

quality and sustainability in city-country relationships

nine pilot projects for mediterranean cities

edited by Biagio Guccione, Andrea Meli, Giorgio Risicaris
preface by Giovanni Malin





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GreenLinks

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Nine pilot projects for Mediterranean Cities

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by the GreenLink network of cities under InterregIIIBmedoccc program

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Introduction

Certain international bulletins estimate that the percentage of the world's population living in urban environments will overtake the percentage of rural populations during 2008. In Italy this threshold was already amply overtaken several decades ago.

Apart from resounding the alarm over the sustainability of the model of development on a global scale, this figure revives the importance of the quality of life in our cities and metropolitan areas. If more people live in cities, these will increasingly be the scenarios for present and future challenges for man's renewed relationship with nature, his own habitat and his possibilities for survival.

This awareness is growing in our society too, sometimes almost feverishly and even incoherently. If we pause for a moment, we can see how rapidly environmental topics have become vitally important to the common awareness of citizens, becoming a primary, imperative need.

The tensions and contradictions linked to the pressing relevance of these arguments are present even in Florence. We believe though that the possibility of responding positively to this challenge can be traced back to the historic legacy and current situation in Florence.

An ancient idea of the city still persists today: that of the mediaeval walled city, separated from the country, the city defined as artificial space, separated from the natural space surrounding it. However, the idea that nature should be physically disconnected from urban space is a misrepresentation considering that open spaces, and even agricultural activity, were present within the mediaeval city.

It is in fact the model city of the industrial age which carried this concept to an extreme, segregating civilian life into ever narrower and totally artificial spaces, made up of houses, roads, cars and factories.

Now, however, it is clear to everyone that one of the main indicators of quality in our cities is the presence of parks, open spaces, natural areas and tree planting. Plants in the city are perceived as an indispensable factor of beauty and wellbeing.

By now our sensations take us further: the city is an ecosystem in itself, a habitat where man lives in symbiosis with other living beings, plants and

animals. The more cities are respectful and aware of the natural dimension necessary to life, the more life can continue harmoniously.

Only by improving the natural equilibrium can we speak of cities "built to human scale". In Florence this not only sounds like a challenge for the future, but also a return to essential grass roots, where the ideal is wedded to reality in a perfect synthesis.

Urban planting can play a strategic rôle in contemporary Florence: it would reconnect the modern city to the renaissance both historically and philologically, and at the same time materially re-establish the relationship between the historic centre, modern quarters, rural areas and the hills.

Thus the European GreenLink project offers our city the privilege of continuing to be a centre for theoretic elaboration and seat of advanced experimentation on the theme of landscape, urban planting, the relationship between built-up space and natural space, to be wholly redefined in post-modern terms.

Following the principles of the European Landscape Convention, known as the "Florence Charter", which has already given positive results in the RiverLinks project, GreenLink proposes Florence again as one of the European leaders in this crucial sector.

On behalf of Florence Municipality I would like to express gratitude to all the partners who have participated in the project, sharing practical experiences and scientific knowledge to join a common European consciousness once again.

Lastly my thanks to Dr Giovanni Malin and the Florence Municipality Department of the Environment for all they have done, and continue to do, to stimulate reflection on these subjects and to maintain a high profile, updated civil and administrative tradition which has its roots in history but crops up again as crucial to our times and our day-to-day existence.

Claudio Del Lungo
Environment Councillor

Introduzione

Alcune agenzie internazionali stimano che nel corso del 2008 la percentuale della popolazione mondiale che vive in ambiente urbano supererà la percentuale di quella che vive in ambiente rurale. In Italia questa soglia è stata ampiamente superata già da alcuni decenni.

Oltre a rinnovare l'allarme sulla sostenibilità del modello di sviluppo a livello globale, questo dato ripropone la centralità del tema della qualità della vita nelle nostre città e aree metropolitane. Se la maggior parte degli uomini vive nelle città, queste saranno sempre più lo scenario delle presenti e future sfide per un rinnovato rapporto dell'uomo con la natura, col proprio habitat, con la sua stessa possibilità di sopravvivenza.

Questa consapevolezza cresce anche nella nostra società. A volte in modo quasi febbrile e addirittura scomposto. Se ci soffermiamo per un attimo, vediamo quanto rapidamente le tematiche ambientali abbiano assunto un rilievo centrale nella consapevolezza diffusa dei cittadini, per diventare un'esigenza primaria e inderogabile.

Anche a Firenze si vivono oggi le tensioni e le contraddizioni legate all'attualità stringente di questi temi. Crediamo però che proprio a Firenze, nella sua eredità storica e nella sua realtà attuale, si possano rintracciare i segni della possibilità di raccogliere positivamente questa sfida.

C'è un'antica idea di città che è dura a morire: quella della città medievale cinta di mura, separata dalla campagna. La città come spazio artificiale, definito proprio come separazione dallo spazio naturale circostante. Ma l'idea che la natura fosse fisicamente disgiunta dallo spazio urbano è in realtà una mistificazione, visto che all'interno delle città medioevali erano pur presenti spazi verdi e addirittura attività agricole.

È in effetti il modello di città dell'epoca industriale che ha estremizzato questo concetto, segregando di fatto la vita civile in spazi sempre più stretti e totalmente artificiali, fatti di case, strade, macchine e industrie.

Oggi è invece chiaro a tutti che uno degli indicatori principali della qualità delle nostre città è dato dalla presenza di parchi, spazi verdi, aree naturali, alberature. Il verde in città è percepito come un fattore indispensabile di bellezza e di benessere.

Ma ormai la nostra sensibilità ci porta oltre: la città è essa stessa un ecosistema, un habitat dove l'uomo vive in simbiosi con altri esseri viventi, piante e animali. E quanto più le città sono rispettose e consapevoli della dimensione naturale necessaria alla vita, tanto più la vita vi si può svolgere armoniosamente. Solo ripristinando un equilibrio naturale si può oggi parlare di città "a misura d'uomo". E a Firenze questo suona non solo come una sfida per il futuro, ma anche come un riallacciarsi alle proprie radici più essenziali, dove l'ideale si sposa con il reale in una sintesi esemplare.

Il verde urbano può giocare un ruolo strategico nella Firenze di oggi: riallacciare storicamente e filologicamente la città contemporanea alla città rinascimentale, e allo stesso tempo ricucire materialmente il rapporto tra centro storico, quartieri moderni, aree rurali e collinari.

In questo senso il progetto europeo GreenLink offre alla nostra città il privilegio di continuare a proporsi come centro di elaborazione teorica e sede di sperimentazione avanzata sul tema del paesaggio, del verde urbano, del rapporto tra spazio costruito e spazio naturale, da ridefinire ormai integralmente in termini postmoderni.

Sulla linea che muove dalla Convenzione Europea del Paesaggio, nota come "Carta di Firenze", e che ha già visto i positivi sviluppi del progetto RiverLinks, GreenLink propone di nuovo Firenze come uno dei capofila europei in questo settore nevralgico.

Sento di dover esprimere un ringraziamento da parte del Comune di Firenze a tutti i partners che partecipano al progetto, condividendo esperienze pratiche e conoscenze scientifiche e coniugando ancora una volta il comune sentimento europeo.

Infine, un ringraziamento al dr Giovanni Malin e alla Direzione Ambiente del Comune di Firenze, per quanto hanno fatto e continuano a fare per animare la riflessione su questi temi e tenere alta e aggiornata una tradizione civile e amministrativa che affonda le sue radici nella storia, ma che si ripropone come indispensabile nel nostro tempo, nella nostra vita di tutti i giorni.

Claudio Del Lungo
Assessore all'Ambiente

Preface

Whoever, like I have, has ever had the chance to attentively follow the complex reports of the partners who have offered their services in search of solutions to the many problems brought up by the GreenLink project, can only agree with the newly invented motto, “the city turns into the country”.

Not that this means liberating the outskirts from growing urbanisation, freed from agricultural activity or at least from any involvement with it!

On the contrary, the motto should be seen as an alliance between the two, a moment of mutual sharing of everyday problems, a reciprocal stimulus for growth, a formula for balance between the needs for living and the ever more pressing requests for open spaces in which to look for a new identity.

In fact, it is not unusual to find spaces of various sizes around urban outskirts, waiting to be swallowed up by buildings, or incorporated without any logical planning of careful integration or of prudent revival of the urban system, degraded, residual, marginal areas almost always destined to succumb when not selected for thorough renovation.

Green spaces, in the widest sense of the term, provide the backbone for these fringe territories: wooded areas of various sizes, agricultural areas once destined for olive-growing, cereal crops or vineyards, fruit orchards, vegetable gardens and so on.

These are suburban territories, where decay has taken over and unauthorised building has free reign, where landscape is degraded and has run wild due to the insecurity of the area.

Europe launched the alarm from Florence with strong and decisive beginnings, set out in the “European Landscape Convention”, approved by all the member states and acknowledged by the Italian government with law no. 14 in 2006.

GreenLink proposes projects which relate urban and suburban areas in an integrated system where the potentials of fringe areas were the first to undergo careful analysis of their negative transformation and later to investigate the environmental, historic and landscape identities of the past in order to renovate and revitalise them. GreenLink represents the context for the main unifying design elements answering fully to the EC guidelines.

Town planners, landscape architects, agronomists and forest rangers, architects, sociologists and economists were all summoned to give their precious professional contribution to reverse this negative tendency and to give the design bases for careful restoration, also ecological, of the new urban landscape.

Giovanni Malin
Project Coordinator

Prefazione

Chi, come me, ha avuto modo di seguire con attenzione le articolate relazioni dei partners che hanno offerto la loro competenza per dare soluzioni ai numerosi quesiti evidenziati dal progetto GreenLink, non può che concordare sul motto, del tutto inventato, “la città si fa con la campagna”.

Non che questo stia a significare la sottrazione delle aree periferiche, svincolate dalle attività agricole o comunque prive di ogni connotazione con esse, da parte della crescente urbanizzazione!

Anzi, il motto va visto come connubio tra le due parti, come momento di reciproca condivisione delle problematiche di vita quotidiana, come stimolo vicendevole di crescita, come formula di equilibrio tra le esigenze abitative e le richieste, sempre più pressanti, di spazi liberi utili a ritrovare un'identità nuova.

Non è infrequente, infatti, registrare superfici di varia estensione, distribuite all'intorno delle periferie urbane, pronte ad essere inglobate dall'edificato, o comunque incorporate senza una logica pianificatoria di integrazione attenta, di rivitalizzazione oculata nel sistema urbano, aree svilite nel loro essere, residuali, marginali, destinate quasi sempre a soccombere se non indirizzate verso una precisa riqualificazione.

Il verde, inteso nella sua più ampia accezione, costituisce certamente l'ossatura di questo territorio di frangia: aree boscate di varie dimensioni, aree agricole destinate un tempo all'olivicoltura, alla cerealicoltura o alla viticoltura, a frutteti, a coltivazione ortive e più e più secondo l'immaginazione più varia. Territori periurbani questi, ove il degrado ha preso

il sopravvento, ove l'abusivismo edilizio trova spesso campo libero, ove il paesaggio risulta svilito ed inselvaticito per la precarietà d'uso dei territori che lo caratterizzano.

E proprio da Firenze l'Europa ha lanciato l'allarme con principi forti e decisi, stigmatizzati nella “Convenzione Europea del Paesaggio”, approvata da tutti gli stati membri e recepita dal governo italiano con la legge n. 14 del 2006.

E GreenLink, con le sue linee di progetto che evidenziano il rapporto tra le aree urbane e le loro periferie in un sistema di vita integrato, ove la potenzialità delle aree marginali subiscono in primis un'attenta analisi della loro trasformazione negativa e poi successivamente chiamano a raccolta le identità ambientali, storiche e paesaggistiche del tempo trascorso per una loro riqualificazione e rivitalizzazione, GreenLink, dicevo, non poteva che rappresentare il quadro dei principali elementi progettuali unificatori rispondenti a pieno alle linee d'indirizzo comunitario.

Urbanisti, paesaggisti, agronomi e forestali, architetti, sociologi ed economisti sono allora chiamati a dare il loro prezioso contributo di professionalità per invertire le linee di tendenza negative sopra richiamate e per conferire così al nuovo paesaggio urbano le basi progettuali di riqualificazione attenta anche sul piano ecologico.

Giovanni Malin
Coordinatore del Progetto

Results of the Pilot Projects

The results of the pilot projects conducted by each of the partners over the last two years of experimentation are published in this book: a shared approach to the city-country relationship, the theme of the GreenLink project.

All the partners worked on the basis of four themes adopted at the outset of the project as the fundamental framework for a coherent, common approach:

1. Technological infrastructures and productive activities;
2. Renewable energy and biodiversity;
3. Sports, leisure and tourist activities;
4. Educational, cultural and artistic activities.

The results shown here have many common characteristics and some differences. All the places examined are great tourist attractions and have the common problem of reducing human pressure in the areas where it is heaviest.

The solutions were varied. Palma and Riccione proposed paths leading inland, Palma towards the historic Bellver Castle through the forest bearing the same name, by means of a greenway or other alternative paths, Riccione followed two rivers to trace a cycle-footpath as an invitation to discover high quality rural landscapes. Oristano, like the other two, also adopted a linear path as a particularly valid environmental connection in the

territorial system, by creating a river park as its project strategy, in accordance with the Regional Landscape Plan.

Florence Municipality approached each of the themes differently, in an attempt to give specific answers to the four different areas: an urban zone full of infrastructures; flood storage areas; one with many sports facilities and an urban fringe area of particular rural value. Seville entrusted its relationship with the country to the extensive Alamillo urban park similar to the even larger Parco della Piana, full of historic and naturalistic vestiges, selected by the Tuscan Region. Zografou, a municipality in the suburbs of Athens, proposed careful planning of the surviving open spaces at the foot of Mount Hymmetus, trying to limit its fragmentation with connecting projects. Vila Real, a small Portuguese tourist resort, provided a laboratory of landscape experimentation where the project offers solutions to each situation: woodland areas; river banks; Atlantic beaches; agricultural areas and wetlands. Arsial, although linked to Terracina, offered a series of studies, in many cases interchangeable: the use of tree belts; data-processing for studies in climate change in the city-country relationship; a virtual museum and sustainable improvement of tourist potentials. Thus we find a wide range of solutions and a valid contribution to the debate on city boundaries.

Biagio Guccione

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PILOT PROJECTS

COMUNE DI FIRENZE (Italia)

Giorgio Risicarìs, Andrea Meli, Biagio Guccione

EastLink. A pilot project case in Florence

GIORGIO RISICARIS*

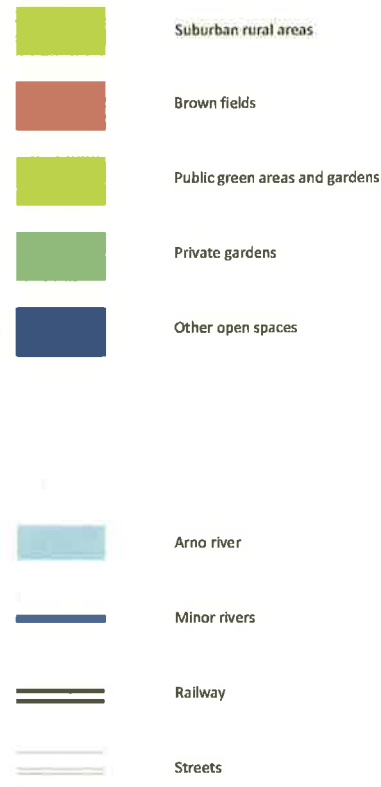
The GreenLink project framework provides an intriguing opportunity to verify the challenging prospect of merging urban and adjacent green space developments through concrete case studies in a single planning structure.

The case studies, conducted by GreenLink proposed excellent and quality open space design applications for suburban green areas, keeping urban developments separate from green field developments.




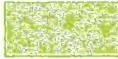


* With the collaboration of Alessandro Boi. Project realized thanks to the collaboration of the Structural Planning Department of the City of Florence.

"GreenLink" Interreg III B Medocc. 2008
Florence, pilot project "EastLink"

Plan. 1. **The green keys.** Availability and recognition of open spaces.





- | | |
|--|---|
|  | 1. GreenRing. Major urban green system (public-private). Linking open spaces with high environmental and landscape values. |
|  | 2. Urban parks. To strengthen or to realize. Socializing thematic and equiped green parks. |
|  | 3. Rural areas. To protect and integrate in city life by natural and cultural values promotion and punctual urban functions. |
|  | 4. Boarder urban areas, to strengthen with green factor prevalence. |
|  | 5. Urban areas, consolidated. |
|  | 6. Suburban areas, of other municipalities. |

Three major questions still remain open:

- a) to give a distinguished autonomous profile to suburban belts;
 - b) to plan urban system developments respecting green field values;
 - c) to create economic viability of suburban public green areas.
- Three corresponding suggestions for a framework can constitute a working agenda to experiment and verify:
- a) to overcome the detailed design of suburban open spaces and aim to design systems that define mixed usage, ranging from urban to rural, covering large territories along urban boundaries and rural hinterlands affected by cities;
 - b) to generalise park design as a generator of urban spaces, from consolidated fabrics to rural areas, passing through a hierarchy of thematic neighbourhoods and areas with high environmental and landscape quality;

- c) to develop operational synergies between urban developments that produce economic added values and profits and urban developments that only produce costs for the community, to obtain large public green areas and guarantee maintenance and renovation.

Such suggestions are not innovative if considered one by one, but they become so when integrated into one planning act.

The EastLink case study in Florence considered the larger territories that compose the east interface of the city towards the adjacent rural systems consisting of a few plains crossed by the Arno river and principally defined by hills.

In this area scant attention is paid to local planning and is mostly dedicated to the main north western development axis of the city, with major space potentials and strong urban extension pressures. Until now these conditions defined a well balanced environment on the east front with relatively high quality spaces and green



"GreenLink" Interreg III B Medocc.

Firenze, progetto "East Link"

TAV. 3. Proposta Preliminare

STRUMENTI:

- A. Piano Integrato:** Funzioni urbane qualificate, progettazione paesaggistica prevalente, alto valore ambientale, forestazione urbana, ERDF, POR Toscana
- B. Parco naturale attrezzato:** B1, Parco naturale, attrezzature sportive; B2, Parco naturale, attrezzature di servizio, svago, culturali; B3, Parco naturale. Intervento: B1, B2, Pubblico-Privato; B3 Pubblico
- C. Parco Tematico:** C1, Parco sportivo; C2, Parco ricreativo commerciale. Primato del verde, prevalenza affacci fluviali, servizi ai cittadini. Intervento: C1 Pubblico; C2 Privato
- D. Parco agricolo:** Funzioni produttive agricole, residenziali, servizi urbani puntuali. Intervento: Privato
- E. Parco Residenziale:** Funzioni residenziali, servizi. Aree semi-consolidate deboli, critiche. Intervento: Pubblico e privato (consolidare, rafforzare, completare)
- F. Città consolidata**
- Nuova centralità sparsi residenziali:** Servizi ai residenti diffusi, aree di socializzazione, rafforzamenti dell'edilizia puntuale
- Circonvallazione Est-Nord**
- Tramvia**
- Direttrici ciclopedonali**
- Sottoattraversamenti ciclopedonali**
- Ponti ciclopedonali**

areas worthy of preservation. Now the sustainable rhythm of eastern territory consumption, registered over the last decades, has started to accelerate. Several residential developments have sprung up together with services, leisure, commercial developments and important mobility infrastructures. They are all part of a critical trend that, if considered together with the existing unconsolidated suburban developments of the seventies (Europa, Sorgane, Guarlone), could rapidly exhaust the limited resources still available and produce negative impacts on environment quality.

Greater attention should now be paid to this area, enabling quality developments and guaranteeing environmental and landscape values.

The EastLink experimental application aims to produce a development vision of the entire eastern territory, defining planning

tools for suburban and rural areas that establish a stable and sustainable alliance between built and open green spaces in a unique balanced act.

The main challenges are to improve the two-way bridge accessibility for citizens to green areas, environmental, natural and rural values, and from rural hinterlands to the city services; provoke intense but balanced complicity between the city and adjacent hinterlands, considering them as distinct territories belonging to the same puzzle; strengthen suburban residential areas introducing improvements that produce urban intensity and self-sufficiency; develop a semi-bordering green ring system connecting suburban residential areas, green clusters and parks; promote public green areas introducing specific thematic use profiles and financial capacities; integrate brown fields into quality development prospects linked to green areas; plan a pedestrian

and bicycle network including crossing of barriers (railway, motorway, river); introduce restoration of existing rural buildings for urban services and leisure.

The three main design steps are included in the three project plans published here:

Plan 1. Green keys. Availability and recognition of open spaces as the keys for a green linking urban proposal;

Plan 2. Green concept. Planning frameworks, definition of potentialities and opportunities, introducing a new suburban system;

Plan 3. Tools for an urban-rural green linking plan.

The keys to each plan offer a sufficient level of understanding of the design performances and proposals.

This highly experimental EastLink application, is only made possible thanks to the InterregIII Bmedoc programme, which supports innovative and advanced performances for local authorities. The trans-national networking experience permitted the progressive and comparative development of the project, using lessons learned and best practices from the project partners, so that they should all be considered as fundamental contributors.

Northwest link, Argingrosso, Ripoli

BY BIAGIO GUCCIONE AND ANDREA MELI

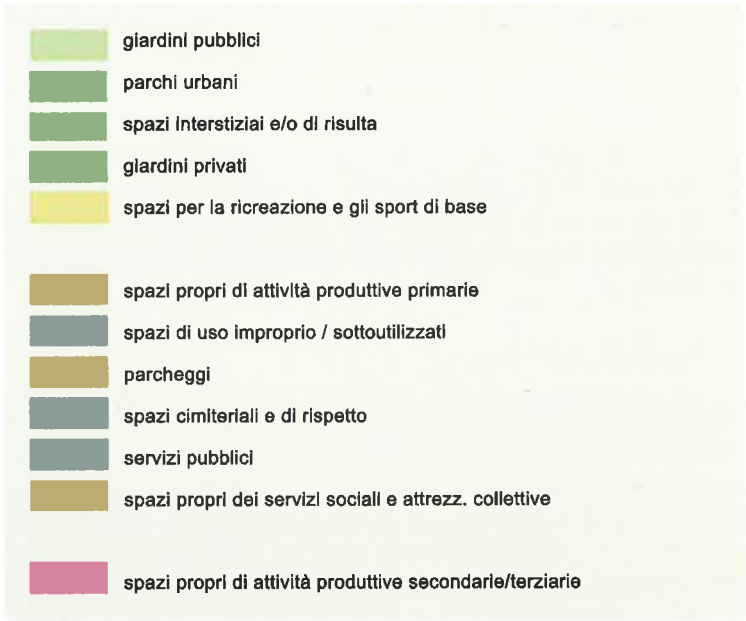
1. Preface

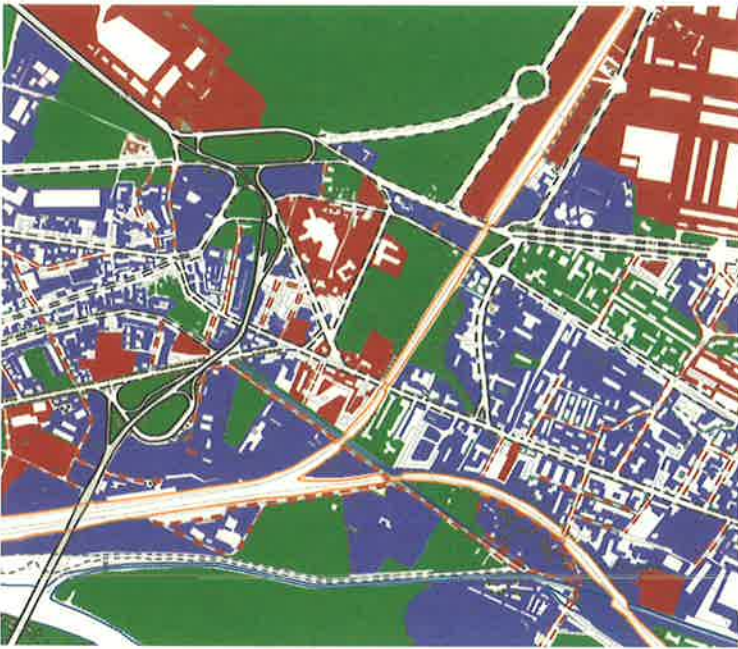
The main objective of the GreenLink project is to pinpoint strategies of intervention in urban fringe landscapes. This is one of the most important actions attributed to planning by the European Landscape Convention, which stresses the need to consider the landscape *as a whole*, even where it is degraded and damaged.

The case of Florence shows the maintenance of a quality landscape on the fringes of the city, apart from the weak points (degradation and pressures) common to almost all the suburbs of large cities and metropolitan areas.

Greenlink has used a strategy of intervention which guarantees the preservation of all surviving quality elements, but mere conservation cannot defend, since it is vital to support the necessary

1. Plant coverage





2. Mineralisation

transformations in all urban fringe areas. It is important that these areas take on a strategic rôle in the city structure.

The four areas chosen for the pilot project are all near the two main entrances to the city, to the north from Bologna/Milan and South from Rome. For brevity we have called them: Northwest link; Argingrosso; East link and Ripoli.

These are areas on the outskirts of the city, very important for future interventions of urban reclamation, but each with its own problems.

2. Description of the areas

Northwest link

This area is in a heavily built-up zone near the entrance to Florence. It is crossed by a large number of urban infrastructures which give it a highly visible, fragmented aspect. The Florence-seaside motorway, the northern access to the city, the stretch of railway of the Pisa-Florence line and the connection to the metropolitan area Florence-Prato-Pistoia, the Ponte all'Indiano viaduct, all con-



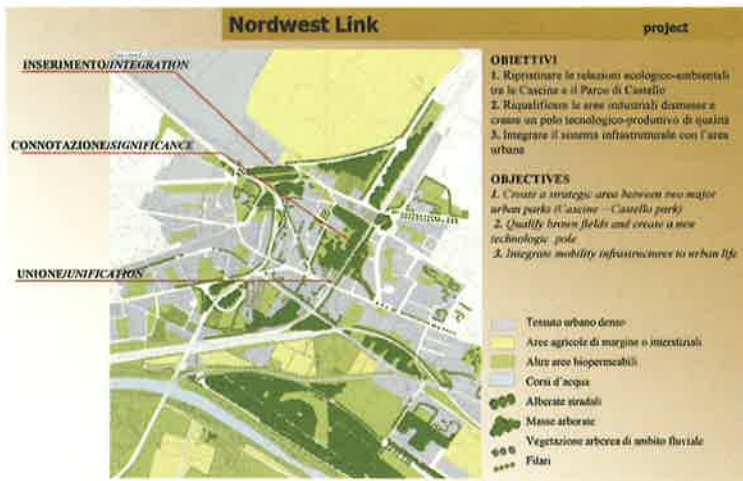
3. North West area

verge in this area before reaching the heart of the city through wide avenues (viale Guidoni, via di Novoli).

Apart from these transport infrastructures there are also the Peretola airport, the new University pole and several newly constructed Public buildings such as the Law Courts and the new seat of the Cassa di Risparmio di Firenze in the vicinity, elements

4. Ripoli: the city/country relationship





5. Northwest link: general project



6. North West: overall project

which will guarantee a new centrality to the north-west of the city, for better or for worse.

This urban area is linked to the river open space system along the Arno and has two strong features in the Parco delle Cascine and the Parco dell'Argingrosso.

The Cascine Park provides a “natural” boundary along the Arno, whereas the rest of the area does not have clear boundaries since the urban spread is uninterrupted. On a larger scale the “void” of the park of the plain can be seen, in which the Parco di Castello is the crowning point.

Argingrosso

The Argingrosso area is situated on the left bank of the Arno river, periodically subject to flooding, sometimes very seriously, such as during the great flood of 1966 in Florence.

Because of its position Argingrosso is a hydraulic risk area, and for this reason was chosen as a site for the development of a flood storage area to limit heavy flooding from the Arno river.

The name of the site refers to a long embankment, a physical boundary between the areas of new urban spread outside Argingrosso developed over the last thirty years, and the internal area, where the presence of buildings is restricted and some of the historic ones are still inhabited.



7. Ripoli area: general project



8. Separation. Conservation/constitution of linear open space systems to increase penetration into the urban fabric

In the second half of the last century this site underwent considerable, extensive excavation for the rich underground resources of sand and gravel, almost completely destroying and transforming the dense network of cultivated fields, of which very few remain.

The present picture of Argingrosso is conditioned by its various uses, (first nucleus of a public park, unplanned allotments, a golf course, sand and gravel processing plants, uncultivated or abandoned areas etc.), showing a lack of direction in sustainable development of the landscape and in the use of a strategically important area for the future urban development of Florence. Argingrosso lies directly in front of the Parco delle Cascine, the largest open space in Florence. Due to this vicinity a functional, direct connection between the two areas has been proposed for several decades, to transform Argingrosso into a natural, contemporary extension of the historic Cascine Park. The site is also in direct relationship with the Northwest Link, thus defining the prerequisites for radically improving the functional connections between the two GreenLink areas.

Ripoli

The study area, south-east of the city and close to the Arno, is a “link” between the urban and agricultural landscapes, between Florence and its neighbouring communities.



9. Unification. Linking public open spaces in hierarchic, differentiated systems

The main connections are the roads (Varlungo road linking the motorway and the Chiantigiana main road; via Europa and the Rosano provincial road leading to Bagno a Ripoli).

The area is at the head of the *river open space system* along the Arno and includes Anconella Park. It is possible to cycle or walk along the embankments of the Arno (see the European RiverLink project).

The area is mainly residential with many services and commercial activities concentrated along Viale Europa, the main transverse road axis. Besides the historic religious buildings (for example the church of San Pietro in Palco), there are other buildings of historic or artistic interest (such as the Bisarno Castle and the Macine Farmstead) and many isolated buildings and complexes of particular typological interest.

The city boundary towards Florence as well as towards Bagno a Ripoli is fairly clear, marked by infrastructures, leaving spacious undeveloped areas between the two cities. The progressive satu-

ration of open spaces can be seen along the Rosano road, within the municipality of Florence.

3. Intervention models

The survey shows the landscape profile of the different types of space, paying particular attention to not entirely urban situations and to the relative phenomena of interstices and isolation. The evaluation of the landscape and environmental rôle of open spaces results in an interpretation of the landscape which, due to its detail and contents, can help us to identify large scale landscape strategies efficiently as well as single design solutions to modify and manage the landscape.

