



Rome, 23rd June 2011
Parallel Session

Present and future role of forest resources in the socio-economic development of rural areas

Parallel Session 3

Strategies for mitigation of and adaptation to climate change

The afforestation of rural landscape in Northern Italy: towards a green infrastructure

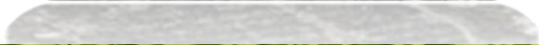
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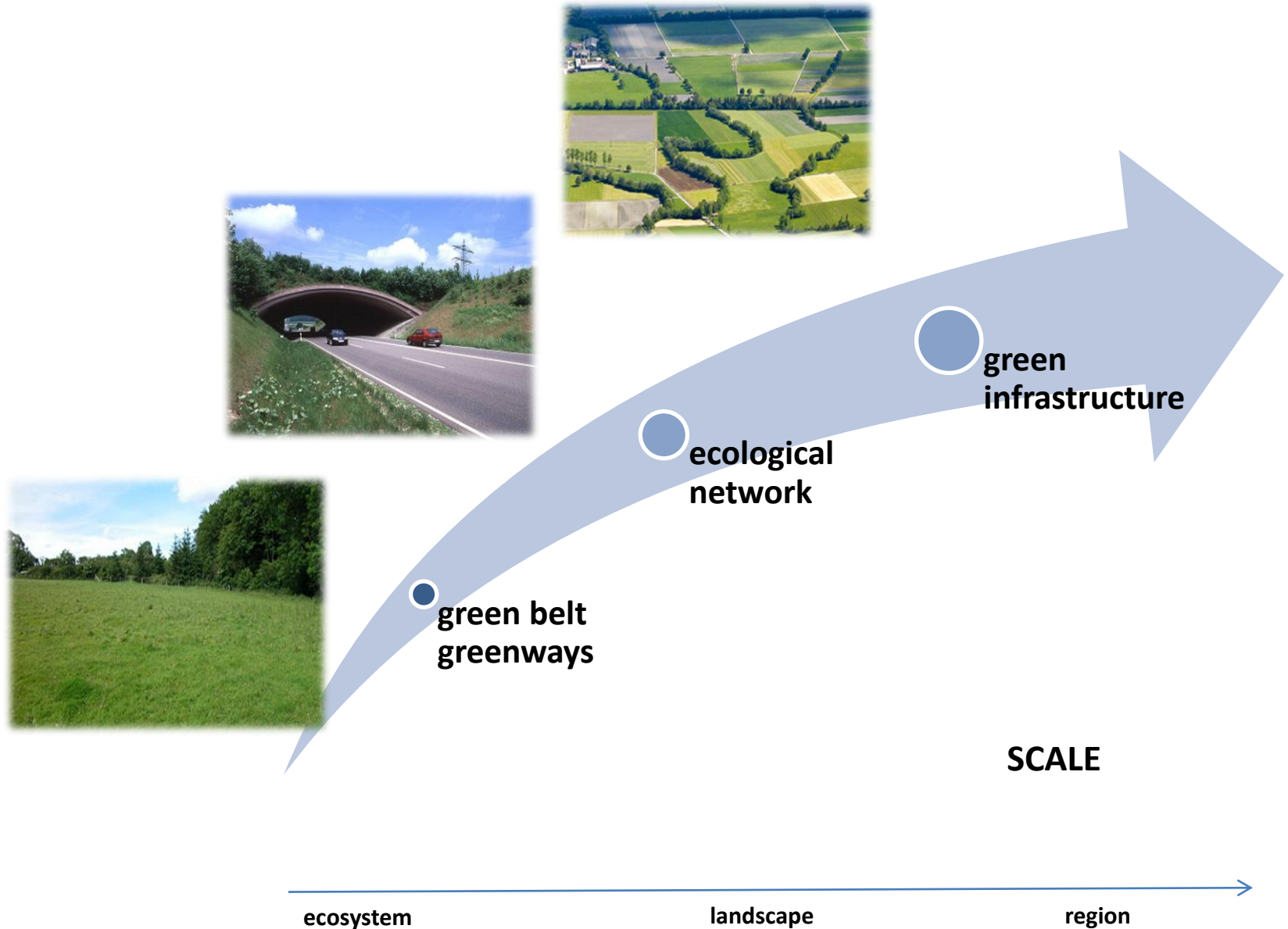


