



**Workshop Report**  
**First Exchange of Experience Workshop**  
**Fingal, Ireland**

**Title: 1. Methodologies and Development Strategies 2. Process Management**

**Introduction**

This first exchange of experience workshop focused on Methodologies and Development Strategies and also on Process Management.

Methodologies refers to the methods that can be applied to develop a green infrastructure plan. This includes how objectives are established, how to identify the information and data that need to be collected, the techniques needed for assessing and evaluating such information, and how to produce an optimal plan that will achieve its objectives. Development Strategies refers to the policy strategies that can be effective in securing the development of green infrastructure and includes communications strategies, integrated land-use planning and securing long-term funding.

Process management refers to the process through which green infrastructure is planned and delivered and how this process is managed over long time periods. These include aspects such as creating long-term policy frameworks, ensuring that appropriate implementing instruments are available, long-term budgeting, organising data collection and analysis, setting up a dialogue process with all stakeholders and communicating results to all interested parties.





This Workshop was the first opportunity partners had to exchange experience in relation to the development of green infrastructure in their regions. Given that most partners were unaware of how green infrastructure thinking had developed in each region and what stage green infrastructure planning and implementation had reached in different regions it was considered important to allocate some time to learning from each other about green infrastructure in each of the regions. This would also be facilitated by the planned study visit to Howth on Day 2 to see green infrastructure implementation in action on the ground. Based on these considerations the following specific objectives were defined for the first exchange of experience workshop:

- To begin the exchange of experience process of Component 3
- To present each partner's experience relating to green infrastructure
- To deliver material for a chapter of the Green Infrastructure Action Tool Kit
- To exchange experiences with local actors participating in green infrastructure implementation

While every workshop has specific objectives to accomplish workshops also have a broader objective of strengthening the relationships between partners. In particular it is important that the initial workshops enable each partner to identify the key role the partner has to play in the project and to help them to answer some key questions such as: What can my region contribute to the goals of the project? What can my region achieve as part of this project?

## **Methodology**

The Workshop can be divided into four parts:

1. An initial participative process which took place prior to the Workshop to set the workshop objectives. This process is described in the agreed Component 3 Methodology (see Appendix 1).



2. The Exchange of Experience Workshop
3. The Study Visit to Howth, Co. Dublin
4. The Report.

It was agreed in discussions prior to the workshop that each partner would present a short overview of the situation in their region, and that the workshop would then look at these experiences in some detail utilizing SWOT analysis. This it was hoped would enable common themes to be identified in relation to methodologies, development strategies and process management. A firm basis for future exchange of experience would also be provided. A study visit was planned for the second day of the Workshop to see green infrastructure implementation in action.

The workshop was composed a first presentations session followed by a participative case study analysis made by all workshop participants.

The theme for the workshop comprised the topics Methodologies and Development Strategies and Process Management. In discussion prior to the workshop by email, and using a discussion group created in Google Groups, the partners agreed that it would also be appropriate to have more freedom to present their region's experiences in the application of green infrastructure policies and practice.

Prior to the meeting Guidelines for the Presentations and SWOT Analysis were developed to assist participants in making a presentation at the meeting (see Appendix 2). These Guidelines identified key questions that needed to be answered in relation to the workshop themes: Methodologies and Development Strategies and Process Management. These were initially proposed by the Fingal team, and followed the Component 3 Working Methodology (see Appendix 1). They were subsequently refined following inputs from a number of partners which was facilitated using Google Groups.

Participants were requested to make a short 15-minute presentation setting out the development of green infrastructure in their region while addressing the



specific questions posed in the Guidelines for the Presentations and SWOT analysis.

Immediately prior to the Exchange of Experience Workshop the Component 3 leader and the Fingal team discussed the Workshop and in particular the proposed SWOT analysis. Following discussion it was agreed to propose to the partners that in the time available it would be better to undertake a Case Study Analysis based on the presentations by the partners rather than a SWOT analysis. Guidelines for Case Study Analysis were then drawn up for agreement by the partners (see Appendix 3).

Following agreement, the second part of the Workshop therefore consisted of a Case Study Analysis, in which the Workshop participants analyzed the cases presented in the first part of the session. For this part of the Workshop the group was divided into three smaller groups and each group analyzed two cases based on the Guidelines.

The Study Visit to Howth took place on the second day of the Workshop, Friday 13<sup>th</sup> July 2012. The purpose of the Visit was to see how a spatial planning tool is being used to manage an area of green infrastructure which is important for its landscape, recreation and biodiversity.

## **Results**

### **Presentations**

Presentations were made on the morning of 12 July 2012 at the Exchange of Experience Workshop by the following partners: Fingal County Council, Provincial Council of Barcelona, Provincial Council of Flevoland, Regional Environmental Center for Central and Eastern Europe, Ghajnsielem Local Council and the Centre of Applied Forest Research, Generalitat Valenciana. Presentations were also received from the Nicosia Development Agency and Stara Zagora Regional Economic Development Agency.



Abstracts of the presentations were also prepared by participants and are in Appendix 4. The presentations are in Appendix 5.



Presentations and case study analysis took place in Ardgillan Castle

## Case Study Analysis

The Case Study Analysis took place in the afternoon of 12 July 2012 following the morning presentations by the partners. This followed the agreement of the partners to this proposal and their agreement to the Guidelines. For the case studies the group was divided into three smaller groups and each small group undertook two case studies. The only rule in forming the small groups was that partners could not analyze their own region.

The small groups looked at the main ideas in each case under the headings in the Guidelines. Feedback on the case studies was recorded on flipcharts (see Appendix 6). Following the case studies a rapporteur from each small group provided feedback to the larger group on each case study.

The results of the case analyses are presented here under the headings in the Guidelines for Case Study Analysis:



## 1. Origins

Green infrastructure thinking has different origins in different countries and regions across Europe. In most regions it seems originates from the need to implement EU nature conservation directives and in doing this to find mechanisms to integrate nature conservation with other land-uses (Fingal, Ghajnsielem, Flevoland, Hungary, Barcelona, Stara Zagora, Nicosia District). In one region it has its origins in the implementation of the European Landscape Convention (Valencia).

## 2. Methodology

**a. Strategy Development:** Green infrastructure is an emerging concept across Europe and in many countries and regions green infrastructure thinking has been integrated into plans and strategies at national, regional or local levels (Barcelona, Fingal, Flevoland, Ghajnsielem Hungary). In Flevoland a formal plan was developed as part of a national process (the Dutch National Ecological Network) and in Hungary green infrastructure has been integrated into sectoral plans in agriculture and nature conservation for example. In the Maltese Islands green infrastructure features in legislation transposing the Habitats and Birds Directives. In some cases mechanisms have been put in place to ensure that green infrastructure can be integrated into land-use plans (Barcelona, Fingal, Flevoland, Ghajnsielem). In Fingal a green infrastructure approach has been integrated into the local land-use development plan in response to a requirement in the Regional Planning Guidelines for the Greater Dublin Area. In Malta the role and importance of spatial planning as an instrument for wider biodiversity conservation is reflected in new policy on spatial planning. In Valencia a formal Strategy has been developed called the Valencian Green Infrastructure Territorial Action Plan (GI-TAP) which implements the requirements of the Law of Landplanning and Landscape Protection (2009). In Barcelona a formal structure for the collection and organization of data has been established which is quality controlled. This relates to nature conservation and open space across the region and is now being used to drive the development of green infrastructure initiatives



in municipalities across the region. In Nicosia Region green infrastructure thinking has yet to be included in local plans and strategies.

**b. Implementation:** Implementation is happening in many regions but in many different ways. There is little commonality across regions but implementation is happening on the ground using a variety of mechanisms from a range of policy areas such as nature conservation, agriculture and spatial planning. Where no formal strategy exists implementation can be compromised by a lack of integration between initiatives which originate in different policy areas. Progress in relation to implementation can be slow due to a lack of buy-in from key stakeholders such as landowners (Flevoland). In addition the current difficult economic circumstances mean that green infrastructure is less of a political priority across the regions.

### 3. Policy Framework

In some regions green infrastructure is implemented through nature conservation legislation utilizing frameworks created for this purpose such as in Flevoland where green infrastructure is based in the implementation of the National Ecological Network. Other regions where this is happening include Hungary and Ghajnsielem. In other regions spatial planning is either to the fore in terms of green infrastructure implementation (Barcelona, Fingal, Stara Zagora) or is a part of the policy framework for implementation (Malta, Valencia). In Hungary agriculture policy is an important policy area through which green infrastructure initiatives are being implemented. In one region green infrastructure is primarily based in legislation implementing the European Landscape Convention (Valencia).

### 4. Long term Sustainability

#### a. Funding



Funding for implementation is an ongoing challenge in all regions and is largely, if not entirely, derived from funding sources related to other policy areas such as nature conservation, spatial planning or agriculture.

## **b. Communication/Participation**

A key outcome from the meeting was the need to use the green infrastructure concept to explain to stakeholders across many different policy areas the wider social (e.g. public health) and economic benefits (e.g. tourism) of green infrastructure, and in this way to generate support for planning and implementation of green infrastructure initiatives. Greater participation by a range of stakeholders in formulating green infrastructure plans may be necessary to achieve this.

### **Study Visit**

Howth peninsula is located on the northern side of Dublin Bay and has long been a special place for Dubliners. The landscape of Howth has made the area attractive for visitors and artists and since the arrival of the railway in the 19<sup>th</sup> century the Hill of Howth has been extensively used by walkers.



Howth and the surrounding areas are also important for biodiversity and several sites have been designated under the Habitats Directive and the Birds Directive as Special Areas of Conservation (SAC) and Special Protection Areas (SPA) (see Tables 1 and 2). In particular Howth Head SAC and Howth Head Coast SPA are important sites on the peninsula designated to protect dry heathland, sea cliffs and their breeding seabirds (see Appendix 7).

**Table 1: Special Areas of Conservation (SACs) on or near Howth, Co. Dublin**

| Site Code | Site Name        | Qualifying Features  |                  |
|-----------|------------------|--|------------------|
|           |                  | Annex 1 Habitat<br>(* indicates priority habitats)   | Annex II species |
| 000199    | Baldoyle Bay     | Mudflats and sandflats not covered by seawater at low tide, <i>Spartina</i> swards, <i>Salicornia</i> and other annuals colonizing mud and sand, Atlantic salt meadows, Mediterranean salt meadows   |                  |
| 000202    | Howth Head       | European dry heaths, Vegetated sea cliffs of the Atlantic and Baltic coasts  |                  |
| 002193    | Ireland's Eye    | Perennial vegetation of stony banks, Vegetated seacliffs of the Atlantic and Baltic coasts   |                  |
| 000206    | North Dublin Bay | Mudflats and sandflats not covered by seawater at low tide, <i>Spartina</i> swards, <i>Salicornia</i> and other annuals colonizing mud and sand, Annual vegetation of drift lines, Atlantic salt meadows, Mediterranean salt meadows, Embryonic shifting dunes, Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes"), *Fixed coastal dunes with herbaceous vegetation ("grey dunes"), Humid dune slacks | Petalwort        |
| 000210    | South Dublin Bay | Mudflats and sandflats not covered by seawater at low tide   |                  |

**Table 2: Special Protection Areas (SPAs) on or near Howth, Co. Dublin**

| Site code | Site name                                | Special Conservation Interests & Features of Interest (species marked with * are Features of Interest only)   |
|-----------|--|---|
| 004113    | Howth Head coast                         | Kittiwake   |
| 004117    | Ireland's Eye                            | Kittiwake, Guillemot, Razorbill, Cormorant*, Herring Gull*  |
| 004006    | North bull Island                        | Light-bellied Brent Goose, Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Golden Plover*, Grey Plover, Knot, Sanderling, Dunlin*, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Turnstone, Black-headed Gull*, Wetlands & Waterbirds |
| 004024    | South Dublin Bay and River Tolka estuary | Light-bellied Brent Goose, Oystercatcher, Ringed Plover, Golden Plover*, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-headed Gull*, Roseate Tern, Common Tern, Arctic Tern*, Wetlands & Waterbirds*                                 |



Howth Peninsula



Howth Peninsula. Areas in blue are Natura 2000 sites. Area in white is designated as a Special Amenity Area.

Under the Planning and Development Acts, 2000-2011 this area is also designated as a Special Amenity Area and planning in the area is subject to the requirements of a Special Amenity Area Order (SAAO) made under Section 202 of the Planning and Development Act. An SAAO Management Committee comprising local elected representatives and local stakeholders is in place to manage the implementation of the Order. A special levy on development in the area and the nearby Howth village was also in place for 4 years after the SAAO came into effect. These monies have been used to fund essential maintenance and conservation works to date. Long-term funding for management of the area is an ongoing challenge.

Participants met in the Deerpark Hotel, Howth and were briefed on the SAAO by the Chairperson of the Management Committee, Councillor Joan Maher and by the scientific advisor to the Committee, Dr Mary Tubridy (see Appendix 7). Other members of the Management Committee also attended including Kevin Rickard, Anita Cannon, Anne Thornton and David Healy. After questions and answers participants went on a 1.5 hr walk around the Hill of Howth to see how different management measures were being implemented. This included the maintenance and development of walking routes and the management of heathland vegetation.



Participants taking part in the Howth Study Visit



## Appendix 1

### Component 3 Working Methodology

## Component 3 working methodology

**Proposal for a participative working methodology to facilitate the experience exchange in the GreenInfraNet project.**

The participative working methodology proposed below is based on the presentation of the Component 3 at the Steering Committee meeting in Flevoland.

1. **Team Definition:** We have to specify, first, the teams that are going to lead the subjects of the different workshops. The first proposal is defined in the application. The default coordinator of this team will be the workshop organizer, unless other partner takes that role.
2. **Definition of workshop goals:** The coordinating team, together with the Component coordinator, the workshop organizer and the consultant responsible of editing the Action Toolkit will decide and agree about the goals and scope of the workshop taking the application form as a guideline.
3. **Preliminary document:** The coordination team, as experts in their specific topics, will have to guide and lead the best practice exchange in every specific area. In order to be effective and to get some results in a short meeting, the information that is going to be worked out during the workshop should be prepared in advance collectively via e-mail. It can be done through a web platform like google groups or in our own webpage. The leading team of the specific topic will begin and guide the discussion. In this way, the partners that are not so versed in the correspondent subject, will be introduced to the topic and will be able to propose ideas. After this first phase we must get a preliminary document with a list of best practices to take to the workshop. The component coordinator will moderate the information exchange.
4. **Workshop:** During the workshops this preliminary documents will be worked out and the information and ideas that had been previously proposed will be prioritized. It is planned that to every meeting come around 18 people. We could make two groups that work separately in order to be more effective. There are two ways of working it out. The two groups handle the same information separately and at the end put their results together, or the groups handle different aspects and the results will be added.
5. **Workshop report:** The coordination team will be the responsible of creating the workshop report.

