



CeNSU
Centro Nazionale Studi Urbanistici



Spatial Planning for Energy And Communities In All Landscapes

I contenuti del Wp2

“Planning Association Competence Building”

Primo Meeting Multipliers
Roma

20 Marzo 2014

Prof. Francesco Martinico



Co-funded by the Intelligent Energy Europe
Programme of the European Union

Le attività di formazione dei partners: **le training weeks**



England



Sweden



Germany

I temi chiave

- Le differenze nella struttura di pianificazione e nelle politiche
- Le differenze culturali
- Le fonti di finanziamento
- Le capacità e le risorse
- La giustizia sociale



Inghilterra

punti di forza

- Forte potere della pianificazione locale

punti di debolezza

- Debole politica nazionale
- Oligarchia dei "Big Six"
- Incertezza negli investimenti
- Deboli standard edilizi
- Mancanza di competenza
- Debole volontà politica



Inghilterra: Esempi

Nine Elms Battersea Power St

- Fare leva sull'investimento privato con una forte regia pubblica (il manuale per il teleriscaldamento)

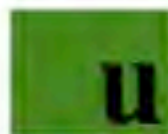
Gamlingway, impianto eolico di comunità

- Coinvolgimento degli abitanti

Milton Keynes cogenerazione e teleriscaldamento

- Il ruolo della azienda municipalizzata





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Svezia

punti di forza

- Forte orientamento politico nazionale
- Attitudine al cambiamento
- Collaborazione tra pianificatori e dipartimenti energia

punti di debolezza

- Debole organizzazione della pianificazione
- Poca attenzione alla giustizia sociale
- Forte privatizzazione

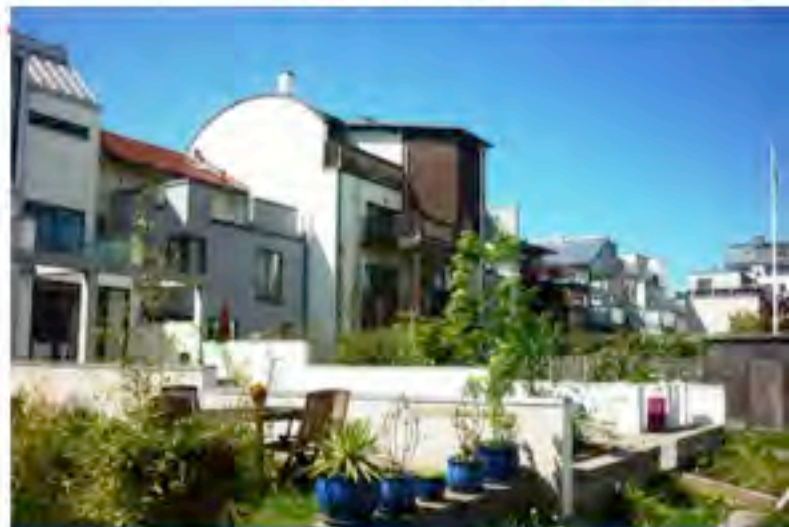


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Svezia: Esempi

Western Harbour, Malmö

- Quartiere basato al 100% su energie rinnovabili
- Integrazione tra i dipartimenti di energia e di pianificazione
- Gli aspetti ambientali sono l'elemento guida delle scelte di pianificazione



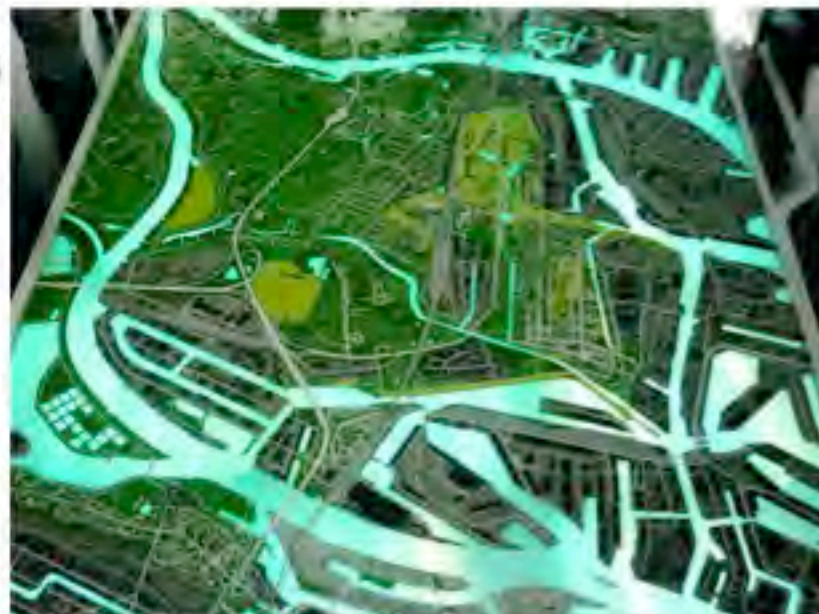
Germania

punti di forza

- Forte potere politico (federale e locale)
- Cultura orientata alle rinnovabili
- Proprietà pubblica della produzione/distribuzione dell'energia
- Strategie inclusive, focus sulla giustizia sociale
- Molteplicità di fondi locali e federali

punti di debolezza

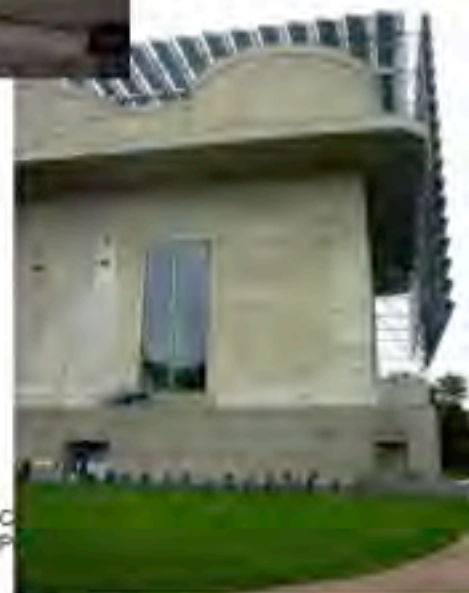
- Debole ruolo della pianificazione fisica



