

The role of natural periurban areas in urban and territorial management models



Proceedings of the technical meeting held in Seville (Spain), 6th May 2010

Sommaire / Contents / Contenido

- i Préambule
Foreword
Preámbulo
Ramón Pardo
-
- ii Introduction
Introduction
Introducción
Slimane Tir
-
- iii Manifeste de Séville
Seville Declaration
Manifiesto de Sevilla
Slimane Tir
-
- 1 Le Défi de la gestion des espaces naturels au XXIème Siècle
Management of Natural Spaces Challenge in the XXI Century
El desafío de la gestión de los espacios naturales en el siglo XXI
Hermelindo Castro Nogueira
-
- 2 Espaces Naturels Protégés en Espagne
Protected Natural Areas in Spain
Espacios Naturales Protegidos en España
Juan Garay Zabala
-
- 3 Espaces Périurbains de l'Andalousie : Réseaux, Villes et Territoire
Periurban Spaces of Andalusia: Networks, Cities and Territory
Espacios Periurbanos de Andalucía: Redes, Ciudades y Territorio
Rocío Espinosa
-
- 4 Planification territoriale et espaces publics métropolitains en Andalousie
Territorial Planning And Metropolitan Public Spaces In Andalusia
Planificación territorial y espacios públicos metropolitanos en Andalucía
Olga Dulce Ormaechea Cazalis
-
- 5 Point de vue des administrations locales. Fédération Espagnole des Municipalités et Provinces (FEMP) -
Réseau des gouvernements locaux + Biodiversité 2010
Vision from local government. Spanish Federation of Municipalities and Provinces (FEMP) -
Local Government Network + Biodiversity 2010
Visión desde las administraciones locales. Federación española de municipios y provincias (FEMP) -
Red de gobiernos locales + Biodiversidad 2010
Sonia Bermúdez
-
- 6 Le rôle des espaces naturels dans le Plan territorial métropolitain de Barcelone (PTMB)
The role of natural areas in the Barcelona Metropolitan Territorial Plan (PTMB)
El papel de los espacios naturales en el Plan Territorial Metropolitan de Barcelona (PTMB)
Martí Domènech
-
- 7 Le Projet de Grille Verte de Londres Est
The East – London Green Grid project
Javiera Maturana
-
- 8 Ceinture Verte – Francfort
Greenbelt – Frankfurt
Klaus Wichert
-
- 9 Projet Couronne Verte de Turin
Turin Green Crown Project
Ippolito Ostellino
-
- 10 L'expérience du Réseau Vert de l'Estonie
Green Network experience from Estonia
Mart Kõlvik
-
- 11 Infrastructure Verte, Commission Européenne
Green Infrastructure, European Commission
Marco Fritz
-

FOREWORD

Ramon Pardo

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Andalusia hosting the 2010 edition of the technical seminars for FEDENATUR (European Federation of Natural and Rural Periurban and Metropolitan Areas) that this time is co-organized by the Ministry of Environment of the Andalusian Government.

Moreover, these technical seminars are part of the project Periurban Parks, from the European Interreg IVC program and is one of the thematic workshops involved in this project, which are FEDENATUR and the Andalusian Regional Ministry of Environment as well another 12 members from other 10 European countries.

The opportunity to join both events creates a great synergy that can increase the participation numbers and allows a larger dissemination of the contents that are presented and discussed in the meeting.

The central theme of the conference, deals with the insertion of peri-urban natural areas in territorial and cities planning as a way of giving a more active role to these areas both in the environmental quality and the social functions they play.

Urban expansion in recent years has resulted in the loss of environmental quality of open spaces in which our lives normally unfold. This phenomenon has affected biodiversity, the quality of citizenship life and the functionality of the territory. The problem is particularly severe in urban environments and is of an important severity given that over 80% of European population lives in these urban and metropolitan areas.

These seminars should be considered in the context of the reflective process that has started at European level to reverse the identified problems and to strengthen the role of peri-urban areas in the preservation of biodiversity, quality of life of citizens and the sustainable development of the cities.

This time they seek to exchange views among different administrative Spanish and from the rest of Europe realities, with reflections that are addressed to the making of action guidelines and to encourage the formation of a working group that ensures the permanence of the debate beyond their own workshops besides the organization of the network of the involved institutions. Therefore, these seminars have been opened to technical managers of these Spanish and European entities. The participation included around 100 people, representing the following countries: Spain, France, Italy, United Kingdom, Portugal, Bulgaria, Czech Republic, Poland, Hungary, Slovakia, Greece, Estonia and Germany.

INTRODUCTION

Slimane Tir
President of FEDENATUR
President of *Espace Naturel Lille Métropole* (France)
Vicepresident of Lille Métropole Communauté Urbaine

FEDENATUR is a federation gathering 25 European protection and management entities for natural and rural areas located outskirts of cities or within metropolitan conurbations.

Our federation was created following the 2nd *Symposium on natural areas in metropolitan and periurban zones*, which was held in Barcelona in October 1995. One of the main conclusions of that meeting was that there was a need to close the existing gap of an exchange network at European level based on the management and protection of nature and biodiversity in the metropolitan arena and in the *Reference Framework for European Sustainable Cities*, in accordance to the goals of the Local Agenda 21 drawn up at the Rio de Janeiro Summit held in Rio de Janeiro in 1992.

Once the network was up and running, we realised that it is not possible to guarantee future protection of biodiversity in natural and rural isolated areas located in so conflictive zones such as the metropolitan ones, unless those areas which are under so much pressure and those called periurban ones, do constitute one system as a whole. That is why 8 years after the meeting, we organised in Barcelona in March 2003, the III *Symposium on natural areas in metropolitan and periurban zones* entitled "*The system of open spaces in the articulation of metropolitan areas*". Specially since many areas of the territory are being metropolitanized (predatory occupation of the soil, spread of human infrastructures, logistical activities which have no direct relation with the city).

With those reflections, we were extraordinarily concerned about the European Commission document "*Towards a Thematic Strategy on the Urban Environment*" which leaves almost unmentioned the need of the natural component (not the urban green) as a priority in the orientation, growing and extension of cities. However, today we can confirm that the green infrastructures issue has started to be dealt with in the framework of the European Commission debates and that is why, we would like to effusively congratulate them for the Workshop entitled "*Towards a green infrastructure for Europe*" held in Brussels on 25-26th March 2009 and organised by the General Directorate of Environment of the European Commission.

It is a great initiative to try to build a green system in Europe, but the great battle comes from the cities and their metropolitan areas where the fragmentation of the territory and its loss of ecological functionality reach catastrophic proportions.

Therefore, it is necessary that territorial planning integrates the need of preserving free spaces, natural and rural, connected to the rest of the green territory, in order to guarantee sustainable and liveable cities as well as the biodiversity. For all the mentioned above, we have decided to organise the current meeting 8 years after the III Symposium, in order to stress the need of a new model of territorial and urban planning as the only way to step forward.

For that reason, it is important that the European Commission promote reflections about the transcendence of changing the way of doing on the territory. Recognizing its importance and increasing the awareness of national, regional and local administrations which, after reflection, an European directive is issued to promote the existence of natural and rural areas as part of our cities, connected to the rest of the natural and rural territory, as a continuous system, not fragmented which leads to a truly regional, national and European green infrastructure.

As a conclusion to the presented interventions and as an outcome of this meeting, added to all work done during the last years, a manifest called "*Sevilla declaration*" collecting the principles herewith exposed has been elaborated and can be found below.



SEVILLE DECLARATION

The European periurban park managers meeting from 5 to 7 May 2010 under the auspices of FEDENATUR in Seville, the capital of Andalusia, a pioneering region in Europe for the protection of periurban and metropolitan natural areas, state:

In Europe, over 80% of people live in urban areas. This demographic concentration and the resulting urban expansion have been carried out at the expense of the environment, nature, farming and the richness of landscapes, flora and fauna, causing serious loss of biodiversity. These losses are often irreversible but more sustainable town planning could slow or even halt the erosion of biodiversity.

Aware that the fight against biodiversity loss and the consequences of climate change will be decided in urban areas, in recent years several European cities and local governments have undertaken to develop active policies for the preservation, restoration and improvement of extensive natural areas located on their immediate outskirts.

Furthermore, some European regions have made significant progress. The Regional Government of Andalusia has driven an unprecedented and fruitful strategic planning partnership between its Ministry of the Environment and Ministry of Public Works and Housing in order to develop a network of natural spaces near cities.

The European Federation of Metropolitan and Periurban Natural and Rural Spaces (FEDENATUR) brings together organizations managing periurban natural areas run by local or regional authorities.

Our association promotes technical exchanges between experts to foster the protection of natural and rural areas close to large cities, driving their ecological connection and improving their management in response to the pressure exerted by the public in search of areas for recreation.

The degree of knowledge built up since 1997, the year when our association was founded, results in the publication of numerous reports and participation in European projects whose aim is to encourage the transfer of knowledge between European regions. FEDENATUR is currently involved in the PERIURBAN project in the INTERREG IV C programme whose goal is to extend these exchanges to periurban natural areas in Eastern Europe.

On the basis of this experience, we believe that periurban nature parks, going beyond their legitimate vocation to be leisure spaces for the public, should be recognized as essential components of a green infrastructure in the form of an ecological network which is indispensable for the establishment of sustainable town planning that is committed to the fight against climate change and to preserving biodiversity.

So far periurban nature parks have not been sufficiently valued or adequately recognized by European environmental policies. The battle for the preservation of biodiversity will also be won at the gates of towns and large cities.

It is for this reason that in 2008 FEDENATUR submitted a motion demanding recognition for periurban natural areas to the IUCN World Congress in Barcelona, which was passed.

By means of the Seville Declaration, FEDENATUR is now addressing the Spanish and Belgian authorities who will hold the Presidency of the European Union in 2010.

FEDENATUR believes that an ambitious European policy must take steps to:

1. Accelerate the protection of natural and rural spaces located near cities.
2. Promote an integrated approach to spatial planning in metropolitan areas in which periurban natural and rural areas are valued and appreciated as essential for biodiversity and the quality of urban life.
3. View periurban nature parks as places with great ecological, social and cultural challenges and include these spaces in public spatial planning policy as a means of containing urban sprawl.
4. Promote the creation of a green infrastructure, consisting of a network of interconnected physical spaces that nurture the welfare of the public and biodiversity, and view these spaces as essential facilities on a par with educational, health, cultural, transport and communication facilities.
5. Encourage the maintenance and diversification of sustainable local agriculture, seen as an important facet of the management of periurban spaces.
6. Promote the means for the preservation of the biodiversity of ecosystems and associated landscapes.

Mr. Slimane Tir
President of FEDENATUR
President of Espace Naturel Lille Métropole
Vice president of Lille Métropole Communauté Urbaine

Management of Natural Spaces Challenge in the XXI century - Natural Andalucía + 20

Hermelindo Castro Nogueira, President of EUROPARC-Spain, Professor of Ecology at the University of Almería

The problems facing the management of natural areas are still internal and environmental, but they also begin to be external and social. An analytical framework is required; a new concept of protected areas and their management to adapt to the twenty-first century values that have justified its creation and maintenance until now.

The Ministry of Environment of the Government of Andalusia, has launched "Natural Andalucía +20 (NA +20)", a reflection process, addressed to both the administration and the different sectors of the Andalusian society, with legitimate interests in protected areas under whose umbrella is to foster a collective commitment to a new management of natural areas.



1. Elements for the development of a new natural areas management

The conceptual basis are:

a) Ecosystem services framework: natural capital as a key concept.

Natural areas management should recognize intrinsic and instrumental ecosystems values as well as their role in human welfare.

Natural areas management in Andalusia should be raised within the framework that provides "*Millennium Ecosystem Assessment*", which advocates for nature conservation in the sense that human welfare depends of a wide range of services that flow from natural capital.

b) The global change context: managing natural areas from a dynamic and flexible vision.

Protected and unprotected natural areas should be integrated into a territorial matrix whose last objective is to maintain a diverse and qualified services flow. The development of representative protected area networks, interconnected and well managed is necessary but not sufficient to respond to the loss of biodiversity that involve global change. It is necessary to supplement these strategies with management models to conserve the territorial matrix.

Natural areas management should be raised in Andalusia from a "*Resilience Management*" approach, which understands nature as a dynamic and variable entity. State changes are considered inherent to natural systems and the management is focused on creating adaptive capacity (resilience) of ecosystems. Ecological resilience is understood as the ability of an ecosystem to retain its functions while supporting disturbances.

c) The territory as an ecological system linking and interacting with the social one.

Natural spaces management claims a global management of the territory, since the processes that determine the health of their ecosystems are beyond administrative boundaries and undertake sectorial policies: water planning, territorial planning, agricultural and biodiversity conservation policies.

The surest way to coordinate management plans and programs and optimize the management of natural areas is to consider basic management units, which are based on ecological and territorial criteria in which conservation and use planning policies are integrated. The challenge is to incorporate this approach to the administration and its actual competence framework.

2. Criteria for determining ecological management units

- Defining and characterizing the criteria through the incorporation of the scale factor to the basic management units where conservation and use planning policies will be incorporated.
- Convergence of criteria in relation to territorial planning and programming of sectorial policies.
- Promoting the role of the headwaters and natural areas in the water cycle maintenance as ecological connectors. Coordinating the PORN (*Plan of Management of Natural Resources*) - PRUG (*Master Plan for Use and Management*) and Basin Plans.
- Influencing measures to support meadows, Integrated Agriculture and Ecological Farming.
- Promoting the convergence criteria for sustainable tourism in natural areas and actions and activities coordination.
- Coordinating the development of criteria for moving conservation objectives from natural capital into land use planning.

3. The Role of peri-urban areas in territorial and urban planning

It is important to strengthen the role of these spaces in the preservation of biodiversity, quality of life of citizens and the cities sustainable development. It would be useful to consider the different administrative realities of the periurban areas in Europe and connect the managing institutions of those national and European spaces as well as to establish common guidelines for action and networking.

Periurban Parks Plan (Andalusian Regional Project)

Objectives:

- Doting meaning to the Periurban Park figure, and establishing guiding-criteria for the declaration of new spaces.
- Analyzing and promoting new models and management tools adapted to the peculiarities and problems of these areas, by incorporating other government and private initiative participation.
- Approving basic guidelines for use planning, territorial planning and management of periurban parks, by leaving enough freedom for local initiative and particularities of each space.
- Achieving greater network coherence, by raising the possibility of taking out those areas that do not meet the assumptions of this figure and integrated management with other areas of similar nature depending on the Ministry of Environment.
- Developing a Strategic Periurban Parks plan, by ensuring its own funding sources to address the required actions.

All the above described approaches fit perfectly within the contents of the motion brought by Fedenatur during the *World Conservation Congress* (Barcelona, 5th-14th October 2008) organized by IUCN and adopted as Recommendation Rec 4128 establishment of protected urban and peri-urban natural areas and which states as follows: <http://www.fedenatur.org/docs/docs/510.pdf>

Protected Natural Areas in Spain

Juan Garay Zabala, National Parks Advisory Member, Ministry of Environment, rural and marine

1. Organizational framework

In Spain, the Central Government is responsible for the basic legislation of protected natural areas. However, the declaration and management of these corresponds to the Autonomous Communities (Regions).

National Parks are declared by the Parliament Act and subject to a common legal framework, the Law on National Parks Network. Additionally it has been incorporated into the legal system the Habitats Directive, from which the Natura 2000 Network comes from.

2. General distribution

The Natura 2000 Network consists of Special Protection Areas for Birds (ZEPA) and Special Areas of Conservation (ZEC). This means the 28.7% of Spanish territory.

All the 1,684 Spanish Protected Natural Areas is 12.1% of national territory (6.1 million ha), mostly included in the Natura Network.

The National Parks Network currently includes 14 National Parks which make up 0.69% of the territory (347,300 ha).

3. The Natura 2000 Network

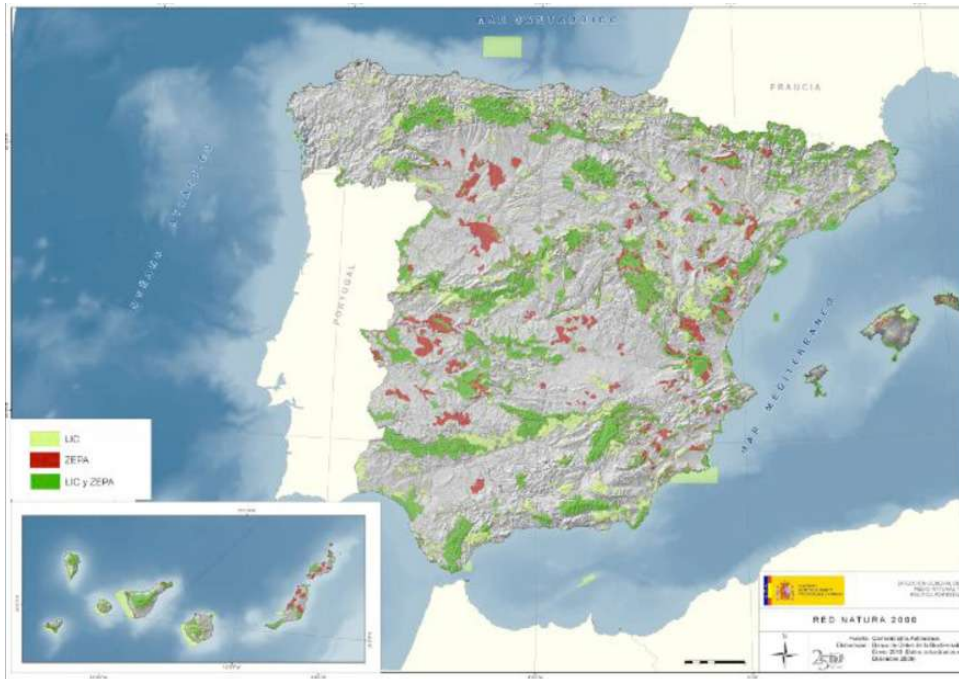
It intends to create a large continental biological corridor to connect European natural spaces. Natura Network aims to reach 20% of EU protected territory



Percentage of land proposed for the Natura 2000 Network	
Country	%
France	12,5
Germany	15,4
Greece	21,0
Spain	28,7
Denmark	8,9
European Average	17,6

Source: European Commission, December 2009

Territory occupied by the Natura Network in Spain



Source: Autonomous Communities-Development: Database of Biodiversity Jan 2010

4. Law 42/2007 of Natural Heritage and Biodiversity

• Classification of Natural Protected Areas (Article 29)

Depending on the assets and values to protect, and on the management objectives that need to be accomplished, the protected natural areas, whether terrestrial or marine, are classified, at least in one of the following categories:

- a) Parks.
- b) Natural Reserves.
- c) Marine Protected Areas.
- d) Monuments.
- e) Protected Landscapes.

• Declaration and management of Protected Natural Areas (Article 36)

Corresponds to the Autonomous Communities the statement and the determination of the formula in the management of protected natural areas.

Protected areas in Spain

Figure	Number of ENP	Surface (ha)
National Park	14	347.081,66
Natural Park	157	3.707.958,71
Natural Reserve	280	169.501,81
Natural Monument	344	98.940,95
Protected Landscape	54	150.096,93
Other local figure	835	2.470.495,00

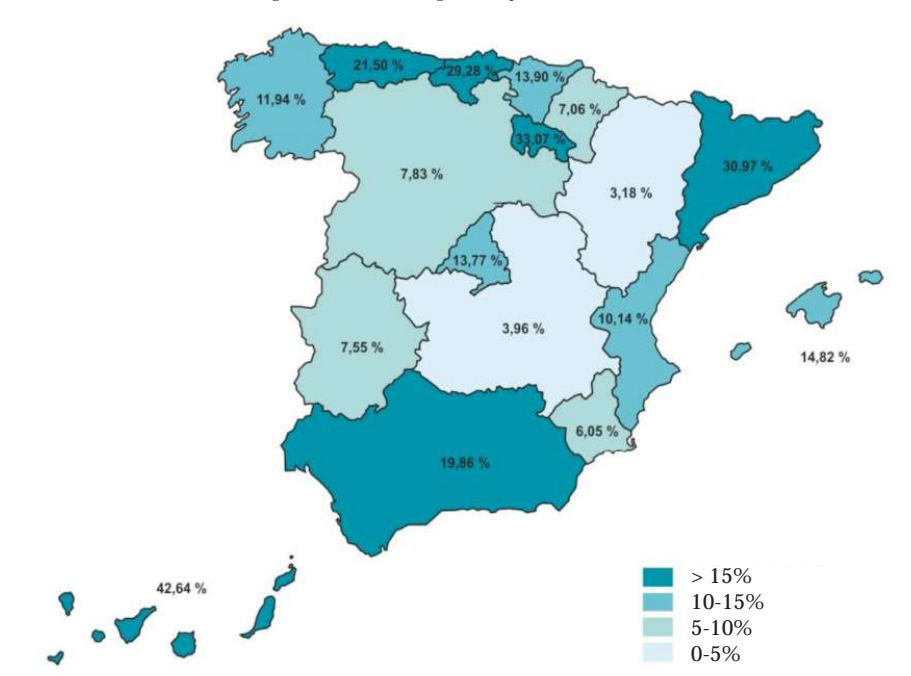
The regional legislation contains up to 48 different forms of protection: natural landscape, picturesque landscape, wildlife refuges, peri-urban parks

Almost all of the protected natural areas have been declared after the decentralized territorial organization (from 1978).