## Component 3 working methodology

6. **End output:** At the end we have an agreed document that can be delivered to Szygy, in the case of the Action Tool Kit, or to the C3 coordinator in the case of the reports of the best practice transfer.

All workshops don't have to apply the same methodology. For example, the application states that in the exchange of experience workshops all partners make a presentation and that the chapters that come from these two workshops are going to be composed from the proceedings of the presentations. The participative methodology described above can be applied only, for example, in the exchange of best practice workshops. However, steps 1 and 2 must belong to every workshop of the project because they will deliver basic information like the responsible partners, the procedures and the goals of the workshops.

In the next table the teams, thematic fields and the calendar for the different workshops are given. The information comes from the application form. It is important that, at this very early stage of the project, all partners deliberate about their role in every thematic field. All partners are welcome to take part in another workshop although they aren't listed there, especially in the two workshops of the "exchange of experience", because the application form doesn't contemplate any specific working group.

| Workshop/ Thematic field   | Coordinating team  | Calendar                       | Output   |
|--|--|--------------------------------|--|
| <b>Exchange of experience 1:</b><br>Development Strategies<br>Process Management | All partners   | Fingal County<br>13-14/07/2012 | Chapter 3  |
| <b>Exchange of experience 2:</b><br>Planning, Policies and Instruments           | All partners   | Budapest,<br>11-12/10/2012     | Chapter 5<br>Chapter 6<br>Chapter 7<br>Chapter 8 |
| <b>Exchange of Best Practice 1</b><br>Analytical methodologies                   | <b>Barcelona</b><br>Emilia Romagna   | Barcelona<br>11/2012           | Chapter 4  |
| <b>Exchange of Best Practice 2</b><br>Urban regions                              | <b>Plovdiv</b><br>Fingal, Stara Zagora,<br>Emilia Romagna,<br>Vides projekti | Plovdiv, 2013<br>I             | Chapter 9  |
| <b>Exchange of Best practice 3</b><br>Policy development and<br>implementation   | <b>Vides Projekti</b><br>REC   | Riga, 2013 I                   | Chapter 6  |

Component 3 working methodology

|  |  |                        |                                   |
|--|--|------------------------|-----------------------------------|
| <b>Exchange of Best practice 4</b><br>Natural areas                                      | <b>Nicosia</b><br>Azores, Valencia   | Nicosia, 2013 II       | Chapter 10                        |
| <b>Exchange of Best practice 5</b><br>Rural areas  | <b>Emilia Romagna</b><br>Valencia, Flevoland, Plovdiv, Stara zagora, Ghajnsielem, REC                          | Emilia Romagna 2013 II | Chapter 11                        |
| <b>Exchange of Best practice 6</b><br>Climate change                                     | <b>Valencia</b><br>Flevoland   | Valencia, 2014 I       | Chapter 12                        |
| <b>Transfer of Best practice 1</b><br>Methodologies<br>(information also from EBP 1)     | Applying partners:<br>Ghajnsielem, Emilia Romagna<br>Contributing partners:<br>Barcelona, Azores               | Ghajnsielem 2013 I     | Report<br>Evaluation<br>Chapter 4 |
| <b>Transfer of Best practice 2</b><br>Policies<br>(Information also from EE 2 and EBP 3) | Applying partners:<br>Azores, Plovdiv, Ghajnsielem<br>Contributing partners:<br>Vides Projekti, REC, Flevoland | Azores 2013 II         | Report<br>Evaluation<br>Chapter 6 |
| <b>Transfer of Best practice 3</b><br>Urban regions<br>(information also from EBP 2)     | Applying partners:<br>Stara Zagora, Fingal<br>Participating partners:<br>Vides Projekti, Emilia Romagna        | Stara Zagora 2013 II   | Report<br>Evaluation<br>Chapter 9 |

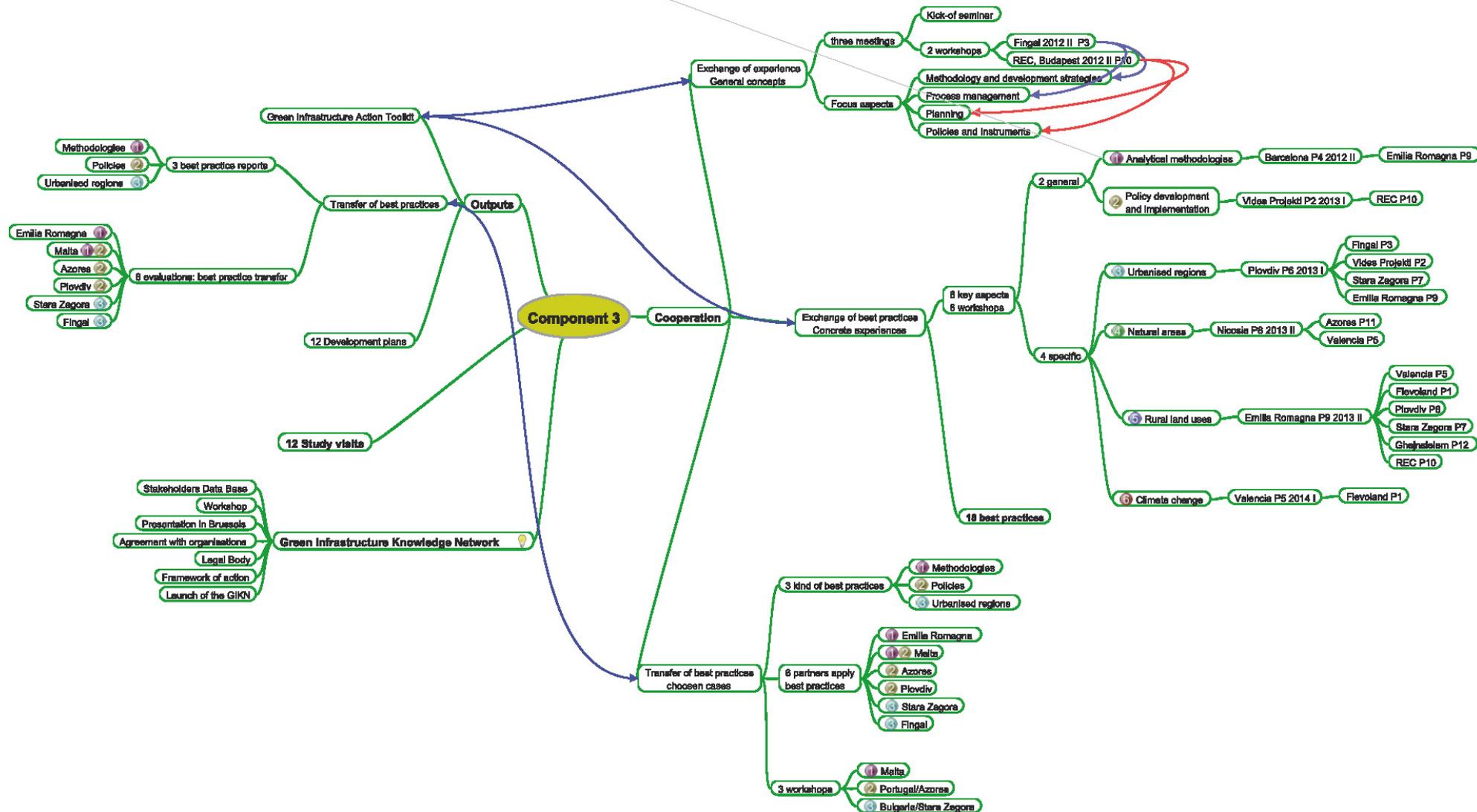
Component 3 working methodology

Working methodology for Component 3 (see text)



Component 3 working methodology

Mind map for the Component 3 (corrected)





## Appendix 2

### Guideline for the presentations and the SWOT analysis

#### 1. Methodologies

- Where did the GI idea originate, how was it taken forward?
- What was the policy framework within which the GI strategy was developed?
- How was a GI strategy developed?
  - What stakeholders were involved?
  - How were objectives established?
  - What information and data were required?
  - How was data assessed and evaluated?
- How is GI strategy being implemented?
  - What structures are in place?
  - Are the right institutions and people involved?
  - What funding mechanisms are there?
  - Are review and evaluation mechanisms in place?

#### 2. Policy strategies that can be effective in securing the development of green infrastructure

- Is GI strategy part of integrated land-use planning?
- Does GI relate to other areas: nature conservation, climate change, agriculture, forestry?
- How is funding being provided for GI?
- What communication strategy is in place?
- Which instruments are going to be implemented?

#### 3. Long-term process through which green infrastructure is put in place and effectively managed

- Is GI part of any long-term policy frameworks?
- Are implementation structures capable of becoming long term
- Has the issue of long-term budgeting been addressed?
- Are there mechanisms in place for long term data collection, storage and analysis?
- How can dialogue with all stakeholders be maintained in the long term?
- How can communication be maintained?



## Appendix 3

### Case Study Analysis

Guideline for case study analysis focusing on the origin, strategy development and implementation and process management of Green Infrastructure

1. Origin  
(Where does the idea come from? History)
  
2. Methodology
  - a. Strategy development  
(development process)
  
  - b. Implementation  
(actors, management structure, tools....)
  
3. Policy framework  
(Land-use planning, Nature conservation, Forestry, Agriculture.....)
  
4. Long term sustainability
  - a. Funding
  - b. Communication/participation



## Appendix 4

### Abstracts of Presentations

#### **Comunitat Valenciana (partner: CIEF-Generalitat Valenciana)**

##### **Origin of the Green Infrastructure in the Comunitat Valenciana.**

The Green Infrastructure concept arises from the valencian Law of Landplanning and Landscape Protection. (Ley de Ordenación del Territorio y Protección del Paisaje) and the European Landscape Convention.

The Law of Landplanning and Landscape Protection of 2009 envisages the development the **Valencian Green Infrastructure Territorial Action Plan (GI-TAP)** to accomplish the objectives set by the law. This GI-TAP must identify the areas and elements that will compose the GI, the mechanisms to include other spaces and the criteria for an integrated management of the GI.

##### **Development of GI-TAP:**

Participants: Environmental Administration, public participation (Experts: other administrations, academics, NGO's)

Methodology: Workshops, "landscape workshops", web, survey.

Territorial Analysis: Delimitation and definition of landscape units (concrete). And from a wider and more general approach: definition of 15 landscape scenes.

##### **Implementation:**

Definition of GI resources: At a start point an effort has been done to define the GI resources in the Valencian Region at a broader scale. The GI-resources have been differentiated in three groups relating their function, that can be, environmental, cultural and visual.

Resources of **environmental interest** are Natura 2000 sites, nature reserves (national, regional and local), public forest, main fluvial corridors, forest land, special agricultural soils of high production capacity and other land protected from building.



Resources of **cultural interest** include all landscape resources that possess some kind of protection or which protection is in process. Also spaces that own special local value and can be ordered as historic landmarks, which alteration could signify a loss of local identity features, are included in the GI-resources. Some examples are local interest goods (archeological, artistic, ethnographical, etc.), archeological sites, caves, paths, drovers roads, historical irrigations systems or giant trees.

The resources of **visual interest**, compared to the environmental and cultural resources, don't possess clear protection status. Their definition demands a more specific analytical process. The Law of Landplanning and Landscape protection remarks that a landscape analysis must be done to identify sensible areas and elements, the visibility of the Valencian Region and the scenic overlooks or observations points.

#### **Examples:**

Some examples of Green Infrastructure projects are the Territorial action plan to protect the peri-urban horticultural land of Valencia (Pla d'Acció Territorial de l'Horta) and the declaration of fluvial park of the Turia river that connects the urban parks of the city of Valencia with the surroundings.



## **Provincial Council of Barcelona**

GI concept appeared at the Provincial Council of Barcelona starting from the network of protected areas managed by this Council. Some years ago, there was a political and technical initiative to identify and assess natural and socio-economical values of ALL the open areas of the province, not only protected areas. Thus, a GIS system (SITxell) with all the information related to values, interest and services of open areas was set up, and since then it is used by different administration departments and levels (local, provincial and regional).

SITxell was developed co-ordinately with the rest of territorial administrations, and relying on information and criteria from the most important research groups, institutions and private companies in Catalonia. In this way, we ensured the quality, objectivity and update of the information. At the same time, information can be consulted and downloaded free of charge not only by public administration, but private bodies and citizens, to promote its broad use and increase social awareness about the importance of open areas.

Around 70 municipalities have applied this information at the local planning level. It has also been used in creating and/or enlarging six protected areas and many areas of interest for the connectivity. One of the most important projects around GI that has used SITxell information has been the Regional Plan of Barcelona. Approved in 2010 by the Government of Catalonia, this plan bases on the analysis of natural and socio-economical values of open areas in the Metropolitan Region of Barcelona. The result is that the Regional Plan protects more than 70% of the land because its interest in terms of GI (biodiversity, ecosystem functionality, prevention of natural risks, food production, ecosystem services, etc).



## Green Infrastructure in Fingal

The development of green infrastructure ideas, policies and action in Fingal is rooted in the need to ensure that environmental stewardship, including biodiversity conservation, is integrated within the spatial planning code thus ensuring that spatial planning in Fingal contributes to sustainable development. The land-use planning system in Ireland is hierarchical with the Government responsible at national level for the preparation of the National Spatial Strategy and for preparing and issuing guidance to planning authorities on a range of planning issues. Eight regional authorities are responsible for drawing up and implementing Regional Planning Guidelines (RPGs) which provide for planning at regional level and in so doing must implement the requirements of the National Spatial Strategy. Below this tier local authorities, as planning authorities, are responsible for the preparation and implementation of Development Plans for their functional area which provide for development at the level of the county or city and must be consistent with higher level plans. Increasingly the planning code addresses concern for the environment which has been driven in large measure by European Union policy and legislation. The requirements of the Habitats and Birds Directives have recently been fully integrated into the planning code. Planning authorities are also now required to incorporate the requirements of River Basin Management Plans prepared into Development Plans and are required to ensure that objectives in Development Plans are consistent with the conservation and protection of the environment.

Fingal lies to the north of Dublin city and is one of four local authorities in County Dublin. The county has experienced very rapid population growth during the last 20 years and in particular during the recent period of rapid economic growth. Increased population growth led to increased pressure for development along the coast and in the countryside. Fingal has important biodiversity resources particularly along the coast. There are a total of nine Special Protection Areas (SPA) and seven Special Areas of Conservation (SAC) on the coast and on offshore islands.