The conditions of *mineralisation*, indicating the degree of artificiality of the land, of *plant supplies*, differentiating the typological aspect of trees or shrubs, of *plant coverage* showing the quantity of plants, are all documented.

North West Link

Research into the structure of open spaces shows the quantity and rôle of all the unbuilt spaces. This means identifying, summarising and interpreting the importance of these spaces, without stopping at the first interpretation of land use.

The following elements emerge in the analysis stage:

- the relationship between built and unbuilt areas (in quantity and quality);
- the distribution of these areas, particularly their continuity or fragmentation;
- the system of mobility and connections;
- the presence of conflicting land use and different types of pressure;
- the presence of delapidated elements or situations.

Argingrosso

Analyses conducted in the area, especially regarding the present uses of the land and its relations with the main neighbouring urban areas, showed how Argingrosso is endowed with open spaces of riverside, agricultural and urban landscapes which, although now mostly dilapidated, could potentially be improved and restored to become strategically important to the city of Florence.

In particular certain outcomes have emerged:

- the presence of activities in contradiction with the vocation



10. Significance. Improvement of visual and functional connections and balance between urban and rural landscapes

of the area which even cause degeneration;

- the significant presence of residual, fragmentary agricultural areas;
- a good endowment of public spaces, some already undergoing improvement;
- the permanence of valuable naturalistic and landscape elements;
- the presence of sports, social and recreational activities in some parts of the site.

Argingrosso is presently involved in two urban projects strategic for Florence:

- The creation of a large urban park;
- The creation of a flood storage area as defence against flooding in Florence.
- Both prospects have an environmental and functional organisation and structural relationship.

Ripoli

The research topics were necessarily different in that particular attention was paid to the intervening agricultural areas rather



11. Protection. Protection of historically interesting areas of urban and agricultural landscape

than the urban system (buildings and infrastructures).

As can be seen on the maps, the quantity of open spaces is greater and the quality is different, less fragmented and with fewer infrastructures (apart from the important arterial route of the motorway slipway for fast-flowing traffic).

One important aspect in this area is the landscape quality linked to perception.

In this case the survey considers the principal roads crossing the area as well as the Arno river which is an important structural element in this environment, as already shown. Thus the urban boundary and the Arno river are the two main subjects on which to concentrate design efforts.

The elements which help to define possible design solutions are analyses of the potentials and problems, as well as fragmentation factors. This is another case of reconfiguration of an area where different rôles are shown for the categories of usage for every piece of land.



12. Integration. Impact limitation of infrastructures and buildings

4. *Proposals*

The result of the analyses has led to the following proposals, set out briefly:

13. Improvement. Improvement of existing cultural and natural landscape resources





14. Aerial view of the Argingrosso area in 1948. Note the dense patchwork of fields, showing the predominance of agriculture in the area

Northwest

Border conditions

Marginality localised on the borders of the municipality with progressive involvement in the urban structure and creation of new centres (University Pole, Law Courts)



15. Aerial view of the Argingrosso area in 1970. Note the profound changes due to intensive sand and gravel quarrying in the area

Links

Good local and external links (motorway slipway-airport)

Pressures and conflicts

Progressive saturation of the existing urban fabric with resulting de-contextualisation of buildings; large spaces for commercial, services and residential expansion

16. Aerial view of the Argingrosso area in 2005. Note the disappearance of any recognisable landscape structure within the area



Deteriorating and detracting elements

Presence of abandoned and deteriorating marginal spaces near the infrastructures (motorway, roads and railway), low quality settlement spaces

Attractive elements and potentials

There are no recreational or tourist facilities in the immediate vicinity, apart from the river and the Cascine Park; the hills with their pronounced anthropological history are further away, though related

Open space quality

Lack of a widespread open space system; pronounced human intervention on the land

Building quality

Blocks with high-rise linear buildings

Environmental and ecological quality

Absence of any truly natural elements, derelict areas serving as biodiversity sanctuaries, reduced space for suburban agriculture

Argingrosso

Border conditions

Linked to functional and social conditions present in the area (gypsy camps, social use limited to a few areas, etc.)

Links

Poor links and ties with the surrounding urban structure and with the Cascine Park

Pressures and conflicts

The presence of productive activities in conflict with the site, inadequate social control, marginalisation and the abandonment of many areas

Dilapidated and detracting elements

The presence of the wide Ponte dell'Indiano road axis which divides the site; low quality of open space systems, strong presence of derelict and abandoned areas

Attractive elements and potentials

Public urban park, playground for children, riding therapy, golf course, social allotments, Arno riverbanks; a potential relationship with Parco delle Cascine and the western area of the Florentine outskirts

Open space quality

Significant fragmentation of usage and general poor quality of the site

Building quality

Meagre presence of small residential complexes

Environmental and ecologic quality

Good ecological potential, partly due to the presence of artificial wetlands, good general outlook in terms of development of natural and environmental quality

Ripoli

Border conditions

Marginality localised on the borders of the municipality which does not imply social, typological or functional marginal conditions

Links

Good local connections (in the Florence municipality and between Florence and Bagno a Ripoli) as well as outside (motorway slipway); guaranteed public services (buses, railway and tram project)

Pressures and conflicts

New building along via di Rosano saturating Florentine municipal space; intervening agricultural areas; designated residential areas with resulting conflicts between different land uses

Deteriorating and detracting elements

Infrastructure system (junctions and unused spaces along the roadsides); low quality settlement spaces

Attractive elements and potentials

There are no recreational or tourist facilities apart from the river; presence of sports and accommodation facilities

Open space quality

Lack of continuity in the open space system with occasional elements within the urban context; equipped open spaces in small unused spaces often with inadequate safety conditions

Building quality

Two main building types: blocks (PEEP) and detached houses

Environmental and ecological quality

Absence of any truly natural elements, derelict areas serving as biodiversity sanctuaries, survival of suburban agriculture

5. Strategies and Targets

There are several basic targets in the projects for the improvement of the urban fringes:

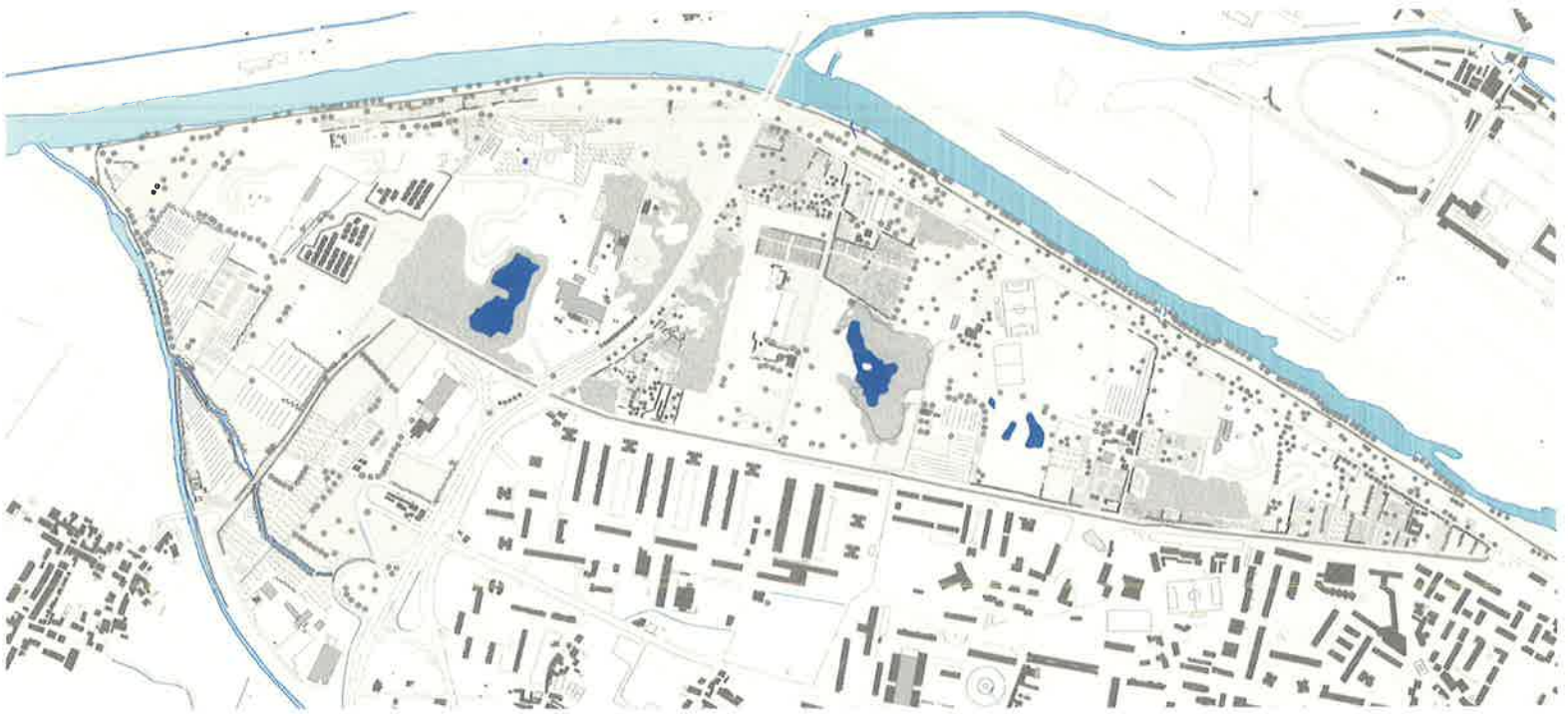
- 1) *to redress the balance between the conflicts* resulting from intervention in situations of tension and transformation;



17. The Argingrosso land use map. Note the striking range of usage, from recreation grounds to fallow lands, from allotments to surviving productive activities, from sports grounds to existing residential complexes



18. View of the Ponte dell'Indiano from the Argingrosso bank on the right, and the bank of the Cascine Park on the left, both covered in lush vegetation



19. The Argingrosso landscape structure map, a synthesis of the main man-made and landscape features, which still partially show recognisable characteristics of the area

20. The central part of the first nucleus of the Argingrosso public park, with the stretch of water after the first interventions of environment and landscape recovery



21. The new children's playground, within the first nucleus of the Argingrosso urban park



- 2) to give *uniformity* to the *complexity* of the suburban situation by means of a *highly visibile design* to organise the complex structure of the place;
- 3) to set out a *long-term strategy*, considering the dynamism of the fringe areas, with long-term interventions to guide the developments;
- 4) to safeguard *multifunctionality*, one of the characteristics of urban landscapes (buildings, agriculture, woodlands, natural areas, recreation spaces);
- 5) to guarantee the survival of suburban agriculture not only for purposes of production but also for employment;
- 6) to establish a balanced relationship between preservation and innovation: between the *protection* of the existing landscape and the *creation* of new landscapes.

Northwest Link Project (see table)

- to restore the ecological-environmental relationship between the two main parks in the area, the Cascine and the Castle Park;
- to improve the dismantled industrial areas and create a high quality technological-productive centre;
- to integrate the infrastructures into the urban area.

Argingrosso Project

- 1) To design and develop the flood storage area, also envisaged for the purpose of the large urban park;
- 2) Improve pedestrian and cyclist connections with the Parco delle Cascine and the neighbouring urban districts;
- 3) Plan present and future activities and uses in the area, aiming towards the creation of a large urban park comprising nature conservation, sustainable recreation and light sports activities.

Ripoli Project (see table)

- to safeguard and enhance surviving suburban agriculture;
- to define a high-quality relationship between the urban and suburban landscapes;
- to create new cultural, social and artistic activities.

The creation of a *system of green wedges* within the metropolitan urban areas absolves the function of blending pieces of the agrarian landscape into the consolidated urban fabric with high settlement density, interrupting the physical continuity of the urbanised territories. This rôle of separation relating to the conservation and structuring of the discontinuity in building allows a readjustment in the aggregation of urban districts.

These green wedges are responsible for environmental readjustment as reserves of open space in the urban landscape, representing strategic planning choices suitable to pilot transformation processes.



22. Aerial view of the north west area

Summaries

The GreenLink project framework provides an intriguing opportunity to verify the challenging prospect of merging urban and adjacent green space developments through concrete case studies in a single planning structure.

Three major questions still remain open:

- a) to give a distinguished autonomous profile to suburban belts;
- b) to plan urban system developments respecting green field values;
- c) to create economic viability of suburban public green areas.

By studying the conditions of *mineralisation*, indicating the degree of artificiality of the soil; of *plant supplies*, differentiating the typological aspect of trees and shrubs; of *plant coverage* emphasising the quantity of vegetation. Project proposals were prepared based on the following criteria: *Border conditions*; *Links*; *Pressures and conflicts*; *Degrading and detracting elements*; *Attractive elements*; *Open space quality*; *Building quality*; *Environmental and ecological quality*.

Green wedges were entrusted with the job of rebalancing the environment on the basis of this information in that they are open space reserves in the urban landscape constituting strategic planning choices suitable to guide the transformation processes.

Il progetto GreenLink dà l'opportunità di verificare attraverso concreti casi di studio di provare una pianificazione unitaria tra aree urbane e aree verdi.

Le tre questioni da risolvere sono:

- a) dare un autonomo profilo alla cintura sub-urbana;
- b) sviluppo urbano nel rispetto delle aree verdi;
- c) considerare la sostenibilità economica delle aree verdi pubbliche.

Attraverso lo studio delle condizioni di *mineralizzazione*, indicando il grado di artificializzazione del suolo; di *equipaggiamento vegetale*, differenziando l'aspetto tipologico della vegetazione arborea o arbustiva; di *copertura vegetale* evidenziando quantitativamente la presenza di vegetazione. Sono state formulate proposte progettuali che hanno come base i seguenti parametri: *Condizione di marginalità*, *Collegamenti*, *Conflitti e pressioni*, *Degradi e detrattori*, *Potenzialità ed elementi attrattivi*, *Qualità del sistema degli spazi aperti*, *Qualità del sistema insediativo*, *Qualità ambientale ed ecologica*.

In base a questi dati si è arrivati ad affidare ai cunei verdi le istanze di riequilibrio ambientale in quanto riserva di spazi aperti nel paesaggio urbano costituendo di fatto scelte strategiche di pianificazione idonee a pilotare i processi di trasformazione.

El marco del proyecto GreenLink proporciona una interesante oportunidad para verificar, a través de casos de estudio concretos, la planificación unitaria de áreas urbanas y áreas verdes.

Las tres cuestiones a resolver son:

- a) proporcionar un perfil autónomo a los cinturones o franjas suburbanos;
- b) desarrollar el sistema urbano respetando las áreas verdes;
- c) considerar la sostenibilidad económica de las áreas verdes públicas.

A través del estudio de las condiciones de mineralización, indicando el grado de artificialidad del suelo; del aprovisionamiento vegetal, diferenciando tipología entre árboles y arbustos; y de la cobertura vegetal enfatizando la cuantía de vegetación. Los proyectos propuestos se han preparado en base a los criterios siguientes: *Condiciones de los márgenes o fronteras (Border conditions)*; *Enlaces o conexiones (Links)*; *Presiones y conflictos (Pressures and conflicts)*; *Degradación y elementos detractores (Degrading and detractors elements)*; *Potencialidades y elementos de atracción (Attractive elements)*; *Calidad del sistema de espacios abiertos (Open space quality)*; *Calidad del sistema de edificación (Building quality)*; *Calidad ambiental y ecológica (Environmental and ecologic quality)*.

En base a estos datos se ha otorgado a las cuñas verdes la función de elemento reequilibrador ambiental en cuanto a reserva de espacio abierto en el paisaje urbano, constituyendo de hecho, la elección estratégica para el seguimiento de la planificación idónea y los procesos de transformación.

O âmbito do projecto GreenLink fornece uma oportunidade para verificar a desafiante perspectiva de fusão entre o desenvolvimento de espaços urbanos e áreas verdes adjacentes, através de casos de estudo concretos numa única estrutura de planeamento.

No entanto, permanecem em aberto 3 questões pertinentes:

- a) atribuir perfis autónomos distintos às cinturas suburbanas;
- b) planificar o desenvolvimento de sistemas urbanos respeitando os valores intrínsecos das áreas verdes;
- c) criar viabilidade económica para as áreas verdes públicas suburbanas.

Estudando as condições de mineralização, indicando o grau de artificialidade do solo; de fornecimento de plantas, diferenciando os aspectos tipológicos entre árvores e arbustos; de cobertura total enfatizando a quantidade de vegetação

As propostas de projecto foram elaboradas tendo em atenção os seguintes critérios: *Condições das zonas de contacto*; *Interfaces*; *Pressões e conflitos*; *Elementos potenciadores de degradação e de abandono das áreas*; *Factores de atractividade*; *Qualidade do espaço aberto*; *Qualidade da edificação*; *Qualidade ambiental e ecológica*.

Com base na informação recolhida, foram criados espaços verdes (cunhas) com a função de reequilibrar o ambiente, como reservas de espaços abertos na paisagem urbana, constituindo escolhas de planeamento estratégico, capazes de liderar os processos de transformação.

REGIONE TOSCANA

(Italia)
Clelia Mele

Proposals matured during the project

Cultural, Educational and Artistic activities

The main features of each theme will be organised to create material and immaterial links to permit the creation of homogeneous systems, based on the theme, in order to give better access to citizens.

The network effect strengthens the value of the themes in their context and creates further opportunities to use the same elements. Events of a cultural nature (congresses, seminars and exhibitions) and artistic nature (theatre productions and concerts) can be held either in building facilities or equipped spaces.

Suitable areas can be found in existing buildings and annexes and in already equipped or equippable open-air spaces, especially during the summer.

The facilities best suited for cultural events could be: The Cascine di Tavola, the Etruscan City at Gonnenti, the Villa and Park at Montalvo, the pre-historic settlements at Sesto Fiorentino and the rural buildings of historic environmental interest in the Plain, so representative of the anthropological development of the area of the Park since pre-historic times.

The earliest prehistoric settlements, in fact, covered extensive areas of the then mainly lacustrine land and later development over the centuries saw the establishment of an important and well structured city by the Etruscans, the 14th century Villa Montalvo, and the De Medicis Farmhouse, Cascina Medicea di Tavola, with its buildings and annexes together with other interesting examples of houses and farmsteads throughout the area of the Plain.

Technology, infrastructure and production

The primary aim of the creation of the park is to guarantee the continued rural nature and relative productive functions of the territory.

Agriculture, and especially organic farming of typical products, will therefore have to be the most significant activity within the park, with the construction of specially equipped facilities for sales

of produce as well as guided tours and other leisure activities. It will be possible to organise experimental and research farming activities with educational and training routes as well as the establishment of new farms using advanced technology (e.g. hydroponic farming).

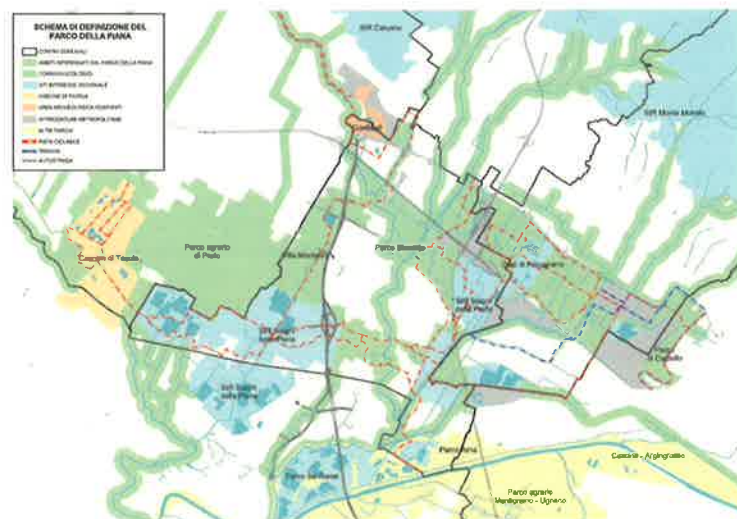
Allotments could be allocated in the areas of the Park nearest to population centres for use by the local inhabitants.

The infrastructure of the park area will have to guarantee access for both farming and the other functions of the park. Besides the existing footpaths and local roads, links to larger road and metropolitan transport systems, will also have to be ensured.

Renewable energy and biodiversity

Elements of biodiversity are present in the area of the park-to-be due to the institution of wetlands of regional interest already protected by appropriate laws. The policy followed by Municipal Authorities is that of extending these areas in order to rebuild the rural fabric of the plain, historically featuring land division and a

1. Definition scheme of the Parco della Piana (Park of the Plain)





2. Cascine di Tavola (Prato) Polline Farmstead

significant number of wetlands (ponds), riparian vegetation and the remains of ancient hedgerows. The areas of natural importance which still exist or which have



3. Campi Bisenzio Villa Montalvo

been reclaimed, will have to be suitably protected by means of controlled access and, in certain cases (Stagni della Piana), only visited accompanied by a guide because of their fragility and the

4. Cascine di Tavola (Prato), La gamberaia



5. Rural territory





6. Rural territory

presence of fauna requiring special protection at certain times of the year.

Part of the agricultural land could be used for the production of

8. Cascine di Tavola (Prato), Footpath signs for people with visual disabilities



7. Entrance to the ponds in the Plain

biomass, to be integrated with the activity of R.S.U. elaboration, whilst also safeguarding the principle of biodiversity.

Sport, tourism and leisure activities

The variety of natural and architectural landscapes ensures that the park is suitable for tourism, with the possibility of organising guided tours on cultural themes, bird watching and gastronomic tourism linked with the local produce of the park (sheep, cheeses, vegetables etc.).

Facilities could also be built in the park to promote traditional, local, quality farming produce as well as offering opportunities to learn about food and taste:

- Snack bar facilities with local food tasting;
- Taste laboratories;
- The creation of educational and cultural itineraries to inform visitors about local fruit and vegetable plants at risk of extinction.

The main routes through the park will have to be equipped to permit sports activities such as cross-country running, golf, rural cycling and horse-back riding.

In the parts nearest to urban centres, small, specifically equipped areas could be built for use by the resident population.

In general, itineraries for the various types of visit envisaged will

have to be built, with indications for use also by people with visual and hearing disabilities.

The rigidity presented by local decision-making processes, shortfalls from an operational point of view, emergencies to be found in the suburban areas, the need for communication and citizen participation

An overall agreement amongst Local Authorities was required and this was reached in two successive phases, thus requiring twice the number of administrative procedures and prolonging the deadline. The addition of another Municipality, and as a consequence its relative Province, has meant that the agreement already signed had to be amended and the launch of the procedure for the signing of the Planning Agreement necessary to vary the instruments of government of the territory of each authority postponed.

From an operational point of view, the technical capacity of each authority varies greatly and therefore it is not possible to proceed with the speed and homogeneity necessary because information does not flow in the same manner nor to deadline.

The complexity of political coordination often hinders time-saving in proceeding to the various decision-making phases. Furthermore, the lack of facilities in one Municipal Authority has caused the delay of approximately one year in the preparation of the results

9. Campi Bisenzio, Cycle-footpath link to Gonfienti (Prato)



10. Cascine di Tavola (Prato), Itinerary signposts

needed to sign the Agreement.

In this initial phase, informing citizens concerned in various ways with the use of the park is part of the work of the Region, the promoter, through the Region's Guarantor of Communication.

Opportunities exploited, involvement of investors and entrepreneurs, public awareness

The park project, with its 4 themes, permits a strengthening of the image of the park held by its users and an arousal of interest by potential private investors thanks to the economic nature of the project.

The project would permit the creation of first-rate facilities in the production of farm produce, typical of the area but at risk of extinction, such as vegetable growing and raising farm animals and sheep.

This would allow for the conservation of the few remaining farms and attract interest in the creation of new farms using the knowledge and promotional instruments offered by the park and support, also of a financial nature, by means of unitary initiatives promoted by the Authorities. In this manner, the most environmentally correct use of the rural area still available within the perimeter of the park could be achieved.

In addition to the revitalisation of farming activities, it would be possible to promote service, food and beverage businesses, with the creation of structures in which research, experimentation and teaching could take place.

Communications implemented by the Guarantor will allow a greater number of people to be involved in the completion of the park and organise their participation in the management of park facilities as well as increasing the cooperation of volunteers.

These aims can be more easily achieved since the population has already spontaneously activated its own instruments of participation, such as forums on the rural territory and volunteer action on websites relating to environmental issues.

Summary of the experience

Thanks to GreenLink, the “Parco della Piana” project is assuming the size and nature of a large suburban park with its own characteristics, similar to other great suburban parks in Europe.

The development of the four themes helps to sustain the image of the park, also from the point of view of the continuity of the area, creating a unity of functional systems which in turn exalt the value of each of the elements forming the structure of the park.

The possibility that the development of the project for the park should follow a shared method at a European programme level, strengthens the quality of the proposal and aids its acceptance at a political-administrative level.

Summaries

The variety of natural and architectural landscapes encourages the use of the park for tourism, with the possibility of organising guided tours on cultural themes, bird watching and gastronomic tourism linked with the local produce of the park (sheep, cheeses, vegetables etc.).

In order for this to be possible, the four themes of the GreenLink Project will be applied, identifying the features for each theme and creating the necessary material and immaterial links between them.

The infrastructures in the area will have to guarantee access for both farming and the other functions of the park. The main routes through the park will have to be equipped to permit sports activities such as cross-country running, golf, rural cycling and horse riding. In general, itineraries for the various types of visit envisaged will have to be created, with indications for use also by people with visual and hearing disabilities. In the parts nearest to urban centres, small, specifically equipped areas could be allocated for use by the resident population.

The areas of natural importance which still exist or which have been restored, will have to be suitably protected by means of controlled access.

The project would permit the creation of first-class facilities in the production of farm produce, typical to the area but at risk of extinction, such as growing vegetables and raising farm animals and sheep.

One part of the agricultural land could also be used for the production of biomass, to be integrated with the activity of R.S.U. elaboration, whilst safeguarding the principle of biodiversity.

La varietà dei contesti naturalistici e architettonici presenti nel Parco consente di prevederne la fruizione anche a fini turistici, con la possibilità di organizzare visite guidate di carattere culturale a tema, attività di birdwatching, di carattere gastronomico collegato alle produzioni tipiche del Parco (pecora, formaggi, ortaggi, ecc.).

Perché ciò sia possibile si mettono a sistema i quattro tematismi del Progetto GreenLink, individuando per ciascuno gli elementi caratterizzanti e creando fra essi i necessari collegamenti materiali ed immateriali.

L'infrastrutturazione del territorio del Parco dovrà assicurarne l'accessibilità, sia ai fini dello svolgimento delle attività agricole sia per l'utilizzo delle funzioni previste. I percorsi principali dovranno essere attrezzati per consentire attività motorie sportive individuali, corsa campestre, golf, ciclismo rurale, cavallo, ecc. Dovranno essere realizzati dei percorsi facilitati per le varie tipologie di itinerari previsti, con opportune indicazioni, fruibili anche da soggetti non vedenti e non udenti. Nell'ambito delle aree più prossime ai centri urbani potranno essere create delle piccole strutture specialistiche godibili anche dalla cittadinanza stabile.

Le aree con valenza naturalistica ancora presenti o ripristinate dovranno essere, oltre che valorizzate, tutelate adeguatamente con accesso controllato.

Si pensa di creare strutture di eccellenza delle produzioni agricole tipiche ed in via di estinzione quali in particolare le produzioni ortive e l'allevamento di animali da cortile e degli ovini.

Una parte di terreno agricolo potrebbe inoltre essere utilizzato per la produzione di biomasse, ad integrazione dell'attività di lavorazione dei R.S.U., salvaguardando comunque il principio della biodiversità.

La variedad del patrimonio natural y arquitectónico presentes en el parque, favorece su utilización incluso con fines turísticos, posibilitando organizar visitas culturales guiadas, observaciones ornitológicas y actividades gastronómicas ligadas a los productos típicos del parque (quesos, carnes, hortalizas, etc.).

Para lograr este objetivo deberán implementarse las cuatro temáticas establecidas en las líneas de actuación del Proyecto GreenLink, identificando los elementos característicos para cada uno de los temas, y creando los necesarios vínculos materiales e inmateriales entre ellos.

Las infraestructuras del territorio del parque deberán asegurar la accesibilidad, ya sea para el desarrollo de las actividades agrícolas como para el resto de actividades previstas. Las rutas principales a través del parque deberán estar acondicionadas para permitir las actividades deportivas como correr, golf, ciclismo rural, equitación, etc.

En general deberán diseñarse itinerarios para los distintos tipos de actividad, con la señalización adecuada para todo tipo de público incluyendo invidentes y personas con discapacidades auditivas. En las áreas más cercanas a los centros urbanos podrían crearse pequeñas áreas específicas para el uso de la propia población residente.

Las zonas naturales de valor, primigenias o restauradas, deberán ser tuteladas de forma adecuada y de acceso restringido.

El proyecto prevé crear estructuras de alto nivel para la producción de los productos típicos agrícolas, algunos de los cuales están en peligro de desaparición, como el cultivo de hortalizas y la cría de animales de corral y de ovejas.

Una parte del territorio agrícola podría utilizarse para la producción de biomasa, integrarse en la actividad de elaboración R.S.U., salvaguardando de esta manera el principio de la biodiversidad.

A variedade existente de paisagens arquitectónicas e de natureza, encoraja a utilização do parque para uma vertente de exploração turística, com a possibilidade da organização de visitas guiadas sob a temática cultural, observação de aves (Ornitologia) e turismo gastronómico relacionado com a produção endógena do próprio parque (gado ovino, queijos e vegetais e outros).

De forma a possibilitar estas vertentes, as quatro temáticas do GreenLink serão aplicadas, identificando as características de cada temática e estabelecendo as ligações materiais e imateriais necessárias entre as mesmas.

As infra-estruturas em cada área deverão garantir o acesso às diferentes funções do parque (agropecuária e outras). Os principais caminhos através do parque deverão estar equipados de forma a permitir actividades desportivas tais como corrida corta-mato, golfe, ciclismo rural e equitação. De forma geral, os vários tipos de itinerários planeados deverão ser criados, dotando-os de sinalética adequada inclusive para aqueles que possuam deficiência visual e auditiva. Nas áreas mais próximas dos centros urbanos, serão criados núcleos especificamente equipados para serem utilizados pela população residente.

As áreas de importância natural que ainda subsistem quer através da sua conservação, quer através da sua recuperação, deverão ser protegidas com recurso ao acesso condicionado ou controlado.

O projecto deverá permitir a implementação de instalações de vanguarda e de alta qualidade na produção agro-pecuária, actividade tradicional da zona em questão mas em risco de cair em desuso.