The 1684 natural areas declared occupy 6.1 million hectares of land. Sea surface covered by these amounts to 255,000 ha in nine autonomous communities.

454 spaces (134 parks and 101 reserves) have an approved management plan, representing a total of 3.9 million hectares

Terrestrial surface protected in Spain by autonomous communities



5. Management models

Natural Parks, Nature Reserves, Natural Monuments and Protected Landscapes (Figures referred by the Law 42/07), managed by the Autonomous Communities in whose territory they are located, directly or through autonomous agencies (O.A. Natural Areas of Castilla-La Mancha, Balearic Institute of the Nature...)

National Parks are managed by the Autonomous Community in whose territory they are. In those that extend for two or more autonomous, they must jointly agree a form of integrated management. The management can be direct or through a governing board (National Park of Ordesa and Monte Perdido)

Other institutions managing PROTECTED NATURAL AREAS: the Island Councils of the Canary Islands, the Provincial Councils of the Basque Country, the Balearic Island Councils, the Provincial Council of Barcelona..

6. Spanish inventory of Protected Natural Areas

The Spanish Inventory of Natural Protected Areas, dependent on the Ministry of Environment, is created (Article 50 of Law 42/2007) with administrative nature and state level.

Natural areas enrolled in the Spanish Inventory of Protected Natural Areas will be allocated, along with its original name, to the categories established internationally, especially by the International Union for Nature (UICN).

7. Periurban parks in Spanish Inventory of Protected Natural Areas

Periurban parks included in the Inventory database, and sent to the European Environment Agency for the development of indicators at community level.

C. A.	Classification	Name	Surface (ha)
Andalusia	Periurban park	Castala	14
		Dunas de San Antón	70
		La Barrosa	126
		La Saura	218
		Los Villares	485
		Los Cabezos	15
		Fuente la Zarza	315
		Fuente Agria	80
		La Sierrezuela	384
		Dehesa del Generalife	458
		Dehesas de Santa Fé	237
		El Saltillo y Lomero Llano	188
		La Norieta	94
		Monte la Sierra	2.720
		Santa Catalina	197
		Sierra de Gracia	35
		Dehesa del Mercadillo	138
		Pinar del Hacho	85
El Gergal	30		
La Corchuela	85		
Hacienda Porzuna	20		
Extremadura	Periurban park Conservation and Leisure	Moheda Alta	158
		Sierra de Azuaga	158
		La Pisá del Caballo	2
		Charca de Brozas	67

Source: Database Natura 2010

8. Consequences of the declaration of a protected natural area (Law 42/2007)

The laws of Andalusia and Extremadura consider Periurban Parks explicitly as "Protected Natural Areas. " The assignment of a protection figure to some of the established in the law 42/2007 means:

In general, for all protected natural areas:

- The specific purpose of protection and maintenance of biological diversity, geodiversity and natural and cultural associated resources. (Article 27-b)
- The declaration of public utility in terms of expropriation of property and rights and the right of first refusal by the autonomous communities (Article 39).

If it is as well homologated with the figure of Park (Article 30):

- The limitation of exploitation of natural resources, forbidding those that are considered incompatible.
- Limiting the entry of visitors needed for its conservation.
- The development and approval by the Autonomous Community of a Master Plan for Use and Management, setting the rules of usage and manage of the park. These plans prevail over urban planning.

Moreover, if it is assigned to the figure of park or nature reserves (Article 35):

- It requires the prior approval of the Plan of Management of Natural Resources in the area.

9. Periurban parks in the regional legislation

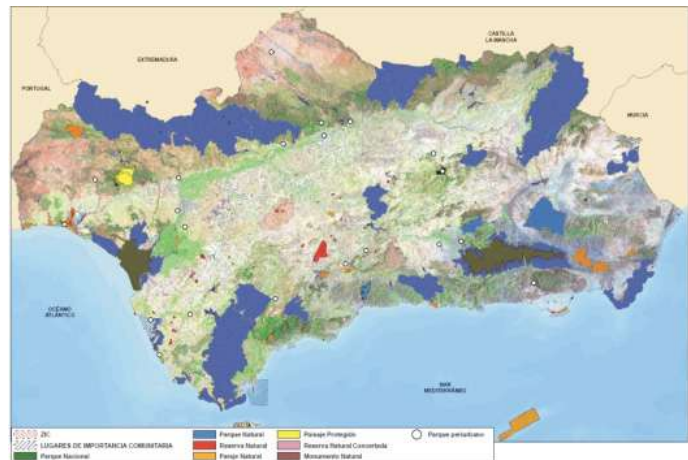
ANDALUCÍA

Inventory of Protected Natural Areas of Andalucía (Act 2 / 1989 of 18 July) define peri-urban parks as Protected Natural Areas (Article 2): [...] In addition to the established figures in the Law 4/1989, the following protection systems are established in Andalusia:

- Natural Places.
- Periurban Parks.
- Agreed Natural Reserves.
- Areas of European Importance

Periurban Parks mean those natural areas located near a urban center, whether or not created by man, that are declared as such in order to adapt its use to the recreational needs of the populations according to which it is declared.

Periurban parks will be declared by Order of the Ministry competent for the environment, ex officio or at the request of the municipalities concerned, after hearing the Provincial Council for the Environment, Forestry and Hunting. The declaration will lead to their inclusion in the Inventory.



Source: Andalusia Junta -2010

EXTREMADURA

LAW 8 / 1998, for the Conservation of Nature and Natural Areas

In CHAPTER I - PROTECTED NATURAL AREAS, the Periurban parks of Conservation and Leisure (Article 23)

Those spaces are relatively close to population centers that combine the conservation of nature and its use for recreational and social activities, and that, for its unique natural or environmental values of local interest deserves this kind of protection figure [...]

In them the predominant use of socio-recreational nature must be reconciled with the awareness and education of the users, as well as with the maintenance or restoration of their natural values.

CASTILLA Y LEÓN

Law 8 / 1991, of Natural Areas, states the difference between the categories of ENP defined by state law, and the Natural Areas of Special Interest that are classified separately with different management tools. Among the latter defines the:

Natural areas for recreation (Article 53)

They may be declared natural recreation areas those areas of natural environment, easily accessible from major urban centers in order to provide the population resting places, recreation and leisure in a way compatible with nature conservation and to be a deterrent element that prevents the influx of visitors to more fragile natural areas.

The law itself classifies them not as protected natural areas, but as Areas of Special Interest (areas in which, while having artificial elements or human intervention, the natural character of the area still prevails).

NAVARRA

Regional Law 9/1996 of 17 June of Natural Areas

In section 3 Classes and definition of natural areas Natural Recreation Areas are defined

"They are natural recreation areas are the spaces with certain natural or scenic values that are declared as such to be places of recreation, relaxation or outdoor leisure in a manner consistent with the conservation of the nature and environmental education."

They are not explicitly protected natural areas, as defined by the state law.

10. Periurban parks in the local rules.

BARCELONA (CATALONIA)

Collserola Park

- The figure of conservation derives from the forecasts of the General Metropolitan Plan of Barcelona (1976) that creates the metropolitan forest parks and from the Special Plan of Arrangement and of Protection of the Environment of the Park (1987)
- This figure is not strictly identified as Natural Protected Area according to the definition of Law 42/2007.
- Direct management of the park corresponds to the Consortium of the Collserola Park, organized as an autonomous body constituted by the Association of Municipalities of the Metropolitan Area of Barcelona, Barcelona Provincial Council and is made up of a Governing Council in which are also represented the nine municipalities that form the park.
- Currently it is in process the declaration of Collserola as Natural Park, which will be by a Decree of the Government of the Generalitat of Catalonia.

Periurban Spaces of Andalusia: Networks, Cities and Territory

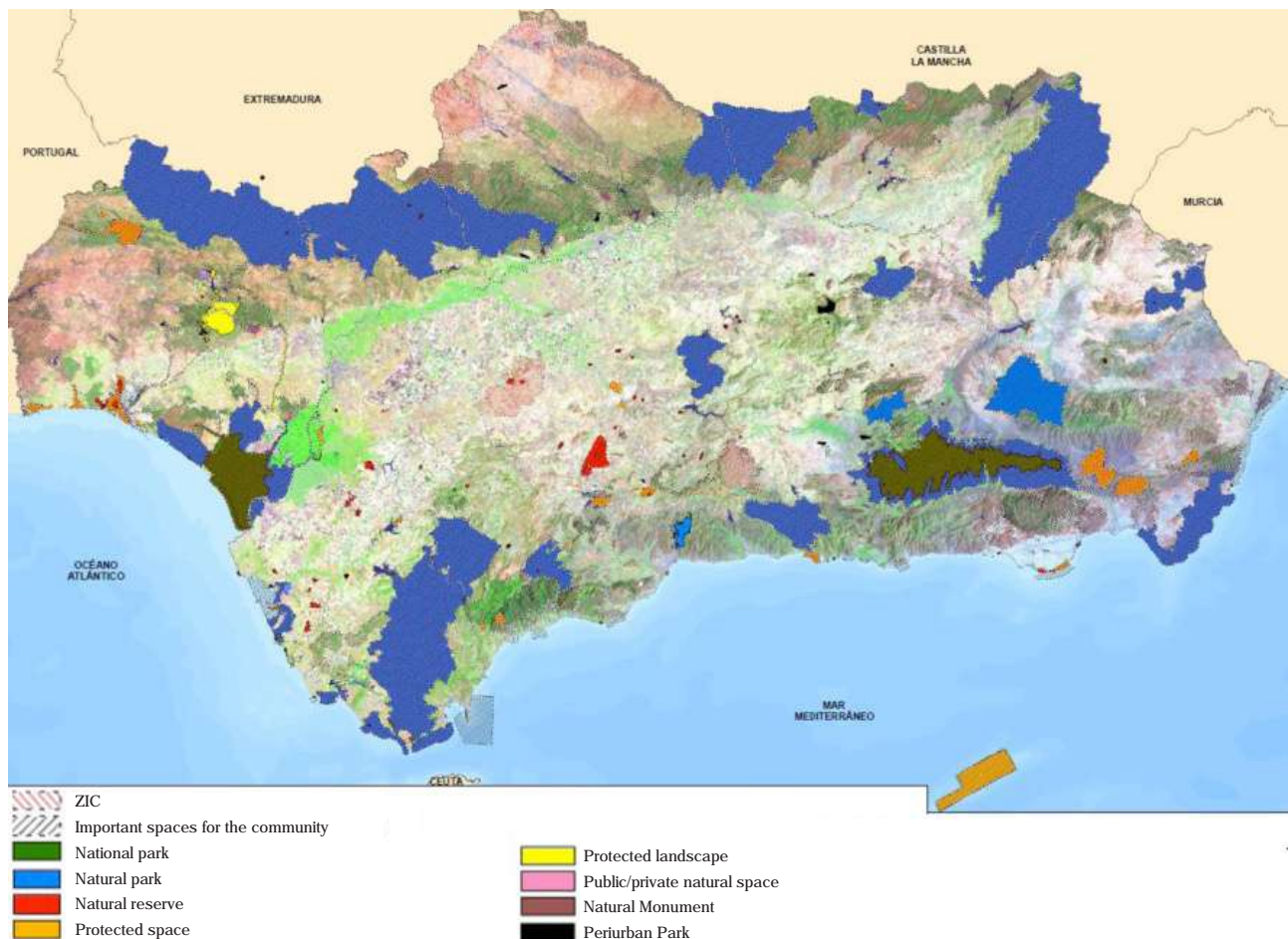
Rocio Espinosa, Director General of Natural Spaces and Civic Participation, Government of Andalusia

1. Andalusia, the region

Andalusia, with 8 million inhabitants, occupies a surface of 87.000 km². It counts with high biodiversity values and a great number of endemisms. It is located along the Guadalquivir River which is longitudinally oriented between two chains of mountains in the northern and southern part, basic for natural spaces, infrastructures and system of cities. Andalusia has in the whole, 11 cities with more than 100.000 inhabitants and 25 with more than 50.000.

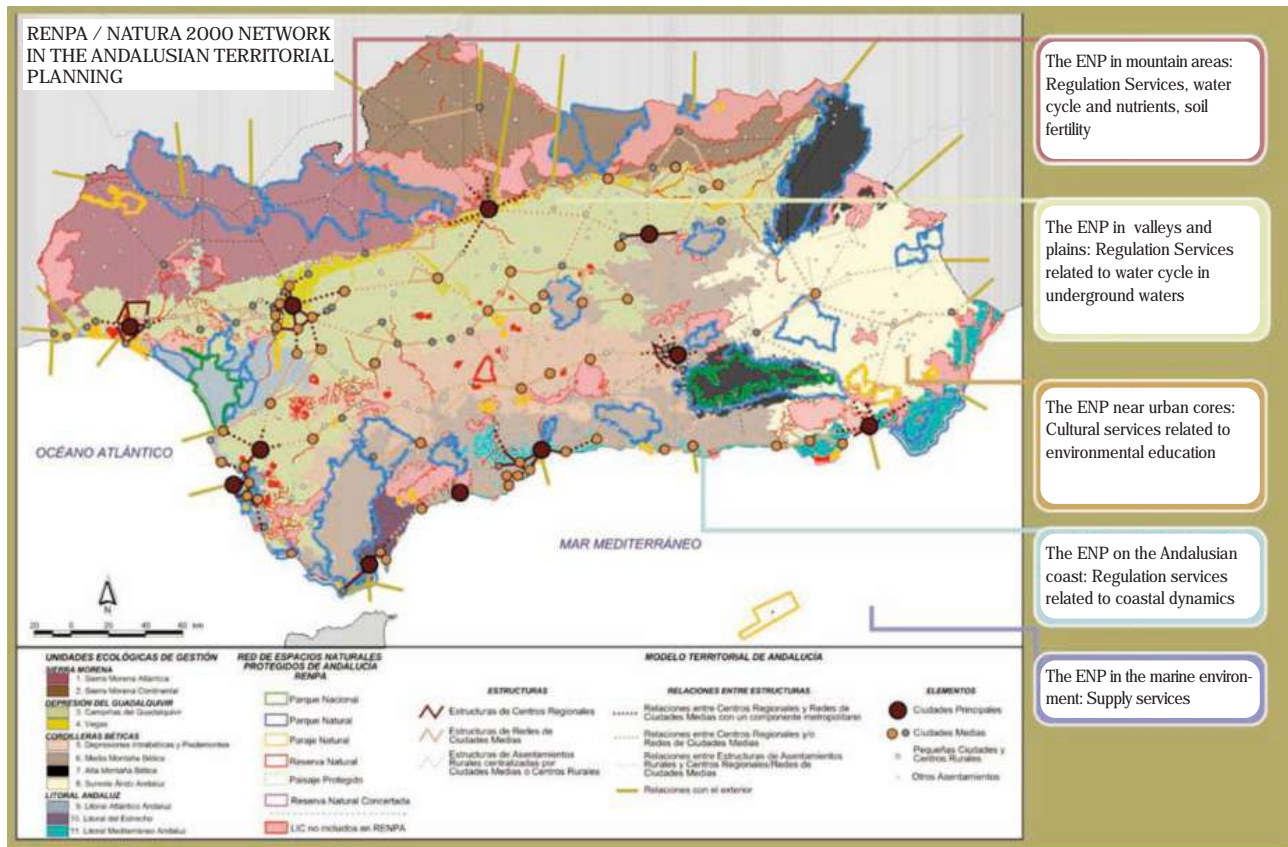
2. Andalusian network of Natural spaces

The Andalusian Network of Natural Protected Spaces (RENPA) was legally created in 1989 with spaces of different typologies and functions. Nowadays the network gathers 156 protected areas (8 figures) + 2 ZEPA (Zones of Bird Special Protection) + 51 spaces Red Natura, which represent as a whole the 29 % of the Andalusian territory.



3. Incorporation of the RENPA (Network Protected Natural Spaces of Andalusia) into the territorial model of Andalusia

- Protected areas must be dealt as elements of territorial structure.
- Their management must integrate, under the same umbrella, natural spaces actions in the whole and the territorial framework where they interact.
- This condition includes the connection of the environment with the cities and their corresponding planning.



4. Natural spaces with periurban functions

Some spaces with different protection figures fulfil periurban functions, but the periurban parks and the Green Doors project have been conceptualized specifically for this end.

- Periurban parks
- Green Doors programmes
- Protected landscapes (Green corridor of the Guadiamar)
- Natural parks (Mounts of Malaga, Bay of Cadiz ...)
- Protected Areas (Marshlands of the Odiel ...)
- Other natural spaces (public mountains ...)

5. Periurban parks and the 2/89 law

Definition:

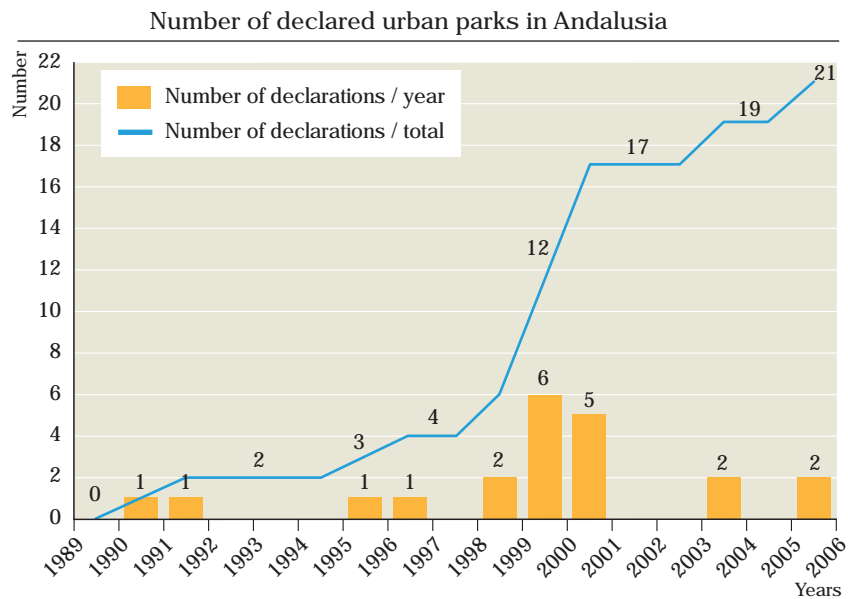
They are natural spaces placed within the area of urban influence, natural or man-made, declared like such in order to adapt their use to the recreative needs of the populations.

Declaration:

The periurban parks are declared through a reglamentation of the Ministry of Environment of Andalusia, ex officio or at instance to a municipality.