In 2005 the Council adopted the first Heritage Plan for Fingal. This was prepared in close collaboration with the Fingal Heritage Forum and also involved public consultation. The Heritage Forum is a non-statutory advisory group established by the Council to provide advice on the preparation and implementation of the County Heritage Plan. It includes representatives from a wide range of organisations with an interest in or responsibility for Fingal's heritage. The Heritage Plan called for the preparation of a local biodiversity action plan for Fingal and for the establishment of an ecological network. In preparation for the local biodiversity action plan a study programme commenced in 2005 to provide data on Fingal's biodiversity resource. Over the following years a range of studies were undertaken together with GIS-based habitat mapping which has been completed for over half the county including the areas of most significance for biodiversity. The data collected and the habitats mapped underpin the Fingal



Biodiversity Action Plan 2010-2015. The most significant element of the Fingal Biodiversity Action Plan is the establishment of the Fingal Ecological Network - a spatial framework for biodiversity conservation and management in Fingal.

As a planning authority Fingal County Council must prepare a Development Plan for the county every six years. The formulation of the Development Plan takes place over a 99 week period and is governed by law. It included wide-ranging consultation with stakeholders and the public in its preparation. In the development of the Fingal Development Plan 2011-2017 it was decided that green infrastructure would form a major and novel element within the Plan. This followed on from a successful green infrastructure conference hosted by the Council in 2008 at which speakers from the UK, USA, the Netherlands and Sweden introduced the green infrastructure concept to Ireland.

The Fingal Ecological Network was subsequently integrated into the Fingal Development Plan 2011- 2017. This means that the spatial framework for biodiversity conservation in Fingal has now been integrated fully within the land-use planning framework for the county. The Fingal Development Plan 2011-2017 identifies five green infrastructure themes for Fingal: 1) Biodiversity, 2) Parks, Open Space and Recreation, 3) Sustainable Water Management, 4) Archaeological and Architectural Heritage and 5) Landscape. Green infrastructure associated with each of these themes has been identified and mapped. The Council's policy and objectives in relation to green infrastructure are also detailed in the Development Plan focussing on the need to protect, enhance and manage green infrastructure as a strategic resource for Fingal. The Plan recognises that the creation of a connected and multifunctional green infrastructure will yield economic and social benefits as well as the more obvious environmental benefits.

It is also expected that incorporating a green infrastructure approach in the Development Plan will minimise conflicts between environmental and economic goals in the planning system. The green infrastructure approach also makes sense in terms of the need for Fingal County Council to implement the growing demands of environmental legislation. This includes the Habitats, Birds, Floods, and the Water Framework and Marine Strategy Framework Directives, and the Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) and Environmental Liability Directives. Because so many key environmental functions and benefits are tied up in the green space network, proactive planning for green infrastructure should enable many of these legislative demands to be more easily met. It should also facilitate joined-up thinking in relation to the many, often overlapping, requirements of different pieces of legislation.

In 2012 the Council established an internal green infrastructure steering group to co-ordinate implementation of key green infrastructure objectives in the Fingal Development Plan.



## Province of Flevoland

The GI idea for Oostvaardersland was initially proposed by the national Dutch government in 1990, as a part of the Ecological Main Structure, a measure to combat loss of biodiversity. A robust ecological corridor between Oostvaardersplassen and Horsterwold for migration of red deer was the single defined objective. In 2004 the national government asked the province to enhance progress. With communities, waterboard and central government the plan was tuned to integration of multiple targets with ecological and human interests, such as water retention, recreation and employment or more distant objectives such as climate control, carbon sequestration and space for other animals than deer. The present land use being agricultural and the area being situated at the bottom of the former Southern Sea, data were collected not only in the field of ecology, but also archeology, the present economic value of agricultural land to be acquired, predictable benefits such as employment, possible interference of birds attracted to Oostvaarderswold with the regional airport traffic, and more. Several media strategies were used to communicate the project, it's purposes and progress: brochures, a website, public hearings, regional television. Together with stakeholders and inhabitants (in a participation project) a more specific plan for Oostvaardersland was developed, built up from a spatial plan, a development plan, a management plan, a financing scheme, and a communication strategy, finished in 2009. At that time Oostvaarderswold was to include some large nature measures compensating biodiversity losses caused by enlargement of infrastructure and two cities in the region, especially the losses of foraging grounds of birds that are protected under Natura 2000. Oostvaarderswold thus was transformed from a ecological corridor to a multi-purpose green infrastructure and partially, a habitatbank. Funding of the project, estimated to require app. 240 Mln, was guaranteed by the national government. By the end of 2010, hundreds of hectares had been acquired, the progress being sufficient to have the project finished in 2014. However, after a political change, the national government withdrew their financial guarantees. A consortium of World Wildlife Fund and regional management organization (State Forestry Commission and Flevo-Landschap) adopted the plan to get it finalized. Regrettably, the supreme court ruled that without the financial guarantee of the central government the plan has no sound financial and thus legal basis. At present, we are in the phase of political and financial rehabilitation, anticipating the national elections in September 2012.



## **Elements of Green Infrastructure in Hungary**

*Green Infrastructure Network project, First Exchange of Experience Workshop*

*Fingal County, July 12th-13th, 2012*

In Hungary the concept of Green Infrastructure has not yet reached a development stage where it would have its own nationwide strategy or programme. However, the main principles of GI are present in several initiatives, strategies and legislations that aim to preserve and improve the connections between natural and semi-natural areas. All of these initiatives cover the national level, while there are only few and not too significant regulations on local level and relatively no specific strategies or programmes on the regional level.

The following can be regarded as main elements of GI in Hungary.

### **Legislation-based initiatives:**

*Areas under natural conservation (based on legislation) and the Natura 2000 network*

The two networks are interconnected (the Natura 2000 system has been introduced later, with the EU accession). The share of areas under natural conservation is 8.9 % while the Natura 2000 sites make up 21 % percent of the country's territory. Depending on the legal background (that of nature conservation areas being the stricter) they provide a certain level of protection for Green Infrastructure components, although connectivity between the sites is in need of some improvement. However, private interests make legal protection of connecting areas nearly impossible in the short-term.

*National Ecological Network*

The Network aims to provide connectivity between areas under natural conservation. Its components (core areas, ecological corridors, buffer zones) appear in the Law on National Territorial Plans, based on which they are also applied in regional planning. On core areas and ecological corridors the relevant authority may introduce limitations or countervailing measures regarding the installation of infrastructure networks of transport, electricity and other energy sources. The regulation is well integrated into the system of spatial planning and promotes cooperation of regional authorities, although some clarification of the legislation will be necessary to strengthen a unified approach.



### *Law on protection of woody plants*

In general the protection of forested areas (both private and state-owned) is regulated by the law on forestry. Areas that do not fall under the scope of the law (due to their small territories or location within settlements) are covered by the law on the protection of woody plants. The regulation aims to preserve the existing network of green areas in urban zones, by regulating their protection in general, their replacement and the limitation of hazards (e.g. anti-icing with road salts in the winter). The regulation gives an increased power to local authorities in this matter.

### **Initiatives based on funding mechanisms:**

#### *Network of areas of high natural assets*

A special type of agri-environmental measure, that involves an area-based subsidy scheme with voluntary participation in order to protect agricultural biodiversity. Following a pilot project the subsidy became available for territories (arable land, grassland, wetland) covering about 10 % of Hungary. The conditions set are critical for the protection of certain species (red footed falcon, great bustard) and habitats and for the maintenance of the ecological network. However, voluntary participation means that not all connected areas will be involved necessarily, therefore creating networks might only become possible through the modification of the scheme.

#### *Large-scale habitat developments, programmes for the protection of species*

The high share of state-owned areas and the strong institutional background provide a good opportunity for large scale habitat developments. These developments, implemented by national park directorates from different funding sources (operative programmes, LIFE-Nature) have an important role in the ecological network. The projects are co-ordinated on regional level and in most cases aim to decrease the fragmentation of protected areas. Examples include the development of wetlands (and their interconnections, e.g. with ecological passes/tunnels for frogs) and substitution of electric air cables with ground cables in critical areas (e.g. bird migration routes).

### **Other initiatives**

#### *„Unobstructed sky” programme:*

The programme aims to reduce bird casualties on the most dangerous electric air cable sections. The implementation is carried out in co-operation with electricity providers.



## **GI in Bulgaria**

The GI concept in Bulgaria is introduced and managed by the Environmental Protection Act and the Protected Area Act and other relevant national ecological and environmental legislation, and international conventions to which Bulgaria is a signatory.

The GI could be described through two models given by Graham in his KoM presentation but the most similar to GI concept are the protected areas: Biodiversity Conservation - strict nature reserves (but not interconnected); Spatial planning - managing nature reserve.

Policy maintenance and management of protected areas is carried out by the Ministry of Environment and Water and its authorities in the respective areas.

Nevertheless it must be underline that the protected areas (which are potential GIN) in Bulgaria are in general state property. All of them have Management Plans which must be approved by the Council of Ministers.

Every year the Directorates of these areas draw up annual plans, subject to approval by the Minister of the Environment and Waters.

A part of such area is located in the North part of Stara Zagora Region. This is the Central Balkan National Park. It is a certified member of the European network of protected areas - PAN Parks since 2003 and it is a part of Federation EUROPARC since 2006. The Park is included as protected zone in the European ecological network NATURA 2000 since 2008.

In such cases the municipalities are allowed only to plan priorities and measures which support some activities around these areas, including business supporting measures.

The protected areas are funded by the state budget, the Environmental Activities Management Enterprise, the National Trust Eco-Fund, and by ad hoc allocations from other financial institutions and grants that support biodiversity conservation and management activities within their boundaries. The funds from the state budget are allocated explicitly to support the Directorates, while funds from the Environmental Activities Management Enterprise finance activities within the areas. These expenditures are subject to approval by the Minister of the Environment and Waters.

Management and protection of protected areas that are not state property, is the task of the Ministry of Agriculture and Forestry.

In Bulgaria the regional authorities (regrouping several municipalities) has limited power in terms of management of territories and land use. In general the land is considered as state property and



only if the state delegates its rights regarding a specific area a Regional authority could manage it.

In case the GI is municipal property then the policy framework is done by each municipality through the 7-years Municipal Development Plan (MDP). These plans should provide the state regulation on local level. The Municipal Councils are eligible to prepare and adopt those MDP.

The GI strategy is developed by all local/regional stakeholders involved in focus/working groups within Municipal Council on local level and Regional Development Council on regional level.

The stakeholders are represented by counsellors, NGO's, experts. And it is supposed that the right institutions and people are involved.

The funding mechanism includes three main sources: State Budget, Municipal Budgets and EU Structural Funds. Because the PPP mechanism is not yet well developed in Bulgaria it is almost not applicable.

According to the Regional Development Act the MDP must be evaluated and updated yearly which includes also priorities and measures related to the GI.

Stara Zagora region has several national reserves, natural parks or protected areas included exclusively or partially in its territory. The list of those areas is as follows:

| <b>No</b> | <b>Name</b>      | <b>Status</b>    | <b>Area<br/>(in hectares)</b> | <b>Exclusively/partially<br/>located in Stara<br/>Zagora region</b> |
|-----------|------------------|------------------|-------------------------------|---|
| 1.        | Central Balkan   | National Park    | 71669.5                       | Partially   |
| 2.        | Sokolna          | Reserve          | 1250.0                        | Exclusively   |
| 3.        | Kamenstizza      | Reserve          | 1016.85                       | Exclusively   |
| 4.        | Leshnitztza      | Reserve          | 388.95                        | Exclusively   |
| 5.        | Elenova gora     | Reserve          | 53.7                          | Exclusively   |
| 6.        | Maritza Parvomay | Natura 2000 site | 11513.09                      | Partially   |
| 7.        | Ovcharitza dam   | Natura 2000 site | 4306.28                       | Partially   |



|     |                     |                  |         |             |
|-----|---------------------|------------------|---------|-------------|
| 8.  | Jrebchevo dam       | Natura 2000 site | 2513.0  | Partially   |
| 9.  | Rozov kladenetz dam | Natura 2000 site | 1265.12 | Exclusively |
| 10. | Yulevska koria      | Protected area   | 228.35  | Exclusively |
| 11. | Chirpanska koria    | Protected area   | 58.0    | Exclusively |
| 12. | Tulovska koria      | Protected area   | 75.7    | Exclusively |
| 13. | Sechi kamak         | Protected area   | 390.0   | Exclusively |
| 14. | Propadnaloto blato  | Protected area   | 27.29   | Exclusively |
| 15. | Maglijka klisura    | Protected area   | 239.64  | Exclusively |
| 16. | Katuna              | Protected area   | 151.6   | Exclusively |
| 17. | Kavakliika          | Protected area   | 90.0    | Exclusively |
| 18. | Zelenite darveta    | Protected area   | 0.34    | Exclusively |
| 19. | Jdreloto            | Protected area   | 11.48   | Exclusively |
| 20. | Dermenika           | Protected area   | 110.4   | Exclusively |
| 21. | Vetrenska koria     | Protected area   | 25.3    | Exclusively |
| 22. | Bozduganovska koria | Protected area   | 310.8   | Exclusively |

Those sites are managed directly by the state or some of its structures and institutions depending on their area size and specifications (forest or water). There is only one regional structure, Regional Inspectorate of Environment and Water, which is a managing authority of all Reserves, Natura 2000 sites and water sites. Nevertheless this institution is a regional structure of the Executive Environment Agency which is governed by the state. Regarding most of the protected areas they are managed by both the Regional Inspectorate of Environment and Water and the Regional Directorate of Forestry. It is important to mention that:

The Regional Directorates of Forestry do not necessarily cover the administrative regions as they usually include more than one; In the case of Stara Zagora region those areas are the same.



The Regional Inspectorates of Environment and Water do not necessarily cover the administrative regions as they usually include more than one; In the case of Stara Zagora Regional Inspectorates of Environment and Water it includes the regions of Stara Zagora, Haskovo, Sliven and Yambol (the major part of South East Bulgaria).



## Appendix 5

## Presentations

**GREENINFRANET**

## Green Infrastructure in Stara Zagora Region

Stara Zagora Regional Economic Development Agency (SZREDA)

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**GREENINFRANET**

### Green Infrastructure in Bulgaria

- The concept of Green Infrastructure (GI) is relatively new to Bulgaria and is hard to find on Region's Agenda
- The GI concept in Bulgaria is introduced and managed by the Environmental Protection Act and the Protected Area Act and other relevant national ecological and environmental legislation, and international conventions to which Bulgaria is a signatory.
- In Bulgaria the Green Infrastructure is most commonly seen as protected areas - strict nature reserves (but not interconnected) and the Spatial planning is limited to managing nature reserves.

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### Green Infrastructure in Bulgaria

- Protected areas in Bulgaria are in general state property
- In Bulgaria the regional authorities (regrouping several municipalities) has limited power in terms of management of territories and land use.
- Policy maintenance and management of protected areas is carried out by the Ministry of Environment and Water and its authorities in the respective areas.
- Management and protection of protected areas that are not state property, is the task of the Ministry of Agriculture and Forestry.

