Corso di formazione **"Valutare la rigenerazione urbana"**

Quale rigenerazione ?

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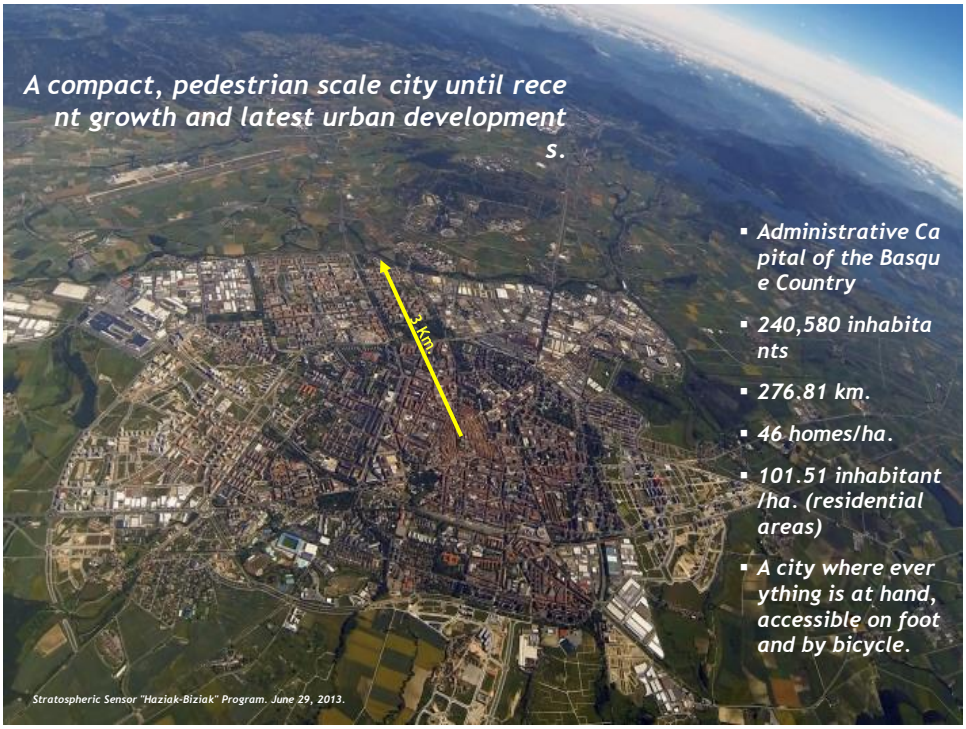

A compact, pedestrian scale city until rece nt growth and latest urban development s.
3 Km.
Administrative Ca pital of the Basqu e Country
240,580 inhabita nts
276.81 km.
46 homes/ha.
101.51 inhabitant /ha. (residential areas)
A city where ever ything is at hand, accessible on foot and by bicycle.
Stratospheric Sensor "Haziak-Biziak" Program. June 29, 2013.


Altro 40% montagna con boschi e pascoli e paesaggi di grande valore, soprattutto a sud
Si trova su un acquifero esteso, che alimenta una grande rete di fiumi e corsi d'acqua minori.
Il fiume principale, lo Zadorra li riceve tutti
Circa 28.000 ettari di cui circa il 40% agricolo con boschi residui e biodiversità importante
Google Earth
GG
Gioia Gibelli
Soc. Italiana di Ecologia del Paesaggio – Siep-Iale – Resilient Lab

Il percorso

1980 – Crisi economica: il Sindaco Cuerda crea il CEA, Centro di Studi Ambientali

1990 - Il CEA lancia il Piano per realizzare un Piano del Sistema del verde periurbano, inteso come soluzione generale per risolvere il problema delle aree degradate tra la città e la campagna. In realtà la greenbelt è stata una strategia multifunzionale per introdurre la landscape ecology nelle scelte di Pianificazione.

1995 - Carta di Aalborg: Vitoria-Gasteiz è la prima città Spagnola che firma la Carta e la prima a definire l'Agenda 21 locale. Temi chiave: idrologia, inquinamento e rumore trattati in modo integrato

1995 – Prima proposta di Greenbelt, definita a partire dai sistemi naturali principali

1998 – la Greenbelt entra nelle strategie alla base della revisione del Piano Urbanistico Generale

1998 - 2005 – Costruzione della Greenbelt contemporaneamente al boom edilizio

2005 – da Vitoria parte l'idea della rete ecologica provinciale

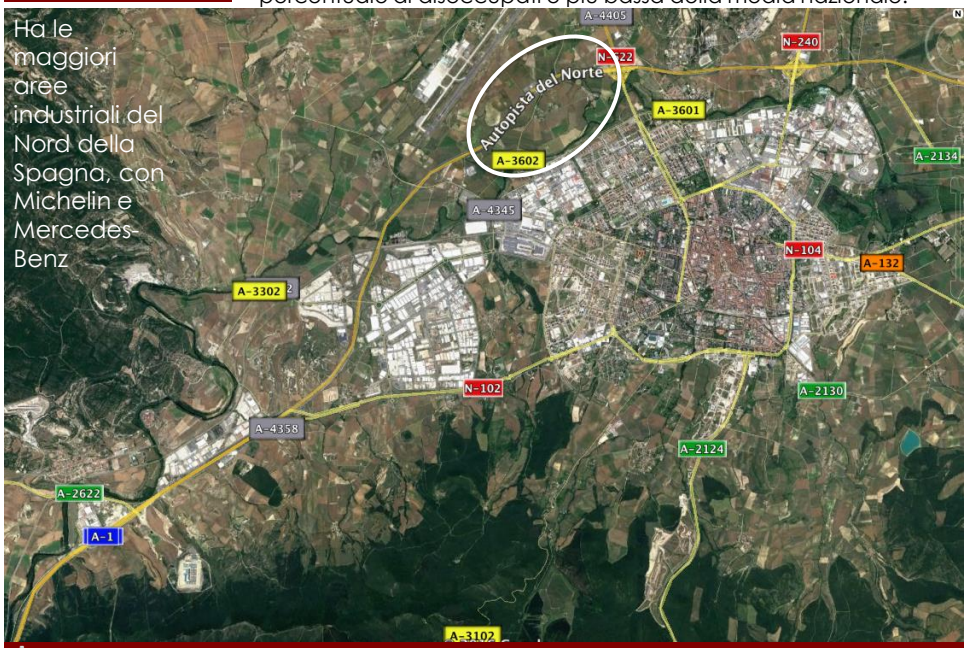
2007 - Il conflitto tra urbanizzazione e natura induce il Sindaco Alfonso Alonsoa prendere una decisione forte: "La parte sud della città sarà un grande parco naturale."

2012 - European Green Capital

Oggi - L'area sud (più di 15.000 ettari) sta per essere dichiarata ufficialmente Parco naturale dal Governo Basco.

Minacce e temi

La città ha uno dei redditi pro-capite più alti di Spagna, e la percentuale di disoccupati è più bassa della media nazionale.



Vitoria-Gasteiz, Spain: From Urban Greenbelt to Regional Green Infr

Minacce e temi

Dal **1998 al 2009**
ettari edificati da 1800 a 3300
nuove case 40.000
Incremento demografico 8%

Figure 7.7 Fierce battles have been fought against urbanization processes during the most speculative decade in Spain's history. The greenbelt has b subjected to multiple pressures along its thirty-five-kilometer perimeter. CEA.

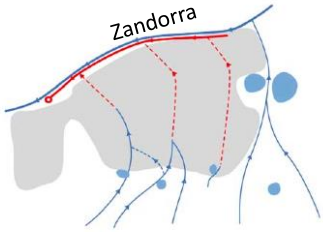
Minacce e temi

Acquiferi, fiumi e zone umide

Vitoria poggia su un acquifero di circa 450.000.000 di litri

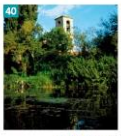
Oggi usato quasi solo per agricoltura e irrigazione e contaminato da nitrati

Problemi: 5 rii tombinati e usati come fogne
alluvioni urbane
sovraccarico dei depuratori
sfiori nello Zandorra



Salburua wetlands

Channelling of floodwaters from the river Zadorra



Balsas wetlands River Zadorra


L'inizio – Gli studi del CEA

conclusioni:

1. Vitoria-Gasteiz ha un grande territorio di ottima qualità ecologica, di cui una buona parte pubblica, e ha una grande attitudine alla conservazione del paesaggio e della biodiversità: la prima proposta è di proteggere 1000 ettari come greenbelt.

2. Vitoria-Gasteiz è una città compatta il cui centro è ben curato, a differenza delle frange urbane degradate e con rischio ambientale elevato, specialmente nei contesti dei laghi e dei fiumi.