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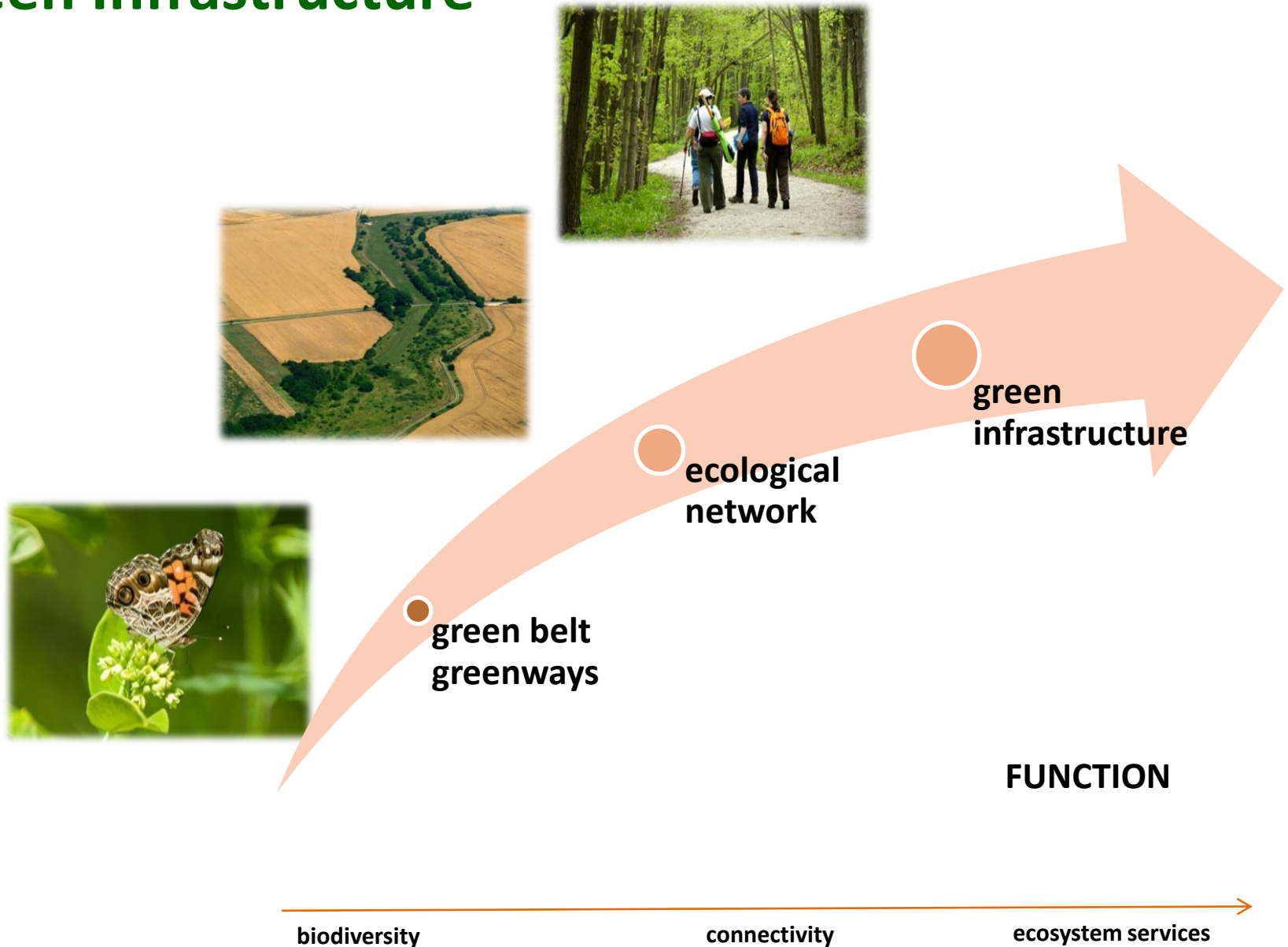
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Green Infrastructure