Parte da área destinada à agricultura poderia ser destinada a produção de biomassa articulando com o sector de R.S.U., procurando salvaguardar o princípio da biodiversidade.

GERENCIA DE URBANISMO - AYUNTAMIENTO DE SEVILLA

(España)

Francisco Javier Pando Sastre

“Los Gordales” urban development proposal

A strategy has been designed to consider the metropolitan centrality of these spaces, and their strategic position with regard to the free urban and metropolitan spaces systems.

The action is devised as an integral strategy to create a new urban centrality area in the District. This area will take advantage of the potentials offered by the sector as free space to recover continuity between Seville's system of historic parks: Parque María Luisa and Riberas de la Dársena del Guadalquivir or, even the Parque de los Príncipes, with the environment, through the Dehesa de Tablada; as well as contemplating the new inter-modality outlooks envisaged with the building of the Line 1 of the Underground. The implementation of university uses contribute in this new centrality, that will be structured around the Parque Equipado de Gordales, in addition to singular urban uses such as the Ciudad de la Justicia, the foreseen Underground interchange station, supra-municipal furnishings and tertiary services. Lastly, this space will also extend the offer of complementary local furnishings for the district Los Remedios.

To make these actions possible, the area where the Seville April Fair is currently held will be transferred to this site, the Charco de la Pava.

To summarise, the urban planning aims and criteria are as follows:

- create the “Parque Equipado de Los Gordales”, as free space recovering continuity between the historic parks and environment, through, the Dehesa de Tablada. Implementing university uses together with singular urban uses, supra-municipal furnishings, business premises and tertiary services;
- possibility of articulating the University with the River. North Campus-Central Area-South Campus;
- linear colonisation structure of the territory, based on the fast line separating Los Gordales and Tablada;
- the horizontal nature of the space is balanced by sporadic, vertical interruptions, maintaining permeability towards the Parque Equipado or University Campus.

Following the final approval of the General Urban Development Plan, on 19 July 2006, the Spanish Ministry of Economy and Finance established a contentious appeal on certain determinations affecting properties owned by the State Administration. One of the State-owned properties was Los Gordales.

“Various properties included in the SOU-DR-01 sector, Los Gordales, with non-consolidated urban land category and a buildability potential of 0.40 m²t/m²s. With regard to this determination it aims at the land having the category of consolidated urban land with a building potential of 0.5035 m²t/m²s”.

Therefore, until this contentious appeal is resolved, the planning development proposals of the sector have been paralysed.

Tablada urban development proposal

The following actions are to be carried out for the “Tablada” urban development action:

- guarantee accessibility by creating: a) Tablada underground railway station; b) North access gate; c) East access gate; d)

1. Aerial photograph of Los Gordales





2. Los Gordaes

South access gate; e) West river access, from the river; f) Internal road system;

- guarantee contact with nature, by creating: a) welcome infrastructures; b) viewpoints; c) protection and recognition of habitats; d) implementation of woodland in the meadowland;

3. Aerial photograph of Tablada



4. Aerial photograph of Tablada

- e) regeneration of the riverside woodlands; f) introduction of hedges and improvement to the orange grove; g) introduction of a flyover cordon with Mediterranean evergreen vegetation; h) research program; i) an interpretation program;
- give relevance to the Guadalquivir river, by: a) building landing stages to facilitate river access; b) regenerating riverside woodlands; c) installation of a hydrological plant; d) construction of river-related “devices”; e) action on the riverside path; f) construction and development of an interpretation centre;
- guarantee the function as mother area to the open space system of the Metropolitan area: a) protection and recognition of habitats; b) limitation in the use of pesticides; c) control and regulation of uses; d) surveillance; e) municipal nurseries;
- increase biodiversity, creating a wetland;
- guarantee the social use of the space by creating: a) a municipal air sports school; b) a municipal horse riding school; c) collective or social kitchen gardens;
- guarantee traditional uses and incorporate the historic and heritage values;
- increase environmental awareness and show good practices in the use of resources;
- defend land-maritime public property;
- contribute in the Kyoto protocol.

ASSESSORATO TURISMO E COMMERCIO EMILIA-ROMAGNA REGION (Italia)

Maria Francesca Buroni, Maura Mingozzi, Enrica Dall'Ara, Matteo Zamagni

Results of the pilot project

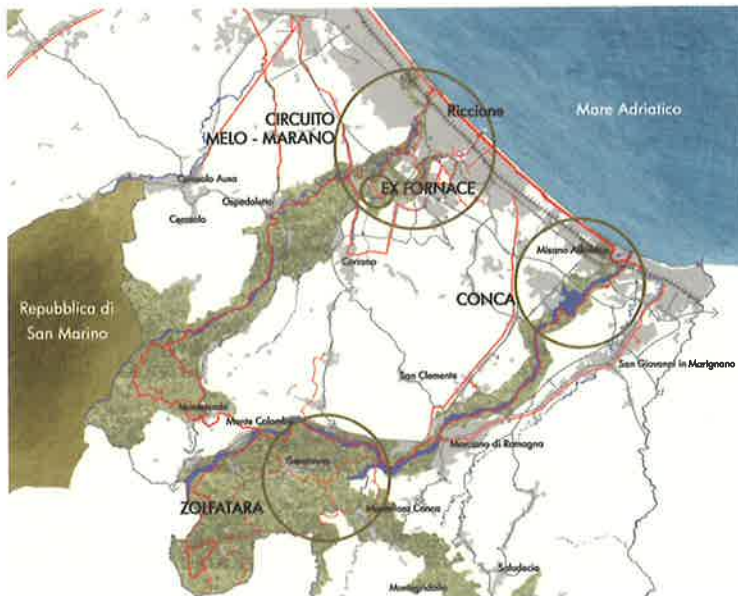
The fifth phase “The perspectives” aims to the future. The leader, with the close cooperation of the partners, will coordinate the elaboration of “The Strategic Manual”, which is the final product of the project, where the scenarios are shown, transformed into simulated models. The results of the simulations, limits met, rigidities of the decisional system, operative weaknesses, emergencies and the fragility found in suburban territories, sensibility of public opinion, duties of communication and of closeness, etc. represent a compendium of knowledge, precious in the review of the scenarios, to optimise their potentials, strengthen their capacities and improve their use as operative guide.

Results obtained by each partner

Proposals matured during the project for the pilot sites (the 4 pilot projects)

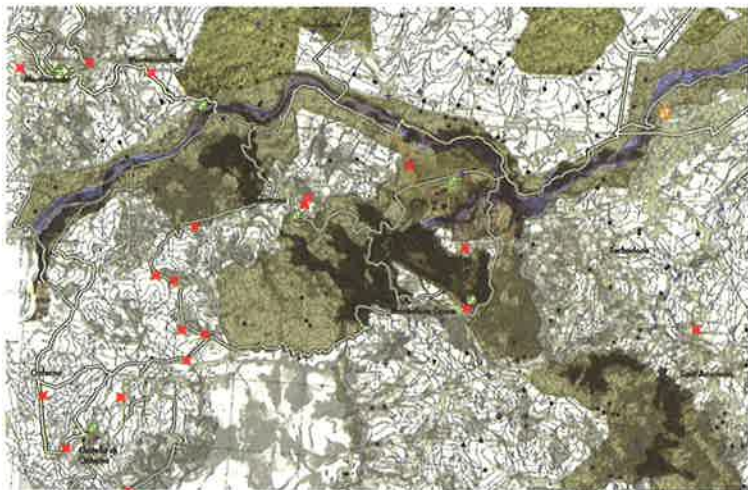
The area where the extensive cycle circuit connecting Riccione to its hinterland is located often shows conflicting landscape features: such imbalances are caused by the coexistence of uses resulting from the heavy coastal anthropisation, a consequence of the tourist-oriented development and the establishment of manufacturing facilities in the foothills. The established landscape pattern is characterised by the combination of accommodation and manufacturing infrastructures, leisure facilities and a rural landscape whose features are still clearly visible. Therefore, the proposals for the four pilot projects have been conceived from

1. Location of the four pilot areas



2. Sulphur Mine Area 2: Landscape pattern made up of woods, river areas and farmland

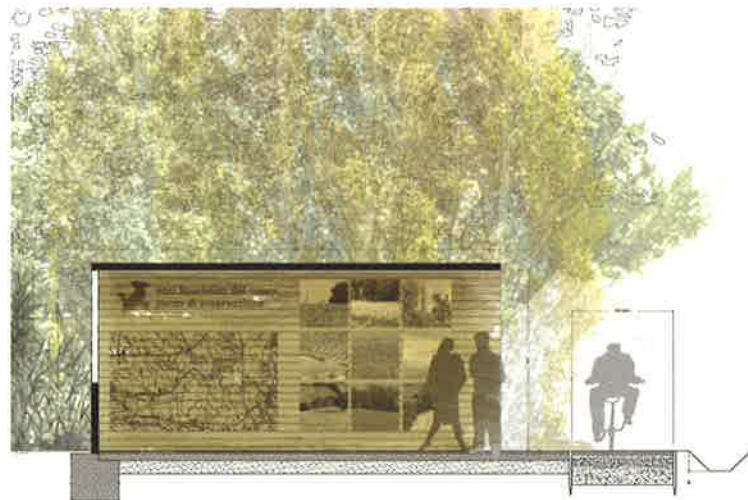




3. Sulphur Mine Area 3: Proposal of cycle/foot paths in relation to the existing trails, accommodation facilities, historic-cultural resources and panoramic viewpoints

a networking and integration perspective aimed at protecting the landscape of the areas behind the coast which still preserve noteworthy features as well as favouring the areas most affected by land exploitation. In particular, the project:

4. Conca Area: Proposal to connect and promote the coastline and the Wildlife Oasis



5. Conca Area: Proposal for a natural itinerary with an observatory for educational purposes

6. Conca Area: Project diagram for the variation of the perception experience.





7. Former kiln area: Proposal for cycle tracks connecting the open spaces

- considers the four areas as strategic rather than isolated elements connected by the cycle path and the rivers, in the framework of a widespread project involving the whole area;
- triggers a virtuous process aimed at re-balancing the landscape of the areas at issue, turning fragmentation into variety;
- blends together the themes suggested by the *GreenLink* programme for a diversified and sustainable set of accommodation services.

The Zolfatara (Sulphur-mine area) - Municipality of Gemmano; Municipality of Montefiore Conca / technological infrastructures and manufacturing activities

The *Zolfatara* is an area of former sulphur-mines in the district of Gemmano and Montefiore. The project promotes it as an attraction point for the itinerary along the Conca river, and as a “bridge” between the riverside and the Onferno Reserve, further from the river area, and well-known for the relevance of its geomorphological features.

It is strategically positioned within the project itinerary, since it is located in the *landscape of the Conca, Ventena, Tavollo foothills* and in the *landscape of the calcareous-limestone hill chain of the southern area* – classification of the Provincial Coordination Territorial Plan 2007 – that is the transition area between the river valley and the foothills, beyond which the cycle itinerary changes its features as

the orography and the road network also change, becoming a perfect itinerary for hikers and mountain-bikers.

The traces left by former sulphur extraction activities provide an ideal context to develop the theme of manufacturing activities suggested by the *GreenLink* project guidelines. In this area several crafts activities were carried out in the past, in connection with a “know-how” which has been handed down verbally up to now: the production of fuller’s earth (sandy clay) for carding clothes, weaving, the production of boiled wool and food.

Thanks to its minor traditions and its high natural interest, it is the ideal place to establish new production clusters or consortia dealing with organic farming, sustainable tourism, and the promotion of the area as a means to keep its history alive.

The project includes the upgrading of the local network of trails to guarantee easy accessibility, fostering the knowledge of the places, favouring territorial marketing and involving the existing accommodation facilities in management and local promotion issues.

The mouth of the River Conca - Municipality of Misano Adriatico / renewable energies and biodiversity

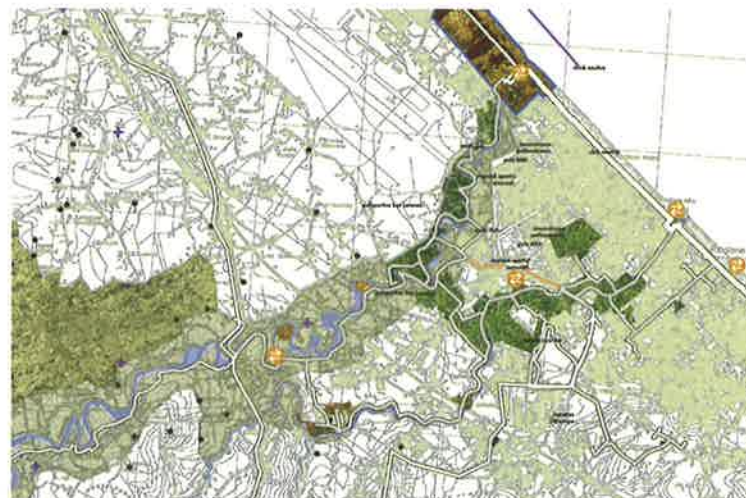
The mouth of the River Conca clearly shows the incongruous overlapping of environmental elements and functions which

8. Former kiln area: Proposal to restore the Former Furnace and the nearby green areas: a new space for environmental education



have led to the exploitation of the coastal area. For this reason initiatives have been held in this area for some time now, such as a “community design” itinerary which has been recently started by the Province of Rimini (*Conca Project*). In this case, our proposal for *Green Link* has been developed to complement this experience, while maintaining its autonomy.

9. Melo-Marano Circuit Area 1: Proposal for diversified recreational use according to the anthropisation level



10. Melo-Marano Circuit Area 2: Proposal for connection and promotion



11. A “Conflicting landscape” reflecting fragmentation at land-use level (Photo Enrica Dall’Ara)

- suggests territorial marketing initiatives, with the involvement of local accommodation and tourist facilities;
- enhances the existing teaching and communication activities, by enlarging the bird watching area and the educational facilities. The envisaged solutions allow control of the problem of the expansion of riparian vegetation in the watching sites alternating stretches of maximum visibility with shielded areas according to ecosystem protection criteria.

The former kiln of Case Furnace along the river Melo - Municipality of Riccione /educational, cultural and artistic activities

The Furnace is what is left of an old kiln along the river Melo. The river valleys of this area have always been suitable for the establishment of production activities (quarries, oil-mills, mills, kilns) due to the presence of soil and water resources. On the one hand, these activities have “exploited” the rivers, while on the other they belong to the history of the local economy and today industrial archaeology sites are evidence of it. The idea of restoring the former kiln for teaching and cultural purposes (with exhibition spaces, classrooms, open-air labs) aims at recognising and enhancing the historic importance of industrial archaeology, of its aesthetic potential and the possibility to adapt these sites to new purposes.



12. A “Conflicting landscape” reflecting fragmentation at land-use level (Photo Matteo Zamagni)

Under the project, the former kiln will become a sort of “hinge” of a system of public green spaces along the river Melo through:

- the creation of a connection between the path along the Melo and Marano rivers, near the crossroads for Coriano;

13. “A “Conflicting landscape” reflecting fragmentation at land-use level (Photo Matteo Zamagni)





14. Cycle track, accessibility and functions (Data processing based on the PTCP of the Province of Rimini)

- the upgrading of the square/car park of Case del Molino (a small town nearby) equipped with an interchange point and an access route to the river Melo;
- the architectural restoration of the former kiln (owned by the Municipality of Riccione) for exhibitions, teaching, cultural and artistic activities;
- the creation of a system of open spaces available throughout the municipal area near the former Furnace, which had previously been identified by the PTCP as a strategic area from an ecological viewpoint. In particular, the presence of the river Melo will be strengthened by planting riparian species; the nearest strip to the river will be used for the spontaneous development and natural growth of the underbrush; in the area near the kiln the new wooded areas will house equipped rest and picnic areas thus acquiring a more artificial aspect, resulting from their public or private management.

The ring along the Melo and Marano rivers and the nearby leisure areas - Municipality of Riccione / sport, leisure and tourism activities

- the short cycle itinerary along the Melo and Marano rivers, intended as a first cycle stretch reaching the hinterland, is the fourth pilot area. This circuit is closely related to the coastal and urban settings and can be completed in a few hours; for this reason it is particularly suitable for occasional as well as daily



15. Cycle track, values and weaknesses (Data processing based on the PTCP of the Province of Rimini)

sport and leisure activities. The envisaged itinerary is related to daily life and connects urban, suburban and rural green spaces, passing through a less and less urbanised landscape. The project includes:

- the completion of a network of cycle paths which had already been planned by the Municipality of Riccione, along the Melo and Marano rivers, to connect the sports centres as well as the urban and suburban parks and gardens;
- the connection and enhancement of existing sports and leisure activities, according to the needs of citizens and tourists alike;
- a programme of activities to be organised according to the anthropic level; in short, the following activities have been planned: traditional and daily sport activities on the coast and in the cities; hiking activities suitable for everybody and requiring a more reduced use of special equipment (e.g. health trail, jogging, hiking ...) in the hinterland.

The rigidities of the local decisional system, operational weaknesses, emergencies tackled in the suburban territories, duties of communication, citizen participation

Planning and management issues

While developing the project of the cycle/footpath itineraries



16. Landscape fragments (Photo Matteo Zamagni)

connecting the coast of Riccione (RN) to its hinterland, through on-site visits and by collecting information about the already implemented or planned projects from the relevant bodies, it has been discovered that many projects had already been planned (and partly implemented) by different subjects at different times.

On the one hand, this is not surprising because general planning at provincial level is followed by several municipal actions with different methods, funding, and design approaches. On the other, this situation clearly hinders the coordination of the actions and, above all, it generates difficulties in terms of management, maintenance, road signs and promotion over time, to make these proposed environmental/cultural itineraries and trails fully usable and functional for a long time (of course this usability must comply with environmental protection requirements and the tourist flows should be controlled).

The local authorities, citizens and visitors have shown a poor understanding and awareness of the overall situation, of the widespread presence and territorial extension of the existing paths, since effective methods for their maintenance are difficult to implement. Their willingness to work in this direction has been detected, as can be inferred from the planning tools of the Province of Rimini (Provincial Coordination Territorial Plan 2000 and 2007, and *BICI PLAN* 2008). Such willingness is also proved by the above-mentioned inter-municipal projects, *Parks and Economy* and *Progetto Conca*, whose study areas do not cover the whole area of the Conca and Marano rivers, from the spring to the mouth (this is a specific feature of the *GreenLink* project) and which, therefore, represent two elements within the system of the decision-making and design actions to be further implemented.



17. Valuable Landscapes along the Marano and Conca rivers (Photo Matteo Zamagni)

Communication and participation issues

In order to coordinate and harmonise the actions to be carried out in the inter-municipal area, to promote the knowledge of

18. Valuable Landscapes along the Marano and Conca rivers (Photo Matteo Zamagni)



19. Valuable Landscapes along the Marano and Conca rivers (Photo Matteo Zamagni)

the resources and needs of the project area, and to suggest a feasible itinerary system, which may be enjoyed by different users in compliance with the directives of the bodies responsible

20. Valuable Landscapes along the Marano and Conca rivers (Photo Matteo Zamagni)



for issuing the authorisations, a technical meeting was held to exchange opinions with representatives from the Local Authorities (i.e. experts from the Province of Rimini, mayors and experts of the involved municipalities). At the same time a working table has also been started with the local primary schools, to increase their knowledge about the environment and its importance and to raise the awareness of the inhabitants.

It is reported that all those involved have carried out these activities with great interest and participation.

The opportunities exploited, the involvement of investors and stakeholders, the sensibility of public opinion

The *GreenLink* project has provided the opportunity to pool local strengths and skills, by organising meetings amongst all those working in the area, although coordination of the actions was often missing. The organisation of the above-mentioned working tables also permitted a broader overview of the already implemented actions and of the future planning requirements. The project helped us to outline an overview of the potentials and needs of the area under scrutiny, identifying possible synergic investments and new consultation opportunities with the different governing subjects. In short, the project has provided the opportunity to identify integrated and shared land use models, with the perspective of making decisions more effective. The discussion between the different governing bodies is crucial to develop common approaches based on the environment and landscape protection.

The project includes the creation of two interconnected cycling circuits:

- *the first*, more easily accessible, extends over about 12 kilometres, within the municipal area of Riccione, along the Melo and Marano rivers. A few stretches of this circuit will include areas of natural interest. This circuit will be connected to existing sport facilities, tourist and wine & food services to encourage the involvement and participation of local economic operators in managing activities;
- *the second* is a mainly natural itinerary stretching over about 50 kilometres, along the Marano and Conca rivers, with a cycle path connecting them near the border with the Marche Region. Connections with the area of San Marino Republic are also planned. The circuit will end at the seashore where it will link to the existing and planned cycle paths.

In developing this project, the scope for action has been broadened and the two described circuits have been conceived as an opportunity to:

- trigger a virtuous process of landscape upgrading, re-designing the boundaries between several conflicting situations, turning the current fragmentation into variety;
- developing suitable actions for a diversified set of tourist services being consistent with the new strategies aiming at enhancing the environmental and “emotional” qualities of the area;
- increasing the cycle/foot connections between the existing tourist services in the area, as an alternative to the exclusive use of the car;
- increasing the ecological connectivity by strengthening the role of the main rivers.

Assessment of the experience

The Emilia-Romagna Region decided to focus its attention on a large area instead of an urban-suburban setting, with the purpose of providing an opportunity to coordinate the existing project initiatives both at planning, creation and management level. The *GreenLink* project centred on the analysis of the current and future situation, on information transfer, also by starting working tables with those responsible for parallel initiatives, on the identification of connection paths to complete the itinerary network, on the transport interchange and management issues. The itineraries have been developed according to the environment/landscape in which they are located (more than on merely technical aspects related to the creation of paths and cycle lanes).

The project has also provided the opportunity to:

- involve citizens in an awareness-raising initiative on the value of their area and its features;
- promote a correct and respectful use of the environment and its natural and cultural resources amongst young people;
- trigger an enhancement and promotion process of the less well-known natural areas;
- outline an overview of the area which might be useful for public and private investors willing to carry out actions in the area.

Summaries

The project proposed by the Emilia-Romagna Region within the GreenLink initiative mainly aims at pooling the local strengths and skills of the Bodies responsible for the planning and design of the cycle/foot paths along the Conca and Marano rivers (Province of Rimini), trying to avoid administrative fragmentation and the implementation of unrelated actions. The project also aims at promoting the complete creation and the integrated management of a ring-shaped cycle/foot path connecting Riccione to its hinterland, acting as a catalyst for the tourist upgrading and improvement of the area it crosses.

The project has been developed on the basis of the four themes established by Green Link guidelines (technological and production infrastructures; renewable energies and biodiversity; education and artistic activities; sports, leisure and tourism activities) following a general theme which results from the rôle played by the Conca, Marano and Melo rivers, conceived as territorial links and underlying elements for the design of the suggested itineraries: water. Water is the natural "vehicle" of biodiversity and environmental variety, is the backbone of the area and creates a seamless network: this implies a great strategic potential for a fragmented land.

Il progetto proposto dalla Regione Emilia-Romagna nell'ambito di GreenLink si è posto quale obiettivo prioritario quello di mettere in rete, a livello locale, le forze e le competenze degli Uffici preposti alla pianificazione e progettazione dei percorsi ciclabili/pedonali del territorio lungo il fiume Conca ed il torrente Marano (Provincia di Rimini), tentando di evitare la dispersione amministrativa e la realizzazione di interventi scollegati fra di loro. Il progetto intende promuovere la realizzazione completa e la gestione integrata di un itinerario ciclabile/pedonale ad anello, di connessione fra Riccione e il suo entroterra, che costituisca un elemento catalizzatore per la riqualificazione e valorizzazione turistica del territorio da esso attraversato.

Il progetto è stato sviluppato rispetto ai quattro assi tematici stabiliti dalle linee guida di GreenLink (infrastrutture tecnologiche e produttive; energie rinnovabili e biodiversità; attività educative ed artistiche; attività sportive, tempo libero e turismo) appoggiandosi ad un tema generale, strutturante, suggerito dal ruolo assunto dal fiume Conca, dal Marano e dal Melo, connettori territoriali e fili conduttori per il disegno degli itinerari proposti: l'acqua. L'acqua è infatti "veicolo" naturale di biodiversità e varietà ambientale, costituisce la nervatura del territorio e disegna una rete di per sé continua: questo è un potenziale strategico in un territorio frammentato.

El proyecto propuesto por la Región de la Emilia-Romagna en el marco de GreenLink, tiene como objetivo prioritario crear una red estable con los estamentos responsables, a nivel local, de la planificación y diseño de trayectos a pie y en bicicleta a lo largo de los cursos de los ríos Conca y Marano (provincia de Rimini), intentando evitar la dispersión administrativa y la implementación de acciones inconexas. El proyecto también pretende promover la realización completa y la gestión integrada de un itinerario circular a pie/en bicicleta que conecte Riccione con su "hinterland" y actúe como catalizador para la revalorización y mejora de la oferta turística del territorio que atraviesa.

El proyecto se ha desarrollado sobre la base de los cuatro temas establecidos por las líneas de actuación de GreenLink (infraestructuras tecnológicas y productivas; energías renovables y biodiversidad; educación y actividades artísticas; deporte, ocio y actividades turísticas) apoyándose en un tema general y estructurador, consecuencia del papel jugado por los ríos Conca, Marano y Melo, como conectores territoriales, e hilo conductor para el diseño del itinerario propuesto: el agua.

El agua es, de hecho, el vehículo natural de la biodiversidad y la variedad ambiental, constituye la columna vertebral del territorio y diseña una red continua *per se*. El agua es, pues, un potencial estratégico en un territorio fragmentado.

O projecto proposto pela Região Emilia-Romagna no âmbito da iniciativa Greenlink, tem como principal objectivo concentrar as competências e os pontos fortes das instituições responsáveis pelo planeamento e concepção das ciclo-vias / vias pedonais ao longo dos rios Conca e Marano (Província de Rimini), tentando evitar a fragmentação administrativa e a implementação de acções desfasadas entre si. O projecto também prevê a criação e gestão integrada duma via ciclo / pedonal entre Riccione e o interior do território, actuando como catalisador para uma evolução e melhoria dos serviços turísticos nas áreas abrangidas no trajecto.

O projecto foi desenvolvido segundo os pressupostos estabelecidos nas linhas orientadoras do Greenlink (infra-estruturas tecnológicas e produtivas; energias renováveis e biodiversidade; educação e actividades artísticas; actividades desportivas, de lazer e turísticas), no seguimento de uma temática geral e moldadora que, resulta do papel desempenhado pelos rios Conca, Marano e Melo, concebidos como elos de ligação territoriais e elementos para a concepção dos itinerários sugeridos: água. A água é o "veículo" natural da biodiversidade e variedade ambiental, é a espinha dorsal desta área e cria uma rede incomparável: este facto antevê um grande potencial estratégico para um território fragmentado.

CÂMARA MUNICIPAL DE VILA REAL DE SANTO ANTÓNIO

(Portugal)

António Carvalho, Bruno Sales

1. Vila Real de Santo António, Master Plan





2. Vila Real de Santo António, Master Plan

1.1.

Within the scope of the GreenLink Project, the Municipality of Vila Real de Santo António started by establishing *guidelines* in order to develop a global initiative, in whose framework the four pilot projects would be detailed, as agreed with the partnership, considering the local specificity of Vila Real de Santo António:

- existence of a city with about 20,000 residents and 3 more centres of "seaside vacation urbanisations";
- a high construction growth associated with the abandonment of agricultural activity and, as a direct consequence, available land areas;
- existence of important areas with great natural value, beautiful natural landscapes and valuable agricultural land on the periphery of urban areas.

We established the following *guidelines / courses of action*:

- preserve the natural areas in the urban periphery;
- adjust urban functions to the biophysical profile and natural resources;
- increase the intrinsic value of the territory;
- reduce land value dualism;
- invest in education, especially regarding the environment, focusing on younger people;
- provide natural and rural contact to younger people;
- involve the population in several projects;
- promote public use and improve the areas dedicated to leisure, recreation, sports and educational activities.

From the beginning, it was clear that at the end of the GreenLink project, we would be able to identify feasible actions and *pilot projects*, and that in the process of developing them and defining management and operational models we would shape our work towards:

3. Natural area on the Guadiana river bank





4. Natural area at Sapal

- implementation measures which would not be "capital intensive";
- maximum usage of existing features;
- projects with low maintenance costs;
- revealing communication related aspects.

With these prerogatives, a *concept* was developed for the suburban areas of Vila Real de Santo António and Monte Gordo, for which four *pilot projects* were proposed:

Educational, cultural and artistic activities

During the development phase of this pilot project, we committed ourselves to define a sustainable way to use the vast amount of natural and landscape values and cultural resources, with another extensive "Natura 2000 Network" area in both territories, Vila Real de Santo António and Monte Gordo.

In order to increase the use of such places for these purposes, we planned public spaces assigned as "Natural Spots", strategically placed in the territory, where it is possible to conduct workshops on nature interpretation, geography, history or sciences, artistic activities such as painting or photography, and group meetings

aiming at contact with a natural environment and good weather conditions.

Observation towers were planned for the same purposes which, in a flat territory such as ours, allow for original perspectives of the landscape and work as attraction vectors for peripheral spaces, often inadequately used and subject to loss of inland landscape characteristics, rural heritage degradation or illegal waste dumping.

As a corollary to the foreseen interventions, we want to create a small and functional facility to be built near an entrance to the "Mata Nacional das Dunas Litorais de Vila Real de Santo António", known as "O Camaleão – The Chameleon" (after the name of an ENGO), a centre for environment interpretation that will work as an information point for the natural values, reception desk for school groups and base for exploring the Municipality.

This initiative is still in an embryonic phase depending on the definition of its management procedures, in order to be articulated with the "Instituto de Conservação da Natureza e da Biodiversidade", responsible for the management of the natural heritage.

Productive activities and technological infrastructures

There is an area suffering from severe degradation located in the northern area of Vila Real de Santo António, in the neighbourhood of the port, used as a deposit for waste until the 1980s, where the installation of a Technological Park and a Waste Water Plant is foreseen, according to the Municipal Master Plan approved in 1992.

The project takes several aspects into consideration such as:

- interest in the environmental improvement of the area;
- existing landscape values;
- the evolution of technology;
- its proximity to urban areas.

5. ETAR Observation Tower



6. Mata Observation Tower

Studies were developed in the framework of the GreenLink project, which allow centralisation of this zone in the city, so that the projects of the technological park could provide an opportunity for environmental improvement, with the help of efficient technologies, minimising negative impacts and endowing the zone with equipment aiming at integration within the public spaces network and pedestrian / bike circuits of the Municipality.



