



LUZ specifications (Urban Audit 2004)

MAIN RESULTS

- **Stakes:** Larger Urban Zones are based on various national definitions (functional areas, planning regions, local administrative units, etc.). Only a good knowledge of specifications allows identifying bias resulting from the national heterogeneity of these definitions
- **Methodology:** after collecting and expertizing documentation on national specifications, a common "syntax" has been used for categorizing specifications (rules of construction, building blocks, evolution since UA II etc.)
- **Results:** 1) Four general maps enlighten a synthetic typology of definitions, the evolution since UA II, the diversity of thresholds in commuting-based approaches and the specificity of capital city LUZ definitions 2) Thirty country-sheets summary specifications following a common syntax

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TABLE OF CONTENT

1	STAKES AND MATTER	4
1.1	A BOTTOM-UP APPROACH FOR BUILDING A EUROPEAN URBAN DATA BASE.....	4
1.2	DETECTING BIAS RESULTING FROM HETEROGENEITY IN LUZ DEFINITIONS	4
2	LARGER URBAN ZONE PRESENTATION	6
2.1	URBAN AUDIT ROUNDS.....	6
2.2	LUZ DEFINITION BY URBAN AUDIT	8
2.2.1	The three-level approach of the European Cities	8
2.2.2	Selection criteria of UA cities.....	9
2.2.3	Documentation (National Reports)	12
3	EXPERTIZE METHODOLOGY	14
3.1	DOCUMENTATION DATA PROCESS.....	14
3.1.1	Expertize of National Reports	14
3.1.2	Expertize of other documentation	15
3.2	CONSTRUCTION OF THE GENERAL SYNTAX.....	16
3.3	UNSOLVED PROBLEMS	17
4	RESULTS.....	18
4.1	TPOLOGY OF LUZ DELINEATIONS.....	18
4.1.1	LUZ as one elementary administrative unit	19
4.1.2	Aggregations of neighbouring units	19
4.1.3	Aggregations mainly based on commuting data	19
4.1.4	Aggregation with no specification.....	19
4.1.5	Planning regions or local consultations	20
4.1.6	No generic rules	20
4.1.7	No precise information	20
4.2	DIVERSITY OF COMMUTING THRESHOLDS.....	20
4.3	CAPITAL CITIES AS PARTICULAR CASES	21
4.4	TOWARDS MORE FUNCTIONAL APPROACHES	22
5	CONCLUSION.....	24
	ANNEX : LUZ SPECIFICATIONS BY COUNTRY (UA III).....	25
	REFERENCES.....	72

1 Stakes and matter

1.1 A bottom-up approach for building a European urban data base

Urban Audit¹ (UA) was conducted at the initiative of the Directorate-General for Regional Policy at the European Commission. It aims collecting comparable statistics and indicators for cities, at three different scales (Sub-Districts, City Core and Larger Urban Zones). A large number of indicators (more than one hundred) are sent by countries for each of these levels of definition, and the interest of such variables for urban studies is not to be proved. However, several questions concerning international comparability of indicators results are specifically raised at the larger scale definition, the LUZ one.

Indeed, the work engaged by Urban Audit for collecting and possibly harmonizing LUZ delineations represent a specific approach for trying to build a European set of cities. As opposed to Urban Morphological Zones², it is not a top-down approach (starting from identical definition criteria and trying to enrich it by taking into account national diversity) but a bottom-up approach. Countries are required by Urban Audit to choose and send national definitions of LUZ, sometimes changing them when taking into account some recommendations.

1.2 Detecting bias resulting from heterogeneity in LUZ definitions

Before using the large amount of available indicators of Urban Audit, some cautions have to be taken: LUZ definitions are so different from one country to another that an expertise of national specifications must be done in order to identify bias resulting from this heterogeneity.

The first step in our expertise was to collect a huge set of documentation on LUZ specifications (National Report sent at each round of Urban Audit, other information on Statistical Census Boards websites, annex documentations gathered by Urban Audit and kindly sent to us³). A second step was dedicated to the construction of a common syntax for describing these specifications, using a common vocabulary and approach in order to understand the national logics in these rules.

¹ <http://www.urbanaudit.org/>

² See Technical Report "Naming UMZ: making them more operational for urban studies", ESPON DB 2013.

³ We want here to thank warmly Teodora Brandmuller, from Urban Audit, without her this work could not have been achieved. She helped us several times to understand some complicated parts of national documentations and she sent us, at different times, a lot of files that fortunately filled some lack in our collect.

This technical report is divided in three parts: in the first one we recall some specificities of Urban Audit and we present the Larger Urban Zones (criteria of selection, evolution, national sources etc.). In the second part we present the methodology used for analyzing LUZ specifications, in particular the general model of country-sheet that has been used for re-writing in common vocabulary and syntax LUZ specification for each of the 30 countries under study. In the third part, results (typologies and maps) are presented and discussed. The 30 country-sheet on LUZ specifications are presented in Annex.

2 Larger Urban Zone presentation

2.1 Urban Audit rounds

Urban Audit, under the coordination of Eurostat, aims gathering comparable data covering most aspects of urban life in European cities and towns. National Urban Audit Coordinators (NUAC), generally represented by National Statistics Offices, are the link between Eurostat and the cities involved. They collect and gather data in their country before transmitting it to Eurostat.

Three different rounds occurred until now (Table 1). A first phase (pilot phase) was launched in 1998, a second one between 2003 for Member States and 2004 for Candidate Countries (UA II 2001), then a third between 2006 and 2007 (UA III 2004). The next round (UA IV 2008) is ongoing and data dissemination is expected for 2011.

