CentropeMAP – Cross-Border Data at a Glance

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1   ABSTRACT

The Centrope region unites the territory near the common boundaries of Austria, the Czech Republic, Hungary, and the Slovak Republic. To foster cross-border issues in municipal and regional planning, CentropeMAP was introduced in the year 2005. CentropeMAP is a geoportal displaying datasets from the Centrope partner countries in a common interface, thus allowing an easy view across the borders.

CentropeMAP is also the basis for the interactive cross-border statistics information system CentropeSTATISTICS which allows statistic figures from the fields of demography, economy, and land use to be compared with each other, analysed and graphically displayed.

CentropeSTATISTICS concentrates on data at municipality level, which is the major difference to other existing cross-border statistics portals which often present their data only on NUTS 3 or even NUTS 2 levels which is insufficient for a cross-border analysis on a small scale.

Since autumn 2017 CentropeSTATISTICS contains a municipality and region comparison tool. Data for one or more municipalities can be compared with each other, or user-defined regions can be analysed – of course across the borders within the whole Centrope region.

Keywords: Centrope, geodata, geoportal, statistical data. thematic maps
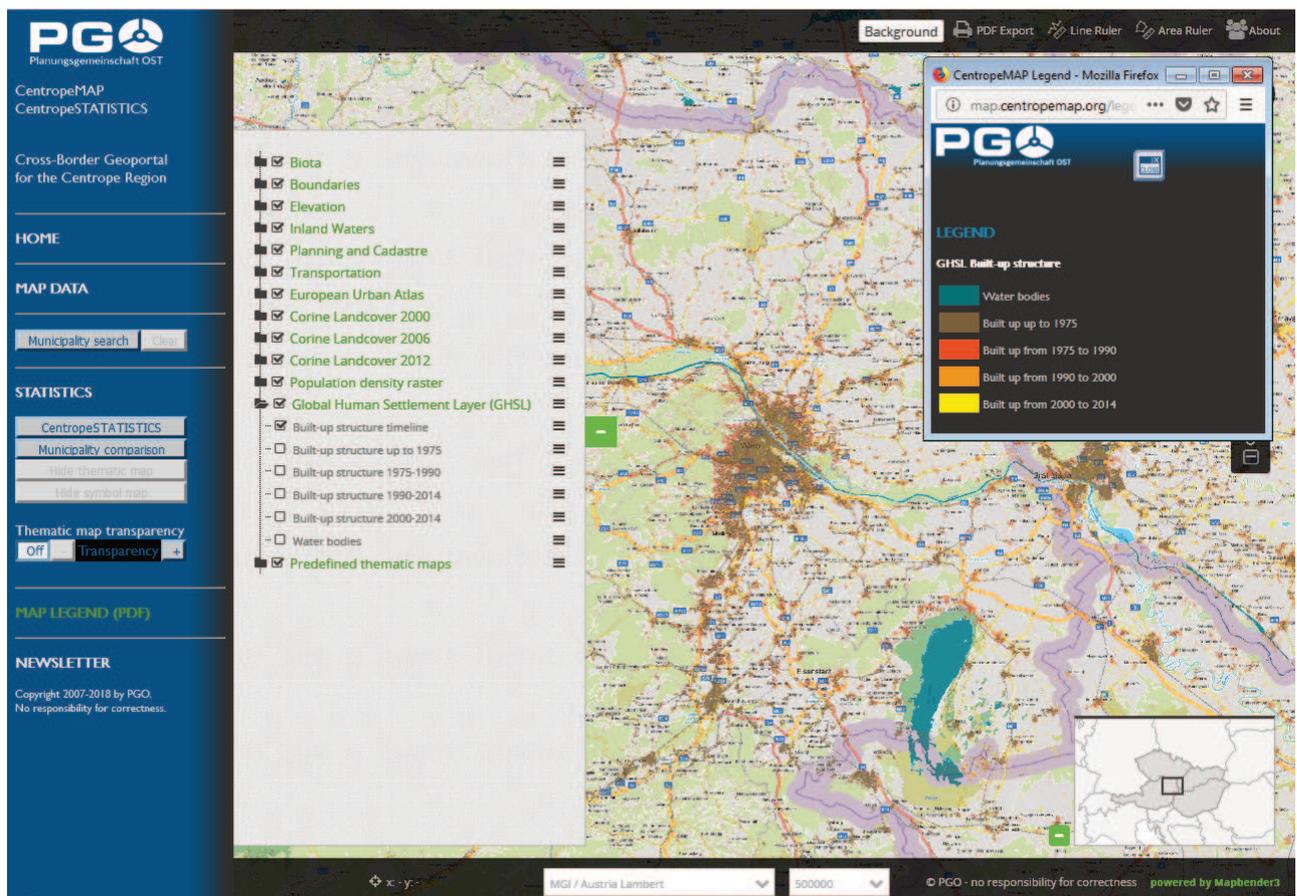
Fig. 1: The geoportal CentropeMAP.