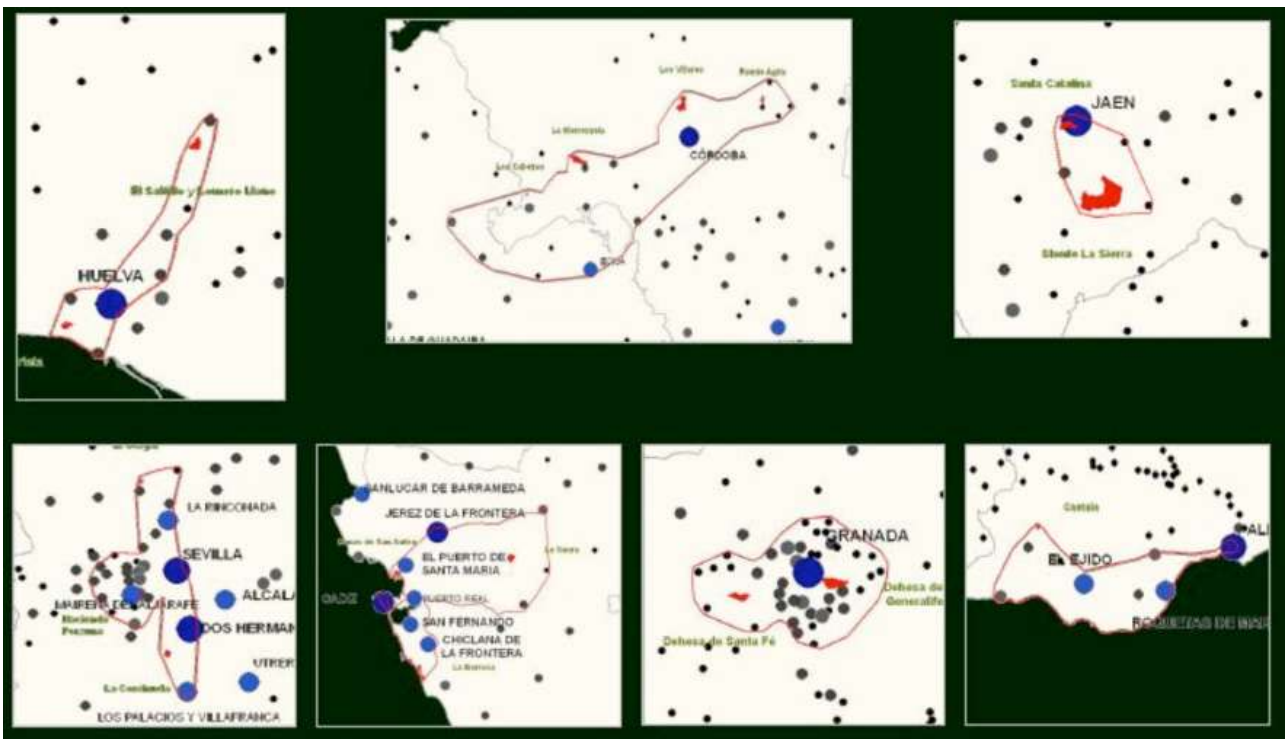
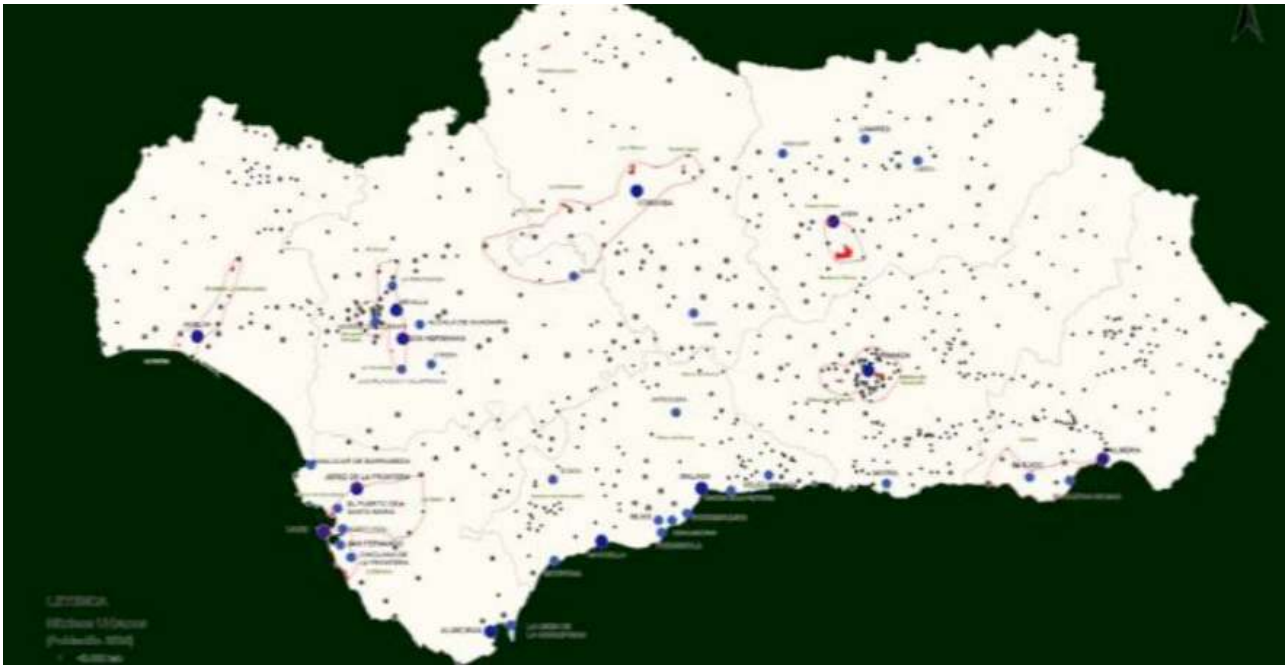
Management:

The periurban parks are managed by the Ministry of Environment of Andalusia which can delegate to the local corporations upon their assentment.



Areas under periurban parks influence

- Population living in cities: 1,4 million inhabitants (17,5 % of the Andalusian population)
- Population living in the areas of influence: 3,5 million inhabitants (43,5 % of the Andalusian population)



5.1 What do periurban parks represent within the RENPA?

Superficially: It is a slightly relevant figure (almost the 0,35 % of the protected surface)

Functionally: It is a polyvalent figure from a territorial, environmental, social and dotational point of view (equipment and donation of green spaces).

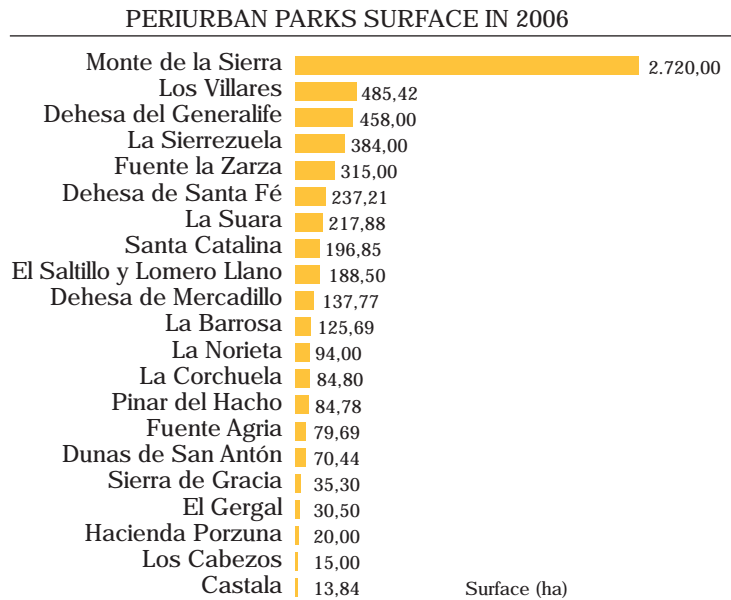
Great social interest, for serving a great variety of nature use needs of the principal urban areas of the region: recreation, education, culture, relations, health

Filter Function: They constitute the first step for recreational and public use activities of the Protected Spaces Network, reducing pressure over other most sensitive natural spaces.

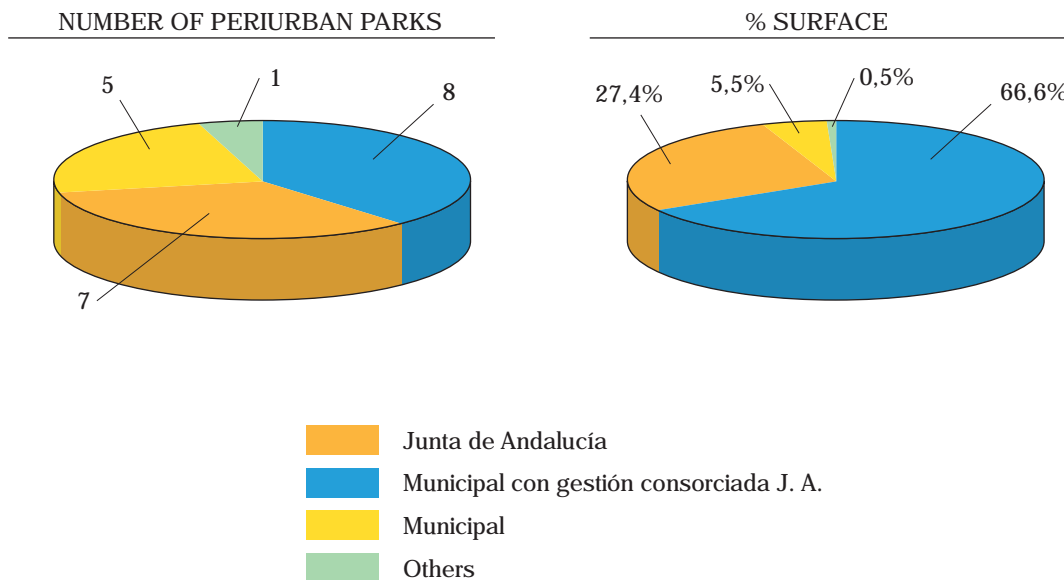
Administrative coordination: It allows a major implication of the municipalities and other administrations of environmental protection as it is possible their declaration by initiative to the Municipality and also the possibility of delegating in them the management and, in a future, transferring the competitions.

5.2 Network characterization:

Extension: Great variability: (from 14 ha to 2.700 ha)



5.3 Ownership



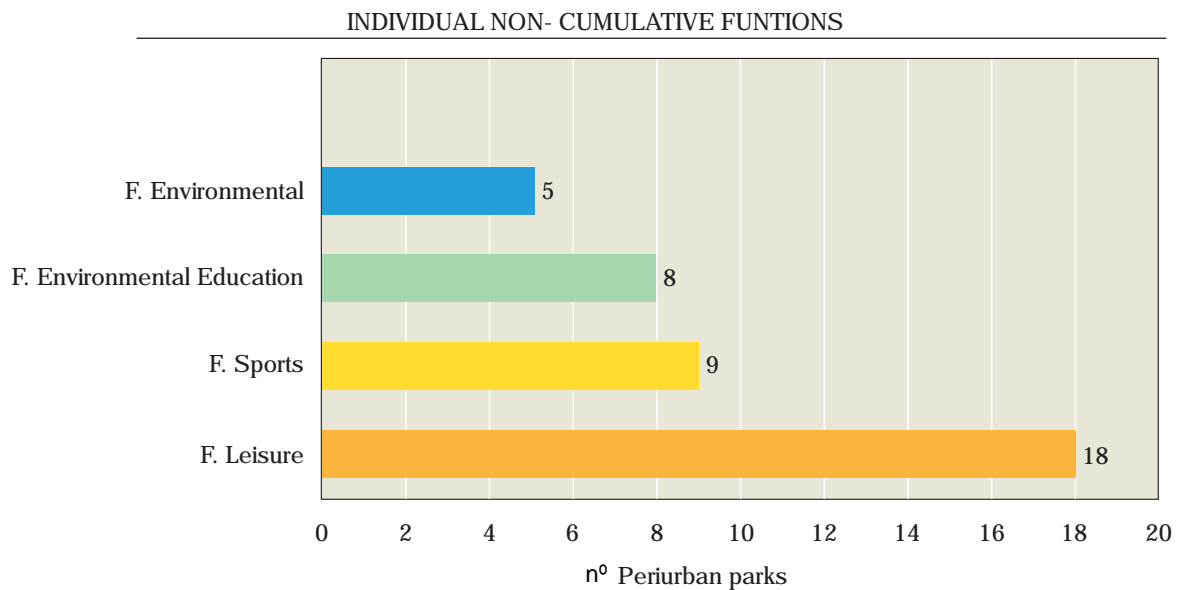
5.4 Typology of Visitors

- Weekend visitors: familiar groups
- Weekdays visitors: scholar groups and local visitors

Characteristics of the visitors:

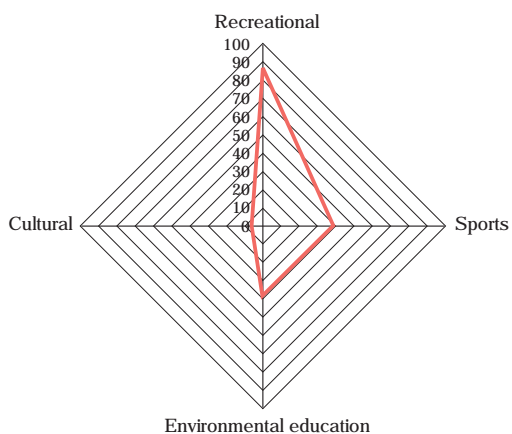
- Man or woman, between 15 and 34 years old and with basic studies or basic professional training
- They know and visit the space for more than 10 years, mostly.
- They come fundamentally with familiar groups or with friends, not regularly.
- Visitors come basically in autumn: October - November (41,5 %) and less frequently in spring (21,4 %).
- The main use is recreative: use of picnic areas and barbecues, apart from walking and enjoying the contact with nature.

5.5 Functions

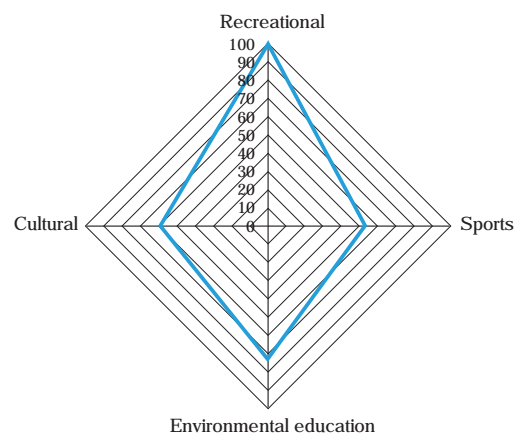


5.6 Current and optimal functions

Current situation:



Desiderable situation:



6 . Where do we want to go?

- Promoting new management models and tools adapted to the peculiarities and problems of these areas, including the participation of other governments, especially local, and private initiative.
- Promoting the convergence of the periurban spaces planning with the urban and territorial planning and the development of large cities.
- Strengthen the presence of periurban spaces in environmental and urban policies.
- Approving basic guidelines for use, planning and managing of periurban parks, strengthening local initiative within the particularities of each space.
- Developing and promoting a Strategic Plan for Periurban Parks, and creating an administrative and budgetary framework with special emphasis in territorial policies.
- Promoting citizen participation, cultural and educative initiatives in periurban spaces Management.
- Advancing in the “Green Doors” program in cities of over 50,000 inhabitants.

7. Green Doors program

The "*Green Doors*" program aims to connect the 25 Andalusian urban agglomerations over 50,000 inhabitants with their immediate natural environment through the Livestock Trails Network.

Actions:

- Recovery of land assets.
- Restoration and integration of landscape
- Adequacy of roads
- Equipment and signals.

The “Green Doors” program will recover and adjust 971 km of the whole livestock trails network in the Region of Andalusia (33,000 km).

Territorial Planning and Metropolitan Public Spaces in Andalusia

Olga Dulce Ormaechea Cazalis, Head of Service, Management of Territorial Plans. General Directorate of Planning, Management and Sustainable Territorial Development, Junta de Andalucía

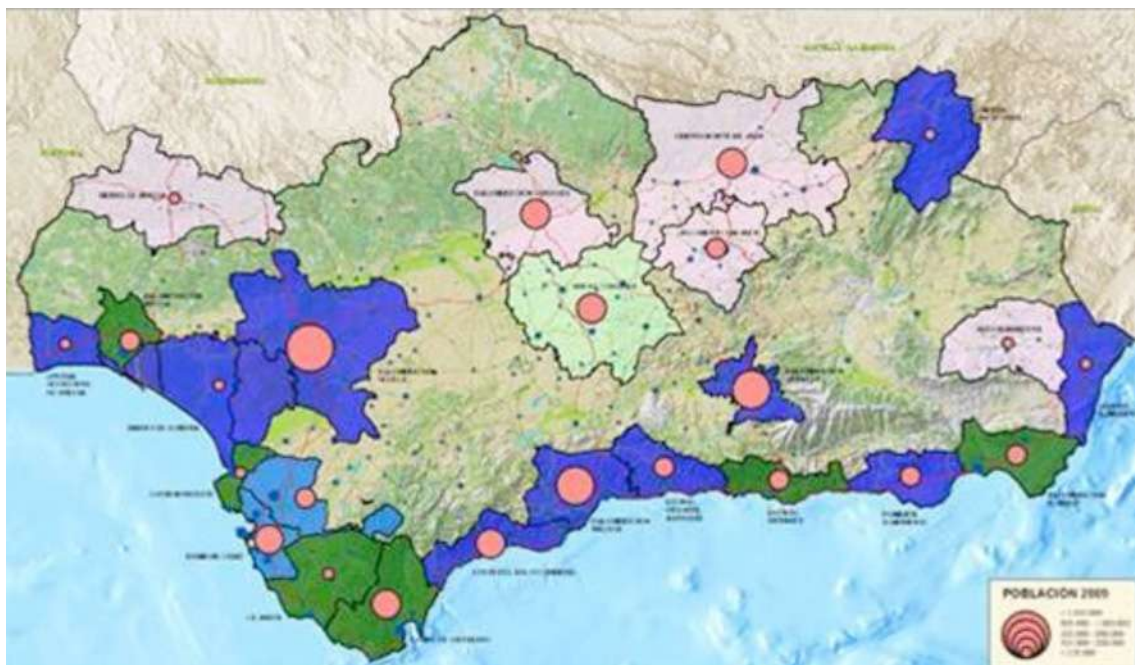
Territorial planning in Andalusia

Land use planning (POT) of Andalusia

Approved by Decree 206/2006, of November 28, 2006, BOJA (Official Gazette of Andalusia) of 29 December 2006

Land use planning at the sub-regional level

Currently, there are 11 approved plans 6 of them are in the final stage of processing, 1 in drafting phase, and 5 in the initial stage.



Open spaces in programming and territorial planning in Andalusia

Regional Program on Public Spaces

Order of June 17, 1998.

- Objective: To improve the environmental quality of cities through interventions in public use spaces, in order to increase the supply or improve the provision of such spaces.
- Programming, promotion and development by the DGPTS (Directorate General for Sustainable Land Use Planning) – Department of Public Works and Housing.
- Delegated management of the records to the Public Land Company of Andalusia (EPSA).

Types of actions

1. Implementation of urban projects in urban planning.
2. Unique urban projects (specific intervention programs in historic centers or in urban areas with special environmental fragility).
3. METROPOLITAN or SUPRAMUNICIPALS actions developing the Green System/Open Spaces System in metropolitan or wider than local areas, valued at regional level for their non-residential, cultural or environmental interest.

Land use planning (POT) of Andalusia

- Foresees the three conditions of Open Spaces:
 - Urban allocation for public use
 - Environmental resource
 - Management resource
- Establishes a Network of Open Spaces of metropolitan public use.

Land use planning at the sub-regional level

It states among its findings:

- The structure of land and joint systems,
 - settlements system,
 - communication and transportation system,
 - basic infrastructure and
 - network of open spaces with metropolitan interest
- Management of land-uses
- Protection of the territory

The Network of Open Spaces in land use planning

1. Definition and structure of the Open Spaces Network

According to:

- Extension
- Geographical location
- Provision of natural resources, ...
- Time at which planning is done
- Variable in each Plan

It collaborates with other regional systems in order to meet the principles proposed by the plan (non-residential land use and improving environmental and landscape quality).

Network of Open Spaces in Land use planning

- territorial criteria
- vocation for public use

Existing public use areas affected by sectoral rules (REMPA, VVPP, DPH and DPMT, Public forests)

Areas of opportunity such as equipment and structure at the supramunicipal level of the Plan.