3

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### Green Infrastructure in Bulgaria

- In case the GI is municipal property then the policy framework is done by each municipality through the 7-years Municipal Development Plan (MDP).
- The GI strategy is developed by all local/regional stakeholders involved in focus/working groups within Municipal Council on local level and Regional Development Council on regional level.
- The stakeholders are represented by counsellors, NGO's, experts. And it is supposed that the right institutions and people are involved.
- According to the Regional Development Act the MDP must be evaluated and updated yearly which includes also priorities and measures related to the GI.

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**GREENINFRANET**

### Green Infrastructure in Stara Zagora Region

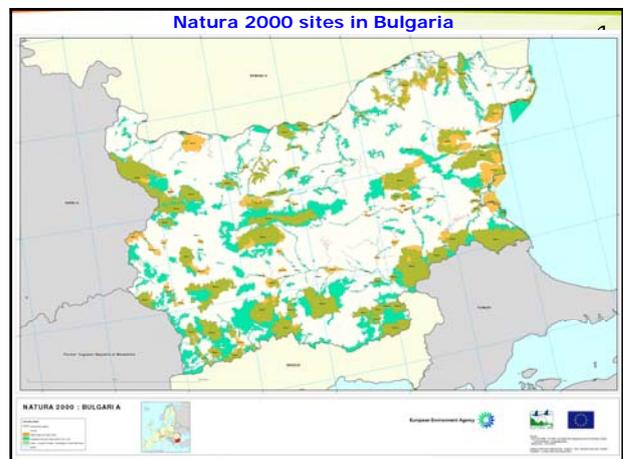
Stara Zagora region has several national reserves, natural parks or protected areas included exclusively or partially in its territory.

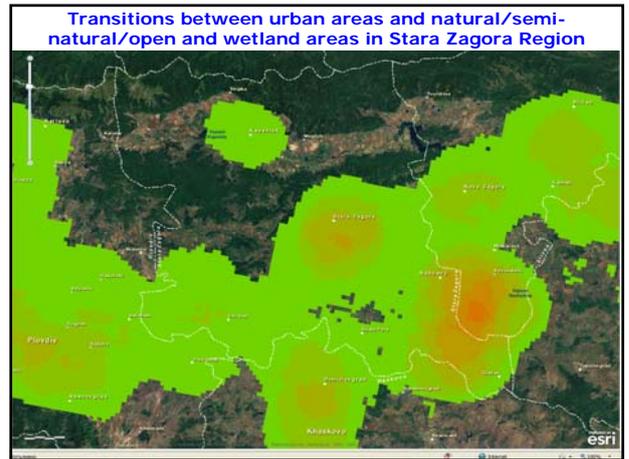
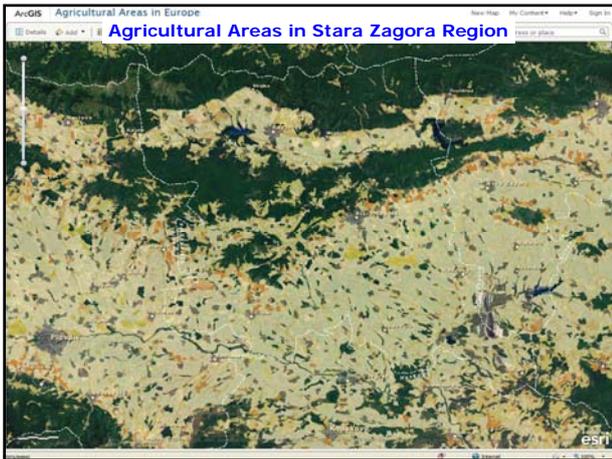
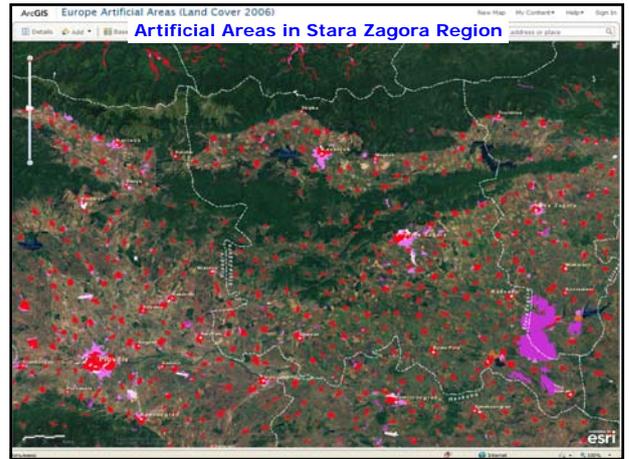
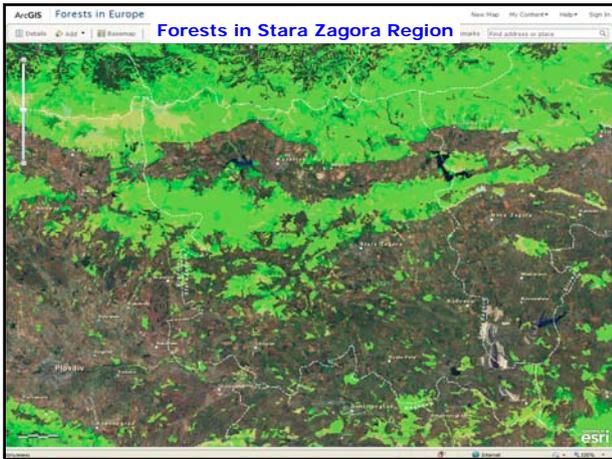
- 1 National Park (Central Balkan)
- 4 Reserves
- 4 Natura 2000 sites
- 13 Protected Areas

5

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**GREENINFRANET**

**THANK YOU!**

Stara Zagora Regional Economic Development Agency (SZREDA)

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## Green Infrastructure in Hungary

Zsuzsanna Kéri  
REC for CEE  
Fingal, July 12, 2012

### Context

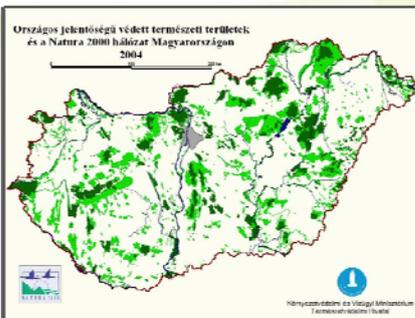
- Focus of REC is on the Central Hungary region
- Analysis is started on national level
- The concept of Green Infrastructure in Hungary is underdeveloped – existing elements
- Strong institutional background
- Current policies reflect the most common land use types:
  - 62.5 % under agricultural cultivation –only 7 % of it in Central Hungary
  - 21.4 % under forestry management
  - Large share of state-owned land (almost 20 %)

### The National Spatial Plan



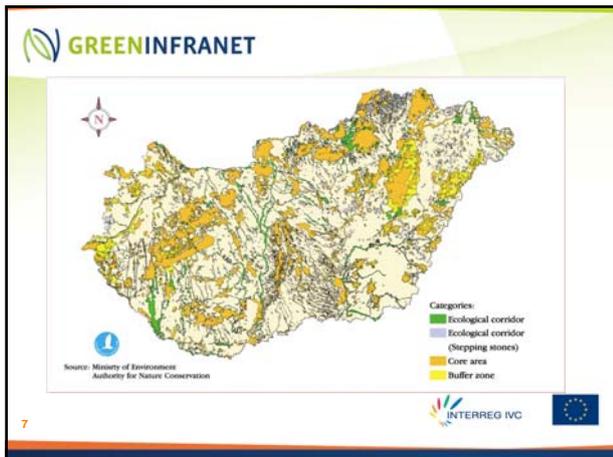
### Areas under natural conservation and Natura 2000 sites

- Well established and highly regulated (9% and 21 % of total area)
- Some funding available (Natura 2000 payments)
- Low stakeholder involvement – due to lack of time for designation of sites
- Further development unlikely – strong private interest



### National Ecological Network

- Integrated into spatial planning on national and regional level
- National authorities may limit infrastructure development
- Promotes co-operation between competent authorities on regional level
- Further development of the legal background is needed (definition of sites on block level)



**GREENINFRANET**

**Protection of woody plants in urban areas**

- Legislation on the protection of existing green areas in settlements
- Low importance on national level but is significant in larger settlements
- From 2008 permissions instead of reporting
- High awareness on local level and some cases receive great public attention

8

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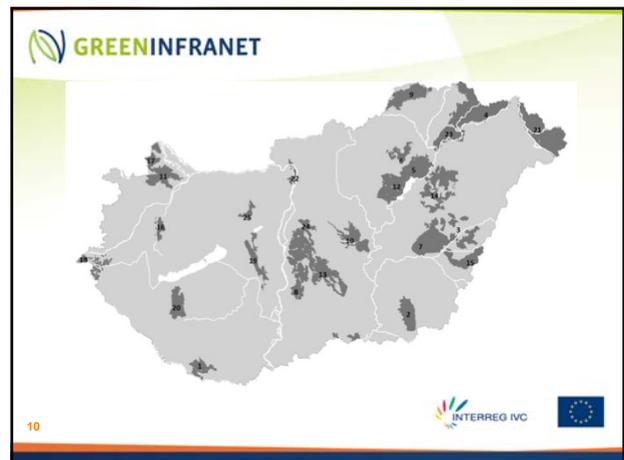
**GREENINFRANET**

**High Nature Value Areas**

- Unique initiative based on a pilot project – biodiversity protection through maintaining environmental-friendly farming practices
- 25 designated areas
- Voluntary participation – currently on a quarter of the available territory
- Area based subsidy provided
- Targeted species: great bustard, red-footed falcon, wild goose, crane
- Good information and monitoring network established

9

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**Large-scale habitat developments**

- Regional level co-operation for reducing the fragmentation of protected areas
- Several sources of funding (LIFE-Nature, Structural Funds)
- Confined to state-owned areas

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**Sky without barriers programme**

- Unique agreement of the Ministry, BirdLife Hungary and electricity providers
- Mapping of electric air cable sections with the highest risk for birds (database of casualties)
- Best practices identified (different insulation techniques)
- Scheduling of works based on the priority list of cable sections and allocation of funding
- Good opportunities for further development/extension of the programme

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### Conclusions

- Some well-established core elements
- Lack of integration of the different elements
- Strong institutional and legal background
- Low awareness, stakeholder involvement should be increased
- The formulation of a Green Infrastructure Strategy is expected to begin– guidance is needed

**Thank you for your  
attention!**

**GREENINFRANET**

**ANEA**  
ANATOLIAN NATURE ENVIRONMENTAL AGENCY

## The Roots of Green Infrastructure Nicosia District - Cyprus

Nicosia Development Agency (ANEL)

First Exchange of Experience Workshop  
Fingal, Ireland, 12-13 July 2012

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**Green Infrastructure in Cyprus**

"Green infrastructure", is being developed at the county level but has not yet been operational. The term 'green infrastructure' does not yet have a commonly accepted scope or definition.

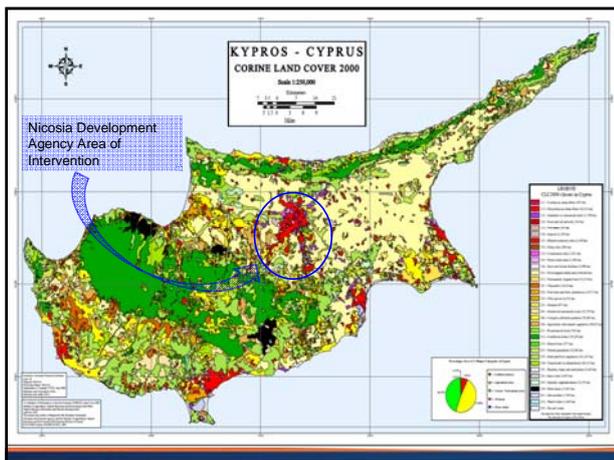
Some initiatives have been initiated by several stakeholders (Municipalities, Universities, NGOs etc) that are included in the more general scope of green infrastructure. EU funding sources used to finance these initiatives in the form of projects (through LIFE+ and ERDF "INTERREG" programs) which fall within the areas of nature protection, water, agriculture and forestry.

In Cyprus urban demand is quite high, thus amplifying the competition for available land.

2

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**GREENINFRANET**

**Green Infrastructure in Cyprus**

The natural environment and biodiversity is varied due to the geographical position of the island. 36 sites of Community Interest have been designated and seven Special Protection Areas classified so far and others are expected to follow. In Cyprus, 1.2 per cent of the total land area is designated for the protection of birds while 5 per cent is designated for rare species and habitats, with some overlap between some designated areas. Management of these sites is still not in place however, management and action plans are currently being devised.

Since the launch of the LIFE program by the European Commission in 1992, a total of 30 projects were financed in Cyprus. Of these, eight focused on environmental innovation, five on nature conservation and 17 on capacity building. These projects represent a total investment of €25 million, of which €14 million has been contributed by the European Union.

The European Commission has included 61 areas in Cyprus to the NATURA 2000 Network which protect plant, animal and bird species according to EC directives.

4

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**GREENINFRANET**

**Green Infrastructure and Cypriot Local Authorities**

Local authorities in Cyprus (Municipalities and Community Councils) have very limited jurisdictions on creating, developing and implementing policies and actions regarding Green Infrastructure. Most activities towards this field are depended on the control of the central government through the Department of Environment of the Ministry of Environment and Natural Resources.

According to Cyprus National Strategy for Sustainable Development 2010 "Insufficient assurance configured and operational public green spaces and recreational facilities undermines the life, work and recreation of local people and visitors. A typical example is Nicosia, which accounts for only 1,4m<sup>2</sup> of green space per inhabitant, while the minimum acceptable ratio is 8m<sup>2</sup> per inhabitant and most European Capitals ratios are highest of 10m<sup>2</sup>. Significant problems are also observed regarding the necessary care and effective maintenance and management of existing limited green spaces"

6

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### Nicosia Development Agency and Green Infrastructure

ANEL through its participation to GREENINFRANET project aims at learning from more advanced European regions about the methodologies applied, the development strategies, the process management, existing policies and the whole framework surrounding green infrastructure development in general existing and functioning in other member states.