2   BACKGROUND

2.1 Genesis of Centrope

The Centrope region is an artificial region consisting of the counties/federal states Burgenland, Lower Austria, Vienna; Jihočeský kraj, Jihomoravský kraj, Győr-Moson-Sopron, Bratislavský kraj, and Trnavský

kraj.[1] It was founded in the year 2003 by politicians and economic actors from the four countries Austria, Czech Republic, Hungary, and Slovak Republic who came together in Kittsee (Burgenland) to declare the foundation of the Centrope region within an INTERREG project to compensate the social and economic disadvantages which were laid on this region during the decades of the Iron Curtain.

At that time the Planning Association East (PGO – Planungsgemeinschaft Ost)[2] launched the pilot project "Base Map Centrope" which aimed at the collection of geodata throughout the Centrope region. These data were put on offline storage media and offered to interested partners and actors in the region. However, due to their offline characteristics, the contents of the base map were difficult to be kept up to date and only little present.

2.2 Genesis of CentropeMAP

The Centrope base map could not make its way because it was difficult to access, being available only on offline media. In 2005 the Planning Association East started an initiative to create the online geoportal CentropeMAP which relies on cooperation between the GIS and statistics departments of Vienna, Lower Austria, and Burgenland as well as with colleagues from the Centrope partner countries and counties in the Czech Republic, Hungary, and the Slovak republic.

During almost 15 years of run-time an excellent communication and exchange basis between all partners could be established, mainly because of the regular annual workshops where latest developments are discussed, new ideas are exchanged and datasets are harmonised.

CentropeMAP is a web-based appication which does not need any software installation, but can be run from any standard computer with internet connection.
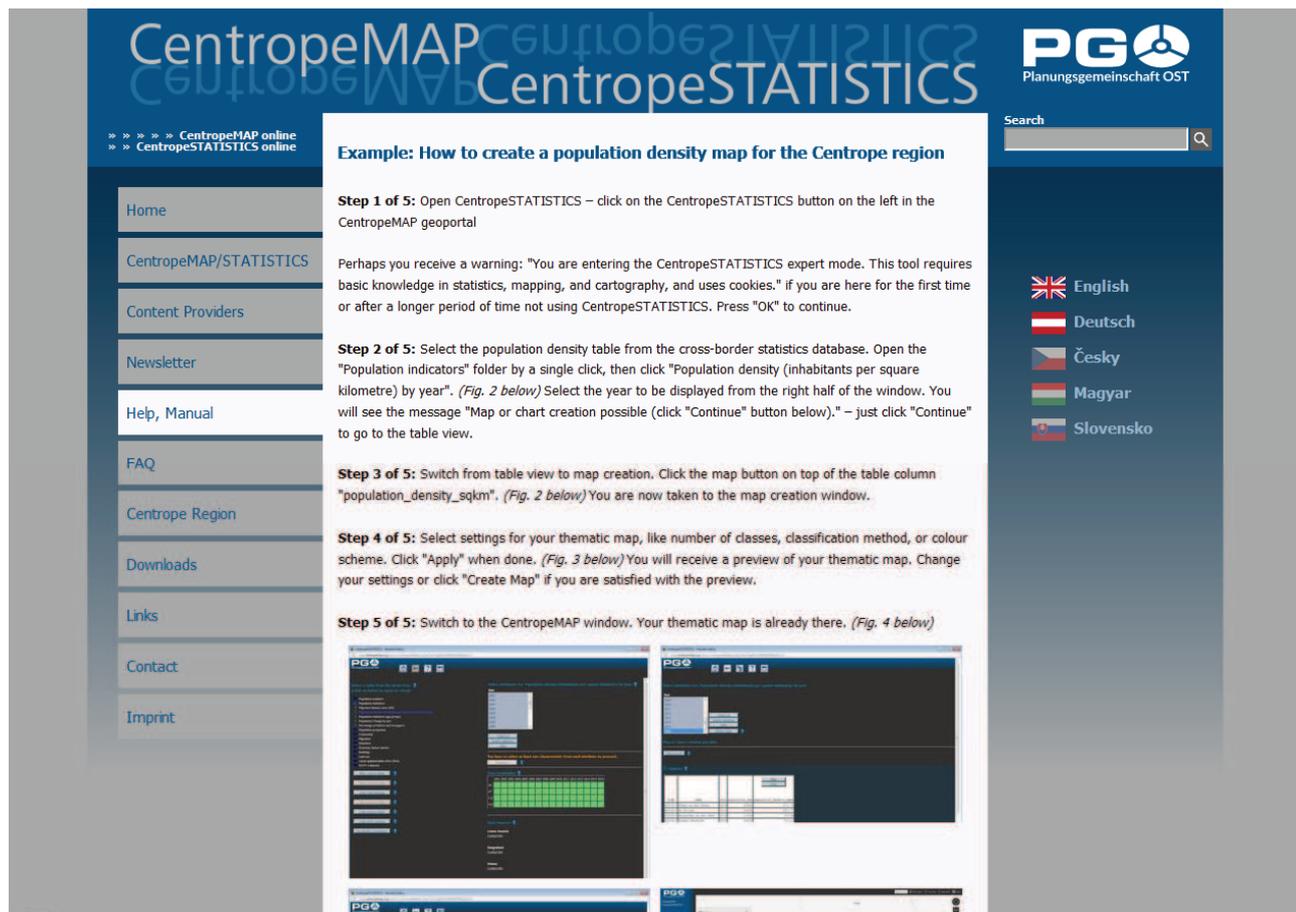