Germania Esempi

Amburgo - Wilhemsburg

- Aspetti energetici fortemente integrati nelle strategie di pianificazione per la rivitalizzazione fisica e sociale di una zona marginale



Ri-municipalizzazione

- Ritorno verso la proprietà pubblica delle aziende energetiche
- Maggior controllo e benefici per le comunità locali



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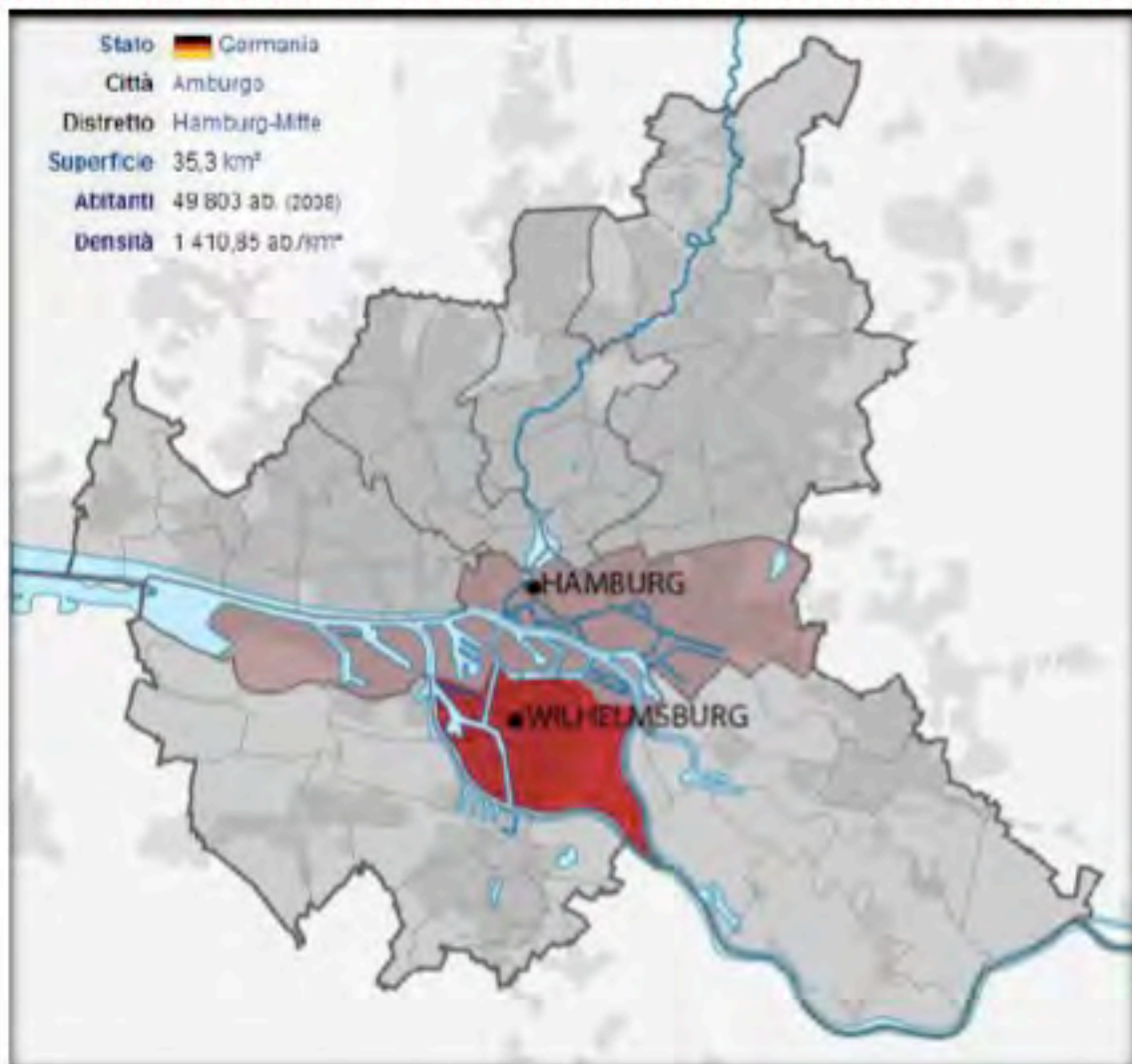
SPECIAL