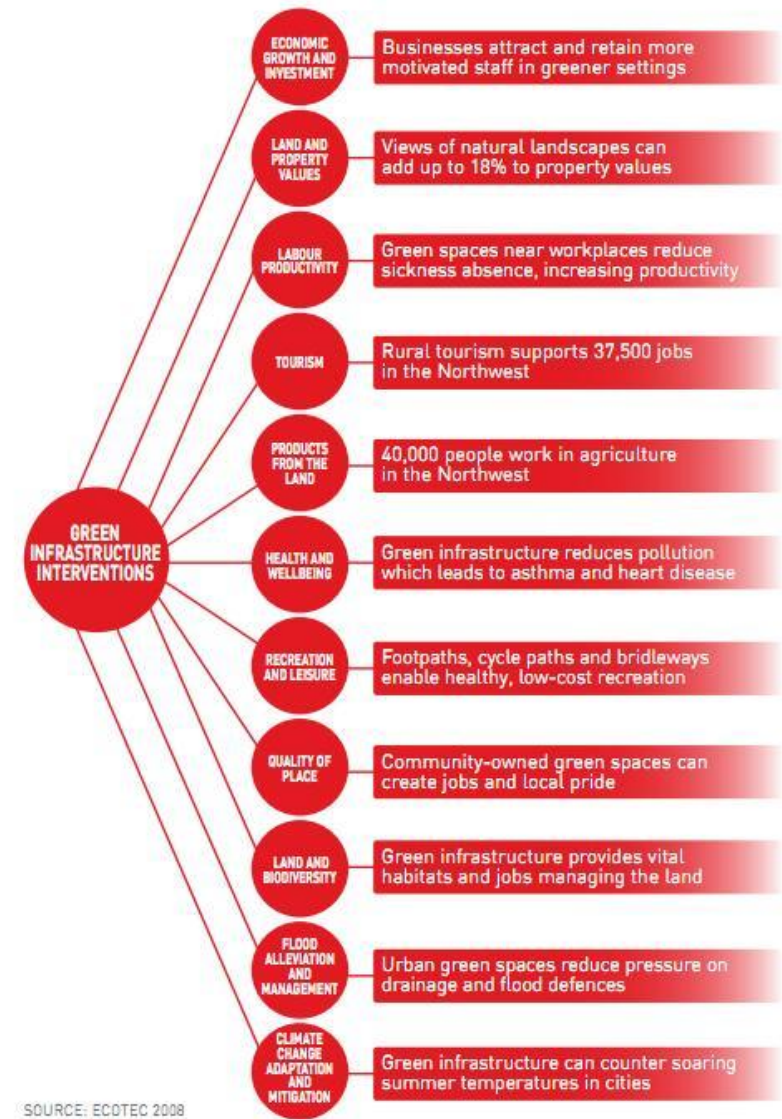


Green Infrastructure



Green Infrastructure: economic evaluation

In recent years, thinking on GI has moved from ecology to economics. Research has identified eleven economic benefits of GI and the way in which it can underpin the success of other economic sectors, offering an improved environment, jobs, sustainable business enterprises, social benefits, economic security and cost savings