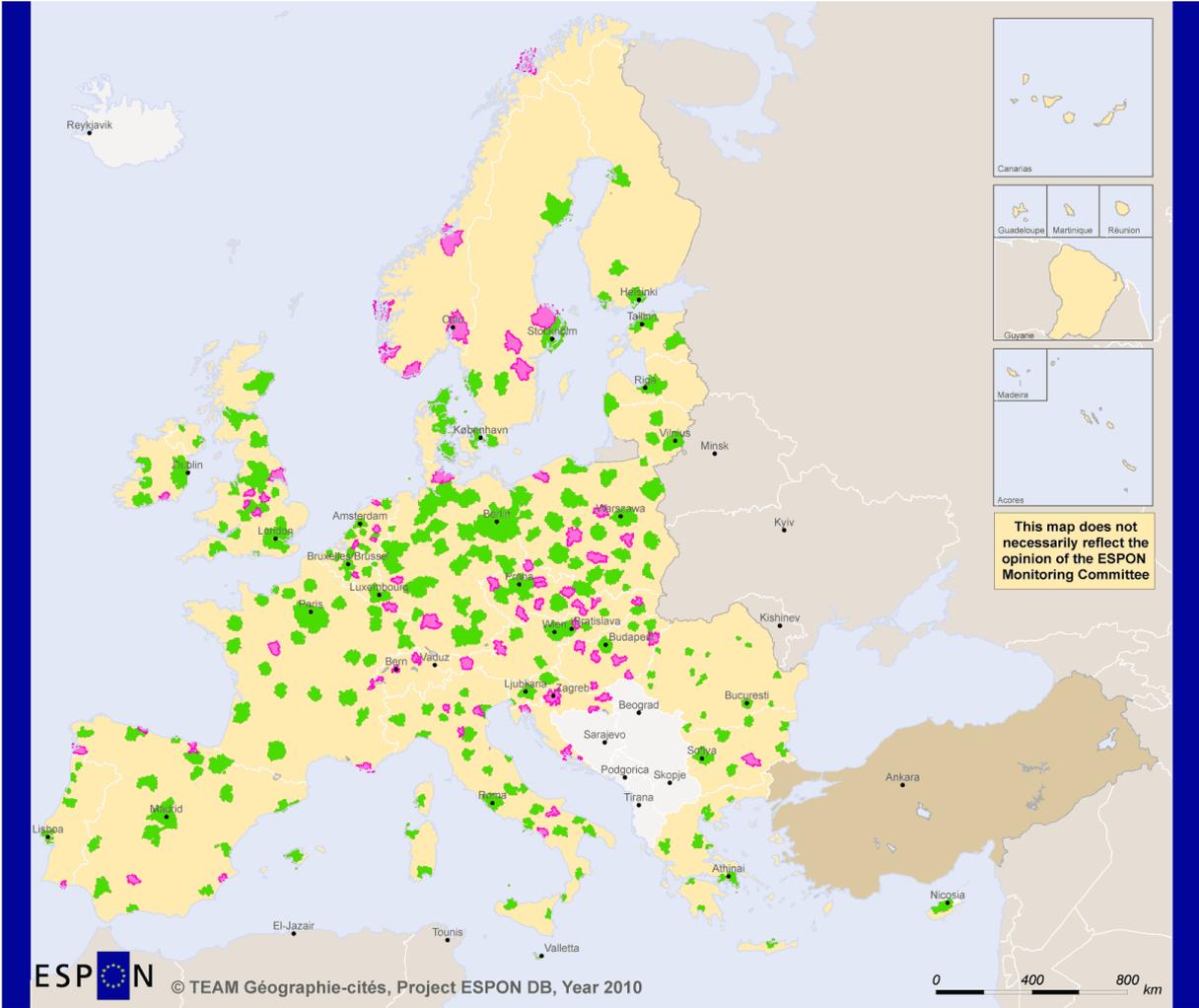
Table 1: Number of cities, countries and indicators involved in the three Urban Audit rounds

	UAPP (1998)	UA II (2001)	UA III (2004)
Number of cities	58	189 MS +69 CC = 258	321+46 = 367
Number of countries	15	15 +12 = 27	27 MS + Norway + Switzerland + Croatia + Turkey = 31
Number of indicators	500	336	338
Reference year	1981, 1991, 1996	2001	2004
Launching year	1998	2003-2004	2006-2007

UAPP: Urban Audit Pilot Phase; MS: Member State; CC: Candidate Countries

Some countries which are not included in the UE perimeter have participated to Urban Audit III and we have integrated them in this expertise when finding some data, i.e. Croatia, Norway and Switzerland. For Turkey, we did not found any information concerning LUZ so that we did not consider it here. We have worked on 30 countries in all (Figure 1)

Figure 1: UA II and UA III LUZ



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Regional level: NUTS 0
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 Origin of data: Urban Audit, year 2010
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- LUZs in UA II
- LUZs added in UA III
- No UA III
- Out of ESPON space
- No precise information

Source: GISCO. Some mismatches between GISCO⁴ and National Reports are described in the Country-sheets(Annex) and must be underlined on this map. Some LUZ are missing (the 26 LUZ from Turkey and 5 of the 9 LUZ from Switzerland), some others should be removed (Toulon LUZ in France).

⁴ Geographical Information System of the European Commission (http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1).

2.2 LUZ definition by Urban Audit

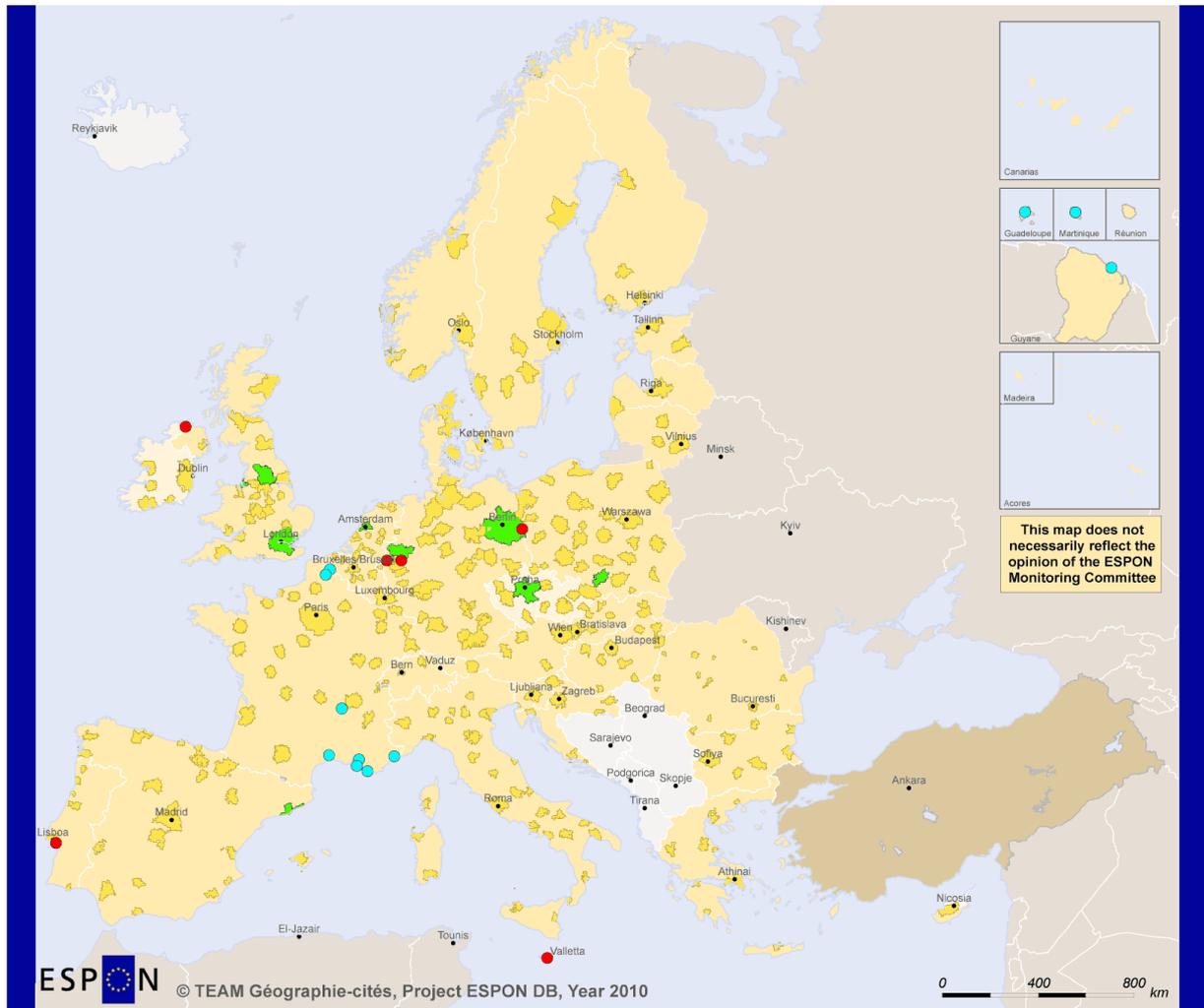
2.2.1 The three-level approach of the European Cities