The ultimate goal is to analyze the data collected through the exchange of experience and best practices and the formation of suggestions for policy formulation, development of strategies and action plans which will be transferred to the appropriate stakeholders (Ministry of Agriculture, Ministry of Interior, Municipalities – members of the Agency)

### THANK YOU FOR YOUR ATTENTION!!!



### NICOSIA DEVELOPMENT AGENCY (ANEL)

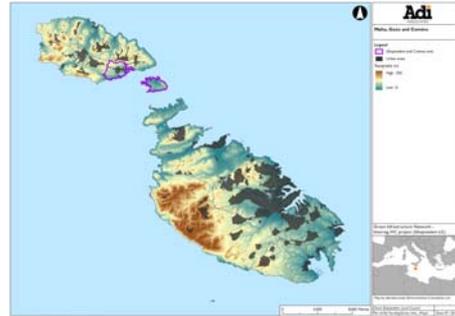
Address: 57 Giannou Kranidioti, 2235,  
Latsia, Nicosia, Cyprus  
Tel: 00 357 22 489105  
Fax: 00 357 22 487213  
Email: [info@anel.com.cy](mailto:info@anel.com.cy)



## Għajnsielem Local Council



## The Maltese Islands <sup>EM2</sup>



## Strategic Environmental & Land Use Planning



- Structure Plan of the Maltese Islands (1990)
- National Biodiversity Strategy & Action Plan (2012)
- National Environment Policy (2012)
- National Climate Change Adaptation Strategy (2012)
- A Sustainable Development Strategy for the Maltese Islands (2006 – 2016)
- Gozo and Comino Local Plan (2006)
- Eco-Gozo Action Plan (2010 – 2012)
- Rural Development Programme (2007 – 2013)
- Diving Master Plan for Gozo (2006)
- Water Catchment Management Plan (2011)
- National Action Plan for the Protection of the Marine Environment from Land-Based Activities (2005)

## National Legal Framework



- Environment & Development Planning Act (2010) – Scheduling of important areas
  - Areas of Ecological Importance
  - Sites of Scientific Interest
  - Areas of High Landscape Value
  - Areas of High Landscape Sensitivity
  - Areas of Agricultural Value
  - Urban Conservation Areas
  - Areas of Archaeological Importance
  - Sites of Archaeological Importance
  - Marine Protected Areas
- Legislation transposing Habitats Directive
  - Special Areas of Conservation (National and International Importance)
- Legislation transposing Birds Directive
  - Special Protected Areas
- Rubble walls and rural structures regulations

## National GI Measures



**EN2: Conservation objectives and management plans are defined (by 2014 for terrestrial areas<sup>107</sup>) and implemented in a timely manner for Natura 2000 sites, which are also supported by sectoral policies and planning instruments that allow a fully integrated ecosystem approach. (NBSAP)**

**EN3: The capacity of linear features in the landscape (such as dry stone walls, watercourses, field margins, vegetated road verges) to serve as ecological corridors between fragmented areas and protected areas and for maintaining their vital role as important microhabitats for wild species and their dispersal, is maintained, more so in the face of climate change. (NBSAP)**

**EN4: Components for building a green infrastructure (as a holistic framework for resource planning and conservation) are strengthened to improve the ecological coherence of Natura 2000, via integration into the broader landscape, and hence curb habitat fragmentation, improve adaptation to climate change and aid in integrated flood management (links with EN2 and EN3). (NBSAP)**

**EN5: A zoning system (which in the case of terrestrial areas builds on adapted principles of the scheduling process) is in place for protected areas and applies temporal and spatial restrictions so as to direct anthropogenic pressures away from particularly sensitive habitats and species, or away from particularly sensitive periods of the year (links with EN2). (NBSAP)**

## National GI Measures

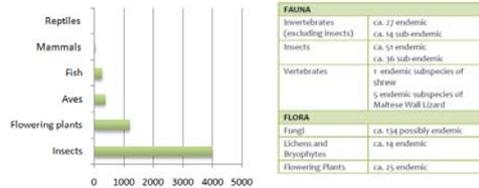


**SI6: The role and importance of spatial planning as an instrument for wider biodiversity conservation is reflected in new policy on spatial planning. The latter builds on the principles of integrated land use planning and devises measures to safeguard the wider countryside from urban sprawl, to support urban biodiversity and, to contribute towards the EU priorities on a Green Infrastructure (links with EN4). (NBSAP)**

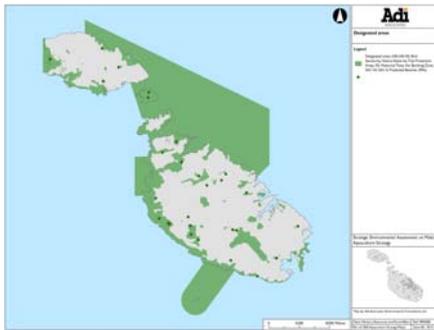
*An action plan will be drawn up to restore at least 15% of ecosystems that have been damaged, using green infrastructures that will allow areas alienated from each other by road networks and urbanisation to be linked again, maintaining healthy ecosystems. (NEP)*



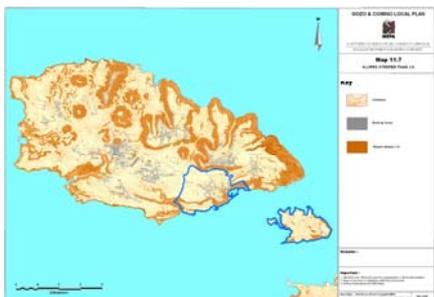
- Endemism & sub-endemism
- Habitat types:
  - Successional ecosystems
  - Inland water ecosystems
  - Coastal ecosystems
  - Coastal-Marine ecosystems
  - Anthropomorphic ecosystems

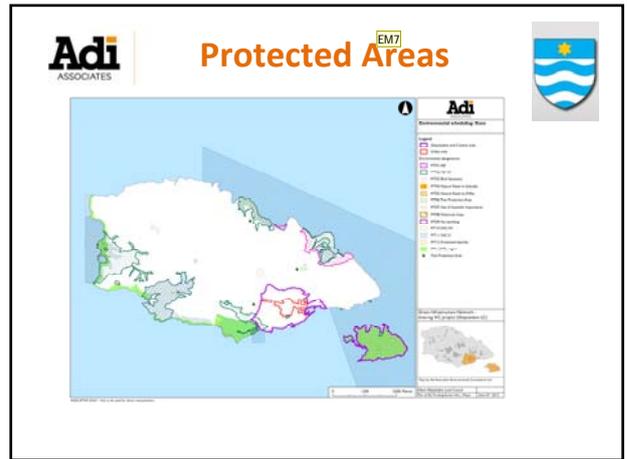
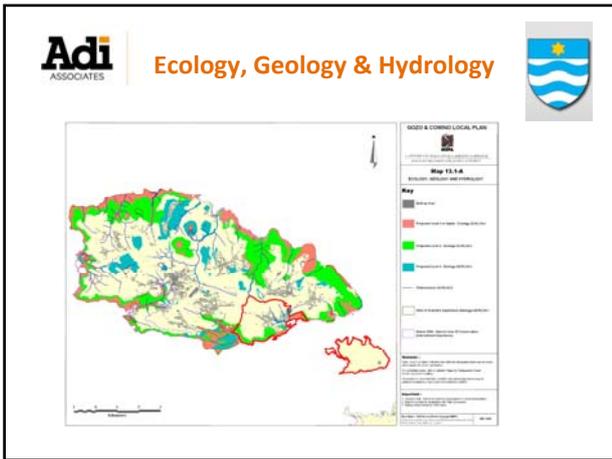
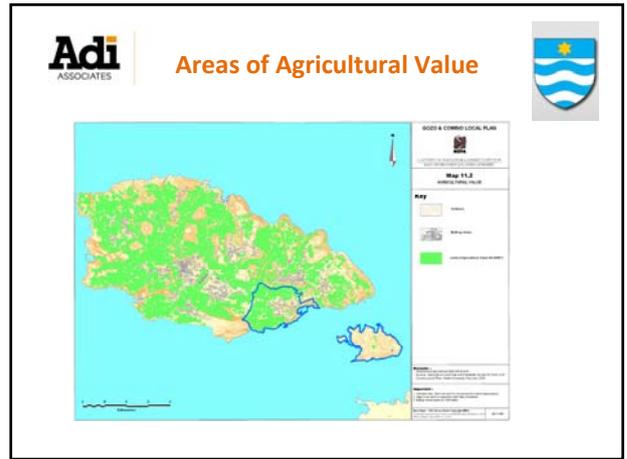
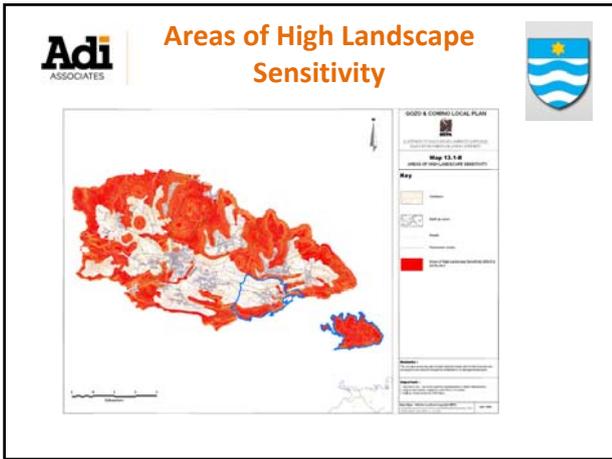


Source: National Biodiversity Strategy and Action Plan (2012)



## Gozo & Comino





# Ghajnsielem & Comino

## Land Use



## Ghajnsielem



## Ghajnsielem

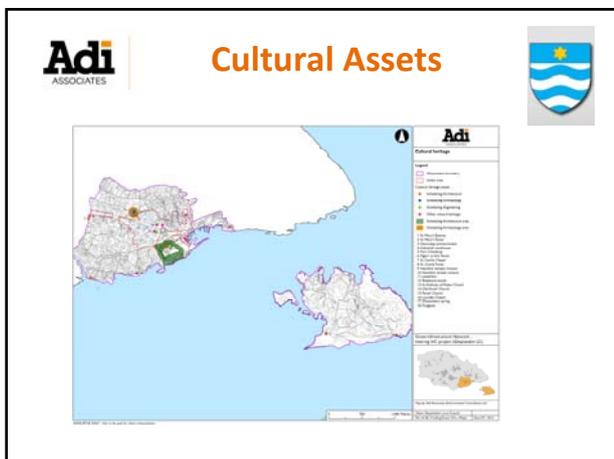
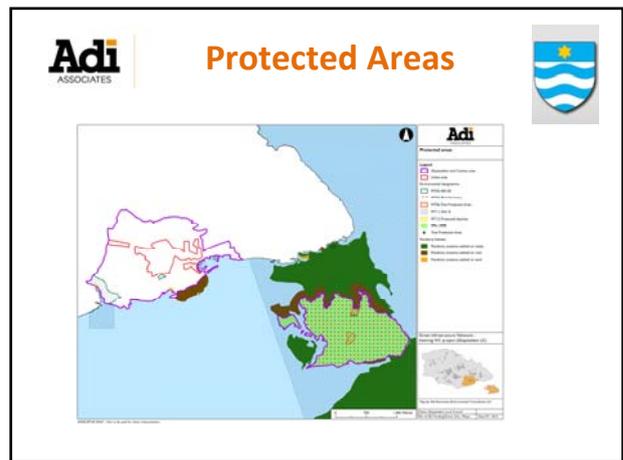
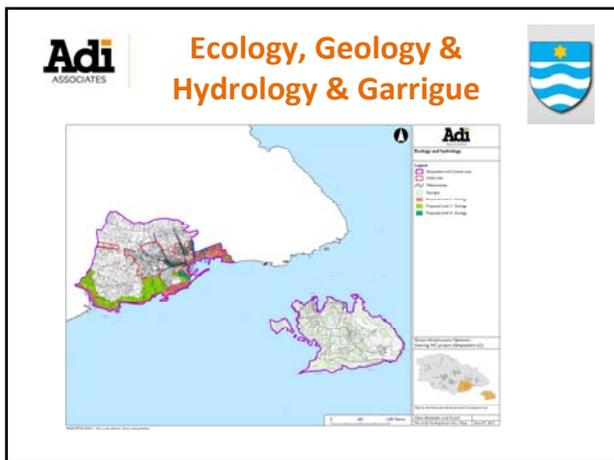
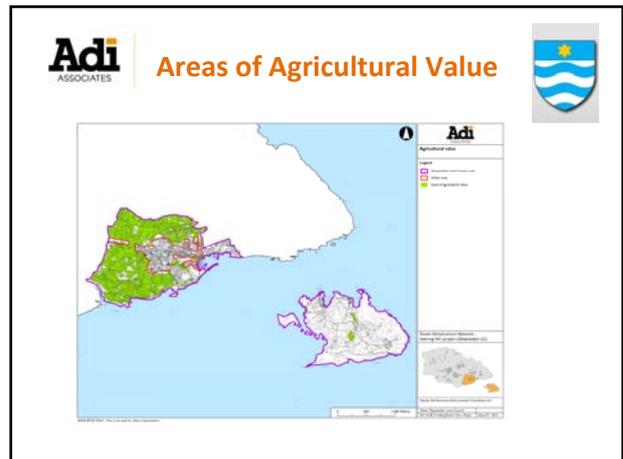
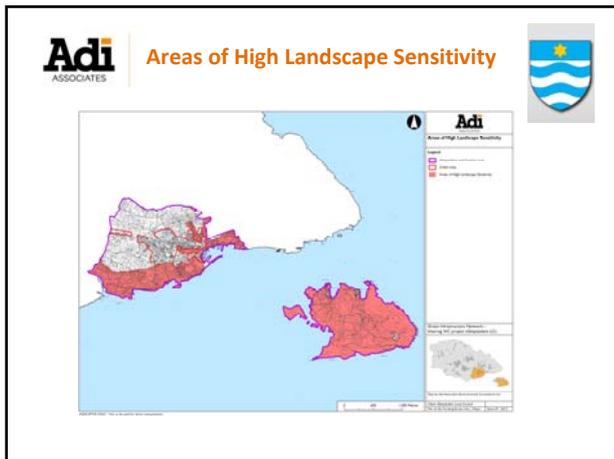


## Ghajnsielem



## Valleys





- Adi ASSOCIATES** | **Ghajsielem Local Council: Previous Initiatives** 
- Sustainable Energy Action Plan 2010  
(framework of actions for reducing CO<sub>2</sub> emissions by 2020)
  - Sustainable Locality Action Plan 2011 - 2016  
(5 year framework of actions to move the locality towards a more sustainable lifestyle)



## Sustainable Locality Action Plan 2011 - 2016



- Bottom-up approach
- Extensive consultation
- Focus on
  - Sustainable Transport
  - Sustainable Local Economy
  - Sustainable Energy



## Identified Actions



- Improve access to the countryside
- Improve access to / along the coast
- Pursue sustainable water management practices
- Increase 'urban' green areas & tree cover
- Establish archaeological park at neolithic temple site
- Positively exploit Ta' Passi natural area for passive & active recreation
- Promote farmers' markets to support agricultural sector



## Way Forward



- Green Infrastructure in latest policy documents
- Elements of GI are present e.g. protected areas & buffers, data collection, recognition of importance of maintaining corridors, eco-tourism, landscape designation, spatial planning etc
- Potential for Ghajnsielem
  - Using SLAP and other data sources to take GI to Phase 2
  - Consultation with relevant stakeholders including MEPA, Ministry of Gozo, NGOs, etc

