

## **Understanding the city: Local Agendas 21, Territorial Audits and Urban Policies. Instruments and technologies applied in the AL21 of the city of Cuenca, Spain**

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### **1 ABSTRACT**

This paper analyzes the potentiality of the Local Agendas 21 to facilitate both the comprehension of the cities and the favouring of the local decision-taken processes. It details the techniques used in the Territorial Audit of the LA21 of the city of Cuenca (Spain), designed with the aim to detect existing problems and to indicate possible urban policies for the Local Social Forum. It analyses several topics related to social participation; local sustainability evaluation system and the graphical representations used as instruments of reference and monitoring.

### **2 FROM THE URBAN PLANNING TO THE TERRITORIAL SUSTAINABILITY**

Cities have always been an object of planned interventions, though the urban demands of the industrial revolution where those that gave birth to the regulatory urbanism, in charge of planning the city according to a master plan. The 20th century consolidated the regional planning, as an instrument to give impulse to the economic and social development through a coordinated administrative management. The post-industrial era give a new insight to the planning process, giving the principles of the sustainability and the Local Agenda 21 as its principal instrument of action.

Unlike a traditional urban ordination scheme, LA21 is a strategic bet that allows solving urban problems without the bureaucratic-administrative requirements of a conventional planning instrument. Even though the methodologies applied to the drawing up of a LA21 are numerous, they all coincide with three basic topics: the problems identification and evaluation, the public participation, and the constitution of a Social Forum committed to agreeing on a Local Action Plan.

#### **2.1 The problems exploration: the Territorial Audits**

The fundamental activity in the draft of a LA21 is to know the state of the local sustainability, since this not only defines the profile of the local situation but contains the elements required to define future local policies. The Territorial Audit is the instrument for detecting current and potential problems, studying the context from two complementary perspectives: the subjective one, related to know what the population feels and understands as problems, and the objective one, directed to detect territorial problems and opportunities. This double analysis drives to two concurring but methodologically different lines of work: the qualitative and the quantitative diagnoses. Unlike other territorial integral diagnoses, those ones are more expeditious, structured on the basis of much directed surveys and on a limited set of indicators.

The qualitative diagnosis gathers the perception of the inhabitants with relation to the territorial sustainable conditions. It is elaborated from public opinion polls directed to two different segments of the community: society in general and social key agents - associations, groups of pressure, institutions, etc. The pools statistical exploitation evaluates the citizens' vision related to the existing social, economic and environmental conditions while detect the aptitude of the local society to face the demands of the sustainable development, including the failures and the success of the existing social and political local system.

On the other hand, the quantitative diagnosis evaluates the real condition of the physical and socio economic context. It has an operative character built on the basis of indicators for which two factors are required: availability of updated and qualified information, including historical series; and the minor possible degree of spatial subdivision such as neighbourhoods, districts, blocks, etc.

The Territorial Audit ends its activity pointing out the principal problems and the possible actions to be taken. The selection of those possible actions, the fixing of its priority, the assignment of the agents in charge and, especially, the economic endowment for its attainment are specific activities of both the Social Forum and the local government. From the exercise of their corresponding functions the future Action Plan of action will arise, consolidating the local urban sustainability strategy.

### 3 KNOWING THE CITY OF CUENCA THROUGH ITS LOCAL AGENDA 21

The city of Cuenca (55.866 inhabitants in 2009), located in the Castilla-La Mancha Autonomous Region, leads a municipality characterized by a reduced demographic and urban dynamics, an acceptable urban services provision, an important but insufficiently exploited tourist-based potential, a reduced economic specialization and a scarce entrepreneurial dynamic. The draft of the LA21 was a part of the political program of its Town Hall, as it is testified by the approval of the "Declaration of Cuenca for Sustainability" in 2006



Map 1. Location: Cuenca and its administrative region

The technical works for the AL21 Territorial Audit were entrusted to a team of researchers belonging to the Institute of Geography, Economy and Demography of the Spanish National Research Council, the Complutense University of Madrid, the University San Paul CEU and the Royal Geographical Society.

#### 3.1 The vision of the citizen: the public opinion

Opinion polls are strategic instruments for the drawing up of integrated diagnoses. Their results, no matter their sensitive or subjective character, offer relevant information for the ratification or nuance of the aspects gathered in the quantitative diagnoses. In this case of study, two different opinion polls were realised.

The first survey had a double objective: to know the degree of satisfaction of the citizens of Cuenca on a series of general urban topics, and to increase citizens' awareness on the importance of its participation. For the accomplishment of this last topic, both the survey and the municipal campaigns of information about the LA 21 were launched at the same time.

