

The role of geo- information in spatial planning

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Chair commission 8

Spatial planning and development

20-07-2021

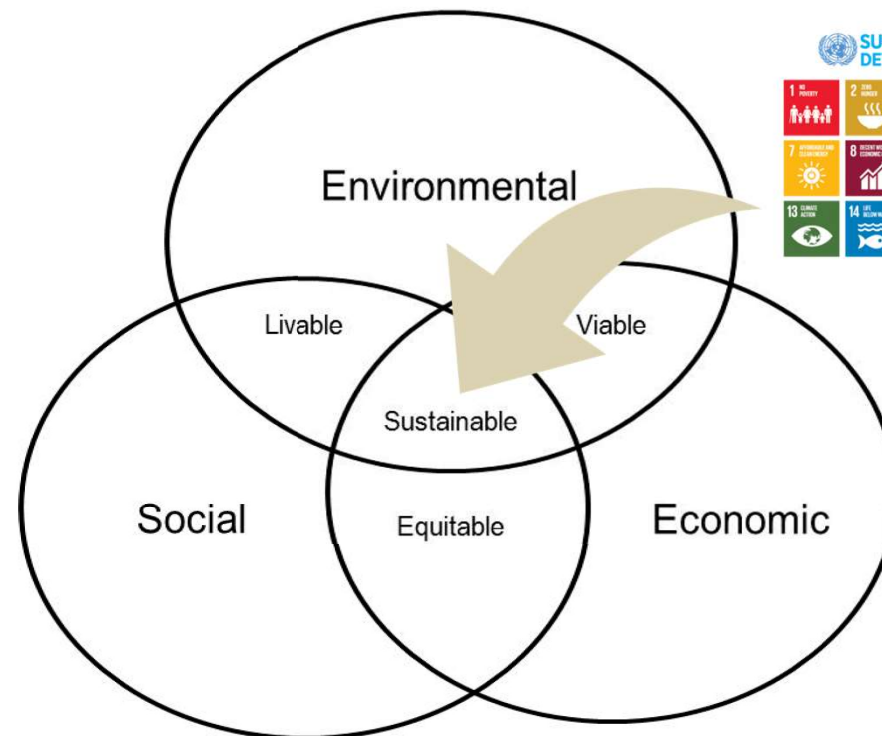


Spatial planning...

