

Green infrastructure and German landscape planning: historical context and comparison



Spa-ce.net Green Infrastructure Conference
27th-29th September 2015, Ljubljana (Slovenia)



RESEARCH QUESTIONS



What is the relation between green infrastructure and other open space planning concepts?

What are the similarities and/or differences between green infrastructure and landscape planning in Germany?



GREEN INFRASTRUCTURE DEFINITION

“a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. It incorporates green spaces (or blue if aquatic ecosystems are concerned) and other physical features in terrestrial (including coastal) and marine areas. On land, GI is present in rural and urban settings”.

European Union Commission, 2013



PREDECESSORS

Axes and boulevards

Parks systems

Garden cities

Greenways

AXES AND BOULEVARDS

Functions:

- Movement;
- Use;
- Vision-experience;
- Linkage of key destination points;
- Carriages traffic;
- Amenity;
- Adornment.



Fig. 1. Boulevard Champs-Élysées, Paris.

Source: www.dreamstime.com

PARKS SYSTEMS



Fig. 2. Emerald Necklace Parks System, Boston – USA.
Source: <http://www.emeraldnecklace.org>

GARDEN CITIES

Functions:

- Buffer urban development;
- Improve living conditions;
- Ameliorate environmental quality.

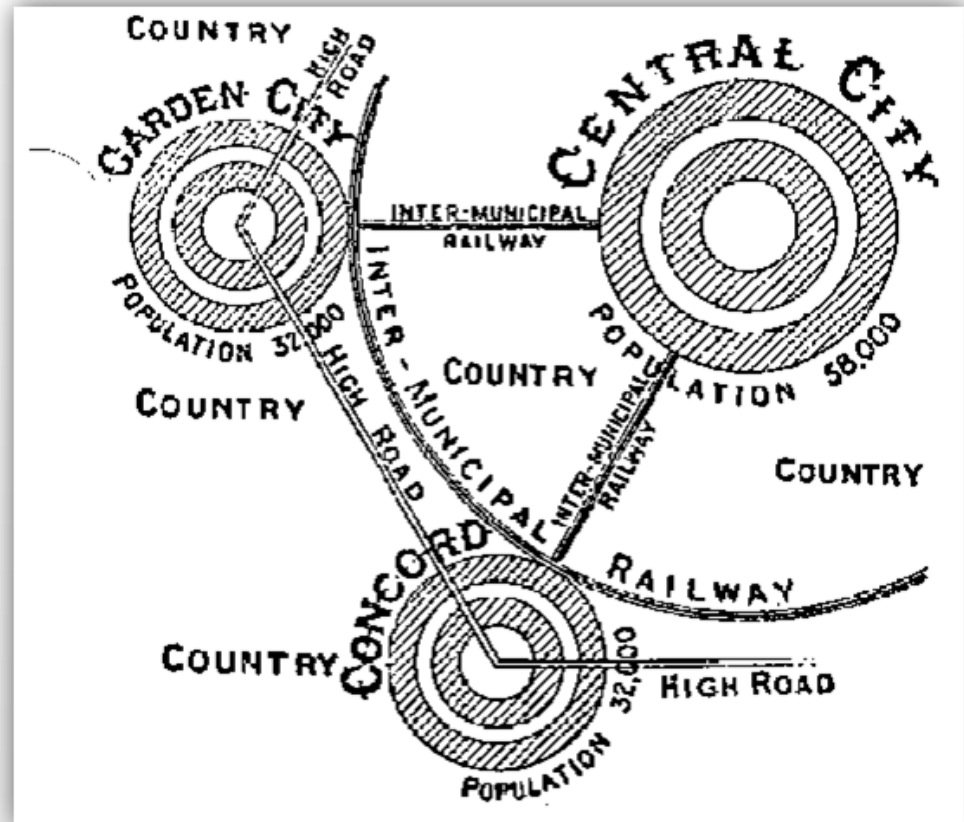


Fig. 3. Diagram of a garden city.
Source: <http://www.houseplanninghelp.com>



GREENWAYS

Functions:

- Recreation;
- Climate change regulation;
- Habitat protection;
- Flooding hazard reduction;
- Storm water management;
- Water quality management;
- Historical preservation;
- Education.



Fig. 4. Weißeritz Green Corridor, Dresden – Germany.
Source: <http://www.dresden.de>



THREE PRINCIPLES OF GREEN INFRASTRUCTURE

Multifunctionality

Multi-scale

Connectivity



LANDSCAPE PLANNING IN GERMANY

- Central planning instrument of nature conservation and landscape management;
- Covers most subjects of environmental protection in their spatial relevance;
- Provides an 'ecological contribution' to comprehensive spatial planning.



MULTIFUNCTIONALITY

Ecosystem services (TEEB)

- **Provisioning services** (food; raw materials; fresh waters; medicinal resources);
- **Regulating services** (local climate and air quality; carbon sequestration and storage ;moderation of extreme events etc.);
- **Supporting services** (habitats for species; maintenance of genetic diversity);
- **Cultural services** (recreation, mental and physical health; tourism; aesthetic appreciation and inspiration for culture, art and design; spiritual experience and sense of place).

Landscape functions

- **Biodiversity function;**
- **Landscape experience function;**
- **Natural yield function;**
- **Water resources function;**
- **Retention function;**
- **Archive function of the geotopes;**
- **Climate functions.**



MULTI-SCALE

Green infrastructure

- Metropolitan region or city;
- Districts or neighbourhoods;
- Individual sites.

But also:

- National;
- Transnational.

Landscape planning

- Landscape program (entire area of a state);
- Landscape structure plan (planning regions, covering several districts in a state);
- Landscape plan (municipal level);
- Open space structure.



CONNECTIVITY

Green infrastructure

Links

- Greenbelts;
- Greenways;
- Conservation corridors;
- Landscape linkages etc.

Landscape planning

Multifunctional Greenways

- To prevent urban sprawl;
- To provide recreational opportunity;
- To improve air quality.

Biotope network

- Species-oriented



CONCLUSION

The contemporary green infrastructure approach has much in common with its predecessors and landscape planning in Germany...

HOWEVER:

- it presents more complex principles;
- it provides a wider range of benefits for human well-being and health.



**Thank you
for listening**