Objectives and role of each element of the system

- Coastal areas. Coastline or sea corridor – terrestrial
- Linear elements. Recreational and scenic routes. River corridors
- Areas of recreational suitability
- County or metropolitan parks

Regulation of the land affected

- Public use
- Precautionary protection of the land affected
- Criteria for management of uses and transformations by area, and for each element

2. Main objectives

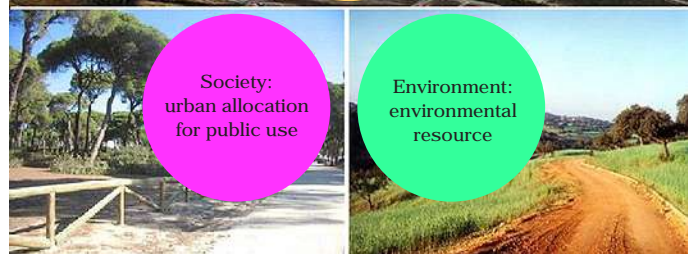
Territory: planning resource

- Contribute to the adequacy of urbanization processes to territorial support. Patterns of urbanization avoiding conurbation.
- Establish corridors or keep routes of interest with urban areas.



Society: urban allocation for public use

- Responding to the population demands of outdoor leisure activities, and nature contact.
- Promote recreational use of forest areas and cattle trails.



Environment: environmental resource

- Improving environmental and landscape quality.
- To safeguard ecological and landscape values.

3. Spatial plans at the sub-regional level

Land use planning “DOÑANA”

- Promote recreational use of the cattle trails to enjoy nature, and as elements of connection to other recreational areas (beaches, recreational pathways, rivers Guadalquivir, Guadiamar and Tinto...)

Land use planning “WEST COSTA DEL SOL”

- Encourage maintenance of natural character and public use of coastal space.

Land use planning “MÁLAGA URBAN AGGLOMERATION”

- Encourage maintenance of natural character and public use of coastal space.

Land use planning “GRANADA URBAN AGGLOMERATION”

- Maintaining agriculture as a supporting element to the system of open spaces.

Land use planning “WEST COAST OF HUELVA”

- Promote Guadiana and the reservoirs as recreational and naturalistic spaces.
- Meet tourist demands.

Functions of Metropolitan Parks in Andalusia

CITY: Articulator between urban space and the physical matrix

NATURE: Valuing natural areas and Protection of fragile natural areas near cities

SOCIETY: Responding to the demands of outdoor leisure activities

CITY - NATURE

- Contribution to urban metabolism processes
- Territorial and ecological connectivity
- Generation of metropolitan landscapes
- Preservation of the territorial and historical heritage

CITY - SOCIETY

- Conservation of traditional uses of land
- Container of uses with a complex adaptation to the urban logic

NATURE - SOCIETY

- Territorial, environmental, health education
- Activities related to nature and sport

Situation of Metropolitan Parks in Andalusia



“PARQUE DEL ALAMILLO”, SEVILLE URBAN AGGLOMERATION

GENERAL INFORMATION

Status: Operating since 1993
Service population: 1,471,723
Size: 90 ha (60 ha in use)
Ownership: 100% Junta de Andalucía (Regional Government)
Management: EPSA
Part of the network of open spaces as metropolitan park of POTAUS (Spatial Planning Management of Seville Urban Agglomeration)



CHARACTERISTICS and TERRITORIAL FUNCTIONS

- High connectivity with the municipalities of the Seville Urban Agglomeration
- Articulation of the northern end of the Guadalquivir river in Seville
- Transition urban area – rural area

ENVIRONMENTAL FUNCTIONS

- Recreated Mediterranean Ecosystem
- Conservation of land and indigenous flora and fauna
- Active contribution to the processes of urban metabolism
- Incorporating the public use of the Expo'92 tree nurseries, important design of wildlife refuges

SOCIAL FUNCTIONS

- Intensive public use: more than 1,000,000 visitors per year
- Partnerships with suppliers, organizations and associations
- 2009: 10 self-organized activities and events, and 314 others activities and events held with the support of the management office
- Area of social and environmental education
- Overall rating of 8.2/10 by users in 2009

“PARQUE DE LOS TORUÑOS”, BAY OF CADIZ

GENERAL INFORMATION

Status: Operating since 2003
Service population: 425,462
Size: 1,000 ha
Ownership: 100% public MMAMRM, Junta de Andalucía and SEPES.
Management: EPSA since 2006
Belongs to the Bay of Cadiz Natural Park, and the Bay of Cadiz POT as an open spaces reserve



CHARACTERISTICS and TERRITORIAL FUNCTIONS

- Basic element of the Open Space Network of the Bay of Cadiz. Centered position with respect to the urban cores and easy accessibility.
- Conservation of an area with great historical and ethnographic importance
- Control of urban pressures on the coastal strip

ENVIRONMENTAL FUNCTIONS

- Preservation of the coastline
- Space of environment research
- Conservation of different marshy-coastal ecosystems, representative of the Bay of Cadiz

SOCIAL FUNCTIONS

- More than 130,000 visitors in 2009
- Reception center established in 2009, which provides an area suitable for exhibitions, meetings, etc.
- Importance of activities related to water sports. 33,6% of visitors in 2008 used the park for sports.
- Large number of environmental education activities
- Overall rating of 8.4/10 by users in 2008

“PARQUE FLUVIAL DEL RÍO PALMONES”, GIBRALTAR AREA

GENERAL INFORMATION

Status: Special Plan pending

Service population: 261,378

Size: 1,998 ha

Ownership: Private / Public

Part of the SEL of the POT “Campo de Gibraltar” as a river park. Encompasses the Menacha-Palmones Metropolitan Park



CHARACTERISTICS and TERRITORIAL FUNCTIONS

- Key part of the system of open spaces in Gibraltar Area
- Metropolitan structure improved. Joint -settlement system- rural and physical environment
- Recovery of the river and its floodplain as modelers of the settlement system
- Integration into the design of municipal open space systems. The park as an element for the setting of urban limits. Accessibility from the surroundings nodes and from the outside.

ENVIRONMENTAL FUNCTIONS

- Green corridor between two protected natural areas
- The river, an element that ensures the physical and spatial continuity of diverse environmental and landscape units
- Environmental and functional recovery of the river and its associated heritage and environmental elements

SOCIAL FUNCTIONS

- Response to the demands of leisure in contact with nature by the inhabitants of the Gibraltar Area. Diverse and supramunicipal initiative.
- Use of public domains. P.M del Palmones-Menacha, space of intensive use, main focus of public use
- Lever for the restoration, improvement, addition of value, and economic activation
- The river as a site for water activities and sports

“PARQUE DE LA VEGA”, GRANADA URBAN AGGLOMERATION

GENERAL INFORMATION

Status: Draft of the Special Plan

Service population: 500,469

Size: 18,294 ha

Ownership: Private/ Public

The spatial planning of this area with the PE impacts on the affected land at the SEL of the POT AUG



CHARACTERISTICS and TERRITORIAL FUNCTIONS

- Strengthening the control of urbanization processes towards La Vega,
- Model of public use: network of spaces spread across La Vega, articulated through the interconnected water system through a network of routes
- Measures of joint-planning: Intermunicipal sustainable mobility, physical continuity of routes, urban edges projects
- Integration, improvement and creation of agricultural landscape in the model for public use

ENVIRONMENTAL FUNCTIONS

- Recovery of the river channels in their role as biological and environmental corridors
- Enhancement of La Vega as a critical space in the metabolic processes of urban agglomeration
- La Vega as a space for environmental education

SOCIAL FUNCTIONS

- Measures to encourage and support agricultural and livestock uses
- Enhancement of the agriculture and heritage of La Vega. Space of transmission of traditional land uses.
- Measures for the compatibility and complementarity between public use and agricultural use. Public use as a tool for economic activation
- Response to the demands of outdoor recreation by the inhabitants of the urban agglomeration
- Citizen participation throughout the planning process

“ARRAIJANAL”, A. U. DE MÁLAGA

GENERAL INFORMATION

Status: Other fields of study

Service population: 851,538

Size: 54 ha

Part of the SEL of the POT Malaga Urban Agglomeration

- Conservation of the last significant unbuild area in the coastline of the Malaga Municipality
- Part of the Metropolitan SEL of POTAUM which includes a connection to the Guadalhorce PM
- Significant archaeological and ecological values in this area

OTROS ÁMBITOS DE ESTUDIO.



MANAGEMENT OF METROPOLITAN PARKS

Implications of the management of the parks

- Conservation
- Adhering staff
- Security and customer service
- Actions of revitalization of the park: activities
- Major works

These activities are funded almost entirely by the Junta de Andalucía (Regional Government) in the parks currently operating

CHALLENGES OF THE MANAGEMENT MODEL FOR THE FUTURE

- More actions among which to allocate resources
- Participation of various administrations in the new actions
- New models of public-private open spaces

CHALLENGES FOR THE FUTURE

- Priority: provide an operating space to all urban agglomerations
- Implementation of planning actions and advance those in other fields of study
- In order to achieve these objectives it is essential to achieve new ways of integrating management involving: citizens, private sector, social groups and various public administrations.

- Improved management for a complex network of metropolitan public spaces
- With the support of the Directorate General of Spatial Planning and Sustainable Territorial Development
- We want to start a transfer of knowledge initiative, within the framework of a European project:
- Possible funding: (Goal 3 of the EU: Territorial Cooperation)

Vision from local government. Spanish Federation of Municipalities and Provinces (FEMP) - Local Government Network + Biodiversity 2010

Sonia Bermúdez, Diputación de Jaén – Presidency of the Local Government Network + Biodiversity 2010

The Spanish Federation of Municipalities and Provinces (FEMP) is the major national association of local authorities. It includes Municipalities, Provincial Councils and Island Councils: a total of 7,287, representing over 89% of Spanish Local Governments.

The Network of Local Governments + Biodiversity 2010 is a forum for local authorities to exchange experiences and design methodologies in order to preserve and maintain Biodiversity, as stated in its Local Strategy & Indicators Systems for Conservation and Augmentation of Biodiversity.

Basis for the implementation of the Network are:

- Ecosystem supports of biodiversity.
- Key elements of biodiversity: spaces and species.
 - Protected Spaces
 - Species
 - Unprotected spaces which are biologically / naturally relevant

The activities developed by the Network of Local Governments + Biodiversity 2010 include:

1. 3rd Competition of Projects for the Conservation and Maintenance of Biodiversity:
€ 1 million for 28 local authorities in 2010:
 - 1 project: € 150,000
 - 1 project: € 100,000
 - 2 projects: € 75,000
 - 6 projects: € 50,000
 - 8 projects: € 25,000
 - 10 projects: € 10,000
2. Competition for Educational centers + Bio + Life
3. Volunteer program: will open a call to honor the experiences of groups in the municipality.
4. Annual Network Meeting. In 21th-22th June 2010, in La Granja, Real Sitio de San Ildefonso.
5. International Day of Biodiversity, documents (strategy, results of competitions, Website, etc.)

Requirements for membership:

- Political commitment of membership expressed by agreement of the council or governing board; an institutional statement of the commitment to join the network and the intention to achieve some objectives, addressed to all citizens.
- Appointment of a political representative to the assembly, and a technical representative to attend meetings and working groups.
- Proof of having signed the Countdown 2010 declaration, IUCN.
- Annual fee based on the number of inhabitants.

Currently there are 215 local authorities attached which represent more than 21 million inhabitants (municipal councils, island councils, and councils associations)

Sectoral requirements:

- Organization of a Forum for public debate.
- Implementation of Agenda 21. Sustainable Development Plans or Programs shall include a commitment to increase diversity.
- Developing a "Program for Increasing Biodiversity + Biodiversity 2010", containing an approach to take inventory of populations and areas of distribution of listed species and natural habitats of Community interest; a tracking system, and an Action Plan.
- Certification of creation and operation of a "Green Patrol" with staff or volunteers, with defined roles for the protection of the environment, together with Annual Reports available since its inception.
- Certificate of environmental measures developed to contribute to the "Program for Increasing Biodiversity + Biodiversity 2010" contained in the General Urban Development Plan; Bylaws, and any other urban management documents of the same nature.

How sectoral requirements can be met?

Straight from Agenda 21 (through studies or diagnoses of Agenda 21; through public participation -Forums for public debate-; through the implementation of programs included in Agenda 21 action plans, including the commitment to increase biodiversity; developing "Programs for Increasing Biodiversity", with methods to take inventory of populations and areas of distribution of listed species and natural habitats of Community interest, its monitoring system and Action Plan), or indirectly through mainstreaming (Instruments of Spatial Planning, bylaws, and other local policy instruments, including certain local political lines).

Case Study of Network Experience: Diputación de Jaén (Provincial Government of Jaén)

Biodiversity Support

Indirectly through mainstreaming:

- Planning Tools
- Bylaws and other instruments of urban policy
- Certain local political lines

Biodiversity must be taken into account in General Urban Development Plans (PGOU). Examples:

- Recommendations for PGOU
- Biodiversity of the territory: SCI (Sites of Community Importance), places of greater wealth or sensitivity
- Conservation in general: breeding seasons, transplant of flora specimens, ensuring replenishment, etc.

As well as some local political lines:

- Commissions to coordinate measures
- Investment
- Awareness
- Parks and gardens Standards (e.g.: the Granada Standard, APJ)

Directly from Agenda 21

Collaboration with the municipalities within the Program:

- In the development of municipal processes: studies; action plans; monitoring, and promotion of citizen participation.

Information, awareness, and environmental education:

- Environment Award of the Provincial Government
- Green classroom throughout the year and Agenda 21 for Schools
- Compost for reforestation
- Sustainable Olive Tree

Drive of Common Projects. Environment Investment:

- Ecoparks
- Conservation of endangered species

Agenda 21 Programme:

- Collaboration with the municipalities within the Program:
Sample of a biodiversity conservation and maintenance program / Action Plan:
 - Restoration of parkland with native plants.
 - Conservation and maintenance of endangered urban species.
 - Plan for removal of exotic species.
 - Raising awareness of biodiversity conservation; e.g. International Day of Biodiversity and International Year of Biodiversity'2010.
 - Drafting a bylaw for the conservation of biodiversity in the municipality, for example taking into account the rehabilitation of buildings which may contain some sort of interest.
 - Catalogue of municipal interest species (e.g. catalog of unique trees, City of Jaén)
- Information, awareness and environmental education:
 - Green classroom throughout the year and Agenda 21 for Schools
 - Environmental education campaign with the aim "To inform and educate participants about the knowledge of global environment and environmental sustainability".
 - 4 sessions for different levels of education:
 - Agenda 21
 - Waste (3R's)
 - Biodiversity
 - Climate Change

The "Green classroom throughout the year" campaign got 13,507 participants in 2010, by visiting the municipalities of the Jaén province participating in the Agenda 21 program.

- Compost for reforestation: over 100 reforestation actions and planting of 80,000 native plants.
- Promoting joint projects:

Environmental Investment: Ecoparks

An Ecopark has a number of features: a place for enjoyment; a learning environment; an open air museum, and an example of good environmental practices.

I. Sustainable waste management. Installation of:

- Bins for selective waste collection
- Excreta collection bins
- Installation of composting for yard trimmings

II. Sustainable Maintenance

- Optimization of the irrigation system
- Energy optimization
- Use of organic materials and fertilizers

III. Environmental education

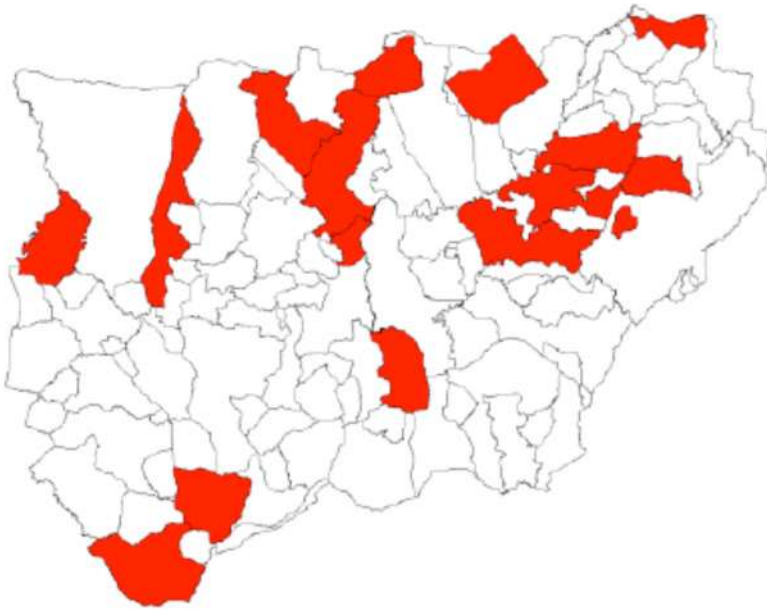
- Information panels of the park's sustainable management
- Information panels on the park's flora and fauna

IV. Conservation and enhancement of urban biodiversity

- Planting native species
- Installation of nests, feeding and / or troughs for birds

V. Contributing to quality of life and healthy habits

- The project "Conservation of endangered species in urban environments in the province of Jaén", was awarded in the 1st Competition of Project for Increasing Biodiversity organized by the Spanish Federation of Municipalities and Provinces and the Biodiversity Foundation, receiving € 187,000 funding for its implementation.

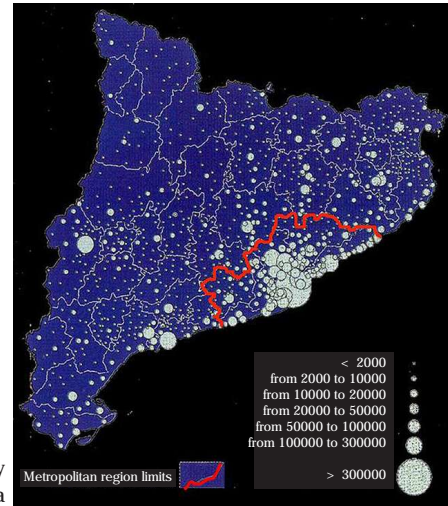


Map of performances - Provincial Council

The role of natural areas in the Barcelona Metropolitan Territorial Plan (PTMB)

Martí Domènech, Coordinator of Natural Areas, Provincial Government of Barcelona., Editor of the PTMB working group.

Barcelona metropolitan region has an area of 3,234 km² and is home to 4,856,579 inhabitants, being one of the highest population densities in Europe. Although the metropolitan area represents only 10% of Catalonia, it is home to about 70% of its population, and produces nearly two-thirds of the Catalan GDP. In the absence of territorial planning, the processes of occupation and land use in the past fifty years have led to negative dynamics and processes concerning natural areas. The proposals of the Barcelona Metropolitan Territorial Plan (PTMB) aim to correct this situation. In particular, a synopsis of the Open Spaces System (natural) proposed by the PTMB will now be exposed.



Population density of cities in Catalonia

Territorial dynamics

Considering the subject of this presentation, we will refer only to those dynamics that have a direct relationship with natural spaces.

In recent decades, the growth pattern of urban land in the metropolitan area of Barcelona, has been characterized by high land occupation, low building density, dispersed occupation of the territory, and specialized land use in urban areas (residential developments, department stores, etc.).

These processes, together with the primary sector decline, are the main cause of loss of environment and landscape values in the territory, involving an increase in commuting (energy consumption, emissions, infrastructure); a reduction in natural areas surface, and increased fragmentation. Thus, ecological connectivity tends to decrease in the metropolitan area, while vulnerability of natural systems tends to increase (e.g. in relation to forest fire risk). As a result landscape is homogenized and biodiversity diminishes. PTMB, in relation to natural systems, aims to correct negative trends described above and ensure the protection of biodiversity.

PTMB content and figures

The first aspect to highlight is the process of drafting the plan. Although the administration responsible for the formulation and approval of territorial plans is the Generalitat de Catalunya (regional government), in this case PTMB proposals have been developed jointly between the regional government and affected municipalities, through technical and political working groups, consisting of equal numbers of representatives of both administrations. This participatory process of developing the plan has secured a broad consensus on the proposals by all administrations, thus ensuring their future development.

PTMB characteristics	
ELABORATION	Regional + Local administration
NATURE	Physical
CONTENTS	Open Areas Settlements / Urban systems Mobility infrastructures
REGULATIONS	Rules Guidelines

The content of the plan is structured around three systems: Open Spaces (undeveloped land), the subject of this article; Settlements (urban land and building land), and Infrastructures (road and rail). These systems are jointly developed, so that each one takes into account the other two. Thus, future growth of towns and cities is expected depending on how potential population growth, jobs and equipments can be served by rail and road transport, enabling a whole efficient mobility system. Infrastructures are also proposed while respecting environmental and landscape values of the territories, which are key to ensure the quality of life of its inhabitants.