7. Observation Tower

Sports, leisure and tourist activities

Vila Real de Santo António is what we call a “Sports City” (it has a High Performance Sports Centre acknowledged by the International Association of Athletics Federation as well as an Olympic Preparation Centre). The Municipality has intense tourist activity associated with the beach, assuming in the last few years the supporting rôle for the local social-economic development. Within the GreenLink framework and implicating all its initiatives, we decided to improve and use the frequently marginalised suburban areas, in order to implement sustainable tourist and

8. Sapal The Chameleon



9. ETAR 1

sports activities in contact with nature, having created several projects within this frame such as:

- pedestrian circuits for walking and jogging;
- bicycle networks;
- footbridges to cross over dune systems in non-urban areas;
- a leisure park dedicated to equestrian and Columbidae centre activities.

Renewable energy sources and biodiversity

The energy cost is crucial to the municipal budget, requiring new steps towards the reduction of energy consumption and improvement of facilities to use the available renewable energy resources.

The potential use of solar energy is currently the most reliable of the renewable energies available. It is a nonsense that this type of energy is not used here with the highest rates of sun hours in Europe, as it is in some less sunny northern countries.



11. Project for the Technological Park

12. Vila Real de Santo António, Sunset



13. Photovoltaic energy 1

It was decided beforehand, as a project development strategy, that management would be assumed by Municipal technical services, outsourcing for specific tasks. On the other hand, actions to foresee it depend essentially on the initiative of the Municipality and largely aim at valorisation of the territorial assets, whose management is within its competence.

Nevertheless there are weaknesses and threats to the project's execution phase, such as:

- financial constraints during implementation;



14. Photovoltaic energy 2

- maintenance difficulties of public spaces, often object of acts of vandalism;
- not enough “mature” use of technology, especially of renewable energy sources;
- persistence of available areas leading to inadequate land usage;
- continuous pressure from urban expansion into natural and agricultural areas.

There is no consistent interventional dynamic concerning population involvement in Portugal, despite legislation being second to none in this field, but during GreenLink activities it is always present and success depends on population involvement.

Although all foreseen actions in the GreenLink framework were objects of suffrage within election programmes and constitute popular initiatives, it is crucial for the success of projects that citizens embrace and stand by them.

1.3.

The main opportunities and strengths behind the GreenLink activities in Vila Real de Santo António are:

- high natural and landscape values towards the periphery of urban cores;

- sustainable economic growth within tourist activity;
- urgent need for improvement of tourist activity;
- established framework by land management plans;
- increasing population sensibility towards environmental issues;
- municipality sensibility towards these issues.

15. Cycling through Nature





16. Footbridges



17. Footbridges

18. Footbridges



19. Footbridges



1.4.

Although an evaluation of the GreenLink Project can only be considered global and final after the implementation of all planned initiatives within its framework, it is clear that it led to reflection over a territorial reality with very special characteristics – the suburban areas of Vila Real de Santo António – and this can already be considered positive.

As a result, the set of projects in preparation, once implemented, will provide important areas for comfort and urban experience, broadly enhancing the value of the territory and promoting a correct use of sensitive areas with great environmental, natural and landscape value.



20. Leisure park, equestrian and Columbiad



21. March in Nature



22-23. Pedestrian circuit

24. Columbidae Centre



Summaries

After having reflected on the characteristics and strengths of the peripheral areas of Vila Real de Santo António and Monte Gordo, an integrated concept was established for a series of interventions to be carried out in phases.

With these actions, we aim at global improvement of the suburbs, minimising the impact of urban expansion and functionally “centralising” the area, so it can become a turning point for the availability of adequate leisure, educational and cultural spaces.

At the same time, we have established the urban expansion limits as well as promoting correct land usage, setting fresh challenges for the “new rurality”.

Considering the dimensions and characteristics of the planned territory, we thought it would be preferable to provide all suburban areas with small linked projects or equipment, rather than creating a defined urban park area, providing a modern and practical network of pedestrian and bicycle circuits. In doing so, we will stimulate diversification of activities and a broad range of options to promote project and territory ownership, and would consider the existence of a landscape and natural potential: forest areas, river banks, Atlantic beaches, agricultural areas and wetlands to be absolutely essential.

Dopo una riflessione sulle caratteristiche ed i punti di forza delle aree periferiche di Vila Real de Santo Antonio e di Monte Gordo si è stabilito di intervenire portando avanti una serie di fasi di attuazione attraverso un concetto di intervento integrato.

Con queste azioni si è mirato ad un miglioramento globale della periferia, minimizzando l'impatto dell'espansione urbana e “centralizzando” l'area in maniera funzionale, in modo da farla divenire il fulcro delle disponibilità di adeguati spazi ricreativi, educativi e culturali.

Allo stesso tempo si sono stabiliti dei limiti all'espansione urbana cercando di promuovere allo stesso tempo un corretto utilizzo dei terreni e accettando la sfida per una “nuova ruralità”.

Considerando dimensioni e caratteristiche dei territori oggetto della pianificazione, si è considerato preferibile dotare tutte le aree suburbane di microprogetti e servizi collegati, piuttosto che istituire un'area definita di parco urbano, realizzando una rete moderna e confortevole di circuiti pedonali e ciclabili. In questo modo si stimolerà la diversificazione delle attività con una vasta disponibilità di opzioni per promuovere progetti e appropriazione del territorio, considerando assolutamente essenziale l'esistenza di paesaggio e potenzialità naturali: aree boschive, ripe fluviali, spiagge dell'Atlantico, aree agricole e zone umide.

Partiendo de una reflexión sobre las características y potencialidades de las áreas situadas en la periferia de Vila Real de Santo Antonio y Monte Gordo, hemos establecido una concepción integrada para un conjunto de intervenciones, que podrán ser ejecutadas de forma gradual.

Con estas acciones, se prevé una valorización global de la periferia urbana, minimizando el impacto del crecimiento urbano y “centralizando” funcionalmente esa zona, con lo cual se proveerá a la ciudad de un mayor número de espacios adecuados para el recreo, el ocio, la educación y la cultura.

Al mismo tiempo, se han diseñado los límites de la expansión urbana y se han potenciado usos adecuados del suelo, estableciendo desafíos para una “nueva ruralidad”. Considerando las dimensiones y características del territorio en proyecto, en lugar de crear una gran área con tipología de parque urbano, se ha creído mas oportuno esparcir por la periferia pequeños proyectos / equipamientos, conectados entre ellos por una moderna y cómoda red de circuitos peatonales y ciclo vías. De esta forma, se estimulan actividades diversificadas y se ofrece una variedad de opciones para la apropiación del proyecto y del territorio por parte de la población. Para la propuesta de esta opción, ha resultado fundamental la existencia de un potencial paisajístico y natural verdaderamente excepcional: áreas forestales, marismas, áreas de agricultura, playas atlánticas y márgenes del río.

Partindo de uma reflexão sobre as características e potencialidades das áreas situadas nas periferias da cidade de Vila Real de Santo António e da vila de Monte Gordo, estabeleceu-se um conceito integrador para diversas intervenções, que podem ser executadas de forma faseada.

Com essas medidas e ações prevê-se valorizar globalmente a periferia urbana, minimizar o impacto do crescimento urbano e “centralizar” funcionalmente essa zona, usando-a para prover a cidade de mais espaços adequados para o recreio, o lazer, a educação e a cultura.

Ao mesmo tempo, esclarecem-se os limites da expansão urbana e potenciam-se usos do solo adequados, colocando desafios à “nova ruralidade”.

Considerando as dimensões e características do território em projecto, em vez de se criar uma área com a tipologia de parque urbano, entendeu-se preferível pontuar toda a periferia com pequenos projectos/equipamentos, conectados entre si por uma rede moderna e confortável de percursos pedonais e ciclovias. Desta forma, estimulam-se actividades diversificadas e a variedade de opções para a apropriação do projecto e do território, tendo sido fundamental para esta opção a existência de um potencial paisagístico e natural verdadeiramente excepcional: áreas florestais, sapais, áreas agrícolas, praias atlânticas e margens de um rio.

ZOGRAFOU MUNICIPAL ENTERPRISE OF DEVELOPMENT (DEADIZ) PREFECTURE OF ATHENS

(Greece)
Joulia Georgi

Results obtained by each partner

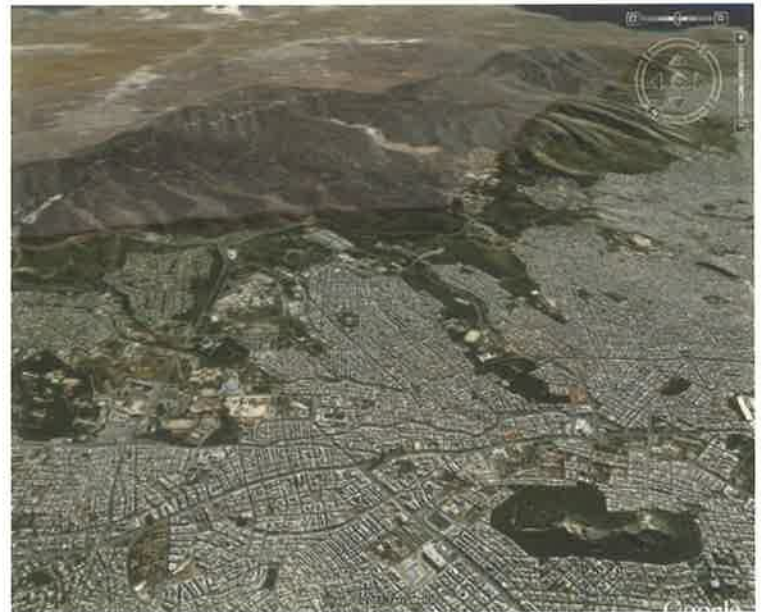
Proposals matured during the project for the pilot sites (the 4 pilot projects)

Zografou is a *suburb* in the eastern part of *Athens* (3.500.000 inhabitants) and is part of Athens Prefecture. It is located about 5 km from downtown *Athens*, about 2 km SW of Katechaki Avenue 4 km from the *Hymettus Ring* (number 65) which is part of the *Attiki Odos* private superhighway network and 3 km E of Kifissias Avenue. *Olof Palme* Avenue passes through the city. To the West Zografou city is attached to the central area of Athens and to the North, East and South it is surrounded by wholly natural green spaces such as Hymmetus Mountain and mixed natural / human environments such as parks and the University campus.

Historically (Plate 2) Zografou was made up of farmlands and some forests dominated the area. The area was of mixed farming which included pastures, vegetables and fruit groves. In the mid-20th century, suburban housing developments from Athens sprung up to replace farmlands, leaving empty space in the northeast. The pine forests are situated to the south, southeast and east, and a small park lies to the north. It is now covered by corporate buildings. Much of the municipality was made up of grasslands and rocks which are part of the *Hymettus* range. Most of the area is hilly in the west. Nowadays the City of Zografou is one of the main Municipalities of Athens with 80.000 inhabitants and covering a surface area of 210 Ha of urban built-up areas, 240 Ha of suburban green areas (Plate 3).

Plate 2. Historic picture of the Municipality of Zografou

Plate 1. The Municipality of Zografou and its surrounding municipalities



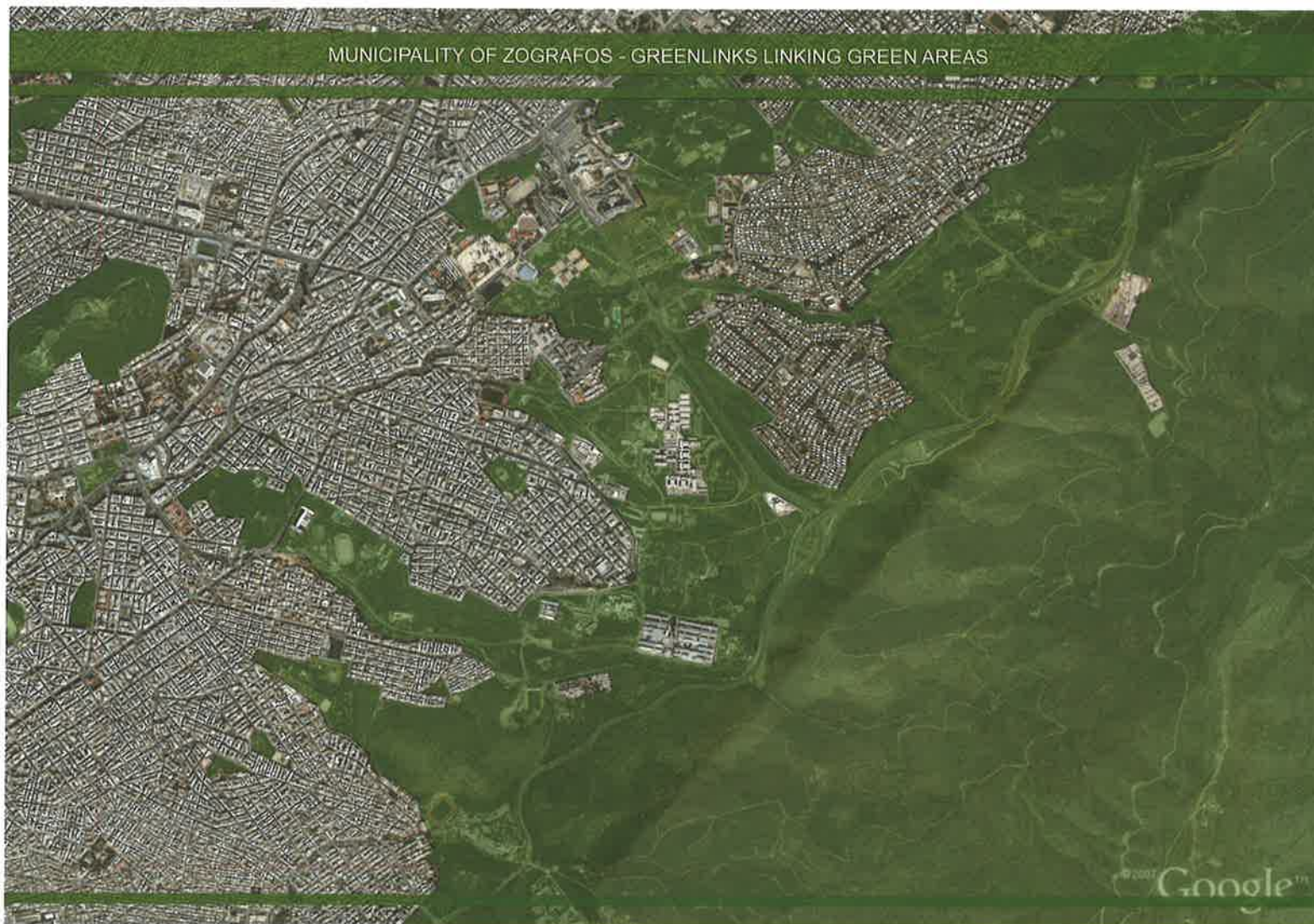


Plate 3. The green areas of Zografou Municipality

The current project aimed at improving the four main green spaces of Zografou municipality and the quality of life of its citizens. The methods followed to design the four project plans of the area are:

- 1) survey and recognition of open public spaces;
- 2) definition of the potentials and opportunities of the area;

3) introduction of a new linking suburban network system and new activities in the area.

A short description of the four sites that have been studied. The four main suburban areas that are compose the pilot projects are:



Figure 1. The hills and mountains in the municipality

1) the major campuses of Athens University and the National Technical University (collectively called “University Town”). The “University Town” is situated in the south along with the private road linking the Hymettus communication towers. Upgrading works such as footpaths, bicycle routes and sitting areas have been made in order to meet the recreational needs of the university student. The recreational areas are used by students (Plate 4) as well as by the residents of the surrounding municipalities (Plate 5);

2) Ilissos park which is located on the south border of the municipality of Zografou. The park-like stand of pine trees, where the Forest Research Institute is located, in the area of Ilissia, near the centre of Athens. Part of the park belongs to Zografou Municipality while the rest belongs to the Municipality of Athens. Inside the park are facilitated walkways and playgrounds (Plate 6). Park users have easy access to food at the Metro Station (Plates 6, 7);

3) Goudi Park (Plate 8) which is located at the North east of the Municipality and North of the National Technical University. Goudi Park contains 3 military camps, hospitals and sports facilities. Part of Goudi Park was one of the Olympic Venues during the 2004 Olympic Games. The venue hosted badminton and the five events of the modern pentathlon. Outside the Olympic Hall work centred on upgrading and enlarging the swimming pool,

and renovating and restructuring the hippodrome, including support areas such as the warm-up area, stables and locker room. Part of Goudi Park belongs to Zografou municipality while the rest belongs to Athens and Papagou Municipality. Recently the Municipality of Zografou upgraded the park with footpaths, water features (lakes, streams and cascades), a playground, a football pitch a small amphitheatre where municipal cultural activities take place, and a modern church. The landscape of the park consists of grassed areas, rows of trees and shrubs. Many people visit the park during the spring and summer, especially for the municipal cultural activities (Plates 9, 10).

4) Hymettus Mountain (Plates 11, 12). In addition to the fore-mentioned three large suburban parks is the Hymettus Mountain which stands in the southern part of the Municipality. 280 ha of the Hymettus Mountain are inside Zografos administrative boundaries. The mountain has a long history from prehistoric and historic

Plate 4. The recreational sites of the University Town used by students especially during the spring



times with several ancient tombs, ancient Kara marble quarries and monasteries. The peak elevation of 3,366 ft (1,026 m), the 11 mile-(18 km) long ridge is divided into two small series of peaks by the gorge of Parnari in the southwest. Nowadays, this site is one of the few biotopes and places of natural amusement still left in the broader area of Athens. At the same time, the existence of important archaeological sites makes the mountain an irreplaceable part of our natural and cultural heritage. More than a few recreational areas have been constructed on several parts of the mountain with footpaths, sitting areas and picnic areas that are not only used by the residents of the municipality but also by the whole urban web of Athens. Part of the forest consists of a botanical garden managed by the Filodasiki Association.

The main environmental problem of the city is the lack of green or open spaces in the city and the difficult access to the suburban green spaces. A high speed peripheral highway cuts off direct access to Hymmetus Mountain and the enclosure of the University campus prevents access to these areas by the inhabitants of Zografou.

The lack of an effective connection of the forementioned four sites characterised the area. The linking of these four sites with a footpath and a cycle lane does not only overcome the barrier of the roads but it also provides the opportunity to enhance the ecological and landscape features of the urban web (see Plate 13).

Therefore the proposals matured during the GreenLink project for the pilot sites aimed to:

- increase green and open sites in the peripheral area of the greater area of Athens;
- join together and unify green areas with the Hymettus mountain;
- create a network of pedestrian paths incorporated in the unified green areas;
- arrange traffic and parking of vehicles, ensuring the unity of the area;
- remove specific installations and activities and adapt the respective areas for public use or for welfare activities;
- unify cultural activities and associate them with other related activities in the wider area;
- establish conditions of unification and correlation of the total region of intervention with other significant areas of green, recreational and cultural activities in the Basin.



Plate 5. The recreational areas of the University Town used by residents of the municipality

The second and the third methodological step, that is the intensification of the concept of the four sites as potentials and opportunities of the area, aimed to create a different theme by introducing several activities from the four areas as followed:

Plate 6. Facilities inside Ilissos Park





Plate 7. The connection of the park with roads, the footpath and the metro station.

Pilot Project 1: "University Town"

Thematic proposal: Unifying the areas and creation of educational and sport activities. This can be achieved by (Plate 14):

- developing the green areas in the parks and connecting them with suburban green spots and the massifs;
- protecting the landscape of unique natural beauty;
- ecological reconstruction of the area, protection of forested land and the surrounding natural environment;
- upgrading of particularly deteriorated areas;
- protecting the historic and cultural heritage;
- encouraging several activities such as walking, cycling, jogging etc.;
- creating environmental educational activities.



Plate 8. General park location

Pilot Project 2: Ilissos Park

Thematic proposal: Unification of the areas and creation of educational and recreational activities. This can be achieved by (Plate 15):

- increasing the green and public spaces in Athens;
- unification and connection of the urban and suburban green spaces (Hymettus mountain and the Tourkovounia hills) by creating a green axis;
- creating a network for pedestrian and bicycle circulation inside the park to connect with the other sites ending at the nearest metro station;
- creating a natural science museum (plant selection of forest species) for educational use;
- improving access to the Forest Research Institute to the public and forming special tours to the laboratories;
- improving public access and encouraging researchers to help the municipality with environmental problems.

Pilot Project 3: Goudi Park-Metropolitan Park

Theme: Unifying the areas and creation of cultural, sports and recreational activities. This can be achieved by (Plate 16):

- rehabilitation of the military buildings by endowing them with cultural, educational and sports activities;
- creation of an environmental educational theme park on energy issues (photovoltaic, aeolic energy);



Figure 2. General location of the parks

- creation of a network for pedestrian and bicycle routes inside the park and urban transport connection to the park (the metro is already near);
- improvement of public access to the park;
- planning to improve the ecological rôle of the Ilissos river.

Pilot Project 4: Hymettus Mountain

Thematic: Creation of Hymettus cultural park. This can be achieved by proposing several activities such as (Plate 17):

- establishing other activities as rock-climbing / pot-holing. Hymettus has a limestone composition with gentle slopes interrupted by vertical cliffs and many karstic formations;
- visiting the Monasteries of Kessariani, St John the Evangelist and St. George Coutalas as well as the monuments on the Taxiarchon and Ascension (Analipsis) Hills;
- educational activities whether or not they involve schools, regarding the natural environment and specifically the fauna and flora of Mount Hymettus;
- organised guided tours to the Botanic Garden of Philodassiki when possible;
- keeping capacity to a standard level.

The Greenways Network Unification System can (Plate 18):

- provide opportunities for recreation and fitness trail activities.
- protect important wildlife habitats and promote the conserva-



Plate 11. The existing situation of Hymmetus mount



Plates 9-10. Activities in Goudi Park during Municipal cultural activities

- tion of open spaces, forests and wetland areas;
- link neighbourhoods with each other and with parks and other community assets;
- educate the public on the importance of the natural environment of the Greenways System;
- redevelop and manage the Pedestrian and Bicycle Routes as part of the Regional Bicycle and Pedestrian Plan, which will

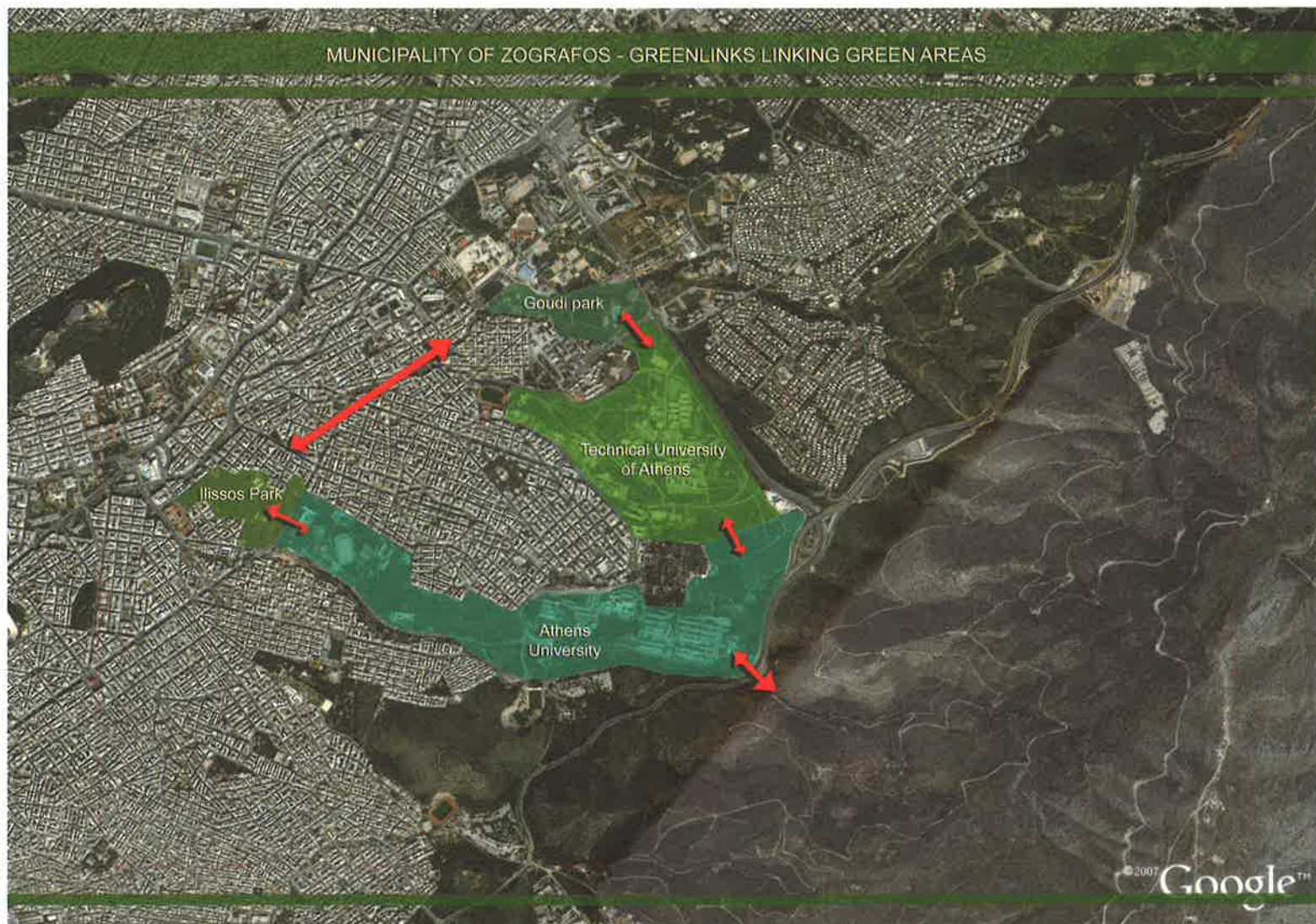


Plate 12. Several historic monuments on Hymmetus mount

- connect the Greenways and Parks System to communities within the region;
- support the conservation of river corridors.

Finally the connection of Kifissos park (Sygrou) with the “University Town” can be achieved by sinking the road at the entrance to Kifissos park (Sygrou) and creating a pedestrian path

on the top of it.

In order to succeed the linking projects have been identified. The existing connection between the areas therefore has been achieved through the project:

1. proposals for improving the existing connections (Plates 19, 20);
2. a detailed design has been made for each case (Plate 21);

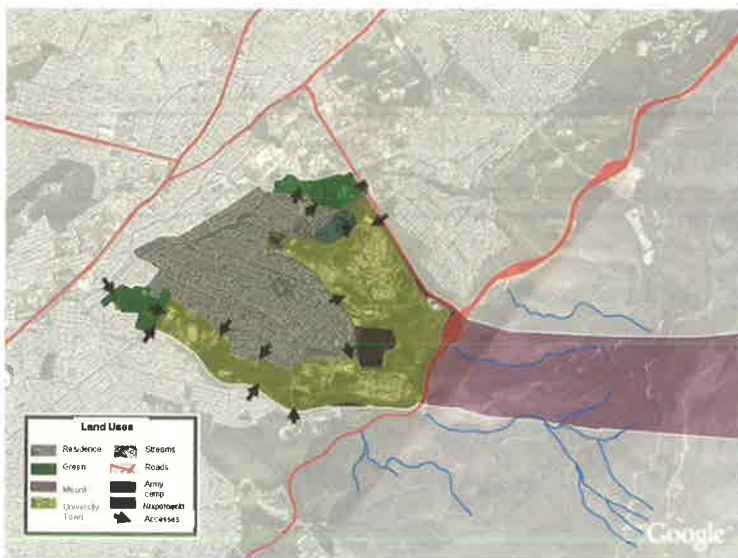


Plate 13. The proposal to link the four pilot projects

3. proposals for new connections have been proceeded (Plate 22);
4. finally an overpass on the highway could improve the connection of the green areas of Zografov with the Hymmetus mount and give access to green areas (only possible to Goudi and Kifissos Parks) (Plate 23).

Plate 14. The proposals for the University Town



The rigidities of the local decisional system, operational weaknesses, emergencies tackled in the suburban territories, duties of communication, citizen participation

Planning and management issues

Whilst developing the GreenLink project by linking green open spaces with footpaths and bicycle routes through site visits and by collecting information about the already implemented or planned projects from the relevant bodies, it has been found that several projects had already been planned (and partly implemented) by different subjects at different times.

On one hand, this is not surprising because general planning at provincial level is followed by several municipal actions with different methods, funding, and design approaches. On the other, this situation clearly hinders the coordination of the actions and, above all, it generates difficulties in terms of management, maintenance, road signs and promotion over time, to make these proposed environmental/cultural itineraries and trails fully usable and functional for a long time (of course this usability must comply with environmental protection requirements and tourist flows should be controlled).

Agreement with neighbouring Local Authorities is required in order to extend the GreenLink system to other municipalities and this could have negative effects for the citizens. Therefore a

Plate 15. The Ilissos park proposal





Plate 16. The Goudi proposals inside the Municipality of Zografou

Planning Agreement is necessary to vary the instruments of territorial government of each authority. From an operational point of view, the technical capacity of each authority varies greatly and therefore it is not possible to proceed

Plate 18. The Greenlink network system



Plate 17. Hymmetus Mount proposal

with the speed and homogeneity necessary because information does not flow in the same manner nor to deadline. The complexity of political coordination often hinders time-saving in proceeding to the various decision-making phases. Furthermore,

Plates 19, 20. Detailed proposal to improve existing links





Plate 21. Detail proposal for a main urban road

the lack of facilities and income in one Municipal Authority has caused delay in the preparation of the GreenLink project.

Communication and participation issues

In this initial phase, informing citizens concerned in various ways with the use of the GreenLink system is part of the work of the Municipality and DEADIZ. In order to promote the GreenLink project, to coordinate and harmonise the actions to be taken in the inter-municipal area, to promote the knowledge of the resources and needs of the project area, and to suggest a feasible itinerary system, DEADIZ will organise an open discussion to exchange opinions with representatives from the Local Authorities (i.e. experts from the Province of Attica, experts of the municipality and the neighbouring municipalities) and the publication of a book and a brochure concerning the GreenLink project is underway.

At the same time a working table has also been started with the local primary schools, to increase their knowledge about the environment and its importance and to raise the awareness of the inhabitants.

It is reported that all those involved have carried out these activities with great interest and participation.