SPATIAL PLANNING and ENERGY for
COMMUNITIES IN ALL LANDSCAPES

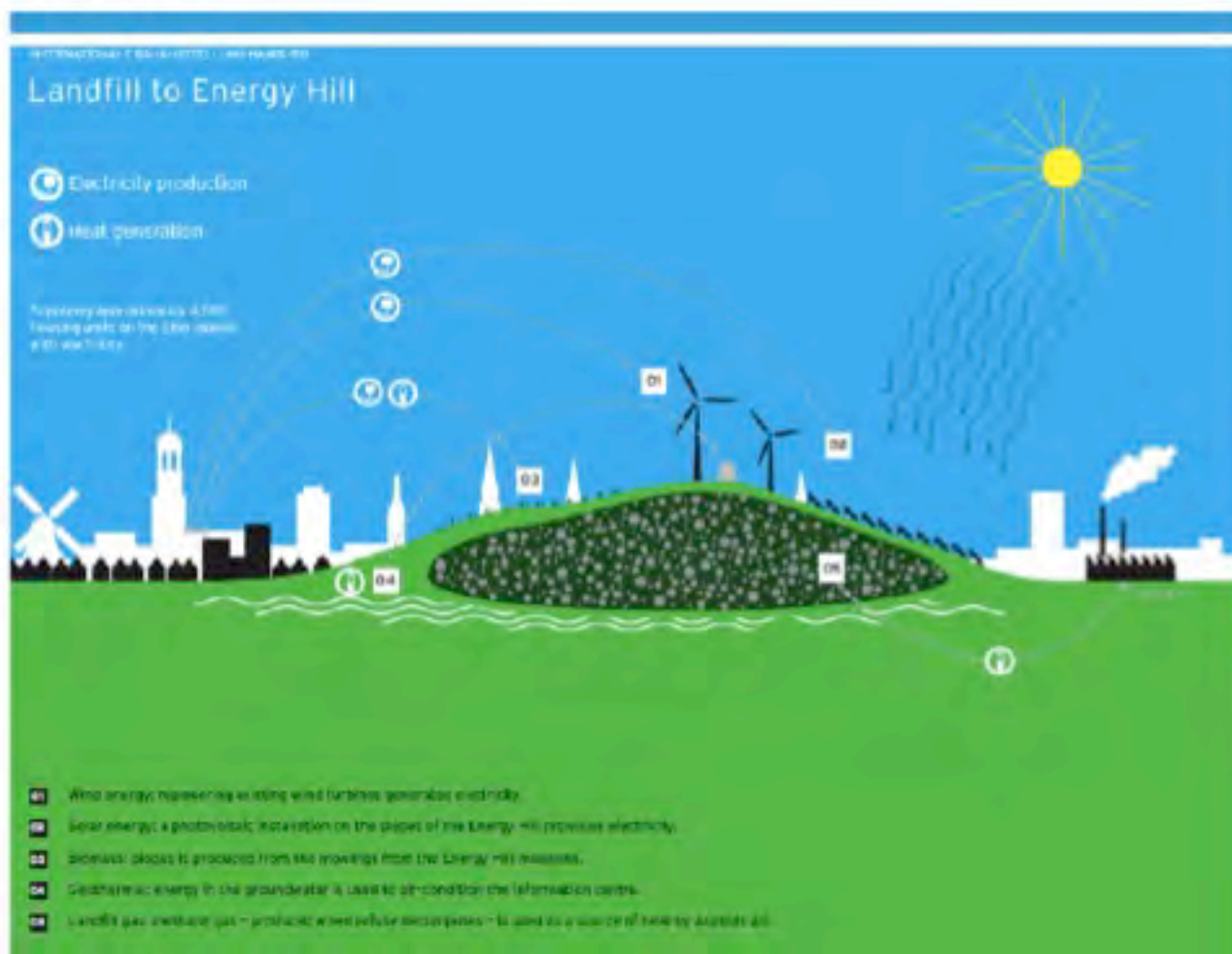
Amburgo

WILHEMSBURG

- 49 000 abitanti
- 35 kmq



Amburgo Energie colline



Amburgo Energie colline



Amburgo Energie colline



Amburgo Energie bunker



Source: Geschichtswerkstatt Wilhelmsburg



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SPECIAL Online Portfolio

Moduli di formazione



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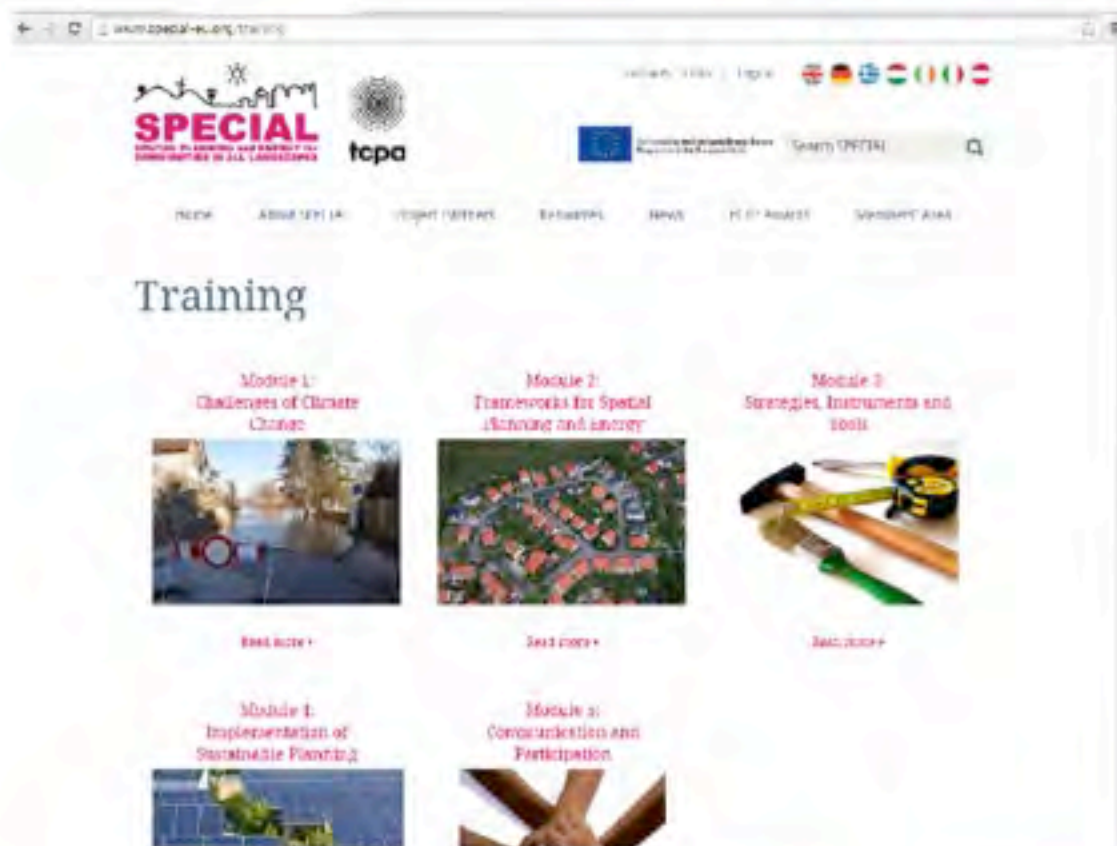
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- E' stato prodotto da tutti i Partner del progetto
- Verrà tradotto e opportunamente adattato alle caratteristiche dei singoli Multiplier
- E' suddiviso in moduli e sub-moduli:
 1. **Le sfide dei Cambiamenti climatici e fornitura di energia sostenibile**
 2. **Quadro normativo della pianificazione urbanistica e della energia sostenibile**
 3. **Strategie e strumenti per l'integrazione dell'energia nelle pratiche di pianificazione urbanistica**
 4. **Attuazione della sostenibilità**
 5. **Coinvolgimento degli stakeholder, processi di partecipazione e comunicazione**



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1. Le sfide del cambiamento climatico

Module 1: Challenges of Climate Change



Energy

1.1 Climate Change

1.2 Opportunities and Benefits

1. Good Practice Example:
 Gamlingay Eco Hub
 Community Centre
 (Cambridgeshire, UK)

2. Good Practice Example:
 Local value creation in the
 district of Steinfurt
 (Germany)

1.3 Social Sustainability

Module 2: Frameworks for Spatial
 Planning and Energy

Module 3: Strategies, Instruments
 and Tools

Module 4: Implementation of
 Sustainable Planning

Module 5: Communication and
 Participation

1.2 Opportunities and Benefits

Introduction

Introduction Key words Summary Relevant Parameters to consider
 Description Planning relevant issues Finance relates aspects
 Description of the most innovative aspects

The sub module 1.2 includes the following issues:

1. Direct and indirect benefits for municipalities, enterprises and inhabitants from renewable energies and energy efficiency measures
2. Role of renewable energy projects for an sustainable urban development
3. Role of municipalities for realization of renewable energy and energy efficiency projects