**Thank you**

amanda.abela@gov.mt  
krista@adi-associates.com



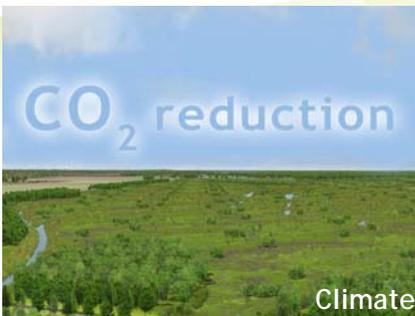


Combination of objectives  
Oostvaarderswold in 2014

- Expand living space large herbivores
- Create new recreational area for citizens of Almere
- Robust corridor for flora and (other) fauna
- Habitatbanking (compensation) of impacts of spatial developments (foraging grounds harriers – Natura 2000)
- Carbon sequestration
- New jobs (thousands)
- Attractive international region near Amsterdam&Schiphol
- Increase water safety



Climate



CO<sub>2</sub> reduction

Climate



Recreation



Diputació Barcelona | Àrea de Territori i Sostenibilitat

SITxell territorial analysis

## SITXELL project: Territorial Information System for the Network of Open Areas

Carles Castell

Head of the Technical Office for Land Analysis and Planning  
Natural Areas Department, Barcelona Provincial Council

Diputació Barcelona | Àrea de Territori i Sostenibilitat

SITxell territorial analysis

## The Province of Barcelona

- 311 municipalities
- Area: 7734 km<sup>2</sup>
- Inhabitants: 5.5 million people

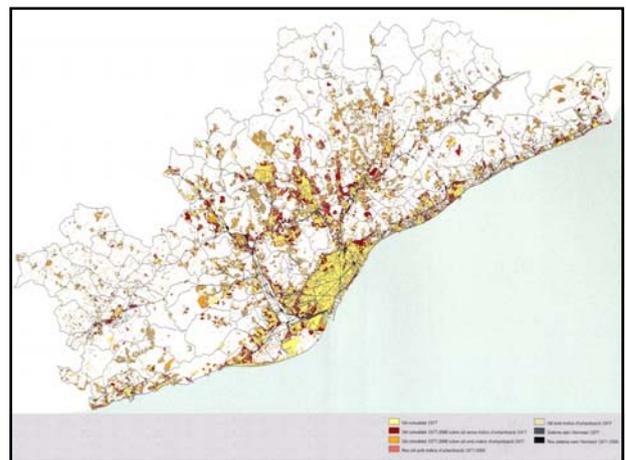



Diputació Barcelona | Àrea de Territori i Sostenibilitat

SITxell territorial analysis

## Situation before the initiative

- ◆ Period of big consumption of land for urban growth and new infrastructures
- ◆ Conflicts over land uses
- ◆ Lack of a global vision of values and benefits of open areas
- ◆ Lack of reliable territorial information
- ◆ Responsibilities for land planning in different levels and departments of public administration
- ◆ Deficient inter-administrative coordination

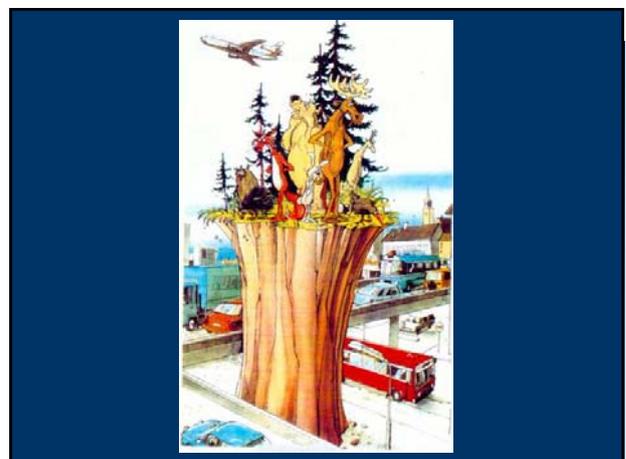


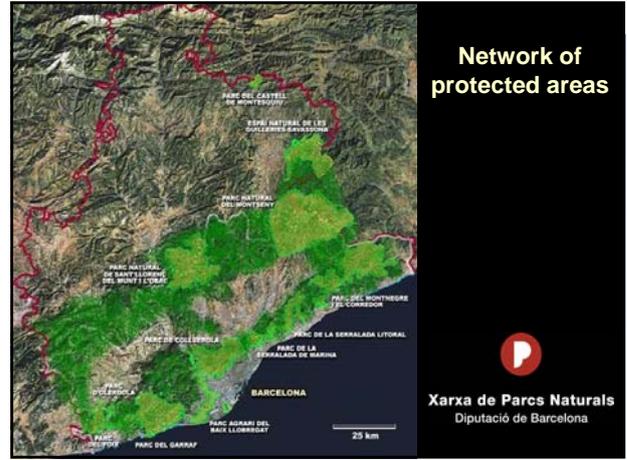
Protected areas

|                                    |                  |
|------------------------------------|------------------|
| Parc Natural Sant Llorenç i l'Obac | 13.694 ha        |
| Parc Natural del Montseny          | 30.120 ha        |
| Parc del Garraf                    | 12.376 ha        |
| Parc del Castell de Montesquiu     | 547 ha           |
| Parc del Montnegre i el Corredor   | 15.010 ha        |
| <b>Total</b>                       | <b>71.737 ha</b> |



Xarxa de Parcs Naturals  
Diputació de Barcelona



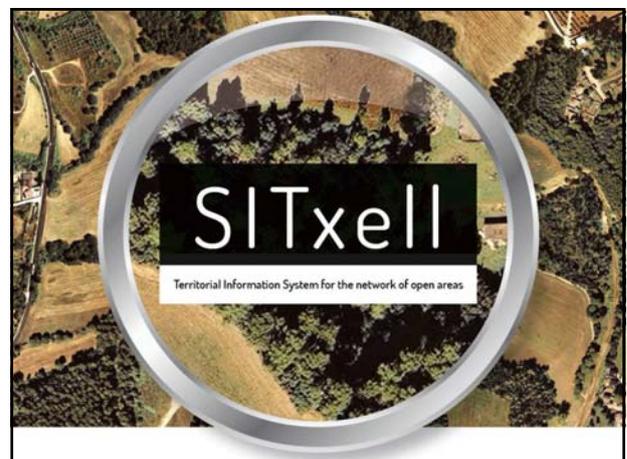


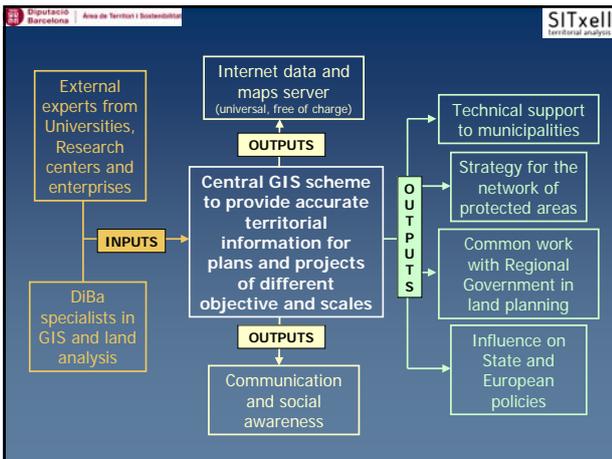
**Objectives of the SITxell project**

- ◆ To develop a multidisciplinary territorial analysis of the Province of Barcelona based on the values and benefits of the network of open areas
- ◆ To agree and establish a common starting point for all the administrations with powers over the territory
- ◆ To avoid duplication of actions by different administrations and added costs associated with acquiring basic land information
- ◆ To disseminate the information among decision-makers, land planning experts and society
- ◆ To implement a territorial model based on the maintenance of environmental services and sustainable use of natural resources

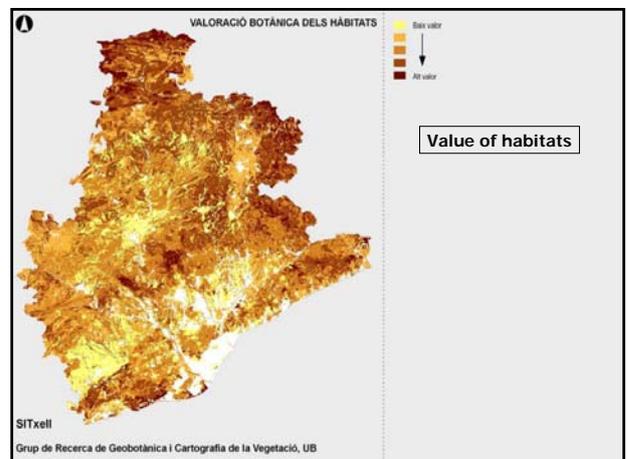
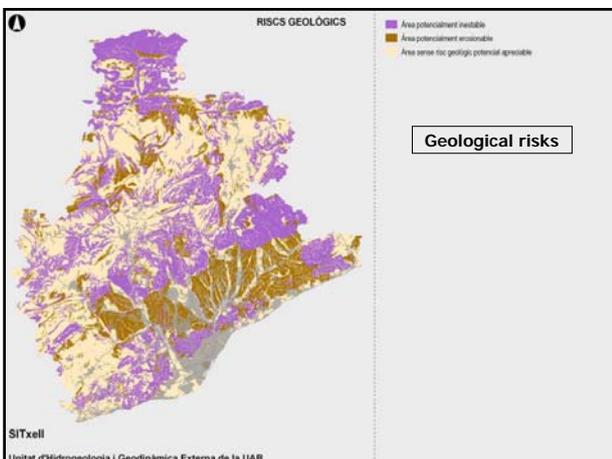
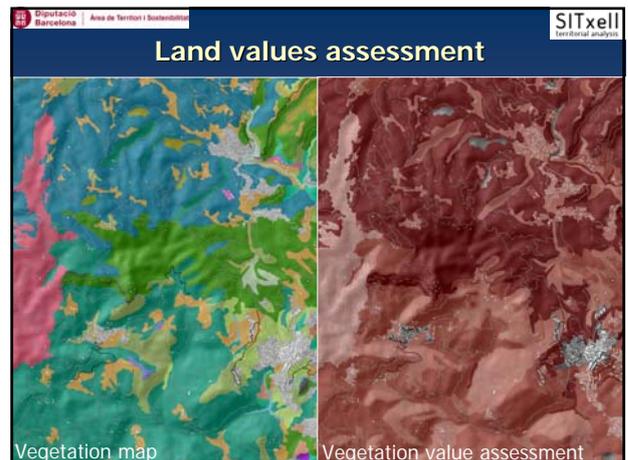
**The key points of SITxell project**

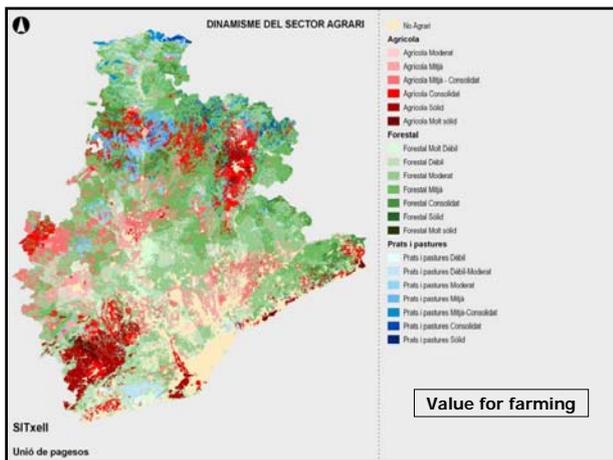
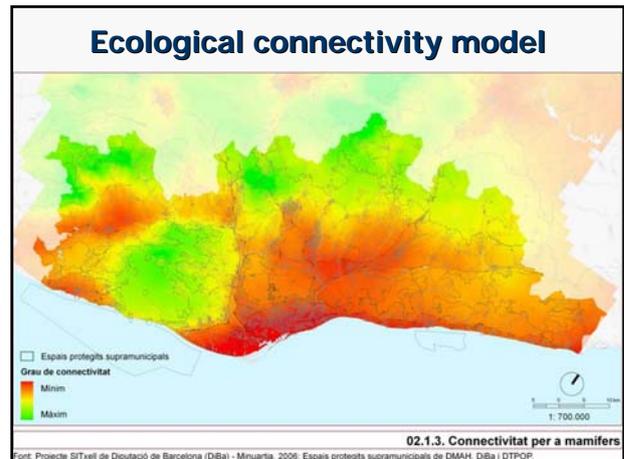
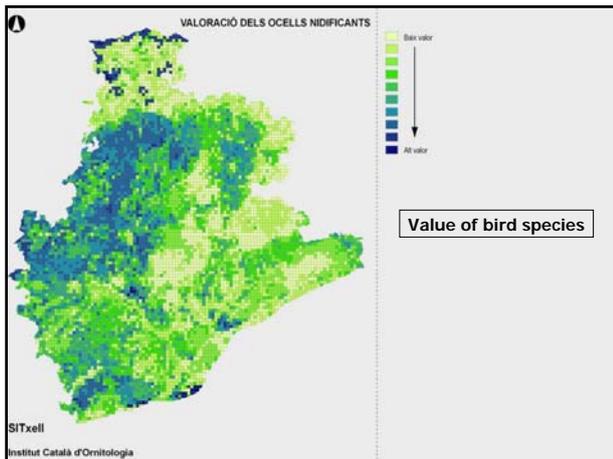
- ◆ Global perspective of ALL the open areas
- ◆ Development in close collaboration with main research teams, businesses and social institutions with expert knowledge of natural systems
- ◆ Obtaining of rigorous, multidisciplinary territorial information describing and valuing open areas
- ◆ Convincing of the administrations of the quality and usefulness of the information supplied and the potential of the analyses carried out
- ◆ Transfer of the knowledge to the persons in charge of territorial planning
- ◆ Increased social awareness about values and benefits of open areas





- MODULES OF ENVIRONMENT**
- Geology
  - Hidrology
  - Flora, vegetation and habitats
  - Fauna
  - Landscape ecology
  - Cultural heritage
  - Landscape
- MODULES OF USES**
- Socioeconomy
  - Sectorial policies
  - Land planning
  - Transport infrastructures
  - Technical infrastructures