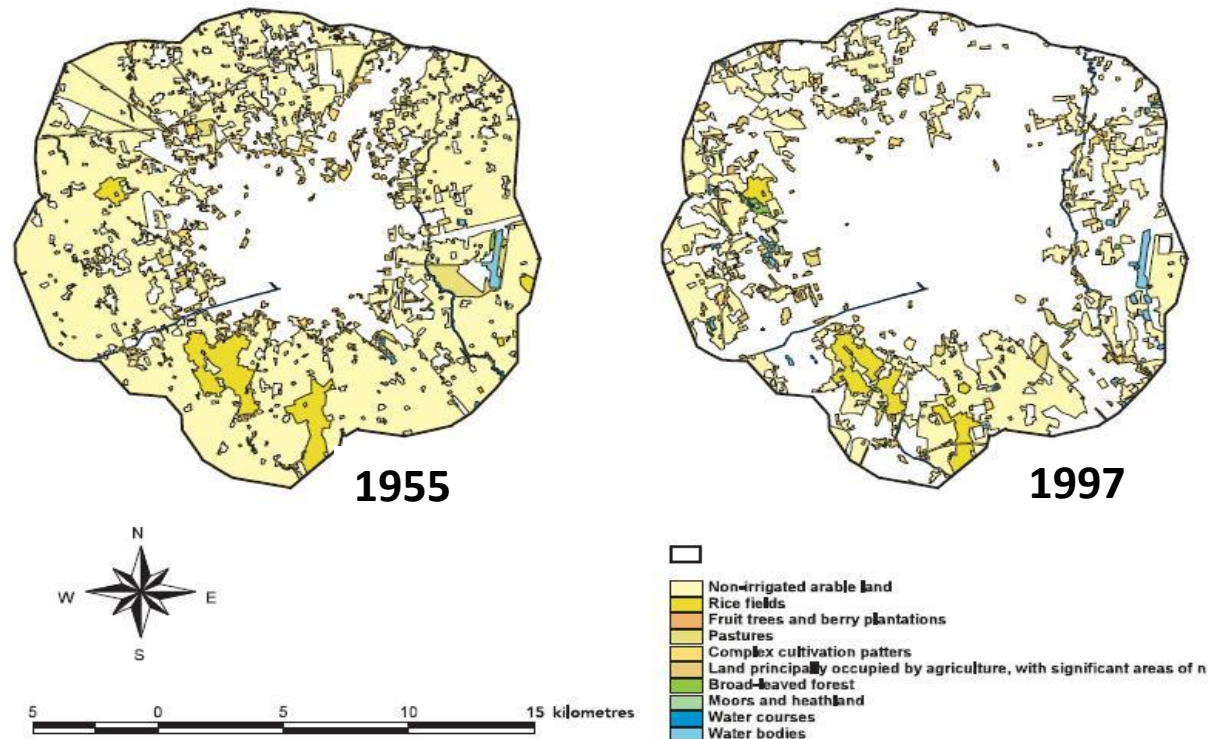


Changing dynamics in Lombardy

- ✓ Lombardy is an example of land disturbed by human activity: forests are been altered in their structure and distribution
- ✓ An important role is covered by urban and peri-urban forests (UPFs) that can provide a range of services and products to the population in urban and rural areas
- ✓ UPFs interventions in Lombardy were realized in several ages and with different aims

Study area: Metropolitan area of Milan

- ✓ One of the largest European metropolitan areas
- ✓ Loss of agricultural soil
- ✓ Strong urban sprawl
- ✓ One of the EU's and the world's major financial and business centres



Case of study: the “creation” of UPFs

- ✓ The province of Milan has been the cradle of urban forestation in Lombardy
- ✓ A lot of applicative projects and master plans have been realized in last decades
- ✓ Environmental groups (i.e. NGOs) and citizens were involved in realization and management of urban forests



Parco Nord

During the early part of the 1980s, Parco Nord was undertaken by the Lombardia Region to establish forest resources within an industrial area in the northern part of the city of Milan

Since 1983, around 100 hectares of formerly industrial land has been converted into urban forest plantations, thus creating large patches of trees with a wide range of functions and services



Boscoincittà

Boscoincittà is a public park of the City of Milan that covers about 110 hectares of forest plantations and natural areas. It was built from 1974 by Italia Nostra (i.e., environmental organization) with the collaboration of volunteers.



Bosco delle querce

Bosco delle querce has been created between 1984 and 1987 on the areas contaminated by dioxin in a famous industrial accident in the 1976.

Today the woodland extends to about 20 hectares and includes 24 species of trees and 28 species of shrubs.



Regional Plans

Regional Law n.80/1989

Have been funded 92 applications for forestry, for a total of € 851,320.00

EEC Regulation 2080/1992

103 applications have been funded for a total amount of € 2,338,208.00

Afforestation plantings realized with a total area of 6,002 hectares, equal to 0.58% of the regional UUA

Rural Development Plan 2000-2006

A total of 72 applications were funded for afforestation, arboriculture plantings, biomass, and poplar on agricultural soils, amounting to € 1,443,932.00

In the period 2001-2003, 9 projects of urban forests were funded.

