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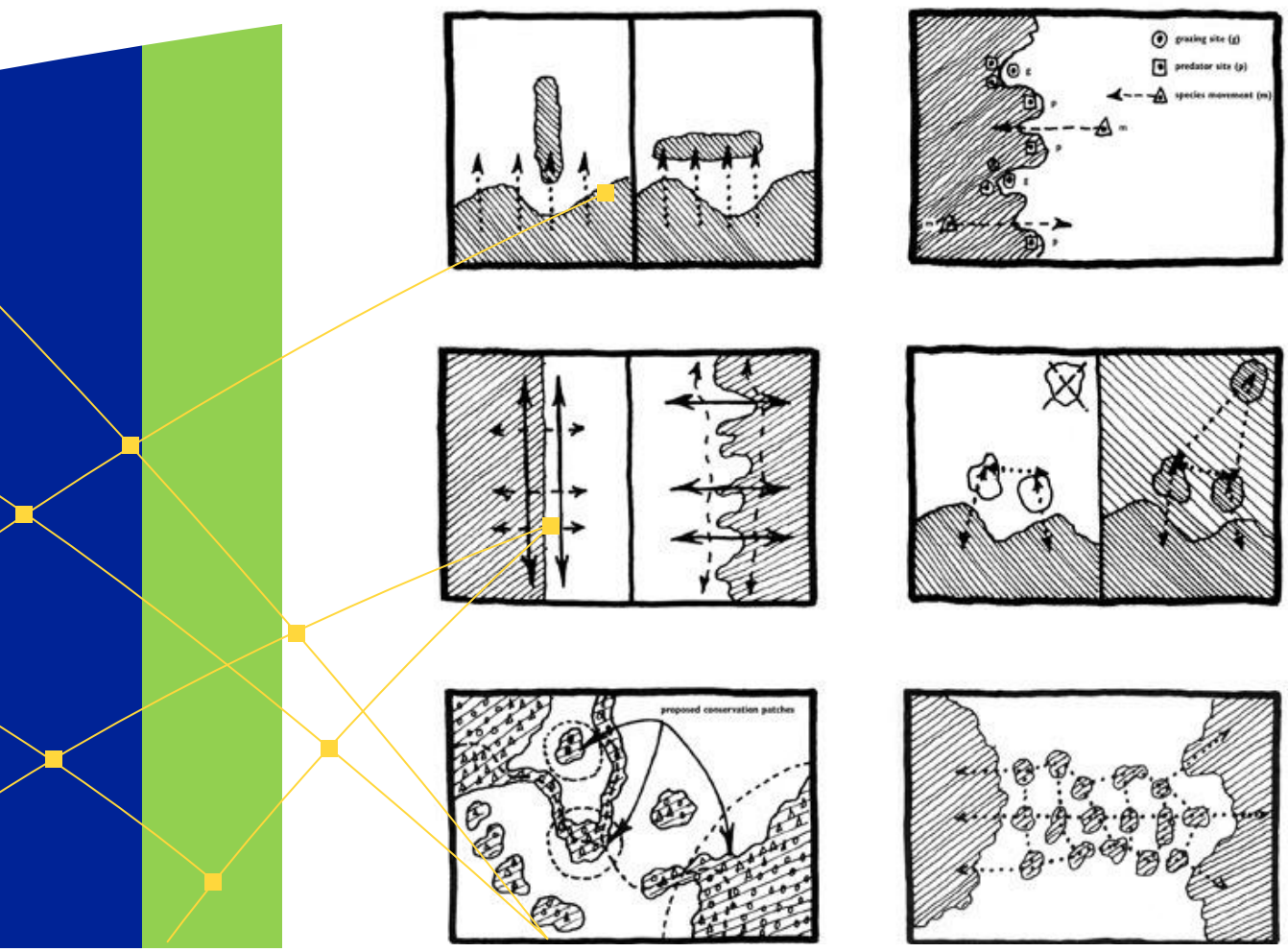

Planning tools and planning governance for Urban Growth Management and reusing urban areas

Edited by USEAct Lead Expert **Vittorio Torbianelli**

European Union
European Regional Development Fund

Connecting cities
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This first Thematic Paper is edited by **Vittorio Torbianelli**, UseAct Lead Expert.
It refers to the network activities and to thematic contributions from the partners , further thematic expert and URBACT experts.

Anna Arena, Maria Luna Nobile and Vincenzo Fusco, (Lead Partner team) contributed to editing the paper.

Cover picture: Wenche E. Dramstad, James D. Olson and Richard T.T. Forman, Movement diagrams: Patches, Edges, Corridors, Mosaics, from *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning*, 1996

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FOREWORD

Vittorio A. Torbianelli
UseAct Lead Expert

The “thematic paper” of the USEACT Project is dedicated to the “first” of the three themes of the UseAct Project : “Planning tools and planning governance for Urban Growth Management and reusing urban areas”.

Two other interim reports, dedicated to the other two main themes of the project shall follow in the upcoming months, concurrently with the development of the themes of the project.

Additionally, in view of the considerable thematic integration which characterises the UseAct project, this first “thematic paper” is to be considered a “work in progress”, as a reflective and complete thematic compendium of the project (thematic booklet) shall only be available at the end of the activity. In fact, the publication of the definitive thematic book is foreseen at the end of the project. It shall constitute the true and proper “thematic output” and comprise additional results, for example, those derived from the bilateral/trilateral meetings.

The aim of this first thematic paper is in any case to provide – especially for those outside the UseAct project – a text which can focus on and encapsulate the main thematic content of the project.

The nature of a “work in progress” naturally implies the possibility that some elements of the paper may be improved, following suggestions from the entire UseAct community, in light of the final publication.

In terms of the structure of the work, a decision was made to continue with the thematic structure already outlined in the “Baseline study”, albeit from the perspective of subthemes.

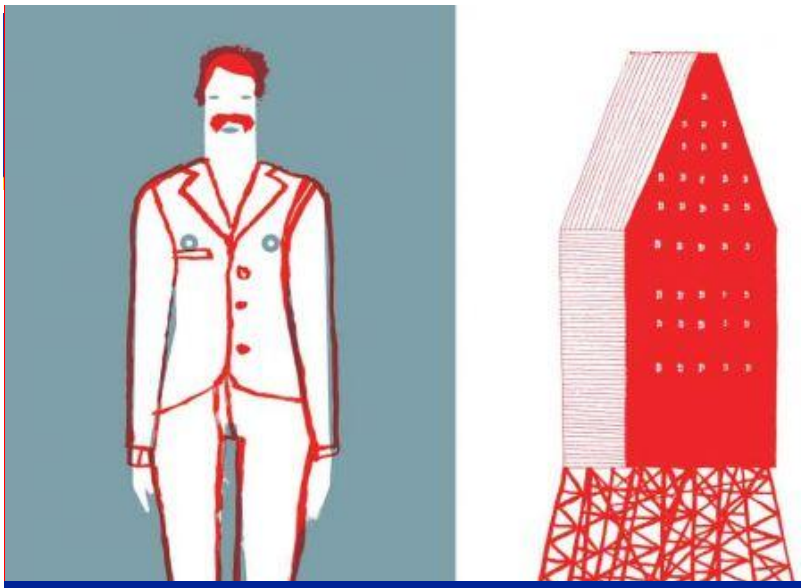
Particular attention has been paid to two “strategic” planning issues, which are at the heart of avoidig landtake policies, but do not always emerge in a marked manner as topics to focus on by the partners – namely the ability to organise a suitable metropolitan “governance” (extended beyond the administrative space of the city) and to activate, in an integrated manner, a land-use management policy.

From the sources, maximum space has been awarded to the more structured contributions presented in the two meetings dedicated to the first theme of the UseAct project, provided both by thematic experts and partners, selecting in particular those most consistent with the thematic focus.

In addition to these, other contributions have also been used (case studies, etc.) from partners, in aspects that adhere highly to the thematic focus.

In essence, this work should therefore be seen as a study carried out by the UseAct community as a whole.

Trieste, 25th February 2014



Source:Architects continues to plan buildings. “un sedicesimo” Corraini Mantova

INTRODUCTION

1. STARTING FROM THE BIGGEST CHALLENGE: THE PLANNING MISMATCH

As pointed out in the Lead Expert Kick-Off meeting presentation[1], the USEAct project aims to focus on the issue of integrated urban growth management policy, to minimize (not necessarily avoid!) land take and soil sealing.

In general to reach this target is important to create a framework for an effective design and implementation of integrated policy.

Cities and local administrations should therefore: identify the general targets of this integrated policy, at local level; identify which are the “management tools” needed and potentially available to implement this policy and to “manage” the implementation process; recognizing the constraints that, at local level or at a superior level, represent a problem for designing and/or implementing the framework.

As it will be pointed out in the next paragraphs, great attention should firstly be paid to the “planning mismatch”, between different authorities. This is probably the first challenge for any “land-take reduction” policy and also for the UseAct partners and in this first thematic report, the specific aspect of planning mismatch is strongly stressed.

Partners should clearly identify, in their respective cases, the “effects” on the land use induced by the mismatch between Administrative Urban Areas, Functional Urban Areas and Morphologic Urban Areas.

All the different components of the integrated policy have therefore to be identified and shown within a coherent enlarged “spatial vision” at supra-municipal level.

The recently published results of the “Plurel Project “, 2007-2011[2], one of the most relevant projects about “anti-sprawl” strategies for European context, has showed very clearly that reducing land take is mainly a “regional –scale” matter.

[1] Vittorio Torbianelli, Presentation at the UseAct Kick-off Meeting, Viladecan, 27th-28th May 2013

[2] http://www.plurel.net/

So far, the governace aspect should be clearly identified (and stressed) by the partners which have situations with more “risks” (now or in the future) of further land take due to the interaction of forces which are not under direct control of the “local” administrative body.

Effective wide area governance frameworks are a possible solution.

Good practices of cooperation among city-administration exist also in case of “small” cities: inter-municipal developments are just an example, and they can be interesting for the UseAct partners as well. Rheintal, Austria, is an agglomeration of several small cities and highly affected by urban sprawl. 29 municipalities have committed themselves to an integrated approach for the whole region, with special focus on the reduction of land take and soil sealing. Inter-municipal business settlements. TMG is a public agency in charge of facilitating new business settlements in Upper Austria. The development of new business locations is an important tool for municipalities to attract new business settlements and new income. However, many Austrian municipalities have already failed and have in fact created new brownfields. As a reaction, TMG has developed the concept of “intermunicipal business location” (INKOBA16). Municipalities co-operate in developing and advertising one common location and share the costs and revenues. By concentrating the efforts of several municipalities the overall land take is lower compared to several smaller projects and the chance that developed locations are efficiently used is higher.

2. INTEGRATED POLICIES AND INTEGRATED PLANNING TOOLS: LAND USE MANAGEMENT TOOLS AS A PRECONDITION

Planning tools and planning Governance issues are essenzial for “reducing land take” integrated policies.

The discussion about the strategic policy framework should be focused on issues such as: what is the best “scale” to implement an effective planning policy? What are the targets of the integrated Urban Growth Management policy? (re there “quantitative” targets for land take? How are they determined?. Are these “targets” more (or less) stringent than the ones proposed by the concurrent authorities (e.g. at regional level)? What are the criteria and indicators used to “manage” the land use and in particular to limit the urban perimeter and to “select” the soils/areas that can or cannot be “taken”, or to select the best functions for the areas? Is there a clear identification of the “target areas” for reuse? What are the criteria to select them within the policy scheme? How are these interventions “linked”, through urban planning, to the land preservation policy? [3]

Effective Land Use Management is a fundamental premise to face these answers and to develop effective integrated policies to reduce land take.

For instance, a land management system that is able to start from the “soilquality “issue can be of great support for effective application of the “Guidelines” proposed by the European Union to reduce land take[4] . These guidelines stress the need to develop the following three “tiers”

Tier 1: Limitation of Soil Sealing: policy, monitoring, realistic land take targets, streamline existing funding policies accordingly, steer new developments to already developed land, provide financial incentives for inner urban development, improve the quality of life in large urban centres, make small city centres more attractive, protect agricultural soils and valuable landscapes;

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3 References: Proposal for a Directive of the European Parliament and of the Council establishing a framework for the protection of soil and amending Directive 2004/35/EC: http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52006PC0232:EN:NOT

Functions of the soil: Ecological, Economic/social. See the 2012 EU guidelines, European Commission, Brussels, 15.5.2012, swd(2012) 101 final/2, commission staff working document (i.e. not yet adopted officially): Guidelines on best practice to limit, mitigate or compensate soil sealing, http://ec.europa.eu/environment/soil/pdf/soil_sealing_guidelines_en.pdf

4 UE, Guidelines on best practice to limit, mitigate or compensate soil sealing, COMMISSION STAFF WORKING DOCUMENT, 2012, http://ec.europa.eu/environment/soil/pdf/soil_sealing_guidelines_en.pdf

Tier 2: Mitigating Soil Sealing as far as possible: respect soil quality along planning processes, apply technical mitigation measures, to conserve at least a few soil functions (i.e. permeable surfaces on parking areas);

Tier 3: Compensate soil losses: establishing qualified compensation measures, facilitate new alternative land uses.

«Soil abilities» and «soil quality» assessments and maps can be useful for making communities more sensitive to the re-development and densification issue. To ensure protection of soil in urban areas, planners should integrate soil quality into evaluation procedures for planning. To this end, a study partly conducted under the EU-funded TUSEC-IP project2 has developed a method to evaluate soil quality by combining soil quality indicators (SQIs), such as texture, pH and contamination levels. [5] An example of a basic soil quality indicator set includes soil quality indicator: soil organic matter content, soil texture, soil pH, soil depth, soil structure, heavy metal contamination, contamination with organic pollutants, buffering, filtering and decomposing capacity, general soil fertility/productivity. However, more in general, also the "economic" qualities (values, potentials of development, etc) of the land (built or not) are important factors that should be monitored and managed trough an advanced land use management framework.

3. THE "PLANNING PANOPLIA: TOWARD "POLICY INTELLIGENCE" AND "CREATION OF VALUES"

Reducing planning mismatch and adopting effective "land use management" approaches are fundamental "planning and governance" preconditions for any effective integrated policy aimed at reducing land take.

However, further steps within a "conceptual multiactor and multifaced framework" have to be developed, to be strongly integrated with the "planning" tools.

As the Plurel Project pointed out6, "*there are technical challenges in multi-sectoral, multifunctional and ultilevel governance. Experience shows that different sectors speak different languages with different incentives. So we need ways of improving 'policy intelligence', which does not only mean more information,but better knowledge management through the whole policy cycle from capacity building, to analysis, strategy, implementation and evaluation.*

This is a challenge for existing governance systems - generally arranged in departmental boxes – to respond to agendas which are multifunctional, multilevel, multiagency, intergenerational and so on.

The concept of 'strategic policy intelligence' brings this all together:

- *Exchange of technical information from different sectors;*
- *Application to the policy cycle, with stages including survey, analysis, strategy, implementation and evaluation;*
- *Organisational capacity building and innovation,learning and skills evelopment;*
- *Anticipatory governance through foresight and future studies, systems thinking and strategic planning".*

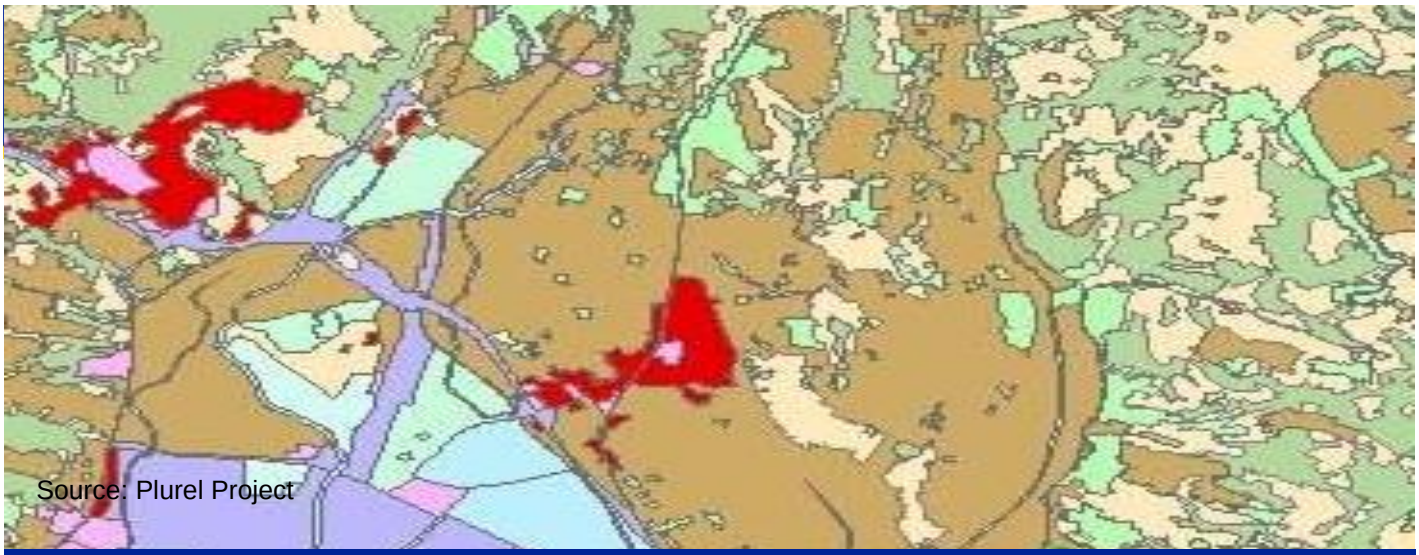
The role of private stakeholder and in particular of businesses has not to be forgotten in the urban planning process, since these subjects are strongly interested in "creating values". As stated in the Plurel final report, *"the question is: what kinds of incentives and mtivations can help to achieve them? How do we get from here to there? This raises the concept of 'value', and the process of generating 'added value'. Value is an economic concept which might be measured in money terms. It is also a social, political or cultural concept more suitable for other kinds of measures. The challenge for governance can be*

5 see Borut Vrscaj, Laura Poggio, Franco Ajmone Marsana (2008), A method for soil environmental quality evaluation for management and planning in urban areas, Landscape and Urban Planning 88 (2008) 81–94

6 Peri-Urbanisation in Europe – Towards European Policies to Sustain Urban-Rural Futures, Synt hesis Report (Editors, Annette Piorr, Joe Ravetz, Ivan Tosics, Synthesis Report, 2011), p.121

seen as the enabling of value-added activity by and for all stakeholders– not just for a static balance sheet -, but as a creative and entrepreneurial process. The best practices and the most valuable pportunities will often combine economic, social and environmental kinds of added value in local economic development, in local community development, in local environmental action.

The message is plain: the planning panoplia to reduce land take has to go beyond the “traditional” but rigid and not velue-oriented planning approaches that are still recurrent in Europe.



Source: Plurel Project

1 IMPLEMENTING URBAN GROWTH MANAGEMENT (UGM) AT DIFFERENT ADMINISTRATIVE LEVELS AND SCALES

1.1 STARTING FROM THE "PERI-URBAN" DEVELOPMENT PROBLEM ISSUE

Every year in the EU more than 1000 km2 of undeveloped land is appropriated for housing, roads, industry and recreation. EEA has estimated that there are as many as 3 million brownfields sites across Europe. Past suburbanisation/planned urban sprawl bring spatial and social segregation. No common legislation at European level for the sustainable use of soil resources has been adopted until now. Given these facts, the presentation of Mr Ivan Tosics[7], URBACT Thematic Pole Expert, during the First USEAct Thematic Meeting held in Viladecan, can be considered an ideal "starting point" for discussing the "Urban Growth Management" issue within the framework of the "USEAct" Project.

The lapidary sentence "Europe has a 21st century economy, 20th century governments, and 19th century territorial systems" can be easily referred, among others, also to the "territorial government mismatch" problem, that explains why "Urban Growth Management" is in general rather weak in reaching effectively land take reduction, not only in Europe but in other contexts as well.

This problem clearly emerged, for example, in the U.S.A. context: "*America's metropolitan areas can no longer afford the crazy quilt of tiny, fragmented governments that they have inherited from the 19th century. The result is a fundamental mismatch between the real metro-scaled economy of innovative firms, risk-taking entrepreneurs and talented workers and the inefficient administrative geography of government*" (Katz, 2010).

[7] Main source: Iván Tosics, Presentation for the USE-Act Kick off meeting – Implementation Phase, 28 May 2013, Viladecans (Spain).

Providing some backgrounds on the relationship between functional areas and EU policies can be therefore useful to start to discuss the issue.