**Cost-effectiveness**

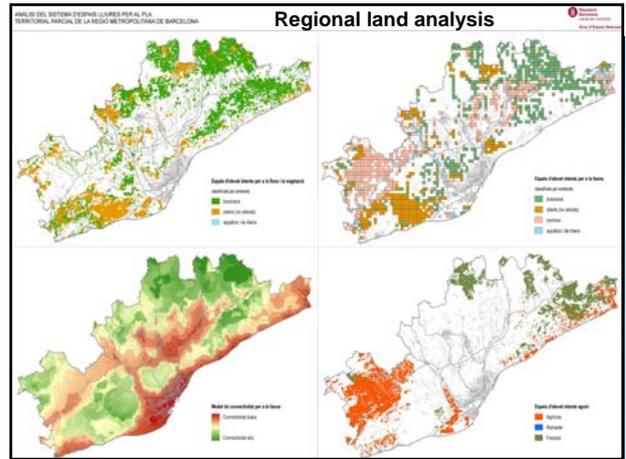
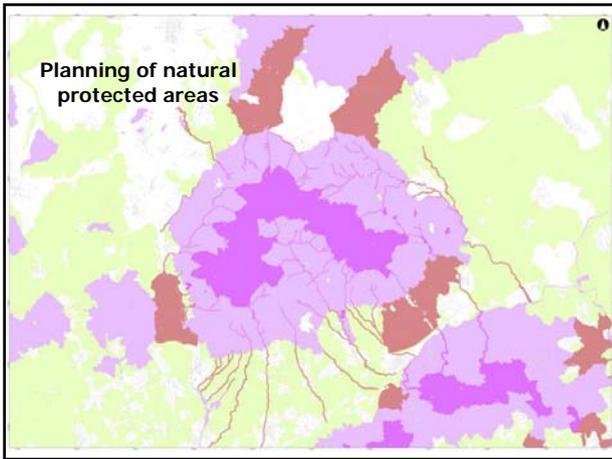
- ◆ Direct cost of SITXELL: **3.285.000 € in 10 years:**
  - External contracts and agreements: 1.935.000 €
  - Internal experts: 1.295.000 €
  - Hardware / Software: 55.000 €
- ◆ Application for **land analysis and planning** at many different scales of reference: local, provincial, regional, state and European
- ◆ Estimation of direct saving for municipalities: **110.000 € per year**



**Data distribution**

- [www.sitxell.eu](http://www.sitxell.eu)
  - Display and consultation
  - Downloads:
    - Municipalities
    - Other public and private stakeholders
- Geoservices WMS: IDEBarcelona





**Protection of the system of open areas in the Barcelona Region (Catalonia, Spain)**  
 Carles Castell. Natural Areas Service, Diputació de Barcelona (Provincial Council)

**Geographical area**  
 Barcelona Metropolitan Region: 3.236 km<sup>2</sup>, 4,8 million inhabitants, 21% of urban land

**Origin**  
 GIS project (SITXELL) to identify natural, social and economical values of open areas

**Application**  
 Proposal of the system of open areas of special interest for the Barcelona Regional Plan, approved

**Results**

- Special interest areas
- Urban areas
- Specific areas

**Working group on Green Infrastructure initiative**  
 DG Environment, Brussels, 2009-2011

Barcelona Regional Plan: <http://www.iecat.org/index.php/ca/plans-terriorials-parciais/pla-terriorial-metropolita-de-barcelona-ptmb>  
 SITXELL project: <http://www.diba.cat/parcs/sitxell/eng> Contact: [castellpc@diba.cat](mailto:castellpc@diba.cat)



**GREENINFRANET**

## GREEN INFRASTRUCTURE IN THE VALENCIAN REGION

1st Exchange of Experience Workshop,  
Development Strategies and Process Management  
Fingal, Ireland, July 12-13, 2012

**GREENINFRANET** **GREEN INFRASTRUCTURE IN THE VALENCIAN REGION**

The Green Infrastructure concept arises from the valencian Law of Landplanning and Landscape Protection of 2004 (Ley de Ordenación del Territorio y Protección del Paisaje) and the European Landscape Convention.

**GREENINFRANET** **GREEN INFRASTRUCTURE IN THE VALENCIAN REGION**

The Law of Landplanning and Landscape Protection of 2009 envisages the development the **Valencian Green Infrastructure Territorial Action Plan (GI-TAP)** to accomplish the objectives set by the law

↓

Identify the areas and elements that will compose the GI.  
The mechanisms to include other spaces and  
The criteria for an integrated management of the GI.

**GREENINFRANET** **Green Infrastructure Territorial Action Plan development process**

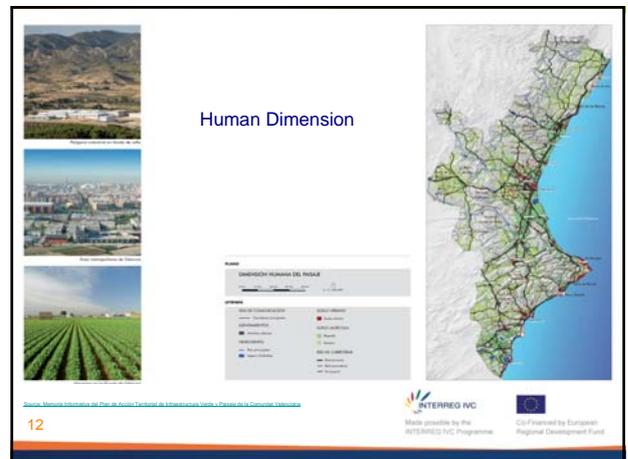
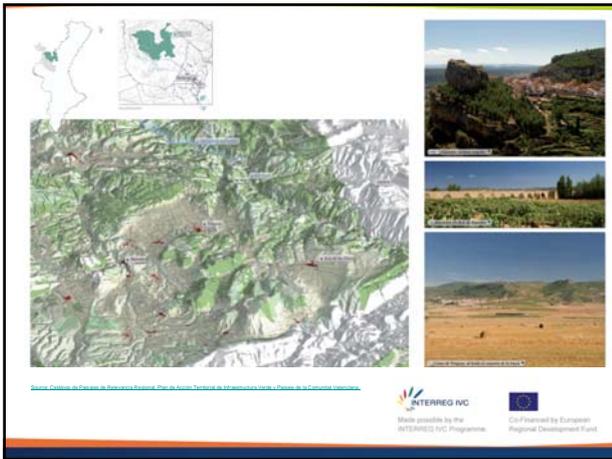
**TERRITORIAL ANALYSIS**

- Landscape characterisation
- Conflict identification
- Landscape Resources
- Landscape Functionality
- Survey SWOT
- Landscape Units
- Reservoirs Corridor Services Connectivity Estrategic
- Landscapes of regional importance
- Validated by Public participation Landscape workshops (experts)
- Elements of environmental, cultural or visual value

**GREENINFRANET** **Territorial Analysis**

Definition of the Landscape typologies

Landscapes of Regional Importance





**GREENINFRANET** Landscape conflicts

Frente litoral masificado

Source: Memoria Interregional del Plan de Acción Territorial de Infraestructuras Verde y Paisaje de la Comunidad Valenciana

19

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**GREENINFRANET** Landscape conflicts

Edificación en ladera

Source: Memoria Interregional del Plan de Acción Territorial de Infraestructuras Verde y Paisaje de la Comunidad Valenciana

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**GREENINFRANET** Landscape conflicts

Cantera de piedra ornamental

Source: Memoria Interregional del Plan de Acción Territorial de Infraestructuras Verde y Paisaje de la Comunidad Valenciana

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**GREENINFRANET** Landscape conflicts

Conurbación en área metropolitana

Source: Memoria Interregional del Plan de Acción Territorial de Infraestructuras Verde y Paisaje de la Comunidad Valenciana

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**GREENINFRANET** LANDSCAPE CONFLICTS

Source: Memoria Interregional del Plan de Acción Territorial de Infraestructuras Verde y Paisaje de la Comunidad Valenciana

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**GREENINFRANET** PUBLIC PARTICIPATION

Visual Landscape Studies

Expert consultation

SWOT analysis

Questionnaire about the region's landscape

Source: Memoria Interregional del Plan de Acción Territorial de Infraestructuras Verde y Paisaje de la Comunidad Valenciana

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# Green Infrastructure in Fingal

Dr Gerry Clabby  
Heritage Officer  
Fingal County Council

GreenInfraNet Workshop  
Ardgillan Castle, Fingal  
12th July 2012

## Overview

- Spatial planning in Ireland
- Introduction to Fingal
- Development of GI policy
- Implementing GI

# Spatial Planning

## Hierarchical System

- National Government issues National Spatial Strategy
- Eight Regional Authorities prepare Regional Planning Guidelines
- Local authorities, as planning authorities, prepare County/City Development Plans every 6 years

## European Environmental Legislation

- Environmental legislation which influences planning:
  - EIA Directive
  - SEA Directive
  - Birds Directive
  - Habitats Directive
  - Water Framework Directive
  - Environmental Liability Directive
  - Floods Directive
  - Marine Strategy Framework Directive

## Key Statute

- Planning and Development Act, 2000-2011
  - to provide, in the interests of the common good, for proper planning and sustainable development
- Increasingly reflects growing demands of European environmental legislation

## Biodiversity and Water as examples

- Full integration of Habitats Directive requirements in planning code
  - Duty in relation to implementation of Habitats and Birds Directive requirements
  - Development Plans **must** include provisions for the conservation and protection of the environment including:
    - Protection of Natura 2000 sites and sites with national designations (e.g. Natural Heritage Areas)
- Development Plans: additional mandatory objectives in relating to water quality standards, RBMPs and management of landscape features such as hedgerows (Article 10 of Habitats Directive)
- Development Plans must take full account of flood risk
- Development Plan objectives must be consistent with the conservation and protection of the environment



## Mechanisms for the implementation of Green Infrastructure objectives

- Regional Planning Guidelines
- County Development Plan
- Local Area Plans
- Fingal Biodiversity Plan
- FEM FRAMS (Fingal East Meath Flood Risk Assessment and Management Study)
- Fingal Heritage Plan
- Forest of Fingal – Tree Strategy
- Open Space Strategy
- Fingal Allotment Strategy



# Fingal

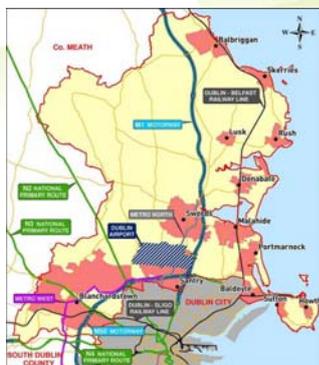


## FINGAL

- Fingal occupies an area of almost 450 sq km
- Coastline of 55Km approx.
- Fingal population increased by 22% between 2002 and 2006 by 14% between 2006 and 2011
- Fingal's population is 273, 051 or 6% of the national population



## Transport & 'Grey' Infrastructure In Fingal



## Urbanising Fingal



Fingal Landscapes



Fingal Seascapes



Baldoyle Estuary SAC and SPA



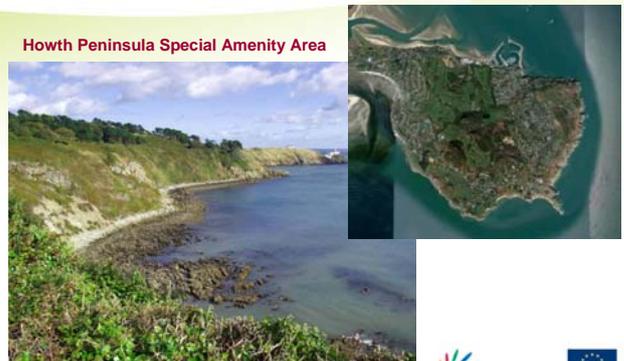
Rogerstown Estuary SAC and SPA



River Corridor Wildlife in Fingal



Howth Peninsula Special Amenity Area



**GREENINFRANET**

Liffey Valley Special Amenity Area



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# Green Infrastructure in Fingal

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## GI policies developed gradually

- In 2003 a biodiversity study programme is launched
  - Data collection
  - Habitat mapping
- Fingal Heritage Plan adopted by Council in 2005
- Fingal Biodiversity Action Plan adopted by Council in 2010 introducing Fingal Ecological Network
- Fingal Development Plan adopted by Council in 2011 includes green infrastructure as major theme addressing five interlinked policy areas

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2005-2010 Fingal heritage plan

proposes establishment of ecological network

commits to preparing a local biodiversity action plan

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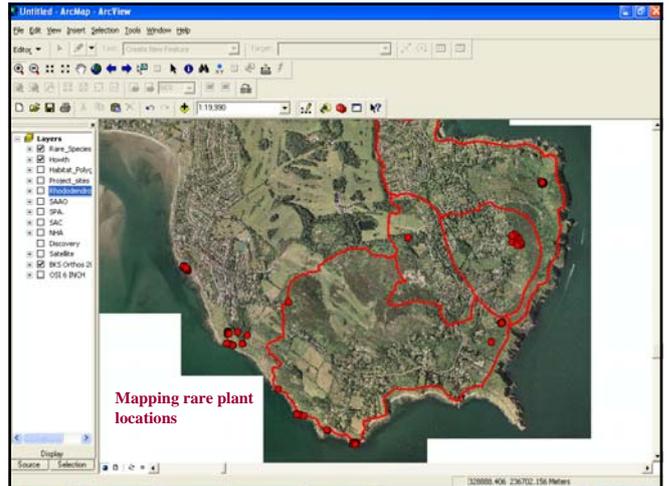
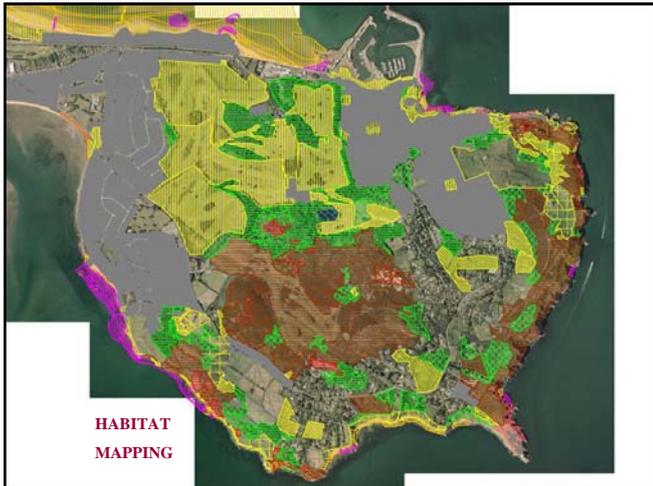
**GREENINFRANET**



[www.fingalbiodiversity.ie](http://www.fingalbiodiversity.ie) INTERREG IVC 



Howth  
Co. Dublin



**GREENINFRANET**

Fingal participates in publication of Green City Guidelines in 2008

**Green City Guidelines**

Subject for the promotion and enhancement of biodiversity in suburbs to high-density urban developments.

**5 Practical measures for incorporating biodiversity**

When we are in the suburb in development of the suburb in the suburb area, we should be aware of the suburb in the suburb area.