Since Urban Audit II, urban entities that have been defined as “cities” may correspond to three representations:

- The **Core City** (CC) relates to an administrative approach of cities and towns, and generally fits with the eponymous central LAU2. In order to facilitate international comparisons, some *Kernels* have been created for larger European cities, and consist in an aggregation of LAU2.
- The **Sub-City District** (SCD) consists in a subdivision of the city according to population criteria.
- The **Larger Urban Zone** (LUZ) is conceived by Urban Audit to approach the functional urban region definition. It must “*allow a comparison between the city and its surroundings. The goal was to have an area from a significant share of the resident commute into the city, a concept known as the ‘functional urban region’.* To ensure a good data availability, the Urban Audit works with administrative boundaries that approximate the functional urban region” (<http://www.urbanaudit.org/help.aspx>).

In most of the cases, Urban Audit data collections concern European Cities simultaneously at the three different scale-levels. However, each Urban Audit “city” hasn’t systematically the three representations: some Urban Audit cities have no LUZ but one CC, other have the same perimeter for LUZ and CC; sometimes two CC share the same LUZ...The map presented below (Figure 2) gives a synthetic view of these particular cases in LUZ-CC articulations.

Figure 2: A variety of representations of Urban Audit "cities" (UA III)



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City representations in terms of city core and LUZ

- LUZ with a City Core inside
- LUZ including several City Cores.
- City Core and LUZ have the same perimeter
- City Core has no LUZ definition
- No precise national information
- No UA III
- Out of ESPON space

2.2.2 Selection criteria of UA cities

Urban Audit cities and the three-scale perimeters for data collection are selected according to specific criteria, that are unusual in the field of urban studies in the sense that classical hierarchical criteria (minimal population threshold) are completed by geographical criteria (spatial dispersion within each country) and administrative criteria (inclusion of national and regional capital) (see Insert 1).

Insert 1: Selection criteria of Urban Audit cities (<http://www.urbanaudit.org/help.aspx>)

The results give a heterogeneous set of cities, as displayed on the following

"What is Urban? The Urban Audit aims at a balanced and representative sample of cities in Europe. To obtain such a selection, a few simple rules were followed:

- 1. Approximately 20% of the national population should be covered by the Urban Audit.*
- 2. All capital cities were included.*
- 3. Where possible, regional capitals were included.*
- 4. Both large (more than 250 000 inhabitants) and medium-sized cities (minimum 50 000 and maximum 250 000 inhabitants) were included.*
- 5. The selected cities should be geographically dispersed within each Member State".*

figure. On the map representing LUZ population (Figure 3), the information seems to be harmonious and close to the one obtained, for example, from the city-size patterns given by Urban Morphological Zone data base (see the Technical Report Naming UMZ, ESPON database 2013).

However, when plotting the distribution of LUZ sizes on a rank-size graph (figure 4), the queue-distribution appears very different from the rest of the city sizes. This is due to the very small number of LUZ under 120 000 inhabitants, under-represented compared to the size of other classes. Some of these small LUZ are indicated on Table 2 (see for example in Germany, Norway, Greece etc.).

Figure 3: Pareto-Zipf distribution of LUZ size (UA III)

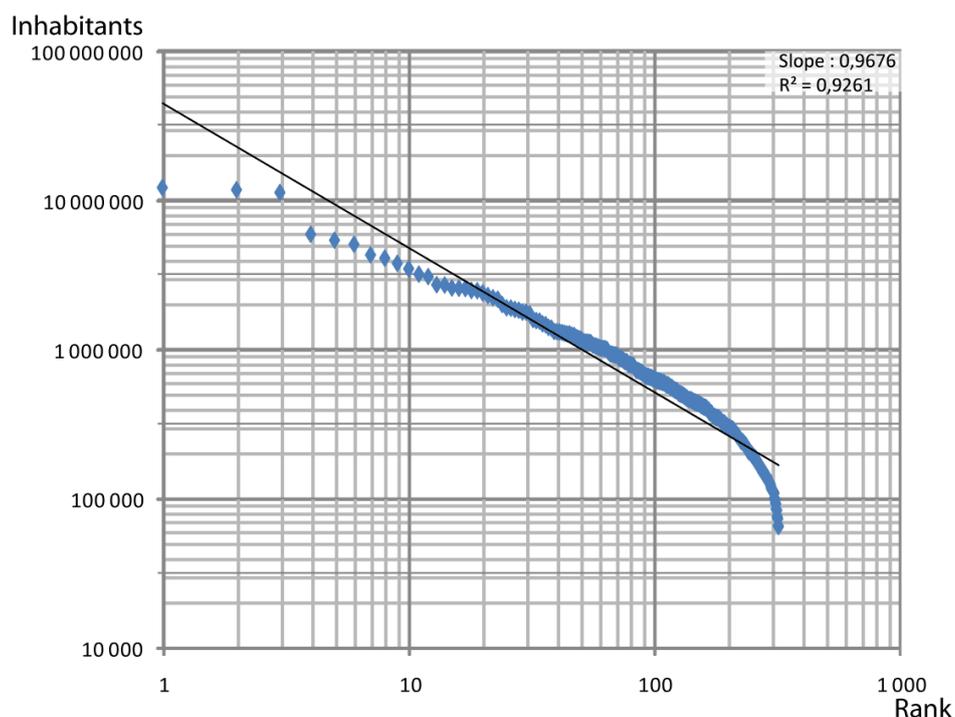
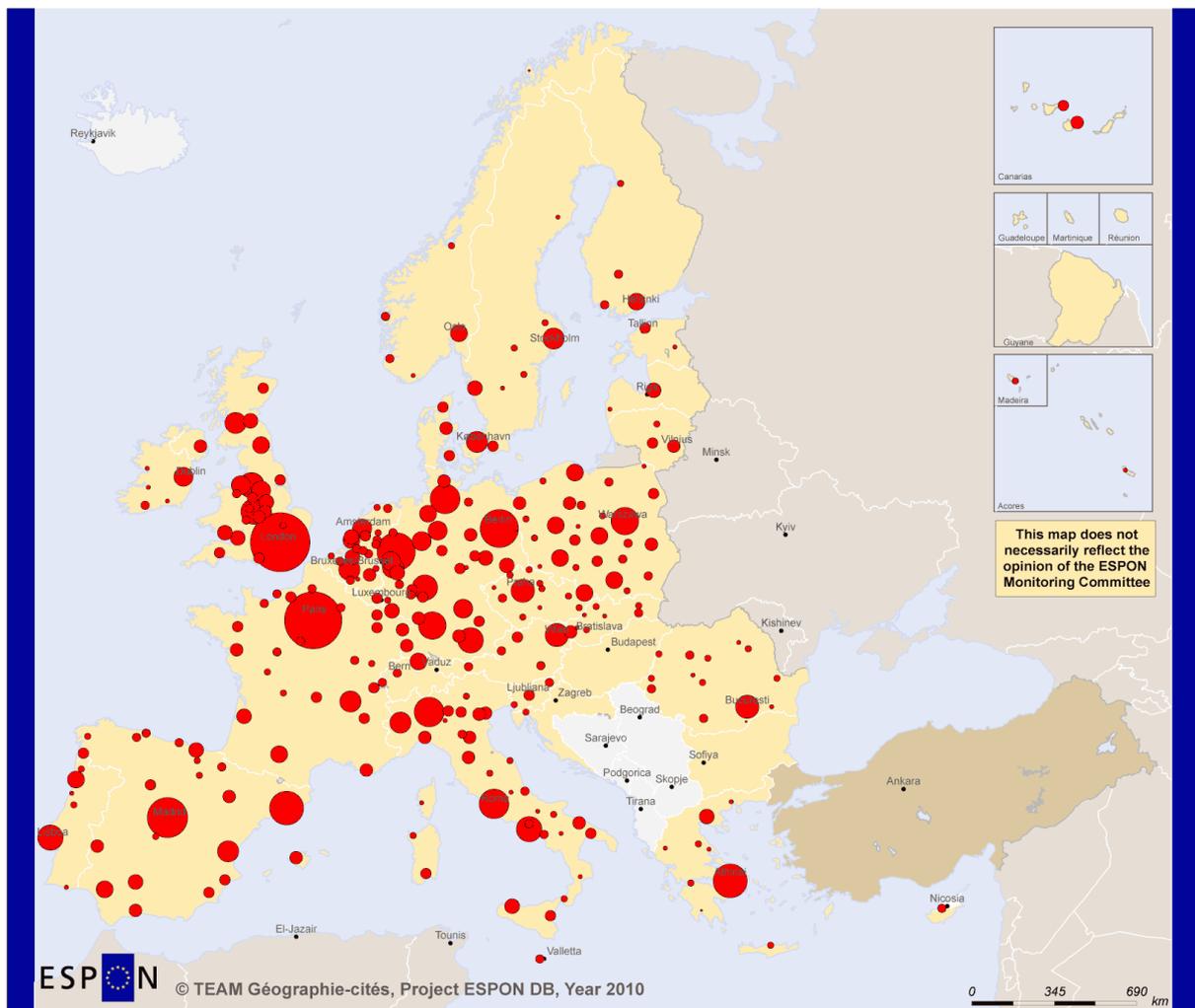