3. Una volta recuperati, I paesaggi di frangia, possono giocare un ruolo straordinario nei confronti delle rete ecologica a scala regionale. Possono anche definire unnuovo modello urbano con effetti positivi sulla qualità della vita di tutti i cittadini.

Caratteristiche e temi

La qualità urbana

Le green infrastructures urbane

La mobilità sostenibile

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Caratteristiche e temi

Rivalutare l'Agricoltura e i paesaggi rurali

educational activities

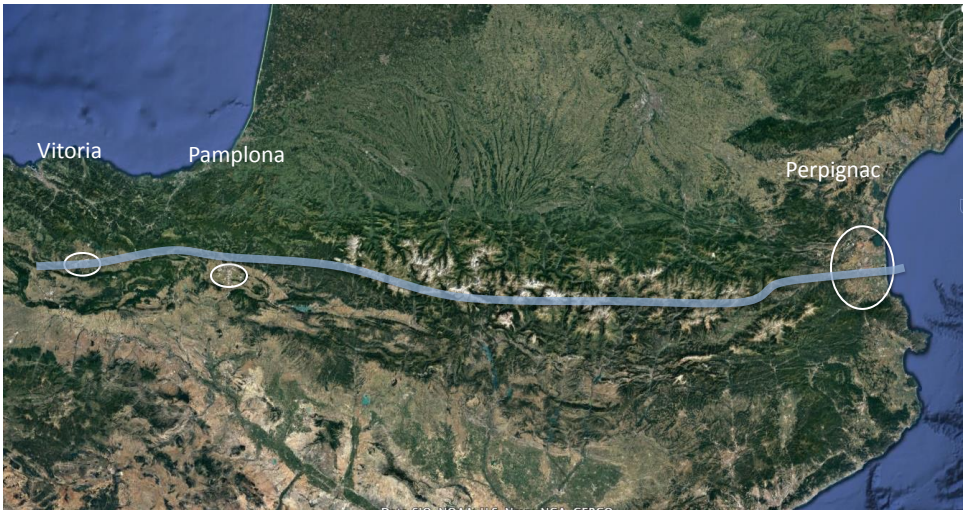
ecological horticulture

place for people over fiftyfive years old

in 1997 the Olarizu meadows and prairies were added to the greenbelt

Caratteristiche e temi

Il fiume principale, lo Zadorra collega la pianura di Alava con la valle del fiume Ebro e con il Mediterraneo



1995 - 35 Km di perimetro

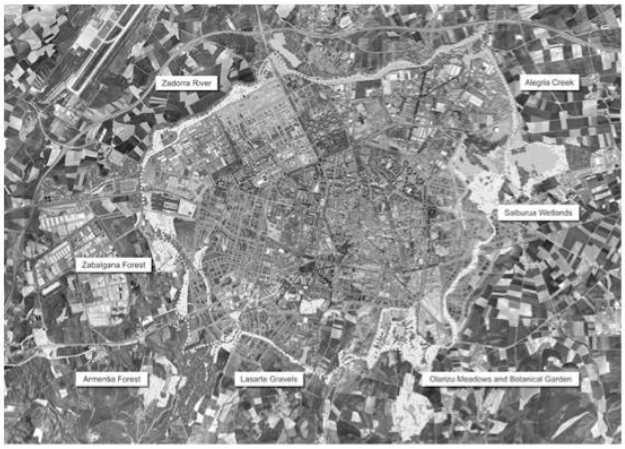
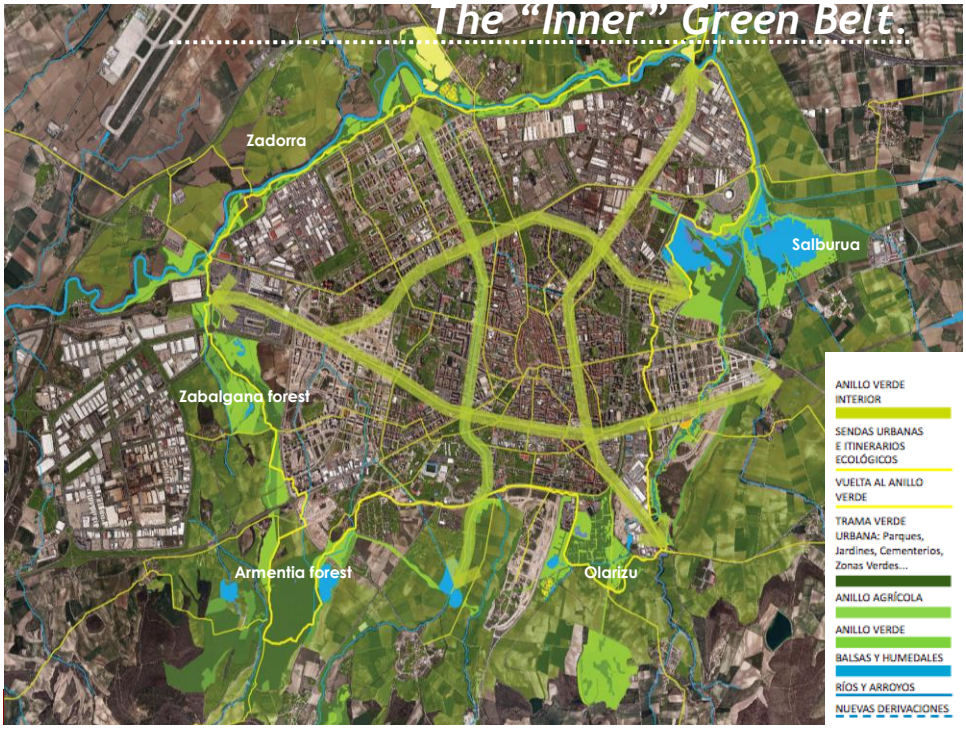


Figure 7.2 Greenbelt of Vitoria-Gasteiz. Credit: CEA.

The first proposal for the greenbelt in 1995 was defined by the main natural systems: a river that marks the boundary of the city to the north (**Zadorra)**, a **mountain system to the south**, and a **drainage system with small rivers and streams to the east and west** of the city. Moreover, there were a number of small "island woods" (**Armentia and Zabalgana**) and a consolidated peri-urban park with its traditional procession and popu- lar festivities **(Olarizu**). A few decades ago, a number of drained wetlands (**Salburua**), before being occupied by farming land, had provided habitats for communities of plants and animals, and played a regulatory role by helping to control flooding, so there was considerable support for their recovery. Despite the fact that many of these spaces were degraded, there was huge potential for their recovery.

2013: la CE pubblica la Strategia Europea delle Infrastrutture Verdi (*Green Infrastructure-Enhancing Europe´s Natural Capital, Comissione Europea, Bruxelles, 6.5.2013*) con l'obiettivo di spingere lo sviluppo delle Infrastrutture Verdi in tutti gli ambiti territoriali, nazionali, regionali e locali) enfatizzandone l'importanza per l'organizzazione del territorio

Vitoria-Gasteiz, : un SISTEMA DE INFRAESTRUCTURA VERDE URBANA, basado en funciones ecosistémicas, que permitan al sistema urbano evolucionar hacia mayores cotas de sostenibilid



Strategie

1.3 GREEN INFRASTRUCTURE FUNCTIONS AND BENEFITS

The green infrastructure helps us to maintain the valuable services provided by ecosystems.


Retaining and filtering rainwater, Portland


Network of bicycle lanes and public transport, Vitoria-Gasteiz


Salburua Ramsar Wetland, Vitoria-Gasteiz


Urban paths and wooded walkways, Vitoria-Gasteiz


Separation of floodwaters from the river Zadorra, Vitoria-Gasteiz


Floodwater channels in the river Zadorra, multifunction spaces, Vitoria-Gasteiz


Rain garden, Wissahickon Charter School, Philadelphia

ADAPTING TO CLIMATE CHANGE

1. Flood prevention, regulating rainwater run-off.
2. Reducing risks deriving from flooding, floodwater regulation.
3. Increasing aquifer recharge water.
4. Thermal regulation and reduction of urban heat islands.
5. Improving ecological permeability - movement and refuge of species - in the case of extreme weather conditions by creating ecological networks.

MITIGATING CLIMATE CHANGE

6. Increasing carbon sequestration (sink effect).
7. Reducing carbon emissions from motor vehicles by increasing public transport infrastructures and sustainable mobility (pathways, bicycle lanes, etc.).
8. Generating renewable energy sources ("green buildings").
9. Reducing energy consumption (climatic heating by means of urban forest, green facades, bioclimatic construction).