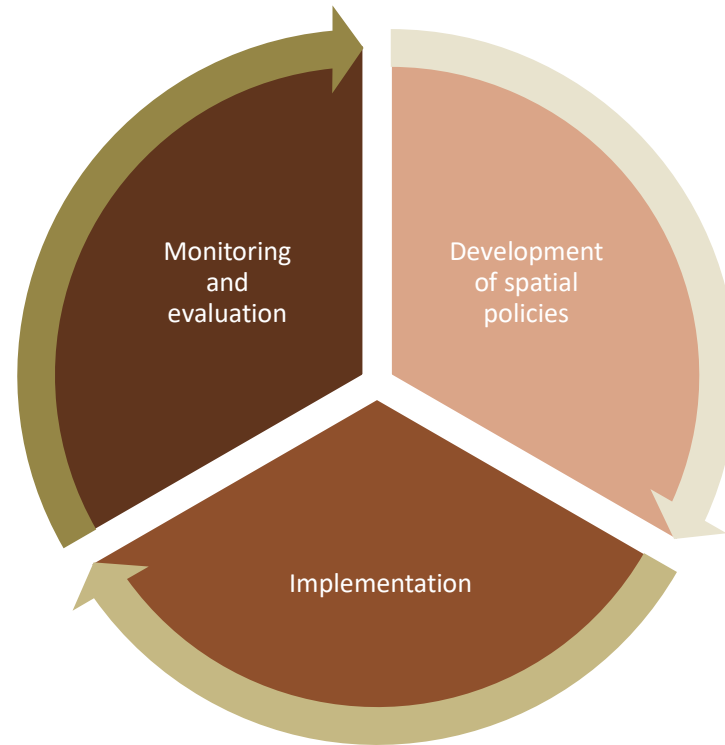


... and the need for geo-info

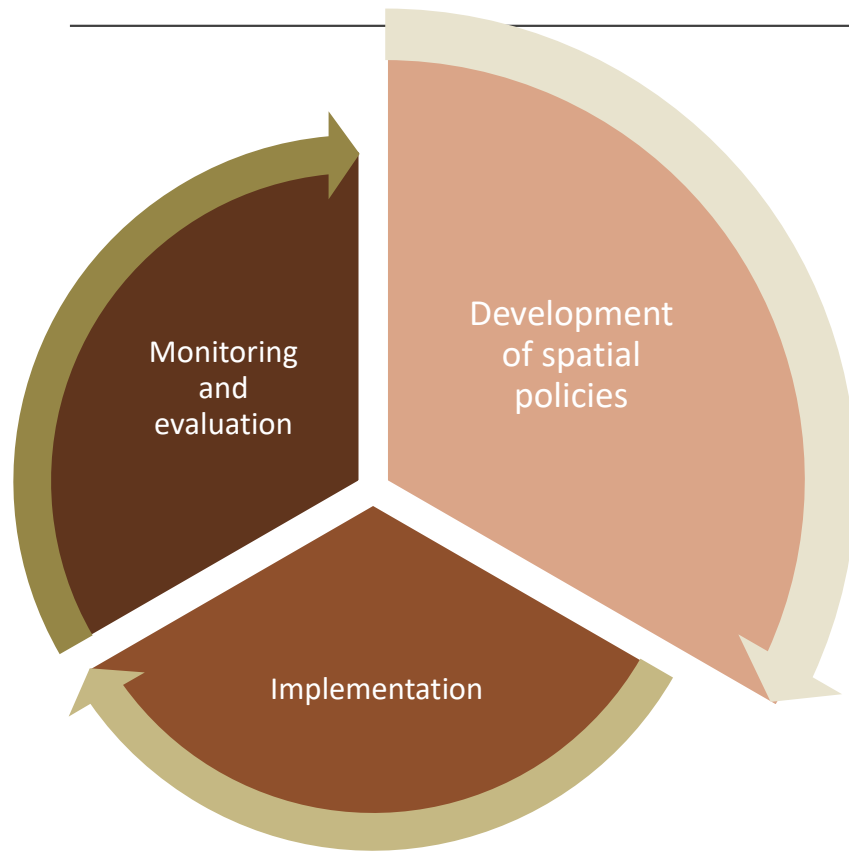
To make location-based decisions about land use and developments