Figure 4: Population of LUZ in 2003-2006 (UA III)



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Source: ESPON DB, year 2011
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Inhabitants

- 100 000
- 1 000 000
- 10 000 000

- No UA III
- Out of ESPON space
- No precise information

*NB: No data for Bulgaria and Hungary (see table 2)
Some LUZ population are missing on Eurostat website⁴.*

In a more general way, one can observe the fact that the distribution is not well adjusted by the model (the coefficient of determination R^2 is only 0.93) whereas it is not the case for more classical distributions of European city-sizes (see UMZ, in the Technical Report "Naming UMZ" of ESPON database 2013, or Geopolis data base, in François Moriconi-Ebrard, 1993, where the value is over 0.98).

⁵ http://epp.eurostat.ec.europa.eu/NavTree_prod/everybody/BulkDownloadListing?sort=1&file=data%2Furb_vluz.tsv.gz

Table 2: LUZ number and min-max population by country (UA III)

Countries	Nb of LUZ in UA III	Population min and max (2003-2006)	Countries	Nb of LUZ in UA III	Population min and max (2003-2006)
Austria	5	272 677 2 179 769	Latvia	2	131 788 1 003 949
Belgium	7	139 024 1 800 663	Lithuania	3	160 656 709 870
Bulgaria	8	No data	Luxembourg	1	451 600
Croatia	5	213 396 ⁶	Malta	2	370 704
Cyprus	1	289 100	Netherland	14	158 883 1 443 258
Czech Republic	13	108 292 1 964 750	Norway	6	64 303 1 090 513
Denmark	4	475 082 1 822 569	Poland	27	82 539 2 660 406
Estonia	2	148 872 521410	Portugal	9	111 782 2 435 837
Finland	4	196 096 1 224 107	Romania	14	72 600 2 140 194
France	24	92 633 11 532 409	Slovakia	8	111 419 601 132
Germany	35	65 242 5 302 179	Slovenia	2	319 426 495 101
Greece	9	73 434 4 013 368	Spain	24	167 036 5 804 829
Hungary	9	No data	Sweden	8	139 588 1 860 872
Ireland	5	84 489 1 534 426	Switzerland	4	91 437 1 116 089
Italy	32	99 887 3 419 287	United Kingdom	26	253 500 11 917 000
			Total	313	

2.2.3 Documentation (National Reports)

The National Reports consist in a specific document sent by the NUAC (National UA Correspondent) at each UA round, which describes the general context and the specific conditions of the data collection. Even if National Reports are very different from one to another (for instance, the shortest is only 6 pages and the largest 124 pages), one can recognize more or less 4 main fields:

- *Overviews*: a general description of the data collection.
- *Spatial units description*: they are described for each of the three definition levels (City-Core, Sub-City Districts and LUZ). Usually the specifications of the LUZ definition are presented in this part of the Report.

⁶ For Croatia, LUZ population is available only for one LUZ on Eurostat website (http://epp.eurostat.ec.europa.eu/NavTree_prod/everybody/BulkDownloadListing?sort=1&file=data%2Furb_vluz.tsv.gz).

- *Indicators descriptions*: this part may contain lists of data available, meta information, or quality aspects of variables.

- *Conclusion*: some recommendations for improvement or other particular aspects can be mentioned there.

The availability of National Reports by country depends not only on each Urban Audit round but also on particular cases (for example Czech Republic and Ireland didn't send National Report for UA III). A general Table sums up these national differences (Table 3). Every National Report can be uploaded for consultation at the Communication & Information Resource Centre Administrator (Circa) of Eurostat.