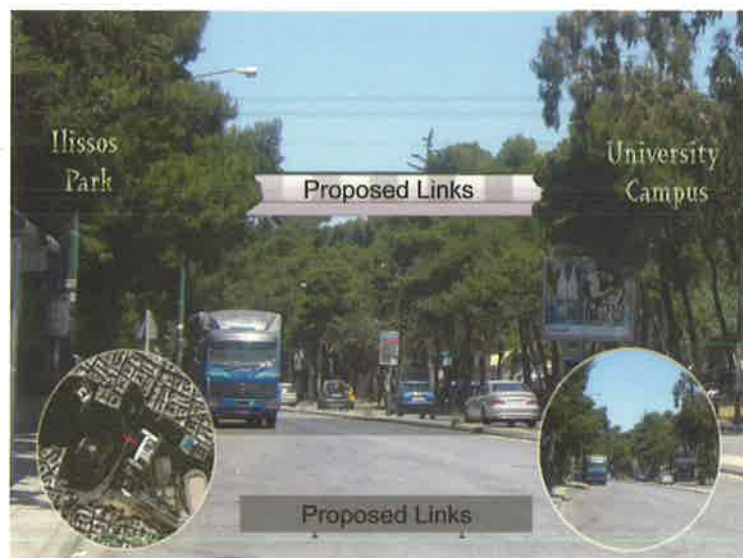


Plate 22. The connections in order to “greenlink”

The opportunities exploited, the involvement of investors and stakeholders, the sensitivity of public opinion

The *Linking* project has provided the opportunity to enhance local strengths and skills, by organising meetings amongst all those living and working in the area, although coordination of the actions was often missing. Therefore a broader overview of the already implemented actions and of the future planning requirements can be permitted. The project helped us to outline an overview of the potentials and needs of the area under scrutiny, identifying possible synergic investments and new consultation opportunities with the different governing subjects. The discussion between the different governing bodies is crucial to develop common approaches based on the environment and landscape protection.

The project includes the creation of two interconnected cycling circuits:

- the first, more easily accessible, is within the urban area of the municipality of Zografou, linking Goudi park, the University campus and Ilissos park. A few stretches of this route will include areas of cultural and natural interest (eg Ilissos river known since ancient times). This route will be connected to existing

sports facilities, recreational and cultural sites in the parks, tourist services to encourage the involvement and participation of local economic operators in managing activities;

- the second is a mainly natural itinerary, along Hymmetus mountain, with footpaths and mountain-bike paths by connecting the existing routes and planned cycle paths. These routes can easily be connected with the part of Hymmetus mount that belongs to the neighbouring municipalities. The route will end at the highway where there are over- and underpasses belonging to the neighbouring municipalities. A new overpass in the municipality of Zografou can provide easier access to citizens of the municipality of Zografou.

In developing this project, the scope for action has been broadened and the two described routes have been conceived as an opportunity to:

- activate a virtual process of landscape upgrading, re-designing the boundaries between several conflicting situations, turning the current fragmentation into variety;
- develop suitable actions for a diversified set of tourist services being consistent with the new strategies aiming to enhance the environmental and “emotional” qualities of the area;
- increase the cycle/foot connections between the existing recreational services in the area, as an alternative to the exclusive use of the car;
- increase ecological connectivity by strengthening the rôle of the main features (eg monuments, vegetation, streams).

The GreenLink project, with its four themes and adoption of several uses of the area, permits a strengthening of the image of the park system held by its users and an encouragement of interest by potential private investors thanks to the economic nature of the project. Therefore it will be a great opportunity for the stakeholders since the value of land and buildings in the surrounding area will be increased and the quality of life will be improved.

Communications implemented by the Guarantor will allow a greater number of people to be involved in the completion of the park in non-profit environmental organisations and organise their participation in the management of park facilities as well as increasing the cooperation of volunteers.

These aims can be more easily achieved since the population has already spontaneously activated its own instruments of participation, such as forums on the rural territory and volunteer action on websites relating to environmental issues.

Assessment of the experience

The GreenLink project focused: 1) on the analysis of the current and future situation; 2) on the identification of connection paths to complete the circuit network; 3) on adoption of several activities of the area; 4) on the transport interchange and management issues. The circuits have been developed according to the environment/landscape in which they are located (more than on merely technical aspects related to the creation of paths and cycle lanes).

The project has also provided the opportunity to:

- involve non-profit environmental organisations as well as other citizens in an awareness-raising initiative on the value of their area and its features;
- promote a correct and respectful use of the environment and its natural and cultural resources amongst young people;
- activate an enhancement and encouragement process of the less well-known natural areas;
- outline an overview of the area which might be useful for public and private investors willing to carry out actions in the area.
- establish a relationship between institutional partners and social and economic stakeholders based on focused areas.

Additionally the GreenLink experience allowed DEADIZ, to focus on a strategic theme in a large green area, enhancing positive elements, encouraging local participants to continue their efforts to identify new strategies and tools for supporting development.

The energetic involvement of the President of DEADIZ and the mayor of Zografou and the dissemination of the general strategy of the GreenLink project to the board of the Municipality and citizens aimed at developing the project and making it familiar and acceptable to the citizens following the development of Landscape Guidelines of the area.

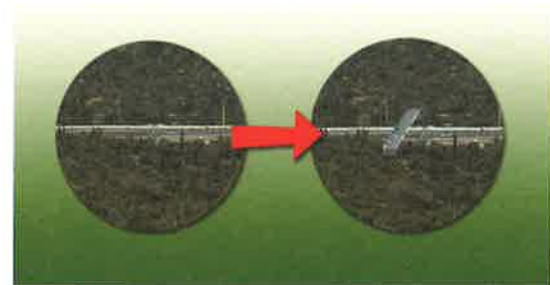


Plate 23. To connect the city to the forest

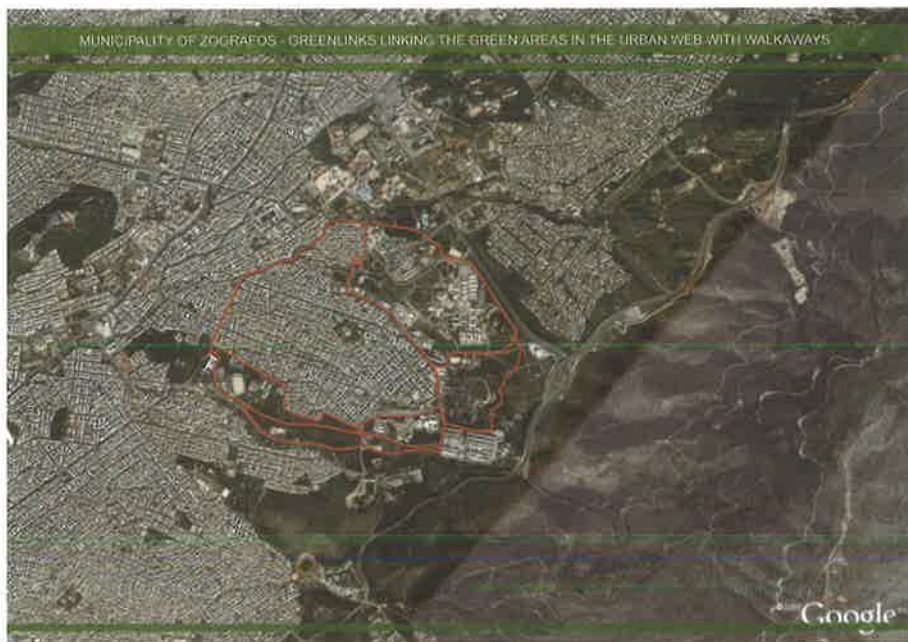


Figure 3. Connections inside the urban network



Figure 4. Connections alongside the forest outside the urban network

Thanks to the experience gained, the GreenLink project treats the green spaces of Zografou as a large suburban park with its own characteristics, similar to other great suburban parks in Europe. Therefore the GreenLink project represents a solid base for achieving the landscape objectives, and can be funded in the new EU programming period 2007-2013, from both European (Structural Funds) and State (Action in Under-Utilised Areas) financial resources.

The development of the four themes helps to reinforce the image of the parks, also from the point of view of the continuity of the area, creating a unity of functional systems which in turn exalt the value of each of the elements forming the structure of the green connectivity.

The possibility that the development of the project for the park should follow a shared method at a European programme level strengthens the quality of the proposal and aids its acceptance at a political-administrative level.

Summaries

The Landscape project developed by DEADIZ within the *GreenLink* project results in: a) an application of the Landscape Plan and design of the cycle/foot paths in the green spaces of the municipality; b) a formation of landscape guidelines for linking the greenspaces and an initiative to secure sustainable development; c) a strategic aim as shown in all EU environmental policy documents for Mediterranean countries; d) collecting the local strengths and skills of the Bodies responsible for the GreenLink network system by avoiding administrative fragmentation and the implementation of unrelated actions.

The project also aims to promote the complete creation and the integrated management of a cycle/foot path connecting the Zografou urban web with Hymmetus Mountain, acting as a case study for the tourist upgrading and enhancement of the other surrounding areas.

The project has been developed on the basis of the four sites established by GreenLink guidelines (University Campus, Goudi Park, Ilissos Park and Hymmetus Mountain) following the adoption of activities and public participation of the area.

The encouragement of walking and cycling and the penetration of biodiversity and environmental variety inside the urban web can improve the quality of life of the citizens.

Il progetto paesaggistico sviluppato da DEADIZ nell'ambito GreenLink risulta composto da: a) un'applicazione di pianificazione paesaggistica e di progettazione di sentieri pedonali/ciclabili lungo gli spazi verdi del comune; b) la creazione di linee guida paesaggistiche di interconnessione fra i diversi spazi verdi; c) un'iniziativa per assicurare uno sviluppo sostenibile; d) un obiettivo strategico conforme alle politiche ambientali europee per i paesi mediterranei; e) la captazione delle capacità locali e conoscenze derivate dalle organizzazioni responsabili del sistema di rete GreenLink per evitare la frammentazione amministrativa e la realizzazione di azioni non correlate.

Il progetto intende anche promuovere la completa realizzazione e la gestione integrata di un sentiero pedonale/ciclabile di connessione fra la rete urbana di Zografou ed il Monte Hymmetus, da utilizzare come caso studio per la valorizzazione turistica e lo sviluppo delle altre aree adiacenti.

Il progetto è stato sviluppato sulla base di quattro siti determinati attraverso le linee guida GreenLink (il Campus universitario, il Parco Goudi, il Parco Ilissos ed il Monte Hymmetus) in conformità al coinvolgimento delle attività e della partecipazione pubblica nell'area.

L'incoraggiamento alle attività motorie pedonali e ciclabili e la penetrazione della biodiversità e della varietà ambientale all'interno della rete urbana contribuiranno a migliorare la qualità di vita dei cittadini.

El proyecto de paisajismo desarrollado por DEADIZ dentro del marco del Proyecto GreenLink tiene como resultado: a) la aplicación del Plan de Paisaje y el diseño de itinerarios a pie y en bicicleta en los espacios verdes del municipio; b) el establecimiento de las líneas maestras para la conexión de los espacios verdes así como para conseguir un desarrollo sostenible; c) un objetivo estratégico, tal como se ha expone en todos los documentos de políticas ambientales de la UE para los países del Mediterráneo; d) incorporar a las fuerzas locales y a los expertos de las administraciones responsables en la red de Greenlink, para evitar la dispersión administrativa y conseguir la implementación de acciones desligadas.

El proyecto también tiene como objetivo promover y ejecutar la creación y la gestión integrada de itinerarios a pie y en bicicleta que conecten la red urbana de Zografou con el monte Hymmitos, representando un caso de estudio en relación al incremento del turismo y al crecimiento de áreas adyacentes.

El proyecto se ha desarrollado en base a los cuatro espacios establecidos en las líneas maestras de GreenLink (Campus Universitario, Parque Goudi, Parque Ilissos y Monte Hymmitos) con la adopción de actividades y la participación pública de la zona.

El fomento del paseo a pie y en bicicleta así como la penetración en la red urbana de la biodiversidad y la variedad ambiental, pueden mejorar la calidad de vida los ciudadanos.

O projecto paisagístico desenvolvido pela DEADIZ no âmbito do GreenLink, resulta de: a) uma aplicação do Plano Paisagístico e *design* de vias pedestres e cicláveis ao longo dos espaços verdes do Município; b) a criação de linhas de orientação paisagísticas para a ligação de espaços verdes; c) uma iniciativa para assegurar o desenvolvimento sustentável; d) um objectivo estratégico como é indicado em todos os documentos definidores da política ambiental da UE para os países mediterrânicos; e) potenciação dos pontos fortes e competências dos organismos locais, responsáveis pela rede Greenlink, evitando assim a fragmentação administrativa e a implementação de acções individuais e não relacionadas.

Este projecto também tem como objectivo promover a criação, conjuntamente com uma gestão integrada, de uma via pedestre / ciclável, entre a rede urbana de Zografou e o Monte Hymettus, assumindo-se como um caso de estudo para a evolução turística e melhoria das áreas envolventes.

O projecto foi desenvolvido tendo como base as quatro localizações estabelecidas na definição do projecto GreenLink (o Campus Universitário, o Parque Goudi, o Parque Ilissos e o Monte Hymettus), prosseguindo a adopção de actividades e a participação pública da área.

O incentivo às caminhadas e ao ciclismo, assim como a penetração da biodiversidade e da variedade ambiental no interior da rede urbana, serão responsáveis pela melhoria da qualidade de vida dos cidadãos.

REGIONE AUTONOMA DELLA SARDEGNA (Italia)

Enrica Campus, Pierpaolo Perra, Giorgio Costa, Gianluigi Perra, Enzo Sanna

Proposals matured during the project for the pilot sites (the 4 pilot projects)

The Regional Landscape Plan proposes the realisation of the Tirso River Park as the aim of the project. For this reason the Sardinia Region has identified the Lower Valley of the Tirso River as a pilot area to test the GreenLink project. The area is in the territory of the Province of Oristano and coincides with the study area that the municipality itself has identified within its planning means for the realisation of a territorial park, extending from Lake Omodeo to the mouth of the river and for which the Tirso River is the most important structural element.

Even if it is not a truly suburban area, the study site represents

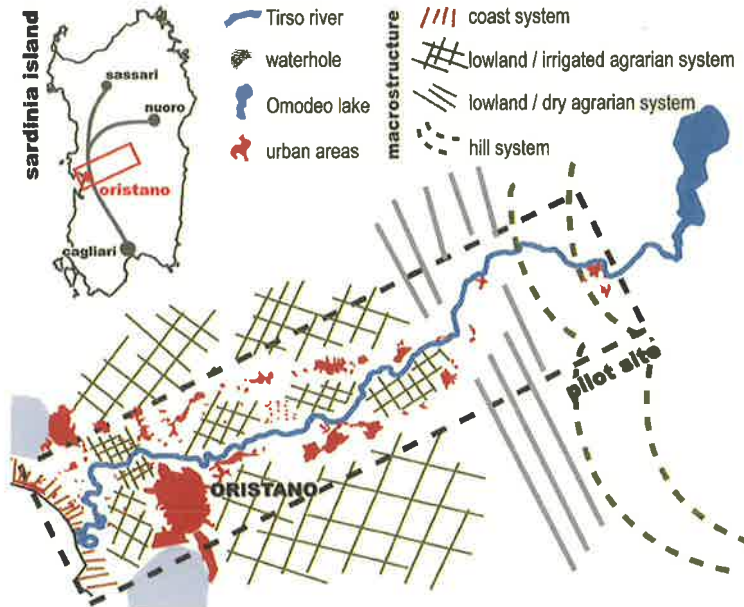
an excellent case of territory under pressure, located between the urban centres of the right and left banks of the river. The landscape is mainly agricultural and the natural, historic and cultural stratifications are woven into it, in a complex environmental system.

The project is developed on two levels:

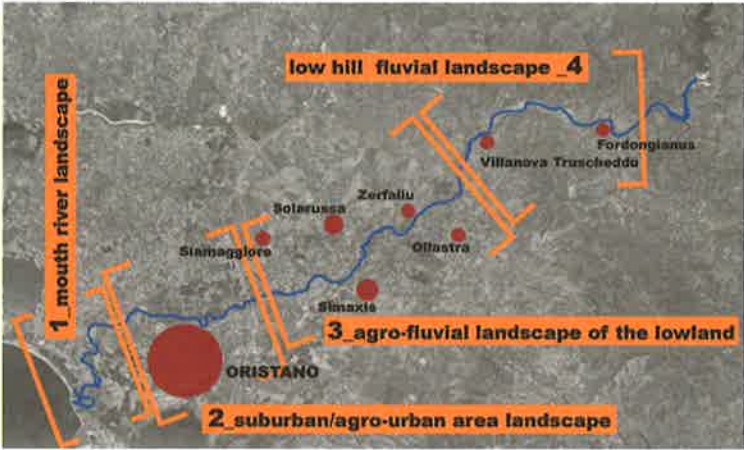
- the definition of a master plan of the River Park is linked to the landscape scale, which permits the identification of strategies, addresses and places of the project, in order to start a process for the valorisation and management of the Tirso valley;

2. Aerial view of the Tirso river: the agricultural patchwork that extends to the river is visible in the photograph (taken from http://ww2.minambiente.it/Sito/ccta/publicazioni/operazione_amico_fiume_2004/docs/tirso.pdf)

1. The pilot site “Tirso river park”, extends from the town of Fordongianus to the estuary in the Oristano gulf. The pilot site is only part of the park within the PPR and of the PUP-PTCP



3. The macro-environments are the synthesis of fluvial landscape (unity of landscape) derived from the cross-reading of some themes drawn from the overall picture of the PUC-PTCP (settlement ecologies and natural environment ecologies)



– detailed projects have been developed on an urban and architectural scale, second level, identifying some solutions able to solve the critical situations found in three project themes and referred to two macro-areas, already identified by the master plan.

4. Aerial view of the river estuary and the suburbs (from the Regione Sardegna web site - Sardegna 3D)



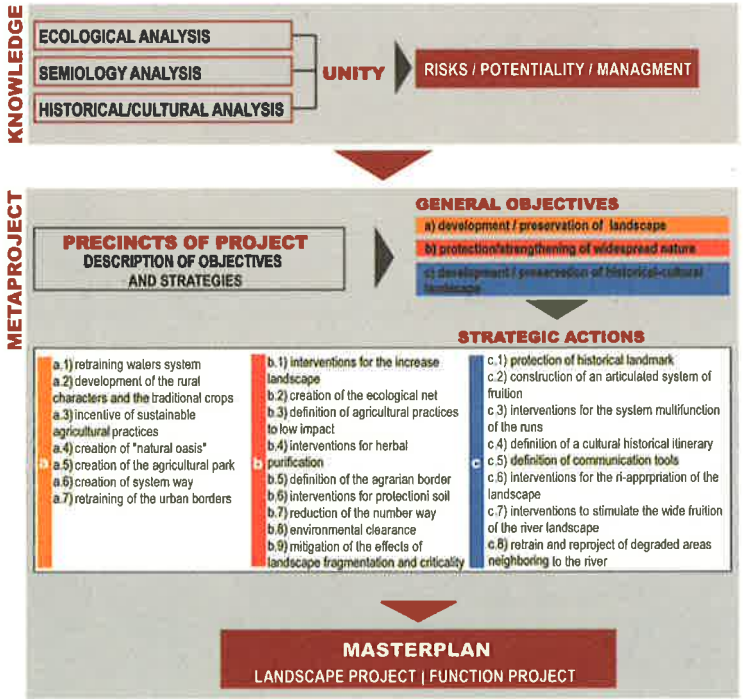
The Tirso River Park: the river as a linear connection of the suburban green spaces

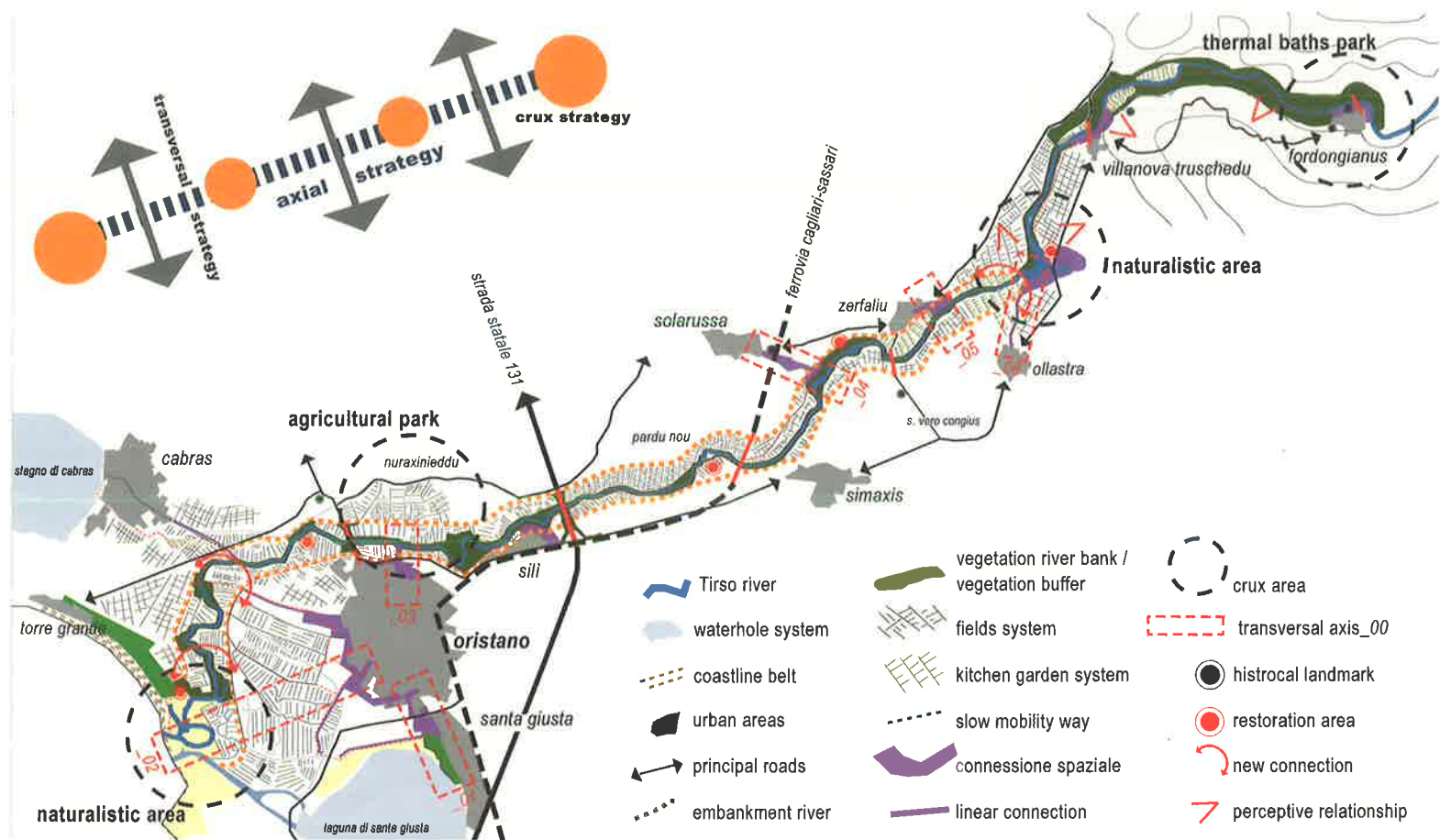
From the first analyses conducted, it is clear that the landscape of the Tirso River consists of three main systems: the system of the *landscape of water* (where, besides the river, there are the humid areas and the articulated system of the canals); the system of the *agricultural landscape* (characterised by the drainage of the low-lands, where orchards and pastures alternate); the system of the *urban landscape* (determined by the weaving of the historic and current characteristics, where archaeology often contributes to define the identities).

Macro-area 1: Landscape of the river mouth

The area of the river mouth has an extended system of humid areas and marshes, apart from the agricultural landscape with horticultural cultivation and arable land. The coast is character-

5. Methodological scheme: the scheme shows the elaboration phases of the master plan with the indication of the strategic interventions identified for each category of the general aims





6. Masterplan of the river park: the strategies, directions and sites of the project are shown on the master plan, to begin the process of renovation and management of the Valley of the Tirso river, not only depending on recognition of the values of the river's course and its surroundings. The interventions and actions suggested for the area alongside the river are, in fact, closely dependent on the formalities with which the surrounding landscapes are managed and transformed. The levels of definition of the master plans vary and become strategies and approaches in cases where trials alter the landscape through diffused action, whereas they become detailed projects in the pilot project areas

ised by dunes, on which the pine wood is situated. In this area the river designs the landscape amongst its meanders.

Macro-area 2: Suburban/agricultural-urban area

This is the landscape around the city of Oristano. Only in a few cases, the suburban zone has residual and fragmented open spaces, such as the area of Torangius. It is more similar to an agricultural belt extending from the city to the river, from the city to the sea and from the city to the ponds.

Macro-area 3: Agricultural-fluvial landscape of the lowland

The agricultural landscape dominates the context of the study area and consists of a mosaic of tesserae of arable, horticultural cultivation and pastures and is enriched, by orchards and citrus groves towards the north.

Macro-area 4: Low hill fluvial landscape

Changing the morphology, the fluvial landscape changes too and is enriched by new signs. It starts to acquire its own identity, possibly because it has a visual relationship with its surroundings,

no longer delimited by its banks. In this area the natural elements sometimes become predominant and the agricultural landscape changes to smaller tesserae, almost like kitchen gardens. Here the river interprets the urban scene, particularly at Fordongianus, where archaeological excavation of the Roman Spa is closely linked to the river.

The macro-areas are the result of reading and analyses of the landscape. They represent project areas where the general aims are identified, corresponding to the strategic themes, leading to the definition of the master plan

The identified general strategic aims for the River Park are.

General aims:

- a) development and preservation of the landscape;
- b) protection/strengthening of widespread nature;
- c) development and preservation of the historic-cultural landscape.

In the following methodological scheme, the corresponding strategic interventions are listed for each aim and they will be included in the application to the detailed scale.

The master plan stresses the strategic knots of the River Park system and the transverse relationships which are established with the surrounding landscape.

7. The river park in the suburban system of Oristano city



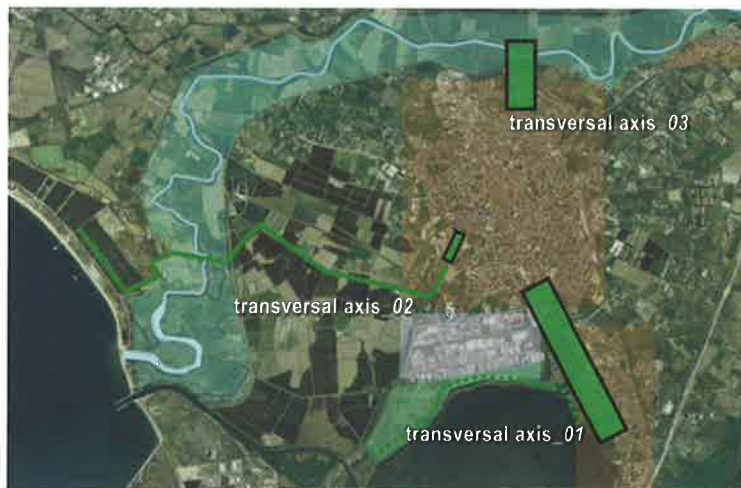
Experimentation to the urban staircase: the realisation of the pilot project in the macro-areas

The master plan identifies the geographic area of application and development for the pilot project in Macro-areas 1-2, designed to give substantial results regarding any critical points emerging during the investigation and assessment stages. In previous years, the areas under examination led to a few projects aimed at obtaining either European or regional funds. Such projects,



8. Restoration of the river: recreational and sports activities in the river park

9. The transverse axis in the suburban area: to the river, lagoon and coast





10. Transverse axis 02: from the historic gardens of San Martino, through the farmlands of Pesaria and the PHOENIX fluvial park, up to the coastline of the Gulf of Oristano, ensuring a new, unexpected “closeness” of the coastline, establishing a new physical, enjoyable and sentimental value as an alternative to the vehicular option

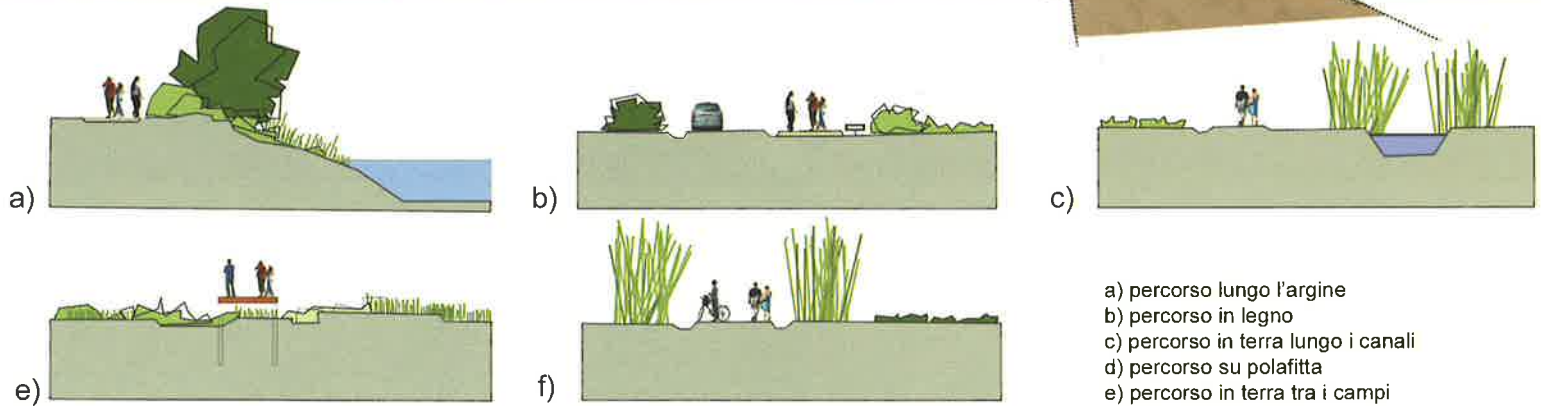
11. Transverse axis 03: from the Torangius quarter, the most extensive and highly populated in town, towards the river Tirso, in the immediate hinterland, through a green corridor, a hypothesis of urban restoration and of a playground /sports area



12. Transverse axis 01: From the San Nicola sports ground to the centre of Santa Giusta and its lagoon, adjacent to the town of Oristano, yet cut off from it because of the interposed industrial area, through a suburban park generating a green “welding” point, as well as a pedestrian and cycling interconnection to the RIBERAS restoration area along the lagoon

13. The wooden footpath leading to the lagoon of Santa Giusta





14. The path system in the park: along the river, the lagoon or through the cultivated fields: a) path along bank; b) wooden path; c) path along mill run; d) path on pil work; e) path through fields

representing a first real approach to the identified issues, are the basis for the development of the pilot project within GreenLink. Strategic projects promoted were namely: PHOINIX – Parco Fluviale Fenicio (“Phoenician Fluvial Park”), focused on the basin of the final tract of the river Tirso; RIBERAS – On the banks of the lagoons, centred on the urban areas of Santa Giusta, Cabras and Riola Sardo; A.R.E.N.A.R.I.E. Piano integrato di gestione e valorizzazione (“Integrated Management and Valorisation Plan”), whose main theme is the restoration of coastal belts.