Table 1 represents the citizens' degree of satisfaction (satisfied, indifferent or unsatisfied) with regard to the following aspects of the city: Cuenca as a place to live (1), labour opportunities (2), open areas and natural environment (3), social and health services (4), educational centres (5), cultural provision (6), leisure facilities (7), public transport (8), civil safety (9), municipal services and facilities (10), civil participation in the municipal decisions taken process (11).

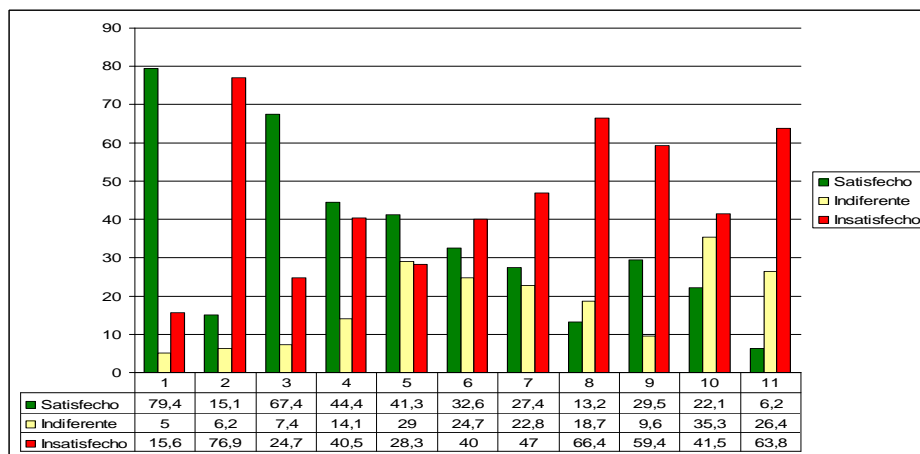


Table 1: Perception Survey results

The second survey was aimed to know concrete aspects concerning the Agenda 21, gathered into four big sections: Agenda 21, Environment, Urban Structure, and Society and Economy. For the AL21 section, questions were directed to evaluate citizens' knowledge about the meaning of a LA21 as a participative plan for local action. The Environment questionnaire was directed to know some specific aspects that affect and determine the urban quality of life, such as protected spaces, forestry, rivers, quality of air, water, noise, waste or energy. The Urban Structure section deepened on three big topics: mobility, urban services and heritage protection, and urban image. The questions on Society and Economy analyzed several topics: immigration, civil safety and local police, attention to citizens, town hall information, access and use of the Internet, employment, business, and access to housing.

From the survey several considerations were detected, for example that the population had a scanty knowledge about the meaning of a LA21 and the fact that the Town Hall had putting in motion the drawing up process for the local one; the existence of several environmental problems affecting the conservation of the local natural resources due to pollutants of diverse origin; the deficits on mobility and public transportation, the lack of dynamism and innovation of the local companies; the low quality and the scarce quantity regarding employment supply, or the need to improve the relationships between citizens and Town Hall.

### 3.2 The sustainability profile: the indicators

The importance of the Territorial Audit is not only to detect the appropriate sustainable indicators but to evaluate them, for which to have access to available, updated and qualified information is decisive. The existence of historical series adds value to the diagnosis, since they allow the interpretation of possible trends. The use of statistical information proceeding from diverse sources, fundamentally censuses, municipal polls and official publications, favoured the technical analysis, based on real data, opposite to the sensitive vision of the citizen derived from the opinion polls.

Thematic area	Indicator	Threshold	Desirable trend
SOCIETY AND ECONOMY	Population growth	10,17	↔
	Aging population	138,80	↓
	Young population	15,43	↑
	Net density population	167,89	↔
	Illiterates up to 16 years old	1,73	↓
	Population with unfinished primary studies after compulsory education	38,73	↓
	Women in charge of single-parent families	2,40	↔
	Population up to 65 years old living alone	21,54	↔
	Population living in bad conditions buildings	10,95	↓
	Migrant population	10,95	↔
	Economic activities municipal licences	3,03	↑
PUBLIC SERVICES AND FACILITIES	Inhabitants within 300 metres from green areas	98,50	↑
	Green areas in relation to total urban area	15,04	↑
	Streets with trees	2,52	↑
	Inhabitants within 300 metres from health centres	19,68	↑
	Scholars (6-11 years old) within 300 metres from a primary education centre	69,56	↑
	Scholars (12-16 years old) within 300 metres from a secondary education centre	26,93	↑
	Means of transportation used for working	46,13	↓
	Trips average length	16,23	↓
	Accessibility to bus	94,71	↑
ENVIRONMENT	Domestic water consumption	166,84	↓
	Population within 300 metres from plastic packing containers.	99,35	↔
	Population within 300 metres from glass containers	99,57	↔
	Population within 300 metres from paper containers	99,70	↔
	Population within 300 metres from battery containers	88,85	↔
	Population within 300 metres from organic waste containers	99,93	↔
	Noise perception	28,03	↓

Table 2: Sustainability indicators

With relation to the selection of the indicators, they were coming fundamentally from the “Panel of Indicators of Local Sustainability of the Network of Sustainable Cities and Towns of the Castilla-La Mancha Autonomous Region”. With the aim to ample the diagnoses, there were added those European indicators of compulsory fulfilment and others adopted by the research team to reflect local particularities.