Fig. 2: The CentropeMAP website – most content is available in five languages.

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[1] The Centrope region as seen by CentropeMAP and CentropeSTATISTICS also features data from Vysočina kraj (Czech Republic) and Vas county (Hungary)..

[2] PGO is a common association of the Austrian federal states Burgenland, Lower Austria, and Vienna dealing with calibration, coordination, and preparation of spatial planning relevant issues in Eastern Austria.

3 WHAT MAKES CENTROPEMAP UNIQUE?

3.1 Combination of geodata from cour countries

CentropeMAP concentrates on datasets which are important for spatial planning and related disciplines like

- basic spatial information like boundariesm biota, water courses/water bodies, transport infrastructure, land use etc.,
- statistical data on demography, migration, education, economy/job market etc.,
- time series of data to analyse the development of the region.

CentropeMAP obtains its geodata directly from the data keeping authorities, which are mainly the GIS departments of the Austrian federal states Burgenland, Lower Austria, and Vienna, the Austrian agroforestry computing centre LFRZ, geoland.at, ITS Vienna Region, the European Environment agency, the Czech counties Jihomoravský and Vysočina, the Czech environment agency CENIA, and the Slovak environment agency SAZP.

3.2 Harmonised municipality data across the borders

Harmonisation of geodata across Europe is currently ongoing within the INSPIRE directive.[3] However, this process turned out to have rather slow progress during the past years so that there are currently no results which can be used in CentropeMAP. We are nevertheless keeping an eye on the INSPIRE implementation in the Centrope countries and are technically ready to use the results in our geoportal.

As far as statistics are concerned, data harmonisation on municipality level is a challenging process. Data from the partner regions may only be merged into a common table if data survey and data processing were done in the same way in all countries. This is quite simple when talking about demographic data; but as soon as other areas like unemployment or household size are reached, problems arise because terms like "unemployed" or "household" are differently defined in the partner countries. Also the methods of data survey are sometimes different – for example, the number of unemployment people is counted by due date in one country, but by monthly annual averages in other countries. In some cases it is possible to eliminate such differences by data aggregation, but this may lead to datasets with weak explanatory power.

Also, when talking about data on municipal level, data protection guidelines become an important issue. Combining attributes in small municipalities allows conclusions regarding single persons, therefore such datasets are not available throughout all partner countries. Nevertheless, CentropeSTATISTICS concentrates on municipality data because only this level allows detailed analyses on a small-scale regional level.

3.3 Easy map and chart creation

CentropeMAP and CentropeSTATISTICS have become a very extensive and complex information system. Nevertheless, we take care that map and chart creation remain a simple, user-friendly designed process which can be done step by step, comprehensible and well-documented. Every statistical process starts with the selection of the topic (table). Each table offers some possibilities to create maps or charts from certain table columns; it is also possible to combine values from more than one table in a user-defined table. CentropeSTATISTICS users whould bring along some basic knowledge in mapping and cartography to make sure they produce meaningful output. An extensive manual in English and German helps understand how CentropeSTATISTICS works.

On the CentropeMAP website we also prepared some examples of map and chart creation to illustrate that it is an easy process to turn statistical figures into colourful maps and different types of charts for one or more municipalities or regions.