IMPROVING BIODIVERSITY

10. Maintenance, protection and enhancement of natural habitats, wildlife and biodiversity.
11. Increasing biocapacity.

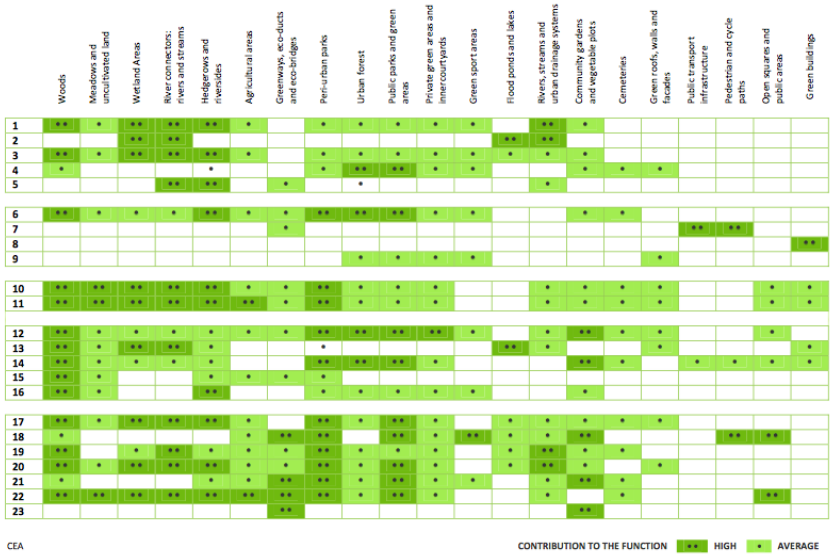
IMPROVING ENVIRONMENTAL QUALITY

12. Improving air quality.
13. Improving water quality (water treatment).
14. Reducing noise levels.
15. Improving and maintaining agricultural land values (increasing soil fertility).
16. Controlling soil erosion.

IMPROVING HEALTH AND WELL-BEING

17. Improving aesthetic values.
18. Increasing resources for sports and leisure pursuits.
19. Increasing resources for contemplation and spiritual well-being.
20. Generating resources for training and education.
21. Generating community resources (involving citizens).
22. Increasing the feeling of belonging and identity.
23. Urban agriculture and locally produced food.

Strategie



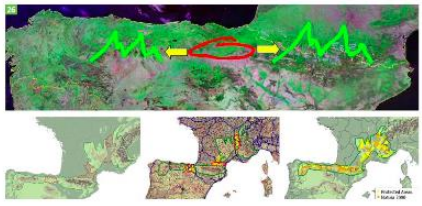
Strategie

1.4 GREEN INFRASTRUCTURE PLANNING AT DIFFERENT SPATIAL SCALES

Structuring a Green Infrastructure system or network requires regional planning and management strategies at different spatial scales.

INTERNATIONAL SCALE
A number of transnational strategies work in order to recover ecological connectivity processes through the definition of large ecological corridors.

At a European level, the Pan-European Ecological Network attempts to advance towards spatial ecological connectivity at different scales and in different ambits (not only terrestrial) in regional and sector planning policies.

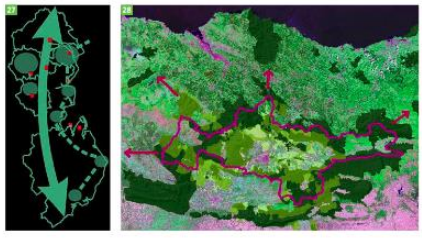


Large Biodiversity Corridors Planning Strategies
European Natura 2000 Network
Large mountain ranges
Pan-European Ecological Network

"Basque Threshold" in the Great Mountain Corridor of the Cantabria - Pyrenees - French Massif Central - Western Alps, Mountain Corridors Initiative of IUCN.

REGIONAL SCALE
At a regional scale, the network of protected spaces does not guarantee the necessary ecological connectivity of the region as a whole. For this reason, the landscape scale is advocated more and more for the design of functional ecological networks.

At this scale, the Green infrastructure is conceived as a regional system that includes spaces with environmental, landscape and heritage values, as well as the necessary connections to maintain the basic ecological processes of the region.



Natural Protected Spaces Network
Connecting ecological corridors
Protected Landscapes
Major routes providing access to natural spaces
Networks of Greenways

Functional ecological network around the Upland Ring, Bioregion of Central Alava.

8 Environmental Studies Centre

The greenbelt is indeed a physical reality today, but it is also “a way of doing things.” This fragile peri-urban system and the city are still two different realities that do indeed coexist and should be directly integrated.
the principles that inspired the strategy of the greenbelt: landscape ecology, social integration, balanced land use distribution, and, above all, full awareness and respect for our region, the rural landscape where we all come from and which we all need, today perhaps more than ever.

Infrastruttura verde urbana

Mobilità sostenibile

Riequilibrio idrologico e rete ecologica

Agricoltura e paesaggio rurale

Infrastruttura verde urbana

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La Greenbelt: dalla scala urbana alla scala regionale

Primi passi

The first steps have been taken in Vitoria-Gasteiz by extending the marketplaces of the greenbelt to community gardens in different neigh-borhoods,

PARTECIPAZIONE

La Greenbelt: dalla scala urbana alla scala regionale

Primi passi : mobilità sostenibile

Pedonalizzazione e ciclabilità.

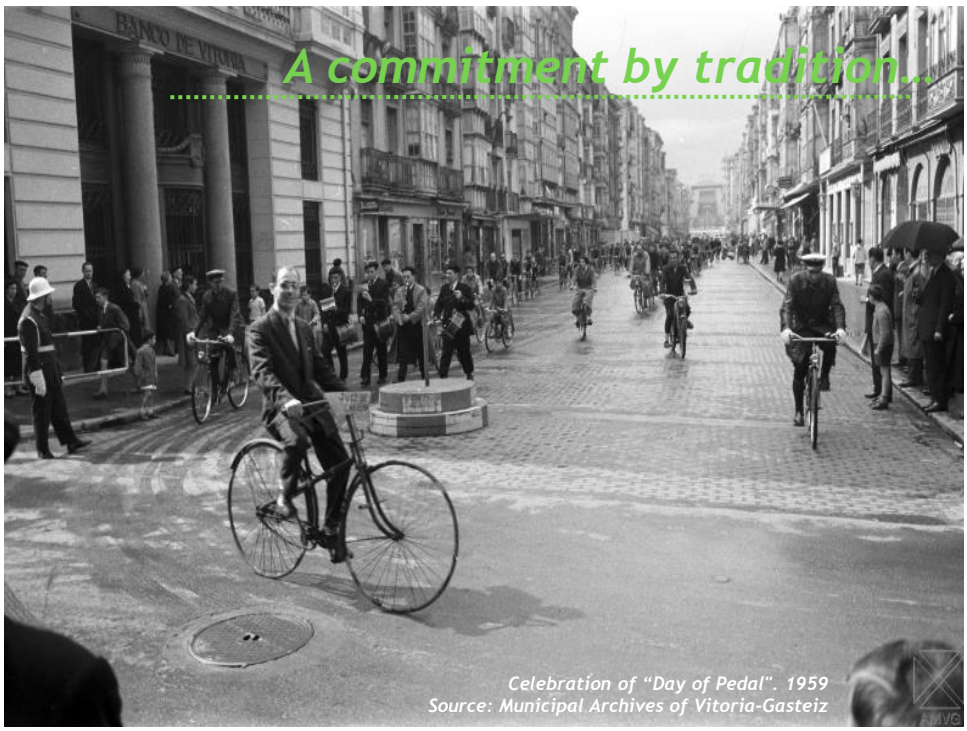
2003 il Piano Urbano per la pedonalizzaione

PARTECIPAZIONE

GG Gioia Gibelli Soc. Italiana di Ecologia del Paesaggio – Siep-Iale – Resilient Lab

Market Day. 1955
Source: Municipal Archives of Vitoria-Gasteiz

A commitment by tradition…



Celebration of "Day of Pedal". 1959
Source: Municipal Archives of Vitoria-Gasteiz

A commitment by tradition...

Old bicycle lane Portal de Gamarra (1964)
ARQUE. Municipal Archives of Vitoria-Gasteiz.

Dato Street, 1966
Source: Municipal Archives of Vitoria-Gasteiz

Infrastruttura verde urbana

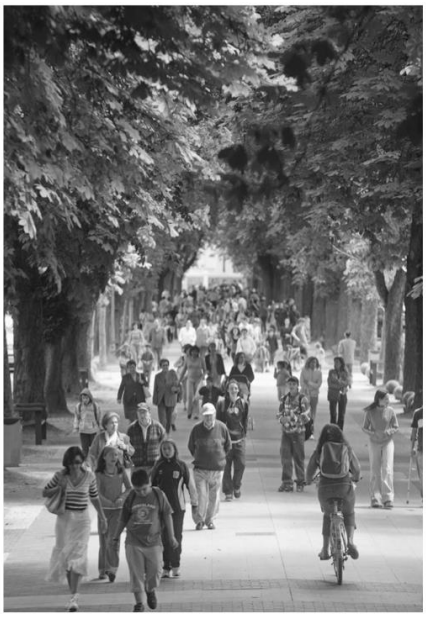


Figure 7.5 The success of the Paseo de la Senda in connecting the city center with the countryside—today's greenbelt—has been a great reference for the new Plan for Sustainable Mobility. Credit: Quintas.