The 94 finally selected had information at municipal level, except 27 that got information at census tract, fact that allowed a detailed profile of the urban sustainability for neighbourhoods and typical zones of the city (historical centre, central area, zones of residential expansion, industrial estates).

Table 2 shows the 27 selected indicators, the thresholds used, and the desirable trend of each indicator: to increase ↑, to maintain ↔, or to diminish ↓. The thresholds fixed as a value of reference was the weighted average between the maximum and minim situation registered in the different census tracts.

### 3.3 Understanding the city through LA21 instruments

One of the aims of the territorial sustainability evaluation is to put the numerical information into instruments of easy comprehension and interpretation for both local administration and citizenship. In this case of study, two types of graphical representations were used: GIS and Comprehensive Matrix.

The main aim of these instruments were to facilitate the drawing up of the future Local Action Plan and its related policies, giving spatial location to the problems, priority to the solutions and recording the information changes along the time.

#### 3.3.1 GIS

As for the spatial location of the indicators, the GIS gave base to the technical diagnosis. It gave spatial correspondence to many indicators (index of aging, rate of illiteracy, water consumption) while facilitated make calculations that without this tool might not have been carried out (distances from public services, local mobility, net residential density). Another possibility for the GIS is its capacity to do simulations to know hypothetically certain situations.

It is expected that the updating of the information that feeds the system will allow a detailed follow-up of every indicator, mark its trends and make comparison among them in space and time.

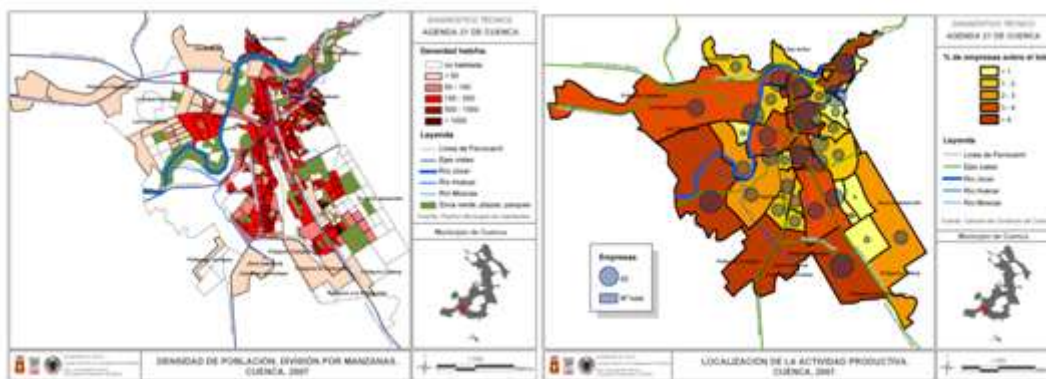


Fig. 2: GIS maps examples: density population and economic activities

#### 3.3.2 Comprehensive Matrix

Thresholds are values of reference that allows finding critical and not critical situations from the sustainability point of view. The values under or below the thresholds were subdivided in three intermediate ranges - high, average and low – with the aim to detect the levels of efforts that every indicator needs to advance towards the maxim sustainability. This information gave pace to the so called band of balance, composed by the minimal critical and not critical ranges, assuming that a minimal negative value, still out of the threshold, demands reduced efforts to be improved.

Those numerical ranges were translated into a chromatic scheme of easy interpretation named Iconographic Tables, representing different situations: negative: critical high and average (red and orange); band of balance: critical low and not critical low (amber) and positive: no critic average and high (light and dark greens).

The aggregation of the Iconographic Tables for thematic areas gave place to the so called Comprehensive Matrix, graphics that allow to detect areas with adverse conditions of sustainability and to relate the state of every indicator to the remaining ones. The finding of chains of causality allows give attention to co-related effects.