Ten large forests for the plains

Planting project proposed by the Directorate General for Agriculture of Lombardy. The Province of Milan identified 15 possible areas all equally distant from the center of Milan.

Regional Plans

Compensatory afforestation

Ruled by the Law n. 227/2001

Rural Development Plan 2007-2013

The Rural Development Plan support afforestation, arboriculture planting, biomass, and poplar on agricultural soils.

10.000 hectares of (new) forests and green systems projects

The province of Milan is involved in 17 projects

The “Green Systems” project includes the creation of all the forests within 2015 to improve the natural environment and the quality of life of the urban population of Po river valley.

Discussion

Benefits of UPFs

The functional role of forests become critical in the case of large and densely populated urban areas

Several research project were carried out considering both aspects of ecological, psychological and social environment.

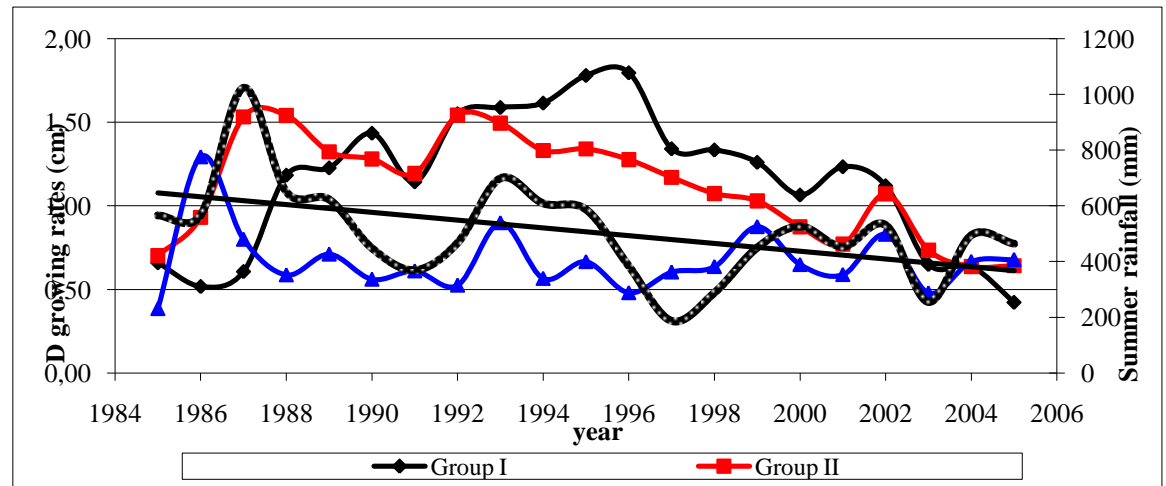
- ✓ Co-occurrence of biotic and abiotic stressors
- ✓ The importance of ecological network to improve biodiversity
- ✓ Effects of green spaces on human well-being

Discussion

Global change impacts

UPFs are affected in a deeper way from climate conditions
Long periods of drought and heat stress affect trees and vegetation

- ✓ Encouraging the spread of new diseases
- ✓ Expanding areas of interest of dangerous insects
- ✓ Influencing growing rates of tree species



Discussion

Governance of UPFs

The governance can affect the creation and management of UPFs

A better quality of places is perceived as a key aspect to improve fruition of green spaces.

- ✓ An important role is played by Voluntary Ecological Guards
- ✓ Community participation in forest management give information about accessibility and needs of people (bottom-up approach)

Conclusion

GI are aimed to:

- ✓ promote access and connectivity
- ✓ plan green spaces in a strategic way
- ✓ support diverse ecological, economic and social needs
- ✓ promote a more holistic approach to landscape management across different spatial areas and time

The experience of UPFs in Lombardy was relevant in last decades
Have been tested different ways for realization and management of green spaces and forests

GI approach gives new values to functions held by UPFs
This is the first step towards the general awareness of the importance of UPFs in promoting a better quality of urban life