La Greenbelt

Passi seguenti

Research and proposals for an inner greenbelt are currently under way, directly promoted by the present mayor, Javier Maroto.

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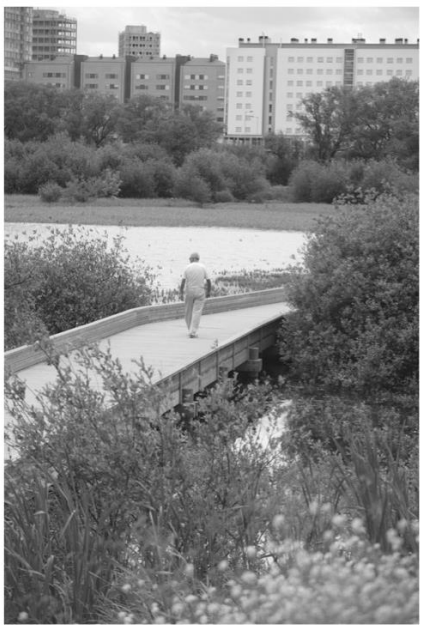
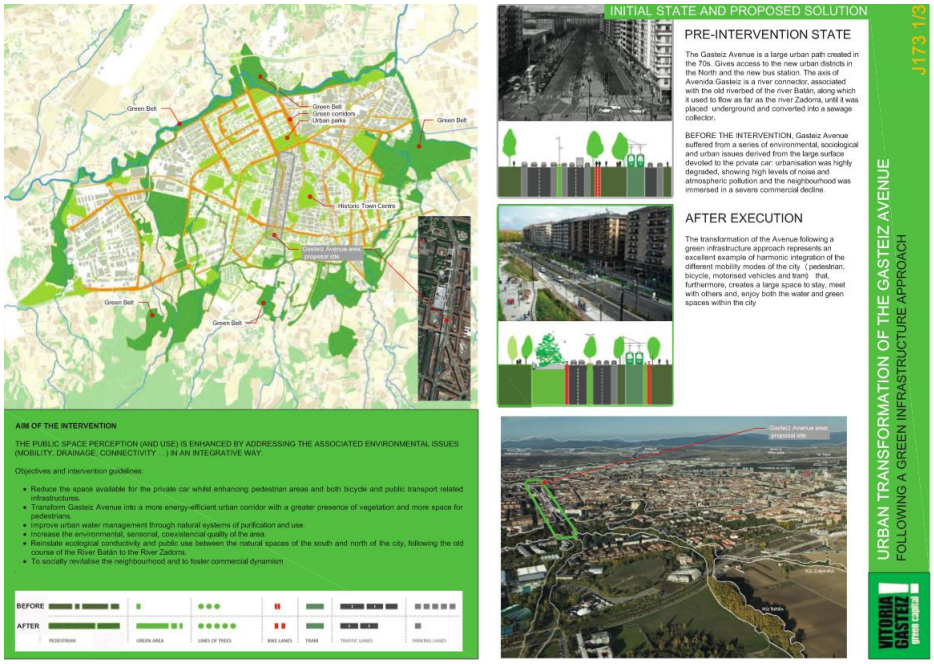


Figure 7.8 The greenbelt starts to enter the consolidated city in order to impregnate it with its values. There is great potential to increase urban biodiversity and biocapacity rates. Credit: Quintas.

PARTECIPAZIONE



Infrastruttura verde urbana

Avenida Gasteiz

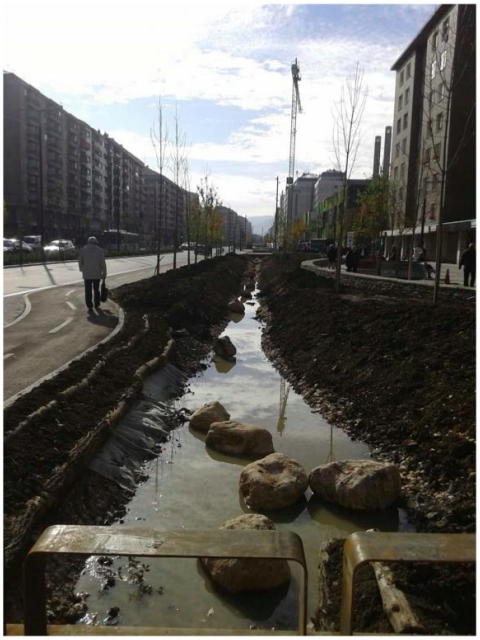
From a private car oriented public spac

Infrastruttura verde urbana

Avenida Gasteiz

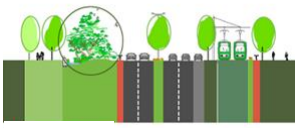
Avenida Gasteiz

Avenida Gasteiz



Fiume Batan

Before



After

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Avenida Gasteiz

La Senda walkway

Circa 90 km di percorsi pedonali e ciclabili

Green Belt walkway

MOBILITA'

A commitment by tradition…

The Kingdom of Walking.

The car free area started in 1976, and in 1993 reached up to 40,000 square meters and up to more than 20 streets. In this period, the number of cars grew by 50%

Some of the pedestrianized str eets registered up to 25,400 ve hicles a day before to free the m from the cars.

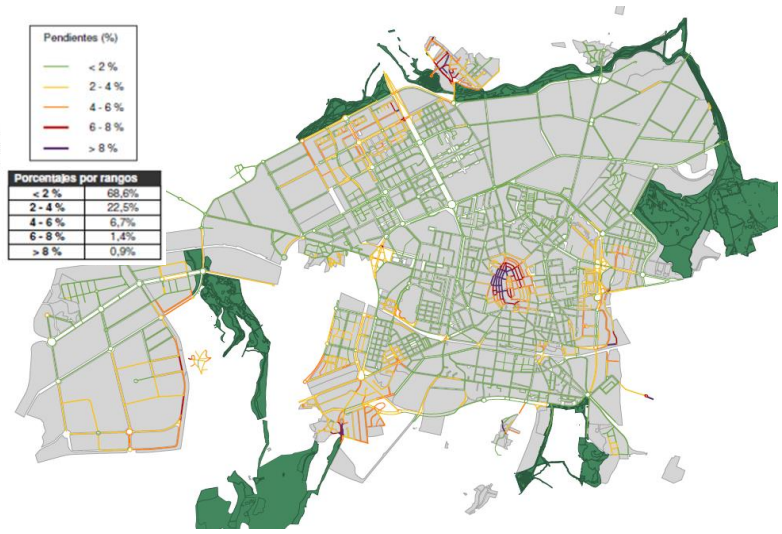
A commitment by tradition…

Nowadays the pedestrian zones reach up to 50 0,000 square meters.

A shopping street in the heart of the medieval quarter.

Renovation of the Plaza de la Virgen Blanca, the real heart of the city, has made it a paradise for pedestrians.

A commitment by opportunity…



Slope map.
Source: Sustainable Mobility and Public Space Plan of Vitoria-Gasteiz

A commitment by opportunity…

Adequate accessibility

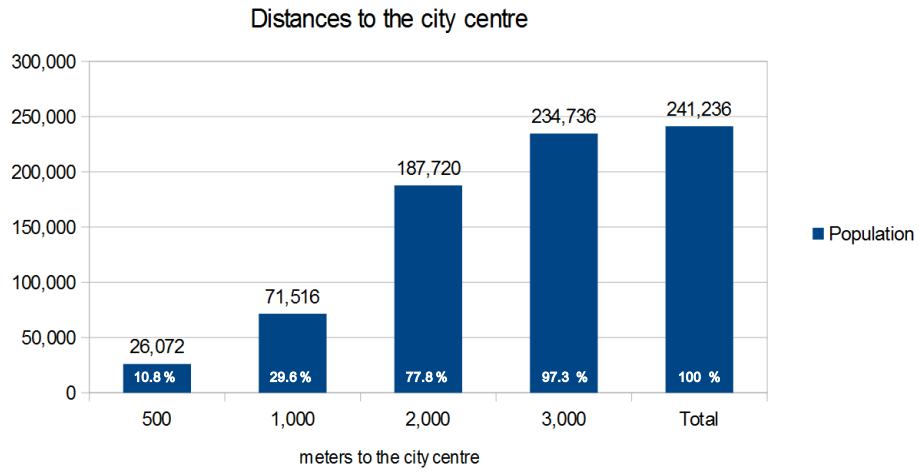
- *Width > 2.5 m and Slope < 5%*
- *Moving walkway*