Tables 1.1 and 1.2 show, as an example, the territorial pattern around Budapest and other European cities, showing in particular the „wheight" of Morphological Urban Area (MUA/city) and Functional Urban Area (FUA/city) in comparison with the population of the „administrative" city.

Table 1.1 – Territorial pattern around Budapest

	Popula-tion (million)	Administrative status	Functional importance
Budapest municipality	1.7	local government	
Agglomeration of Budapest	2.5	none (statistical unit)	job market, housing market, infrastructure
Region of Budapest	2.9	NUTS II planning level	none
Economic area of Budapest	4.0	none	economic area (investors)

Source: Ivan Tosics, op.cit.

Table 1.2 – Population in different "areas" around the city core (ratios)

CITIES (million)	Admin city	MUA/city	FUA/city
London	7,43	1,1	1,8
Berlin	3,44	1,1	1,2
Madrid	3,26	1,5	1,6
Paris	2,18	4,4	5,1
Budapest	1,70	1,2	1,5
Vienna	1,60	1,0	1,6
Lisbon	0,53	4,4	4,9
Manchester	0,44	5,0	5,8
Liverpool	0,44	2,7	5,1
Katowice	0,32	7,1	9,5
Lille	0,23	4,1	11,3
…			
AVERAGE (40 cities)	42.63 mill	1,7	2,3

Source: Ivan Tosics, op.cit.

The above mentioned situation – Ivan Tosics affirms – is a precondition of a „democracy deficit" in planning and governance in many cities.

Planning is dominated by private interests and by authoritative decisions of local municipalities. In many CEE cities opportunity led local development dominates and in many Western European cities tax-income maximising policies are behind the efforts to make inner city areas attractive again.

The consequence is increase in socio-spatial segregation (growth of gated communities of the rich vs growing ghettoization of the poor and migrants), leading to dissatisfaction of people.

In such a context, the importance of „functional urban area cooperation" should be stressed to avoid the negative effects of competition (investments, services, taxes) between local authorities, To integrate policies – economic, environmental and social challenges can best be addressed at once on broader urban level and to reach the economy of scale – size matters in economic terms and in services. However, functional urban areas are

undefined and usually weak in administrative-political sense

Potential ways to define and „delimit" metropolitan areas, city regions

As Ivan Tosics clearly pointed out, there is no universal agreement, neither on the terms (metropolitan area, functional urban zone, city-region) nor on its contents. Different definitions are recognized, as:

- Labour-market definitions (predominantly focused on TTW-travel-to-work area);
- Economic activity-based definitions (besides access to labour markets other factors might also be important: e.g. the supply chain, proximity of international airport);
- Housing-market definitions (the city-region might be defined as the area in which households search for residential locations);
- Service-district definitions (for example retail catchments, access to hospitals, theatres, etc.).

The OECD identification of FUAs is the following one: population grid from the global dataset "Landscan" (2000). Polycentric cores and the hinterlands of FUAs identified on the basis of commuting data, including all settlements from where at least 15% of the workers commute to any of the core settlement(s). OECD distinguishes four "categories" of „functional urban areas":

– small urban areas, with a population of 50 – 200 thousand;

– medium-sized urban areas (200 – 500 thousand),

– metropolitan areas (500 thousand – 1,5 million);

– large metropolitan areas (above 1,5 million population).

Data contained in the public data base[8], show that in 29 OECD countries, 1.175 functional urban areas are reckoned. In European OECD countries 659 functional urban areas are counted (29 large metropolitan areas and 88 metropolitan areas). More specific data are provided in Table 1.3.

[8] www.oecd.org/gov/regional/measuringurban

Table 1.3 - Metropolitan areas in OECD countries

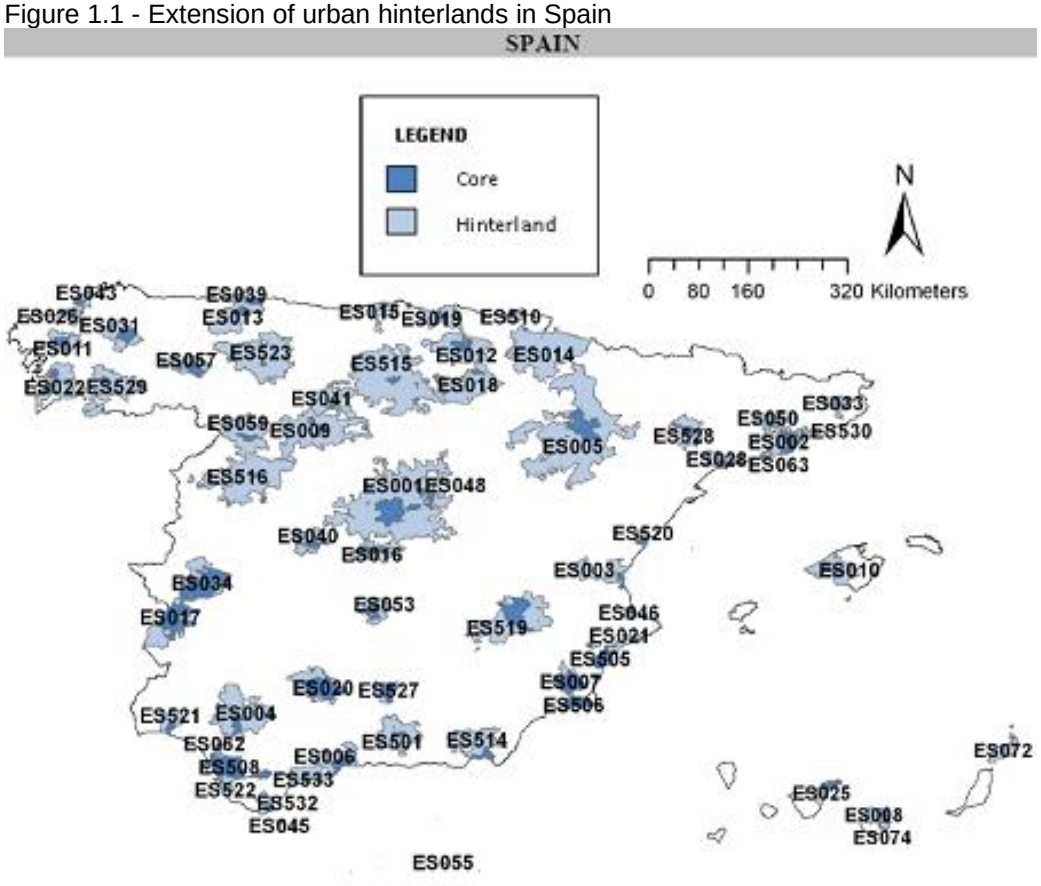
European OECD Countries	Large metro-politan area (1,5 mill -)	Metropolitan area (0,5 mill-1,5 m)	Medium sized urban area (200 th–500)	Small urban area (50 th– 200 th)	SUM M	Share of pop in FUAs (%)
Austria	1	2	3	-	6	56,5
Belgium	1	3	4	3	11	58,9
Czech Rep	1	2	2	11	16	45,6
Denmark	1	3	-	-	4	53,8
Estonia	-	1	-	2	3	55,3
Finland	-	1	2	4	7	49,7
France	3	12	29	39	83	**62,8**
Germany	6	18	49	36	109	**64,3**
Greece	1	1	1	6	9	49,8
Hungary	1	-	7	2	10	49,7
Ireland	-	1	1	3	5	50,3
Italy	4	7	21	42	74	50,8
Luxembourg	-	-	1	-	1	**80,2**
Netherlands	1	4	11	19	35	**72,1**
Norway	-	1	3	2	6	44,5
Poland	2	6	16	34	58	55,2
Portugal	1	1	3	8	13	53,9
Slovak Rep	-	1	1	6	8	36,9
Slovenia	-	1	1	-	2	39,1
Spain	2	6	22	46	76	**62,7**
Sweden	1	2	1	8	12	52,7

Switzerland	-	3	3	4	10	55,6
UK	3	12	44	42	101	**73,0**
SUMM	**29**	**88**	**225**	**317**	**659**	

Source: Ivan Tosics, op.cit.

Figure 1.1 clearly shows, as an example, the extension of “urban hinterlands” in Spain.

Figure 1.1 - Extension of urban hinterlands in Spain



Source: Ivan Tosics, op.cit.

Territorial mismatch and governance models

With reference to the “territorial mismatch” issue, analysing the difference governance models is a fundamental step.

The recent “Eurocities Metropolitan Areas Survey”, developed within the “Eurocities” Association framework [9], reached some preliminary results. The cities that have been scrutinized are the following ones. In North-western Europe: Birmingham, Brussels, Ghent, Helsinki, Lille, Linköping, Malmö, Manchester, Oslo, Rennes, Stockholm, Stuttgart, Vienna, Zurich. In Southern Europe: Terrassa, Torino. In East-central Europe: Bratislava, Brno, Budapest, Katowice, Warsaw.

As reported by Ivan Tosics, different types of metropolitan governance emerge from the survey. In particular

1. Structured, pre-defined, fixed boundary metropolitan area organisation (e.g.:STUTTGART)
2. Flexible and/or bottom-up models of territorial governance (e.g. BIRMINGHAM)
3. Strategic planning lead metropolitan areas (e.g. MALMÖ-LUND)

Table 1.4 shows some different governance models with different legal frameworks, functions and roles played by each administrative level.

[9] See: http://www.eurocities.eu/eurocities/home

Table 1.4 - Stuttgart, Birmingham, Malmö, Vienna hinterlands: governance models, functions, legal framework

City, size	Areas around the city	Functions of the different areas	Legal background	Note
Stutt-gart (0,6 mill)	1. Stuttgart Region (2,7 mill) 178 municipalities 2. Stuttgart Metropolitan Region (5,3 mill)	1. Land use planning, the organisation of public transport and the promotion of the economy 2. Voluntarily tasks in the field of transport, economic development, climate change	1. Stuttgart Region (Parliament with 91 delegates) and the Stuttgart Region Association and agencies 2. Committee with 36 nominated delegates.	In Germany, the Federal Ministry of Transport supports model projects of spatial planning called „Modellvorhaben der Raumordnung“, or “MORO”. In these model projects, new ideas and instruments of spatial planning are tested and scientifically monitored.
City, size	Areas around the city	Functions of the different areas	Legal background	Note
Birming-ham (1,04 mill)	1. Greater Birmingham and Solihull Local Economic Partnership (1,9 million) Birmingham, Solihull + 7 settlements 2. Birmingham agglomeration (2,3 mill): physically built area + 10 km green belt 3. West Midland Metropolitan County (2,55 mil): two main parts, Birmingham – Black Country 4. Birmingham Metropolitan Area (3,6 million): County + towns with 30-60 th. inhabitants including rural areas 5. West Midlands Region (5,3 mil)	1. Not clearly decided yet: may contain strategic planning, economic development, transport, culture and the creative industries, tourism and inward investment, business support, skills, the green economy and housing. Finance comes from business oriented public measures. 2. No functions 3. County: Integrated Transport authority (crosses several LEPs, containing only some part of the Birmingham LEP) under geographical reorganisation. 4. Non 5. Non	1. LEP system introduced in 2010 (local governments had the right which LEP to choose). Voluntary partnership. It has boards and working groups, members are mixture of political leaders and business leaders. 2. No organisation 3. The County was established by national law in 1974, and originally had a council. The council was abolished in 1986 and replaced by the current governance by the political leaders of the 7 districts. 4. There has never been any governance arrangements at the Birmingham Metropolitan Area level 5. The Region was just abolished in 2010.	The new British Government that was elected early in 2010 announced that it was abolishing the English regions. The Government announced that the regions would be replaced by "Local Enterprise Partnerships" (LEPs). These would be at the sub-regional level and were expected to reflect functional economic areas - metropolitan areas but also some non-metropolitan areas. The regions have now been abolished, and 99% of England is now covered by LEPs.
City, size	Areas around the city	Functions of the different areas	Legal background	Note

Malmö (0,3 mill)	1. Malmö – Lund (0,63 mill): 11 municipalities 2. Malmö – Copenhagen (appr. 3 mill) 3. Öresund Region (3,7 mill)	1. Malmö-Lund cooperation: planning, business, education-employment, tourism, transport. Common vision and strategy is under development 2. Common vision, huge joint projects (metro) 3. Cooperation (based on Interreg)	1.Voluntary cooperation, informal meetings 2.Meetings of the city councils 3. Öresund Committee since 1993 (state representatives and delegated elected local members)	
City, size	Areas around the city	Functions of the different areas	Legal background	Note
Vienna (1,7 mill)	1: Suburban region (SUM), local definition, close to MUA (2 mill), 70 municipalities 2: Vienna Metropolitan Area (SRO): local definition, close to FUA (2,6 mill), 268 municipalities 3: Planungs-gemeinschaft Ost (PGO): An association of the three eastern federal states Vienna, Lower Austria and Burgenland, larger than FUA, (3,7 mill), 745 municipalities 4: "Vienna Region" Vienna, Lower Austria and Burgenland (larger than FUA) – same area as the PGO 5: Vienna-Bratislava 6: Centrope (6,5 mill): AU, CZ, SK, HU	1. Primary areas of SUM involvement are spatial and landscape planning as well as traffic issues 2. Strategic planning 3. The task of the PGO is to „prepare and coordinate activities of spatial character". It mainly focuses traffic, open space and spatial planning issues in the form of studies, research and conceptual work. 4. Marketing and business promotion agency 5. -- 6. Planning in the framework of Interreg projects	1. The SUM is organised as a society under civil law, members are the provinces Vienna and Lower Austria. Strategies are adopted by a steering committee of 23 members 2. The area is not officially defined and has no formal organisation. Currently a project by the PGO 3. College of Governors of the participating federal provinces which convenes once per year 4. VIENNA REGION Marketing GmbH 5. Run by business and industry organisations 6. Centrope Agency with regional offices in the 4 countries	

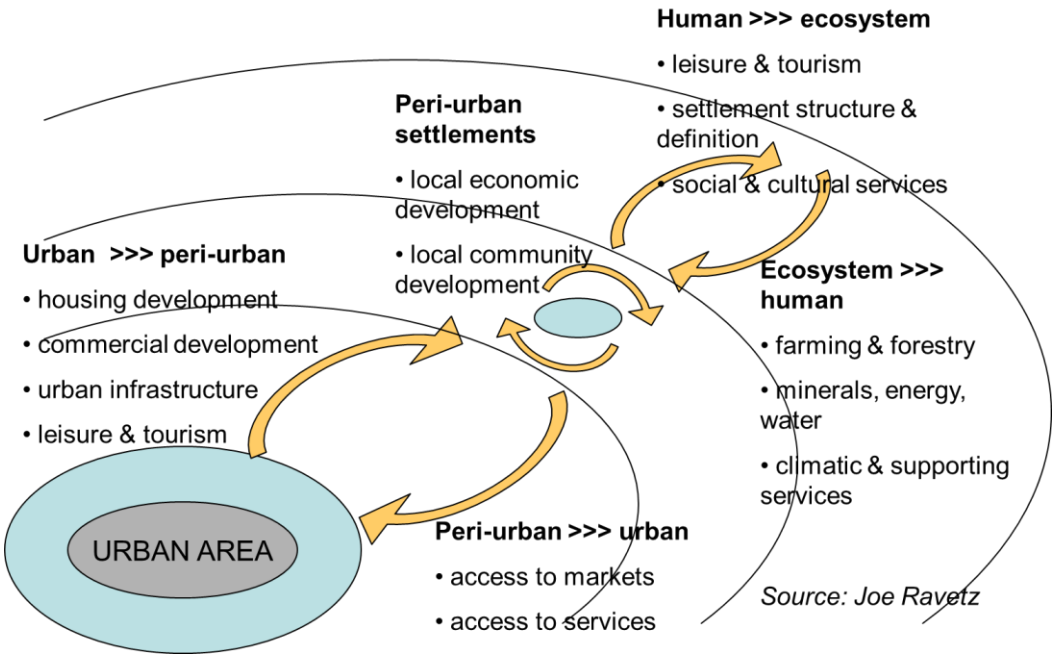
Source: Ivan Tosics, op.cit.

Difference between the agglomeration and the metropolitan area

As Ivan Tosics points out, it is possible, in general, to differentiate the agglomeration area (day-to-day cooperation) and the metropolitan area (broader economic cooperation area), according to functional differences.

The „agglomeration area" refers to integration for transport, housing, sewage, garbage; the metropolitan area to business relations, cultural links, leisure-tourism.

Figure 1.2 - Functions and urban/peri-urban areas



Source: Ivan Tosics, op.cit. (from Plurel Project)

There are relevant variations, whether real cooperation exists in formalized way or at least informally on agglomerational and on metropolitan level.

Peri-urban relationships: the PLUREL project

As showed in Figure 1.2, different functions are placed within different "radiuses" ideally centred in the core urban area.

The FP6 PLUREL Project (Peri-urban Land Use Relationships - Strategies and Sustainability Assessment Tools for Urban-Rural Linkages) [10] stresses the importance of coordinating several financial and sectorial policies ("systems") for different zones. Different "systems" and "sectorial policies" to be coordinated can be recognized, as showed in table 1.5.

[10] http://www.plurel.net/Project-4.aspx

Table 1.5 - Systems and sectorial policies relevant from the UGM point of view

a)	**The local government financing system**
-	from where and according to which parameters the local governments receive their revenues – externalities
b)	**The taxation system**
•	the existence of different types of local taxes and the spatially relevant consequences of these taxes – tax competition
c)	**Sectoral policies**
•	infrastructure, economic development, transport, housing – regulations and subsidy systems
d)	**Transport in urban – periurban areas**
Anti-sprawl policies:	
•	The share of public transport use in the urban, peri urban and rural areas is high
•	There are financial contribution and other special public subsidies given to encourage the use of public transport
•	There any no transport-linked public subsidies which strengthen urban sprawl (such as tax deduction of travel-to-work costs by car)
•	The RUR area is covered by public transport associations
•	There are efforts to ensure the internalization of external costs of transport
•	Mobility management tools are considered in the most dense urban areas in order to reduce congestions and improve the environmental conditions of transport

e)	**Housing development**
Anti-sprawl policies:	
•	There are supra-local (regional, national) regulations, prescriptions existing, e.g. minimal share of social housing, which influence local housing policy
•	There are no housing-linked public subsidies with the effect to strengthen urban sprawl
•	There is cooperation between the municipalities of the RUR area (or smaller subsets of it) regarding housing policy
f)	**Regulatory "against sprawl" tools and policies at local level**
Public land ownership	
•	land-banking
g)	**Growth management**
•	e.g. balance between jobs and homes, transport services, physical and social infrastructure requirements
h)	**Financial regulations**
•	possibilities for the public sector to recapture some part of land value increase; taxes on green field investments, subsidies for brown field redevelopment

Source: Ivan Tosics, op.cit. (from Plurel Project)

EU level interventions required for integrated urban development

For the success of EU2020 integrated planning (green and social economy strategies) is needed on the level of functional regions.

This new approach needs policy guidance and financial support from the EU, initiating cross-sectoral and cross-territorial planning on the functional region level. Integrated solutions are needed: green economy (retrofitting), social economy (including the low skilled)

New elements in European policy making for the 2014-2020 period

As showed in the presentation of Mr. Tosics, for the success of EU2020 integrated planning (green and social economy strategies) is needed on the level of functional regions. This new approach needs policy guidance and financial support from the EU, initiating cross-sectoral and cross-territorial planning on the functional region level. Integrated solutions are needed: green economy (retrofitting), social economy (including the low skilled).

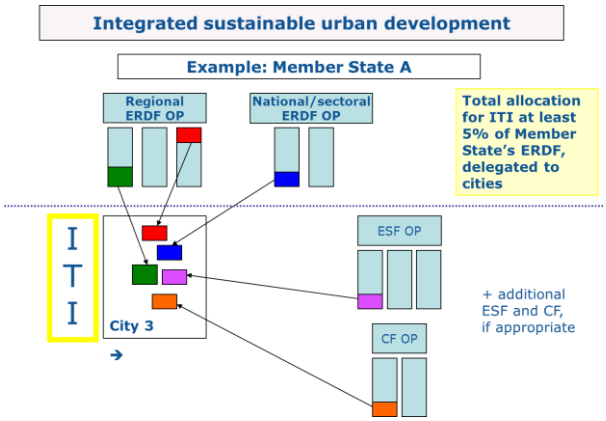
To face the evident "territorial mismatch problem" at the European level, European Union is therefore introducing some new approaches with the aim of improving the ability to "overcome" the often weak integration among urban and peri-urban policies.