4 MUNICIPALITY AND REGION COMPARISON

Have you ever been asked how many inhabitants or how many employable people live in your municipality, compared to its neighbouring municipality or the surrounding region? Neighbours do not always live in the

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[3] INSPIRE: Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community.

same administrative district or region, sometimes even in another country. Administrative boundaries disappear more and more in practise, however, they are still a limiting factor in statistics.
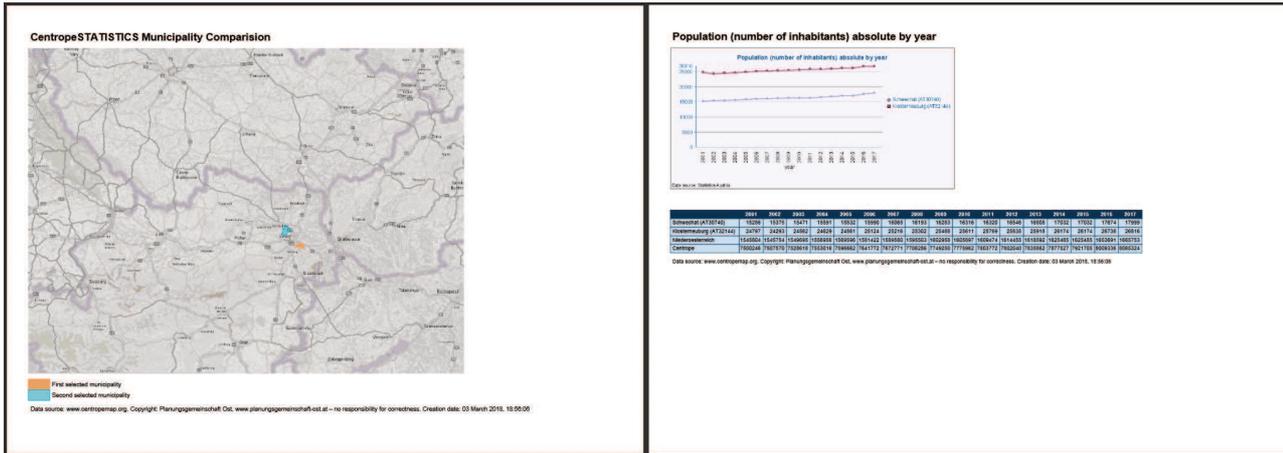

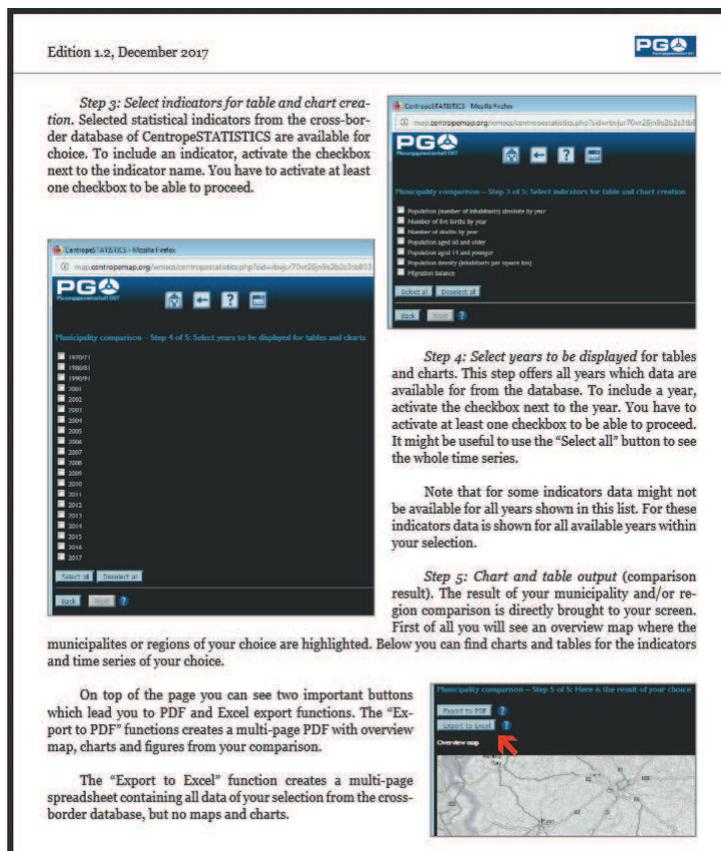Fig. 3: Parts of the formatted output of municipality comparison (PDF version).

Fig. 4: Screenshot from the CentropeSTATISTICS manual offering an easy and richly illustrated guide to all functions of CentropeSTATISTICS.

The new municipality and region comparison tool in CentropeSTATISTICS allows the comparison of a municipality or a region with another municipality or region. The main aspects are flexible application and customising options for users from the Centrope region – for example, adjacent municipalities can be queried automatically or a user-defined region can be built by selecting municipalities via a map. These functions are currently available:

- comparison of single municipalities or municipalities and regions,
- creation of tables and charts for selected statistical indicators and time series of CentropeSTATISTICS (will be continuously extended),
- display of the individual query results on the web or as PDF download.

The municipality and region comparison tool is directly available from the CentropeMAP geoportal (click the "Municipality comparison" button in the left menu); more content will be added in the future. Detailed instructions on how to use this tool are available from the CentropeSTATISTICS manual which can be obtained from the CentropeMAP website in English and German.

5   WEB LINK

http://www.centropemap.org/