Inadequate accessibility

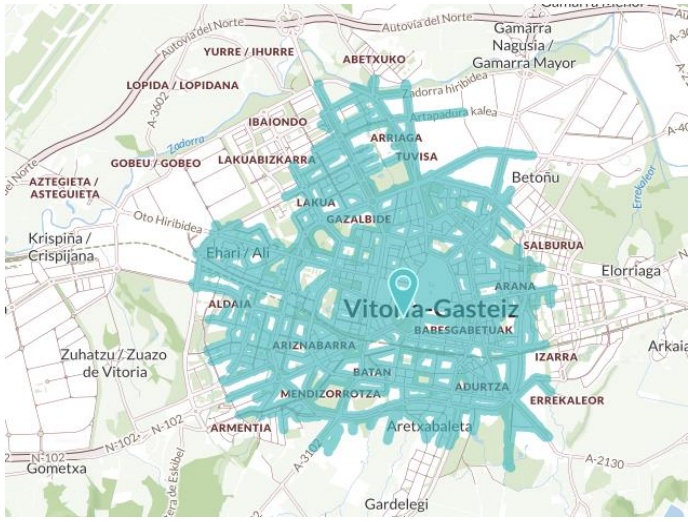
- *Width < 2.5 m and Slope > 5%*
- *Slope > 5%*
- *Width < 2.5 m*

Accessibility map.
Source: Sustainable Mobility and Public Spac e Plan of Vitoria-Gasteiz

A commitment by opportunity…



A commitment by opportunity…



bikecitizens.net

after a 10 minutes ride by bike …

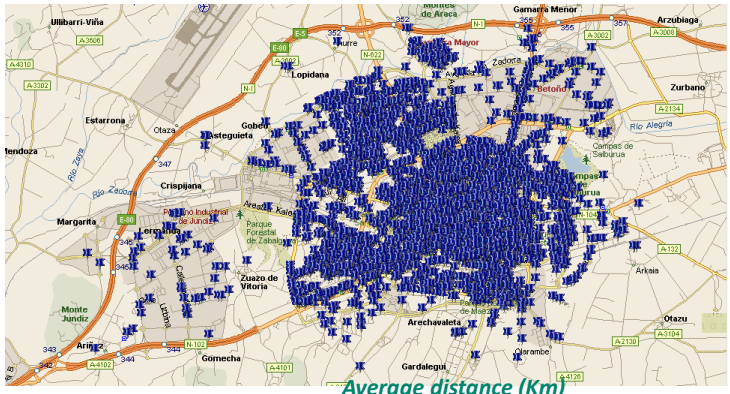
A commitment by opportunity…

Duration

< 10' (39%)	11'-20' (34%)	> 20' (27%)

Average duration (min)

19	20	20	28	35

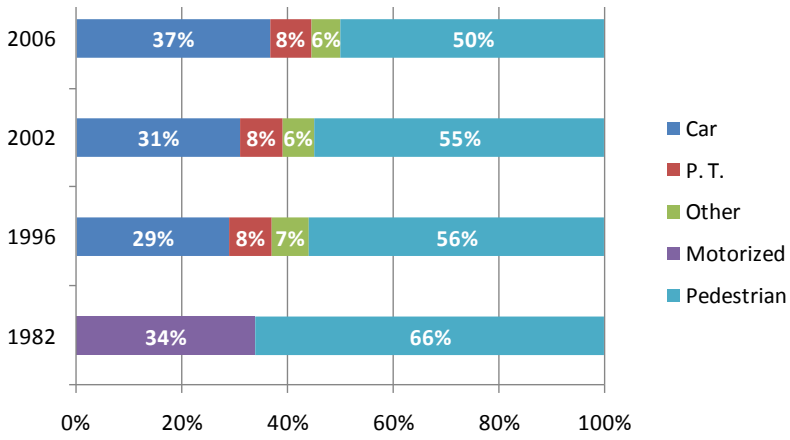


Average distance (Km)

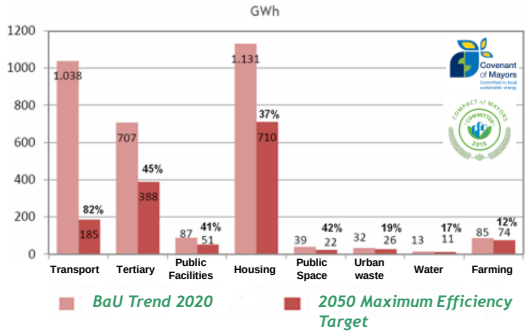
1.1	2.5	3.0	3.1

A commitment by convenience …

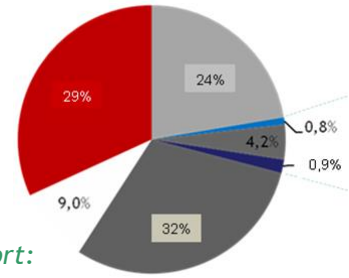
Modal Split trend.
Changes in urban scale forces a quick motorisation in the daily mobility



A commitment by convenience …



Hot to become a Carbon Neutral City by 2050?



Private transport:

29% of CO_2 Emissions in 2006

The social consensus …

Towards a successful Plan through citizen engagement.

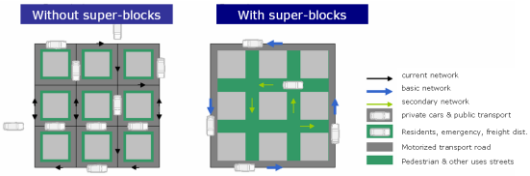
October 2006
1st participatory workshop.
Mobility and sustainability in Vitoria-Gasteiz Report

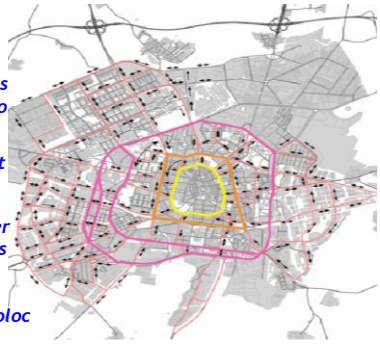
November 2006
2nd participatory workshop.
Mobility in Vitoria-Gasteiz in 2010???

January 2007
3rd participatory workshop
Citizens' Pact for Sustainable Mobility

Citizens' Pact for Sustainable Mobility
- Signature. April 2007
- Plenary approval. September 2007
- Social Council approval. July 2008

A new urban cell: Superblocks and main roads.





The superblock is a key element of the mobility and public space strategy. Gives the public space back to the people from the private car.

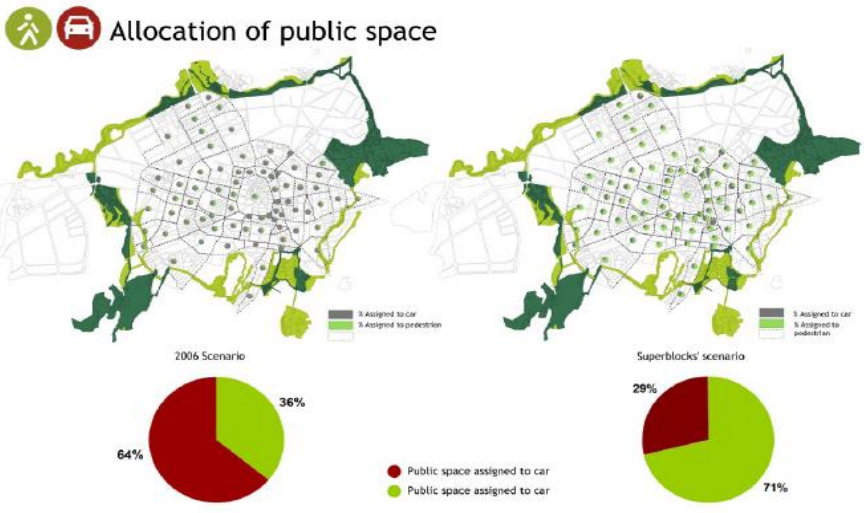
A superblock is a new concept, a geographical space delimited by main corridors that covers several city blocks.

Private cars and public transport are kept outside the super block while the inner streets are redesigned to be mainly used by pedestrians.

Vitoria-Gasteiz has reorganized the whole city in 72 superblocks.