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**GREENINFRANET**

green infrastructure  
connecting nature, people & places

A healthy international conference was held in November 2008, Grand Hotel, Helsinki, Co. Dublin.

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**Fingal Biodiversity Action Plan 2010-2015**

Fingal County Council  
Catharine Conboy, Project Officer

**FINGAL BIODIVERSITY ACTION PLAN**  
2010-2015

Fingal County Council  
December 2010

Creating Connections for Wildlife and People

**FINGAL ECOLOGICAL NETWORK - MAP 1**  
April 2010

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# Fingal Development Plan 2011-2017

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## County/City Development Plan

- Development Plan sets the land-use planning framework for a county or city.
- Statutory process leading to the production of land-use policy document and associated maps setting out zoning applying to different areas of a county or city. Integrates land-use with transport, physical and social infrastructure provision while protecting the environment
- Must be in compliance with Regional Planning Guidelines and National Spatial Strategy

## Fingal Development Plan 2011-2017

- Green Infrastructure Framework
- Key GI themes identified:
  - Biodiversity
  - Landscape
  - Parks and Open Space
  - Sustainable Water Management
  - Archaeological & Architectural Heritage
- Robust and interlinked policy
- Deliver key projects
- Develop a GI Strategy for Fingal
- Integrate into all new development and Local Area Plans



## First steps in developing GI for development plan

- Existing green infrastructure resources identified and mapped
- Focus on areas designated for nature conservation, landscape protection, parks and open space, rivers and areas prone to flooding
- Examined how these areas were zoned in land-use planning terms: focus on high-amenity and green belt zoning categories

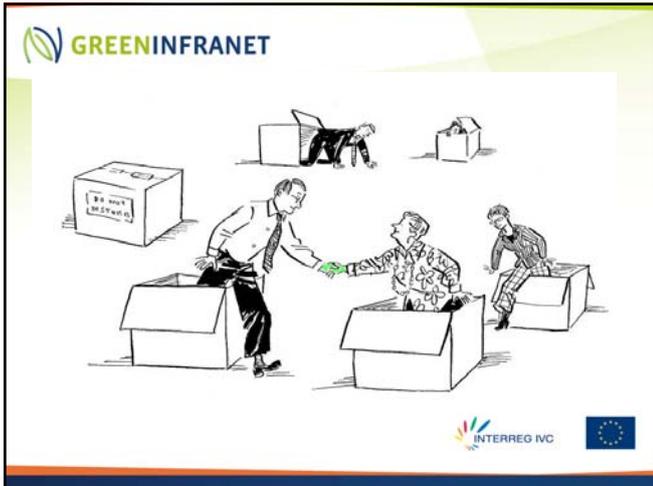
### Nature Conservation Landscape Protection And River Corridors



### Emerging 'Green Infrastructure'







### Developing GI approach takes time

- Development Plan facilitated interaction and discussion
- Shared understanding of where we want to go
- First steps: building on existing initiatives

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### Engaging external stakeholders is an important challenge

- Landowners
- Community Organisations
- Other Local Authorities
- Developers
- Sports Clubs
- National Parks and Wildlife Service
- Office of Public Works
- Environmental Protection Agency

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### Green Infrastructure Steering Group

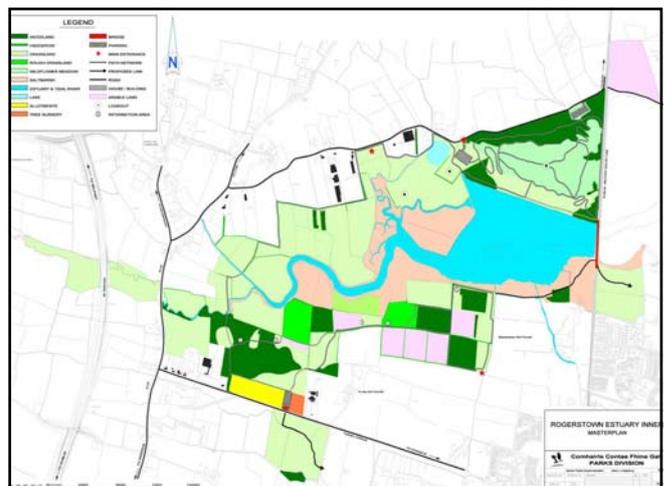
- Steering Group established early 2012
- Priority projects agreed
- Working groups for each project
- Work programmes being developed with and timed deliverables
- Funding sources being investigated

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### Nature on Display:

An integrated masterplan for amenity, nature, agriculture and education in the Rogerstown Inner Estuary

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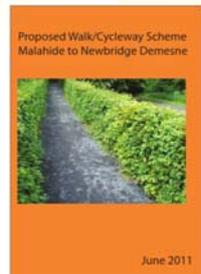


## Local Area Plans



## Sustainable transport

### Fingal Allotment Strategy



# Thank you





## Appendix 6

### Case Study Feedback

# FINGAL

1 2003 -  
specific BD plan  
EU-judgements (LOT!) → NH.

2 a Reactive strategy =  
no harm done communication

b Horizontal approach locally  
Note at Natl. level

EU-enforcing?

3

a no funds for exp.

b From stick to carrot  
ecologists step from your box

# FLEVO LAND

- ⑤ MAJOR CHALLENGE WITH CONVERSION FROM FARM/LAND TO NATURE CONSERVATION
- ② GOOD SUPPORT AT LOCAL AUTHORITY LEVEL
- ③ CHANGE IN NATIONAL SUPPORT (POLITICS)
  - EMPHASIZE MULTI-FUNCTIONAL USE + JOBS + ECONOMICS
- ④ ORIGINAL NATURE CONSERVATION
- ④ EXTENSIVE CONSULTATION
  - BUT NO AGREEMENT FROM LANDOWNERS
- ⑥ DIFFICULT TO IMPLEMENT G. J. IN GENERAL

# MALTA

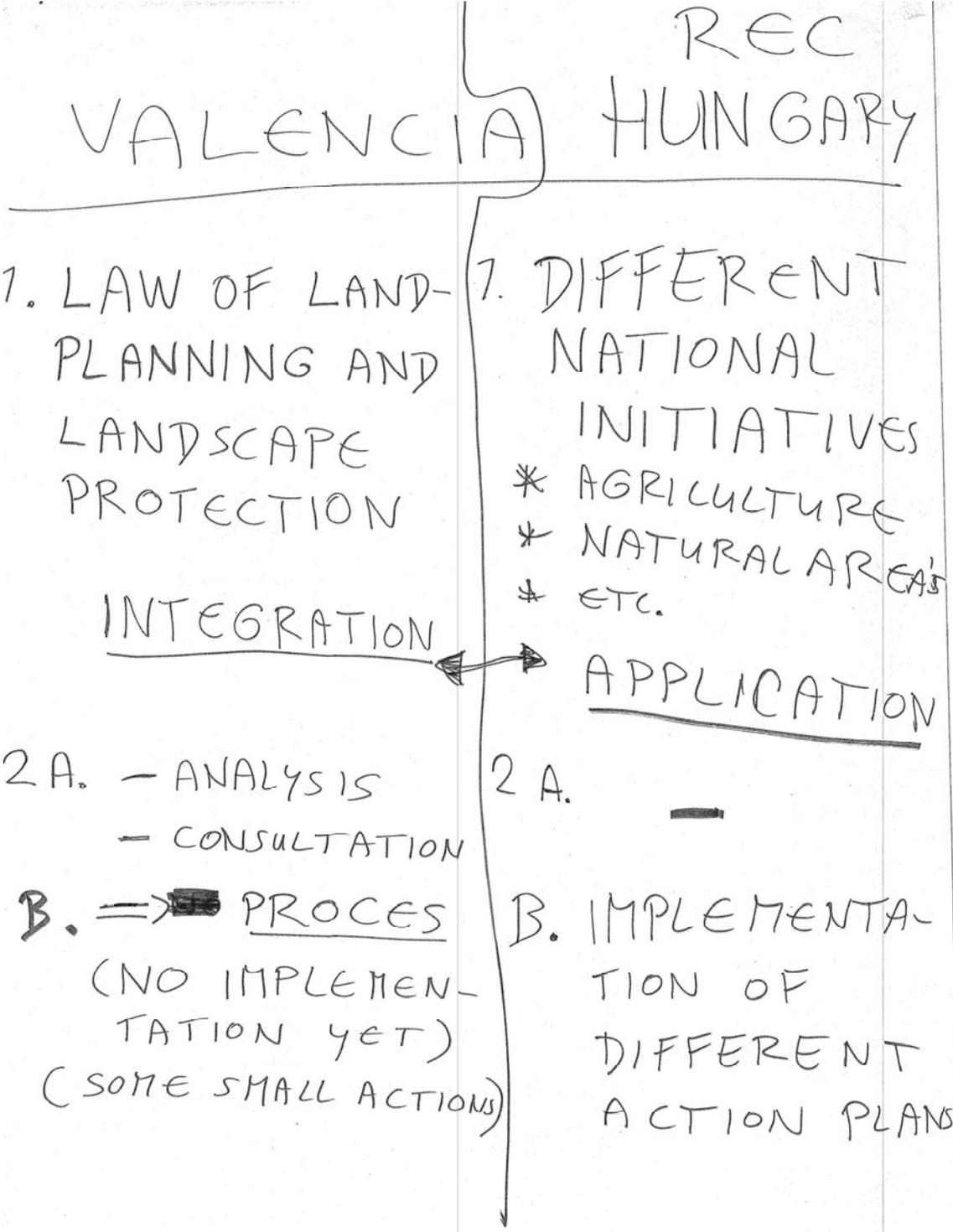
1 SHORT HISTORY

2 A Dep Env Natl.

3 Many  
b no integrating process  
several levels, local focus

4 a ?  
b planning stakeholder & public involvement

| V.  | H.  |
|---|---|
| <p><u>2B</u></p>                                    | <p><u>2B</u> - DIFFERENT ACTORS / TOOLS</p>           |
| <p>3. LAND-USE PLANNING</p>                         | <p>3. NATURE CONSERVATION<br/>- AGRICULTURE<br/>-</p> |
| <p>4A. FUNDING FOR STRATEGY, NOT IMPLEMENTATION</p> | <p>4A. EU-FUNDING</p>                                 |
| <p>B. EXPERTS, NGO'S, PUBLIC ADM.</p>               | <p>B. INVOLVEMENT<br/>→ VOLUNTARY BASIS</p>           |





## Appendix 7

### Study Visit to Howth

**GREENINFRANET**

## Visit to Howth, Ireland July 13th 2012

Community representatives, Howth  
SAAO Management Committee

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Regional Development Fund

**GREENINFRANET** FAILTE FROM

- Kevin Rickard, Resident and howthpathways.com
- David Healy, Resident and howthpathways.com
- Anita Cannon, Resident and Hillwatch
- Con Breen, Botanist and Dublin Naturalists Field Club, dnfc.net
- Mary Tubridy, Ecologist and irishuplandsforum.org

2

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**GREENINFRANET** Howth

3

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**GREENINFRANET** STATUS

4

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**GREENINFRANET** BIODIVERSITY

5

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**GREENINFRANET** LANDSCAPE

6

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**GREENINFRANET** RECREATION




7

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**GREENINFRANET** SAAO

- Local lobbying 1980's -1999
- Designation 1999 has particular implications for local planning.
- Management Committee with budget. Membership includes community representatives, Council officials, local councillors.
- Biodiversity Officer acts as Liaison with Council. Fingalco.co.ie/
- Meets 4 times a year.

8

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**GREENINFRANET** SAAO

- Research on biodiversity, (flora, red squirrel and heathland management) in partnership with DNFC, National Botanic Gardens and University College Dublin.
- Management works (removal of exotics, improvement of habitat for red squirrel) partly carried out by volunteers
- Trail management (partly carried out by Howth Pathways)
- Interpretation and promotion, in partnership with landowners, local business interests and Failte Ireland

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**GREENINFRANET** GOAT PROJECT 2012



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**GREENINFRANET** WALKING ROUTE



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**GREENINFRANET** CHALLENGES

- Habitat/species/trail management; technical, knowledge and resource issues
- Reliance on Development Levy (since withdrawn) =finite resources for management
- No resources from central government
- Little awareness of SAAO or/and activities of Management Committee locally
- On-going community mobilisation and information campaign

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## SITE SYNOPSIS

**SITE NAME: HOWTH HEAD COAST SPA**

**SITE CODE: 004113**

Howth Head is a rocky headland situated on the northern side of Dublin Bay. The peninsula is composed of Cambrian rock of the Bray Group, the most conspicuous component being quartzite. The site comprises the sea cliffs extending from just east of the Nose of Howth to the tip of the Bailey Lighthouse peninsula. The marine area to a distance of 500 m from the cliff base, where seabirds socialise and feed, is included within the site.

The cliffs vary from between about 60 m and 90 m in height, and in places comprise fairly sheer, exposed rock face. Here plants such as Rock Sea-spurrey (*Spergularia rupicola*), Navelwort (*Umbilicus rupestris*), Rock Samphire (*Crithmum maritimum*), English Stonecrop (*Sedum anglicum*) and Biting Stonecrop (*Sedum acre*) are found, along with a good diversity of lichen species. Where the gradient allows, shallow glacial drift supports a typical maritime flora, with such conspicuous species as Thrift (*Armeria maritima*), Sea Campion (*Silene vulgaris* subsp. *maritima*), Common Scurvygrass (*Cochlearia officinalis*), Sea Plantain (*Plantago maritima*), Sea Mayweed (*Matricaria maritima*) and Sea Beet (*Beta vulgaris*). Spring Squill (*Scilla verna*), Bloody Crane's-bill (*Geranium sanguineum*), Sea Stork's-bill (*Erodium maritimum*) and Golden-samphire (*Inula crithmoides*) are notable species of the cliff flora.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Kittiwake.

Howth Head has important colonies of breeding seabirds. A census in 1999 recorded the following species: Fulmar (33 pairs), Shag (12 pairs), Herring Gull (17 pairs), Great Black-backed Gull (5 pairs), Kittiwake (2,269 pairs), Guillemot (990 individuals) and Razorbill (416 individuals). In addition, 39 individual Black Guillemot were counted within the site in May 1998. The populations of Kittiwake and Black Guillemot are of national importance, while the Razorbill, Guillemot and Fulmar populations are of regional importance. The cliffs also support a breeding pair of Peregrine Falcon, a species listed on Annex I of the E.U. Birds Directive. The seabird colony at Howth Head has been monitored at intervals since the Operation Seafarer project in 1969/70. The Kittiwake, Guillemot and Razorbill populations have increased in recent years. The seabirds within the site are not under significant threat at present.

This site is of high ornithological importance, with four seabird species having populations of national importance. It is also a traditional nesting site for Peregrine Falcon. The site is easily accessible and has important amenity and educational value due to its proximity to Dublin City.

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