Three concepts are, in particular, rather promising:

- ITI (Integrated Territorial Investment): a place-based integrated approach, potentially on metropolitan level (larger cities);
- CLLD (Community Led Local Development): people-based integrated interventions on local (smaller municipalities) and neighbourhood level;
- Horizon2020: spatially blind innovative economic actions.

Figure 1.3 shows how the ITI approach will work

Figure 1.3 - ITI and integrated sustainable urban development



Source: Ivan Tosics, op.cit.

With regards to ITI, funding comes from different programmes, and finances an integrated approach. It is not as easy as it sounds, but the idea is promising.
Decision on how it will work depends on the national level. An innovative aspect is that it is not a territorial approach. It will be important to build the results of USEAct into the ITIs.

In smaller neighbourhoods integrated approaches should be applied„. Results which are useful must be based on decisions made with other actors" (strategic thinking).
The metropolitan agenda and the new EU planning period (2014-2020) is an another field for innovation. The development of tools of different policies is speeding up: Cohesion Policy €320-350bn, within ERDF the ITIs, within EAFRD the CLLDs , innovative urban actions around €0,3 bn, Innovation Policy: Horizon 2020 approximately €80bn.
Potential links between "metropolitan ideas" and European policies are also under evaluation.
Narrow metropolitan areas (zero-sum game model) could allow to develop the following approach: ITIs, led by cities, in conjunction to CLLDs, led by public-private-thirdsector partnerships in smaller areas. The need for defined boundaries and (at least delegated) fixed institutional structure is a possible solution anyway. For broader metropolitan areas (win-win type cooperation model): link to regional innovation strategies, led by administrative regions and, to Horizon2020,innovation partnerships can and should be kept on a flexible spatial level.

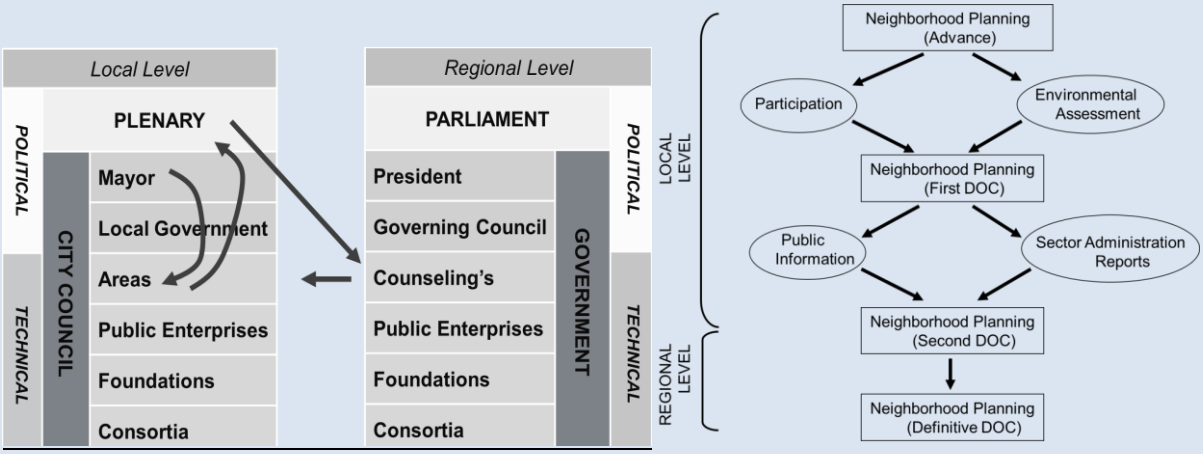
Metroplitan Governance and Urban Planning in the UseAct partnership

VILADECANS

The governance framework (local level and regional level) is a fundamental feature of the decision making process also for UseAct partners cities.

Figure 1.4 shows the decision- making process and the different planning tools in Viladecan context.

Figure 1.4 - Viladecans: decision-making process and planning tools



Regional Planning:
- Territorial Plan for the whole region of Barcelona, 2010 (164 municipalities)
- Director Plans (Coastal, Airport, …)
- Metropolitan Plan (Master Plan), 1976 (27 municipalities)

Local Level:
- Neighborhood Plans
- Municipal Action Plan
- Urban Land, Building Land and Non-Building Land Director Plans
- Housing Local Plan
- Local Agenda 21
- Strategic Plan
- Mobility Plan
- Municipal Laws

Source: Eric Serra: Presentation of the City of Viladecans, UseAct Kick-off Meeting, 28th May 2013

An example of “coordination” among different planning levels, relevant for Viladecan context, is the so called “Districts Act” This Act is a regional government initiative to promote the transformation of slum areas in the cities of Catalonia through the definition of integral projects to be financed. The level of co-financing is set at 50%. The first neighbourhood that was chosen to implement this initiative was the Ponent neighbourhood in 2007. It is a social housing environment configured with isolated dwelling buildings. The whole project is based on actions included in 8 compulsory action fields: Improvement of public space and the facilities, rehabilitation and furnishing of the common elements of buildings, Increasing the facilities for collective use, Incorporating information technologies in buildings, promoting the sustainability of urban development Gender equity in the use of public space and the facilities, social urban and economic improvement programmes, accessibility and removal of architectural barriers. Most programmes have been developed. Currently, urban planning needed to complete the renovation of the district is being developed.

NAPLES

The essential role played by the “super-urban” planning framework emerges also from the Naples case study . The “**Provincial level Regional Masterplan”** (PTR – “Piano Territoriale Regionale) aims at protecting landscape (natural and built), preserving the territory from land consumption and sprawling development and enhancing the multifunctional character of rural areas in peri-urban fringes. Moreover, a “Legge Regionale 1/2011 (So called “Piano Casa” law), promotes the interventions on existing built heritage.

The Management Plan for the Protection of land and water resources (promoted by the Northwestern Campania Basin Authority) is aimed at preserving open spaces and reducing land consumption. Thanks to a new law recently entered in force, Naples will become an administrative “Metropolitan Area”: this fact can be considered as a positive one, since it will allow greater control of land-use around the city . Also the transport plan is an essential planning level, **since** urban reuse potential is linked to the urban transport structure: important parts of the urban fabric are interested by the optimization plan of the infrastructure network, which operates both on an urban and regional scale, and is based on the creation of new underground lines to connect the suburbs to the city centre, and a “regional metro”.

The Naples integrated transport network plans, which are based on railway/metro infrastructures (see the so called “Hundred Stations Project”), fit the requirements of the regional government planning schemes. These plans include the 1997 Council transport Project, the “Primary Infrastructure Network Plan” and the “General Masterplan” which was developed during the period 1004-2004. The renovation and extension of the underground network and its station is of particular importance. Before the Hundred Stations Project, the Naples underground network numbered a total of 57 stations, while the network development project foresees 114 stations, of which a large number will be finished by 2015.

NITRA

*In Slovack Republic, national authorities are r*esponsible for the budget. Definition of the basic strategies of the state development which should be adopted at the regional, local, city level by implementation in to the lower level strategic documents /vertical structure/ in the field of urban development, nature conservation, environmental issue. *County/regional authorities have a c*ontrol function, evaluation of construction, environmental and conceptual matters merit at the local/regional level, review of the general plans ad conception document proposals and adjustment.

*Municipality / city council have e*xecutive and legislative function, and local budget affirmation. Moreover they are in charge of urban development proposals, implementation of the legal framework through the local level regulation, dealing with the city property, social issues.

OSTFOLD

In Norway, the political/ administrative and decision-making process is as follows. At national level, the Planning Authority is the Ministry for the environment, that provides guidelines for planning at the regional and local level. The Ministry for local and regional issues is in charge of housing policy, local and regional development, local government and administrating elections. Priority is given to the outlying districts. At regional Level there is a further planning authority: the county council that prepares plans for the county, provides guidelines for planning in the municipalities and sectors. The regional authority stops local plans which are not considering regional or national restrictions. At local level there is the Municipal Council, as Planning Authority: it prepares municipal master plans and legally binding zoning plans.

1.2 TERRITORIAL PLANS TO REDUCE LAND TAKE: CASES STUDIES FROM SPAIN

As pointed out in the presentation of professor Adolf Sotoca (University of Barcelona), coherent planning frameworks at territorial level are seriously important to reach land take reduction targets at local level. Recently, in Spain, several planning instrument at regional level have been introduced. This paragraph is dedicated to present this articulated instrument framework[11].

To better understand the current Spanish urban planning environment, is useful to begin from the real estate boom phenomenon occurred some years ago.

Currently, there are 3,5 milion empty housing units (increased up to 10,8% in the last 10 years) and the amount of land financed by the bank sector would potentially allow the construction of 3,5 milion more housing units. The amount of potential land for urbanization covers the housing demand for the next 45 years. The existence of a decentralized planning system in Spain has also to be recalled. **C**entral government controls basic regulations on land value and financial valuations ("national land act"). Regional governments are fully in charge of urban legislation and strategic planning. Municipalities, finally, are responsible for planning tools approval ("masterplan").

Finally, the role played by some national laws has to be stressed. In 1998 the so called "Land Act" was putted into effect. It was a market orientated law, that recognizes market values of land once the real estate product is offered. In 2008, another national law is introduced. This is a "balanced" orientated law, that takes in consideration the existing status of land value, independent of future potentialities.

The land Act characterised land as: 'not for building', as 'potential urbanisation' (growth containment) or as 'urban land for integrated urban regeneration'.

Figure 1.5 shows the framework of Policies, Instruments and Actions that characterizes the current Planning system in Spain, as premises for effective UGM. Most actions are at regional level. Only recently have there been discussions to introduce instruments, at national level, to promote rehabilitation, regeneration and renewal.

In the images of figure 1.6, through several examples, an overview on "how" these different instruments work is presented.

Within this framework, policy instruments are under three main headings:

a) Rural land custody (Landscape plans and Rural land custody);

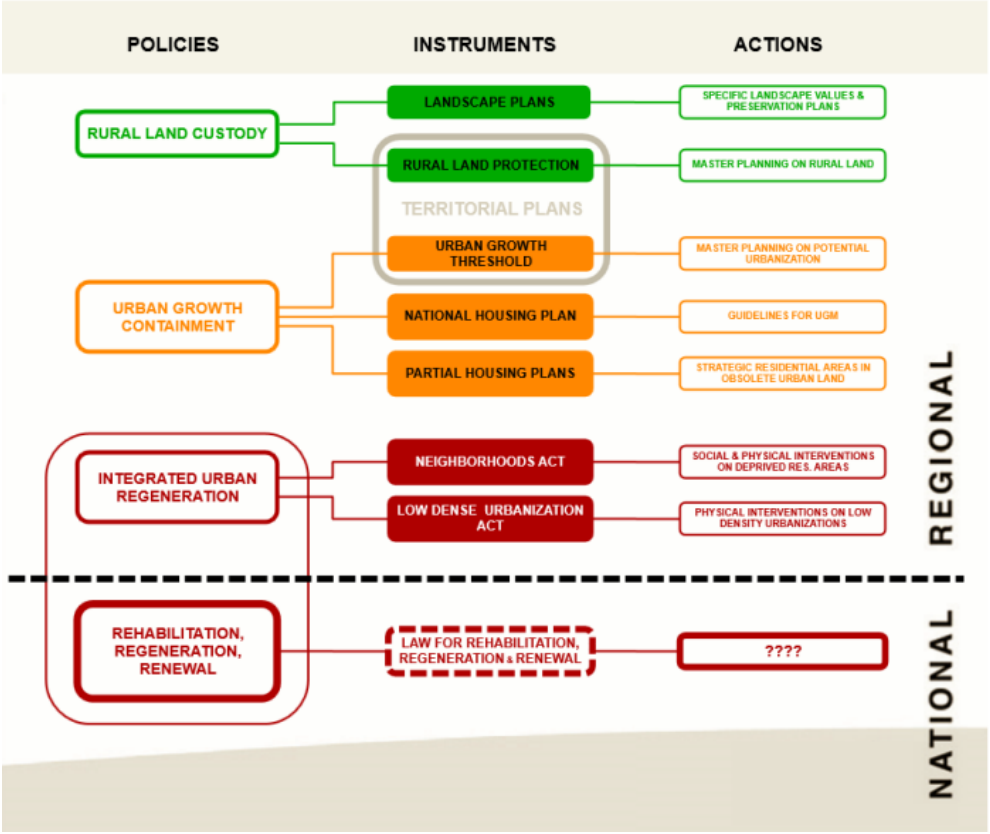
b) Urban growth containment(Urban growth threshold, the National housing plan and Partial housing plans) and:

c) Providing land for regeneration, rehabilitation and renewal (Neighbourhoods act, Low density urbanisation).

In 2004 17 landscape plans were drawn up in Catalonia, with classification and guidelines. Of these, however, only two were implemented, and two more only partially implemented.

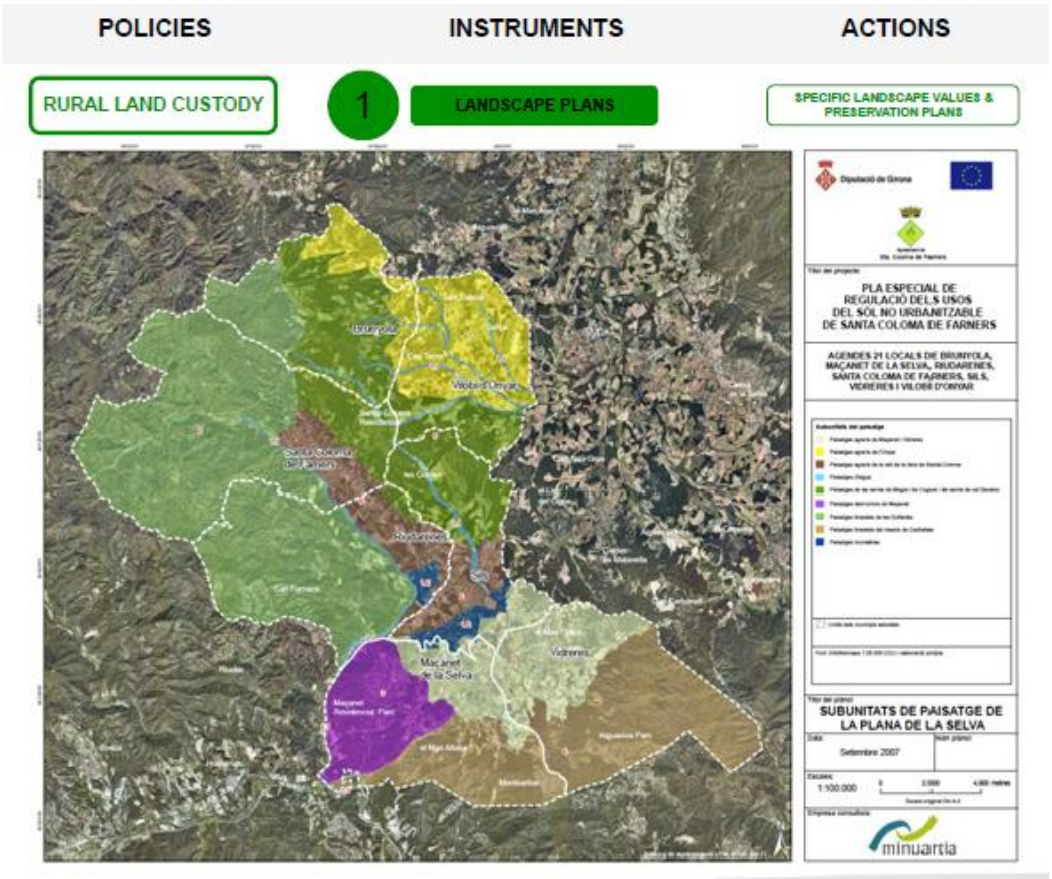
[11] Main Source: Adolf Sotoca, Planning Tools in the Spanish Context, Presentation at the UseAct Kick-off Meeting. Viladecans, 28th May 2013

Figure 1.5 - Planning Policies, Instruments and Actions for Urban Planning in Spain



Source: Adolfo Sotoca, op.cit.

Figure 1.6 *(1-11)* – Planning policies, instruments and actions for UGM in Spain