Table 3: Availability of National Report per country and per Urban Audit round

Countries	UA II	UA III	Countries	UA II	UA III
Austria	✓	✓	Ireland	✓	✗
Belgium	✓	✓	Italy	✓	✓
Bulgaria	✓	✓	Lithuania	✓	✓
Switzerland		✓	Luxembourg	✓	✓
Cyprus	✓	✓	Latvia	✓	✓
Czech Republic	✓	✗	Malta	✓	✗
Germany	✓	✓	Netherland	✓	✓
Denmark	✓	✓	Norway		✓
Estonia	✓	✓	Poland	✓	✓
Spain	✓	✓	Portugal	✓	✓
Finland	✓	✓	Romania	✓	✓
France	✓	✓	Sweden	✓	✓
Greece	✓	✓	Slovenia	✓	✓
Croatia		✓	Slovakia	✓	✓
Hungary	✓	✓	United Kingdom	✓	✓

3 Expertize methodology

3.1 Documentation data process

3.1.1 Expertize of National Reports

National Reports constitute the main source of information on LUZ specifications. They have been analyzed through different steps:

- Identification of coherence between the different phases of UA (which countries do participate, which cities, which LUZ?)
- Research of regularities in the national descriptions of the process, in order to point out categories that may be systematically extracted (city implications, LUZ evolutions...)
- Identification of the degree of completeness of the information regarding these categories.
- Research of correspondence with the geometric sources of LUZ, provided by GISCO (Geographical Information System of the European Commission⁷)

During these processes, different problems have been raised and have made the work highly complex. Some of them are purely formal (for example the National Reports which are not translated in English, a problem that we have naturally solved for France and Belgium but not for Norway). Some others are related to the content (for instance, allusive description of LUZ definition, or lack of explanation concerning LUZ definition) (Insert 2).

⁷http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

Insert 2: Main problems encountered in National Report expertise (see country-sheets in Annex for more details)

- National Reports or technical annexes are not written in English (France, Belgium, Norway) ;
- LUZ definitions refer to a national zoning whose construction rules are not specified (for example the *Stadsgewest* of the Netherlands, the *Stobyregioner* of Norway or the *Local Labour Market areas* of Sweden, resulting from a collaboration with Eurostat).
- LUZ building blocks are described in allusive terms (for example the *Amter* of Denmark).
- The National Report does not give any information about LUZ definition (for example in Luxembourg).
- There is no National Report (Ireland, Czech Republic).
- Building Blocks mentioned in National Reports are difficult to compare with the last version of NUTS or LAU available at European scale. Sometimes the version of LAU 2 is not the same, or LAU 1 are not available for the related country.
- Information given in National Report is sometimes in contradiction with information given in GISCO (for example when cities have their City Core inside another LUZ, see Wirral in United Kingdom).

3.1.2 Expertize of other documentation

About one dozen of National Reports contained a fully specified description of LUZ definitions that did not need to be completed by other documentation (Austria, Bulgaria, Croatia, Cyprus, Estonia, Italy, Poland, Portugal, Romania, United Kingdom...).

For the rest of National Reports, we used other sources of information in order to try to fill the lack of information. Different situations occurred:

Situation 1: LUZ is defined as a NUTS or LAU proxy⁸.

We have then checked this information, using GISCO (Austria, Cyprus, Estonia, Latvia, Lithuania, Denmark, Slovakia) or search more information, especially when some reports or urban analyses were mentioned in the National Report for justifying the NUTS or LAU proxy (Austria, Latvia, Lithuania, Slovakia).

⁸ See Section 4.1.1

Situation 2: LUZ is defined using a national zoning not fully described in the National Report.

We have then tried to find the documents giving the precise methodology on National Statistical Boards websites (for example, the *région urbaine* of Belgium, the *aire urbaine* of France, the *agglomeration* of Switzerland, the *planungsregionen* of Germany, the *stadsgewest* of Netherlands, the *storbyregioner* of Norway). For Netherlands and Norway, some documents were found but not in English.

Situation 3: LUZ is defined using an allusive reference to a national zoning definition.

Again, National Statistical Boards websites were visited (for example concerning “labour market areas” in Sweden or «suburban communes» in Romania). Another complementary method consisted to find information on national functional areas (Statistical Boards websites, publications) and to compare them to the LUZ perimeters (for example in Sweden).

Situation 4: LUZ is not defined, or in a very imprecise way.

We have then contacted Urban Audit Team (Teodora Brandmuller) and received in most of the cases some additional information (for example Greece, Spain, Finland).

3.2 Construction of the general syntax

Different fields have been chosen for describing, in a common language and syntax, the rules used by each country to construct their LUZ. These fields and their content are described in Insert 3.

Insert 3: Model of the Country-Sheet

NAME OF THE COUNTRY
Summary
◆ Number of cities with a LUZ in UA III and previous UA ■ Changes in LUZ definitions between UA II and UA III ● Description of LUZ delineation rules in UA III
Building blocks
◆ Identification of the building blocks of the LUZ ■ Links between building blocks when LUZ is an aggregation ● LUZ capital specificity (relatively to the other national LUZ)
Particular cases
Particular observations, not concerning LUZ capital
Correspondence with GISCO
Coherence between National Reports and GISCO shape files (number of LUZ, names etc.)
References
Documentation used for building the sheet (National Reports and other sources)

3.3 Unsolved problems

In some cases, it was not possible to achieve the expertise because of a remaining lack in information. In these cases, the country-sheet is not complete but missing information is specifically underlined. The most striking cases are:

- Netherlands and its "Stadsgewesten" (only a rough summary of the definition was found in English)
- Hungary and its LAU1 (statistical entities but without information on aggregation criteria)
- Sweden and its "Local Labour Market Areas" (defined in collaboration with Eurostat but we did not found more information)
- Finland and its LUZ (no information on LAU 2 aggregation criteria).