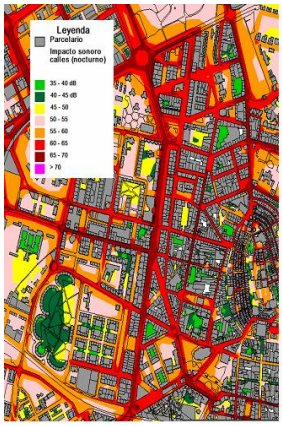
With the scheme of the superblock is possible to create different and efficient networks for pedestrians, cyclists and motorized modes

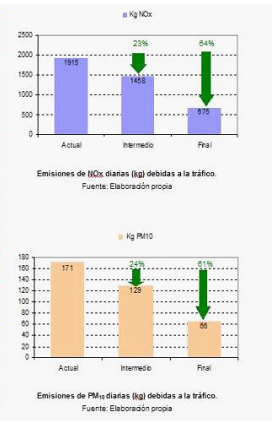
A new urban cell: Superblocks and main roads.



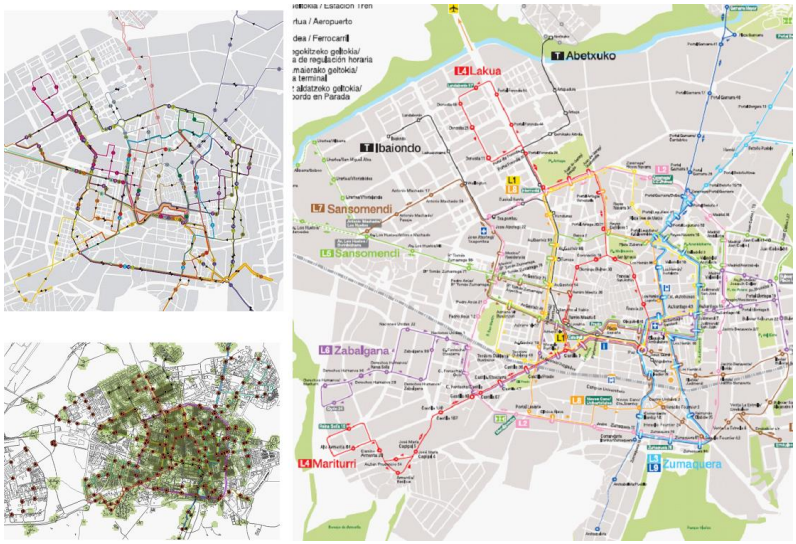
Super-block scheme allows ...

- *To free public space for mobility activ ities, accommodation and respect for pedestrians.*
- *To ensure the diversity of activities in a re-qualified public space.*
- *To improve accessibility.*
- *To reduce noise and polluting gas emis sions in the city.*
- *To not significantly affect traffic capa city, neither in the super-block district , nor in the rest of the city.*



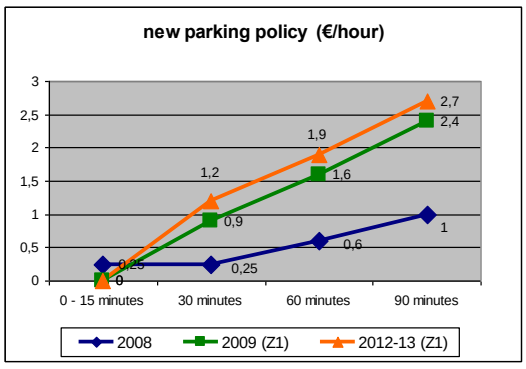


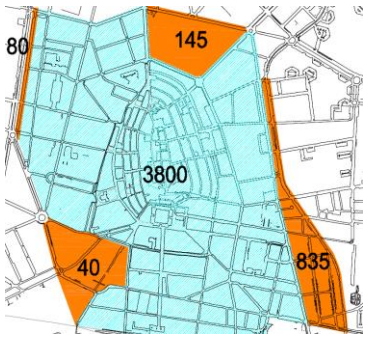
A new public transport network



A new on-street parking policy

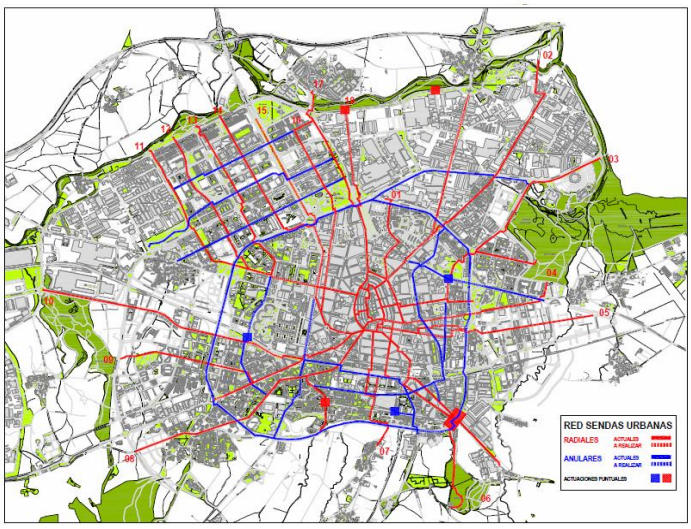
Higher prices:



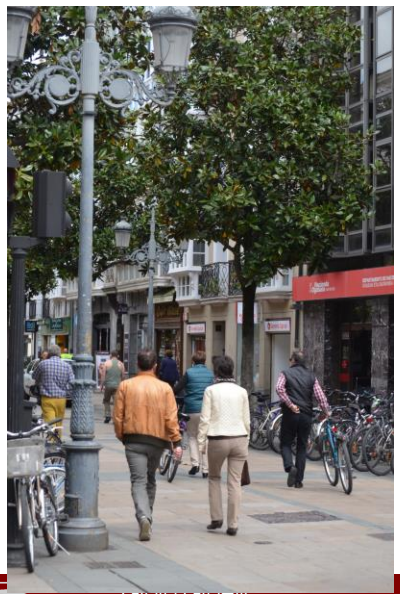


Extended area: 29%

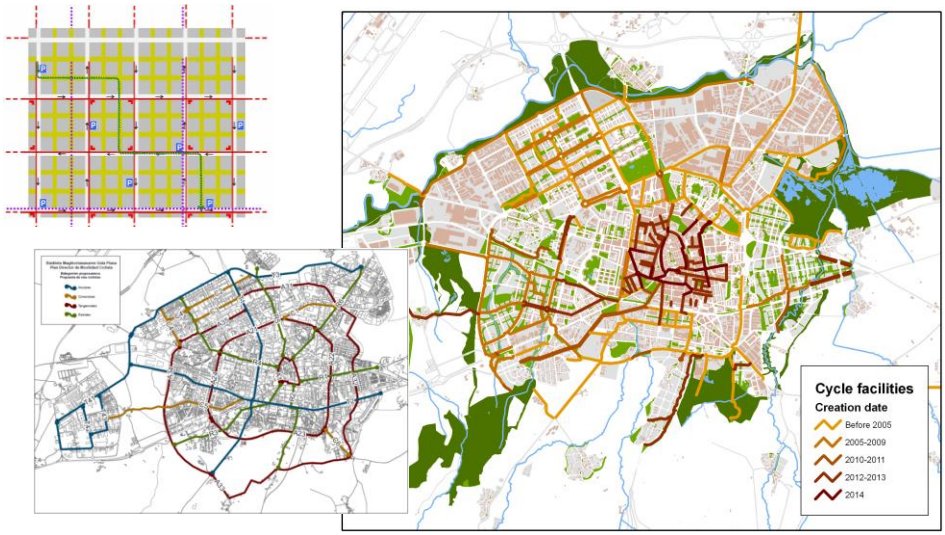
An improved pedestrian network



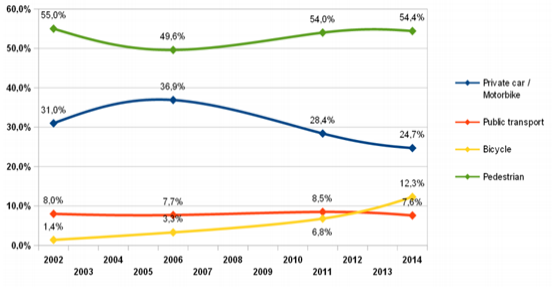
An improved pedestrian network



An improved bicycle network



Main figures after 8 years

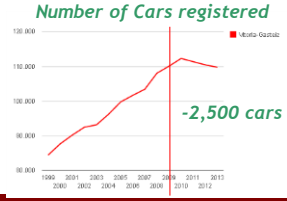


We succeeded in reversing the rising trend in private car use, raising the pedestrian share to 2002 levels and increasing the use of bicycle.