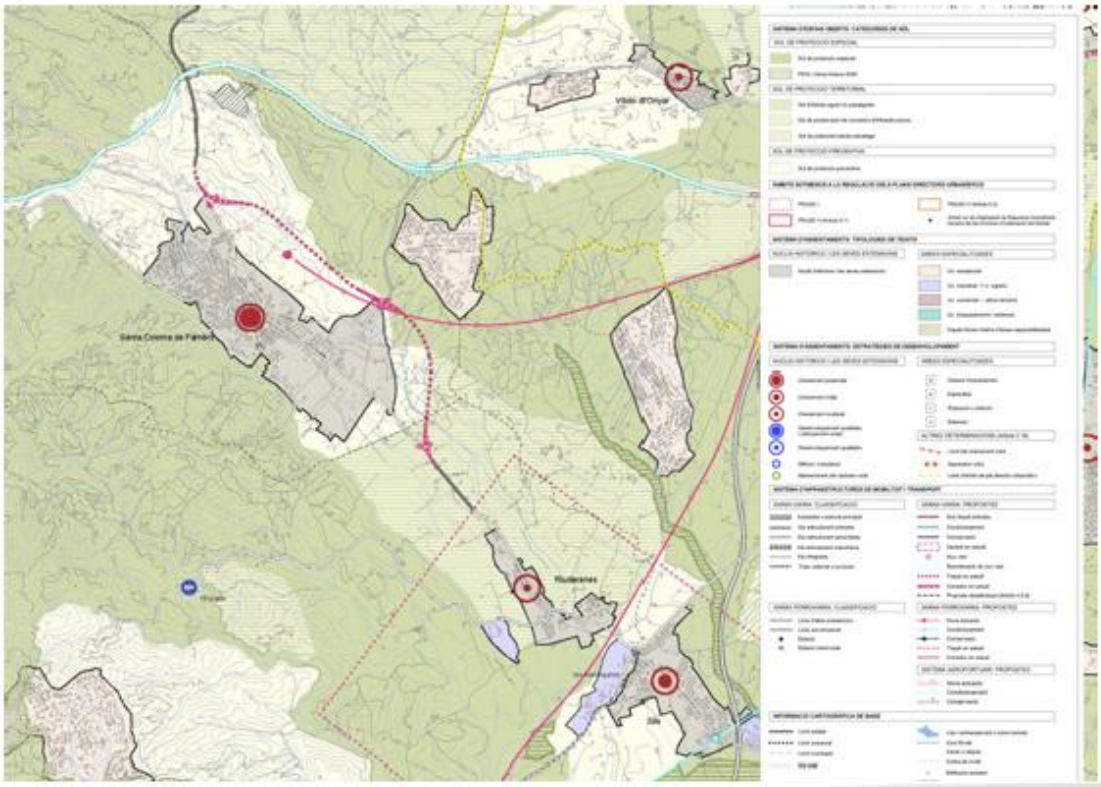
POLICIES | INSTRUMENTS | ACTIONS

RURAL LAND CUSTODY

2

RURAL LAND PROTECTION

MASTER PLANNING ON RURAL LAND



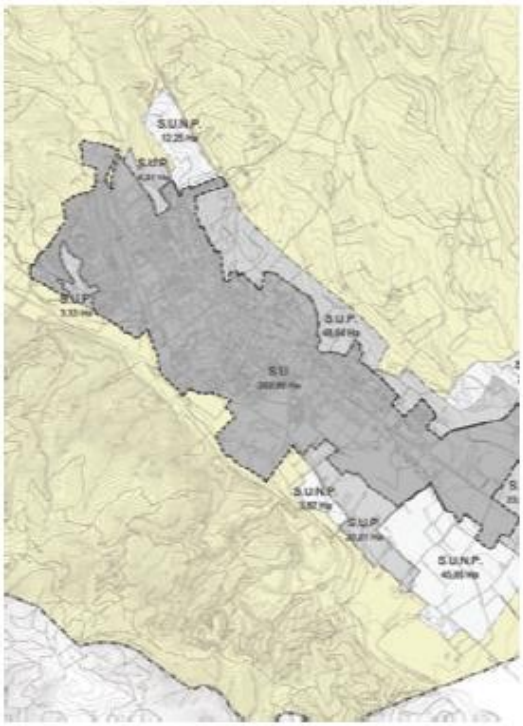
POLICIES | INSTRUMENTS | ACTIONS

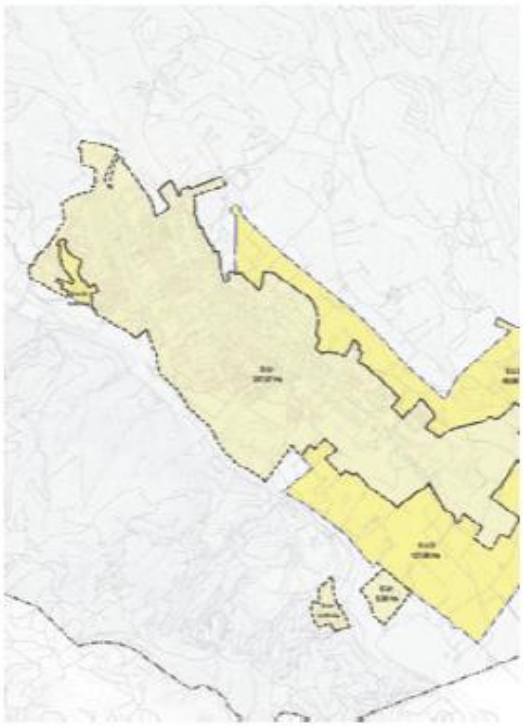
RURAL LAND CUSTODY

2

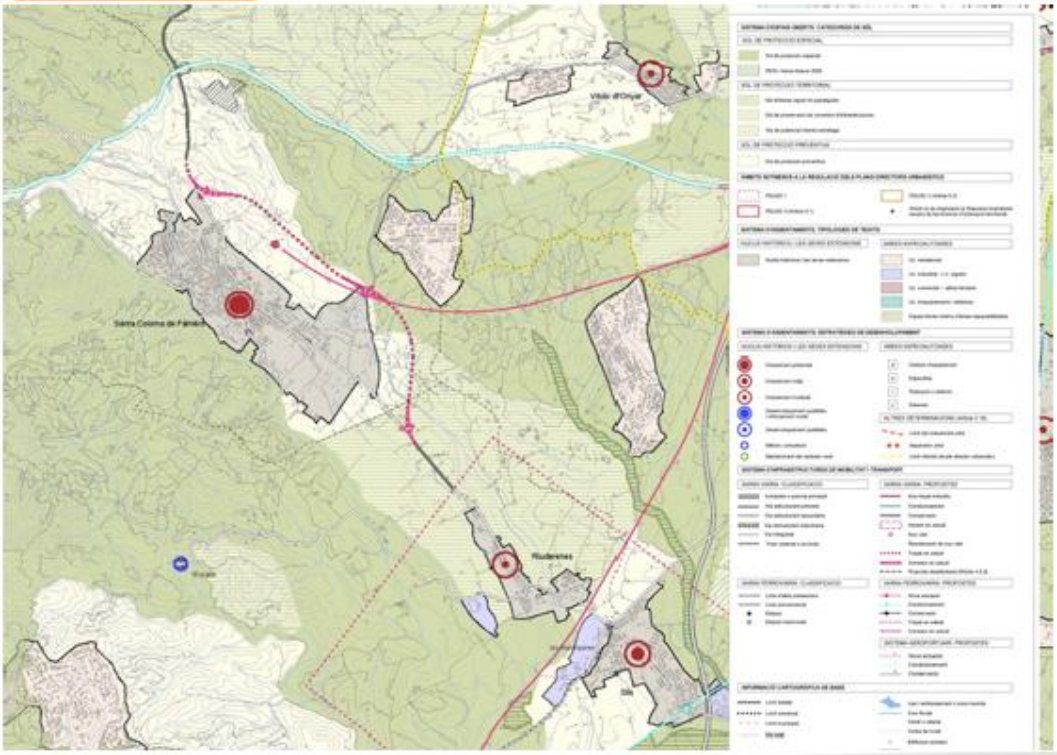
RURAL LAND PROTECTION

MASTER PLANNING ON RURAL LAND

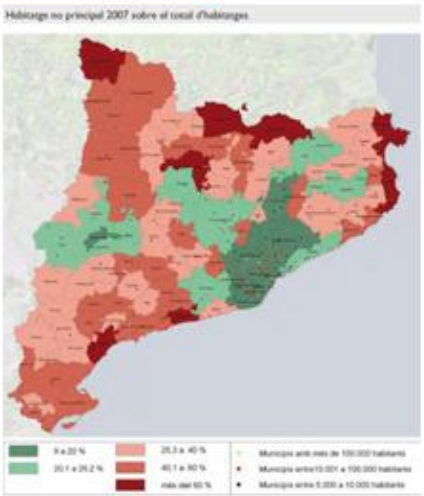


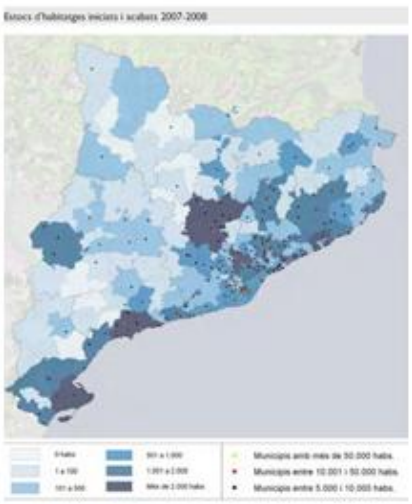


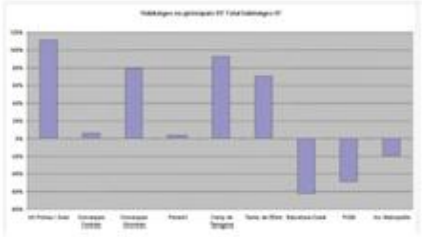
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	3 URBAN GROWTH THRESHOLD	MASTER PLANNING ON POTENTIAL URBANIZATION



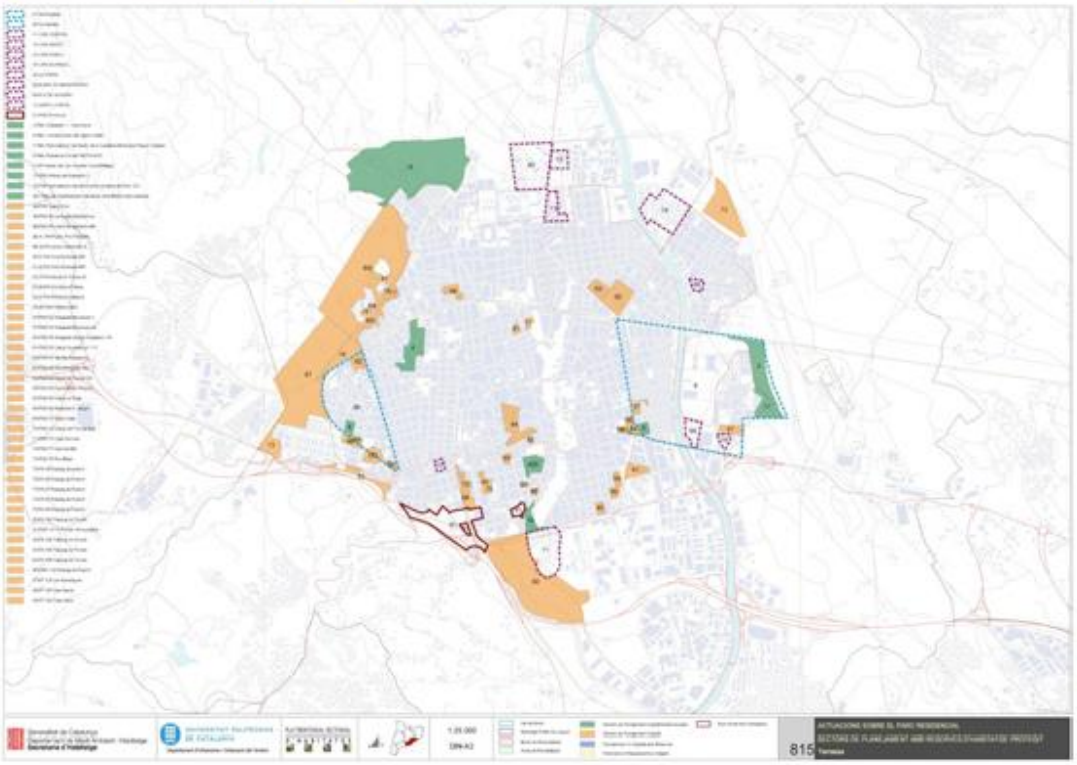
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	4 NATIONAL HOUSING PLAN	GUIDELINES FOR UGM





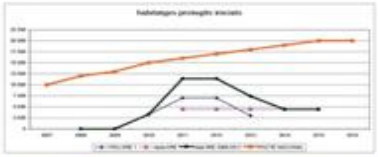


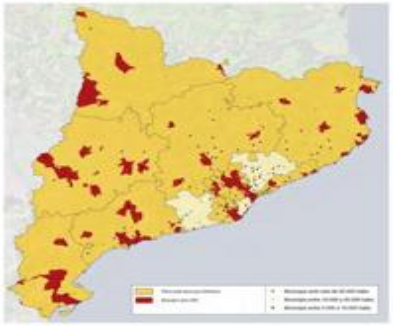
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	4 NATIONAL HOUSING PLAN	GUIDELINES FOR UGM



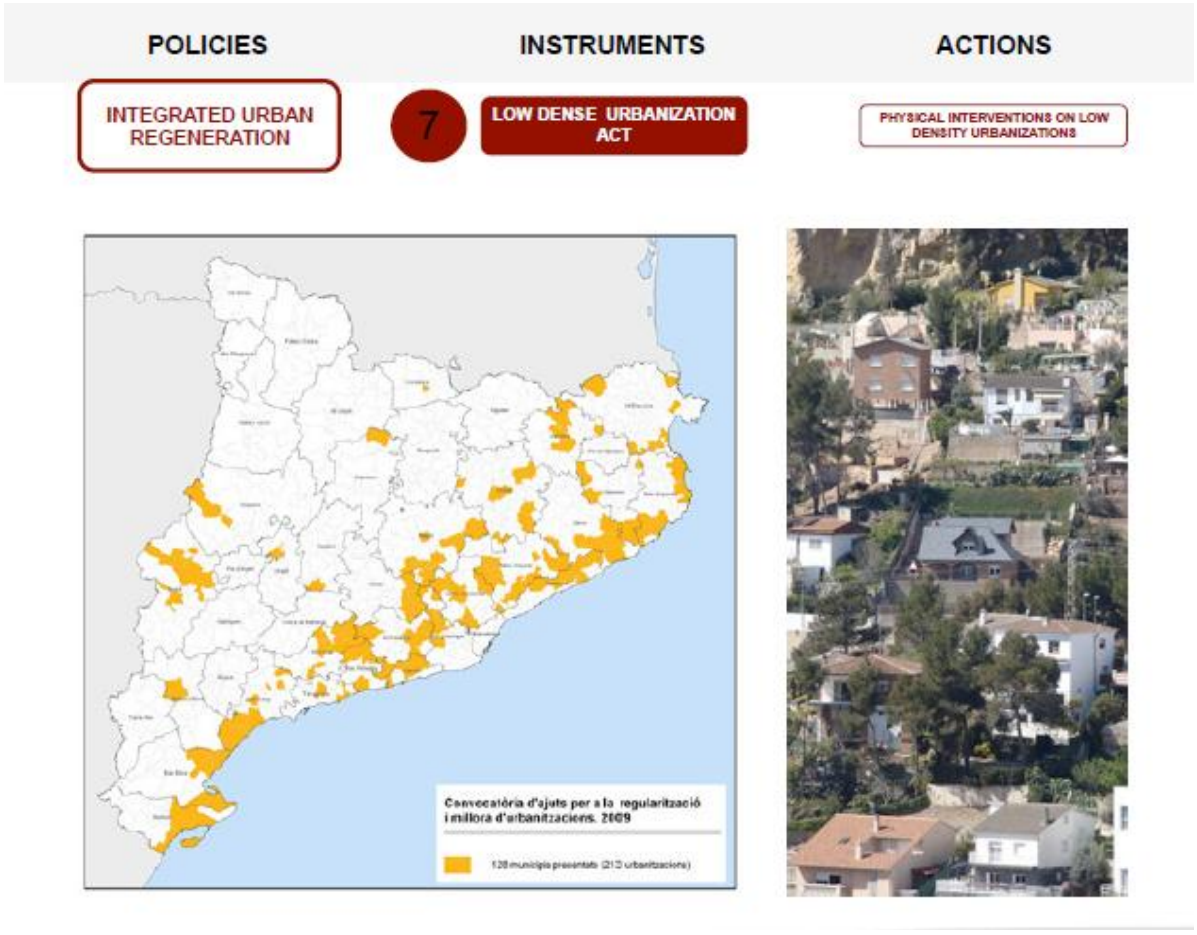
POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	4 NATIONAL HOUSING PLAN	GUIDELINES FOR UGM

POLICIES	INSTRUMENTS	ACTIONS
URBAN GROWTH CONTAINMENT	5 REGIONAL HOUSING PLANS	STRATEGIC RESIDENTIAL AREAS IN OBSOLETE URBAN LAND





POLICIES	INSTRUMENTS	ACTIONS
INTEGRATED URBAN REGENERATION	6 NEIGHBORHOODS ACT	SOCIAL & PHYSICAL INTERVENTIONS ON DEPRIVED RES. AREAS



Source: Adolfo Sotoca, op.cit.

Seven territorial plans were drawn up in Catalonia, with planning at a regional scale, to promote rational use of existing resources, with a more coherent approach. This entailed potential categorisation as well as two on protected urban land. These were very strictly applied, though less so now, following political changes.

Master plans are drawn up by municipalities, subject to final approval by regional government. Now most plans are de-classifying land, at regional level. Now they won't compensate on further losses. This process avoids conflict at local level, because the plan has to be approved by the master plan.

The 2008National housing plan (guidelines for UGM) was not approved. Some houses are used only a few days per year, so either pre-emption was proposed (not approved) which would give local authorities the right to buy the stock (in Catalonia there are one million empty housing units) or to impose mandatory housing rental. This is also a not approved plan. However, this is happening in Andalucia, where banks owning housing are being taken over by the government to make them available for rent.

The regional housing plan (strategic residential areas in obsolete urban land) is in force in seven areas in Catalonia. As a response to the lack of social housing, it has been decided to take advantage of the housing need to develop "strategic housing" (30.000 dwells for social housing). However, this would imply the need of continuing to extend cities. Therefore, the majority have stopped this due to the crisis: the initial objective (9.000 housing units) was not reached. Some of these deregulated areas are placed in the so called "urban renewal land", and not only in central areas.

The Neighbourhoods Act is oriented to improve mainly Urban Land. The Catalan programme, aimed at improving different typologies of developments (mass housing estates, informal

settlements, old city centres), can be mainly comes from industrial developments plans for renewal of urban areas. The Act supported 92 neighbourhoods, through 1500 M€. The current aim is to integrate physical interventions with social ones. Participation is important. The regional government funded 50% and the municipalities 50%.

The 'Low density urbanisation act' has its root in the fact that, in the 60s and 70s, many individual houses were built in several areas around Spain and people are now moving to live there. Densifications are allowed, with public support (regional government 50%, local residents 50%.) and the need to provide services for community. This measure is only partially implemented, due to the crisis.

It is useful, , among others, to focus on the more recent instrument, the "Law for rehabilitation, regeneration and renewal" (See Figure 1.6 Number 8).

Table 1.6 provides some basic data about the law, which is still under discussion.

This new law for regeneration, rehabiliation and renewal at national level deals, first of all, with the land values issue, being inspired by an "urban renewal" oriented approach rather than an urban growth oriented one. Originally conceived as a support at the single building scale (rehabilitation) and local scale (regeneration), the framework is paying more attention to urban renewal (with relevant changes in the currently in force "Land Act"), to stimulate the seriously damaged building industry (73% less activity than in 2007). Moreover, further targets have been progressively recognized, and in particular: updating the housing stock through energy efficiency improvements; promoting the rental market (today it only means 7% of total), adapting the legal framework towards an urban renewal oriented planning; reducing the public land take; supporting planning agreements and improving flexibility in the basic urban parameters for renewal interventions; introducing fiscal bonus for renewal interventions (depending on conditions); promoting the development of urban renewal consortiums (blurring of public/private domains); clarifying the distinction between owners and promoters.

Some programmes (rental market promotion, public housing stock, rehabilitation fostering) can be considered as "related" to this general framework.

Further programmes are also focused on urban regeneration and reducing land taking by public administration, while other are targeted to improve the "size" of interventions and to promote integrated interventions (with more actors involved), to reach critical mass.

Table 1.6 - The Spanish "Law for regeneration, rehabiliation and renewal": essentials and linked programs

Originally conceived at the building scale (rehabilitation) and local scale (regeneration)
Later consideration of urban renewal (relevant changes in the current land act)
Motivation:
Stimulation of the seriously damaged building industry (73% less activity than in 2007)
Updating of the housing stock through energy efficiency actions.
Promotion of rental market (today it only means 7% of total)
Daptation of the legal framework towards an urban renewal orientated planning
Taking of public land
Planning agreements: flexibility in changing the basic urban parameters for renewal interventions
Fiscal bonus for renewal interventions (depending on conditions)
Size of potentially renewal sectors
Set up of urban renewal consortiums (bluring of public/private domains)
Distinction between owners and promoters (= to previous urban extension processes)
Programs:
Even programs (rental market promotion, public housing stock, rehabilitation fostering)
Ne program focused in urban regeneration
Land taking by public administration diminishing
Size of interventions
Market integrated interventions (critical mass

Source: Adolfo Sotoca, op.cit.

To conclude, Urban Growth Management implies potential growth of every municipality. This means that renewal can only be undertaken within existing land, leading to a lot of conflict with planning bodies. Land cannot really be de-classified if it has already been prepared. As soon as streets are built, it becomes considered as urban land, which has tax implications.

The legislation on urban regeneration has to be considered, as a whole, still rather weak in Spain.

Reaching development and land take reduction targets: a failure of the national planning framework in UK?

As explained in the presentation on the Governance System of the Wycombe area (Buckingamshire), in March 2012 the UK government produced the National Planning Policy Framework (NPPF), to consolidate the majority of the national planning guidance and statements into a single document.

The NPPF includes a shift in emphasis particularly in:

a) Presumption in favour of sustainable development. Local authorities are required to add into new plans as they are produced and essentially means that the Council should grant planning permission where the development plan is absent, silent or relevant policies are out-of-date, unless any adverse impacts of doing so would outweigh the benefit, focus on the Economy. The planning system should focus on building a strong, competitive economy, with significant weight placed on the need to support economic growth.

b) Previously Developed Land (PDL) in the Green Belt: although great importance is still attached to the protection of the Green Belt, the NPPF identifies that limited infilling or the partial or complete redevelopment PDL is not inappropriate development in the green belt

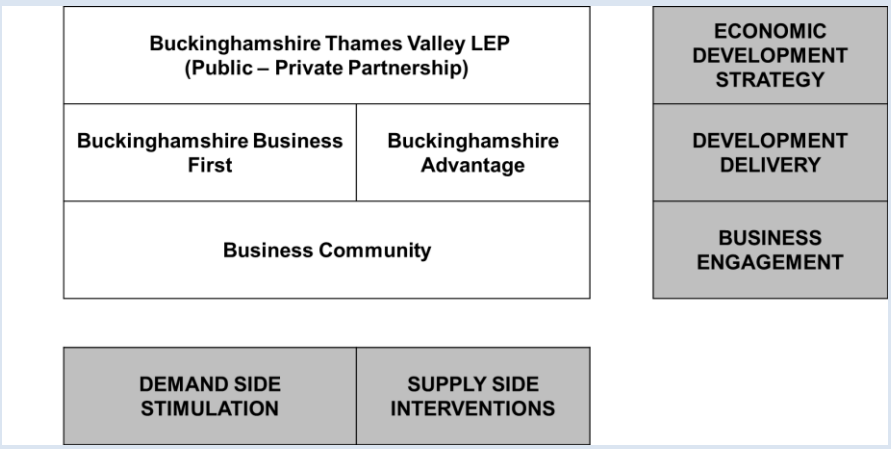
c) Local Green Spaces: the NPPF enables local communities through local and neighbourhood plans to identify for special protection green areas of particular importance to them.

The NPPF is a key material consideration when the Council considers planning applications. When assessing proposals for development the Council will still use the adopted plans as set out below, but will also need to consider how consistent existing policies are with the NPPF on a case by case basis.

But the system isn't working, since it does not allow the development of industrial sector. Situation is difficult at present: the gross value added per hour worked is decreasing; worklessness is increasing; poor supply of technical skills for an effective industrial mix is recognized; industrial sector shows one of the lowest investment rates in commercial property in the UK; there is a lack of core, basic infrastructure; low firm inward investment, accelerated outward investment and an increasing extreme dormitory status; suitable employment land is lacking, with developers that are always keen to convert what development land is available to housing.