4. Value creation in favour of municipalities through renewable energies

Key words

Introduction **Key words** Summary Relevant Parameters to consider
 Description Planning relevant issues Finance relates aspects
 Description of the most innovative aspects

Summary

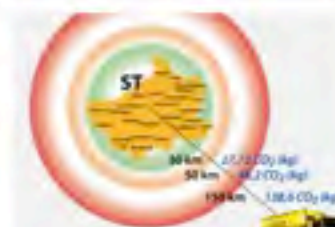
Introduction **Key words** **Summary** Relevant Parameters to consider
 Description Planning relevant issues Finance relates aspects

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1. Good Practice Example:
 Gamlingay Eco Hub
 Community Centre
 (Cambridgeshire, UK)



2. Good Practice Example:
 Local value creation in the
 district of Steinfurt
 (Germany)

Change

1.1 Climate Change

1.2 Opportunities and Benefits

1.3 Social Sustainability

1. Good Practice Example:
Quarter Regeneration
Programme (Budapest,
Hungary)

2. Good Practice Example:
Renovation of Village Block
(Óbuda / Budapest, Hungary)

5. Good Practice Example:
Sustainable energy systems
with employment education
(Stockholm, Sweden)

6. Good Practice Example:
Energy Saving Trust (UK)

Module 2: Frameworks for Spatial
Planning and Energy

Module 3: Strategies, Instruments
and Tools

Module 4: Implementation of
Sustainable Planning

1.3 Social Sustainability

List of relevant key words

List of relevant key words Social Sustainability Introduction Relevant parameters to be considered Detailed issues Planning relevant issues Finance related aspects Description of the most innovative aspects involved Core technical specifications, Green Building Certifications Innovations and social aspects

Sustainable development, social capital, green urbanism

Social Sustainability

List of relevant key words Social Sustainability Introduction Relevant parameters to be considered Detailed issues Planning relevant issues Finance related aspects Description of the most innovative aspects involved Core technical specifications, Green Building Certifications Innovations and social aspects

Introduction

List of relevant key words Social Sustainability Introduction Relevant parameters to be considered Detailed issues Planning relevant issues Finance related aspects Description of the most innovative aspects involved Core technical specifications, Green Building Certifications Innovations and social aspects