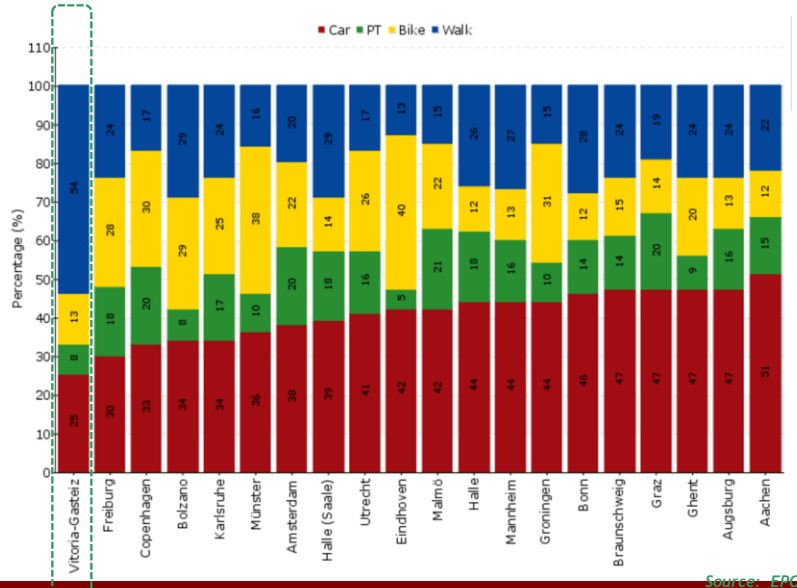
- *Walking modal split has increased from 49.9 up to 54.4%*
- *Bicycle modal split has increased f rom 3.4 up to 12.3%*
- *Private cars modal split went fro m 36.6% down to 24.7%*
- *-9.5 % CO2 emissions in transport*
- *-8.9% energy consumption in trans port*

Trips		2006	2011	2014
GENERAL MODAL SHARE	Pedestrian	288,141	447,911	495,427
	Bicycle	19,051	56,400	111,851
	Public transport	45,045	70,854	69,491
	Car or motorbike	214,224	236,008	224,892
	Others	14,875	18,653	9,665

Number of Cars registered



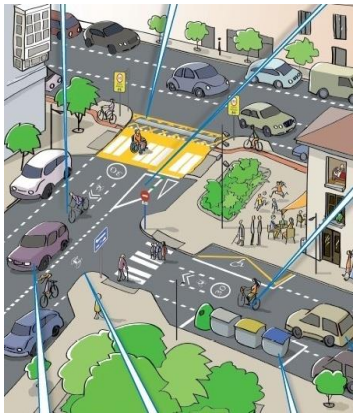
Active mobility in the focus: A value to preserve.



Source: EPOMM

An improved bicycle network

Area 30 Pilot scheme in the city centre.



The measure does not end here but extends to all city.

The increase in the number of cyclists on sidewalks and pede strian areas has led to conflicts with pedestrians, so has bee n designed a traffic calming campaign in 47 streets of downt own with 3 objectives

- *Improving road safety for pedestrian and cyclists*
- *Reduce emissions of pollutants*
- *Reclaim the space for pedestrians*


Coca-Cola
Improved permeability for cyclists


Improved permeability for cyclists

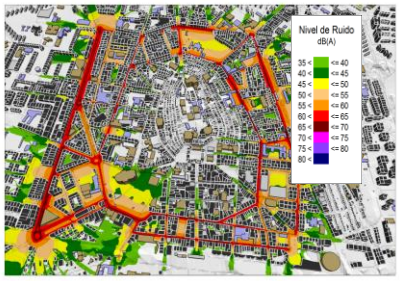

Improved permeability for cyclists

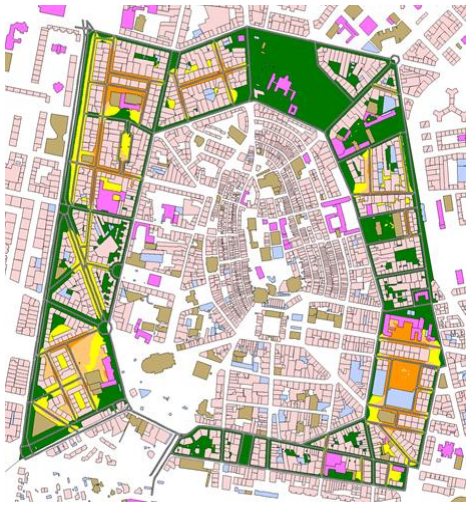

20
Improved permeability for cyclists

Road safety trainning at primary school

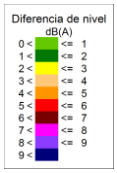
Access regulations with privileges for cargobikes

Traffic-calming assessment

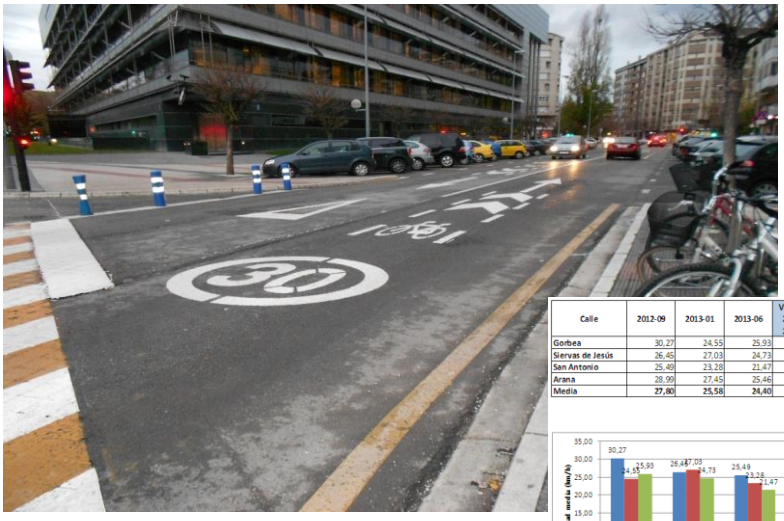




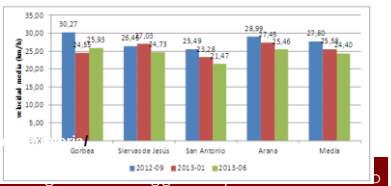
Reduction in the noise levels in the pilot area after the implementation of the measure



Traffic-calming assessment



Calle	2012-09	2013-01	2013-06	Variación 2012-09 2013-01	Variación 2013-01 2013-06	Variación 2012-09 2013-06
Gorbea	30,27	24,55	25,93	-18,9%	5,6%	-14,4%
Siervas de Jesús	26,45	27,03	24,73	2,2%	-8,5%	-6,5%
San Antonio	25,49	23,28	21,47	-8,7%	-7,8%	-15,8%
Arana	28,99	27,45	25,46	-5,3%	-7,2%	-12,2%
Media	**27,80**	**25,58**	**24,40**	**-8,0%**	**-4,6%**	**-12,2%**



Regolare il sistema idrologico

two of the main industrial areas were laid out on the Za- dorra floodplains during the 1970s, and they suffered greatly from regular flooding episodes.

990s when, in order to avoid the frequent economic consequences of the river overflowing, the Basque government and the Provincial Coun- cil of Alava proposed to transform the river into a large concrete channel.

rejected outright by the citizens

But the most important achievement was the decision not to develop the floodable areas on the right bank of the river (figure 7.3). This would allow the establishment of a boundary for urban growth and the preservation of agricultural areas, which would also serve as natural separation pools when needed.