What are the reasons? Planning seems to be too focussed on adhering to a regulatory process, rather than managing development sensitively. There is a shortage of good "old fashioned" town planning skills in the system. The governance of the planning process is too squarely rooted in the political system. Local politicians face clear and present lobbying from current residents with fears while future generations and employees have no voice. There is inconsistency in process across different organisations.

Figure 1.7 – Buckingamshire: PPP Governance solution



Source: City of Wycombe

A PPP governance solution – as is the case described in figure 1.7 - based on a "effective functional integration" between subjects can be considered a solution.

There is increasing need for some local authorities to trade to balance finances is encouraging some to favour schemes which only happen on their land.

However the Nimby communities view development from the 'neighbourhood' perspective, rather than from a 'global competitiveness perspective' appears to be potentially harmful to the society as a whole. \ Green Belt Policy continues to hold back growth.

Source: UseAct Presentation of the "City of High Wycombe", UsaAct Kick-off Meeting Viladecan, 27th-28th May 2013

1.3 GOING BEYOND "THE PLAN": INTEGRATED STRATEGIES TOWARDS LAND USE MANAGEMENT

In occasion of the UseAct Kick Off Metting, in Viladecans, Mr Didier Vancutsem, Thematic Expert of the UseAct Project, and previous Thematic Expert of the LUMASEC project, showed as "integrated land use management" is a methodology that, whereas adequately applied, can play a major role not only in reaching urban land take reduction targets but also to overcome more traditional, rigid planning approaches (plans, etc.) that could be not still able to provide answers to the requirements of the contemporary European Cities.

In this paragraph, starting – among others - from the conclusions of the LUMASEC project, the concept of integrated land use management strategy is presented and some good practices, taken from European Cities cases studies, are described[12].

An essential conclusion of the URBACT LUMASEC Project is that Strategic Land Use Management approaches are required. These approaches should be able to coordinate spatial, sector-oriented and temporal aspects of urban policies.

Strategic Land Use Management should include the debate about norms and visions driving the policy-making and sector-based planning in both the strategic and operative time spans, as well as the spatial integration of sectorial issues, decision-making, budgeting, participation, implementation of plans and decisions and the monitoring of results and evaluation impacts.

By developing their strategic land use management, cities and regions would achieve the following targets:

- A sustainable prevention and/or adaptation to climate change
- An important step towards building resilient areas
- An interlinking of different layers of intervention to integrative approach against political fragmentation
- The building of sustainable financial policy for municipality
- A better environmental protection and development
- The building sustainable transport infrastructure
- *Capacity building*

The elements of building an integrated land use management strategy can be identified on several levels, especially on the spatial pattern level, on the governance level and on the capacity building level.

[12] Main Sources: Didier Vancutsem, Integrated strategies towards land management - Best Practices, Presentation at the UseAct Kick-off Meeting, Viladecans, 27th-28th May 2013;

Furthermore, a strategic land use management on the regional level should, on one side, identify in a comprehensive way the inner development potentials, develop mobilizing strategies and evaluate in a realistic way the implementation time steps.

On the other side, it is necessary to take precautions measures to avoid –sometimes inevitably- outskirts urban developments, in respect to unsure prognosis.

A balanced strategic land use management should manage the land use and building land (re) production in the sense of a regional system management, and optimize for the territory:

- according to economical, social, ecological and urban-planning criteria,
- related to quantity, quality, situation and priority levels,
- in a participative, cooperative regional process.

A strategic land use management means also planning, active implementation and experimental projects instead passive "supply planning".

It should have its main focus in mobilizing surfaces for inner development, in the support of land saving building and in land recycling.

Moreover, it has to prepare in time and foresightedly the necessary building plots development ("outside development") and in particular, early clarifying the settlement areas with clear linkage to the regional system, in which central challenges have to be addressed (climate fair city, social integration, new mobility and energy-efficient building).

Biodiversity offsetting: a debated matter

The UK government has outlined its proposals on compensating for the loss of biodiversity through development.

The idea of "biodiversity offsetting" is controversial, with campaigners dubbing it a "licence to trash".

It means developers planning to build houses in environmentally sensitive areas would be allowed to go ahead if they could offset damage by paying for conservation activities elsewhere.

In England, six pilot areas were selected in 2012 for two year trails of a voluntary approach to offsetting through the planning system Reinforcing and integrating biodiversity offsetting into developments can help manage the environmental impacts of development

Current methodologies, tools and evidence are sufficient to begin encouraging increased use of biodiversity offsetting.

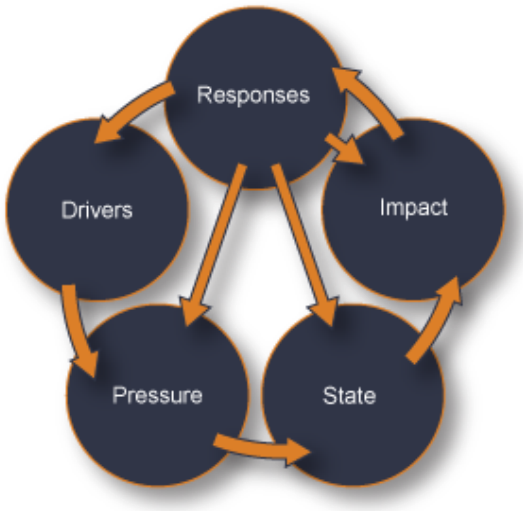
Some key-points should be considered in evaluating the "offset" approach:

- Evaluate the scientific principles underpinning your proposed biodiversity offset carefully.
- In designing biodiversity offsetting schemes, try and involve third party agencies and interest groups (NGOs, local authorities etc.)
- Interest groups, the public and decision-makers need to be engaged carefully when implementing Biodiversity Offsetting..
- Manage risks and avoid unintended consequences.
- Base your proposals on good quality biodiversity information.
- Consider offsetting for ecosystem services in addition to biodiversity.

Source: Jim Sims, UseAct Case Study "Biodiversity offsetting", Nitra Thematic Meeting, October 1st – 2nd 2013

As already pointed out, focussing on peri-urbanisation is essential. By using e.g. the circular DPSIR model (Drivers/Pressure/State,Impact, Responses) is possible to try to understand what is happening in the peri-urban area.
Figure 1.8 illustrates the main components of the DPSIR Model - *Drivers / Pressures / State / Impact / Response*

Figure 1.8 - Main components of the DPSIR Model



Source: Didier Vancutsem, op,cit

Using modelling approaches is useful to test the anticipated land use changes arising from land use development scenarios.

Different models are potentially available for that purpose.

- Regional Urban Growth model (RUG)
- MOLAND (Monitoring land use cover dynamics)
- Testing residents responses to environmental change affecting their quality of life (QOLSim)

Figure 1.9 shows how a modelling approach can generate, trough integrated GIS tools, land use and impact scenarios.

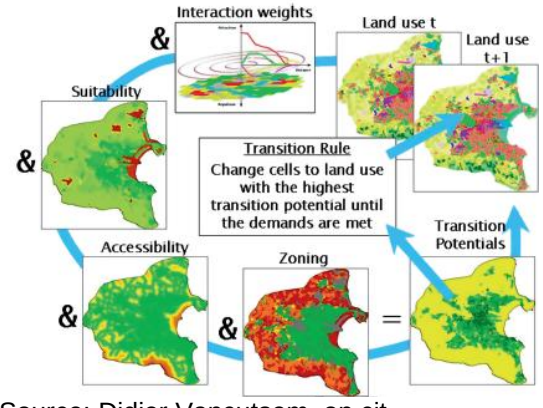
An integrated land use management strategy impacts on different drivers/elements is showed in Table 1.7.

Table 1.7 - Impacts of Land Use Management on different urban drivers

On Spatial patterns
*Getting an **overview regarding land, land use, land value**, including brownfields, sprawl, etc. by developing a GIS mapping tool for the territory, respecting the INSPIRE regulations*
*Development of a **strategic integrated vision** / strategic plan for the territory, including territory outside the borders, controlling growth without sprawl and compliant with environmental and other EU procedures, taking into account the actual trends in demography, climate change, economy, social changes and energy*
*Combination of the strategic plan with **strong rules including fiscal instruments like land taxes, land banking** as well as consideration of the added value of development for public interest*
On Governance
*Building up a **culture of cross-sectoral working between the different levels of administration** and developing structures for the integration of multilevel partnerships in land use processes: public, private and citizenship*
Developing leadership in territorial land use policies to achieve vertical and horizontal integration of *stakeholders*
*Combining **long- and short term interests in the processes**: developing financial engineering techniques for long-term land use strategies to establish integrated urban strategies*
On Capacity Building
*Active communication of land use tasks to stakeholders and citizens by **sensitizing to the land as resource and not as tool***
*Building up **co-operations with existing participatory networks** like e.g. the Local Agenda 21 to establish two-way learning processes*
*Considering public administration and other stakeholders as target groups in addition to the involvement of citizens. **Education and training of institutions and people** in order to develop skills regarding tools and the processes.*

Source: Didier Vancutsem, op,cit

Figure 1.9 - Modelling approach for MOLAND (RIKS)



Source: Didier Vancutsem, op,cit

Different Best Practices in urban growth management

It can be useful to categorize Land Use Management best practices putting in light the "drivers/focus" of each approach. Specifically, three cases studies are presented, with three different "drivers".

a) ICT related – case study: Region Stuttgart

b) Process related – case study: City Munich

c) Governance related – case study: Amsterdam

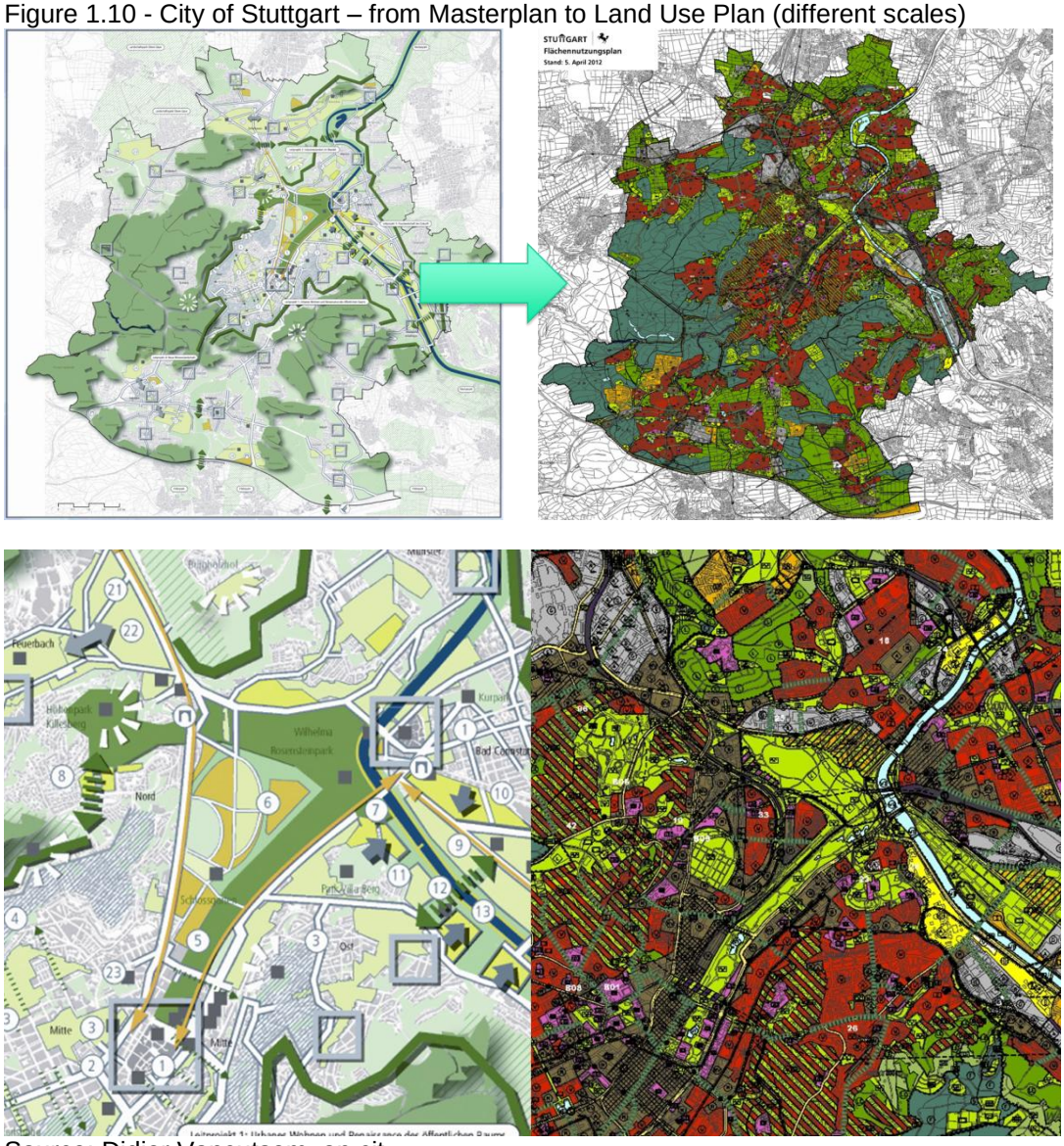
a) A "GIS related" case study: City of Stuttgart

The Stuttgart, the Land Use Management strategy has been founded on several pillars, which are integrated trough a wide use of GIS based technology and data bases. In particular, the Stuttgart approach is bases on:

- Existence of different plans integrated each other (Masterplan – Land Use Plan – Building plans)
- Integrated strategies – from the regional level to the local level
- Very strong instrumentation of planning
- High level quality of urban documents
- Database "NBS – Nachhaltiges Bauflächenmanagement" (Sustainable building areas management).

Figure 1.10 shows the integration between the "MasterPlan" and the "Land Use Plan" layers, facilitated by GIS technology.

Figure 1.10 - City of Stuttgart – from Masterplan to Land Use Plan (different scales)



Source: Didier Vancutsem, op.cit.

Moreover, the general framework of the Land Use Management strategy encompasses, in Stuttgart, a specific tool, designed to identify, categorize and optimize the use of the "existing building areas", with the purpose to reduce the need of further expansion. This tool, called "NBS – Sustainable building area management"; it represents an excellent example of integration between a technology (GIS) and a strong strategic managerial approach, by the public administration, for urban reuse.

In short, Stuttgart Region moves from a master plan to a land use plan to a building plan, and, in order to attract investors created a detailed online database, indicating all available plots for development: housing, industry etc. It indicates clusters of strategic importance, as well as plan density. The database is updated every week by an agency inside the administration connected to a property agency. This operates both inside and outside the city centre. Also a lighting plan, and a well-developed marketing plan are integrated too. This information is communicated to citizens, linked to the building plan consultation, where the value of land is visible.

b) A "process related" case study: City of Munich

City of Munich is a case of a city with no master plan. The planning process is a continuum: durable effort is needed from the administration which is always producing updated documents.

Essentials of the so called "Perspective Munich" are the following ones.

- Process of urban development since 1998;
- Integrated long-term strategy for Munich attractiveness and competitiveness;
- No plans, but a framework of action with parameters;
- Together with an intensive dialogue between actors interested in Munich's urban development;
- 16 guidelines and principles (previously 12);
- Implementation: 5 action programmes and 50 pilot projects.

Furthermore, since 2010, a long-term development discussion called "LaSie–Langfristige Siedlungsentwicklung/long-term urban development" is ongoing.

Principles of the "Perspective Munich" are described in Tab. 1.8. In general, following the "principles", the city had to build on brownfields (for example, an old railway has been re-planned and integrated into the urban structure).

Table 1.8 - Principles of the "Perspective Munich"

1.	To safeguard and promote economic prosperity
2.	To improve cooperation in the region - enhance the competitiveness of the economic area
3.	To safeguard social peace through socially-minded local government policies
4.	To strengthen individual districts through local developments
5.	To create future-oriented settlement structures through qualified internal development - "compact-urban-green"
6.	To preserve the form and appearance of the city of Munich and promote new architecture
7.	To maintain and improve mobility for all road and transport system users and manage traffic and transportation to the benefit of the city
8.	To safeguard internal harmony through local security, social, educational and cultural policies
9.	To seize the opportunities offered by new media and promote improved basic services, public access, media competence and the media industry
10.	To develop ecological standards and safeguard natural resources
11.	To safeguard Munich's leisure value by offering varied facilities for different target groups

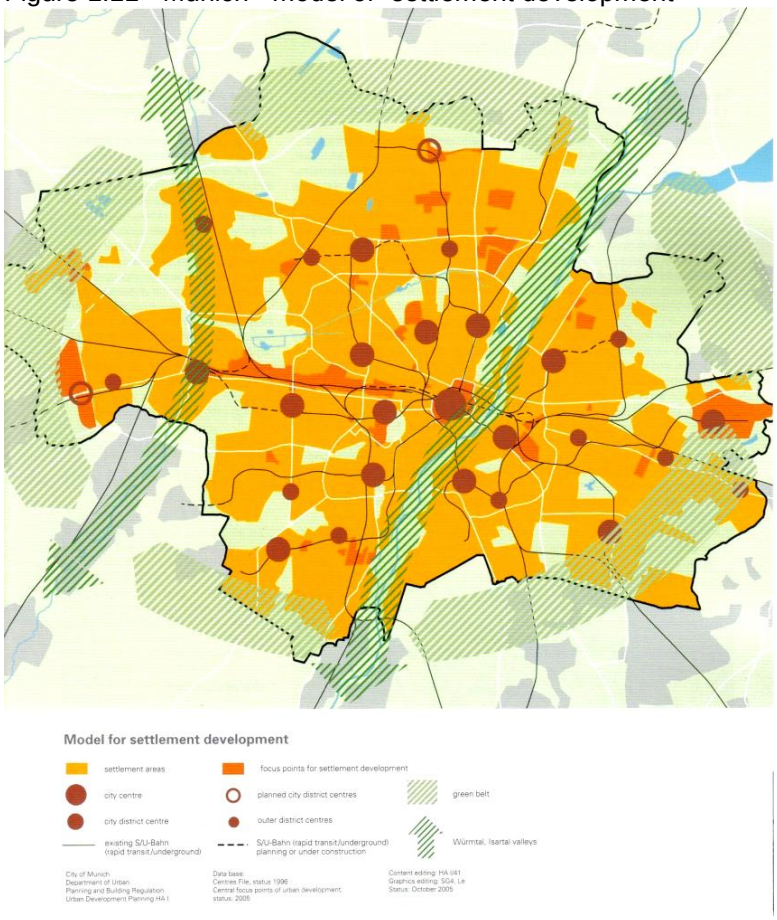
Source: Didier Vancutsem, op.cit.

The land use plan is integrated with the 'process'. Furthermore, a new 'land use tax' was decided for the realisation of green spaces: part (20%) of the plot development must be a green space: this can also include green space on the roof. Each square meter built in Germany, has to be compensated with 1 square metre of green space. The city is working with the Regional Planning Agency and the regional board (a meeting of mayors on a monthly basis). All housing developments are located around public transport, so there is concentration along public transport routes.

Next steps will be restructuring mixed areas, densifying single family housing, and urban border developments. An integrated approach can be developed to link developments on one plot. Very important principles adopted by Munich Municipality are referred to the so called "Inner city development" approach.

Figure 1.11 shows the “model of settlement development” within the urban area, aimed at creating future-oriented residential area structures through qualified inner-city development and „compact, urban, green“.

Figure 1.11 - Münich - model of “settlement development”

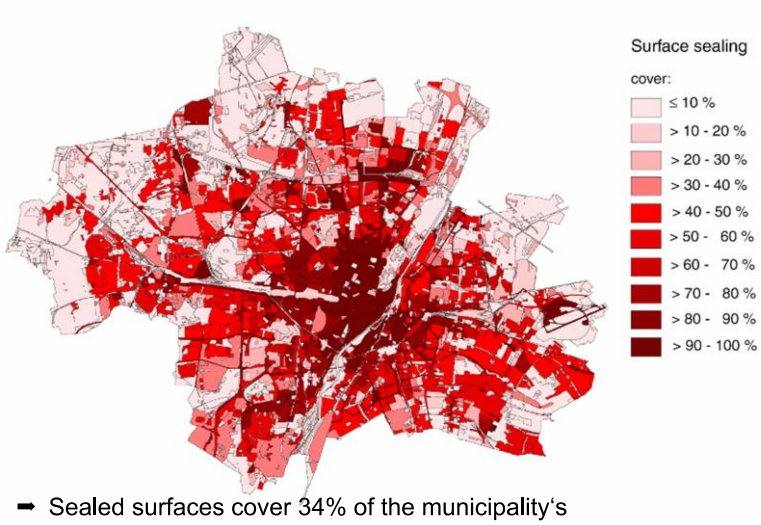


Source: Didier Vancutsem, op.cit.