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Methods and Instruments



1. Good Practice Example:
Quarter Regeneration
Programme (Budapest,
Hungary)

2. Good Practice Example:
Renovation of Village Block
(Óbuda / Budapest, Hungary)

3. Good Practice Example:
Hammarby Sjöstad (Sweden)

2. Quadro normativo della pianificazione urbanistica e della energia sostenibile

Module 2: Frameworks for Spatial Planning and Energy



Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

2.1 Policies and objectives

2.2 Legal framework and planning systems

2.3 Programmes with relevance to spatial planning

Module 3: Strategies, Instruments and Tools

Module 4: Implementation of Sustainable Planning

Module 5: Communication and Participation

Frameworks for Spatial Planning and Energy

Background

Background Specific content Main goal Additional information

The legal- and planning framework has a main impact on how planners can foster renewable energy or efficiency in their plans. Across the SPECIAL partnership, each country has different frameworks and structures at the national, state, regional, sub-regional and local levels. An understanding of each is required to identify what is required by law, what are the relevant levels for policy development and making decisions on developments, who is involved and needs to be engaged, but also to understand the limitations of spatial planning. Module 2 presents general aspects of legislation and planning systems and provides links to the other partners' planning system information and overview. For each SPECIAL partner the planning systems are described in "good practise" example.

Specific content

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2.1 Policies and objectives

2.2 Legal framework and planning systems

2.3 Programmes with relevance to spatial planning

Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

2.1 Policies and objectives

2.2 Legal framework and planning systems

Hungary – Planning Systems

Ireland – Planning Systems

United Kingdom – Planning Systems

Greece – Planning Systems

Austria – Planning Systems

Sweden – Planning Systems

Germany – Planning Systems

Italy – Planning Systems

2.3 Programmes with relevance to spatial planning

Module 3: Strategies, Instruments

Module 2: Frameworks for Spatial Planning and Energy

2.2 Legal framework and planning systems

Keywords

Keywords: Introduction Legal framework Planning systems Relevant parameters to be considered: Planning relevant issues

energy legislation, planning legislation, planning systems, housing, urban development, climate mitigation

Introduction

Keywords: Introduction Legal framework Planning systems Relevant parameters to be considered: Planning relevant issues

Legal framework

Keywords: Introduction Legal framework Planning systems Relevant parameters to be considered: Planning relevant issues

Planning systems

Keywords: Introduction Legal framework Planning systems Relevant parameters to be considered: Planning relevant issues

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Methods and instruments

Hungary – Planning Systems

Ireland – Planning Systems

United Kingdom – Planning Systems

Greece – Planning Systems

Austria – Planning Systems

Sweden – Planning Systems



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3. Strategie, strumenti ed attrezzi per l'integrazione dell'energia nelle pratiche di pianificazione urbanistica

Module 3: Strategies, Instruments and Tools



Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

Module 3: Strategies, Instruments and Tools

3.1 Integrated strategies, instruments and tools

3.2 Sectorial strategies, instruments and tools

3.3 Regional Plan

3.4 Binding land use plan

3.5 Energy Mapping

3.6 Municipal energy concept

3.7 Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA)

3.8 Sustainable Energy Action Plan (SEAP)

Module 4: Implementation of Sustainable Planning

Strategies, Instruments and Tools

Background

Background Specific content Main goal Additional information

The production and supply of renewable energy are closely connected to spatial planning on national, regional and local level. The targeted shift in energy provision towards increased energy efficiency and the use of renewable resources can only be achieved if its spatial dimensions are taken into consideration.

Despite the fact that cities triggers in an especially way the climate change and that the answers also have to be find in the urban areas (climate mitigation), is a consideration of the supra local planning and its embedding in planning procedures important. The integration of the urban hinterland (e.g. comuter flow, wind and sun energy, grids,...) is essential for solving the climate change problems and a main challenge.

Spatial structures have considerable influence on different aspects of the energy demand. Spatial structures have considerable influence on different aspects of the energy demand and with spatial planning the resource availability and use are influenced.

Spatial planning sets the framework for energy consumption, production and distribution and is therefore a key factor to implement intelligent and sustainable energy systems which meet the needs of citizens, consumers and suppliers.

The implementation of renewable energy supply systems covers both technical and



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3.1 Integrated strategies, instruments and tools

3.2 Sectorial strategies, instruments and tools

3.3 Regional Plan

3.4 Binding land use plan

3.5 Energy Mapping

3.6 Municipal energy concept

3.7 Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA)



Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

Module 3: Strategies, Instruments and Tools

3.1 Integrated strategies, instruments and tools

1. Good Practice Example: Sustainable Urban Development (Northern Budapest, Hungary)

2. Good Practice Example: Local Authority Renewable Energy Strategy (Dublin, Ireland)

3. Good Practice Example: Municipal energy enhancement (Faenza, Italy)

4. Good Practice Example: District Heating Manual for London

5. Good Practice Example:

9. Good Practice Example: THE WALKABLE CITY (Stockholm, Sweden)

Keywords

Keywords Name and location Background, objectives, implementation measures and financing Development areas, nodes and links

Sustainable urban development, urban planning, comprehensive plan, strategic planning,

Name and location

Keywords **Name and location** Background, objectives, implementation measures and financing Development areas, nodes and links

Background, objectives, implementation measures and financing

Keywords Name and location **Background, objectives, implementation measures and financing** Development areas, nodes and links

Development areas, nodes and links

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Related link

[Stockholm-City-Plan](#)

Contact possibilities

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Organisation(s): City of Stockholm, urban planning department

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Web: <http://international.stockholm.se/Stockholm/Stockholm-City-Plan/>

Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

Module 3: Strategies, Instruments and Tools

3.1 Integrated strategies, instruments and tools

3.2 Sectorial strategies, instruments and tools

3.3 Regional Plan

3.4 Binding land use plan

1. Good Practice Example:
Energy landscape Morbach
(Rhineland-Palatinate,
Germany)

2. Good Practice Example:
Solarpark on former landfill
(Jena, Germany)

3. Good Practice Example:
Climate Protection Estates
zero:e park (Hannover,
Germany)

1. Good Practice Example: Energy landscape Morbach (Rhineland-Palatinate, Germany)

Keywords

Keywords: Name and location Background, objectives, implementation measures and financing Cost benefit, effects and results achieved Planning procedures, involvement of stakeholders and possible participation structures Images Innovation fostered - local / regional developments triggered

Energy landscape, photovoltaic, wind power, biogas plants, wood pellets factory, energy tourism, waste stream management, citizen wind turbine

Name and location

Keywords: Name and location Background, objectives, implementation measures and financing Cost benefit, effects and results achieved Planning procedures, involvement of stakeholders and possible participation structures Images Innovation fostered - local / regional developments triggered

Background, objectives, implementation measures and financing

Keywords: Name and location Background, objectives, implementation measures and financing Cost benefit, effects and results achieved

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Energy landscape Morbach.



Related Links

<http://www.umweltbundesamt.de/in-raeumlichen-planung-0>
<http://www.energielandschaft.de>

Contact possibilities

Name(s): Michael Grehl
Organisation(s): Local government Morbach
Phone: +49 6533/71-317
e-Mail: mgrehl@morbach.de
Web: www.energielandschaft.de

4. Attuazione della sostenibilità

Module 4: Implementation of Sustainable Planning



Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

Module 3: Strategies, Instruments and Tools

Module 4: Implementation of Sustainable Planning

4.1 Heat supply

4.2 Power supply

4.3 Mobility

4.4 Storage

4.5 Energy efficient Buildings and Retrofitting

4.6 Heritage/Monuments

Module 5: Communication and Participation

Implementation of Sustainable Planning

Background

Background Specific content Main goal Additional information

Strategies for fostering the use of renewable energies and efficiency - which are described in Module 3 - have to fill with life through planing and implementation. These aspects will be presented in this Module 4. However, main sources of greenhouse gases in the EU are e.g. **Energy supply** (31%), **Transport** (20%), **Industry** (20%), **Households/Commercial buildings** (16%). These are the sectors which should be in the focus of planners to reduce greenhouse gases. A comprehensive implementation of sustainable energy supply/demand or carbon sinks are needed. This has an impact on the future design of existing and coming spatial- and settlement structures. In many cases is the existing infrastructure old and renovation/modifications are needed anyway. The **transformation of infrastructure** is a key element of a smart future in our Cities. Issues regarding energy efficiency, decentralised renewable energy production/supply are closely connected to spatial planning on national, regional and local level. Key sectors and activity fields for spatial- and town planners to build up future able regions/cities/qaurtlers are therefore:

Heat/Cold: Fostering the efficient production of/and supply with emission low- or free and renewable heat/cold energies. Minimisation of heat/cold supply in settlement structures like living, commercial, trade. Fields of activity: e.g. energy efficient settlement structures and heat- and cold supply, storage

Power: Fostering the efficient production of/and supply with emission low- or free and renewable power energies. Fields of activity: e.g. renewable power production, transmission and storage

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4.1 Heat supply

4.2 Power supply

4.3 Mobility

4.4 Storage

4.5 Energy efficient Buildings and Retrofitting

4.6 Heritage/Monuments

Related links

Making Cities Energy Efficient
(Final report) by UP-RES

Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

Module 3: Strategies, Instruments and Tools

Module 4: Implementation of Sustainable Planning

4.1 Heat supply

4.2 Power supply

4.3 Mobility

1. Good Practice Example: Sustainable transports in Malmö

2. Good Practice Example: The first Bus Rapid Transit (BRT) line (Catania, Italy)

3. Good Practice Example: Sustainable Urban Mobility

Module 4: Implementation of Sustainable Planning

4. Good Practice Example: Automatic light metro system (Brescia, Italy)

Keywords

Keywords Name and location Background, objectives, implementation measures and financing Cost benefit, effects and results achieved Planning procedures, involvement of stakeholders and possible participation structures Images

Sustainable mobility, automatic light metro system

Name and location

Keywords **Name and location** Background, objectives, implementation measures and financing Cost benefit, effects and results achieved Planning procedures, involvement of stakeholders and possible participation structures Images

Background, objectives, implementation measures and financing

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Related Links

<http://www.bresciamobilita.it/gru-brescia-mobilita/metro-brescia-srl>

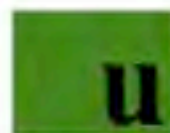
Contact possibilities

Customer Care Brescia Mobilità
customer care@bresciamobilita.it
www.facebook.com/bresciamobilita

5. Coinvolgimento degli stakeholder, processi di partecipazione e comunicazione

Module 5: Communication and Participation





Module 1: Challenges of Climate Change

Module 2: Frameworks for Spatial Planning and Energy

Module 3: Strategies, Instruments and Tools

Module 4: Implementation of Sustainable Planning

Module 5: Communication and Participation

5.1 Communication

5.2 Participation

Module 5: Communication and Participation

Background

Background Specific content Main goal Additional information

Communication and participation are crucial factors for the successful implementation of renewable energy infrastructures and also for behaviour for efficient energy using. Respective planning and implementation processes nowadays are clearly facilitated by an approval of the different stakeholders affected by the projects. The existence of trust and cooperation from the public for the project, the lack of resistance to the implementation of it and the increased support for former similar projects are indispensable conditions for any project planning and realisation.