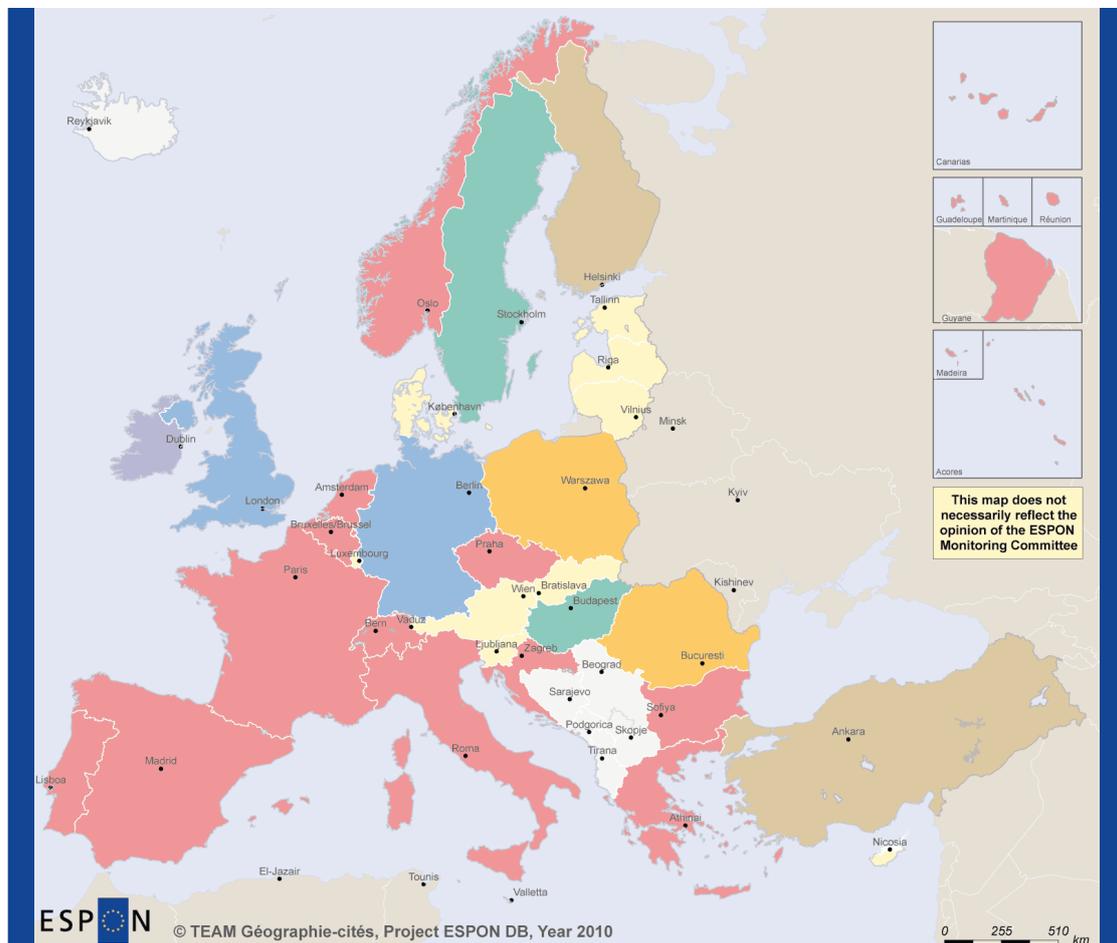
4 Results

After the construction of the 30 country-sheet specifications, different analyses have crossed the results in order to qualify in a synthetic way some national specificities in LUZ delineations.

4.1 Typology of LUZ delineations

A first synthesis of the 30 country-sheets is related to their type of definitions (Figure 5).

Figure 5: Typology of LUZ delineation (UA III)



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 Origin of data: Urban Audit, year 2010

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National LUZ definitions based on:

One administrative unit

Aggregation of neighbouring units

Commuters mainly

Aggregation with no specification

Planning regions or local consultation

No generic rules

No precise information

No UA III

Out of ESPON space

4.1.1 LUZ as one elementary administrative unit

A first approach characterizes countries that use a sole administrative unit as a LUZ, for example one LAU 1 (Cyprus or Estonia) or one NUTS 3 (Austria or Slovenia). Since these LUZ do not result from an aggregation of LAU, they are not considered as functional in our typology, even if most of the countries mention in their National Report some previous statistical analyses on commuters data that would justify the choice of such or such specific administrative level unit as a proxy (for example Estonia, or Slovakia).

4.1.2 Aggregations of neighbouring units

In two countries, Poland and Romania, LUZ consist in an aggregation of neighboring units, mainly based on distance or contiguity criteria. In Poland, these criteria are completed by hierarchical criteria (the extent of the ring depending on the City-Core size), and in Romania, it is completed by juridical criteria (the selected surrounding LAU 2 must be qualified as "urban" according to a former law, see the country-sheet in Annex).

4.1.3 Aggregations mainly based on commuting data

In about half of European countries, LUZ consist in functional aggregations mainly based on commuting data. However, we have to precise that construction methods are extremely different from one country to another: some take into account only commuters patterns towards a central pole (for example Greece or Croatia), whereas other also consider commuters patterns towards surrounding areas (for example Italy). Sometimes, school commuting are included (see Belgium), population growth (see Switzerland) or transport infrastructures (see Netherlands). In Portugal, the method is first based on LAU 2 commuter levels, then on LAU 1 commuter levels. And we will see in the next sub-section that, even if we examine only commuter thresholds, a great variety of situations appears. Nevertheless, this very rich set of functional approaches is worth studying, as it reflects results of national expertise on "what is a functional urban area" in such or such country.

4.1.4 Aggregation with no specification

In two countries, Sweden and Hungary, LUZ consist in an aggregation of administrative units but the criteria are not specified in the National Reports. In Hungary, for example, the LAU 1 is called a "statistical sub-region" and consists itself in an aggregation of elementary units based on functional criteria (see country-sheet in Annex).

4.1.5 Planning regions or local consultations

In Germany and United Kingdom, LUZ constructions are based on consultations at local or regional levels. LUZ correspond to "Planning regions" in Germany, whereas in United Kingdom "*Office for National Statistics sought the recommendation of relevant Local Authorities and Government Office Regions when constructing the LUZ area for each of the 24 cities under analysis*" (see country-sheets in Annex).

4.1.6 No generic rules

Ireland constitutes a particular case, in the sense that several approaches are used in this country (on a total of 5 LUZ, two of them are based on commuters and two others are based on planning regions) (see country-sheet in Annex).

4.1.7 No precise information

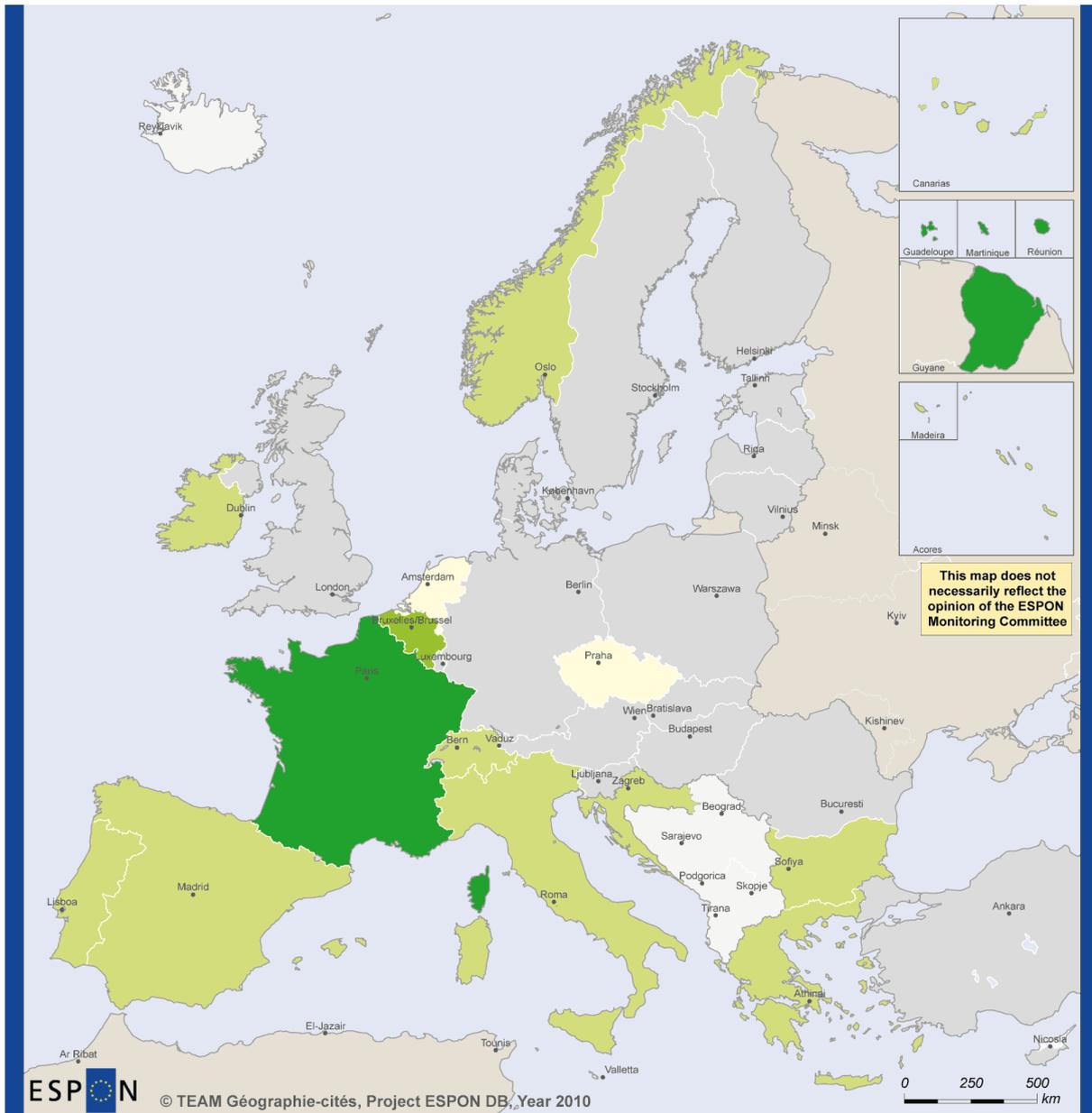
In Finland, the information given in the National Report or other sources collected by us is too incomplete about the way LUZ are constructed (see country-sheet in Annex).