This understanding of the Plan as a system formed by three systems, results in a spatial planning of physical nature complemented with its corresponding standards, guidelines and recommendations, which together meet the following territorial planning criteria:

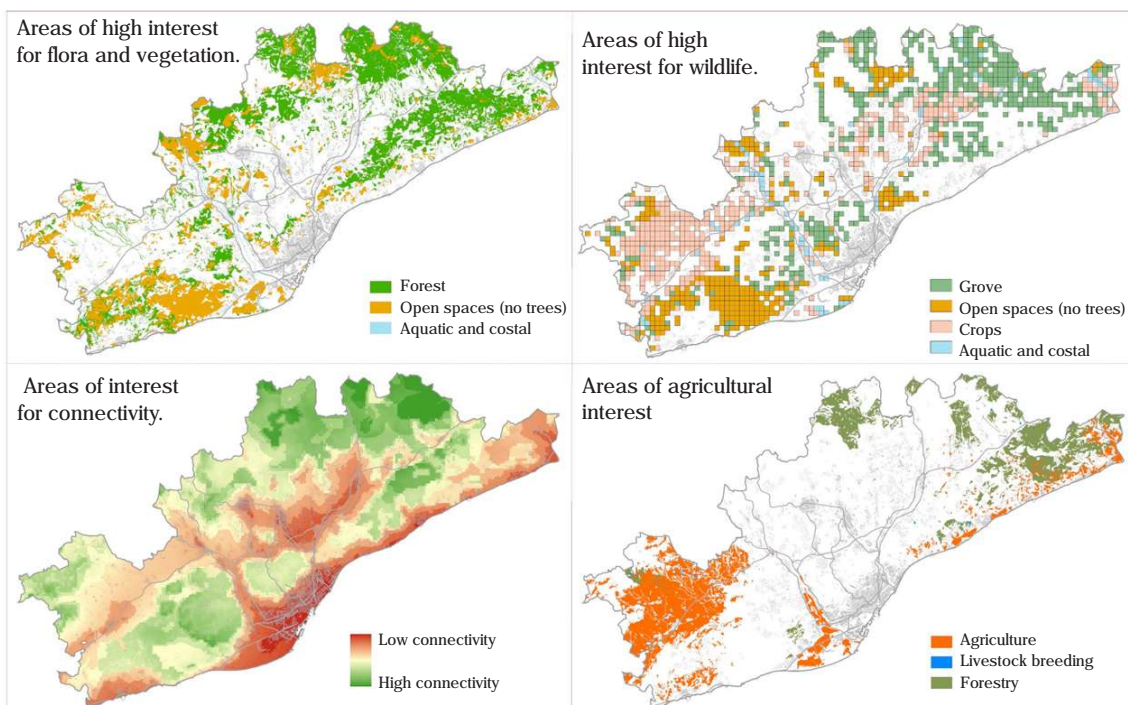
- Encourage diversity of the territory and protect natural and agricultural spaces.
- Promote efficient use of land through the establishment of occupation densities.
- Growth based on the strengthening of the current nodal structure of cities.
- Promote urban development by balancing the relationship between residential and economic activities in order to avoid specialization and segregation of land use.
- Develop public transport as a key feature of the mobility system; as a way to improve environmental quality of the territory, and as a factor of social cohesion.

Open Spaces System

The Open Spaces System Plan interprets the territory as a system. It is based on the general approach of respecting the biophysical matrix, and it aims to preserve and improve the structure and functionality of spaces with natural or intrinsic productive values, interconnected around existing protected areas by sectoral legislation, so that together constitute a truly functional system of open spaces (as such, it is now non-existent).

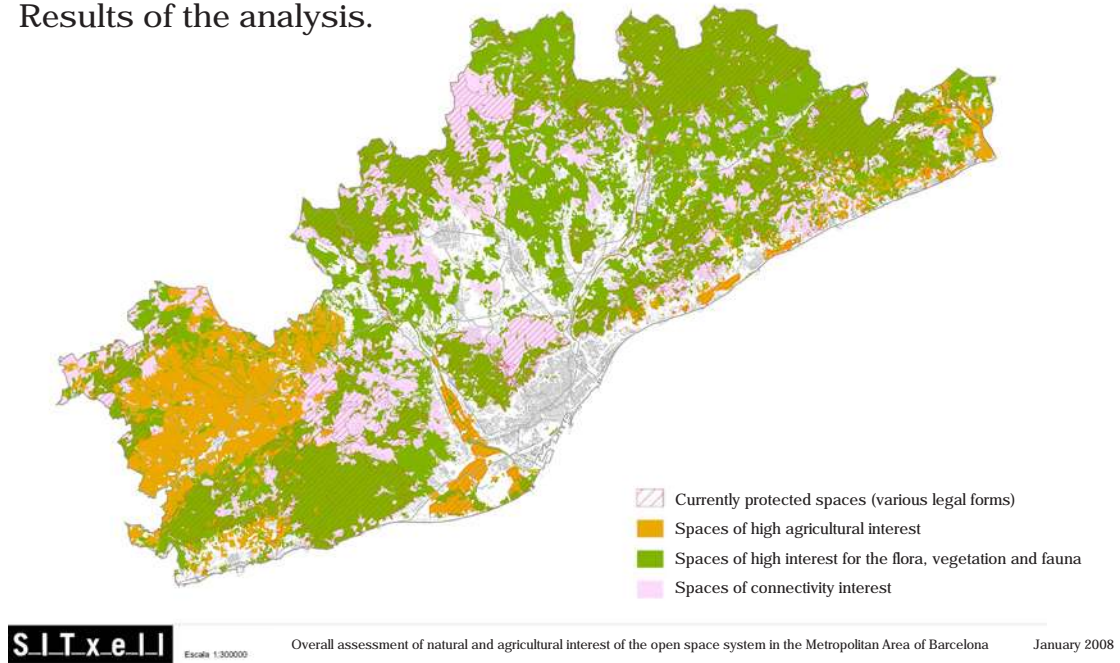
The proposal of open spaces in the territorial plan is based on an analysis and assessment of its intrinsic values, structure and function, which could be summarized in the following four areas:

- Areas of high interest for flora and vegetation.
- Areas of high interest for wildlife.
- Areas of interest for connectivity.
- Areas of agricultural interest.



Under this approach, open spaces are a matrix of vital importance in the maintenance of key ecological, environmental and landscape processes in the territory. Therefore, its planning pretends to go beyond preserving the system of the urbanization processes, serving both its natural and cultural values, and its structure and function. It also adds value to these areas, so an ecological, social and economic project can be developed in them in the long-term, as the only way to preserve them. The environmental quality of the territory depends on it.

Results of the analysis.



The resulting Open Spaces System consists of three basic categories of spaces, all located on the existing undeveloped land in the municipal urban planning:

- *Special protection spaces of natural and environmental interest*

Natural areas which are currently protected by sectoral planning, and those proposed by the PTMB, which can ensure the functionality of the system due to their natural, productive and/or connecting values.

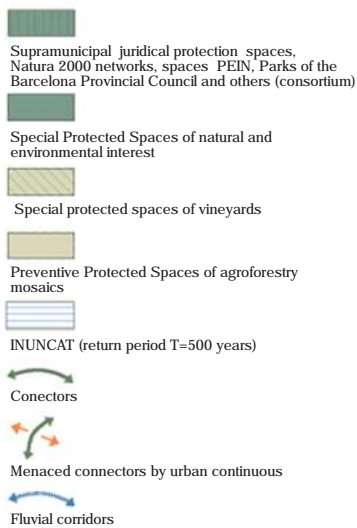
- *Special protection spaces in the vineyard*

Agricultural value areas of vine cultivation with Designation of Origin (DO), Protected Geographical Indication (PGI) and organic production and activities.

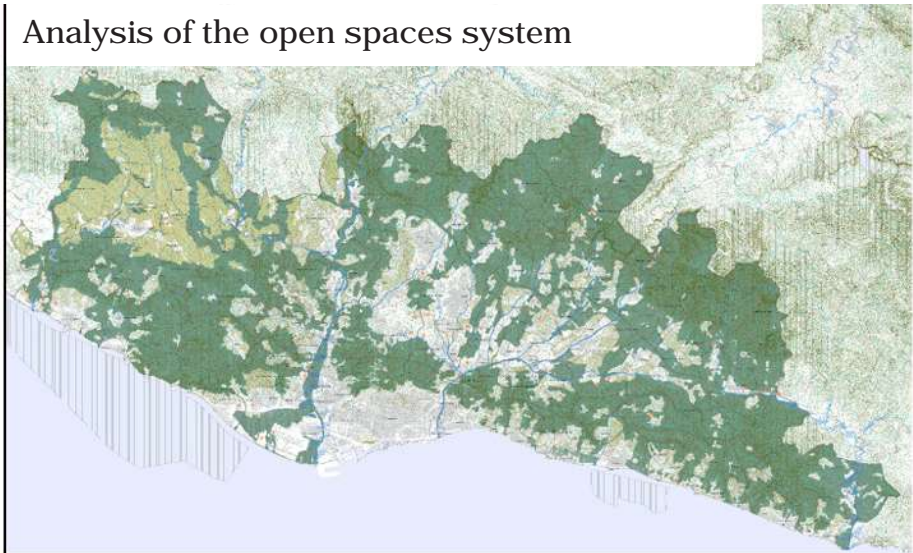
- *Preventive protection spaces*

Spaces classified as non-developable by urban planning which have not been considered for special protection.

The fundamental difference between the latter category and the other two is that municipal urban planning could in the future delineate areas to be built in preventive protection spaces, if they coincide with the growth strategies for a particular municipality established by the PTMB. Obviously, the possibility of transformation as a result of urban growth is excluded in the categories of special protection.



Analysis of the open spaces system



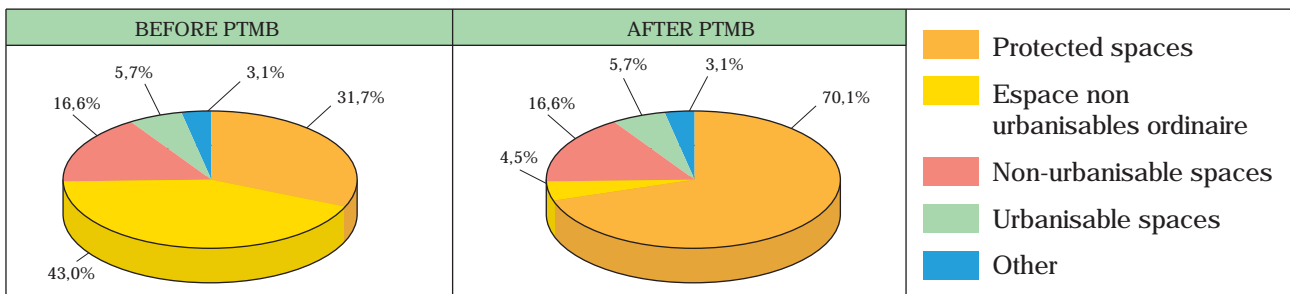
The plan identifies connector flows between spaces in the open spaces system, and among them, those with the most threatened role by urbanization or infrastructure. Diagnosis planes show qualitative information regarding its value (natural interest, connective, agriculture, etc) for each particular space. Overall information is a reference for implementing the planning guidelines and, if applicable, for transposition into urban planning.

The PTMB scale of work (1:50,000) is not appropriate to transpose directly the contours of the categories as precise boundaries of urban planning. Thus, except when the constraints come from sectoral planning figures (natural parks, Natura 2000 Network, etc) an adjustment of these boundaries through planning instruments will be necessary, according to the criteria specified in the PTMB legislation.

Finally, regulations provided by the plan for the open spaces system are binding for urban planning, and may assume the character of directly applicable rules when more specific planning tools will not be essential.

Protection of natural areas before and after PTMB

Concept	Protected Area without PTMB (%)	Protected Area with PTMB (%)
Special protection area (Global)	31,7	70,1
A. Botanical high value habitats	57,2	91,6
B. Habitats of community interest	51,2	90,7
C. Forests with high diversity	45,8	90,8
D. Habitats of interest for breeding birds	32,2	75,1
E. Areas of high forest connectivity	46,3	85,4
F. Areas of high agricultural interest	13,0	85,3

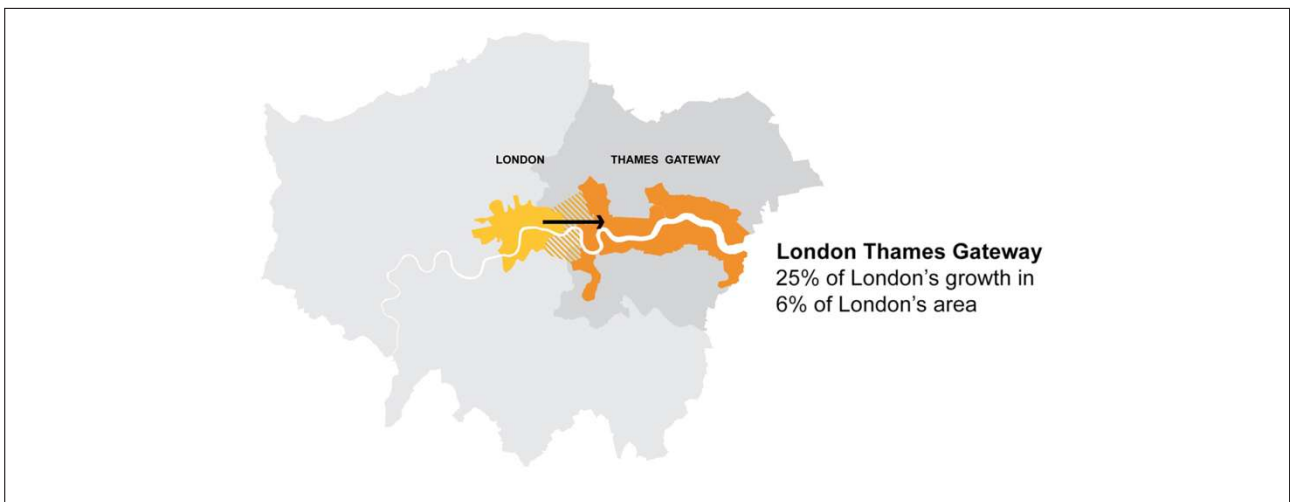


The East – London Green Grid project

Javiera Maturana, London Development Agency

Design for London (DfL), LDA

Design for London (DfL) is part of the London Development Agency, the Mayor of London's economic development agency. It is responsible for delivering regeneration and bringing about prosperity to London, among others objectives. As part of the work Design, Development and Environment Directorate, DfL has delivered the Mayor's East London Green Grid (ELGG), involving the identification and implementation of a network of green spaces throughout east London, including within peri-urban locations in the urban fringes.



London's growth to the East

After decades of decline, population has started rising steadily with an additional 1 Million living in the city by 2026, an increase of 13% on the current population. The pressures of an ever growing population requires strategies which convert slack, disjointed urban forms into compact cities, and therefore design becomes even more important, as with open space. It is anticipated that 25% of London's growth will be located in 6% of London's area, concentrated in east London.



Slack city



Compact city

Green infrastructure in London serves many purposes. The East London Green Grid project aims to embrace multifunctionality to better connect the industrial landscape with residential communities, to provide an appropriate setting for utilities (gas, sewerage, water) which have located in parts of the Green Grid, to provide recreational space and encourage biodiversity, to provide for allotments and local food growing, and to mitigate flooding among others. London frequently experiences flooding, and climate change and pressures from London's growth is likely to increase its probability and consequences. In the last 5 years, the UK insurance sector paid out £22bn in claims for damaged property.



The East London Green Grid began collecting evidence of flooding, location of new development, and mapping deficiency in access to open space, measured by the following distances to communities:

- Regional : 3.2km to 8km
- Metropolitan : 3.2km
- District : 1.2km
- Local : 400m

The ELGG project has been about designing and thinking at the landscape scale, to pull together, package and promote place-making ideas, and fashion strategies for delivery and developing a range of arguments to shape change. Work with some 11 Local Planning authorities, DfL has supported local policy and ensured strategic compliance.

Six Area Frameworks were produced, which cross local authority boundaries, and are unified on a landscape level. They set out strategies for creation and enhancement of a green grid to attract, shape and support growth, and has helped local authorities to plan for green infrastructure.

The ELGG Primer was published in 2006 and sets out a vision for East London's fragmented green infrastructure to be brought together into an interlinked multifunctional network. The ELGG has been embedded in London planning policy and sets out a range of policy objectives including tackling climate change, addressing deficiencies in access to open space and nature, promoting sustainable movement and boosting the visitor economy.

Specific Projects

1. The Lea Valley
2. Barking Riverside
3. Rainham Wildspace

1. The Lea Valley



Upper Lea Landscape

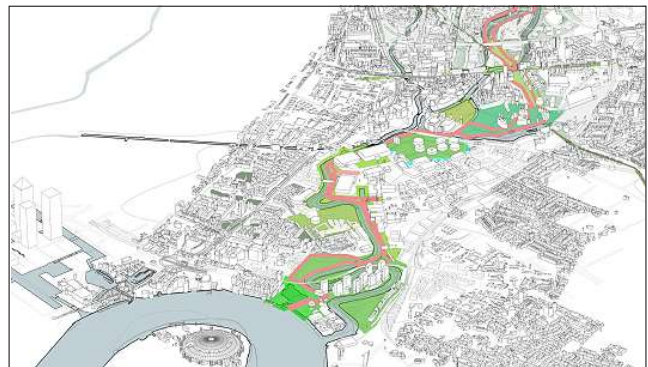
The Upper Lea Landscape Strategy is part of the cross boundary achievements working through a Placeshaping Board, with three main local authorities (including their planning functions), the Regional Park Authority, and water and other utilities providers. The catalyst for this project was the Olympics (located in the “Lower” Lea Valley) so that its benefits could be maximized northwards to achieve integration and activity.



Walthamstow Wetlands



Lower Lea & Olympics Parklands



The Lea River Park connects directly to the Olympic Park and to Hackney Marshes, Walthamstow Wetlands and beyond to the north. Projects also include Fat Walk which connects to the River Thames to the south. The strategy is recognized as a multifunctional but very much engineered landscape, which has embeds water sensitive urban design and other biodiversity features. It establishes a new green spine for east London, most of which has contained a former industrial past.

2. Barking Riverside

Barking Riverside is the quintessential peri-urban landscape, surrounded by vacant, industrial and pockets of low density residential uses. Barking Riverside is considered to be the UK's largest brownfield site and is set to accommodate 10,800 homes, as well as other commercial, retail and community facilities. It is a joint venture between a central Government agency (Homes & Communities Agency), with a private sector developer. In many ways, the public sector control over land facilitates the delivery of projects such as networking new green infrastructure with the ELGG.



3. Rainham Wildspace



Rainham Wildspace

In contrast to Barking Riverside but in proximity to this regeneration area is Rainham Marshes. In this case, rather than creating new green infrastructure around development, this project aims to open access to this marshlands to existing communities. Very few local residents access the marshes and the river Thames. Its relative isolation is set to be addressed through access links and other improvements. There is a long term plan to open up the landfill site to the tip of the marshlands, working in broad partnership with the Royal Society of the Protection of Birds, using shipping containers as classrooms, public facilities and bird watching hides.

Greenbelt – Frankfurt

Klaus Wichert, Leader of the Frankfurt environmental administration

The Rhine-Main region with Frankfurt am Main as the focal point functioning as its inner city, is one of the regions in Europe with an enormous economic power. This is due to a number of favourable factors such as its good accessibility and its function as an important hub of European traffic for air, rail and for inland navigation.

But this is by no means a guaranty for future success. Structural changes in the traditional economic sectors and the emergence of new technologies diminish the existing commitments to a location. In addition, they intensify the interregional competition for enterprises, jobs and highly qualified manpower.

Whoever wants to do something for the future of the region, must be familiar with its strengths and its weaknesses. For international executives, the choice of a location depends to a great extend on the attractiveness of a region, which is therefore an important criterion for the city's sustainability.