Regolare il sistema idrologico

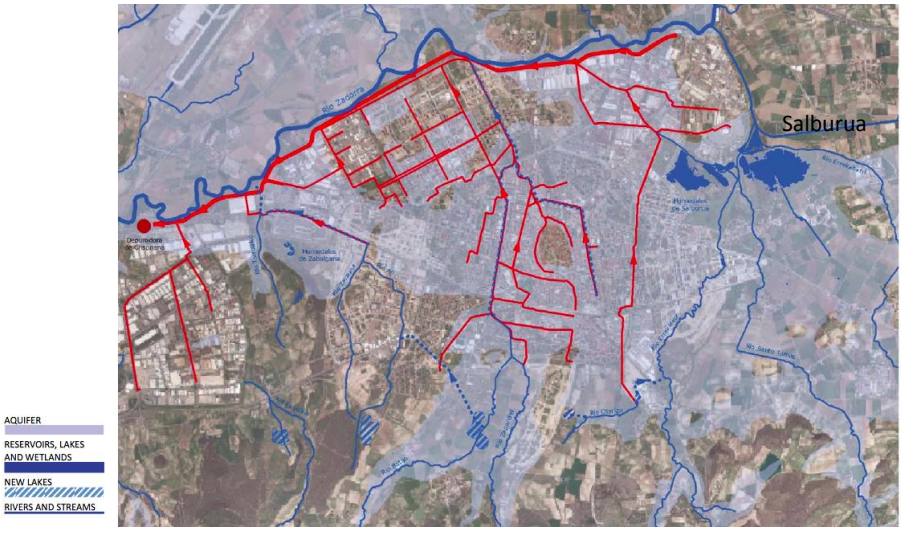
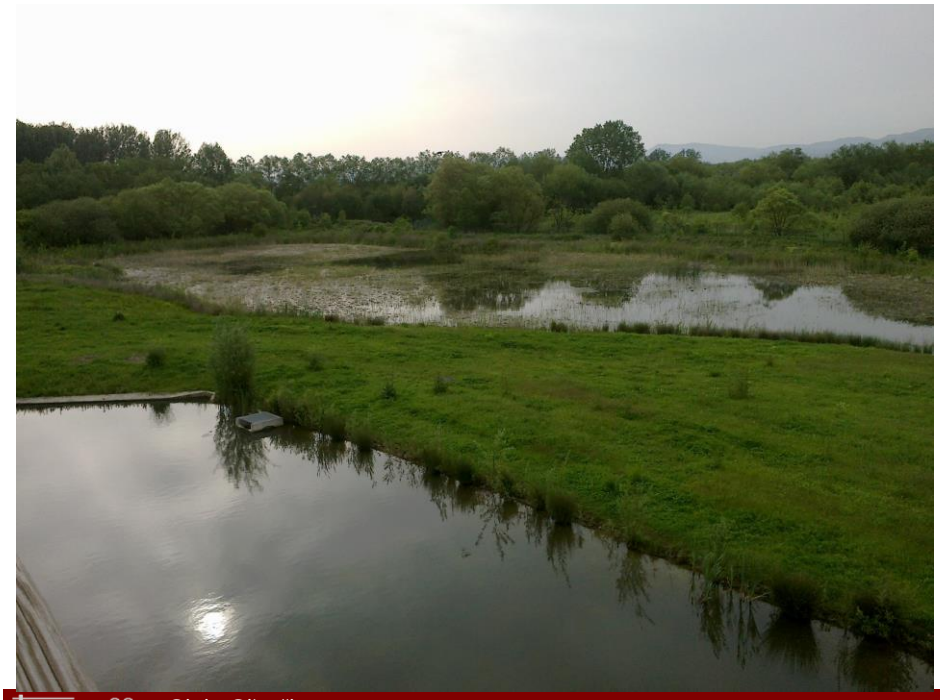


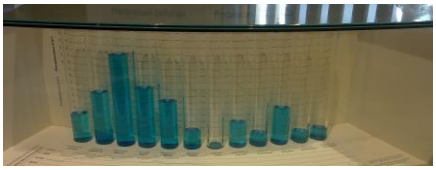
Figure 7.3 Multiple projects for ecological regeneration and hydraulic adaptation have been implemented over the last few years. The city of Vitoria-Gasteiz is situated over a huge underground aquifer, and the adequate management of the water has been of great importance for recognizing the "tangible" values of the greenbelt. Credit: CEA.

Salburua

Figure 7.4 Only a twenty-minute walk from the city center, the Salburua wetlands have become a hotspot on bird migration routes, as several species choose this area to stop for shelter or even for breeding. Credit: Quintas.

Le zone umide di Salburua





La green belt agricola

Work began in 2006 designing a system with a capacity for 250 gardens to promote ecological agriculture to farmers of all ages.

This project was 100% financed by the Izartu Program of the Basque government, with urban rehabilitation objectives and funds.

The project has played an important role in connecting socially neighboring districts.

fifteen hectares of ecological horticulture facilities were added at the north of the city in the Z

the Environmental Park, known today as the Market Gardens

More than one hundred vegetable gardens
a community garden

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La Greenbelt: dalla scala urbana alla scala regionale

Il Piano delle Greenways

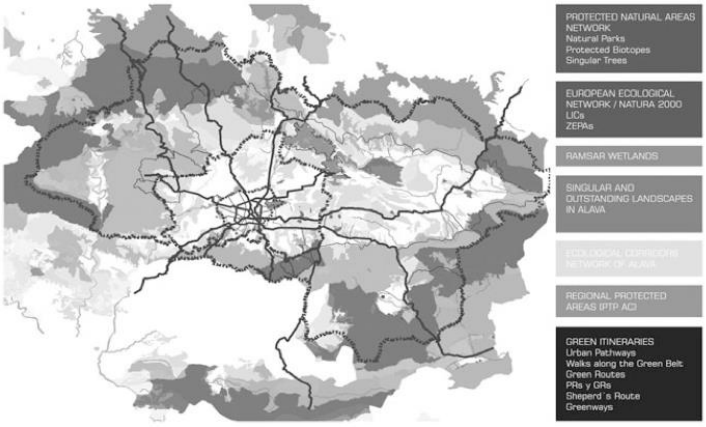


Figure 7.9 The Greenways Network constitutes an essential tool in the conservation strategy toward territorial defense and social valorization. Credit: CEA.

La Greenbelt: dalla scala urbana alla scala regionale

La rete ecologica nella provincia di Alava

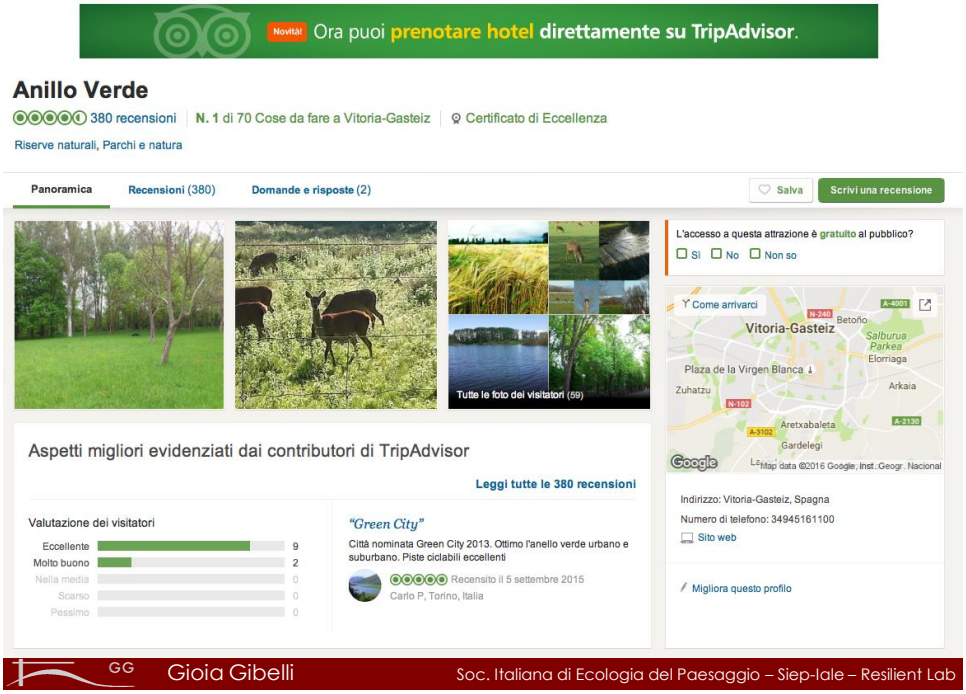
Table 7.1 Conservation strategy in Alava province

	1998	*2011*
Network of protected natural spaces	18,824 hectares	31,201 hectares
Natural parks	2	5
Protected biotopes	0	2
Singular trees	0	11
Ramsar wetlands	0	4
European Ecological Network Natura 2000	0 hectares	79,936 hectares
Special protected areas for birds	0	4
Sites of community importance	0	25
Catalogue of singular and outstanding landscapes	0 hectares	173,584 hectares
Singular landscapes	0	6
Outstanding landscapes	0	56
Ecological Corridors Network	0 hectares	88,000 hectares
Territorial protection areas in the regional plan	0 hectares	136,280 hectares
Green routes	36 km	1,100 km

La Greenbelt: dalla scala urbana alla scala regionale

La rete ecologica funzionale dell'Anello dell'Altopiano

La rete ecologica dell'Alava è stata selezionate come "Buona Pratica di Sostenibilità" e ha ricevuto il primo premio al concorso internazionale UN-HABITAT nel 2010



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http://www.vitoria-gasteiz.org/we001/was/we001Action.do?aplicacion=wb021&tabla=contenido&idioma=en&uid=u25e08f9d_14a56aaea69__7fdf

GRAZIE A

Mr. Juan C. Escudero
Environmental Studies Centre (CEA)
jcescudero@vitoria-gasteiz.org

Velasco, Ane Itziar
avelasco@vitoria-gasteiz.org

Gianni Rondinella
gianni.rondinella@gmail.com

GRAZIE A VOI PER L'ATTENZIONE

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