Secciones censales	Hab. radio 300 m. zonas verdes	Hab. radio 300 m centros salud	Hab. radio 300 m colegios	Hab. radio 300 m. institutos	Hab. radio 300 m paradas autobús
	%	%	%	%	%
1001	100,00	0,00	69,39	0,00	96,96
2001	100,00	0,00	100,00	0,00	100,00
2003	100,00	22,71	100,00	0,00	100,00
3001	94,08	0,08	18,33	0,00	94,79
3002	100,00	100,00	100,00	64,86	100,00
3003	100,00	84,06	100,00	41,67	100,00
3004	100,00	9,32	100,00	11,76	82,90
3005	86,19	29,18	17,57	30,28	80,11
3006	100,00	0,00	25,00	0,00	100,00
3007	100,00	0,00	54,10	0,00	100,00
4001	100,00	0,00	98,72	0,00	77,56
4003	100,00	0,00	100,00	0,00	79,46
4004	100,00	0,00	70,24	15,94	88,94
4005	100,00	40,92	100,00	77,55	100,00
4006	100,00	10,23	54,00	17,65	100,00
4007	100,00	46,10	100,00	86,42	100,00
4008	100,00	7,31	100,00	6,98	100,00
4009	100,00	0,00	100,00	40,43	100,00
4010	100,00	0,00	100,00	0,00	100,00
4011	100,00	83,09	20,80	0,00	80,15
4012	100,00	4,35	100,00	94,62	93,66
4013	100,00	1,73	100,00	100,00	100,00
4014	100,00	12,10	47,73	0,00	100,00
4015	100,00	69,03	55,26	0,00	100,00
4016	100,00	51,06	100,00	0,00	100,00
4017	100,00	50,12	92,17	85,83	100,00
4018	100,00	0,00	63,23	55,50	100,00
4019	100,00	8,49	26,37	0,00	100,00
4020	100,00	0,00	70,00	81,73	100,00
4021	100,00	0,00	79,51	29,19	100,00
4022	96,53	0,00	38,92	0,00	97,58
4023	100,00	0,00	0,00	21,37	100,00
4024	77,78	0,00	0,00	0,00	69,25
4025	97,54	0,00	3,76	0,00	89,47
METAS	↑	↑	↑	↑	↑
UMBRAL	98,50	19,68	69,56	26,93	94,71

Table 2: Comprehensive Matrix of the Thematic Area "Public Services and Facilities"

### 3.3.3 The Municipal Integrated Diagnosis: proposals for future urban policies

The Territorial Audit sustains the technical recommendations of the Municipal Integrated Diagnosis (MID), a document aimed to encourage the draft of future urban policies. This case study, the MID offered a wide range of topics feasible to be translated into transversal actions. Some risk aspects detected for the city of Cuenca are:

- areas of high urban vulnerability, affected by loss of population and high index of aging

- areas with risk of social exclusion, due to conditions of illiteracy, single-parent families, high rates of immigrant population and shortage of specific public housing programmes
- decay of traditional neighbourhoods in historic centre, with a negative urban image and a reduced quality of life produced due to the lack of a stable rehabilitation policy
- unbalanced distribution of the economic activities, specially in the new low density residential expansions
- unstructured green spaces system, unconnected from the surrounding high valuable natural resources
- citizens are proud of the quality of the surrounding natural landscape but their perception about its conservation is unsatisfactory
- transport system highly dependant of the private car for daily movements, inefficient urban transport and scarce parking provision
- poor pedestrian accessibility, lack of pedestrian streets and spaces for alternative means of transportation
- lack of channels for communication between citizenship and Town Hall

#### **4 FROM THE AUDIT TO THE FORUM: THE LONG WAY OF CITIES TOWARDS SUSTAINABILITY**

Territorial Audits detect existing problems and indicate possible actions to the Social Forum and the local government. The responsibility of selecting the proper options according to the existing economic resources is in their hands. In this process, two required aspects have necessarily to coincide: the political will of the government to give course to the AL21 results, and the social co-responsibility of encouraging this activity in behalf of the whole community. In this unstable balance of determinations takes root the principal weakness of the approach that defends the draft of a LA21: the high dependence of relating to the moment circumstances they might limit the advances as for sustainability, turning it into an action politically attractive though ineffective in reality.

Even if the urban sustainability has established itself as a habitual practice in local governments - as it is demonstrated by the innumerable actions tackled worldwide - the results are still isolated and partial. In any case, local governments have to be adapted to the new times, centring their efforts on imaginative formulae that allow obtaining more with fewer resources.

The areas in local government where the major changes are expected are those concerning to management, control and results evaluation, for which the demands refers to departmental restructuring, reduction of the bureaucracy, rationalization in the use of local resources and administrative transparency, among others. Governance bets for the participation of citizens, organizations and companies for the definition of collective decisions. Examples in this respect are numerous, from programs of economic modernization, strategic plans, city-programs, participative budgets, environmental audits, partnership, administrative mediation in projects, up to the drawing up of Local Agendas 21.

Transforming existing cities into sustainable ones is a slow process consisting of small advances. But this will be the only way that in an indefinite future allows to the next generations to be much nearer of the paradigm that inaugurated the 21st century after years of excesses: to reach simultaneously the social well-being, the economic efficiency and the ecological balance.

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