4.2 Diversity of commuting thresholds

When the National Reports or other sources clearly mention the commuter thresholds used in functional definitions of LUZ, it is possible to display these data as values of a quantitative variable (Figure 6). The results seem to be very random and chaotic: countries with similar values are not located in the same part of Europe, and the map does not enlighten a general gradient or center-periphery structure or other macro-structure. Another possible explanation could be represented by the average size of administrative units (variation of thresholds corresponding to variation in LAU surfaces), but we did not find any statistical relations between these two variables. A more specific study should be addressed to the national researches that sustained the choice of these functional criteria in the different countries⁹.

⁹ In France, for example, this context is given by Thomas Le Jeannic (1996), « Une nouvelle approche territoriale de la ville », INSEE – *Economie et Statistique* n°294-295.

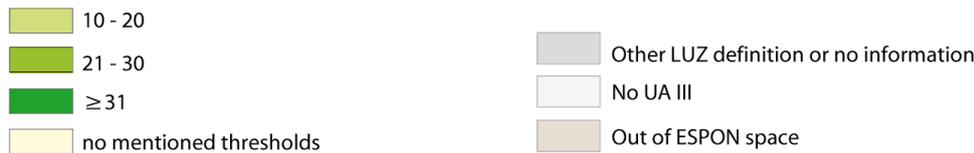
Figure 6: A European variety of LUZ commuting thresholds



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Level of commuters in LUZ functional approaches (%)

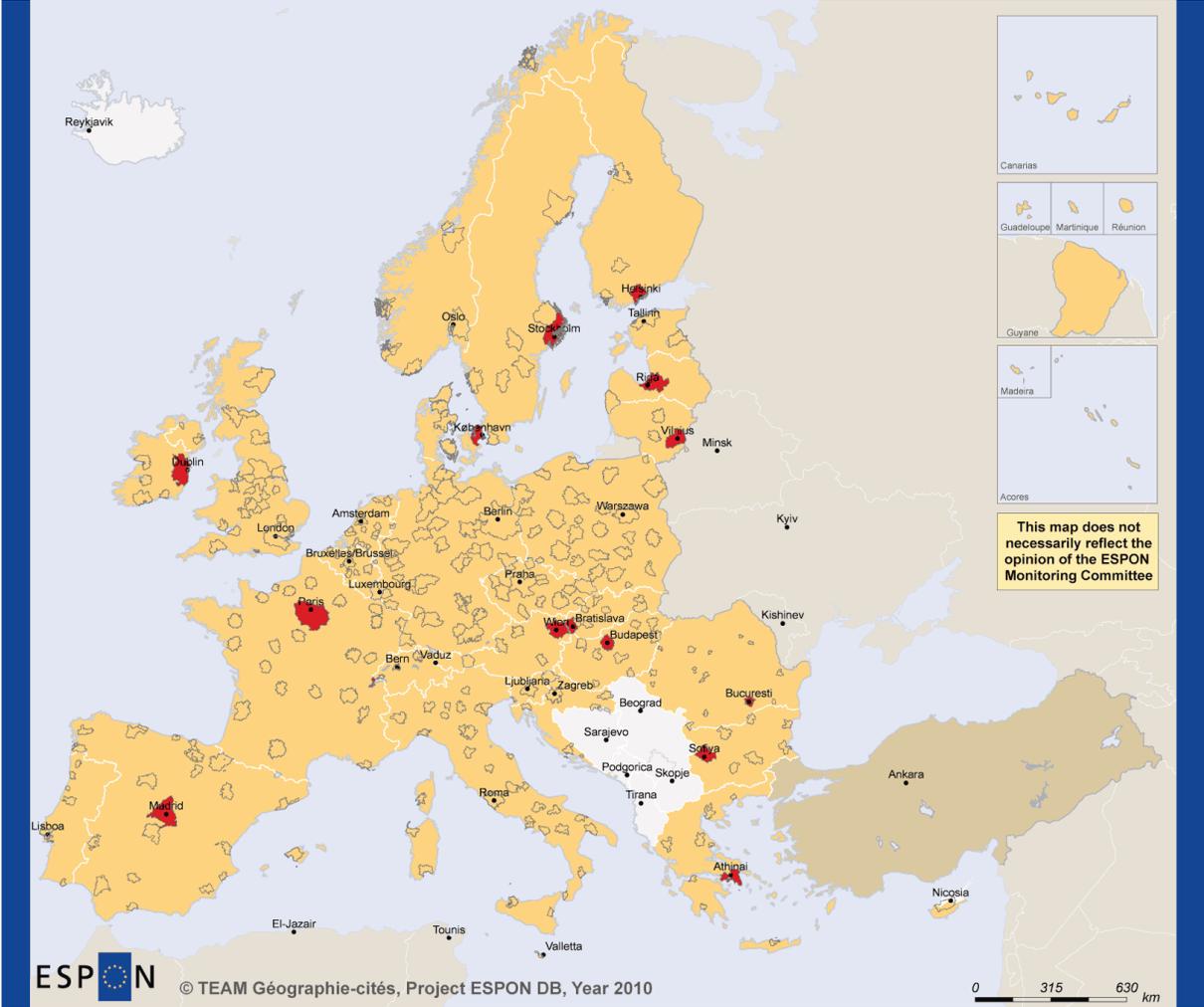


4.3 Capital cities as particular cases

In more than half of the European countries, the Capital cities constitute a particular case of the LUZ perimeters (Figure 7). The aim is generally to take into

account a particular influence field of this city (see for example Bucharest), or to fit better to a large administrative unit for questions of data availability (see for example the case of Paris). In most of the cases, NUTS perimeters are used : 4 Capital city LUZ fit with a NUTS 3, one fits with a NUTS 2, 5 are based on an aggregation of NUTS3, and 5 other are based on another type of aggregations (see country-sheets in Annex).

