring'' of planning, as the case may be. From this point of view, it has been necessary to analyse it jointly with those described above.

7.26. ***Integrate Agenda 21 programmes into planning***

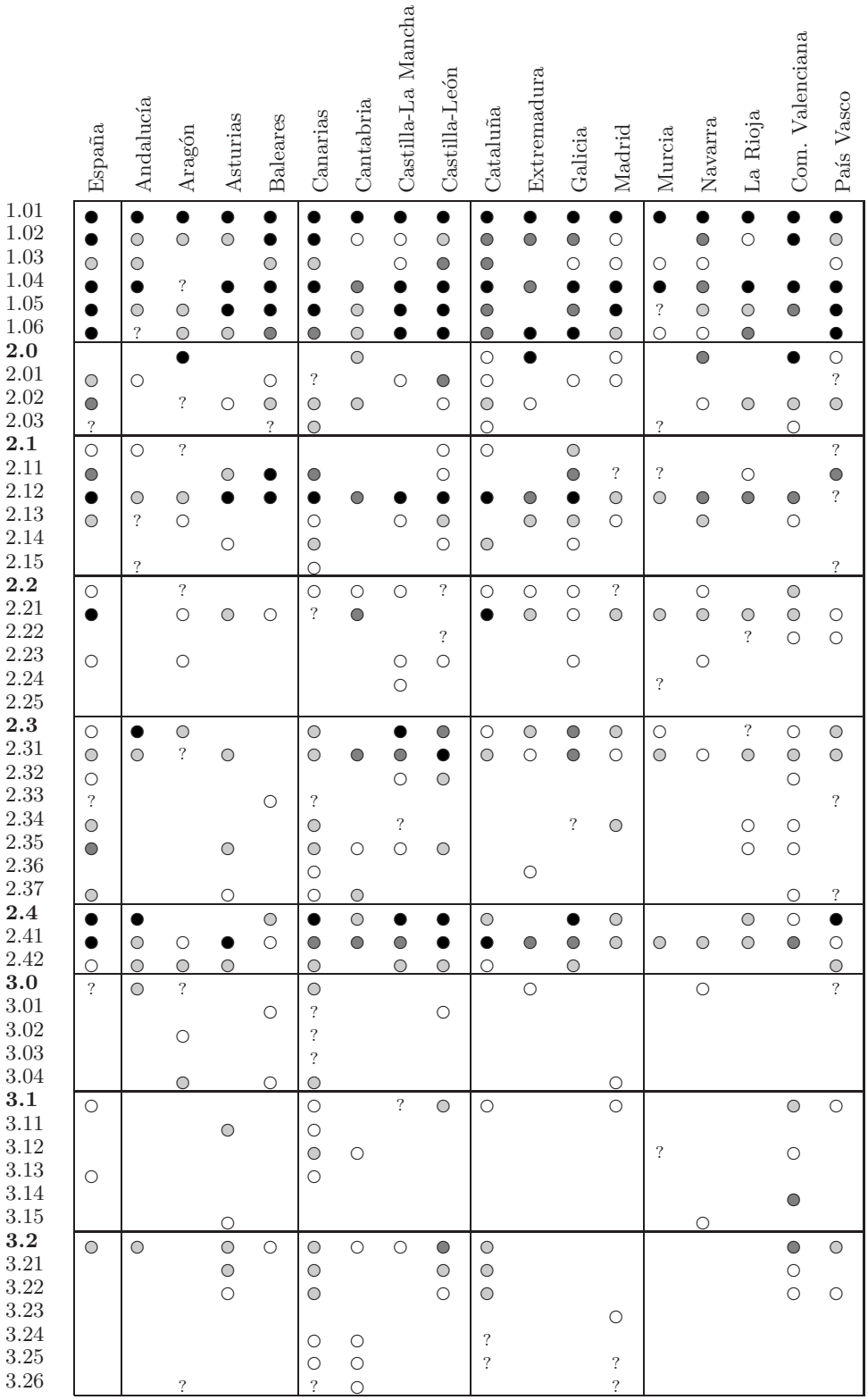
The matter of Agenda 21 programmes has been dealt with above. Their integration in planning is still a relatively recent development and a clear precedent for what we will probably see in the future: the integration of urban planning into a strategic city plan, combining a political agreement with economics and physical planning.