Oristano is the capital of the province and, consequently, the major centre within this territory. Its particular context highlights the significance of projects in suburban green areas in their connection to farming and natural landscapes, enhancing the transversal project between the town and the river, the coastline and the lagoons, without neglecting the industrial expansion areas and the harbour.

15. The river estuary in the gulf of Oristano





16. Aerial view of the river mouth on Lake Omodeo, in the lower Tirso valley (from the Regione Sardegna web site - Sardegna 3D)



17. The first barrier upstream from the lake, before the breakwater

The GreenLink pilot project is structured around three main topics:

1) Restoration and protection of the hydrographic system

The main lagoons and minor ponds, the river Tirso, canals and artificial watercourses compose a complex hydrographic system that is closely related to soil fertility and healthy topsoil, as well as

to the geography of landscapes within the territory of Oristano. The key assumption for the reorganisation of the territory is the restoration of the hydrographic system, in its multi-faceted aspect. All these systems are distinguished by a deprivation/degradation of their banks (i.e. those very areas hosting the most valuable natural systems and biodiversity) due to invasive farming activities, which have now become unacceptable, as well as other

18. Pasture land on the outskirts of Zerfaliu



19. St. Gregory's church in the suburbs of Solarussa



improper exploitation entailing a progressive marginalisation of these places.

The project provides for the restoration of the currently degraded hydrographic system, as well as the implementation of a green system, comprising different ecosystems of various integrated natural and aesthetic levels.

2) Valorisation of farming areas and production

The fluvial park area concentrates mainly on farming; this is why a more careful organisation of farming activities and production is essential in order to preserve and valorise their most significant characteristics. The suggested procedures vary, although they might prove equally effective:

- an Environmental and Farming Agreement (“Accordo Agro ambientale”) may involve any farms in the Park (creation of hedges, route maintenance and inter-included areas, conversion to organic farming, etc.);
- design/implementation, in co-operation with specialised training organisations, of training courses centred on farm-tourism, production line traceability etc.;
- park adhesion to the Open Farms programme (“Fattorie Aperte”), in cooperation with major farms;
- promotion of top-quality typical and local farming products, through specific initiatives; support for organic farming; institution of a Quality Brand for ‘Phoenix’ products.

3) Connection between urban/suburban green areas and fluvial, lagoon and coastal ecosystems

Over the last 40 years, the urban development of Oristano (including that of minor centres) has increased the sense of “alienation” of surrounding areas in comparison with the town. Indeed, although the town is near, on the other hand it seems to “ignore” its river, its lagoon and coastal zones, confining them as peripheral, alienated places. The result is a progressive discontinuity tending to marginalise a number of areas that are eventually neglected.

The project is focused on the concept of landscape park, working as a connective system for the territory and its urban areas. The river provides a structure of planting and routes, a natural, equipped corridor extending towards the adjacent areas. In this way the fluvial park becomes the connective tissue within an integrated vision of environmental resources, while improving the accessibility from urban centres to the open territory and the

coastline, forming new ecological corridors.

Accordingly, the three great project themes identified to tackle the critical points in the territory may result in a few specific landscape projects. The relation with the topics identified within the GreenLink ¹ project should be established in subsequent stages:

a) Cultural, artistic and educational activities

An “identity” framework aiming for greater enjoyment of the environmental and historic/cultural heritage involved in the pilot projects areas: the valorisation of the main peculiarities, of naturalistic (lagoons and wetlands in general ...) and archaeological areas (Othoca, Tharros, Pontis ... coastal towers, etc.), including the most significant traditions and local productions (rice farming, vegetables, fishing, traditional ceramics ...). The aim is to give a ‘sense’ and a functionality to these places, allowing the conservation of memory and an innovative interpretation of the existing facts and, on the other hand, the construction of a new environment for different activities integrating culture, nature, local resource organisation and economy.

By inevitably modifying the pre-existing context, the project introduces new meanings and functions into it, in a newly discovered synthesis of nature, history, culture and architecture. Thus, an area of ‘new meanings’ may be identified, aiming at finding new opportunities and cultural awareness: the ‘land art’ park, in the final tract of the river Tirso and the coastal pinewood, in continuity with the Phoenix centre, focused on Phoenician culture and the broader frame of art within the landscape; the Phoenician cultural centre PHOENIX MUSEUM, as a place dedicated to Phoenician history and culture in Sardinia, meant as a documentation/study centre based on advanced, beneficial artistic and multimedia systems.

b) Free time, sports and tourist activities

The fluvial and lagoon park becomes an extensive, diversified resource for human activities, in particular for:

- 1) stimulation of social relationships;
- 2) enhancement of the development of a number of activities

¹ In its official version, the pilot project within GreenLink takes into consideration the following themes: 1. technological infrastructures and production activities; 2. renewable energy sources and biodiversity; 3. cultural, artistic and educational activities; 4. activities associated with sports, free time and tourism.



20. An artichoke field in the countryside near the city

related to sports and free time, with special reference to sports that are already deep-rooted in the local community, such as regattas and horse-riding;

- 3) allowing the enjoyment of the environmental and cultural heritage;
- 4) increasing tourism as a resource.

c) Renewable energy sources

With regard to characteristics and peculiarities underlined in the reference context, the following situations have been identified as strategic and applicable:

- 1) Recuperation of waste water from farms and livestock companies, either aimed at biogas production, or to be mediated by a phyto-purification process;
- 2) Creation of Aeolian and/or photovoltaic parks, in the indeterminate areas surrounding the industrial/harbour/manufacturing zones, where the environmental impact has been consolidated in relation to landscape issues. In such sites, apart from the presence of anemological requirements – unlike in a few critical areas of landscape and historic/cultural value – the installation of an Aeolian or photovoltaic system would result in a new visual and perceptive identity.
- 3) Pilot project of ecological farm-stay aimed at self-provisioning, through the use of active/passive solar systems and the recuperation of rainwater and waste waters phyto-purification, including the recuperation and recycling of resources contained in waste products.
- 4) Lighting of areas and routes of PHOINIX park by storing solar energy.



21. Roman thermal baths on the river bank at Fordongianus

d) Technological infrastructures and production activities

The issue of technological infrastructures is closely linked to renewable energy sources that, in the case of farms, farm-stays or spread-out lodgings, may generate self-provisioning conditions. Production activities associated with farming, fishing and crafts are an integrated and essential component of the park, including the creation of new advanced tourist-oriented activities and other services aimed at the enjoyment of the natural and cultural heritage.

22. The “prickly pear” path to the estuary



Rigidities of the local decisional system, operational weaknesses, emergencies tackled in suburban territories, duties of communication, citizen participation

The protection and development of the naturalistic and landscape resources of the Tirso river is a goal and project hypothesis which has been discussed for the last ten years. The idea of a river park, however, was first fostered in a predominantly individual way by single municipalities, and has only recently been progressively widened to the Greenlink project.

Coordination of the actions for the protection and exploitation of the river environment was first promoted within the Lake Omodeo Consorzio Turistico (Tourism Syndicate). The experience of the “Progettazione Integrata” (integrated planning) in the year 2006 was finally the main factor of the aggregation and integration of the town council’s ideas for an organic project of a river park. In this context Oristano Province, as leader organisation, has fostered the development of an integrated project on Sustainable Tourism, and the building of the relevant extensive partnership, through many different discussion groups and public forums with the representatives of the economic and social networks of the province. In particular, a Cooperation Agreement on the Tirso River Park was reached within the integrated project on Sustainable Tourism, for the protection and development of the naturalistic, cultural and production resources of all the river area, from Omodeo Lake to the mouth, which was undersigned by the mayors of all the municipalities concerned. It is noteworthy that the production fabric of the area was also involved in the agreement, for it was undersigned by the person in charge of another integrated project on rice farming, which is a production peculiar to the area.

The Province, as an intermediate local government and a strategic link in the territory’s planning system between the municipality and the regional levels, carries out a fundamental task of coordination of the local proposals of development of the territory. The topic of the parks is one of the subjects specifically assigned to the province by both the state and regional laws; in particular the new Piano Paesaggistico Regionale (Sardinian Landscape Protection Plan).

The theme of systematic, overall protection and development of the environmental and cultural heritage of the territory through the “instrument” of the parks (and particularly river parks) is one



23. The river below Fordongianus

of the main subjects of the Piano Territoriale di Coordinamento della Provincia di Oristano (Oristano Province Territorial Plan). The first scheme of this plan was adopted in 2005, and is now under revision and integration. Within this updating, the working out of the participation and the agreement by the concerned authorities and by the public (as requested also by the EU and SEA state rules) is one of the main lines of action. In this context, the contents of the Greenlink project will also of course be made public and submitted to the organisations and the public concerned.

Opportunities exploited, involvement of investors and stakeholders, public awareness

Towards the river mouth, the Tirso flows alongside an extraordinary mosaic of landscapes, creating a system of particular environmental and ecological importance; nevertheless this “System of values” escapes urban communities. This kind of “indifference”, also due to the presence of high banks which border it in its final part, has for a long time prevented the Tirso river from having

the strength of connection and dialogue necessary for the “comparison” with the city project.

The aim of the GreenLink project is to make the local communities (local authorities and citizens) understand that the river is a resource both for the environment and for the economic and social development of the territory through which it flows.

The County has started a series of consultations concerning the River Park project, with Integrated Projects (operational instruments to implement regional strategies) involving the municipalities touched by the river, frequently unaware of its presence and potentials.

The project of the River Park is not only landscape design, but also a project promoting new social-economic and historic-cultural identities, mainly through the development of agricultural production and the promotion of sustainable and consistent practices which encourage the development of a conscious use of the agricultural landscape, a particularly rich mosaic.

The Park project not only offers the possibility of restoration and improvement of the agricultural-fluvial landscape and its main activities, but also the urban centres and their marginal areas, which establish a direct relationship with the river. Besides, the historic-archaeological system, widespread in the territory, enters a network system which completes the cultural landscape and the sacred landscape (through the system of the “novenari”) to the landscape of daily life.

The planning of access to the river through the restoration of agricultural tracks not only offers the possibility to facilitate crossing the countryside for daily work, but also the possibility to realise a route to encourage knowledge of local identities.

The project of the agricultural park in Nuraxineiddu is another means of diffusion of typical production, linked to tourism as well as the promotion of environmental education, now an essential instrument to increase citizen awareness of environment and landscape problems.

With its paths and planning of public spaces, the creation of the River System offers an opportunity for a series of activities, also entrepreneurial, especially for young people, such as the small cooperatives for the management of the activities and the facilities of the Park.

The creation of the River Park has the potential to attract public stakeholders through the financing sources of the different

measures of the P.O.R., and private investors for the building of new reception facilities or for the improvement and strengthening of the existing ones.

Moreover, the creation of a correct system of visual communication of the Park, by means of informative placards, leaflets, brochures and other activities, will encourage public involvement and awareness, particularly in local communities, which will be involved firstly in maintenance and improvement of the rediscovered river source.

Assessment of the experience

The Greenlink experience allowed Regione Sardegna, with the local partner Provincia di Oristano, to focus on a strategic theme in a weak and backward area, also showing positive elements, encouraging local participants to continue their efforts to identify new strategies and tools for supporting development.

Activities developed within the Greenlink project established a relationship between institutional partners and social and economic stakeholders based on focused areas.

One of the most important goals, confirming the strategic importance of the site, is the Institutional Agreement (“Intesa”) between the Regione Autonoma della Sardegna (Autonomous Region of Sardinia), Oristano Province and the Municipality for the Tirso-Omodeo-Flumineddu Phoenician Fluvial Park.

Aims of the Agreement:

- to develop sustainable productive activities;
- to fulfil sustainable environmental projects;
- to protect the cultural and landscape heritage.

This involved the President of the Sardinian Region, the President of Oristano Province, mayors of local municipalities, social and economic stakeholders working together and sharing common strategies, aiming for coherent sustainable development following Regional Landscape Plan Guidelines.

Thanks to the experience gained, the GreenLink project represents a solid base for achieving the objectives of regional and local policymakers, and will almost certainly be funded in the new EU programming period 2007-2013, from both European (Structural Funds) and State (Action in Under-Utilised Areas) financial resources.

Summaries

The Landscape project developed within GreenLink is the result of an application of Sardinian Landscape Regional Plan guidelines, an initiative to secure sustainable coastal development in the Sardinia Region, a strategic aim set out in all EU environmental policy documents for Mediterranean countries.

A fluvial park is a strategic means of landscape management: this is the reason why this theme fits into GreenLink objectives. This particular site is a suburban, rural and coastal landscape and an "ecological connection" at the same time, as perceived by the people living along the river path.

For these reasons, the pilot project approaches the four themes in a multi-disciplinary way, able to manage the different problems and the potential solutions for the population, policy-makers and local stakeholders.

The fluvial park sets out a planning strategy to identify local macro-areas. Through these sectors it will be able to achieve the aims which are the basis of the fluvial park. Each macro-area contains a project and carries out a management function, in order to attract work and activities which could be developed inside the park. The pilot project suggests some new planning solutions to connect the town to the river, to improve paths and roads, to renovate the town fringes and lagoons.

Il percorso che si è voluto intraprendere con GreenLink e in particolare con il progetto pilota è legato a una idea di paesaggio che è racchiusa all'interno del Piano paesaggistico dell'isola di Sardegna, che vede le coste come un bene di straordinaria importanza, in linea con le politiche per l'ambiente di tutti i paesi del Mediterraneo. Il parco fluviale è una forma di gestione del paesaggio, strategica per la regione. La tematica rientra nel progetto GreenLink perché il paesaggio fluviale è anche un paesaggio periurbano, una connessione ecologica, un paesaggio agricolo, un paesaggio costiero, un paesaggio creato e percepito dalle popolazioni locali che vivono lungo il percorso delle acque. Per questo il progetto pilota affronta il tema in maniera integrata e a diverse scale di lettura, interpretazione, per configurare una risposta adeguata alle aspettative della popolazione e della politica.

Il piano del parco fluviale elabora una strategia di pianificazione che individua ambiti di paesaggio locale per il raggiungimento degli obiettivi che costituiscono la base dell'idea stessa di parco fluviale. Ogni ambito racchiude un progetto e svolge una funzione gestionale nei confronti delle opere e delle attività che interessano tutto il parco. Il progetto pilota propone alcune soluzioni progettuali nuove per connettere la città con il fiume, per migliorare i percorsi, per riqualificare i margini della città e delle lagune.

El proyecto paisajístico desarrollado en el seno de Greenlink, y en particular el proyecto piloto, es el resultado de una aplicación de las líneas maestras del Plan regional del paisaje de Cerdeña, una iniciativa que valora la costa como un bien de extraordinaria importancia, en la línea de las políticas ambientales de todos los países del mediterráneo, y que asegura el desarrollo sostenible de la costa de la isla de Cerdeña.

El parque fluvial es un modo de gestión del paisaje, estratégico para la región. Esta temática tiene cabida en el proyecto de GreenLink porque el paisaje fluvial es, además de un paisaje periurbano, una conexión ecológica, un paisaje agrícola, un paisaje costero, un paisaje creado y percibido por la población local que habita a lo largo del curso del agua. Por ello el proyecto piloto afronta el tema de una forma integrada y a diferentes escalas de lectura e interpretación, para configurar una respuesta adecuada a las expectativas de la población y de la política.

El plan del parque fluvial lleva acabo una estrategia de planificación que distingue macro-ámbitos de paisaje local, para alcanzar los objetivos que constituyen la base de la propia idea del parque fluvial. Cada ámbito contiene un proyecto que cumple la función de gestión en lo que se refiere a trabajos y actividades que deben desarrollarse en el seno del parque. El proyecto piloto proyecta algunas nuevas soluciones para la conexión de la ciudad con el río, para mejorar los caminos e itinerarios y para recalificar los márgenes de la ciudad y de la laguna.

O projecto paisagístico desenvolvido no âmbito do GreenLink, é o resultado da aplicação das linhas de orientação definidas no Plano Paisagístico Regional da Sardenha, uma iniciativa com o objectivo de assegurar o desenvolvimento costeiro sustentável da Região da Sardenha. É essencialmente, uma estratégia especialmente pensada para os países mediterrânicos, conforme constante em todos os documentos oficiais sobre política ambiental da UE.

O Parque Fluvial é uma orientação estratégica para a gestão paisagística: esta é a razão pela qual esta temática está directamente relacionada com os objectivos do projecto GreenLink. Este local único é ao mesmo tempo periurbano, rural e paisagem costeira e uma "ligação ecológica", tal como é percebida pelos habitantes que vivem ao longo do curso do rio.

Por estas razões, a abordagem das quatro temáticas pelo projecto-piloto, é feita de forma multi-disciplinar, capaz de gerir os diferentes problemas e potenciais soluções, tanto do ponto de vista da população, como para a classe política e igualmente para os agentes locais envolvidos.

O Plano do parque fluvial define uma estratégia que identifica macro áreas locais. Através destes sectores será capaz de alcançar os objectivos que estão na base do próprio parque fluvial. Cada macro área contém um projecto e cumpre uma função de gestão de acordo com os trabalhos e actividades que podem ser desenvolvidos dentro do parque. O projecto-piloto sugere novas soluções de planeamento, de forma a interligar a cidade e o rio, melhorar caminhos e estradas, requalificar áreas periféricas de cidades e lagoas.

AGENZIA REGIONALE PER LO SVILUPPO E L'INNOVAZIONE DELL'AGRICOLTURA DEL LAZIO (ARSIAL)

(Italia)

S. Carrano, G. Izzo, P. Collepari, M. Paffetti, E. Cacciotti, P. Onorati

Proposals matured during the project for the pilot sites (the 4 pilot projects)

The intervention of ARSIAL in the GreenLink project was distinctively featured, because of the proper institutional mission of this regional Body, that is the agriculture development and related extension services. This oriented the decision to bring the added value of ARSIAL expertise and experience in the field to the project, rather than deepening a strictly local and technical approach.

The targeted area of intervention of ARSIAL was Terracina Municipality and the surrounding territories of the Pontine Plain in Southern Latium. The particular richness of this area in terms of environmental, historic, cultural and territorial heritages with special concern for its developing potentials, induced ARSIAL to consider this area as a whole, disregarding the contingent municipal borders and other administrative limits. This was of special importance because a strategy of intervention was conceived upon these premises, involving the formation of four

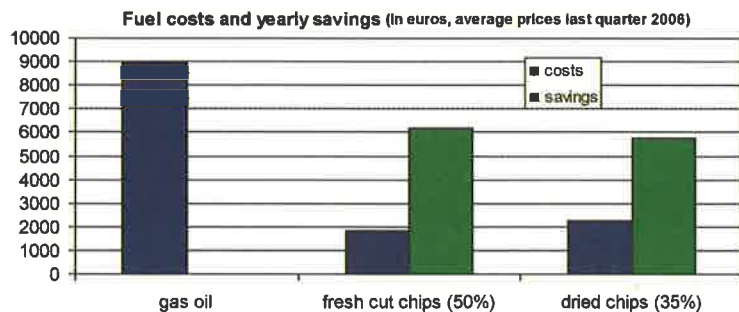
paradigmatic models of action, significantly including agriculture-related issues, where the “town-country” relationship is usually underestimated.

1) The first pilot project was dedicated to the theme of sustainable energy. In particular, due to the territory's extensive development of tree shelter belts systems, utilised as windbreaks, the research aimed at evaluating the feasibility of their utilisation as a source of sustainable energy. A proper management of tree shelter belts was proposed, linked to the exploitation of pruning waste, to be processed as chips and utilised as fuel for wood boilers. The target of the project was thus the installation of a wood chip heating system in a community building (for dissemination and awareness purposes) and to fine-tune a procedure for the best and sustain-

2. Present state of Pontine Plain tree shelter belts: overgrown and totally neglected

1. Localisation of the targeted area of intervention: Terracina Municipality and the surrounding territories of the Pontine Plain in Southern Latium





3. Wood chips allow a sensible economic saving due to the lower cost of the biomass

able management of the tree shelter belts of the Pontine Plain (owned by the Latium Region and managed by ARSIAL). A survey was carried out into the related legal situation at European, national and regional levels and the potentials of the biomass production of the area. Detailed guidelines for the accomplishment of this survey were outlined for the utilisation of a GIS (Geographical Information System) and the technical resources needed for its realisation. The next step of the procedure concerned the evaluation of supply based on an assessment of the present tree shelter belts and their productivity and an analysis of the present maintenance service structure. This phase brought two proposals: a) a proposal of restoration solutions concerning pruning of overgrown tree belts and plantation or new installation of heavily damaged tree belts; b) research into the best practices for organising maintenance operations.

Next in the methodological model came a biomass evaluation study of standard wood market typologies, prices and available production obtainable from the maintenance operation of one kilometre of shelter belts leading to the definition of the targeted wood typology: wood chips. More enquiries were made into the fuel analysis quality requirements and fuel logistics, quantifying the combustible needs.

The heating plant planning phase involved the selection of a location for the pilot plant, as well the estimation of biomass needs, and a technical and economic comparison between different kinds of fuel (gas, oil, fresh wood chips and dried chips).

A detailed costs and benefits analysis concluded the simulation, stating the results of the three different levels of comparison among gas, oil and wood chips fuel utilisation: through an energy

balance, an environmental balance and an economic balance. Moreover an analytic budget for the completion of the operation was drawn up (exempt of non-monetary effects and benefits) concerning 560 km of three shelter belts, their restoration, proper management and recovering of wood waste for heating energy production purposes.

2) The second pilot project aimed at involving the global climate change perspective into the town-country planning frame, with particular concern regarding technological infrastructures and productive activity aspects. This was accomplished by dividing the study into two parts: a preliminary overview on the general issues of climate and the suggestion of related proposals to be carried out in the Terracina area. The first part gathered some general proposals valid for planners and decision makers, concerning the effects that global warming has on every human activity linked to planning and forecasting; the requirement of continuous development of sophisticated climate models; the requirement of new integration of these models with predictive descriptions of human behaviour. Then an introduction to climate and meteorology sci-

4. Chipper device in action



ences provided the guidelines for the realisation (of networks) of weather stations. A survey on climate monitoring related to the town-country link assessed the key rôle that tourism plays in this relationship and resulted in the formulation of two priorities: a) the need for local studies in order to form the basis for planning suitable responses; b) the crucial rôle played by the planning system to prevent further damage, through the provision of sustainable energy, energy efficiency, food security, high quality housing, green spaces and integrated transport, as well as helping to adapt to the inevitable impacts of climate chaos. The investigation into recent developments in the field of applied climatology, stated that in the framework of the town-country relationship simple climate monitoring has to be supported with other functional data in order to allow the elaboration of instruments helpful for wise, long-term planning. Therefore it is essential:

- to record all the different factors of fluxes present in this relationship;
- to store and preserve long-term records, to be analysed and compared to meteorological and climatic data;
- to promote and support data analyses and elaboration in order to build operative models and decision making tools.

The second part of the project took the area of Terracina as a

5. Chipped wood properly stocked and ready to be conveyed to the heating system



6. Terracina seen from the hinterland. The close town-country relationship is shown in the direct link between the area of intensive agriculture (glasshouses) and the urban area

case study in order to develop these principles. An analysis of the state of the art was carried out concerning: the territory (altimetry, road system, protected areas, hydrology, urban development), tourism fluxes (local policy, reception typologies, historic records, comparative trends, road traffic, other travel infra-structures), the climate (local weather monitoring and its historic elaboration), the productivity frame (tourism, agriculture and SME business). The results led to the conclusion that in the Terracina area there is an urgent need of:

- elaboration of vulnerability studies;
- realisation of more appropriate data collection concerning local climate evolution and traffic fluxes;
- promotion of a diversion of tourism fluxes, sponsoring new destinations (nature and environment vs. seaside);
- enhancement of the relationship between agriculture and tourism in a sustainable way;
- involvement of agricultural food producers, managing authorities of protected areas and tourist operators in open debates through round tables, forums and workshops to meet the different needs and to find adequate integration.

The first proposal was for the installation of a meteorological station in order to generate benefits both for local agriculture and for assessment of climate change in the South Pontine region,



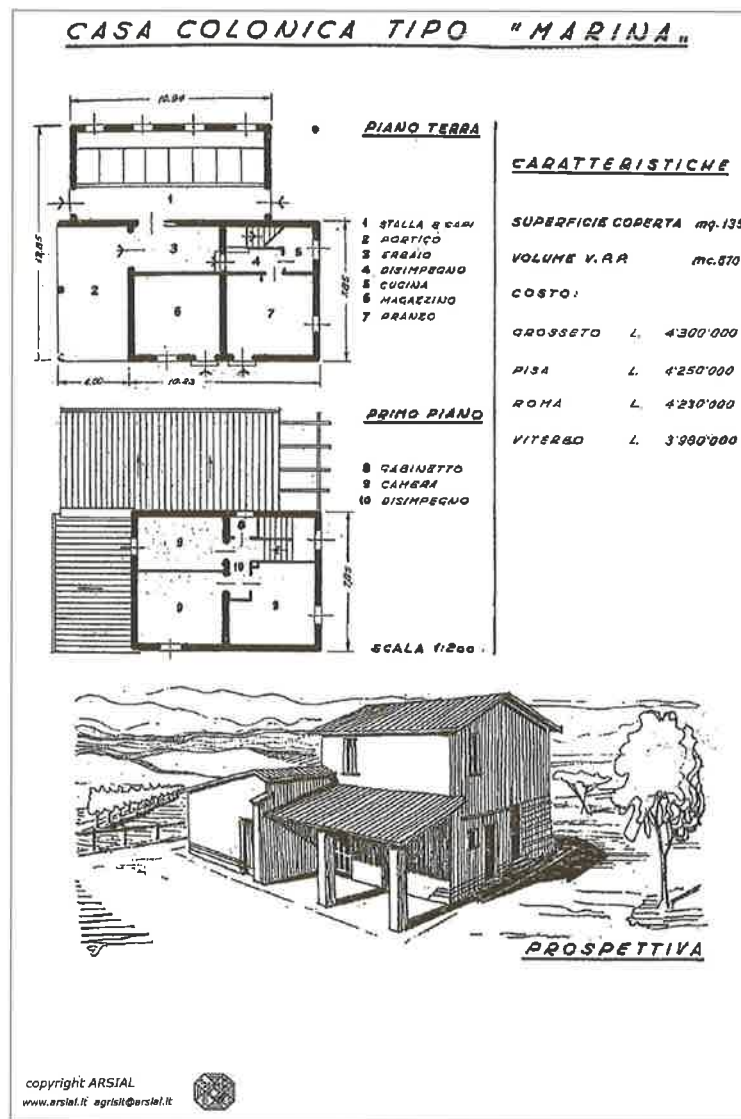
7. Aerial view of the “Future perspectives” monitoring integrated action highlighting the agricultural area (yellow), integrated WS system locations (red) and area suitable for location of traffic sensor (blue)

answering to the need for intervention in micro-climate correction and climate-related emergencies. This action would be in harmony with ARSIAL’s mission. A specific definition of purposes and siting choice was made.

The second proposal, called “Future perspectives”, concerns interaction between ARSIAL and development and planning services of local authorities. This was done with two main purposes: to assess solutions to climate change for the different ecosystems in the municipality and to verify the localisation of tourist/traffic fluxes under the different weather conditions inside the municipality. The simulation involved: a list of extra climate monitoring factors to be taken into consideration in order to enable a rational integrated processing of data; the definition of the monitoring purposes, of the technical tools to be utilised and of the siting choice.

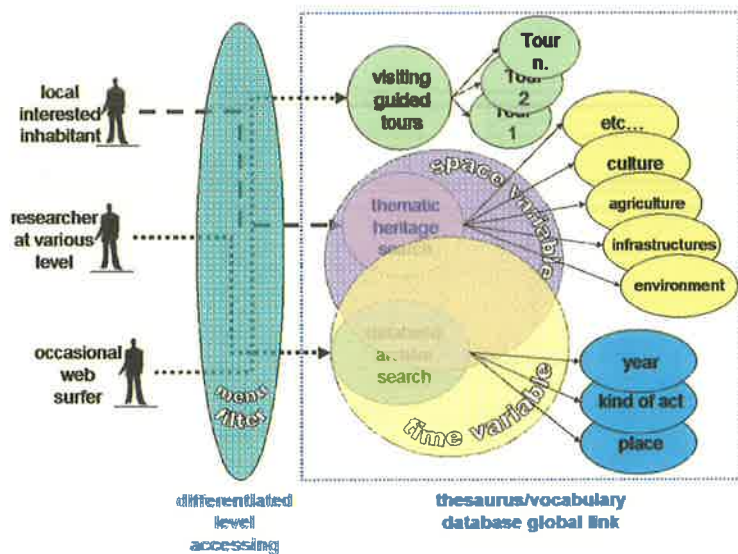
A budget analysis was carried out to conclude the project, stressing the general benefits on global and local scales and, in particular, the costs for both the proposed action and for future perspectives.

- 3) The third pilot project focused on the cultural and educational axis. The Virtual Museum (VM) emerged as one of the best methods to represent the cultural aspects of the town-country relationship. This because VM utilisation entails:
- no physical limits to the quest of knowledge;



8. ARSIAL documentary heritage: farm typology project (early 1960s)

- different approaches from different points of view;
- improved educational potential;
- special aptitude to represent art, culture, history and environment at local level;
- an optimised representation of the culture sphere linked to the phenomena of migration and the town-country relationship;



9. The VM of Pontine Plain land reform accessing properties planned conceptual scheme

- environmental friendliness (low carbon footprints);
- a low operational cost.

In this context a definition and a list of best practices of Virtual Museums was offered, before giving advice on how to design, develop and realise a VM.

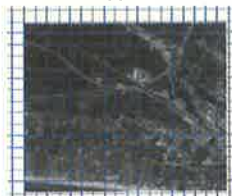
The specific project proposed the realisation of a VM on the theme of the Land Reform that was accomplished in the first half of the XXth Century on the Terracina and Pontine Plain resulting in enormous environmental, social and cultural changes.