Spatial planning & geo-info



Spatial planning & geo-info



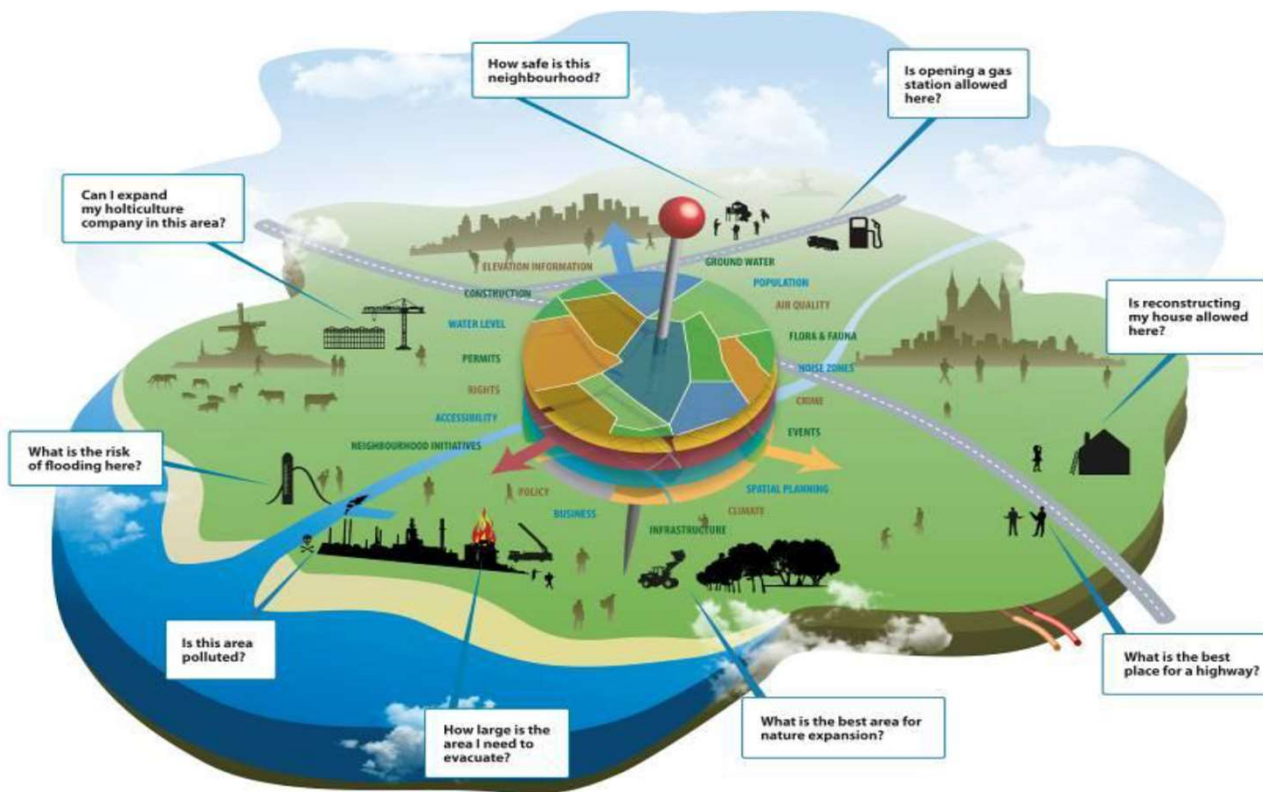
Strategic plans for the long term:

- Policy framework
- Vision and strategy
- Planning system and instruments

Operational plans for the short to medium term:

- Zoning plans
- Land use management plans

Development of spatial policy & plans



Determine objectives

Analyse situation

Identify opportunities and threats

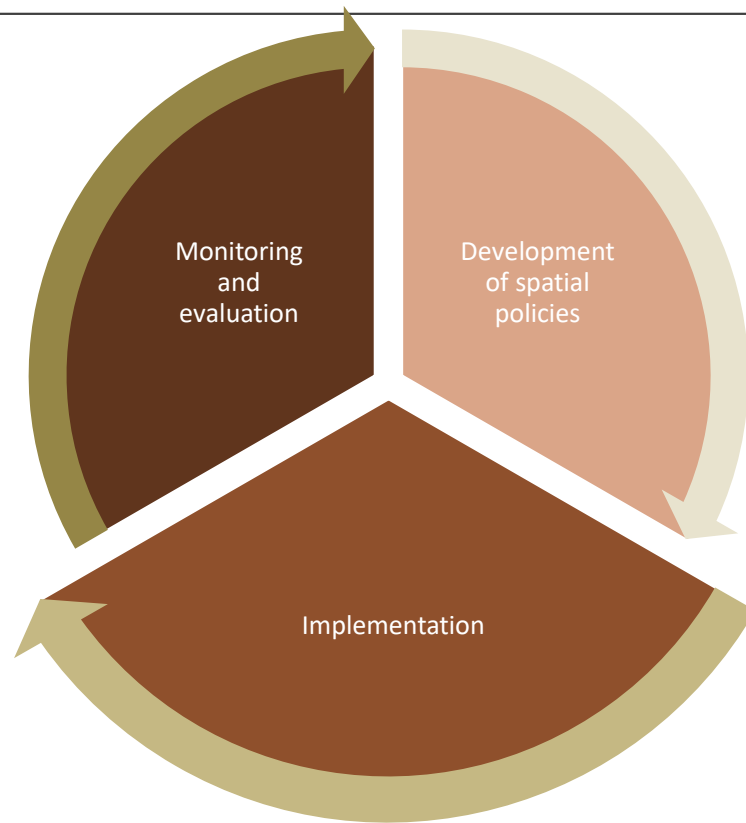
Develop options

Make spatial plan

Example zoning plan



Spatial planning & geo-info



Align real land use with planned land use by

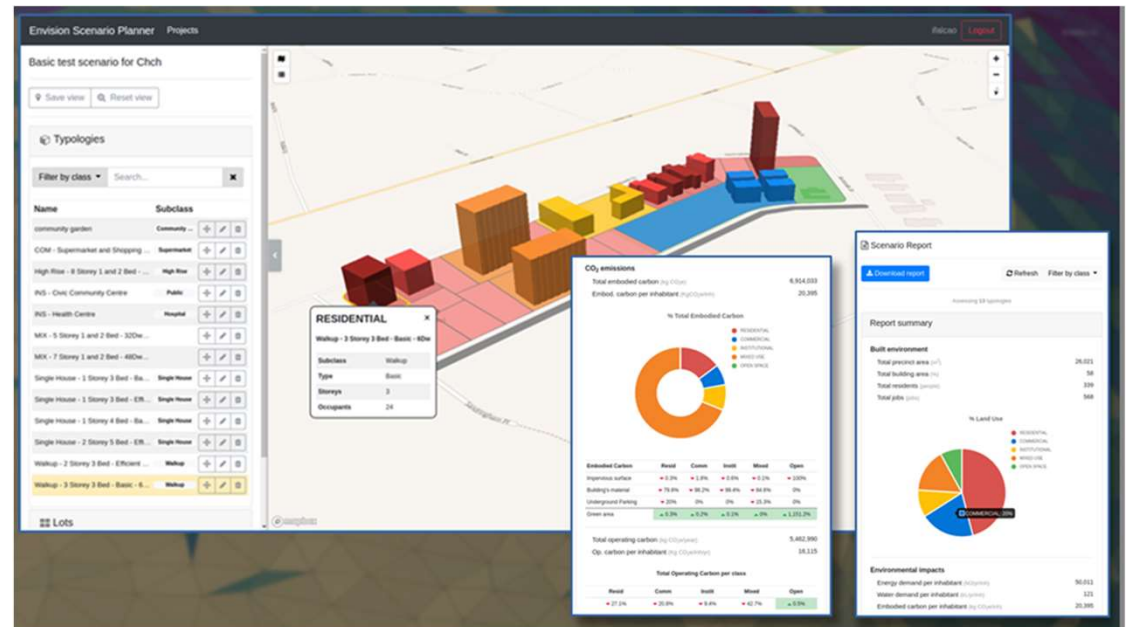
Projects:

- urban (re)development
- land consolidation
- land readjustment
- infrastructure

Enforcement:

- if situation is not according to zoning plan or rules and regulations

Example implementation

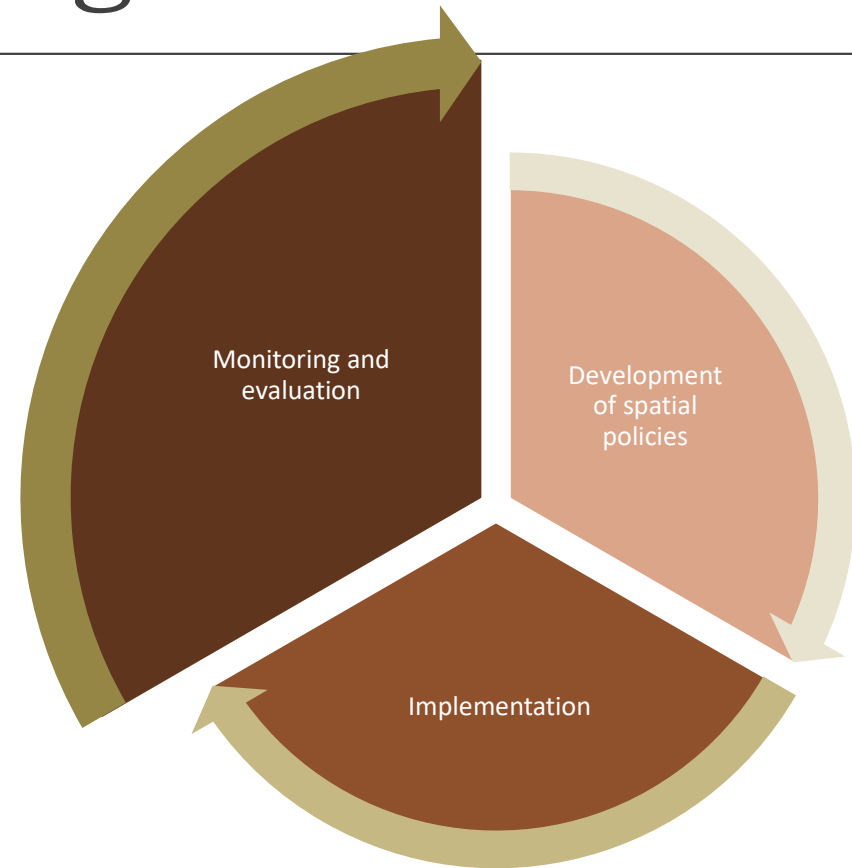


Spatial planning & geo-info

Monitor developments over time (geo-information at regular time intervals)

Analyse information and distinguish trends

Evaluate effectiveness and efficiency of spatial policy, which is input again for new/updated spatial policies



Dutch example monitoring


Verandering areaal groen binnen ringweg A10 van Amsterdam, 2003 - 2016






Bron: Giezen et al. 2018; bewerking PBL

The PBL evaluates government policy for the environment, nature and spatial planning in the Balance of the Living Environment. The Balance Sheet provides parliament, the cabinet and society with factually substantiated insight into the current quality of the physical living environment. It is the PBL's biennial evaluation that indicates the extent to which the environmental quality target set by the government is achieved in time. Where policy goals are not achieved, the PBL provides possible explanations for why this is the case.

European example monitoring

European Environment Agency 

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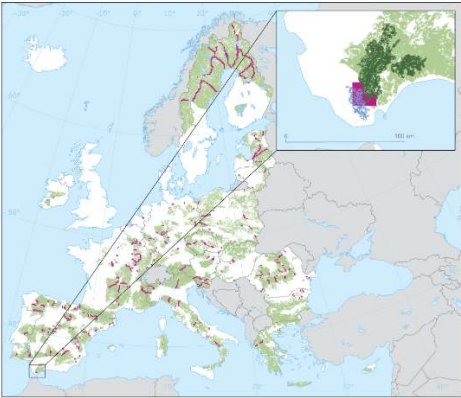
Publications > Building a coherent...

Topics: Biodiversity — Ecosystems Land use

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Biodiversity

Figure 1. Network of GI segments connecting Natura 2000 sites dominated by forest and woodland patches larger than 3 500 ha



Reference data: 9531

Network of GI segments connecting Natura 2000 sites dominated by forest and woodland patches larger than 3500ha

Minimum distance to GI network (km)	Number of connected sites and segments
< 1	2
1-5	3
5-10	
10-25	
> 25	

Legend: Selected Natura 2000 sites, GI connectors, No data, Outside coverage

Publication Created 02 Jul 2020 — Published 02 Jul 2020 —

Topics: Biodiversity — Ecosystems Land use

Briefing No 5/2020

Despite a strong policy framework and significant efforts by Member States (MSs) to halt biodiversity loss and ecosystem degradation in Europe, the conservation status of protected species and habitats continues to decline along with the provision of ecosystem services. The new EU biodiversity strategy to 2030 addresses this decline with a plan to 'build a truly coherent Trans-European Nature Network'. This will be built on the existing Natura 2000 network by analysing the potential connectivity between Natura 2000 sites using green infrastructure (GI) landscape elements important for delivering ecosystem services.