Each “model” can be assessed also in terms of effects on the sealed surfaces, which are recorded trough the GIS managed by the municipality, as showed in Figure 1.12.

Figure 1.12 - Munich – Sealed surfaces map

Sealed surfaces



➡ Sealed surfaces cover 34% of the municipality‘s surface area

LÖK et al. 1990

Source: Didier Vancutsem, op.cit.

As already noted, "long-term urban development" approach is a keyword of the urban strategy of Munich municipality. The land use management strategy is therefore strongly integrated with housing development scenarios.

Table 1.9 presents the "numbers" of the expected housing demand in Munich and the potential effects on land-use (surfaces needed).

Table 1.9 - Munich - expected housing and surface demand (2030)

Expected Growth Inhabitants 2009 – 2030:
+151.000 Inhabitants
Housing demand related to demo Growth:
+76.000 Housing Units
Growth Liveable Housing surface:
+10.000 Housing Units
Replacement Demand:
+30.000 Housing Units
Housing Demand until 2030:
+116.000 HU
Building construction:
- 59.000 HU
(brownfields, empty spaces)
Necessary Building Authorisation for:
59.000 HU
Surface demand for Building:
1.220 ha

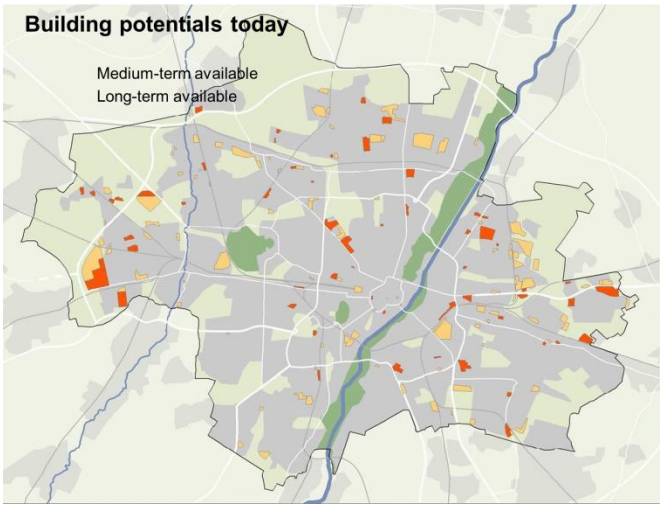
Source: Didier Vancutsem,op.cit.

In general, the urban growth strategy is based on three different "axis": re-structuring urban core, densifying mixed areas, developing single family housing only for the development of the urban border.

A coherent urban land use management cannot avoid to take in account the development at regional level as well. In general, demographic development at the region level is lower than in Munich, but the liveable housing surface growth is higher than in Munich. Necessary building authorisation are similar to the Munich case, while building densities are lower than in Munich. Therefore Building Surface demand is higher than in Munich, whith consequences that have to be managed also at regional level.

The land use management strategy adopted in Munich (similarly to the above mentioned Stuttgart case) allows to get a very precise quantitative and qualitative assessment of the building potentials – with information on temporal availability - in the inner-city areas, as showed in Figure 1.13.

Figure 1.13 - Munich – building potentials and temporal availability



Source: Didier Vancutsem, op.cit.

c) A "Governance related" case study: City of Amsterdam

The case study described below, related to City of Amsterdam, is not strictly referred to the "reducing land take" issue, but it is very remarkable from the "integration", "flexibility" and "inclusivity" of urban strategies point of view.

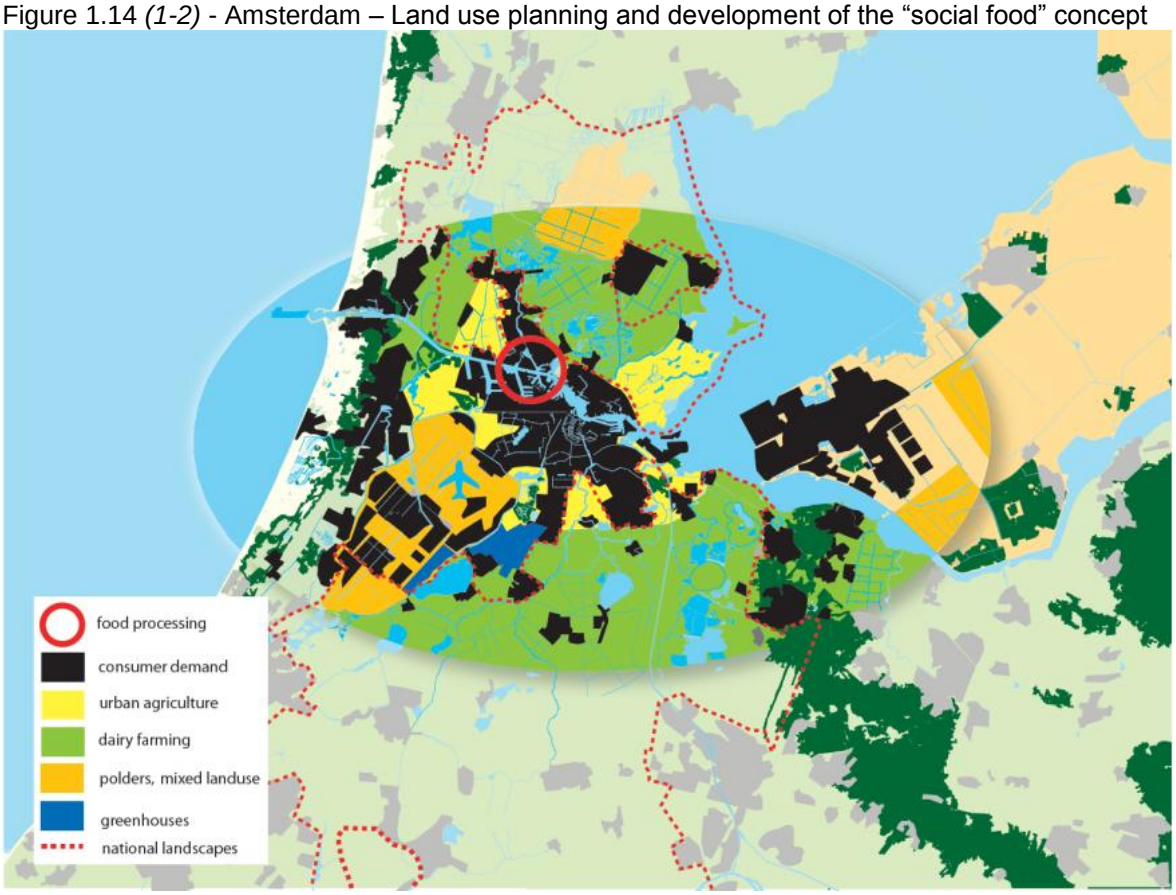
The process has stimulated participation in the food industry, including food production land use by involving people (tools: urban farm, cultural activities) The aim is providing around 17 sq m/habitat public space within a 5' walk from some "central cultural clusters". The process allowed, among others, to highlight heritage or outstand landscape features, to re-populate low density areas and to develop a "no cars" vision for the city in central areas.

The approach adopted is able to stimulate a participation methods useful for updating the general land use plan, improving local and social food production, developing cultural clusters useful to reinforce the identification process of the citizen.

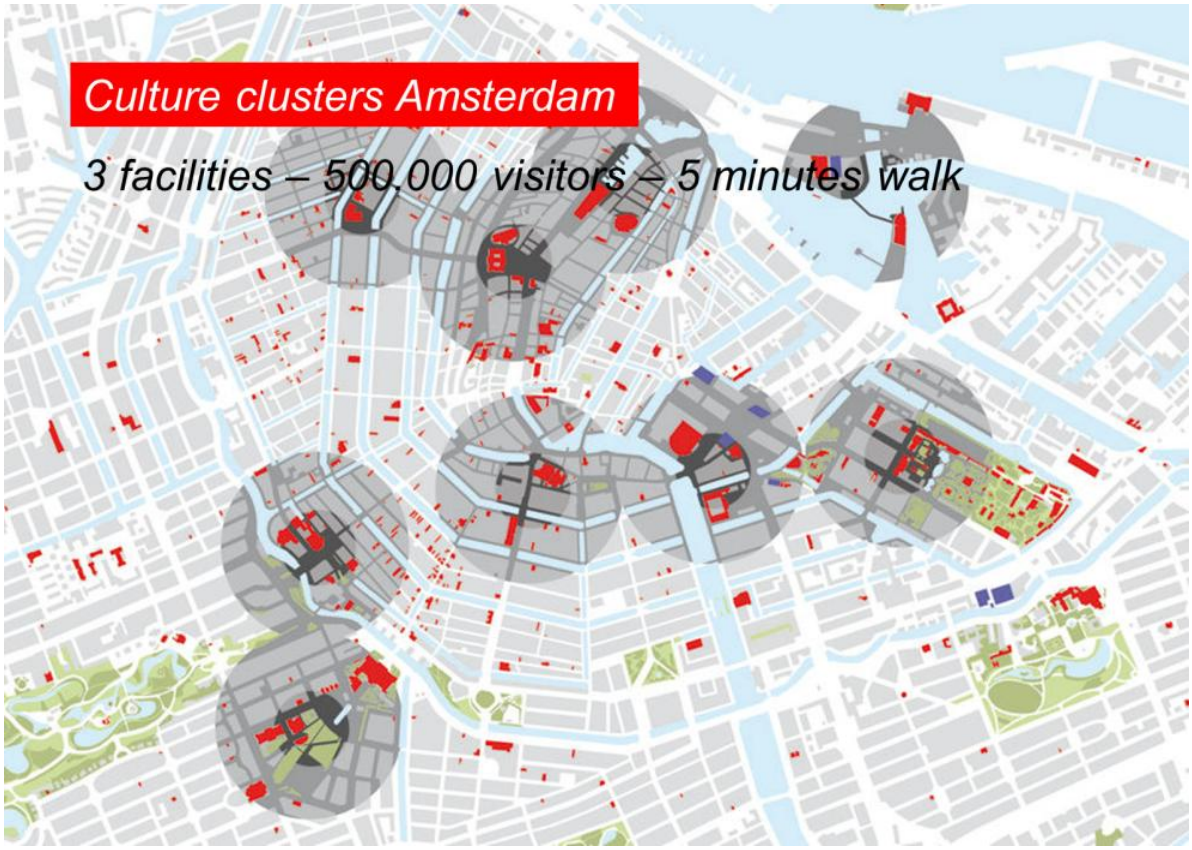
Figure 1.14 shows some "visions" elaborated within the process.

The values of this process, which has been strongly founded on participation, can be considered as useful guidelines for every land use management. Key words are: "start small, do not exclude others, leave your weapons, focus on the content, share stories, avoiding power points, curb your passions, be curious, old on"

Figure 1.14 *(1-2)* - Amsterdam – Land use planning and development of the “social food” concept



Source: Didier Vancutsem, op. cit



Source: Didier Vancutsem, op.cit.

Focusing governance - UK "Local partnerships" as promoters of sustainable "Land Use Management" approaches

UK Local Nature Partnerships (LNPs) are partnerships of a broad range of local organisations, businesses and people who aim to help bring about improvements in their local natural environment. Setting up LNPs was one of the commitments the UK Government made in the Natural Environment White Paper 2011. There are 48 LNPs across England. LNPs work strategically to help their local area manage the natural environment. They aim to make sure that its value, and the value of the services it provides to the economy and the people who live there, is taken into account in local decisions, for example about planning and development. LNPs are also being encouraged to work at a large scale, which we call 'landscape-scale', and to identify Nature Improvement Areas using these criteria.

Buckinghamshire and Milton Keynes Natural Environment Partnership has been established as an influential and authoritative advocate of the natural environment to engage positively with business and community interests. Membership of the Partnership will be open to organisations in the public, private and voluntary sectors with an interest in, and ability to influence, a high quality natural environment.

Strategic leadership of the Partnership will be provided by a Board whose members will represent local government and the voluntary, business, health and education sectors. The Board is advised and supported by a Co-ordinator and by Delivery and Task Groups. At present the Delivery Group focuses on biodiversity and green infrastructure, and the Environment Task Group covers sustainability issues. The Board collaborates with other strategic bodies, with a key objective to work with Local Enterprise Partnerships, and Health and Wellbeing Boards to promote their common interests. The NEP defines the natural environment as covering ecosystems, wildlife, landscapes, accessible green spaces, natural resources and cultural heritage. The proposed key priority work areas are as follows:

A. Developing a framework to support landscape-scale projects
B. Influencing spatial planning
C. Low Carbon Buckinghamshire
D. Highlighting the health and wellbeing benefits of the natural environment
E. Sustainable growth - Promoting the natural environment as an economic asset and driver
F. Monitoring and reporting on progress in the Natural Environment

By establishing a partnership comprising these various governance bodies, we hope that we kind find appropriate ways of managing development whilst also maintaining the natural environment

Source: City of Wycombe

The Land Use Management issue: the "Lumasec" and "CircUse" projects

The LUMASEC URBACT II Project experience

Sustainable Land Use Management is an integrated process of managing use and development of land, in which spatial, sector-oriented and temporary aspects of urban policy are coordinated.

In the past, "steering urban land use" was a simple matter of permissions and land exchange. Today the framework conditions are changing: land issues are more interlinked and globalized in urbanisation context and Local Authorities are responsible for delivering sustainable development for today and future generations. Cities have a huge impact on natural resource management, consumption of land and global warming, combined with brownfield land within cities and urban sprawl.

The “Lumasec” project, dedicated to the Sustainable Land Use Management issue, involved different partners within different planning cultures: 5 city partners, i.e. Baia Mare (Romania), Bristol (United Kingdom), Bytom (Poland), Kavala (Greece) and EPURES Saint-Etienne (France); the 3 “knowledge” partners were CERTU (the Centre for Development of Urban Development and Transport, France), the University of Ljubljana (Slovenia), the University of Karlsruhe (Germany) as Lead Partner, Lead Expert Didier Vancutsem (Germany/Belgium), within the URBACT family.

The Main Focus of the project was on strategic land use management for sustainable development of cities, considering issues of urban sprawl and brownfields on the strategic level (strategic planning methods, process of cooperation between public and private bodies, fiscal measures and observation tools) and the operational level (actions plans related to case studies) of land use management. The aim of the Project is the elaboration of strategies, methods, tools and practical recommendations.

The project started with a discussion with partners and politicians, with the public and private sectors. The “trialogue” between public actors, private sector and politics aims to integrate the diverging perceptions of a problem and by this means to overcome the gap between planning and implementation and between long-term and short-term objectives.

The first discussion was on Spatial planning and land use management, focusing on the real world, with targets and understanding, and an analysis of instruments. Creating an image of the reality by different professions; mapping by indicators and competences; getting (and sharing) an understanding of the use of land; Identifying and analysing instruments, tools as well as involved stakeholders; defining or executing policy aims in land use; setting up a management approach of land use (process) by intervention on different layers were the focal points of the discussion.

A discussion on Spatial pattern took place **in** Bytom (19-21 November 2008) – “Information and data for land use management” covered the occurrence of urban sprawl, GIS tools for mapping and steering land use, and government by building permits.

The discussion on Governance took place in Bristol (4-6 November 2009) – “Governance of land use management”, with Stakeholders involved in land use management and examined Structures, processes and tools of governance.

The discussion on “Capacity” took place in Kavala (5-7 May 2009) – “Involving people!” with participation of inhabitants and other (not professional) stakeholders, on awareness and political backup for land use and its management, and competences to deal with complex problems and tools.

An Example of a Lumasec LAP is the Local Action Plan of LUMASEC Partner EPURES/Saint-Etienne, aimed at developing a Land Use Strategy as a Governance tool. This strategy aimed at delivering both an operational tool to limit urban sprawl and promote urban renewal, preserve natural spaces and promote social housing and a strategic tool to establish a governance capacity without new institution. Actions were proposed to promote a smart green and incentive city: introducing public “Land Banks” in peripheries (organizing urban development and preventing uncontrolled development) and existing urban areas (urban renewal, public investment with incentive role); identifying strategic places for social housing development, transport, etc. ; developing mixed-uses programs, organization of land exchanges with investors, etc.

The Karlsruhe Knowledge Support Group developed a “learning kit” on sustainable land use management, with the aim of creating awareness and impact knowledge on land use management. The learning kit consists of teaching material for high school onwards – environmental education, containing commonly understandable information, ready to use teaching units, interactive media like video or online tools as well as games on land use management. The learning kit was developed in co-operation with the Local Agenda 21 in Karlsruhe.

In general, some typical problems emerged from the Local Action Plans: weak data management and data use; lack of citizens involvement and participation; lack of inter-municipal cooperation / governance; Brownfield and Urban Sprawl challenges in cities combined with a lack of instruments to contain sprawling process; problem of short-term projects vs. long-term spatial strategy; limited capacity of authorities to develop effective land use management due to administrative and institutional fragmentation; inefficient dialogue within existing horizontal structures / lack of vertical integration at city and city-regional level.

Regarding the Local Support Group Concerning the very relevant issue of “data management”, there is now more data available than at the time of the project. In one city data was made available to the public. In Greece there is no data available, in France it is being organised.

“Lumasec” Project provided several conclusions and recommendations included policy implications for European cities: multi-level approach coordinating land use policies on horizontal and vertical levels of governance; knowledge before action (e.g. local land market); elaboration of land use policies between strategic planning and opportunities (public regulation, direct land acquisition, private involvement by initial public investment, local taxes, etc.).

The tools proposed are mainly the following ones:

- good governance tools; actions by local authorities (internal management structures, networking city-region, information system, capacity building, tax systems,…);
- new generation of financial tools oriented to future governance structures (EIB Programmes, innovative PPP structures);
- Land Banking and Land Accounting Systems.

“Lumasec” also developed a communication network: 1st “post-project” Newsletter; Addressing Networks such as: ISOCARP, IFHP, ECTP, DIFU, ADEF, CERTU, etc:; European Environment Agency; European Investment Bank; ESPON; DG Regio, DG Agriculture, DG Environment; Committee of the Regions: municipalities, regional agencies. The results of the LUMSEC project can be found on the URBACT website.

Main Sources: a) Didier Vancutsem, LUMASEC Project - Land use management for sustainable European cities, Project Conclusions, Presentation at the UseAct Kick-off Meeting, Viladecans, 27th-28th May 2013. b) http://urbact.eu/en/projects/metropolitan-governance/lumasec/homepage/

The CircUse Project Experience

CircUse gatheres academics and cities dealing with brownfields, land use and regeneration, and concerns a methodology for circular land use management, representing cities in Poland, Germany, Austria, Slovakia, the Czech Republic and Italy. The Spectra Centre of Excellence works with the universities of Newscatle upon Tyne as well as German universities. The project concentrates on instruments for land management and land consumption.

In general, land use management in all (CircUse) project partner countries is much more focused on the controlling of changing land uses at the strategic and local level than on the practical interventions. Regulation is used to ensure a sustainable and growing development. The local level is the land-use management level while the central government is giving supervision on setting central objectives.

The analysis shows that on the one hand land re-use and structural rehabilitation measures and instruments are included as parts of the overall legal framework of planning and on the other hand own specific legislations or regulations are in place addressing exclusively issues of land-re-use and rehabilitation.

Legal framework can be characterized by the importance of sectorial laws dealing with the particular aspects of land-re-use, e.g. historical preservation, public housing, environmental protections, soil protection, transportation, technical and environmental infrastructure, housing improvement strategies offering financial incentives to owners and small businesses.

The institutional arrangement plays an important role in land-re-use and is the conventional framework for urban rehabilitation. The role of the regions and municipalities as well as the involvement of public sector in planning and decision making differs considerably among the different partner countries. Increasingly, municipalities are seen as focal points of land-re-use management as well as of public participation and involvement of the private sector.

Most of participating countries suffer a lack of expertise and financial instruments, as the decentralization of responsibilities and decision making power was not accompanied by decentralization of funding and resources.