International studies to that effect show that the standing for the Rhine-Main region and for Frankfurt am Main has improved continually. The best part of this is that the qualities of both the region and the city are being highly appreciated by its inhabitants. Needless to say that this refers not only to executives, but to all of the citizens in the existing multifaceted social structure, they are truly cosmopolitan as can easily be experienced. Well-known qualities of the region are its excellent transport connections, the wide variety of cultural presentations, its coherent scope and the open spaces in the city and the region. The latter have been landscaped over centuries and have gained new qualities over recent decades. It is very unfortunate however, that the public awareness of this low (*Business Location P. 151*).

1. Historic tradition - the former military wall as public promenade -

The visitors of Frankfurt during the first part of the 19th century were able to see the first green belt of landscaped nature. This first green belt came into existence during the early 19th century, after local citizens had decided to change the bold image of their community. The existing fortifications had become useless, and with considerable commitment of local citizens, it became a promenade bordered by trees and adjoining gardens. A local decree protected it against repeated building applications of the local mercantile community. Emperor William II authenticated the protection of these open spaces which encircle the Old Town north of the river Main by the "Wallservitut" of 1907 (*Business Location P. 153*).

Frankfurts fast growth in the 19th Century - a ring of avenues as urbanistic frame -

On the occasion of the large-scale extension of the city towards the end of the 19th century and at the early 20th century, the further development of the existing road network was combined with the creation of a ring road adjacent to prestigious green belts. The establishing of this second green belt provided for care of the surrounding scenery and for visibility of the remote Taunus mountains; it encompassed the city by a surrounding scenery. It became a convincing selling point for neighbouring properties. These days, the city ring still has the invariable charm of a tree-lined avenue, even though the intensive traffic on this arterial road constrains its perception as leisure area (*Business Location P. 153*).



2. Finding a figure - GreenBelt Frankfurt

The idea of a third green belt was already mapped out in the 1920s, when the planning director of the urban development authority, Ernst May, devised plans to protect existing large-scale green spaces against plans for housing developments. He had the intention to eventually landscape these spaces. It took more than 70 years however, to convert these intentions into a positive decision by the city council (*Business Location P. 153*).

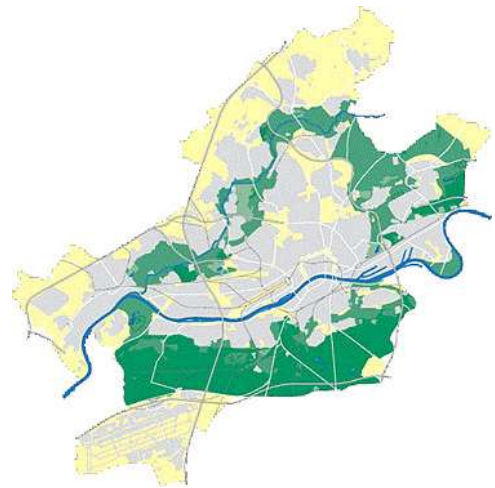
The modern GreenBelt Frankfurt was created by the city parliament of Frankfurt in November 1991. This municipal government body unanimously passed a Green Belt Constitution consisting of four parts:

1. a map defining the boundaries of the GreenBelt area,
2. a GreenBelt setting out the types of development permitted,
3. a GreenBelt Charter containing guiding principles on nature conservation, planning and administration,
4. and procedures to protect the Green Belt through legal and political instruments, such as rules and permit requirements to protect natural areas and landscapes (*Ontario P. 33*)

This political commitment for the preservation of the Frankfurt GreenBelt in such an obligatory manner gave the signal for the start of a multitude of projects (*Business Location P. 155*).

At the time of its introduction, the Green Belt Charter was considered to be a politically powerful document. Emphasizing the city's responsibility to future generations, the Charter declares that a ring of green open spaces around the centre of the city is to be preserved and developed as the GreenBelt (*Ontario P. 34*).

Enjoying permanent environmental protection, the GreenBelt was acclaimed by the United Nations in 1996 as a successful model of sustainable city development.



3. Landscapes in the GreenBelt

The Frankfurt GreenBelt has since become an open space, which is being preserved and landscaped and which is dedicated to nature-related leisure or sports activities. Groups of trees have been planted, formerly paved surfaces were renaturalized and landscaped and learning points were installed within the green belt. Hiking trails, including loop trails as well as cycle tracks, facilitate the access for citizens of Frankfurt and the region (*Business Location P. 155*).

Frankfurt's "green" is also edible! The typical specialities are closely connected to certain landscapes.

- "Äbbelwoi" – Applewine

Agricultural production in the Green Belt includes the renowned regional apple wine (Stöffche) industry northeast of the city (*Ontario P. 50*). Apple wine has been particularly promoted in the Green Belt and is a significant part of the local cultural tradition (*Ontario P. 73*).

- "Grie Soss" – Frankfurter Green Sauce

Seven fresh herbs go into this sauce: parsley, chives, chervil, cress, burnet, sorrel and borage. These grow in the fields in Oberrad, one family business next to the other. Market gardening has a tradition stretching back to the 18th century. The finely chopped herbs are mixed to suit the individual palate with sour cream, and / or mayonnaise and seasoned with salt and pepper and / or sweet mustard. Hardboiled eggs, either chopped small or halved, are added to the sauce and the dish is served with potatoes boiled in the skin or with boiled beef.



- “Wäldsche”- the Frankfurt City Forest (Stadtwald)

The Frankfurt City Forest covers more than half of the Green belt .The city forest includes beech, pine and old-growth oak trees (*Business Location P. 151*).

The Stadtwald supplies wood and a third of Frankfurt’s drinking water. It cleans the air and also offers an abundance of recreational activities. Over 700 species of plant grow in the Stadtwald. Besides forest, there are meadows, wild grassland, streams and ponds. Countless animals make their homes here: amphibians, birds, bats, roe and fallow deer and, in the western parts of the Stadtwald, wild boar families.

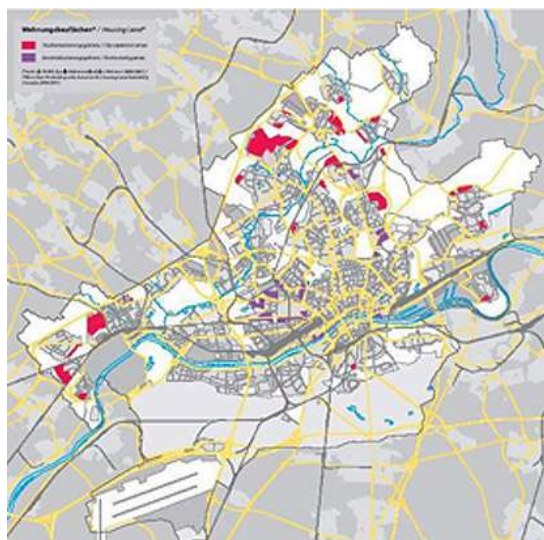
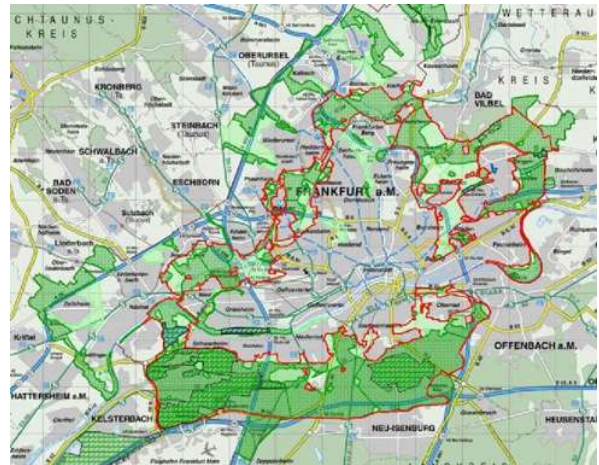


4. Landscape protection areas

The Green Belt around the city includes an area of 80 square kilometres, approximately one-third of Frankfurt’s total area. The Frankfurt City Forest covers more than half of the Green belt, and in the remaining area there are other green spaces, parks and playgrounds. There is agriculture in the Green Belt as well (*Ontario P. 50*).

The planners of the Frankfurt Green Belt recognized early on the importance of the agricultural lands in protecting the landscape. Frankfurt has a strong agricultural base and in the early 1990s was considered the largest “farmer village” in Germany with 160 farms within the city limits (*Ontario P. 72*).

The Frankfurt Green Belt is made up of forests in the South, the valleys of the Nidda and Main Rivers, and hills to the North East. To the north-east of the city, there are agricultural lands, and poplar and willow trees. There are also over 50 lakes, pools and ponds in the region. The Green Belt contains scenic landscapes and, along with the FrankfurtRhineMain Regional Park, hosts a 70 kilometre cycle path and a 63 kilometre hiking path (*Ontario P. 50*).



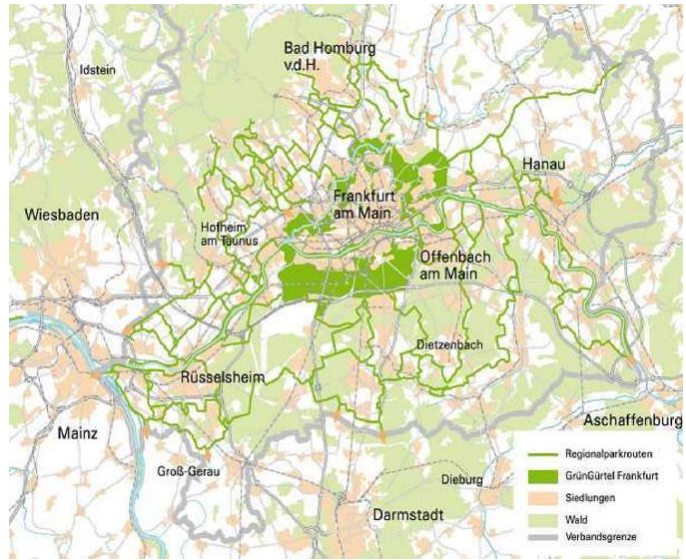
5. Urbanistic developments

In spite of present discussions about a future decline in population, Frankfurt am Main is a growing city. During the last two years, Frankfurt’s population (672.700 inhabitants) has grown by around 16.000 inhabitants. And quite in contrast to the general trend in Germany, Frankfurt registers an attractive birth surplus.

Growing cities have a perpetual demand for additional apartments. For the near future, the development of new residential quarters will remain an important challenge for the city development in Frankfurt (*Business Location P. 33*).

6. Networking - Regionalpark Rhein-Main

In their intentions to link the Frankfurt green belt with the outskirts, the efforts of both planning committee and officials of the city are not only concentrating on Frankfurt, but also on the region. The Frankfurt green belt and all of its green spaces are an ideal transition between the city and the surrounding scenery. The spaces of the Frankfurt green belt and the passages of the regional parks do not rival one another, but they are interwoven and complement each other in an excellent way. There are plans to display a main route within Regionalpark Rhein-Main with a total length of around 190 kilometres, which will encircle the core area of the agglomeration completely. This appears to be a sensible start for the fourth green belt around the city and through the region. Residents of the region will become aware of attractions along the way such as look-out towers, natural monuments, historical buildings, tree-lined roads, gardens and parks as well as playgrounds and it will be an interesting experience for them (*Business Location P. 155*).



7. Development directions

- Characteristics
 - stele
The steles are an attribute in and for the GreenBelt. They are vertical standing squared timber about 141 cm high with a text on their top. We have about 120 steles standing in 80 square kilometres.
 - settles
 - group of 3 trees
 - loop road. The GreenBelt circular bike route is 75 kilometres long, only meeting the hiking trail in one or two places .



- GreenBelt parks – optimise for repose
What makes a park a park? As an oasis in everyday life, it must be close at hand and easy to reach. To please the eye, there should also be no lack of flowerbeds, winding paths or old trees. To satisfy romantic wishes, I must also have idyllic secluded niches. To fulfil all these needs, it requires large lawns, old trees, attractive flowerbeds, winding paths, where possible, water and lots of park benches. No problem at all in Frankfurt! One of the city's 40 parks is always nearby – for a sunny corner in the lunch break, for recreation, fun or sport.

- Special places

- a) Schwanheimerer Alteichen

When mediaeval Frankfurt was still surrounded by a fortified wall, the oak trees, which we can still marvel at today, were just starting to sprout in Schwanheim. For centuries herdsman drove their livestock into the forest here. The sheep, goats, cows and pigs ate the young seedlings and, in autumn, the acorns. As a result the forest was not able to rejuvenate. In 1729 this kind of grazing fell under the control of the city foresters. Today evidence of the pigsties is found in the name "Oberschweinstiegschneise". Grass spread on the forest floor and the few remaining oaks grow just as an artist would capture them: sturdy trunks and wide spreading crowns. In the western part of the Stadtwald the trees grew in a particularly bizarre and gnarled way.

- b) Berger Warte (216 m – highest location of the city)

- Nature conservation

In the former flood plains to the West of Schwanheim lies the "Schwanheimer Düne", one of the few inland dunes in Europe. It was created after the last Ice Age by sand blown from the riverbed of the Main. The gnarled pines bring to mind distant shores and the characteristic sand-dune plant, grey-hair grass, is extremely rare and valuable. A wooden pathway runs through the bizarre landscape. In this way nature remains undisturbed. Moorland sheep are kept here by the environmental protection organisation BUND to help preserve the area.



8. Marketing and PR

The Green Belt continues to be strongly promoted by the City of Frankfurt for its recreational and tourism opportunities. It contains beautiful landscapes, many parks and both cycling and hiking paths. The apple wine production is also important to tourism and recreation (*Ontario P. 73*).

- GreenBelt to take away and look up

You can learn more about Frankfurt's green oasis in the GreenBelt leisure map (scale 1:20000). This includes outings, parks, cycle paths, hiking trails and lots more. More detailed information about the parks and green areas can be found in the theme flyers from the Green Space Office.

- GreenBelt to circle

Hikers can follow the 62 kilometre Green Belt hiking trail. Picnic sites, shelters and guest houses allow you to take a rest en route. At the end of each of the nine stages (between six until seven kilometres) is a column where you can stamp your hiking pass. If you collect all nine stamps, you can receive a small medal in the Citizens' Advice Office on Römer.



- GreenBelt to stroll
Since 1999 we offer guided strolls in the GreenBelt to different issues.
- GreenBelt to buy / The Green Belt Creature
One park was also the birthplace of the fabulous Green Belt Creature. This extremely rare hybrid of pig, newt and starling lives only in the Green belt. It appeared quite suddenly to the Frankfurt poet and illustrator Robert Gernhardt on the “Wörthspitze” in Nied, where the Nidda meets the Main. Why not give the cuddly mythical creature as a gift?

9. Education program

The GreenBelt development corporation has established a program for children called Discover, Research and Learn in the Green Belt. It has been successful in introducing the GreenBelt to children and their parents, and allowing them to learn about the environment and conservation while having fun (*Ontario P. 73*).



Learning stations:

- No. 1: Former Airport
A learning station at the ancient airfield Frankfurt permits playful learning for children. For example: Various afternoon-workshops, focussing on different fields of interest, will be offered.
- No. 2: CityForestHouse - StadtWaldHaus
A stream babbles on the ground floor and in the middle of the house stands a mighty oak. In the “night room” the hidden nocturnal life of the forest can be heard and felt. The StadtWaldHaus is an institution in Frankfurt and the entrance is free. Outside there is an adventure trail for children and in the vivarium you can experience fallow deer and wild boar at close quarters .
- No. 3: MainAppleHouse
The “MainÄppelHaus Lohrberg” provides horticultural advice on everything from fruit and vegetable-growing, soil care, fertilisation and composting to garden techniques and plant protection .

10. Comic Art

Cultural attractions have been integrated into the GreenBelt in innovative ways. For example, a number of pieces of weather-resistant comic art and tree art have been placed in the GreenBelt in partnership with the Frankfurt Museum for Comic Art (*Ontario P. 73*).

- The Green Belt Creature by Robert Gernhardt (1937-2006)
In 2001 Robert Gerhardt drew the Green Belt Creature. In the following years we developed several variations, par example postcards, the stuffed animal, the pins, a bookmark, the figure of a new bridge over the Nidda and others. The fancy creature is like a symbol for the open space, in which you can discover a lot of life. You have only to look at it exactly with calmness.
- The Ego Memorial in the main riverside park by Hans Traxler (1929)
Nowadays it is not so easy to become a living monument. Consequently, the illustrator and cartoonist Hans Traxler has created an Ich-Denkmal (Monument to Me) which can be reached by climbing the three steps.
- The Fruit garden with Chlodwig Poth (1930-2004)
His location was the quarter Sossenheim, where he lived since 1990. The every daylife inspired him to bitchy outlines known under the titel: "Last Exit Sossenheim". Two serials remember to his favorite place in the landscape. Frankfurt esteemed him 2006 with the "Chlodwig-Poth-Anlage" in the GreenBelt near Sossenheim.
- The tree-projekts by F. K. Waechter (1937-2005)
He had drawn twenty drafts over art in and with trees recently before his death in 2005. Our working group GreenBelt has realised six objects with support of his sun Philipp as yet. They are little interventions beside the greenbelt trail. Only attentive walker will notice them. The owl with the norwegian pullover, the piddling tree, the alien pecker, the king of the squirrels, the monster acorns. They invite the people to think about their relationship to the surrounding nature –smiling allowed. Last but not least of course the struwwelpeter, who belongs to Frankfurt like Goethe.



11. Prospects for a future cityscape

- Freed rivers and brooks / the Nidda renaturation
In the Niddatal traces of the former flood plains, with their lush forests and swamps can now only be seen in the romantic side rivers. However the canalised Nidda is gradually being returned to its natural state: sloping banks, natural winding course, with sand or gravel bank or muddy ground. The Niddatal stretches from the Main near Nied/Höchst in the West to Harheim in the North. Open fields offer a view over the Taunus Hills. The nightingals's song can be heard all along the Nidda and on the Bonameser Altarm you can even hear the golden oriole.
- Primeval forest / Near-natural forestry
Frankfurt's large international airport is situated near the city forest. The proximity to the airport does create noise and reduces the quality of the Green Belt for recreation in that area (*Ontario P. 57*).
Currently, as the GreenBelt approaches its twentieth anniversary, the City is undertaking a reevaluation and re-design of the Green Belt. The re-design will be linked to the theme of environmental justice that was highlighted last year by the Frankfurt Commissioner of Environmental Affairs (*Ontario P. 74*).

12. Former Airport

- Take the subway to wilderness

A recent project within the GreenBelt is reclaiming a former military airfield at Bonames. The project is encouraging the development of a new wilderness area in the GreenBelt. With minimal change to the site, nature is being permitted to take its course, and wildlife is returning to the area (*Ontario P. 73*).

- The former use

The Maurice Rose Airfield has been built by US-military in the 1950's and has been used as such until 1992. Since 1994, Werkstatt Frankfurt e. V., a municipal institution reintegrating long-term jobless people, is located here and using the buildings.

Why did vertical take-off helicopters need such a long landing strip? Quite simple: they took off in formation and had to take up these positions while still on the ground. And, smaller aircraft could use the airfield if they were forced to land.

- Controversy

On the one hand the wish for unspoilt nature, on the other the need for sport, fun and recreation. The aim: peaceful co-existence of leisure activities, recreation and nature. The airfield is a compromise between nature and leisure – and it relies on the visitors behaving responsibly.

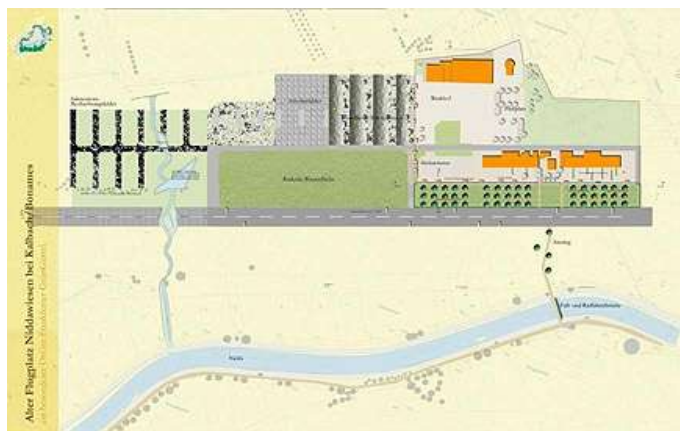
- Solution

We started in 2003 with the reconstruction of the extensive sealed surface of the runway and adjacent areas became reorganised: parts were broken up – financially supported by means / fees of the environmental-impact-compensations-funds.