Different steps for its creation were set out: identification of the mission and purposes; access to properties; their historic background; sources of documentation. Particular attention was paid to user targeting, with differentiated level accessing, and in the planning of visiting properties on three different search modalities: database archive search; thematic heritage search; guided tours. The identification of the documentary sources pointed out three different origins: ARSIAL historic archives (inherited from the historic land reforming bodies); Latina Province cultural heritage reality; the environmental landscape transformation. Detailed proposals were worked out for the utilisation of these sources: a methodology was formulated for documentary selection purposes, involving ARSIAL archives that contain more than



1954

Infrastructure covering area = 17.15%



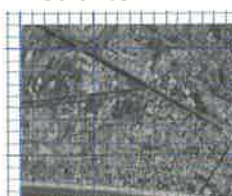
1982

Infrastructure covering area = 47.09%



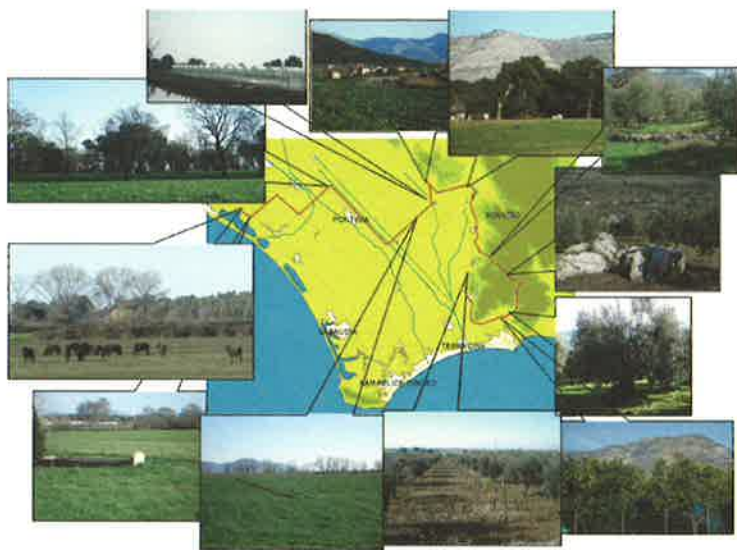
2007

Infrastructure covering area = 69.34%



10. A bird's eye chronological comparison of a highly urbanised area, a detail of Terracina: as shown in 1954, 1982 and 2007 images

35,000 items of possible interest. However, extensive systematic reorganisation is necessary before starting the selection phase and a specific procedure was proposed to this end.



11. The amazing biodiversity of the agricultural landscape of the area, as enhanced by the landscape valorisation route

A survey on the cultural scenario of Latina Province demonstrated the existence of 21 local museums and archives of possible interest. Preliminary contacts were made with the main institutions. A specific methodology to document landscape transformation was proposed with practical instances using two means of chronological comparison: the bird's eye and the ground level representation based on geographical mapping of the territory. A detailed resources allocation plan was proposed in order to achieve both documentary sourcing and the VM realisation, and a costs and

benefits analysis was drawn up to show the financial involvement for the whole project.

4) The fourth pilot project concerned the GreenLink axis "Sport, leisure and tourist activities". Starting from the notion achieved in the second pilot project that tourism is a central factor playing a key rôle in the town-country relationship, a general survey was conducted on the theme "Route tourism" as a business economic stimulator for rural areas, with particular attention to respect of environmental and cultural issues to ensure sustainable development. Best practices instances of tourist routes were shown to collect a general overview on the matter and the main elements for proper planning were provided. Particular attention was given to environment sustainability, governmental management of biological diversity, public and community involvement showing the range of possible approaches and instances of public participation. Suggestions were provided on where to find technical tools and an original integrated multidisciplinary approach methodology to help the planning phase was proposed. This was then verified on site in a practical case study, always concerning the targeted project area.

In detail, the territory of South Pontine was analysed thanks to a GIS (Geographical Information System), featuring all the tourist routes and services already existing, quantitative and qualitative attractions for tourism, exploiting potentials by using a comparative grid of values and establishing priorities with SWAT analysis. This resulted in a proposal concerning: firstly, the realisation of links between some of the existing structures and their restoration to enhance the network of tourist potential of the territory; and

12. The tourist potential of the territory could be easily understood in the different kinds of landscapes portrayed in this panoramic view taken by Monte Circeo



secondly, the creation of two new thematic routes particularly suitable to the richness of the local environment, to sustainability development purposes and to cultural and educational values. They are: a) a route for landscape study and fruition and b) a route to visit the water resources. The courses of these routes were traced and mapped and related structures and services were planned. To avoid risks of subsequent deterioration of the routes (as in many cases in the area), a managing body was proposed to service and maintain them, with the involvement of local stakeholders. Costs for construction, servicing and long-term management were calculated.

Rigidities of the local decisional system, operational weaknesses, emergencies tackled in suburban territories, duties of communication, citizen participation

The distinctive nature of ARSIAL, as a regional body of agricultural divulgation with no particular links to local governance, prevented a strong operational characterisation of the projects, in particular in those aspects concerning local authority involvement in territorial decision making.

However, the projects distinguished by a high level of autarchy (involving mainly ARSIAL's own decision making processes), such

13. Nature reserve managing authorities try to enhance tourism in the hinterland by introducing picnic areas



as projects 3 and 4, will have a much higher level of operational strength.

In detail, the first project "Three shelter belts for energy utilisation" entered a phase of internal debate concerning its construction. These three belts are owned by the Region, but managed by ARSIAL. During discussion on their governance, some of the Regional authorities proposed the assignment of the tree belts to the single municipalities and the neighbouring private owners. This hypothesis would signify the end of the belt system considered as an entity, with risks of serious damage to these natural structures which have important effects on agriculture, environment, landscape and air and soil pollution. This is due to a generalised lack of awareness in the local inhabitants concerning the importance of the three belts as a bulwark against soil desertification, climate damage and air and environment degradation. For these reasons the proposal concentrated on demonstrating the exploitable and tangible benefits obtainable by the tree belts (energy source and economic reserve), as a vehicle and as a first step to communicate to the citizens the importance of respecting and protecting them as heritage for the next generations.

Regarding Project n. 2 on climate monitoring, obstacles and difficulties of a bureaucratic nature have been raised by local administrations notwithstanding the preliminary contacts held with the Municipality of Terracina and Latina Province Tourist Authority. The greater difficulty was to arouse awareness on the urgency of the climate change problem, not only to citizens but to decision makers themselves. So far the level of importance of this event has been appreciated only by scientists. In fact the main weakness of this project, frequently pointed out, is its conception as a study that plans more studies, but this was due to the impossibility of knowing how, when and in which way the high vulnerability of this territory (because of its nature and localisation) will be affected by climate change. The urgency to collect scientific evidence and data in order to study and forecast proper actions of mitigation, remains the only possible strategy of action.

More awareness and active participation were aroused by the Virtual Museum project, resulting in the involvement of local cultural and tourist authorities. In spite of the great wealth of cultural centres and museums of the Province, there is a lack of networking and of orientation for potential visitors. This could be solved by a strong unitary action of attraction and information on Internet with a quality communication process that has



14. Local authorities are not aware of the importance of a strategy of hinterland diversion for tourist fluxes (signs invite tourists to visit beach and historic centres only)

been envisaged for the proposal. The main point of weakness in the tourist route project is the quality of hotel receptivity and the seasonal scheduling of services, that should be transposed to January-April, re-orienting tourist fluxes towards the hinterland, to fully enhance the great potential for tourism in the territory presently only publicised for seaside and summer leisure. The proposal was conceived as a solution to meet some of the main problems of the tourist quality offer of the area: lack of integration between different communities, a poor sense of tourist hospitality in the hinterland, scarce awareness among tourist operators of the need to develop the hinterland potentials (to mitigate pressure on the coast), lack of networking between different stakeholders.

Opportunities exploited, involvement of investors and stakeholders, sensibility of public opinion

The first proposal was well received at the Agronomy Institute of Borgo Piave (LT) and cooperation was set up with this Technical School, designed as a dissemination centre. The attention of the students has been focused on the argument and a small forestry plantation of poplars (particularly suitable for disseminating purposes) has been created on the premises to feed the boiler, with ARSIAL's direct involvement. The boiler was purchased by ARSIAL with funding from the Woodland Energy for Europe Project, and the plant will be in service by next winter. Notwithstanding this achievement a full-scale implementation of the project would be subject to regional availability of the great financial commitment required to restore and manage 560 km of tree belts.

Concerning public sensibility towards the Virtual Museum project on land reform and reclamation, it is important to stress that new generations are not usually able to recognise the importance of

15. A sign of the low sensibility of the local population toward tourism: tourist information boards in the hinterland are often vandalised



this historic accomplishment and should be educated to read the footprints of their past history in the surrounding landscape and understand the great efforts (and even the lives) of thousands of people that contributed to the present environmental and social equilibrium of the area. This will bring awareness and respect to an environment that was so hard to conquer. The quest for financial covering for the realisation has been set in two directions: the search for ERDF funding through regional financial instruments that will be published in the near future and the application to European culture-related calls for funding together with other European interested partners. A first attempt is going to be carried out with the SPACE MED call that has already aroused the interest of two possible European partners. Concerning the stakeholders, preliminary meetings have been held with the managers of Latina Province Tourist Department and the Municipality of Latina's "Museo della Terra Pontina", which expressed their interest and support for the work done. The technical staff of the Consorzio di Bonifica of Latina also agreed to help in giving its own historic documentation.

The last project at stake, n° 4, on thematic routes for tourists, has found a good level of interest both among the tourist authorities of the Province and the APT (Local Agency for the Promotion of Tourism). The proposal has been disseminated to the managing authorities of the protected area, to tourist operators and to the local environmental associations and has met with agreement and awareness. An opportunity to build a permanent self-sustainable organisation for the maintenance services (once the proposal is realised), was explored and suggested with reference to the main stakeholders. The opportunities envisaged for the funding refer to the ERDF future allowances from the Latium region again. These could be easily utilised by the project, since its own involvement in the Abbazia di Fossanova, designed by the Regional ERDF managing authority as one of the three "Great Cultural Attractions" of Latium, claimed funding for tourist structural development. Here too the proposal is planned to confront the generalised low sensibility of the local population toward tourism. Acts of vandalism against tourist signs, information boards and recreational structures are every day occurrences, in particular in the hinterland areas of the region (considered as the personal property of local hunters, shepherds and mushroom seekers). Therefore there is a lack of generalised awareness and consensus among the inhabitants of the area, that could be by-passed by the implementation of the proposal.

Assessment of the experience

ARSIAL's experience was important on many levels:

On the territorial level, it enabled the realisation of four simulations of intervention to meet peculiar local needs on matters of:

- a) technological infrastructures and productive activities – allowing data recording for better management of the productive sectors (tourism, agriculture, etc.) and for the mitigation of the effects of climate change;
- b) renewable energies and biodiversity – enhancing renewable energy utilisation from tree belts and preservation of that natural heritage;
- c) educational, cultural and artistic activities – strengthening the conservation of the historic memory of the roots of the inhabitants;
- d) sport, leisure and tourist activities – creating new links to enhance places for open-air sports and cultural themes, for a better quality of life.

On ARSIAL level, the experienced involved the Agency in themes that would have never been exploited without the GreenLink incentive, although linked with agriculture, and this opened new fruitful possibilities of intervention in a broader perspective of the town-country relationship regarding landscape analysis, cultural valorisation of the land reform and the importance of tourism in the agricultural economy. It has moreover strengthened the links of the Agency with the territory.

On GreenLink partnership level, ARSIAL's experience helped to develop cross-disciplinary strategies involving a deeper insight into agriculture-related issues such as energy obtainable from biomasses, enhancement of the historic rural heritage, insertion of agricultural landscape values as a point of attraction for tourist valorisation. A global appeal to consideration and awareness for the climate change perspective into every planning and design strategy could be considered as another strong point of this experience.

On a global level the simulations could be considered important for their illustrative meaning. Specific commitment was devolved in the definition of methodologies on how to proceed; in the exhibition of best-practices; in the development of case-studies and guidelines for a general comprehension of the matter and in offering (or suggesting where to find) technical advice. A relevant part of the work was devolved to these purposes, with the hope of being useful in helping others to go further.

Summaries

The ARSIAL intervention in the GreenLink framework produced four simulations of intervention for the territory of the Terracina Municipality and South Pontine neighbouring area in Southern Latium. The achievement could be characterised by its illustrative meaning and by the deep involvement of agriculture-related issues. The work saw the selection of four main themes inside the town-country relationship:

- a) the valorisation of the concept of tree belts, utilised for landscape, biodiversity or protection purposes as well as for heat production due to a sustainable rationalisation of the chain system for management of the trees;
- b) the enhancement of data collecting and processing for the main fluxes of factors inside the town-country relationship, with the purpose of establishing applied services, finalised to improve the quality of life, productivity and understanding the impact of climate change in order to mitigate its effects;
- c) the realisation of a Virtual Museum, to enable the enrichment of the cultural offer of the territory and the preservation of the heritage of its own natural, cultural and social values;
- d) the sustainable improvement of the potential of local tourist pathways, through an integrated system enhancing and connecting the important values of cultural and natural attractiveness present in the territory, trying to reroute the users from the usual, overcrowded and polluting seasonal seaside tourist destinations.

A broad overview on each theme, for a general comprehension of the matter, was produced with specific descriptions of the state-of-the-art, definitions of methods on how to proceed, exhibitions of best practices, technical advice and development of case-studies.

L'intervento di ARSIAL nell'ambito del progetto GreenLink ha prodotto quattro simulazioni di intervento per il territorio del Comune di Terracina ed aree adiacenti della Piana Pontina nel Lazio meridionale. Il risultato può essere caratterizzato dal suo valore esemplificativo e dal profondo coinvolgimento di tematiche legate all'agricoltura. Il lavoro ha visto la selezione di quattro temi principali all'interno del rapporto città-campagna:

- a) la valorizzazione del concetto di fasce arboree utilizzate non solamente per i valori protettivi, paesaggistici o di biodiversità, ma anche per la produzione di energia termica grazie ad una razionalizzazione sostenibile della filiera di gestione delle alberature;
- b) lo sviluppo di raccolte ed elaborazioni di dati per i principali flussi di fattori all'interno della relazione città-campagna al fine di fondare servizi applicativi finalizzati al miglioramento della qualità della vita, della produttività e ad una migliore comprensione dell'impatto del cambiamento climatico allo scopo di mitigarne gli effetti;
- c) la realizzazione di uno strumento di museo virtuale per favorire l'arricchimento dell'offerta culturale del territorio e per salvaguardare il patrimonio dei suoi valori naturali, culturali e sociali;
- d) la valorizzazione sostenibile delle potenzialità turistiche locali attraverso un sistema integrato di percorsi per il consolidamento e la connessione dei valori naturali e culturali importanti di attrazione presenti nel territorio, cercando di dirottare gli utenti dalla solita, sovraffollata e inquinante destinazione turistica estiva e balneare.

Una vasta introduzione ad ogni tematica, per una comprensione generale del problema, è stata accompagnata da una specifica descrizione dello stato dell'arte, da una definizione delle metodologie sul modo di procedere, da una esposizione di esempi probanti, dal suggerimento di consigli tecnici e dallo sviluppo di un caso studio.

La intervención de ARSIAL en el marco del proyecto GreenLink, ha supuesto la simulación de 4 actuaciones en el territorio del municipio de Terracina y áreas adyacentes de la "Piana Pontina", en el Lazio meridional. El resultado se caracteriza por su valor de ejemplo y por la profunda implicación de los temas ligados a la agricultura. El proyecto ha conllevado la selección de cuatro temas principales en el marco de las relaciones ciudad/campo:

- a) la valorización del concepto franja arbórea no únicamente utilizado por sus valores de protección, paisajísticos o de biodiversidad, sino también para la producción de energía térmica, gracias una gestión racional sostenible de las arboledas;
- b) el desarrollo de un sistema de recogida y elaboración de datos de los elementos que fluyen en el marco territorial ciudad-campo, con el propósito de establecer servicios aplicados, enfocados a la mejora de la calidad de vida y de la productividad, que nos permita disponer de un mejor conocimiento del impacto del cambio climático, que nos sirva de ayuda para mitigar sus efectos;
- c) la realización de un museo virtual como instrumento que favorezca el enriquecimiento de la oferta cultural del territorio y la conservación del patrimonio natural, cultural y social;
- d) la valorización sostenible del potencial turístico local a través de un sistema integrado de trayectos que consolide y conecte los valores naturales y culturales del territorio, buscando una alternativa a los usuarios, más allá de las abarrotadas y contaminadas destinaciones turísticas estivales habituales.

Para la comprensión general del problema, cada tema se ha acompañado con una descripción específica del estado de la cuestión, una definición de la metodología sobre el modo de proceder, exposición de ejemplos de buenas prácticas, con sugerencias sobre asesoramiento técnico y con el desarrollo de casos de estudio.

A intervenção da ARSIAL no quadro do Greenlink produziu quatro simulações de intervenções possíveis no território do Município de Terracina e área vizinha de South Pontine em Southern Latium. Os resultados podem ser caracterizados pelo seu significado exemplificativo e pelo seu profundo envolvimento com assuntos relacionados com a agricultura. Este trabalho contemplou a seleção de quatro temáticas principais no âmbito da relação cidade-país:

- a) a valorização do conceito das cinturas arborizadas, utilizado não só para situações de paisagem, biodiversidade ou proteção mas igualmente para a produção de calor, graças a uma racionalização sustentável do sistema em cadeia para a gestão destas cinturas;
- b) a melhoria da recolha e processamento de dados para os fluxos principais de factores dentro da relação cidade-país, com o objectivo de estabelecer serviços aplicados, criados para aumentar a qualidade de vida e a produtividade, assim como para melhor compreender o impacto das alterações climáticas por forma a mitigar os efeitos das mesmas;
- c) a implementação de um Museu Virtual, como ferramenta que permite o enriquecimento da oferta cultural do território e a preservação do património natural, cultural e valores sociais;
- d) a valorização sustentável do potencial turístico dos caminhos locais, através de um sistema integrado que sublinhe e relacione a importância dos valores do potencial de atratividade culturais e naturais presentes no território, por forma a afastar os utilizadores das habituais zonas de destino turístico sazonal à beira mar que inclusive, estão normalmente sobrelotadas e poluídas.

Uma análise ampla de cada temática, necessária para uma compreensão geral do assunto, foi fortemente assumida com descrições específicas do "estado-da-arte", definições de metodologias para os procedimentos, exibições de casos de boas práticas, aconselhamento técnico e desenvolvimento de casos de estudo.

FUNDACIÓ PER AL DESENVOLUPAMENT SOSTENIBLE DE LES ILLES BALEARS

(Espanya)

Inmaculada Gascón López, James Braybrooke

The city of Palma is to be remodelled and the green belts incorporated into the city itself, thus facilitating integration with its geographic identity.

The green belts in question link this Mediterranean city to the maritime front that overlooks the Bay of Palma on the one side, and to nature on the other, through the main torrent beds and singular accidents of nature, along with Bellver Castle, which is built on the promontory overlooking the city.

New civic axes will also be created in the denser suburban areas, and vehicle traffic will be prohibited for the residents' convenience and enjoyment.

Both lines of work aim to ensure the continuity of the urban space by linking the currently dispersed suburban areas with each other and the city centre, while facilitating public transport, bicycle lanes, pedestrian walkways and other modes of transport.

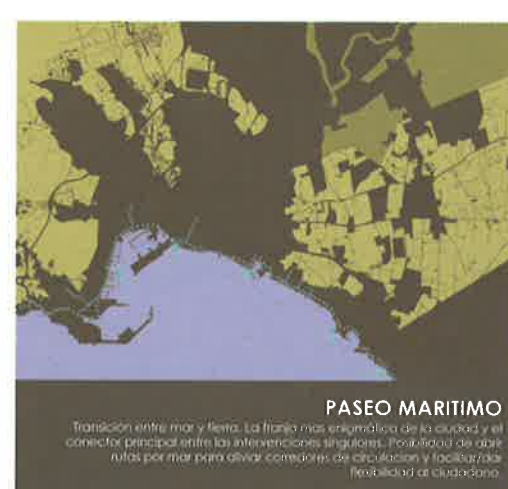
The objective of this model is to improve the quality of the urban space for the residents and the many tourists who visit Palma every year. Furthermore, the proposed measures facilitate contact with nature in a more continuous and better connected green area that has better transport links, thus making for a more sustainable city.

The model includes the provision of important green infrastructures:

- The continuation of the *Parc de la Riera* green belt that runs along the torrent bed from the point where it enters the city until the sea. The second phase of this project includes the creation of an open area consisting of 80,000 m². Phase: final design. Team: Ribas Piera. Investment: 10 million Euros.
- *Bellver Forest*. With an area of 106 hectares, this forest is the city's largest natural space and home to a monumental heritage

of exceptional historical value. The project envisages the restoration of the plant community and the improvement of the infrastructures and services. Phase: Final design. Teams: Martirià Figueres and Palma Municipal Council. Investment: 2.4 million Euros;

- *Parc de les vies*. The interment of the railway line beneath the city has enabled the creation of an open overground space that links the suburban areas to the city centre. It has public transport facilities, bicycle lanes, continuous pedestrian walkways and an abundance of greenery, making it a large linear park. This park extends to the outskirts of the city, passing over the Palma-Inca motorway and continuing on to the city's main industrial estate. It also features leisure and sports facilities. Phase: Out to tender. Coordination: Joan Riera. Team: the successful bidder. Investment: Phase I: 4 million Euros, Phase II: 8 million euros;
- *Torrent Gros Green Belt*. The shortage of green areas on the east side of the city is to be remedied with the creation of a new green belt linked to Torrent Gros. This belt runs along the torrent bed, borders the edge of the city and connects the suburban areas until reaching the sea. Phase: preliminary studies prior to the announcement of an international call for tenders. Team: Palma Municipal Council. Investment: to be decided;
- *Playa de Palma Linear Park*. This beach is the most popular tourist attraction in Palma. The built-up hotel area which has been in existence since the 1960s still has a rustic green strip and wetlands of a high environmental value which can be turned into an open space to compensate for the overcrowded tourist zone. In addition, different green belts can be created to connect it to the seafront. Phase: Out to tender. Team: Adrian Geuze. Investment: to be decided.



Diag_01. Local context

Important urban centres in the vicinity of Palma that create concentric circles and axis of movement and access to the centre of the capital city

Diag_02. Existing green zones / existing recycled water strategy

Illustrate that the connection between recycled water sources and green zones exist in parallel. There are missing links between the seafront and Rings 2/3

Diag_03. Rings A1 A2 A3 A4

Green 'rings' which unify the most important green spaces within the city. A1-A2 create green bands along future tramways. A3 & A4 create green fringes in the semi-urban areas thus providing a crucial link between the areas close to the city centre and those areas adjacent to the open/rural countryside that surround the city

Diag_04. Corridors Urban/Natural/Cycle

The most important green corridors/axes are delineated over natural riparian

ways or transportation systems. As well as a new network of cycle routes these link the city centre with the concentric green bands and the city limits

Diag_05. Individual projects & interventions

There is a vision to generate important green infrastructural areas within the city, attempting to ameliorate the quality of life of residents and visitors alike. Provisions of access to large open areas within the city's network of open spaces and enjoyment

Diag_06. Shoreline waterfront

Transition space between sea and land. This is envisioned to be the most enigmatic space within the city and the principal connector between the new large projected open areas. This space has the ability to alleviate congested circulation circumventing the city centre by providing maritime access to strategic waterfront locations which are linked with the city centre by means of a sustainable public transport network

ESTRATEGIA . MASTERPLAN

Paseo de la Rivera
Este corredor de transporte público es el eje principal de la ciudad, conectando el centro con las zonas periféricas. Se trata de un corredor de alta capacidad que incluye un carril exclusivo para buses y bicicletas, y un carril para peatones. El corredor es el eje principal de la ciudad, conectando el centro con las zonas periféricas.

Bosque de Seiver
Este bosque es un espacio verde que sirve como un pulmón para la ciudad. El bosque es un espacio verde que sirve como un pulmón para la ciudad. El bosque es un espacio verde que sirve como un pulmón para la ciudad.

Parque Central Parque Lineal
Este parque es un espacio verde que sirve como un pulmón para la ciudad. El parque es un espacio verde que sirve como un pulmón para la ciudad. El parque es un espacio verde que sirve como un pulmón para la ciudad.

Parque lineal de la Playa de Palma
Este parque es un espacio verde que sirve como un pulmón para la ciudad. El parque es un espacio verde que sirve como un pulmón para la ciudad. El parque es un espacio verde que sirve como un pulmón para la ciudad.

Corredor verde Tormentosa
Este corredor es un espacio verde que sirve como un pulmón para la ciudad. El corredor es un espacio verde que sirve como un pulmón para la ciudad. El corredor es un espacio verde que sirve como un pulmón para la ciudad.

Paseo de la Rivera
Este corredor es un espacio verde que sirve como un pulmón para la ciudad. El corredor es un espacio verde que sirve como un pulmón para la ciudad. El corredor es un espacio verde que sirve como un pulmón para la ciudad.

ANILLOS & RADIALES

Leyenda

A1 & A2
Este anillo es el más cercano al centro de la ciudad. El anillo es el más cercano al centro de la ciudad. El anillo es el más cercano al centro de la ciudad.

A3 & A4
Este anillo es el más lejano al centro de la ciudad. El anillo es el más lejano al centro de la ciudad. El anillo es el más lejano al centro de la ciudad.

R1 - R5
Este radio es el más cercano al centro de la ciudad. El radio es el más cercano al centro de la ciudad. El radio es el más cercano al centro de la ciudad.

Leyenda

ANILLOS & RADIALES

Un trazo de tranvía se divide en tres fases. La primera prioridad es conectar todo el frente trasero. Este se incorpora a su vez una segunda y tercera fase de ampliación en forma de arcos concéntricos que atraviesan las casillas del casco antiguo de la ciudad. Estos rufos también dan prioridad al flujo peatonal ya que restringe el movimiento vehicular.

En el caso del A7 se prevé la conversión del eje de tráfico vehicular existente a un espacio compartido por transporte ecológico (transmis) y coches + creando un parque lineal incorporando transportes ecológicos mediante alta capacidad de carga y histórico demandando la obra (ordenación circulación de tráfico normal, este zona proteger la fachada antigua y mantener la por visibilidad al parque central y poro municipal y a los comitentes.

En el caso de ambas aristas se contempla la incorporación de espacios verdes interiores, incluyendo abastecido, ventilación y sistemas de distribución térmica, impulsando siempre que esto sea posible la sección y que respalde el correcto flujo de un futuro flujo.

A3 & A4

Elas são as ilhas formadas por avenidas, ciclovias, parques que formam bandos concêntricos amplos atravessando zonas residenciais e industriais. O anillo 3 tem caráter urbano enquanto que o anillo 4 é caracterizado por muito mais verde e não estar tão limitado por muros urbanos.

El anillo verde sirve de separación entre la zona urbana y la "naturaleza" al borde de la ciudad. Pideleja a la ciudad contra la urbanización descontrolada y proporciona mayor control sobre futuras interacciones con el área.

R1-R3

radiales de limitación para la zona periférica semiurbana con mayor potencial de crecimiento. En los radiales, unen las diferentes zonas verdes de importancia, como el Bosque Selwer, con el centro de la ciudad. Diferenciada la zona más urbana central de la zona urbana más verde. Una serie de radiales que informa al usuario de la transición entre espacios desde el centro urbano a las periferias más rurales.

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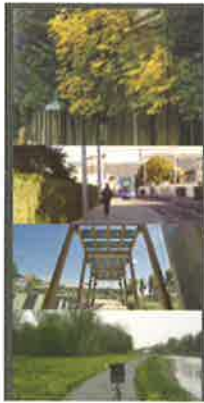
Porte de la Roca

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Condor verde fomenta
-Gros, la dellosa verde fomenta
en el sector de la agricultura del
valle de la Patagonia.

Parque lineal de la Playa de Palma La Playa es el principal foco de actividades turísticas de Mallorca. La zona de nueva urbanización está ubicada donde las olas del mar bañan la zona de una península verde de terrenos naturales y con naturaleza. La zona está diseñada que pueda incorporar como espacio vital de compensación de la zona turística adyacente, creando además espacios contemplativos y de ocio y recreación. Los habitantes de la zona de la

Praga Maritime
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 2015 • 2016 • 2017 • 2018 • 2019 • 2020 • 2021
 2022 • 2023 • 2024 • 2025 • 2026 • 2027 • 2028 • 2029 • 2030



Panel 1. Strategy: Unifying Spaces



Panel 2. Masterplan

Key: Rings (A) & Radials (R)

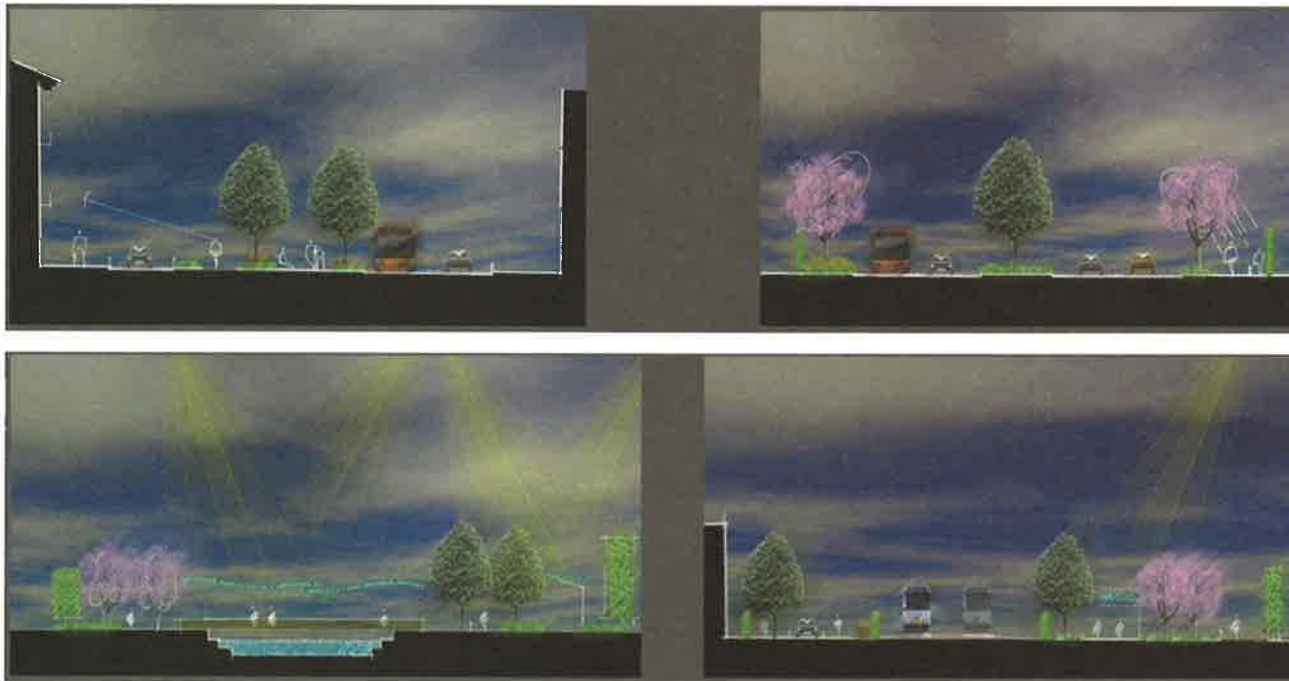
A1 & A2

Proposed tramway routes projected in three distinct phases. The first connects the whole of the waterfront, which in turn provides the backbone for two concentric rings which traverse the city centre. These routes give priority at the same time to pedestrian movement around the city by restricting vehicular access.