Typical for all analysed countries is the claim for more public-private cooperation and partnerships as for example quasi-commercial enterprises. On the other hand, for example in Italy, contracting became a very common instrument addressing complex situations of land-re-use and urban rehabilitation. An efficient comprehensive system of instruments to guarantee efficient limitation of land consumption is missing:

In general, the following negative drivers emerge:

- Fragmentation of the legal instruments dealing with land consumption into many laws (-)
- No quantitative goals on land consumption (-)
- No implementation of controlling urban sprawl (-)
- Region and municipalities in central Europe are weak in steering allocation of sustainable land use (-)
- Contrast of the important position and weak capacities of local responsible bodies (-)
- Financial resources of municipalities (-)

Positive aspects are, on the other hand, the following ones:

- Environmental compensation measure pools by nature conservation law or building codes in several countries e.g. in Germany, Slovakia, Czech Republic (+)
- PPP (+)
- Specific organisations e.g. land development agencies (+)
- Regional schemes (+)
- Italian and German experience with informal planning instruments (+)
- Integrated spatial development measures (+)
- Key element to combine space, institutions and action and civil society involvement (+)
- Optimising direct funding programs (more oriented to circular land use management (+)
- Cost-benefit surveys as a tool for estimation of long-term profitability of settlement development (also in terms of infrastructure costs) (+)
- Property tax (+)
- Tradable land-use obligations (+)

CircUse project tried also to identify potential, chances and preconditions for efficient land use management towards land consumption reduction, that can be summarized in the nine theses presented in the table 1.10.

Thesis number 8 is of high relevance, since it represents a “concept” (the Circular Flow Land Use Management) that can be considered as a specific outcome of the CircUse project (see Figure 1.15)

Further focal issues pointed out by the CircUse Project are the need to develop Land Use Management Database, and in particular GIS based transnational database, and to improve the European and national systems of the land re-use instruments.

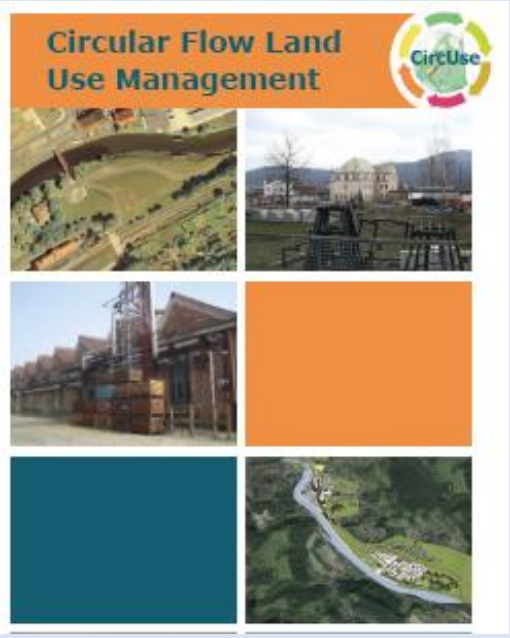
CircUse also supported the development of CircUse – Training courses (for municipal and regional stakeholders) on reducing land consumption. This aspect is of highest importance, since There is often a lack of expertise (in particular where municipalities are of so many different sizes) on that field and it is very important to support local decision-making processes. Education of investors is also important: investors are not aware of the potential relevance of empty city centre areas, because they don’t have a vision of the benefits of city centre re use, which already have infrastructures etc.

Table 1.10 - The nine thesis of the CircUse Project

Thesis 1: common problems and diversity of national and regional frameworks could be tackled by a common strategy on land consumption reduction and circular flow land use management
Thesis 2: the setting of quantified and qualified targets is a necessary requirement for successful implementation of a management strategy according to sustainable land use management.
Thesis 3: sustainable land use management focused on land consumption reduction needs a comprehensive definition of land types (incl. greenfield and brownfield areas)
Thesis 4: the development and application of information instruments and data management for registration and monitoring of space oriented potentials is one of the key activities towards land consumption reduction and land circular flow land use management.
Thesis 5: circular land use management in urban regions cannot be driven by the actions of a single primary stakeholder but can only be achieved through the coordinated efforts of the various public and private stakeholders who, as planners, property owners and land developers, influence or govern how land is used (shift from government).
Thesis 6: the implementation of sustainable land use management needs an integrated course of action which encompasses the wider spectrum of policies and activities providing a package of instruments (policy mix). In this instance current and potential new instruments should be pooled according to regional differences in framework conditions.
Thesis 7: the implementation of action plans need the selection of an applicable policy mix, stakeholder institutions, financing sources that meet the regional demands.
Thesis 8: in general new forms of organization need to be implemented by the stakeholders of a circular flow land use management. There are wide opportunities for institutional solutions in the EU.
Thesis 9: permanent knowledge acquisition and awareness of sustainable land use management are crucial preconditions for a successful implementation of a strategy for reducing land take and strengthening inner development.

Source: Maros Finka, op.cit

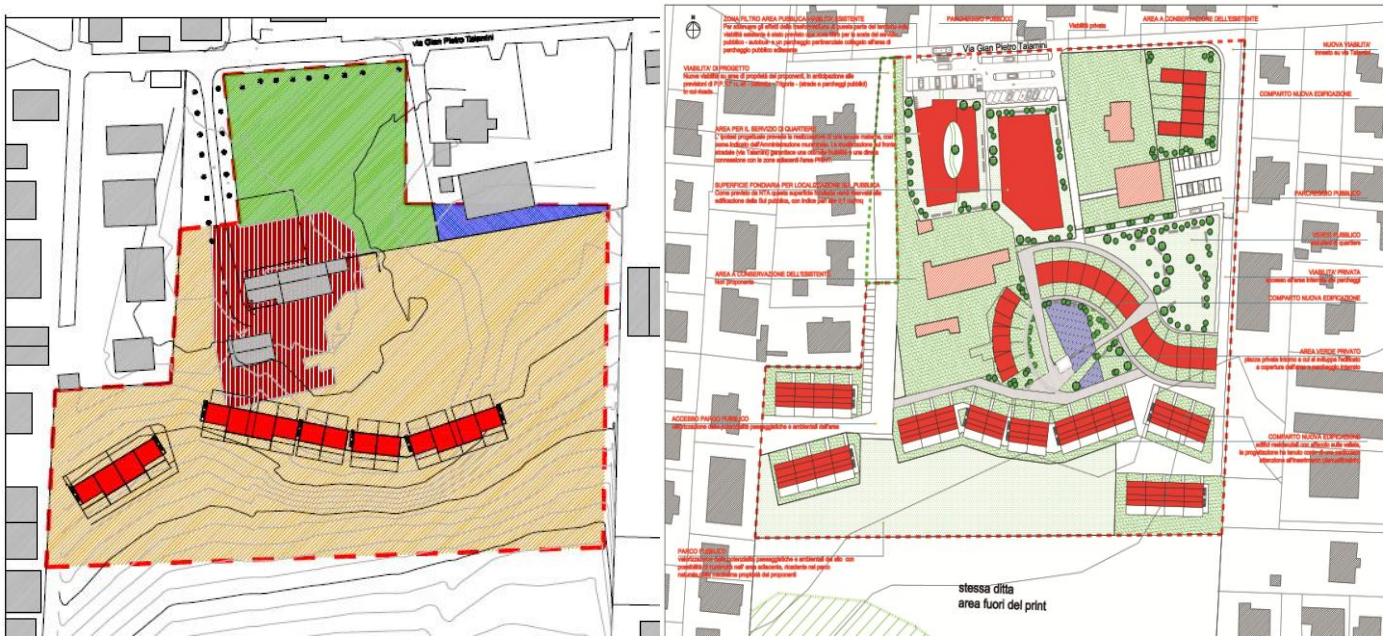
Figure 1.15 - The CircUse “Circular Flow Land Use Management Concept”



Source: Maros Finka, op.cit

More in general, a comprehensive system of instruments is missing and CircUse Project tried to provide a framework to support the different stakeholders to change their strategies, stressing, among others, that regional cooperation is very important in land use reduction.

Sources: Maros Finka; Existing and New Instruments Supporting the Circular Flow Land Use Management and Land-Consumption Reduction - CircUse Project´s opinion, Presentation at the Useact Nitra Thematic Meeting, Nitra, October 2013; www.CircUse.eu



2 PLANNING TOOLS FOR INTEGRATED "REUSE" INTERVENTIONS

2.1 INCENTIVES TO "JOIN" OWNERS AND PROPERTIES IN THE RECENT NEW GENERAL TOWN PLAN OF ROME

City of Rome recently adopted (2008) a new General Town Plan scheme (GTP) which substituted the previous one, in force since 1962. The former plan, based on a "traditional" zoning approach, suffered several variations over the years. One of the most important target of the new GTP is limiting land take, trough promoting a better use of already urbanized areas, following a "mixed use" approach.

The new GTP encompasses some specific incentives aimed at boosting developments run by several land-owners jointly. Before focusing on these specific tools, it is of use to provide a general overview on the general scheme[13].

One clearly declared challenge of the new GTP is to boost "redevelopment schemes" on areas that are already urbanized, avoiding, as much as possible, new land take. To boost redevelopment, two main «area based» planning tools working within the existing city are available.

A) URBAN PROJECTS («Progetto Urbano»), which are public Initiative interventions (with public funds) on established areas. These projects mainly focus on infrastructures, connections and public spaces and require a strong participatory approach. They are used mainly for "historic city/dense" urban zones.

[13] Main Source: Vittorio Torbianelli, Planning tools and incentives for urban regeneration and densification: the Rome case-study, presentation at the UseAct Nitra Thematic Meeting, Nitra, October 2013

B) INTEGRATED PROGRAMS (PRINT). Aimed at urban renewal/densification of urban non core areas, PRINTs can be defined as (re)development densification schemes (new volumes are allowed) with the purpose of urban and environmental requalification, in areas designated by the GTP, that are totally or partially built.

PRINTs do not require any specific variation of the GTP (PRINT spatial boundaries are clearly identified) and should therefore be quickly viable. In PRINTs areas, threshold planning parameters are the general ones, but within these limits there is freedom.

PRINTs in general allow several urban uses (no mono-functional approach) and integrate – also from funds and resources point of view - different typologies of intervention (public utilities included).

More detailed clarifications on PRINTs are necessary. Public or private entities can develop PRINT development schemes. In the Rome case, the role of public promoter is played by the so called «Municipio» ("borough"). Formally, in the Public Initiative PRINTs there is room for integrating (one or more) private owners into the scheme (through a "contractual" approach). However, if private owner does not comply with the scheme, compulsory purchase occurs. At present, public administration has weak interest and no resources for promoting such schemes and public Initiative PRINTs in fact does not work actually.

PRINT development schemes can also be developed on private initiative. Private owners have two solutions since they a) can develop the properties individually, following the normal rule (without any specific incentive); b) officially apply for a PRINT scheme jointly (if they associate at least 75% of the whole PRINT land). For PRINTs that comply with the "prevailing residential" character, the volumetric incentives provided are showed in Table 2.1-

Table 2.1 - Incentives for private "individual" and "joined" development

	Building Rights (m2Built/m2Land) Usablr Surface/Total Surface*			
	For individual developments denominator (total Surface) is the extension of the owned parcel within the PRINT area; for joint-ventures, it is the entire PRINT area			
FORMER GTP zones (1962)	Individual Private Development = ordinary building rights <u>Ordinary Planning Fees:</u> Primary public works (network utilities)	(PRINT) Joint-venture (75% of properties) For private owners (joined) = extraordinary share of building rights <u>Extraordinary Planning Fees:</u> Secondary public services (e.g. school)	Available for the municipality (compensatio ns?) See later!	Total
Zones (former GTP 1962)				
Land for high density housing developments	0,30	0,60	0,00	0,60
Land for low density housing developments	0,10	0,20	0,10	0,30
Land for public building (M1, M3)	0,00	0,20	0,10	0,30
Not developable land (roads, etc)	0,00	0,12	0,18	0,30
Green and public services areas	0,04	0,06	0,50	0,56

Source: Vittorio Torbianelli (op.cit)

Private owners (joined) together with the public body («Municipio") discuss and arrange the scheme (and the private contributions), up to definitive approval. In general, PRINT schemes developed jointly allow a better utilisation of the areas.

Owners that are not involved in the (original) private proposal, have right to join the group if interested, even if that represents a risk of "complications" within the original "group" (for example due to a low financial solidness of the additional partner).

The above mentioned incentives (as supplementary «building rights») would induce considerable benefits for the land owners. So far, the larger rights are balanced by a purpose-built "planning fees"

system, linked to the PRINT scheme, agreed both by public and private investors. The fee scheme is as follows.

A) For the “standard” share of the building rights (first column of Table 2.1), planning fees are the ordinary ones (note that generally the fees are contractually “converted” into physical public works - network public utilities – roads, etc.- to be built by the private developer)

B) For the “supplementary” share of building rights (second column of Table 2.1), “extraordinary” planning fees (higher than the ordinary ones) are required, to finance further public services (schools, social housing, etc.). These fees are contractually convertible into public works too.

The “value” received by the public sector as extraordinary planning fees (actually as physical works) must be exploited only for public works/services within the PRINT area and not generically in the entire borough area.

As above mentioned, the conversion of the supplementary planning fees into material works is “agreed” within the PP development scheme. In principle, this solution could benefit the (efficient) private developers, by reducing their final cost in comparison with the monetary payment alternative. However, private developers often assert that the lack of prior information on what/where public services should be built (cost uncertainness) is a strongest deterrent to apply.

Therefore, public bodies should previously provide a clear outline of public targets/public works/services for the PRINT areas

A similar incentive framework to promote joint-ventures among land-owners is available for PRINTs areas which are dedicated to host “economic activity” In case of individual development, the building ratio allowed is 0,30 m2/m2 and on public green areas, development is allowed only if parcels are smaller than 1.500 m2 and. Moreover, urban uses allowed for individual developments are rather severe: residential buildings can be («only one dwelling for each productive unit, not exceeding 10% of the Usable Surface), while further allowed uses are retail, services (allowed functions with low parking/transport impact only) hospitality (hotels, etc.), production, agricultural activities and parking spaces.

For larger private-owned areas (more than 10.000 m2), a joint application for a scheme (75% of the parcels) is always compulsory. More in general, urban functions allowed and incentives for “joint-venture” development schemes in PRINT areas dedicated to economic activity are more favourable than the individual development case. The building ration is 0,35 m2/m2 and residential units are permitted up to 20% of the whole allowed development. Further uses are production activities (not less than 30% of the allowed development), retail, services, tourism/hospitality (uses with medium and high parking/transport impact allowed too).

Changes of urban uses are also allowed, through payment of extraordinary planning fee.

In reality, many factors tend to dissuade private developers to apply for development schemes in reality.

1) The extent of the PRINT areas is often too large to allow “75% of the area” agreements (Implementation of partial development sub-schemes should be allowed).

2) The “right to be involved” of further (extra75%) land-owners is considered a potentially relevant “risk” and a source of uncertainty for the “first” applicants (Agreed “admission procedure” of further applicants should be allowed).

3) The lack of a prior general vision (developed by the public authority) on what are the public requirements/public services for each PRINT area: this brings not minor uncertainty for the business plan of the applicants (a clear pre-existing plan for public facilities should be available).

4) Boroughs are often not technically capable to manage the “agreement procedures” and the multi-step design and assessment process of the development scheme (need to identify the appropriate level of competence for managing the procedure).

These negative factors represent, in general, a typical risk for incentive-based planning schemes aimed to “joint” fragmented properties and should carefully considered as the legal planning framework is developed.

Identifying and levy urban vacant land in Dublin – A way to incentivate urban reuse?

Identifying and levy urban vacant land in Dublin – A way to incentivate urban reuse?

Now that the era of tax incentives is over, Dublin City is pursuing alternative means of turning our brownfield legacy into opportunities. The policies and objectives of the Development Plan "promote intensification and consolidation of Dublin city. This will be achieved by way of in-fill and brownfield development; regeneration and renewal of the inner city; redevelopment of strategic regeneration areas; and the use of higher densities especially in public transport catchments" (DCC Development Plan 2011-2017 Chapter: 3.2.1)

Recently the Lord Mayor's Task Force on Vacant Land proposed a "vacant land levy" for the Inner City of Dublin to the Department of Finance. In addition students from University College Dublin are currently preparing a report on the range of incentives/sanctions/policies/best practice which could be used to expedite the regeneration of such lands.

The Vacant Lands Levy initiative involves 2 key pieces of work to date;

a) A research paper on a proposed vacant land levy for the Inner City, produced by the Lord Mayor's Task Force, and which has been submitted to the Department of Finance for its consideration.

b) A vacant lands survey for all vacant sites in the Inner City has begun.

In addition the City Council has set up a Local Support Group comprising City Council Experts, Strategic Policy Committee Elected Members and including one University Representative.

The survey is initially confined to the Inner City. Need a base map (1:1000) with most recent vacant sites survey. May need to be divided into grids blocks (e.g. 500x500m) to assist survey work. Baseline map could have vacant sites from Housing Land Availability and City Council owned sites layered onto it.

The project is still undergoing implementation therefore steadfast or concrete conclusions have not become apparent yet, particularly in regard to the logistics of implementing a vacant land levy on a derelict site against the will of the land owner. Moreover, the nature of a number of the chosen sites and their subsequent categorization on the vacant lands database may lead to legal discourse in the future, particularly if such a levy was to be introduced.

2.2 CONTAINMENT OF LAND USE AS A STIMULUS FOR THE REGENERATION OF EXISTING AREAS AND REUSE OF ABANDONED AREAS FOR A MORE LIVEABLE AND ENERGETICALLY EFFICIENT CITY: THE NEW GENERAL TOWN PLAN OF TRIESTE

The Municipality of Trieste is developing the new General Town Plan. Focussing on reuse and regeneration as an opportunity to regenerate the city of Trieste and make it more sustainable presupposes much work reading the specificity of the various urban fabrics and elements that make it up, like the starting of a process of recognition of many urban cityscapes and built elements of value.

This is to identify levels of transformability of individual buildings and parts of the city, up to the possibility of more significant operations of demolition and replacement of these elements that are no longer able to guarantee a suitable level of

habitability and energy efficiency. This is a request that was put forward not only during the economics and professional participation-meetings, but also that takes on an important role in improving the environmental quality of our city that is central to the administration programme.

The General Town Plan in process identifies:

-areas of real urban renovation, where it will be possible to replace whole parts of the fabric for better energy efficiency standards, but also for a better use of green spaces and public use; the

creation of regeneration opportunities of periphery parts of the city that today are in an evident state of neglect can also be linked to this;

- areas of the city where the energy efficiency of individual buildings is “rewarded” through the acquisition of volumetric “credits” in other parts of the city (identified in the Plan, see map) where a densification process is possible (essentially this deals with a reinterpretation of the “equalising” mechanisms that our Plan modifies to the Trieste context where there are no large public properties, or large areas of expansion where further building capacity can be set down.

- areas of the city in which the energy efficiency of individual buildings is “rewarded” through the acquisition of volumetric “credits” in other parts of the city (identified in the Plan, see map) where a densification process is possible (this is essentially a reinterpretation of equalising mechanisms, which our Plan adjusts to the conditions of the Trieste context where there are neither large public properties, nor large expansion areas in which “to land” additional building capacity, but the volumetric awarding should be necessarily conceived in the most widespread manner on the existing fabric);

- rewarding mechanisms which incentivise the recovery of disused buildings.

Ecological reconversion and incentives for energy upgrading

Ecological reconversion pursues the general aim of improving the quality of life in the city, via measures which are both diverse and vary in the binding legislation.

The themes concern the safeguarding and improvement of the quality of air, water and soil, energy efficiency, production and biodiversity.

In line with this objective, the Plan outlines:

1. measures designed to improve the quality of air, such as the use of green for regulating the microclimate, the introduction of a tree and shrub density index, the encouragement of the use of roof gardens;

2. measures designed to obtain conditions of hydraulic invariance, such as the provision of systems to ensure the full return of rainwater to groundwater;

3. measures designed to save energy, such as the creation of roof gardens and solar greenhouses, energy upgrading of existing buildings with a level change, the improvement of the environmental compatability of the buildings and the energy efficiency of the building systems and/or envelopes;

4. measures designed to ensure biodiversity, such as the protection and enhancement of environmental safeguards and ecological corridors, the recovery of enclosures in karst stone, the creation of roof gardens, the introduction of a tree and shrub density index.

Incentives for energy upgrading

The Plan provides for the energy upgrading of existing buildings (in particular those built in the sixties-seventies in the last century), through the development of a type of “pilot project” geared towards promoting energy reconversion:

- of buildings in the urban Centre of environmental value (B0);

- of buildings in the City of objects (zone Bo1 and zone Bo2);

- of disused buildings.

The selection of places in which to incentivise energy upgrading is motivated by the fact that these areas are difficult to transform for the following reasons:

- presence of buildings where some elements of value and alignments along the road have to be safeguarded;

- presence of buildings of high density and and high coverage ratios, of large containers with a high number of housing;

- presence of different owner conditions;

- building heritage (in particular in zones Bo1 and Bo2) sometimes of poor quality both architecturally and in energy-environmental terms.

The energy upgrading is incentivised via the creation of building “credits”, not more than 10% of the volume of the redeveloped building.