The eastern part and the landing strip are for leisure time use: a grove of trees invites you to have a picnic and the meadow to enjoy yourself. The landing strip is an inviting area to practise skating and cycling.

In the northwest the wilderness: here nature can do just as it pleases, while birds can breed or rest. Here you can observe the dynamics of growth.

The traditional cultural landscape of the cultivated meadow: this stretches south from the landing strip up to the banks of the Nidda.



- Heavy concrete – broken concrete
- Isolated contaminant – building bridges



- Wilderness / Giving room to the conquest of nature
On the crushed stone beds you can observe a unique open-land experiment: waiting for the wilderness. How will the nature win back the sterile concrete ground? Which plants and animals will come, which ones leave and which ones will come out on top?
- Runway = “Playway”
Where American helicopters took off and landed, today kites soar into the sky and children practise cycling or inline skating. Over 500 metres of the original landing strip has been preserved.



- Open space and picnic hayfield
The Airport has been awarded first prize by the Association of German Landscape Architects for this successful transformation.
- Towercafe by Werkstatt Frankfurt e.V.
The former tower was turned into the Tower Café and opened to the public.

13. Summary

Scenery is a construct which originates in the minds of viewers. Appreciating a scenery is a learning process; but it will be simplified for inhabitants and transient visitors by the arrangement of attractive and uncomplicated routes for them. A good example is the former airfield Bonames.

A picnic, bicycle trip or a walk will make the region to a personal involvement.

The green belts of the city and region are urban spaces with a multiple use, besides being rooms for ecological balance, for forestry produce as well as for undisturbed recreation and leisure activities. They permit to establish relations to nature and scenery and offer a spiritual and emotional home.

The green belts of city and region are an important element of our surroundings and deserve an important position in public awareness (*Business Location P. 155*).

Literature source:

- Business Location Frankfurt am Main (2009/2010) / Klaus Wichert: City of green belts (150 - 155)
- Ontario's Greenbelt in an International Context (2010) / Maureen Carter-Whitney
- Stadt Frankfurt am Main (2006): Wide open – Frankfurt's green oasis

Turin Green Crown Project

Ippolito Ostellino, Director of the Po Torinese Park

The “*Green Crown*” project proposes an integrated strategy for the reorganization and modernization of Turin, which also aims to reach ecological balance, active preservation of natural zones and connection of ecological networks, protection of the hydrologic system, countryside protection, cultural, and historic heritage and landscape promotion. The project aims to promote both the exceptional value of the park (as the Savoy powerful architecture) as well as the cultural rural landscape.

The Green Crown project, apart from establishing a vast system of green spaces to be protected and to promote the great values of the Turin region, it is also a tool for:



- Implementing the ecological network at regional and provincial level on the connection and the improvement of natural spaces and waterways and the protection of open spaces and periurban agriculture.
- Creating a parks network interconnected with the Savoy system.
- Ensuring an integrated accessibility for all citizens.

An access to a great ecological and environmental "infrastructure", a park crossing the whole metropolitan



region.

The project is divided into two phases.

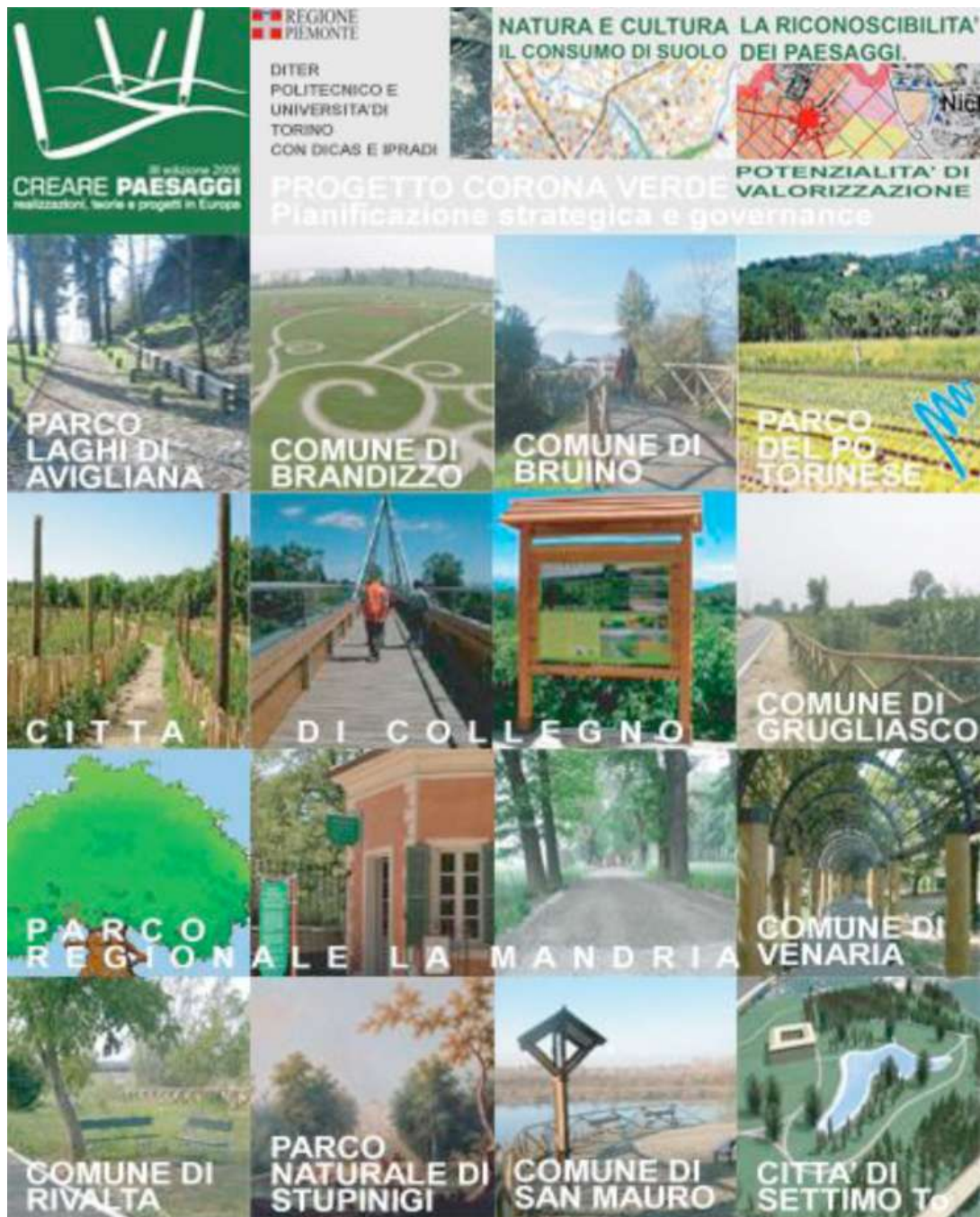
1. First phase

The aspects considered in the first phase are the following ones:

- Green infrastructure,
- Footprint of urbanization: grey networks,
- Historic network,
- Rural-agricultural fabric
- Perceptive tracks and values,
- Critical aspects and projects upon domain

The chronology of activities has been as follows:

- March 2000: drafting a program
- December 2000: feasibility study
- April 2003: financing agreement of 12.000.000 € for 30 interventions
- March 2005: The Polytechnic Institute of Turin and the University of Turin were asked to make a research study on the "Green Crown: Strategic planning and governance".
- February, 2007: The research study was translated into a Master plan



Strategic planning master plan and governance

The Master plan brings to light numerous critical aspects, as for example:

- Lack of coordination and project objectives according to the system goals.
- Lack of commitment of concerned operators and populations.

This frame of critical problems faces the urgent intervention request in a systematic way in a context of extraordinary resources nowadays in danger, because of the lack of coordination in land use at metropolitan level, specially:

- The whole “*Corona di Delitie*” (“*Delights Crown*”) represented by the Royal Palaces of Savoy, concerned for the restoration works, but with lack of network interventions and connections which would allow them to be more evidently linked.
- The natural systems landscaped (parks and fluvial spaces), too fragmented, resulting from implementation developments and infrastructures.

Consequently, the Master plan proposes an integrated strategy of requalification of the Torinese area, aiming on one hand to:

- ecological balance (with active preservation of natural spaces and linking networks, protection of hydrologic system, protection of rural space)
- and on the other hand, to the development of the historical and cultural heritage as a system, concerning both the great Savoy architecture as well as networks of cultural landscape.

By knocking down the traditional approach, we leave the open spaces concept (periurban countryside, historical and cultural heritage) to propose new strategies of sustainable development at territorial level which lead to a new urban and infrastructural vision.

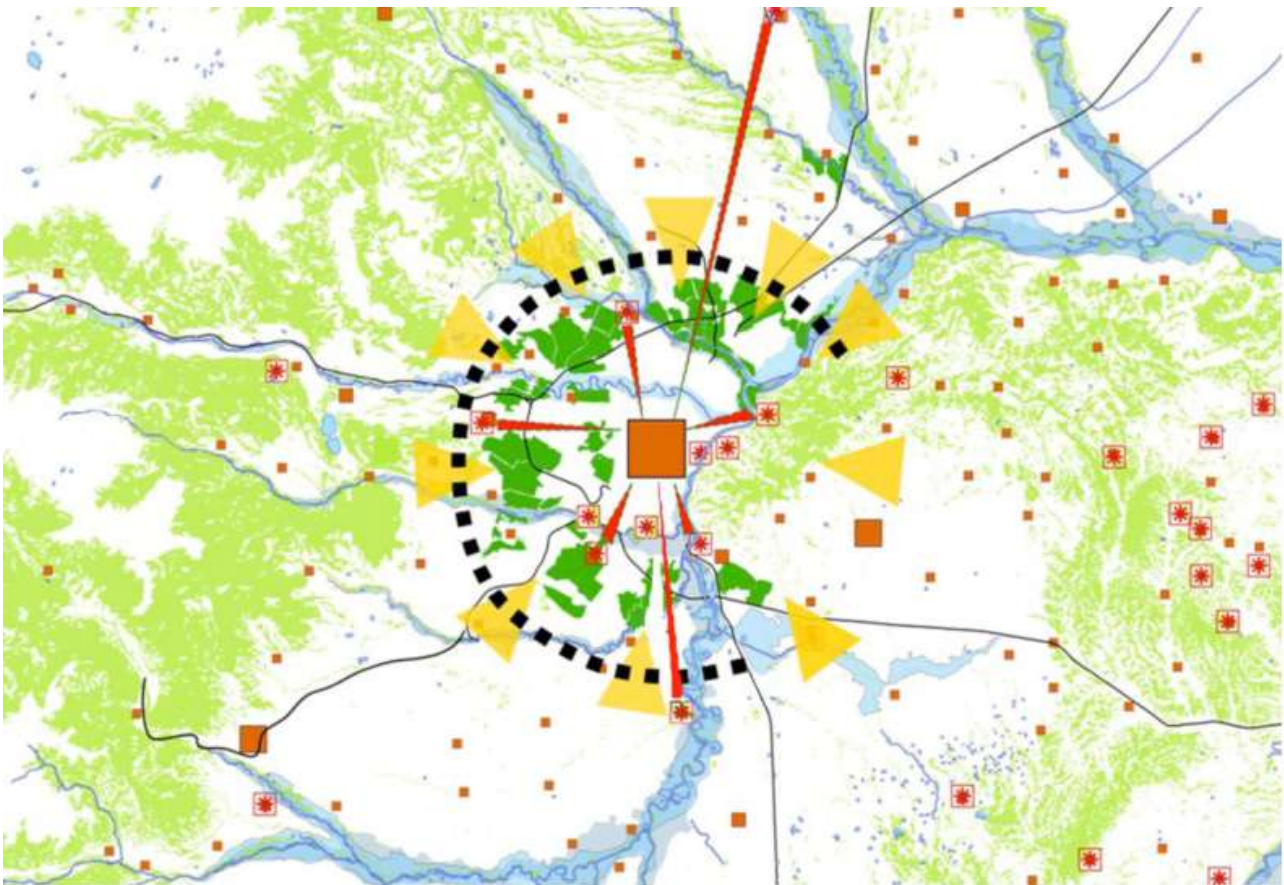
Consequently, through this way, some perspectives and options to share among institutions have appeared as well as a new frame of reference within which governance and intervention programs at different levels and sectors of territorial government are located.

According to the knowledge and interpretation of the ecological, historical, and cultural landscape profiles, we propose some action tools, not so much as rules, but rather:

- orientation guidelines to address the intervention strategies and the disciplinary action forms for every level of government (specified for the whole metropolitan area and for each one of the 17 environmental milieu),
- specifications of cooperation initiatives and public/private agreements

A conceptual plan based on:

- Extension of the rural and natural system towards the urban core.
- Strengthening nodes and connections of the ecological network in the metropolitan area, based on fluvial axes, protected areas and future agricultural parks.
- Strengthening landscape connections between cultural heritage properties, through the "*historical heritage crown of delights*" concept.
- Qualification of the periurban open spaces, as identity element of the metropolitan developments system.



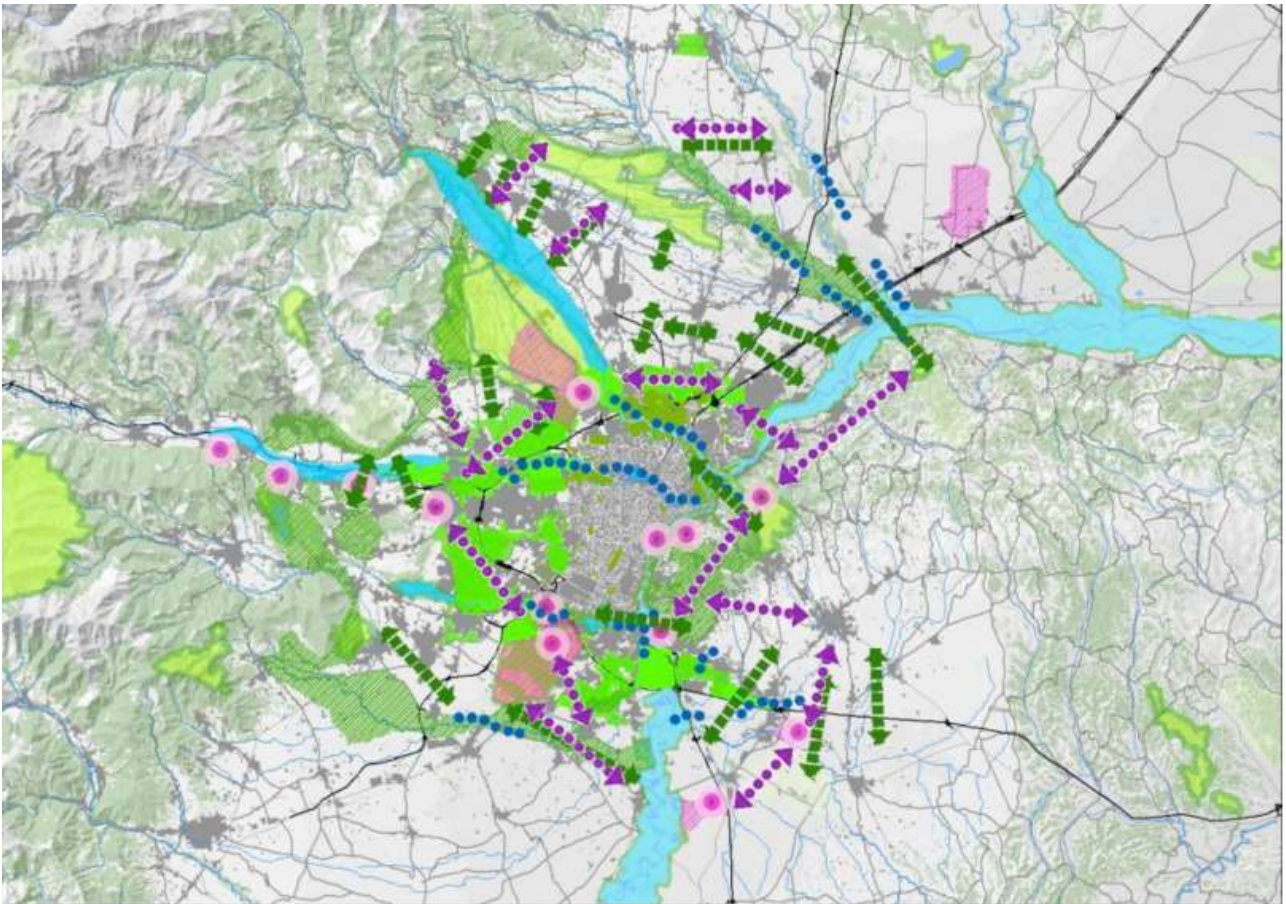
There are three levels of strategic actions:

1. At regional level, concerning general issues such as the protection and promotion of fluvial "corridors", or the relaunching of a relationship between the city and the Alps;
2. At subregional or metropolitan level, where the whole Green Crown organization is drawn, by concentrating the attention on the bounded area, on the East, by the Torinese hill, on the West, by morainiques hills and the "Vaude", on the North and on the South, by the extreme edges of the metropolitan conurbation;
3. At local level, where environmental milieus or particularly critical or important nodes from a strategic vision are to be considered as a priority, according to the local development plan.

2. Second phase

Considered aspects in the second phase are the following ones:

- Local governance,
- Individualization of intervention strategic axes,
- Permanent project: towards a facilitation agency
- Strengthening of environmental and leisure connections



Actions:

- Signature of the Protocol Agreement “*Green Crown*”: strategic political agreement.
- Setting a Technical decision Office (Region, Province, parks, municipal representative, Polytechnic)
- Specification booklet of the local projects for every sub-domain of the program.
- Selection of the more significant projects.
- Launching works with EU financial resources
- Permanent application of the agreement protocol within policies
- In the future: establishment of a coordination Agency and facilitation of the "*Green Crown*" policies.

Green Network experience from Estonia

Mart Külvik, Institute of Agricultural and Environmental Sciences, Estonian University of Life Sciences

The Estonian way of green or ecological networks - the “*network of ecologically compensating areas*” have noted in several studies among the pioneering national concepts in Europe. In its classical form this represents an “ecostabilizing” concept – a multi-functional approach to ecological networks which is based on a strong land-use planning tradition, with wilderness and areas of conservation value as core areas - interlinked by natural and semi-natural landscapes (Jongman et al 2004).

In spatial planning a new term “*green network*” has recently been taken into use in Estonia. Resembling a bit the American term “*greenways*”, it simplifies the complex nature of the theoretical concept of ecological networks and demarcates a network with characteristics determinable in regular planning practice. It also adds the socio-economic dimensions to the network concept. Like American terminological analogues, green-nets seem to be attractive to landscape architects and land-use planners for channelling recreation and visualizing “ecological producer” corridors, especially in near-settlement areas. According to the Estonian Spatial Plan the green network is a coherent system of extensively used areas in a comparatively good natural state that helps to maintain the biodiversity and stability of the environment.

When looking at the contemporary applications of the ecological network in spatial planning in Estonia, we can see that the essentials of ecological network-like thinking have been included in a number of legislative acts in the 1990s, such as those related to protection of coasts, shores and banks. Nevertheless, the term itself has so far not been taken into direct legislative use.

On the other hand, the spatial planning sector, through the process initiated by the Planning and Building Act and supported by the Environmental Action Plans, has been the most consistent harnesser of the ecological network model in practice, for the time being. In the Action Plans the defined tasks for the years 2001-2006 and 2007-2013 were set. These include the tasks of methodological updating, economic analysis of implementation, and education of specialists and decision-makers.

The concept of ecological networks in Estonia is principally embedded into the spatial planning system. The vision contains a chapter on “*green networks*” and a schematic map of the Estonian green network (see Figure 1). The vision determines the “*green network*” total coverage at around 55% of the whole Estonian territory, in 12 comparatively compact core areas. This area is large enough not only to fulfil the compensatory function on the national, but on the European scale as well.