Download

-  Briefing-building-a-coherent-trans-european-nature-network.pdf [1.1 MB]
- read briefing online

Natura 2000 public viewer



Natura 2000 public database

- Click here to download the Natura 2000 database & shapefiles from the EEA Data Service  

Natura 2000 WMS and WFS

Web Map Services (WMS) is a standard protocol for serving geo-referenced map images over the Internet. Web Feature Services (WFS) is a standard protocol allowing requests for geographical features over the Internet. The features are returned in XML-based GML and can be subsequently used for spatial analysis or mapping. The specifications of both of these protocols were first published by the Open Geospatial Consortium.

- Natura 2000 Web Map Services 
- Natura 2000 Web Feature Services (available soon) 

Natura 2000 and biogeographical maps

- Natura 2000 maps by Member States
- Natura 2000 maps by Biogeographical region

Statistics

- Natura 2000 Barometer 
- GIS Area Calculations 

Requirements for geo-information

- Scalable – to coincide with planning level and institutional responsibilities
- Combinable – to map the complexity of planning locations
- Harmonized – to be able to analyse the data in a meaningful way
- Informative – to provide reliable and accurate location-based data
- Timely – to be able to capture trends and developments over time
- Understandable – to communicate plans in a simple way (KISS principle)
- And more

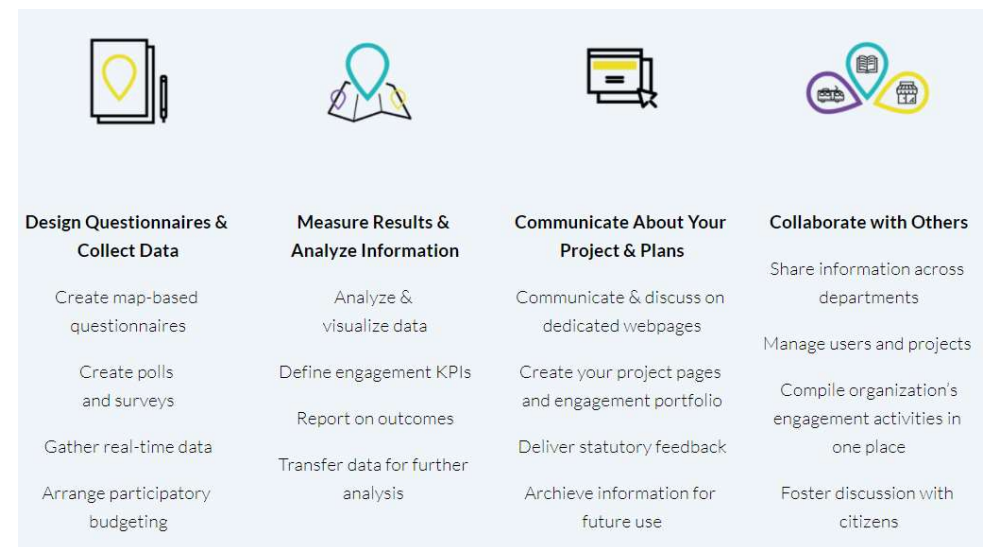
Some trends and developments

Data driven support for decision making

Digital twins to visualize 3D space

Augmented reality to visualize spatial plans

Map-based public participation



Example Maptionnaire

THANK YOU

Marije Louwsma

Chair commission 8

Spatial planning and development



FIG



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Save the Date

Workshop Joint FIG Commissions 3 and 8

PRATO, ITALY 20-21 JULY 2021