The general public plays an important role in the whole process since most of these projects, as for example wind farms, solar cells, biogas plants, hydropower plants have an impact on the citizens' living in the surrounding areas.

The implementation of renewable energies related concepts and projects at regional and sub-regional scales can be considered as a process of coalition building, where local policy and other decision makers and administrations are reliant on building partnership between state and non-state actors to achieve its objectives. Public acceptance thus is key to the implementation of renewable energies at a regional and municipal level.

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5.1 Communication

5.2 Participation

5.1 Communication

5.2 Participation

1. Good Practice Example:
Flagghusen Creative
Dialogue (Sweden)

2. Good Practice Example:
Community Solar Power
Plant (Village Rampura,
India)

3. Good Practice Example:
White Creek Wind Project in
Washington (USA)

4. Good Practice Example:
Sustainable Community

5.2 Participation

Introduction -

Introduction Summary Core values for the practice of public participation Levels and intensity of participation Different participation techniques Practice relevant aspects

Participation is fundamental to all planning processes in an urban context, also for the integration of renewable energies and planning. Policy makers and administrations face tensions between 'streamlining' planning procedures, engaging with diverse publics to address what is commonly conceived as 'NIMBY' (not in my back yard) opposition, and the need to maintain democratic, participatory values in planning systems.

Summary +

Introduction **Summary** Core values for the practice of public participation Levels and intensity of participation Different participation techniques Practice relevant aspects

Core values for the practice of public participation +

Introduction Summary **Core values for the practice of public participation** Levels and intensity of participation Different participation techniques Practice relevant aspects

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1. Good Practice Example:
Flagghusen Creative
Dialogue (Sweden)



2. Good Practice Example:
Community Solar Power
Plant (Village Rampura,
India)



Download PDF case studies

Good Practice Example 5: Energy document for settlements (Graz, Austria)

Download

[Download the energy document for settlements \(Graz, Austria\)](#)

Download the energy document

Energy document for settlements

- The energy document for settlements (Graz, Austria) is a document that provides information on the energy situation of the city of Graz, Austria. It is a document that provides information on the energy situation of the city of Graz, Austria. It is a document that provides information on the energy situation of the city of Graz, Austria.
- The energy document for settlements (Graz, Austria) is a document that provides information on the energy situation of the city of Graz, Austria. It is a document that provides information on the energy situation of the city of Graz, Austria. It is a document that provides information on the energy situation of the city of Graz, Austria.

Energy document for settlements



Good Practice Example 2: Local Authority Renewable Energy Strategy (Dublin, Ireland)

Download

[Download the energy strategy for Dublin, Ireland](#)

Download the energy strategy

The Dublin City Council (DCC) has developed a Renewable Energy Strategy for Dublin City Council (DCC) to guide the development of renewable energy in the city of Dublin. The strategy is a document that provides information on the energy situation of the city of Dublin, Ireland.

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Download the energy strategy for Dublin, Ireland

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Il Piano Regolatore dell'energia di Faenza

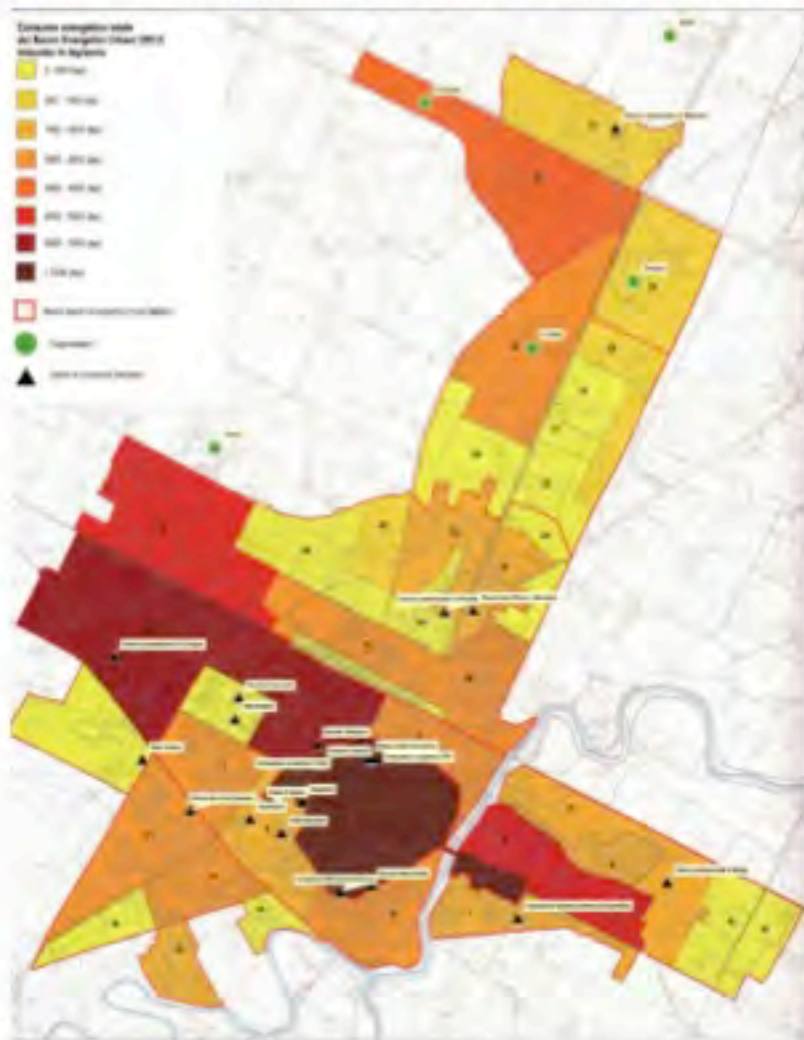


Sostanziare gli
indirizzi della
pianificazione
sovraordinata
in strategie
normative
all'interno di
strumenti urbanistici
sottordinati