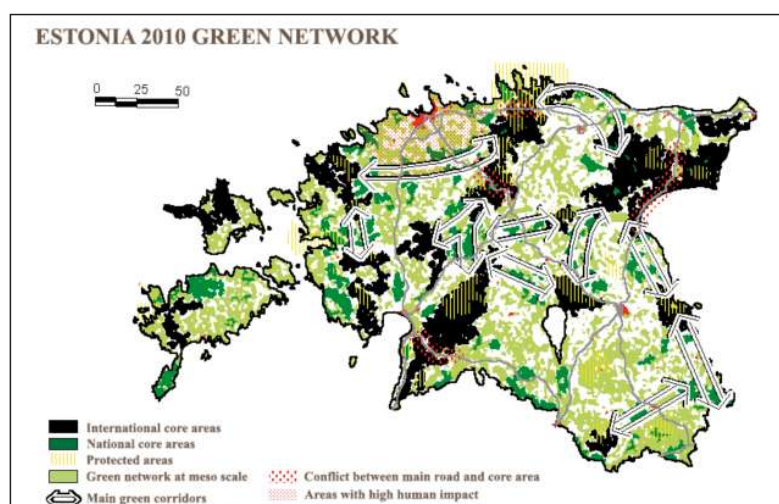


Figure 1. Estonian “green network” according to “Estonia - vision 2010” (after Estonian... 2001). Black - core areas of international importance ($S > 100 \text{ km}^2$), dark green - core areas of national importance ($S > 45 \text{ km}^2$) and light green - core areas of regional importance and local importance ($S > 15 \text{ km}^2$).

The assessment of anthropogenic load on the green network and the study of concurrent conflicts show that the following are the strategic problems in the elaboration of the network:

- maintaining the ecological network in the regions of high human activity load in the vicinity of settlements and highways;
- maintaining the continuity of networks in places where highways penetrate the large compensatory areas. The issue here is traffic-induced development of business, which brings about an increase in population density of a comparatively wide corridor.



Figure 2. Green network plan at county level: Harju county around the Estonian capital city Tallinn.

The hierarchy of the spatial planning system is mainly organised around basic administrative units of Estonia (country – national plan → counties – county plans → municipalities – comprehensive plans). The green network is, at various extent, addressed at all three levels of planning. The national long-term spatial plan – “Estonia 2010” – delineates basic principles of Estonian ecological network by establishing corridors and 12 core areas of national and international importance.

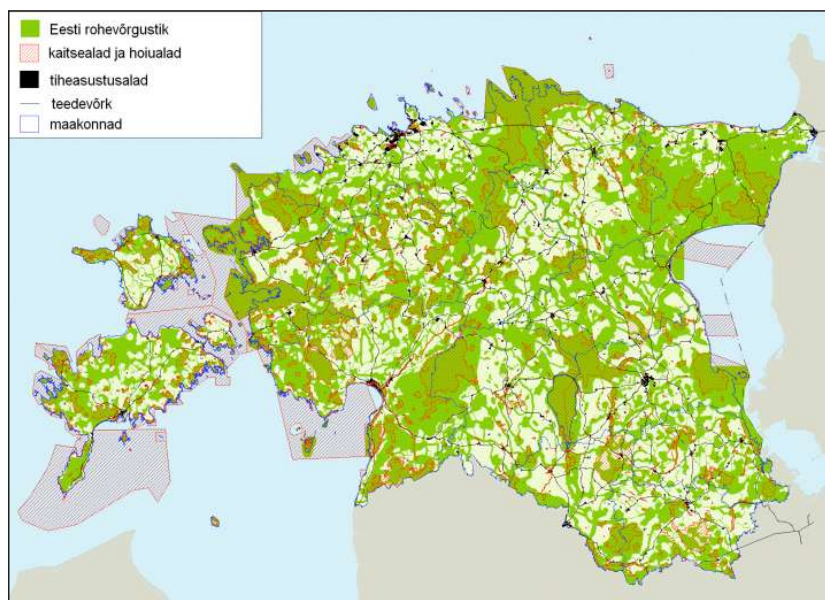


Figure 3. Green network map at national level, compiled of 14 Green Network plans prepared at county level (2001-2007).

At county level, the green network is one sub-theme of county thematic planning. In 1999, the second phase of county planning (thematic planning) was initiated which aims at defining environmental conditions for the development of land use and settlement. The Governmental decree for the second phase of county planning (1999-2002), regarding the definition of environmental conditions for the development of land-use and settlement structure, has been issued. The main tasks of the second phase of county planning include the design of the green network and the definition of valuable cultural/historical landscapes.

By December 2002, each of the 15 counties of Estonia was obligated to prepare a map of ecological networks on a scale of 1: 50 000, as one of the layers of thematic spatial planning. For that reason, three methodologies were elaborated; one for designing "green networks", a second for defining valuable cultural landscapes, and a third to combine the two above-mentioned themes.

One of the main objectives of planning the green network on the county level is not to define a large-scale 'green surface' and leave it out of use, but, first and foremost, to guarantee the naturally, environmentally, socio-economically grounded space structure, based on the location of different infrastructures and a needs analysis of society. The second purpose is to complete the functionality of the network of protected areas, by connecting them into a complete system with natural areas. Altogether 200 layers of information were suggested to be used to identify structural elements of the green network. They not only included core nature areas and areas of conflict but also buffer zones around industry, roads and urbanisation and many other considerations.

However, only by the end of 2007, all 15 counties have finished the preparation of these plans (see Figure 2 and 3) is not just a mapping exercise they have also defined management conditions, restrictions etc needed to put these green networks into place.

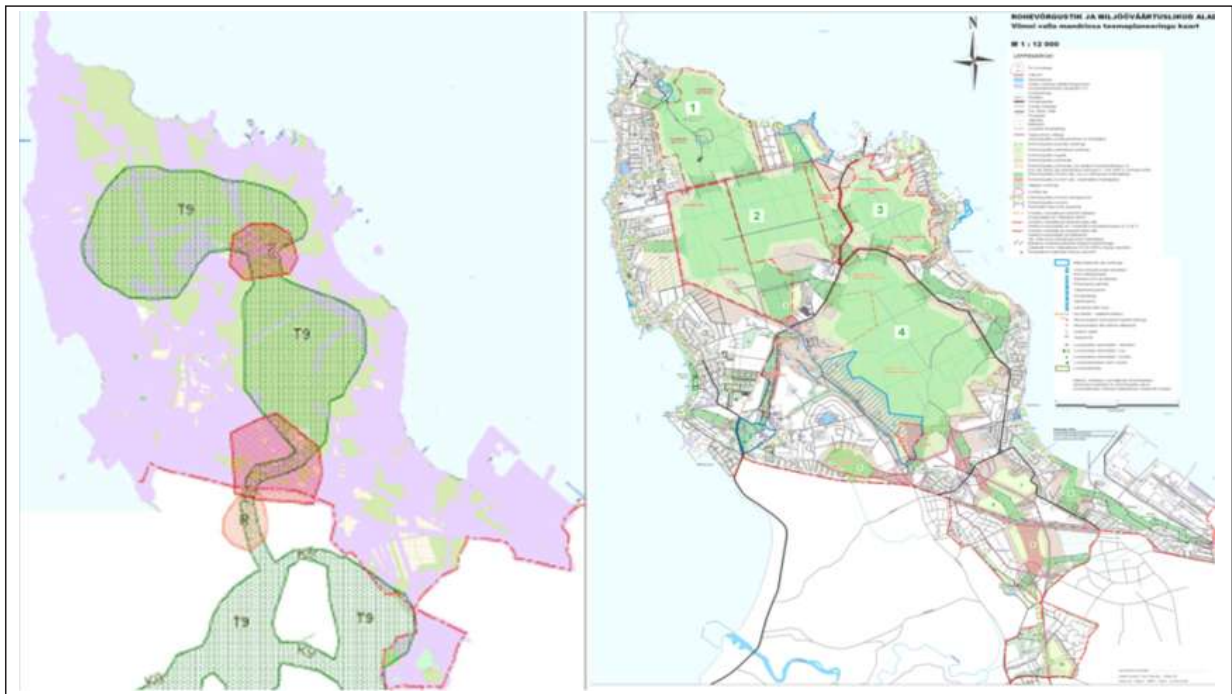


Figure 4. The comprehensive plan at municipality level (map in right) specifies the details of the Green Network delineated in county thematic plans (map in left) and lays down requirements for land use within the Green Network at the local level. Example of Viimsi Rural Municipality, Harju County, Estonia.

On the municipality level, according to the Act on Planning, green network is required as one topic in the comprehensive plan. The plan should specify the boundaries of green network delineated in county thematic plans and lay down requirements for land use within green network at local level.

There are noticeable differences in methodology between comprehensive plans produced by municipalities and the range of ways in which the Green Network is addressed by municipalities in comprehensive plans

reflects the variety of consultants involved by different local authorities. The adaptations made to thematic county plans in municipality's comprehensive plans are mostly enlargement or diminution of core areas or corridors or, less often, displacement of corridors (see Figure 4).

A wide variety of stakeholders representing different land-use sectors, as well as government, commerce and civil society, are relevant to Green Network issues at regional and local levels. According to Estonian planning law, local governments are obliged to specify the land-use conditions for Green Network areas defined at county level. Municipalities have absolute power in planning decisions about building within their administrative borders. County governments coordinated planning of the Green Network at a regional level (completed in 2007) and continue to supervise Green Network planning at local level. The Ministry of the Environment and its sub-divisions mainly possess advisory powers in considering impacts on the Green Network (e.g. Strategic/Environmental Impact Assessment (SEA/EIA)).

Various environmental non-governmental organisations' activities support implementation of the Green Network in general. However, so far their action has not been specifically aimed at maintaining or increasing ecological connectivity. Hunting organisations provide valuable information to local/regional governments and planning consultants on migration routes of animals, which helps to delineate green corridors. Ecologists have been closely involved in planning the Green Network at all the planning levels. They continue to make an important contribution to some of the network implementation measures, especially in the EIA process. However, there is not much specific legal guidance on how to consider the Green Network in their assessment.

Estonian legislation on spatial planning includes mechanisms for public involvement in Green Network planning. More specifically, at regional level the public should be involved in the final phases of the planning process. Public involvement includes a written consultation period in relation to draft planning documents for the Green Network, followed by a public discussion. The same is true at a local level but the public is to be included earlier in the process and there are: public discussions over earlier drafts of planning documents. These legal obligations represent the minimum requirements for public involvement and their success depends on how they are implemented in practice (e.g. public discussions need a skilled facilitator to be meaningful and produce a worthwhile output).

The legislation does not specify how to identify all relevant stakeholders and how to encourage them to take part in the processes. If only the legal requirements for participation are fulfilled, relevant stakeholders might be excluded from decision-making in relation to the Green Network. In order to participate, stakeholders need to have a specific interest in Green Network issues and an awareness of how to get involved. Currently, many stakeholders are unaware of the concept and of opportunities for involvement, which can prevent them from participating. Continuous direct contact with stakeholders has the potential to encourage them to be involved throughout the process of planning and implementing the Green Network (Kivimaa *et al* 2009).

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Green Infrastructure, European Commission

Marco Fritz, European Commission – DG Environment, B.2 Biodiversity¹

Why does the European Commission undertake the development of a Green Infrastructure strategy?

The answer is: Green Infrastructure could become one of the main tools to fight the loss of biodiversity in Europe.

Habitat loss, degradation and fragmentation are by far the biggest drivers of terrestrial biodiversity loss at EU level over the past 50 years. This is a result of the massive expansion of urban zones and transport infrastructures that have been cutting up Europe's landscape. In addition, traditional land use practices have been replaced by more intensive, mechanised and industrial-scale activities, especially in the agricultural and forestry sectors. This has weakened ecosystems, its functions and the biodiversity they support.

It is essential to ensure that ecosystems functions are maintained, to sustain crucial ecosystem services. On the one hand, as the Natura 2000 network of protected sites reaches completion, it is becoming increasingly important to ensure that ecosystems functions are maintained and the Natura 2000 network of sites is spatially and functionally coherent. This represents a great conservation and policy challenge. On the other hand, further benefits could be reaped from the development of and investment in green infrastructure in the 83% of EU territory falling outside the Natura 2000 network. Such an approach would call for the restoration of ecosystems insofar as possible to strengthen their resilience and sustain key services they provide, while also achieving conservation objectives and enabling Member States to adapt to climate change. The Commission is promoting and supporting exchanges of best practice as a basis for an EU strategy on green infrastructure after 2010.



Policy background

Green Infrastructure has a major role for mitigation and adaptation to Climate Change². It should contribute to strengthening ecosystem services and support the central role that biodiversity should play in reducing the impact of, and adapting to climate change.

On 15 March 2010, the Environment Council agreed on a new vision and target for biodiversity, reflecting the most ambitious option set out in the Commission Communication "Options for an EU vision and target for biodiversity beyond 2010" adopted in January³.

¹ The views expressed in this article are purely those of the writer and may not in any circumstances be regarded as stating an official position of the Commission.

² White paper on adapting to Climate change. More information on: http://ec.europa.eu/environment/climat/adaptation/index_en.htm

³ COM 2010 (4) final, 19.01.2010.

COM 2010 (4) foresees the development of an EU strategy on Green Infrastructure after 2010; and Council Conclusions of March 2010 call for the further elaboration of a concept on Green Infrastructure. DG ENV plans to publish a Communication in 2011, informing about the Green Infrastructure concept, and delivering a tool box for implementation, facilitating exchange of practices and coordinated integrated planning. Green Infrastructure therein is a key tool to address the ecosystem services dimension of biodiversity.

HEADLINE TARGET

Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss

To deliver on this biodiversity target, a new EU strategy, which will apply to terrestrial (including below-ground) and marine biodiversity, is to be developed by end 2010, taking into account international deliberations on a global biodiversity policy framework to be adopted at the 10th Conference of the Parties of the CBD in October 2010.

The Commission will set a limited number of ambitious, realistic, achievable and measurable sub-targets for different ecosystems, driving forces, pressures and responses. Such potential sub-targets could be:

- Sub-target 1: Integration and sustainable use of resources
- Sub-target 2: Overexploitation
- Sub-target 3: Fragmentation and Green Infrastructure
- Sub-target 4: Invasive Species
- Sub-target 5: Nature Conservation
- Sub-target 6: Contribution to global biodiversity.

Regarding the further implementation of the Nature Directives, in particular Article 10 of the Habitats Directive 92/43/EC⁴ recognises that ecological coherence of the Natura 2000 network as well as habitat quality is essential for the long-term survival of many species and habitats. It is of particular relevance when considering the impacts of climate change.

What is it about?

Green Infrastructure is aimed at strengthening ecosystems by developing an integrated land management. It shall protect and restore Europe's rich natural heritage and counter loss and fragmentation of the natural environment. Developing Green Infrastructure will enhance the land's permeability for migrating species and re-connect habitats which had been separated by intensive land use, transport routes and urban sprawl.

Green Infrastructure consists of spatially or functionally connected natural and man-made, rural and urban structures; it provides essential elements for the maintenance of ecosystem services such as clean water, productive soils and attractive recreational areas. The added value of Green Infrastructure however comes through its multifunctional use for greening transport and energy infrastructure, strengthening the functionality of ecosystems for delivering goods and services and for mitigating and adapting to climate change effects, for acting as barriers against erosion, and for enhancing the quality of life (health, tourism, conserving historic and cultural heritage). They often ensure efficient and sustainable land use by integrating interacting functions or activities on the same piece of land: the spatial character of Green Infrastructure is addressing both the question of connectivity and the provision of ecosystem services (such as natural coastal protection through marshes/flood plain restoration versus dikes; natural water cycling versus waste water treatment plant; urban solutions such as tree planting versus air conditioning etc).

⁴ OJ L 206, 22.7.1992, p. 7.

Green Infrastructure encompasses elements such as reforestation zones, green bridges and green roofs, green urban areas, fish migration channels, high nature value farmland or forest areas, which maintain ecological coherence as essential condition for healthy ecosystems. Green Infrastructure shows that financial investments in biodiversity and ecosystem protection are possible and can pay off ⁵.

The EU Green Infrastructure strategy will build on what has already been achieved and to provide a framework for further development that enables different policy sectors, stakeholders and levels of government to use those approaches that are best suited to their local circumstances and local land uses. In this respect, the Commission is actively promoting the exchange of best practices on the implementation of green infrastructure initiatives across different parts of the EU and is investigating ways to increase support for green infrastructure development through existing EU policies and funding mechanisms.

Green Infrastructure will play a decisive role in integrating biodiversity in other policies, such as agriculture, forestry, water, marine and fisheries, regional and cohesion policy, transport, energy and land use policy. It supports and integrates into existing instruments, such as the Water Framework Directive, the Marine Framework Directive, Environmental Impact Assessment and Strategic Environment Assessment, and the Financing Instrument for the Environment, LIFE.

The added value of Green Infrastructure however comes through its multifunctional use: It often ensures efficient and sustainable land use by integrating interacting functions or activities on the same piece of land: the spatial character of Green Infrastructure is addressing both the question of connectivity and the provision of ecosystem services (e.g. natural coastal protection through marshes/flood plain restoration – such climate change mitigation and adaptation measures are often more effective and cheaper than building dikes).

The Thematic Strategy on Urban Environment⁶ recognised the importance of cities where environmental, economic and social dimensions meet most strongly. These problems in cities are particularly complex and it is widely recognised that the most successful local authorities use integrated approaches to manage this complexity. Therefore the Commission published technical guidance on Integrated Environmental Management plans in 2008 by drawing on experiences and giving good practice examples. The Commission recommended to local authorities to integrate within their plans land use planning, transport and other areas in order to reduce the negative impacts on the environment such as urban sprawl and foster biodiversity in urban areas – Green Infrastructure could support to fulfil those targets.

How does Green Infrastructure look like?

As an example for the multiple purpose/scale character for Green Infrastructure, a floodplain forest illustrates the nested approach needed:

- Local scale:
 - enhancing recreation area, planting trees
 - harbouring key species of healthy floodplain ecosystems
- Regional scale:
 - connecting ecological networks, increasing their coherence.
 - Timber production
 - limitation of pesticides inflow, stops soil erosion
- National or river basin scale:
 - increasing flood retention capability
- Biogeographical or global scale:
 - carbon storage function,
 - climate change resilience

Investing in floodplain Green Infrastructure pays off: Restoration as part of lower Danube flood risk mitigation

⁵ More information on:

http://ec.europa.eu/environment/nature/ecosystems/index_en.htm

http://ec.europa.eu/environment/nature/info/pubs/docs/nat2000newsl/nat27_en.pdf

⁶ http://ec.europa.eu/environment/urban/pdf/com_2005_0718_en.pdf

scheme used €180 million, which compares very favourably to the €400 million damages caused by floods in this region in 2005 alone.



The reason why Green Infrastructure in urban and peri-urban areas, where the majority of European citizens live, is particularly important, are multiple: urban Green Infrastructure is reducing the urban-heat island effect), minimises flooding and improves air quality, links linking urban, peri-urban and rural areas, enhances the quality of life by offering recreation and nature education facilities ... and can take profit of high business interests in nature-based solutions such as green walls and green roofs.

Information on Green Infrastructure

Data availability on Green Infrastructure is scarce and scattered in Europe. The upcoming Biodiversity Information System for Europe, BISE, will offer a unique portal for biodiversity information in Europe, and Green Infrastructure information will be part of it.

Within the European Commission, priorities on the work on Green Infrastructure are as follows:

- 1: Making the concept operational
- 2: Integrating it into other policies
- 3: Developing coherent approach to spatial planning
- 4: Explore funding possibilities
- 5: Link to international agenda.

More information on Green Infrastructure can be found on DG Environment's website:

http://ec.europa.eu/environment/nature/ecosystems/index_en.htm.

The head article in the December 09 issues of the Natura 2000 Newsletter covers Green Infrastructure, to be found on:

http://ec.europa.eu/environment/nature/info/pubs/docs/nat2000news/nat27_es.pdf.

EEA will publish, within its series on 10 messages on biodiversity, a message on Urban biodiversity in May 2010. Two further publications, LIFE-Focus on Green Infrastructure, and a Factsheet on Green Infrastructure will be issued by DG Environment in June 2010. This year's Green Week (1-4 June 10) will address the state of biodiversity and nature in Europe and the world, the benefits they bring, present-day pressures on them, and possible solutions to the current rates of loss. Part of Green Week will be a stakeholder consultation on biodiversity post-2010 targets, and a session on Green Infrastructure: <http://ec.europa.eu/environment/greenweek/home.html>.

An upcoming, relevant event will be the conference in Ghent (BE) on biodiversity in urbanizing Europe, organised by the Belgian Presidency in September 2010.