These credits can be used:

- in areas specifically identified within zone Bo4 City of objects, in zone Bg1 City of gardens and in zone Bg2 City of gardens from Karst to Opicina (see composition PO1.2). In the areas of “landing” the credits in zones Bo4 and Bg1, a maximum expansion of 250 cubic metres is forecast per housing unit, up to a maximum of 45% of the existant volume; in the area of “landing” the credits in zone Bg2, a maximum expansion of 250 cubic metres is forecast per housing unit, up to a maximum of 2 units and no more than 45% of the existing volume in the lot;

- in some C zones – New city of gardens, where an increase of territorial index 0.5 cubic metres/square metres is permissable, which leads to a maximum1.5 cubic metres/square metres, as provided for by PURG.

The selection of “landing” areas of credits is motivated by the fact they are low density building areas or expansion areas. However, among these types of areas, environments and zones deemed particularly sensitive from the following perspectives have been excluded:

- environmental: zone Bg1 City of gardens and specifically the areas corresponding to Barcola, but also zone Bg3 City of coastal gardens, zone Bg4 City of vegetable gardens;

- of settlement principles: zone Bg2 City of the gardens of Karst (except Opicina);

- of historical and documentary architectural value: buildings under protection.

Other excluded areas include those falling under Areas of urban renewal and restructuring because they are aready covered by volumetric awards.

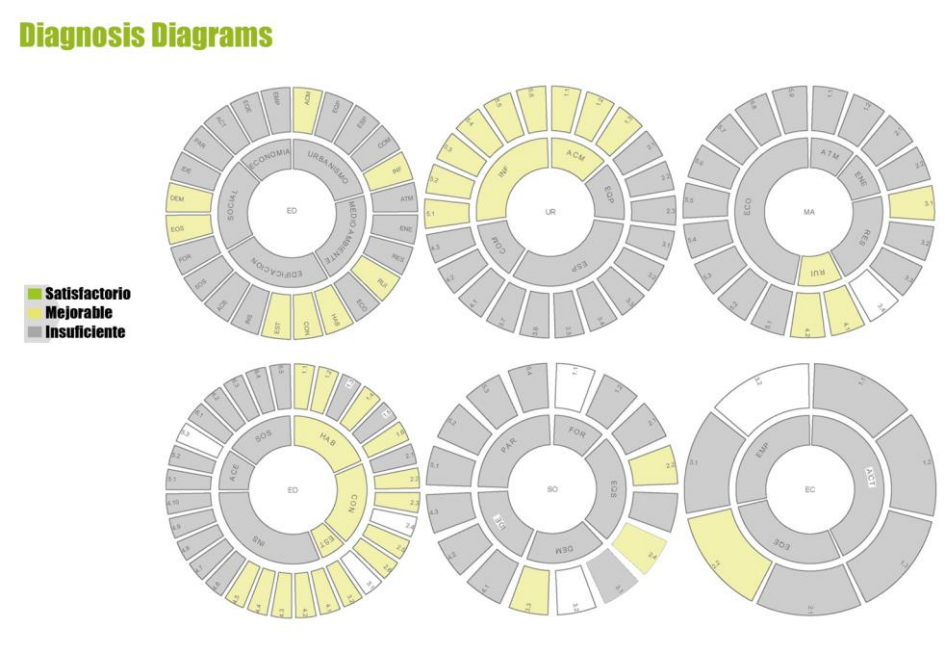
Specific Regulation will define in detail the process of the operation and landing of credits. This process shall also see the establishment of a special Register of building credits, aimed at controlling building loans that can be activated throughout the whole territory. In this initial phase, the loans amount to 350,000 cubic metres and can be used within 10 years of the Registry set up.

What are the priorities? Measuring urban vulnerability to improve urban planning

"Land Use Management" approaches aimed at reducing land take and reusing urban areas, require continuous evaluation and monitoring activities. The Municipality of Barakaldo has developed a research aimed at establishing criteria to assign priorities in renovation programs. This research, called "Diagnóstico de las necesidades de intervención en la renovación del parque edificado de la CAPV" (Diagnosis of the necessities in built environment renewal interventions of the Basque Country) has been developed by TECNALIA- Madrid Polytechnic University (UPM) and Basque Country University (UPV/EHU). This diagnosis establishes six parameters of vulnerability for urban analysis on two scales of comparison (Basque Country average town and Barakaldo municipality). The parameters were (see figure 2.1):

- Social and economic vulnerability.
- Building habitability and comfort measures.
- Urban and building accessibility.
- Construction and structural viability.
- Energy efficiency.
- Building and population density.

Figure 2.1 - The diagnosis diagram



Source: City of Barakaldo

This second methodology establishes five categories of vulnerability on neighbourhood scale, considering before-after inputs of compared analysis to determine the benefits of the possible proposals. The categories were:

- Urbanism.
- Environment.
- Building.
- Social
- Economic.

Once the proposal of urban intervention was defined, the second methodology was carried out again, in order to check the improvements of each category (colour code difference for the improvements, along with the circular shape, enhance the comprehension of the analysis).

Analyzing the pre-existing urban spaces and areas with the idea of promoting urban interventions, requires the definition and implementation of an integral methodology for urban analysis, considering all the specific and key factors of the area (specific indicators and sub indicators).

- The proposed interventions are and must be analysed from the urbanistic, environmental, building, social and economic points of view, so as to have a real overall view.
- The proposed methodology and indicators have to be easily understood (for public participation and dissemination) and must allow reflecting and evaluating the benefits of the urban proposals (before-after comparison).

At the same time, Barakaldo City officers concluded that:

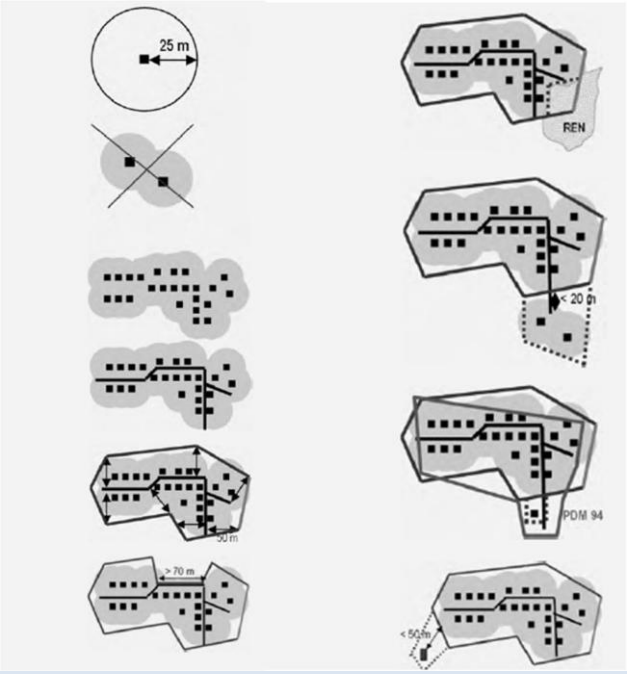
- The presented methodology and indicators of analysis were valid.
- They will try to use this methodology in the revision of the future Barakaldo Urban General Plan, so as to study urban pre-existing and degraded areas.

(Source: Alvaro Cerezo, Analysis and Diagnostic on vulnerable urban areas, the neighbourhood of Llano in Barakaldo - Methodology and Indicators for Urban Analysis, case study presented at the UseAct Nitra meeting, Nitra, 27TH-28TH October 2014

What is the urban "built area"? Methodologies to identify the "urban fringe"

Urban planning schemes aimed at reducing land take often require to "delimit" the areas that have to be considered as urban area. This is the so called "Morphological delimitation of urban fringe" issue, as defined by N.U.R.E.C. 1994 (Network on Urban, Research in the European Community).

Figure 2.2 - Different approaches to delimit "urban fringes"



Morphological delimitation takes into consideration the United Nations' concept for contiguous built-up area, where the distance between buildings must be less than 200 m. That is, by generating a buffer of 100m around buildings it is possible to delimit built-up continua. This sort of criteria, well suited to cities with very uniform expansion, is insufficient when these processes are a complex blend of suburbanization, sprawl and the incorporation of existing settlements, when the dominating typologies are the detached single family housing, both in the close vicinity of urban settlements or on the outskirts of the city, and the isolated single family house, aimed for the weekend- or summer-house market. In these cases, is very important to adopt a rational approach to "delimitate" the urban fringe ("built area"), within the official planning document. A very sensitive aspect is related to the areas which are placed near the infrastructures (roads).

The lack of an adequate supply of building plots within urban perimeters or the difficulty in acquiring them from landowners unwilling to either build on them or sell them to those who will, may have contributed to the strong building pressure outside urban settlements. The slim supply of housing in the city and the slow or stalled rate of conclusion of some large-scale urban plotting and urban plans situated inside the city's boundaries were also identified as probable causes for this sprawl.

Source: José Antunes Ferreira⁎, Beatriz Condessa, Joana Castro e Almeida, Pedro Pintos (2010), Urban settlements delimitation in low-density areas—An application to the municipality of Tomar (Portugal), Landscape and Urban Planning 97 (2010) 156–167

3 IMPROVING SOCIAL AWARENESS: TOOLS FOR URBAN LANDSCAPE VISUALIZATION

3.1 THE ROLE OF URBAN VISUALIZATION TOOLS FOR COMMUNICATION OF FUTURES LANDSCAPE AND URBAN ALTERNATIVES

Urban "visualization tools", in particular when supported by EDP, are gaining importance in the urban planning arena. They can be used to show to local communities targets and visions (or impact scenarios) related to the land use, to discuss them, playing a potentially important role in stressing the opportunities both of avoiding land take and, in other cases, of developing land trough "suitable" schemes.

It is clear that the choice to use these tools should consider the difficulties that citizens can face in "reading" and interpreting the contents, but also the opportunities to integrate these tools with widespread online web-based geographic visualisation tools.

An Australian survey[14] dedicated to the potential role of using "Google Earth" to develop scenarios of land use/environmental impacts shows clearly that perceptions of the current users (planners, city managers, etc.) and futures users (young people – university students) are in general rather positive, whereas different categories react in different ways. A Denmark national project[15] supported cities through providing guidelines useful to identify and «communicate» the «values» of urban density to the citizens within a common basic framework. The project was published in 2009 (Ministry of Environment).

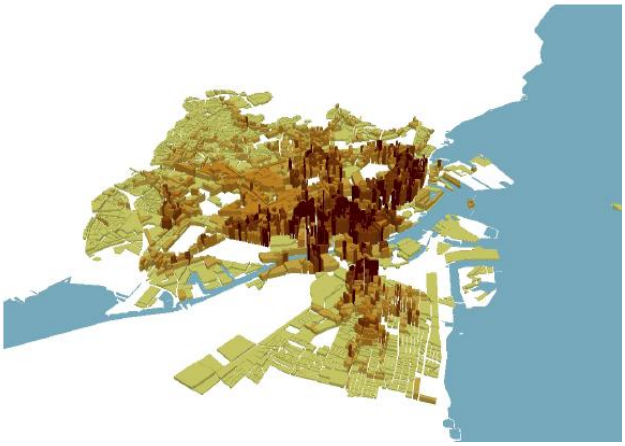
[14]Source : Christopher J. Pettit a, Christopher M. Raymond, Brett A. Bryan, Hayden Lewisa (2011), Identifying strengths and weaknesses of landscape visualisation for effective communication of future alternatives (2011), Landscape and Urban Planning 100 (2011) 231–241

15 3D City Model and Urban density, Danish examples, Center of Urban Planning Bruno Tournay, 2010, Milan. http://www.blst.dk/NR/rdonlyres/1A4B568E-F851-4718-8527-61843FD08A4D/90547/taethed_bog_til_nettethw.pdf

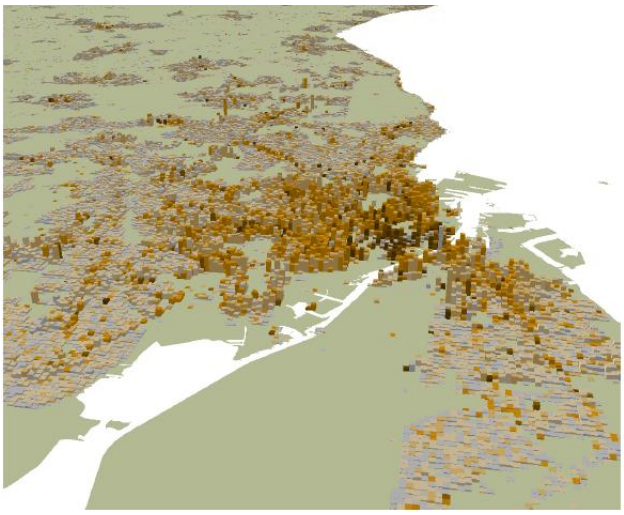
The visualisation framework entails three frames (different scales) for urban 3D EDP, and visualization: 100x100 m cells. The three frames refer respectively to building typologies (30x30m), Settlement (1200 x 1200 m), and wider areas (7000 x 7000 m), a distance within which it is comfortable to move by bike (3-5 km).

As showed in Figure 3.1, a 3D visualization of the number of people living in each 100x100m cell, can be represented by the height of the column, and the number of working places witch is represented by the colour of the cell. The higher and darker is the column, the more dense and integrated are residential and working places.

Figure 3.1 - Outcomes of 3D City and Urban density Model (Denemark, 2009)



Source: City Model and Urban density



Source: City Model and Urban density

At a large scale level, online tools can be used also as cost-assessment tools. “Urban Interactive Studio, in conjunction with PlaceWays and RKG Associates, developed an online tool under the auspices of the New Hampshire Office of Energy and Planning[16]. This tool, called “Cost of Sprawl”, was specifically designed to incorporate existing land use information, infrastructure, and financial attributes with sprawl-related conditions in order to assess the future impact of development in any of New Hampshire’s 239 municipalities”.

More in general, online tools can be uses also to engage citizens.

The City Form Lab at MIT has released a new data visualization that allows users to analyse urban street networks with by utilizing five graph analysis measures of street networks (reach, gravity, Betweenness, closeness, and straightness)[17].

Denver city (USA) also developed an online “visualization/participation” tool to involve citizens into planning issues and stimulate a participatory approach[18].

3.2 INTEGRATING GIS AND VISUALIZATION TOOLS: LESSONS FROM U.S.A.

Integrating GIS town management systems with visualization tools can be a way, for city administration, to reach effective outcomes, both for “internal” and “communication/participatory” use. A USA case study is significant[19].

Langley is 45 minutes east of Vancouver. In 2010 the municipality issued nearly 1,000 building permits: for a community that is used to a landscape of farmland and single-family housing, new proposed pockets of urban growth that include higher-density apartments and condominiums can be perceived as a problematic solution. Since 1995, the municipality has used “Esri” technology to manage land information across its enterprise and

16 (Source: Geneva Faulkner, “Engaging City”, 2012). See http://www.costofsprawl.org/.

17 http://engagingcities.com/article/data-modeling-tools-help-planners-visualize-different-futures

18 http://www.deliveringdenversfuture.org/

19 Main source: web page ESRI advertising http://www.esri.com/news/arcnews/spring12articles/preparing-for-a-vibrant-future-in-the-township-of-langley.html

enable geographic applications in various departments, including planning, finance, engineering, and protective services”._“It also maintains a web-based GIS interactive mapping system that provides staff and the public with access to maps, land data, and aerial photography of the township.

To stay at the forefront of GIS technology, the township upgraded recently to an another system (ArcGIS 10). The ability to create an interactive, shareable 3D model for the township that can be used for current and future needs was a major driver for that decision. The new EDP/GIS tools allows to view and analyze large datasets in three dimensions. This includes remotely sensed ‘Lidar’ data that provides highly accurate geographic positions of properties and assets whether they be buildings, utility poles, or trees. Lidar - light detection and ranging - is an optical remote-sensing technique that uses laser light to densely sample the surface of the earth, producing highly accurate x,y,z measurements.

This data is being used to create a 3D model that will provide a current baseline against which the township can visualize alternative growth scenarios. GIS allows municipality departments to conduct view-shed and line-of-sight analyses to see how new development—multifamily housing structures and mixed-use buildings, which are taller than single-family houses predominant in the township—might impact the current skyline or special views to landmarks. Taller buildings can also mean more shadow: GIS supports the visualization and estimation of the total amount of shadow that a new building might cast on adjacent properties, which could result in greater heating costs for the impacted property.

Urban planners have traditionally taught and used GIS, while the architects have taught and used modelling/visualization software. The development of integration between GIS and 3D visualization tools is a target that can be reached also trough cooperation with universities. The faculty members and students at Florida Atlantic University (FAU), who had no proficiency in CAD or GIS software, came together to create an interactive three-dimensional GIS for a portion of downtown Fort Lauderdale (USA)[20].

Architectural visualization emphasizes the representation and analysis of form, space, and material, while GIS uses layers to subdivide datasets, layering systems in architectural design typically reference material components and a language of line-weights, colours, and textures.”

Key questions to select the best approach

Municipalities or other authorities that are interested in developing or optimizing integrated approaches toward land use management, should carefully focus on the opportunities offered by advanced visualisation tools integrated with GIS.

However, the following basic questions should be answered.

- What is the purpose of the local authority? Just focusing an issue (density? Land uses changes and scenarios; environmental issues?). To assess/support urban development schemes?
- At what scale could the tool be operated? (region/municipality)
- Could the tool be integrated into a more structured urban management approach (GIS managed by the municipality for many functions?)
- Benefits of integrating high quality features of the typical «architecture» 3D visualization tools with GIS database/data processing have been carefully considered?
- How could be the tool integrated into a online interactive communication/participation framework (e.g. “urban games”)?

These questions seem to be of primary importance also for UseAct partners interested in developing most advanced tools to face land take and improving the use of existing city.

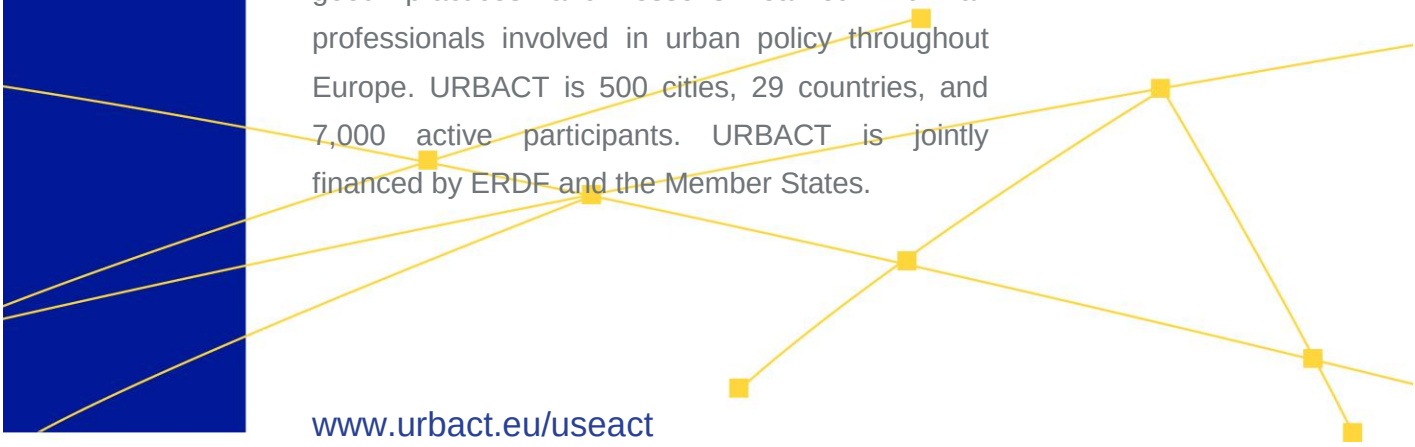
20Source:Esri
http://www.esri.com/news/arcuser/0207/urban.html
Some demos…
http://www.esri.com/software/arcgis/extensions/3danalyst/key-features/demos
http://www.rndrstudio.it/

https://www.youtube.com/watch?v=pjK_ljgWxCM

URBACT II

URBACT is a European exchange and learning programme promoting sustainable urban development.

It enables cities to work together to develop solutions to major urban challenges, reaffirming the key role they play in facing increasingly complex societal changes. URBACT helps cites to develop pragmatic solutions that are new and sustainable, and that integrate economic, social and environmental dimensions. It enables cities to share good practices and lessons learned with all professionals involved in urban policy throughout Europe. URBACT is 500 cities, 29 countries, and 7,000 active participants. URBACT is jointly financed by ERDF and the Member States.



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EUROPEAN PROGRAMME FOR SUSTAINABLE URBAN DEVELOPMENT

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