In the case of "ring" A1 which delineates the transition between the old city centre and its immediate surroundings, a shared space between vehicles and

trams. At the same time this extensive space becomes a linear green space with wide pedestrian walking routes. Cleaner movement, by tram or on foot, adjacent to the old city walls. Vehicular movement is located beyond this, adjacent to the newer extended city frontages. This division is expected to protect the ancient city façade of the old quarter and will improve accessibility to the central park and the shoreline promenade.

Wherever possible, both of these concentric 'rings' will incorporate new shady treescapes, associated Mediterranean vegetation, comfortable seating and complementary street furniture for pedestrian enjoyment.



To conduct the necessary preliminary studies, two professional teams have been enlisted to provide external technical assistance: Antonio Forteza (Architect) and James Braybrooke (Landscape Architect).

In addition to the pedestrian walkways and bicycle lanes, measures to promote public transport include the creation of a city tramway that will serve the historic centre and link the city to the airport and its main tourist attraction, Playa de Palma.

The tramline is also expected to connect Palma with the surrounding districts and towns.

A3 & A4

These rings are formed by the expansion of the current city cycle network which crosses residential and industrial areas closer to the periphery of the city. Ring 3 (A3) has a more "urban" character while ring 4 (A4) is greener, being less limited by urban massing and located close to the more open city fringes.

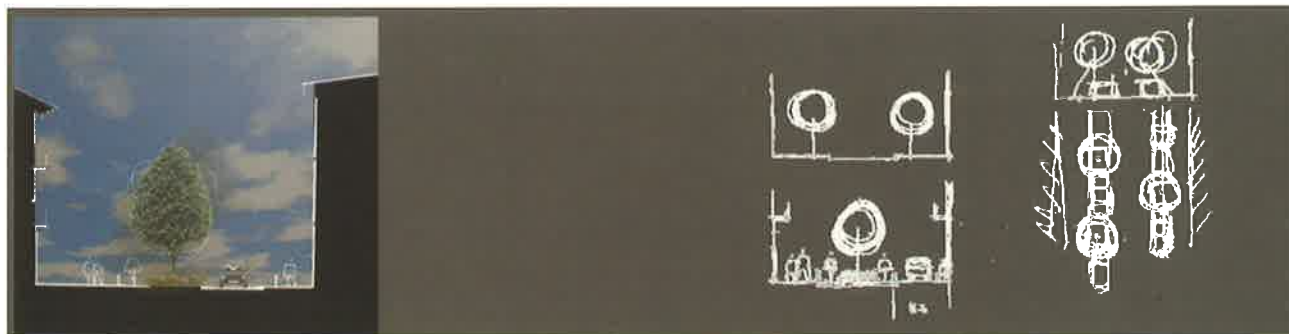
Ring 4 is envisaged to provide a very distinct separator between the built-up city limits and the open countryside. Future city growth and expansion will use this concentric marker as a benchmark for controlled growth. Any future expansion will need to be closely linked to this important greenway route which is in turn linked to provide pleasant pedestrian and cycle access to the

The entire project will be carried out in accordance with sustainable development principles (such as the extension of the regenerated water system created in connection with these lines of action, the provision of watering systems for a more efficient use of water, the use of highly effective native plant species and urban facilities and elements manufactured in accordance with sustainable principles). All of these activities are aimed at creating maximum environmental comfort at minimum implementation and maintenance costs.

city centre. It serves to act as a self imposed green belt to protect the city from uncontrolled growth.

R1-R8

Radials from the densely consolidated city centre to the growing urban periphery. These radials serve to unify all the concentric rings and thus the different stages of the city's historic growth. They serve to link the major green spaces such as the Bellver Forest with the city centre and the shoreline promenade. The user will take these routes when choosing to move away from built up city centre locations in search of the more natural rural and maritime surroundings.



Panel 3. Green Route Sections

Sections 01

Rings phase: 0-5 years

A1 A2 A3 A4

Creation of functional pedestrian routes / cycle lanes / and sustainable public transport such as tramways.

Creation of green "rings" to improve native flora and fauna.

Creation of self sufficient and sustainable botanical "rings" which tolerate both urban conditions and a harsh Mediterranean summer climate. Introducing seasonal colour and dense evergreen shrub massing providing distinct separation between vehicular and pedestrian spaces.

Generating respectful citizenship and public ownership of space. Pride / ownership of place by its inhabitants.

Vertical parameters / interventions to reduce environmental and visual impact.

Sections 02

Corridors phase: 0-10 years

Urban: Parque de les Vies. Natural: Torrent Gros

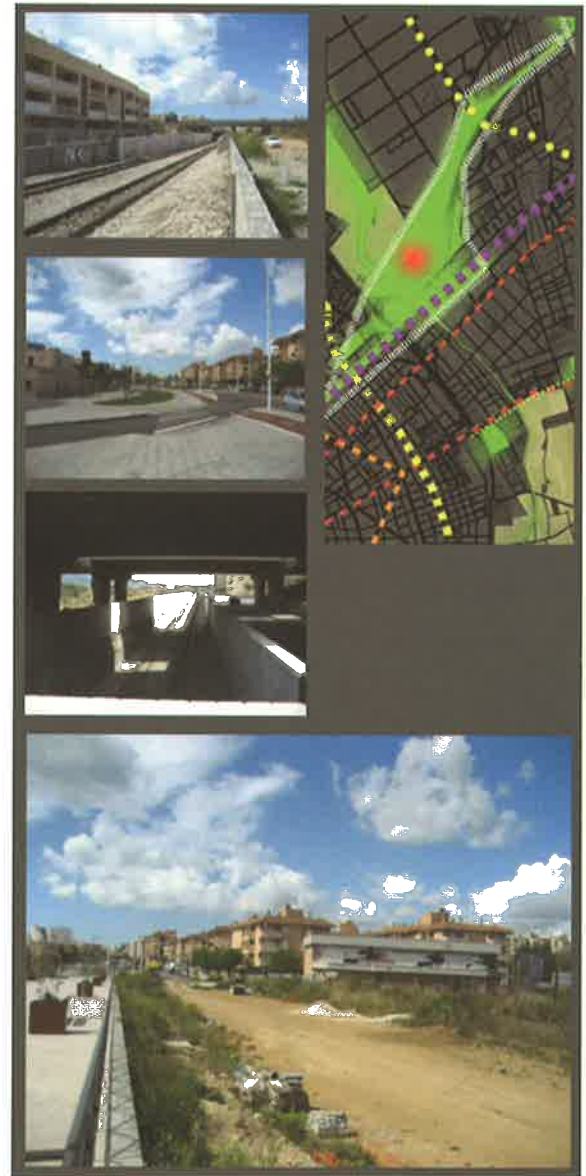
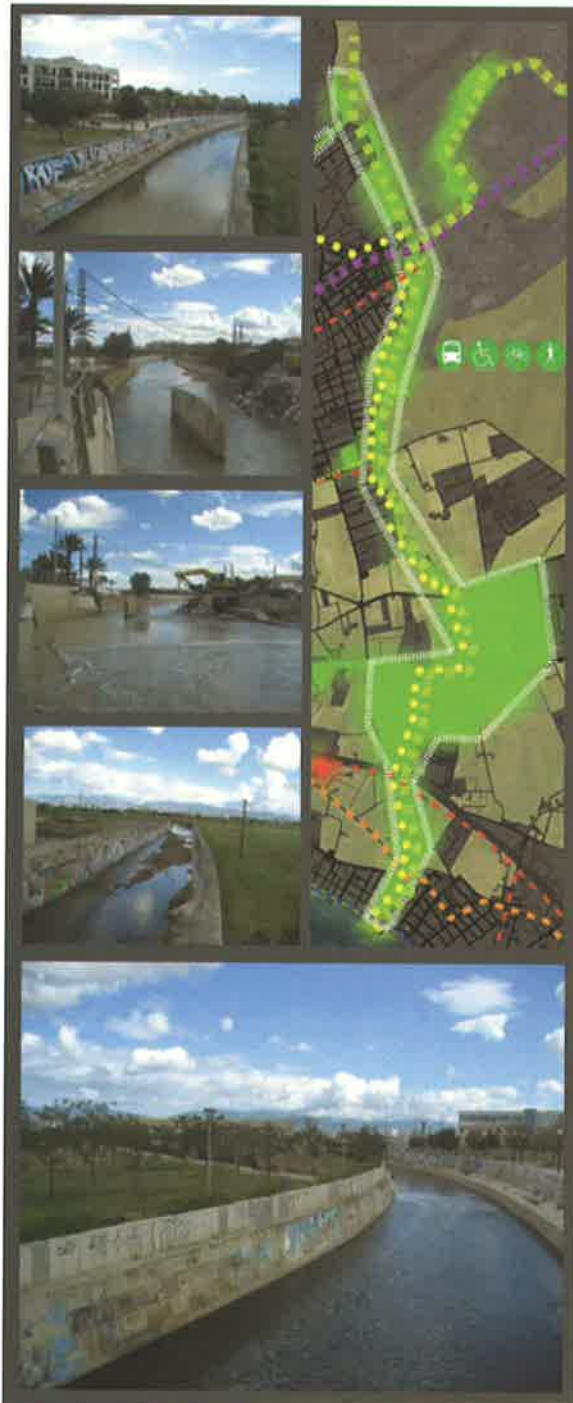
Creation of sustainable linear parks with the objective of generating a closed network of green transport options

Creation of ecological axis and improvement of urban eco-systems

Recuperation of spaces associated with public transport routes and their re-use as amenity linear open spaces with environmental, sporting and tourist facilities.

Vertical parameters / interventions to reduce environmental and visual impact.

Creation of axes for the purpose of orientation and identity





Panel 3. Green Route Sections

Sections 03

Green routes phase: 3-5 years

Connections

Creation of urban connections with limited space by means of interactive signage, vertical green interventions etc

Improve the division / sharing of the different users of the streetscape (vehicular and pedestrian harmony)

Improvement in the quality of paving materials and façade treatments to better relate to the human pedestrian experience

Creation of axes for the purpose of orientation and identity

Sections 04

Shoreline promenade phase: 0-3 years

North/South permeability with perpendicular connections between the seascape and the network of parks and gardens within the cityscape

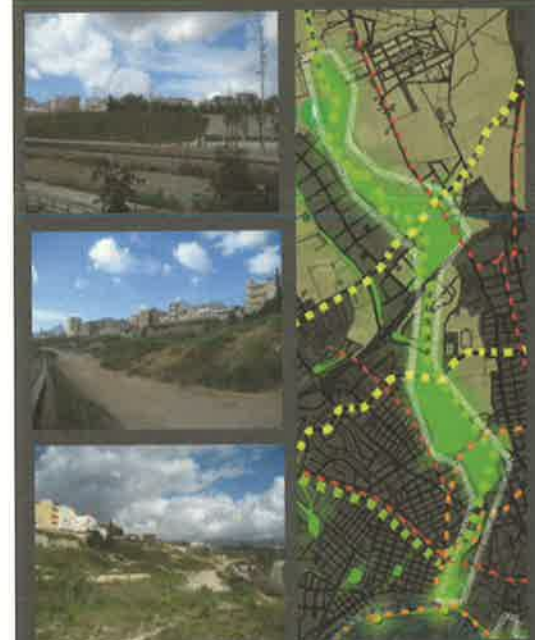
Pedestrian priority

Redistribution of traffic (underground or through ring 1 (A1) so as to enlarge this central area and unify it with the "Krecovic" Park and the "Polígono Levante"

Access to future solar-ferry terminals

Creation of axes for the purpose of orientation and identity

"Intelligent Landscape" eg. Rehabilitation of existing pergolas with organically formed solar canopies with the incorporation of lighting systems



Panel 4. Single Projects & Interventions

Summaries

The global scale Palma Greenlink Project analyses the city in terms of its spatial accessibility and integration through computer modelling techniques that forecast the effects of design decisions on functional performance. The evidence based analysis makes the fundamental link between how space is designed and how it is used. The success of the project will be in the linking of the cities existing spaces together in a coherent way - "...the quality of the connecting network of pedestrian routes is fundamental to the performance of the individual spaces" (*space syntax – public spaces*)

The Greenlink project focuses on one of the most complex urban projects in the city "Parc de les vies". It is used as a real example of how this analysis can be applied to work with the Client (Government Bodies) and external Design Team to improve the spatial design making it more integrated into the urban context, making it safer by use of natural surveillance and deliver proposals that anticipate use patterns better.

The idea being that through evidence based analysis and design we facilitate access and wayfinding through the cities future projects for the local people and visitor alike, at the same time evaluating the environmental / social / economic impact of the new proposals.

La scala globale del progetto GreenLink di Palma analizza la città in termini di accessibilità spaziale ed integrazione attraverso tecniche computerizzate di modellistica che permettono di prevedere gli effetti delle decisioni di pianificazione attraverso rappresentazioni funzionali. L'analisi su dati basati sull'evidenza restituisce il legame fondamentale tra come lo spazio viene progettato e come viene utilizzato. Il successo progettuale risiede nel collegamento in maniera coerente di tutti gli spazi urbani esistenti - "...la qualità della rete connettiva dei percorsi pedonali è fondamentale per la resa degli spazi individuali" (*space syntax – lo spazio pubblico*)

Il progetto Greenlink è incentrato sopra uno dei progetti urbani più complessi: il "Parc de les vies". Sarà utilizzato come esempio concreto di come tale analisi si possa applicare per agevolare, tanto per il committente (Autorità pubblica) che per il Gruppo di Progettazione esterno, il lavoro della pianificazione spaziale e per meglio integrarlo nel contesto urbano, che risulterà più sicuro attraverso la "sorveglianza naturale", fornendo quindi proposte che possano meglio anticipare gli schemi di utilizzo degli spazi. Il concetto di analisi e progettazione basata sull'evidenza ci permetterà di facilitare l'accesso e la percorribilità sia per gli abitanti che per i visitatori anche nella pianificazione urbana del futuro ed allo stesso tempo di valutare l'impatto ambientale / sociale / economico di nuove proposte.

La escala global del Proyecto Palma GreenLink analiza la ciudad de Palma en relación a accesibilidad espacial y su integración mediante la utilización de técnicas de modelación informatizada con fin de prever los efectos de decisiones de diseño en la funcionalidad del entorno. Este análisis basado en hechos y evidencias identifica la conexión entre como el espacio se diseña en un primer lugar y en como se utiliza posteriormente. El éxito del proyecto se basará en intentar conectar los espacios abiertos de la ciudad de manera coherente (parques, jardines, avenidas etc.). "La calidad de la red del sistemas de movilidad peatonal es fundamental para las prestaciones de cada uno de estos espacios" (*space syntax – espacios públicos*).

El estudio de GreenLink se enfoca en uno de los proyectos urbanos mas complejos de la ciudad: "Parc de les Vies". Este proyecto se utiliza como un ejemplo real de cómo un análisis de este tipo puede ayudar tanto al cliente (Ayuntamientos en concreto) como al equipo de diseñadores y arquitectos para mejorar el diseño espacial e integrando bien el espacio con la trama urbana existente. De esta misma manera, haciendo que el espacio sea mas seguro con 'vigilancia natural', y proporcionando propuestas arquitectónicas que anticipan mejores patrones de utilización de los espacios.

La idea es que a través de este análisis basado en hechos y evidencias y su posterior uso en el diseño, faciliten el acceso peatonal y el 'wayfinding' en los futuros proyectos de la ciudad tanto para los residentes como para los visitantes, y de esta misma manera evaluar los impactos medioambientales, sociales y económicos de las nuevas propuestas.

A escala global do Projecto Palma GreenLink analisa a cidade de Palma em relação à acessibilidade espacial e a sua integração mediante a utilização de técnicas de modelação informatizada, com o objectivo de prever os efeitos das decisões de design na funcionalidade da envolvente. Esta análise, baseada em factos e evidências, identifica a ligação entre a forma como o espaço é projectado em primeira instância e a forma como depois se concretiza a sua utilização posterior. O êxito do projecto baseia-se na tentativa de interligar de forma coerente os espaços abertos da cidade (parques, jardins, avenidas e outros). "A qualidade da rede de sistemas de mobilidade pedonal é fundamental para a prestação de cada um destes espaços" (*space syntax – espaços públicos*).

O estudo no âmbito do GreenLink incide sobre um dos projectos urbanos mais complexos da cidade: "Parc de les Viés". Este projecto é utilizado como exemplo real, da forma como uma análise deste tipo pode auxiliar, tanto o cliente (o *Ayuntamiento* neste caso concreto), como a equipa de projectistas externos (desenhadores e arquitectos) para melhorar o desenho espacial, integrando de forma consistente o espaço com contexto urbano existente; proporcionando que o espaço seja mais seguro através de "vigilância natural", criando propostas arquitectónicas que antecipam melhores padrões de utilização dos mesmos.

A intenção reside em que, através desta análise baseada em factos e evidências e no seu uso posterior no projecto, seja facilitado o acesso pedonal e o "wayfinding" em futuros projectos urbanos, tanto para os residentes como para os visitantes, e desta mesma forma, avaliar os impactes ambientais, sociais e económicos das novas propostas.

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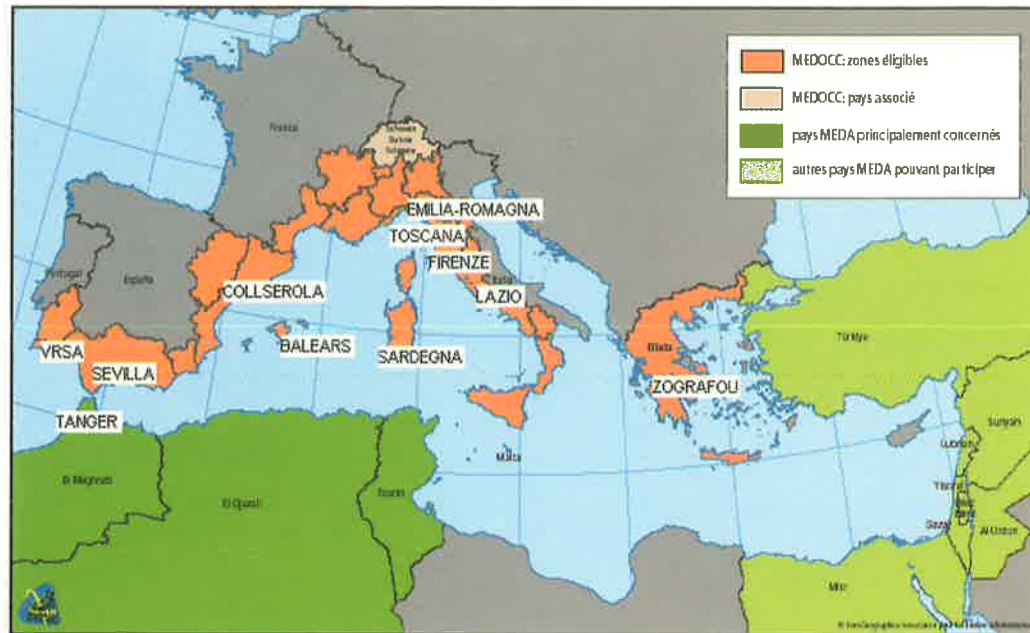
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PROJECT ACTIVITIES



The GreenLink partnership sites

Reflections

Alongside the excellent design work of all our technical colleagues, an obscure administrative activity exists, certainly less obvious but no less important in its contribution to the fulfilment and success of this project.

This work is conducted “behind the scenes” and has to overcome many bureaucratic obstacles to do with finances and book-keeping, due to complicated procedures, especially regarding the presentation of financial statements. This is a common problem, remarked on by all the partners to the project as well as others, to varying degrees.

So, a strong signal should go out to whoever contemplates reviewing the methods and procedures adopted in any way, because sometimes one has the sensation that these bureaucratic mechanisms act as a brake rather than an incentive to participation in the project.

In fact, whoever believes in Europe as firmly as we do and enthusiastically launches into this type of challenge, however old, knows that the clue to these programmes lies in successfully creating conditions for cooperation, exchange and sharing experiences. The individual input of each person is enriched through dialogue and comparison with others and certainly helps to overcome prejudices and distance and to make us increasingly citizens of Europe.

So, my heartfelt thanks to all the participants of the project with whom it has been an enormous pleasure to share a common path, and to all those who made our involvement possible, since one certainly emerges greatly enriched from such experiences.

Maurizia Basti
Administrative Referee to the “Green Link” project

Partners Meetings



GreenLink kick-off meeting

Florence 14-15 September 2006

Organised by the Environment department of the City of Florence in Villa di Rusciano Benedetto Fortini str. 37

Introduced by Mr Claudio Del Lungo Environment councillor of Florence

Technical guided visit to the Novoli developments in Florence.

By Mr Epifanio Furnari, Administration deputy of the Società Immobiliare Novoli and Gaetano Di Benedetto, City of Florence, Town Planning department director



Presentation of the objectives of the GreenLink project



The opening of the first GreenLink meeting in Florence



The valuable task of simultaneous translation



The delegations from Vila Real de Santo Antonio, Emilia Romagna Region and Deadiz-Zografou



Presentation of the pilot sites of the GreenLink project



2nd GreenLink Meeting

Zografou 14-15 December 2006

Organised by DEADIZ / Municipality of Zografou, in the Town Hall, Georgiou Zografou str. 7, Zografou, Athens

Introduced by the Mayor of Zografou Mr Yannis Kazakos

Technical guided visits. A field trip on the selected parks for the implementation of the pilot projects was conducted in Hymettus and Goudi Park



GreenLink at work in Zografou



Biagio Guccione and Giorgio Risicaris during the Athens meeting



The ARSIAL and Emilia Romagna Region delegations during the Athens meeting



Park of Goudi



View of Mount Hymettus during the technical visit



View of Athens during the technical visit to Mount Hymettus



GreenLink at work in Zografou



The Parthenon in Athens

3rd GreenLink Meeting

Palma de Mallorca 22-23 February 2007

Organised by Fundació per al desenvolupament sostenible de les Illes Balears in Fundació la Caixa, Plaza Weyler 3, Palma de Mallorca

Technical visit Parc de Collserola (Barcelona) on 24 February 2007

Organised by Consorci del Parc de Collserola FEDENATUR, Barcelona

Technical visit to the Parc de Collserola (Barcelona) guided by the GreenLink technical partner Parc de Collserola and its director Mr Marià Martí.

Tibidabo Temple, highest altitude of the Park.

Visit to the Information Centre and the Technical Services of the Park.

View of a video track about the Park.

Short visit to the public areas near the Park Information Centre

Visit to the Municipalities of Sant Cugat and Cerdanyola. Vision of the peripheral Park (buffer) of Canaletes.

Visit to the Can Coll Environmental Education Centre, and to the picnic area.

Visit to Can Borrell, ancient farmhouse.



Marià Martí, the director of Collserola Park, with Giorgio Risicarís and the park attendants during the technical visit



The GreenLink delegation during the technical visit to Collserola Park



The partner delegations during the Palma di Majorca meeting



Giorgio Risicarís shows the Florentine pilot projects at the Palma di Majorca meeting



The partner delegations during the Palma di Majorca meeting



The GreenLink delegations during the technical visit to the Palma di Majorca pilot site



Collserola Park, a valuable GreenLink technical partner



The interior of the beautiful visitors' centre in Collserola Park



VILAREALST°ANTONIO

4th GreenLink Meeting

Vila Real Santo Antonio 30-31 May 2007

Organised by Camara Municipal Vila Real de Santo Antonio

Meeting place: Cultural Centre VRSA

Introduced by Jose Carlos Barros Vice Mayor of VRSA.

Technical visits to the VRSA GreenLink pilot sites.

Technical visit Sevilla 01 June 2007

Organisation: Gerencia de Urbanismo de Sevilla

Technical visits to Sevilla GreenLink sites, by Francisco Javier Pando Sastre.



The welcoming address of the city Vila Real de Santo Antonio at the opening of the GreenLink meeting



The illustration of the Deadiz Zografou pilot projects



The Vila Real de Santo Antonio ponds during the technical visit to the pilot sites



The Vila Real de Santo Antonio ponds during the technical visit to the pilot sites



The Praça do Marquês de Pombal in the centre of Vila Real de Santo Antonio



The technical visit to Alamillo Park visitors' centre in Seville



The illustration of the projects underway in Alamillo Park in Seville



Technical visit to the plant nursery in Alamillo Park in Seville



5th GreenLink Meeting

Oristano 08-09 October 2007

Organised by Region Sardegna and Provincia di Oristano in Palazzo D'Arcais, Corso Umberto I n. 33, Oristano

Introduced by Mr. Cristiano Carrus, Regional Councillor for Tourism

GreenLink Workshops "Pilot projects"

Partners exposed and assessed their pilot projects during two parallel workshops

Workshop cities. Reporter: Giorgio Risicaris.

Workshop regions. Reporter: Maria Martì.

Partners participated in the technical visits to the Oristano GreenLink pilot sites.



Giovanni Malin addresses the GreenLink delegations at the Oristano meeting



The partner delegations during the meeting



Typical Sardinian dances during the welcome given by the Sardinian Region and Oristano Province to the GreenLink delegations



The partner delegations during the meeting



The GreenLink pilot committee at the Oristano meeting



An historic site seen during the technical visit to Tharros



The GreenLink technical visit to the wetlands of Cabras and Oristano

6th GreenLink Meeting

Roma 13-14 December 2007

Organised by Agenzia Regionale per lo sviluppo e l'innovazione dell'agricoltura del Lazio in Rodolfo Lanciani str. 38 Roma

Introduced by Fabio Massimo Pallottini, Temporary Commissioner of ARSIAL and Giuseppe Izzo, responsible for the ARSIAL projects.

GreenLink Technical guided visits.

Natural reserve of Decima Malafede (Castel di Decima), Cooperativa "Agricoltura Nuova".



Clelia Mele presents the Tuscan Region pilot site



The GreenLink meeting in Rome at the ARSIAL headquarters



Presentation of the Vila Real de Santo Antonio pilot sites



Presentation of the Balearic Islands pilot site



Technical visit to the Decima Malafede Nature Reserve



The GreenLink delegation during the technical visit to the Decima Malafede Nature Reserve



A view of the Decima Malafede Nature Reserve in Rome



The GreenLink delegation during the technical visit to the Decima Malafede Nature Reserve



Marià Martí, the director of Collserola Park, a GreenLink technical partner, comments on the results of the meeting

7th GreenLink Meeting

Riccione 3-4 April 2008

Organised by Regione Emilia-Romagna and the Municipality of Riccione, in Comune di Riccione, sala Consigliare, Vittorio Emanuele II str. n. 2

Introduced by Daniele Imola, Mayor of Riccione

Technical visits to pilot project sites, "Fairytale by bicycle" event along the project pathway, Parco della Resistenza and Oltremare Aquaparc.



The GreenLink poster at Riccione



School children at the GreenLink party during the Riccione meeting



School children at the GreenLink party during the meeting in Riccione



One of the products of the school children using recycled materials



Giovanni Malin addresses school children during the party, in the name of the GreenLink delegation



The Riccione meeting



The Palma di Maiorca and Zografou delegations during the meeting



The Riccione meeting



Closing Mediterranean GreenLinks Seminar

Florence 29-30 May 2008

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The results of the pilot projects conducted by each of the partners over the last two years of experimentation are published in this book: a shared approach to the city-country relationship, the theme of the GREENLINK project.

The solutions were varied. Palma and Riccione proposed paths leading inland, Palma towards the historic Bellver Castle through the forest bearing the same name, by means of a greenway or other alternative paths, Riccione followed two rivers to trace a cycle-footpath as an invitation to discover high quality rural landscapes. Oristano, like the other two, also adopted a linear path as a particularly valid environmental connection in the territorial system, by creating a river park as its project strategy, in accordance with the Regional Landscape Plan.

Florence Municipality approached each of the themes differently, in an attempt to give specific answers to the four different areas: an urban zone full of infrastructures; flood storage areas; one with many sports facilities and an urban fringe area of particular rural value. Seville entrusted its relationship with the country to the extensive Alamillo urban park similar to the even larger Parco della Piana, full of historic and naturalistic vestiges, selected by the Tuscan Region. Zografou, a municipality in the suburbs of Athens, proposed careful planning of the surviving open spaces at the foot of Mount Hymmetus, trying to limit its fragmentation with connecting projects. Vila Real, a small Portuguese tourist resort, provided a laboratory of landscape experimentation where the project offers solutions to each situation: woodland areas; river banks; Atlantic beaches; agricultural areas and wetlands. Arsiál, although linked to Terracina, offered a series of studies, in many cases interchangeable: the use of tree belts; data-processing for studies in climate change in the city-country relationship; a virtual museum and sustainable improvement of tourist potentials.

Thus we find a wide range of solutions and a valid contribution to the debate on city boundaries.

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GreenLink project partners

Comune di Firenze Italia

Regione Toscana Italia

Gerencia de Urbanismo, Ayuntamiento de Sevilla España

Assessorato Turismo e Commercio, Regione Emilia Romagna Italia

Câmara Municipal de Vila Real de Santo António Portugal

Zografou Municipal Enterprise of Development (DEADIZ), Prefecture of Athens Greece

Regione Autonoma della Sardegna Italia

Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura del Lazio (ARSIAL) Italia

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