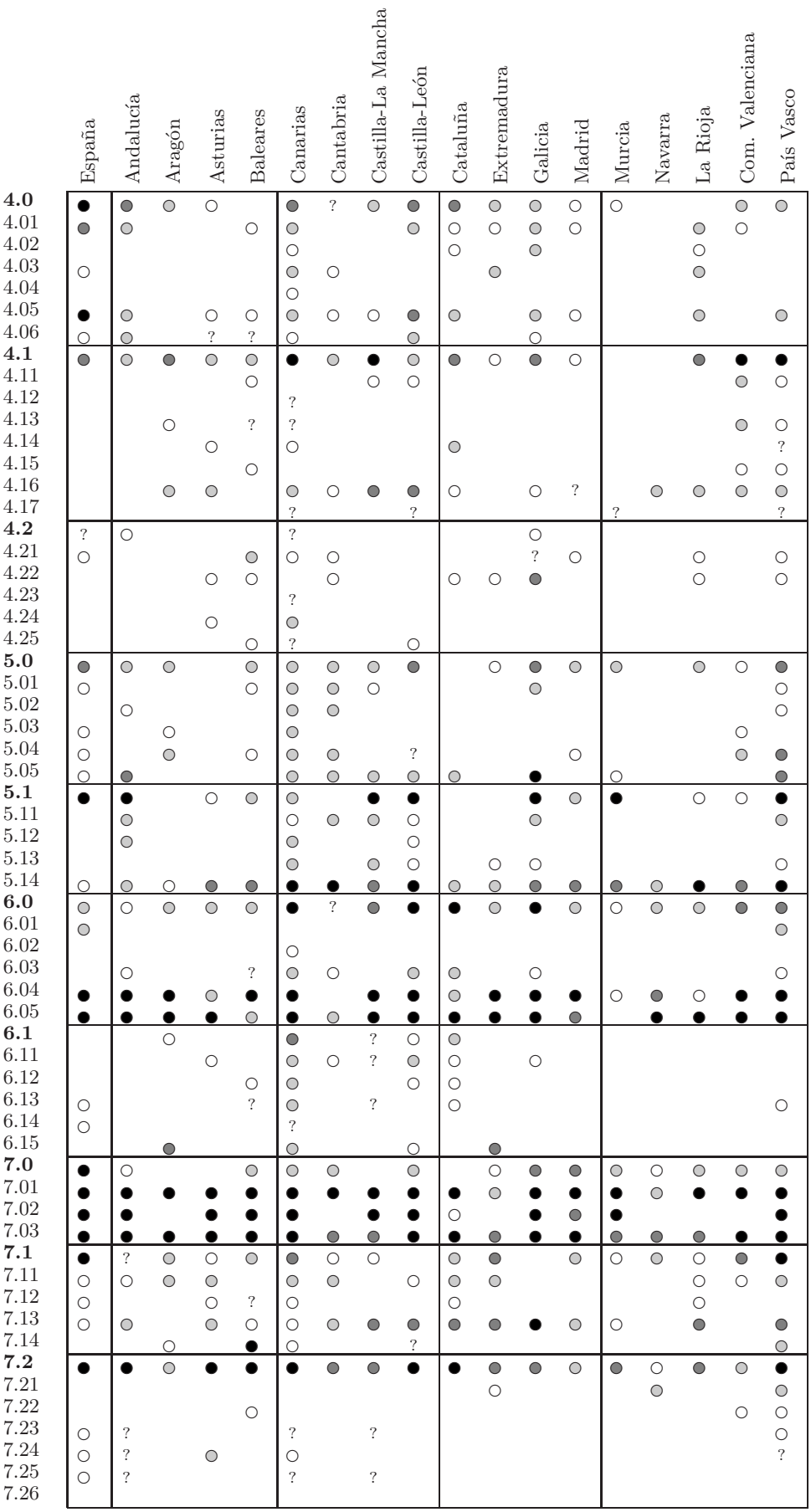
Discussion

If we except the national ambit, the regions have barely legislated on the issue, as we can see from the many fields left blank (no references) when these indicators are analysed. The fact that public information is a citizens' right under European directives and Spanish legislation as well appears not yet to have been transferred to the field of urban planning. This participation is currently, as before, at only minimal levels.

Summary table

Key:
- ● more than 7 articles from various regulations
- ● 4–7 articles from various regulations, or more than 7 from just one
- ● up to 3 articles from various regulations, or up to 7 from just one
- ○ just one article
- ? with some hesitation

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Annex III. Guidelines and manuals

Programa de Sostenibilidad Ambiental Urbana Ciudad 21 (Andalucía, 2002)

Estudi de criteris ambientals per a la redacció del planejament urbanístic (Cataluña, 2003)

Guía de Buenas Prácticas de Planeamiento Urbanístico Sostenible (Castilla-La Mancha, 2004)

Manual para la redacción del planeamiento urbanístico con criterios de sostenibilidad (País Vasco, 2005)

Libro verde del medio ambiente urbano (Ministerio de Medio Ambiente, 2007)

Guía para la elaboración del informe de sostenibilidad ambiental (La Rioja, 2007)

Plan especial de indicadores ambientales (Ayuntamiento de Sevilla, 2007)

Criterios de base para la planificación de sistemas verdes y sistemas viarios sostenibles (Andalucía, 2006)

Guía práctica para la elaboración e implantación de Planes de Movilidad Urbana Sostenible (IDAE, 2006)

Modelo de pacto local para la movilidad sostenible (Red de ciudades y pueblos hacia la sostenibilidad, 2001)

Guía básica de criterios de sostenibilidad en las promociones de viviendas con protección pública (Comunidad Valenciana, 2007)

Guía de edificación sostenible para la vivienda (País Vasco, 2006)