Censimento energetico – scenari – norme



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Bilancio Energetico Generale e Inventario delle emissioni di CO_{2eq}



40 Bacini Energetici Urbani



settore edilizio
32% consumi
50% emissioni di CO₂

Scenari di miglioramento urbano

- Base
- con azioni urbanistiche
- con azioni urbanistiche supplementari



Misure

dalla previsione di reti di teleriscaldamento ed impianti di co-generazione fino al meccanismo del **trasferimento**

di diritti edificatori in aree identificate e legato ad interventi di **riqualificazione energetica in centro storico**

Scenario di miglioramento energetico e Energy efficiency potential

1. Scenario of improvement measures at 2010 for primary energy (see scenario of energy efficiency and energy efficiency potential) and secondary energy (see scenario of energy efficiency and energy efficiency potential) and secondary energy (see scenario of energy efficiency and energy efficiency potential)

Baseline Scenario	Energy Efficiency	Energy Efficiency
2010 consumption (GJ)	2010 consumption (GJ)	2010 consumption (GJ)
100,000 GJ	90,000 GJ	80,000 GJ
2010 emissions CO ₂ (t)	2010 emissions CO ₂ (t)	2010 emissions CO ₂ (t)
2010 CO ₂ building emissions	2010 CO ₂ building emissions	2010 CO ₂ building emissions
2010 CO ₂ building emissions	2010 CO ₂ building emissions	2010 CO ₂ building emissions

2. Scenario of improvement measures at 2020 for primary energy (see scenario of energy efficiency and energy efficiency potential) and secondary energy (see scenario of energy efficiency and energy efficiency potential) and secondary energy (see scenario of energy efficiency and energy efficiency potential)

Baseline Scenario	Energy Efficiency	Energy Efficiency
2020 consumption (GJ)	2020 consumption (GJ)	2020 consumption (GJ)
100,000 GJ	90,000 GJ	80,000 GJ
2020 emissions CO ₂ (t)	2020 emissions CO ₂ (t)	2020 emissions CO ₂ (t)
2020 CO ₂ building emissions	2020 CO ₂ building emissions	2020 CO ₂ building emissions
2020 CO ₂ building emissions	2020 CO ₂ building emissions	2020 CO ₂ building emissions

3. Scenario of improvement measures at 2030 for primary energy (see scenario of energy efficiency and energy efficiency potential) and secondary energy (see scenario of energy efficiency and energy efficiency potential) and secondary energy (see scenario of energy efficiency and energy efficiency potential)

Baseline Scenario	Energy Efficiency	Energy Efficiency
2030 consumption (GJ)	2030 consumption (GJ)	2030 consumption (GJ)
100,000 GJ	90,000 GJ	80,000 GJ
2030 emissions CO ₂ (t)	2030 emissions CO ₂ (t)	2030 emissions CO ₂ (t)
2030 CO ₂ building emissions	2030 CO ₂ building emissions	2030 CO ₂ building emissions
2030 CO ₂ building emissions	2030 CO ₂ building emissions	2030 CO ₂ building emissions





Prossimi obiettivi

- Rafforzare la collaborazione con gli altri Partner per ultimare il Portfolio on line
- Lavorare con i Multiplier per adattare il Portfolio, sviluppare specifici programmi di costruzione di competenze e di formazione basati su punti deboli, esigenze, capacità e obiettivi di ciascun Multiplier
- Valutare la possibilità di organizzare workshop, seminari e moduli on-line, visite studio, collaborazioni con altri professionisti (non pianificatori)
- Eventualmente organizzare un progetto pilota con alcuni Multiplier





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Guidare i pianificatori

- **Revisione dei piani regolatori comunali** per coordinare e rafforzare l'integrazione fra gli aspetti dell'energia sostenibile e quelli urbanistici
- Predisposizione di **'energy opportunity mapping'**, e **'heat map'**
- **Mappatura delle coperture di edifici** (dalla scala del vicinato alla città) adatti alla possibile installazione di pannelli fotovoltaici
- Identificazione degli edifici pubblici energeticamente inefficienti dove prevedere interventi di **retrofitting**
- Identificazione, sviluppo o rafforzamento di **'obiettivi di produzione di energia da fonti rinnovabili e risparmio energetico'** negli interventi di trasformazione edilizia/urbanistica a tutte le scale



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- Adozione e sviluppo di metodi per monitorare **obiettivi di efficienza energetica** nella pianificazione urbanistica
- **Organizzare incontri con la comunità** insieme agli attori locali (residenti, associazioni) per individuare possibili progetti a tutte le scale
- **Organizzare incontri con gli imprenditori** nella fase di progettazione di massima e prima della presentazione del piano per assicurarsi che la pianificazione garantisca l'efficienza e la previsione di produzione di energia da fonti rinnovabili
- **Organizzare incontri con le compagnie private di fornitura di energia** per meglio integrare le istanze dell'energia con quelle della pianificazione



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In sintesi

- La scala urbana è fondamentale per il funzionamento energetico della città
La città è più della somma delle parti
- Le competenze ingegneristiche diventano rilevanti negli aspetti di pianificazione
L'esempio di energie bunker e energie colline ad Amburgo, teleriscaldamento, mappature termiche ecc.



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Grazie

Francesco Martinico