Figure 7: Intra-national heterogeneity in UA III definitions



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Regional level: NUTS 0
Source: ESPON DB, year 2010
Origin of data: Urban Audit, year 2010
© EuroGeographics Association for administrative boundaries

- 1 - Basic national delineation
- 2 - Particular zoning
- LUZ delineation
- Capital cities
- No UA III
- Out of ESPON space
- No precise information

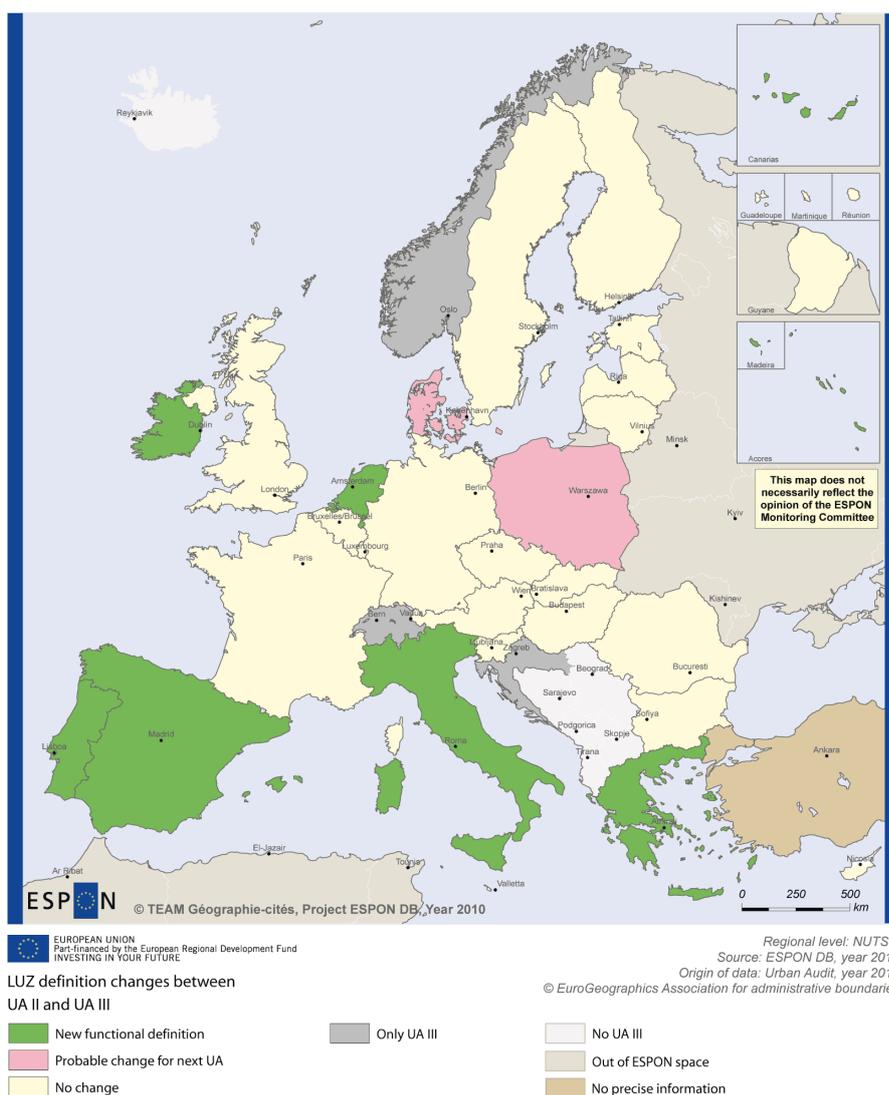
4.4 Towards more functional approaches

One of the fields that have been filled in the country-sheets concerns the evolution of LUZ definition between UA II and UA III. The results enlighten a

clear dynamic towards more functional approaches, largely encouraged by Urban Audit and Eurostat¹⁰.

Between UA II and UA III, six countries have changed to adopt functional definitions (Portugal, Spain, Greece, Italy, Netherlands, Ireland), and two countries have announced in their National Report or annex documentation that they would probably adopt new definition for the next Urban Audit (Poland and Denmark). It is also noteworthy that all the new participant members to UA III, which are not represented on this map because not concerned by evolution since UA II, i.e. Croatia, Norwegian and Switzerland, have all adopted functional definition (mainly based on commuters). We have no information for Turkey.

Figure 8: New LUZ functional definitions



¹⁰ Torbiörn, Carlquist. « The Larger Urban Zones in the Urban Audit data collection. » *Globalisation impact on Regional and Urban Statistics*. Wrocław, 2006.

5 Conclusion

As presented in this technical report, the work consisting in collecting and analyzing documentation on LUZ specifications was very complex but helped to re-write in a common way the different rules used by each country to define its LUZ. This work is just a step in the whole process, for three different reasons:

- It will have to be updated when the results of the next Urban Audit will be published
- Some explaining factors still have to be explored (for example, concerning the great variety of commuter thresholds in Europe)
- Some country profiles (country sheets) are not yet complete. Other documentation has to be found or to be translated in English.

Anyway, the different maps and the typology allowed to have a global overview and to enlighten different results. The large heterogeneity in the national approaches used to define LUZ engages researchers to be very cautious when interpreting some statistical results. But they also enlighten a very interesting evolution between UA 2001 and UA 2004, towards more functional definitions mainly based on commuters, even if the criteria (commuter thresholds, for instance) are very different from one country to another.

It confirms again that harmonization in definitions must not be only guided by the research of a unique rule and criteria for the whole Europe but must be based firstly on a good knowledge of the regional differences in settlement contexts and secondly on the political and historical ways each country defines cities. These differences are not an obstacle to harmonization when the metadata are fully specified.

Annex : LUZ specifications by country (UA III)

Model of the Country-Sheet

NAME OF THE COUNTRY
Summary
<ul style="list-style-type: none"> ◆ Number of cities with a LUZ in UA III and previous UA ■ Changes in LUZ definitions between UA II and UA III ● Description of LUZ delineation rules in UA III
Building blocks
<ul style="list-style-type: none"> ◆ Identification of the building blocks of the LUZ ■ Links between building blocks when LUZ is an aggregation ● LUZ capital specificity (relatively to the other national LUZ)
Particular cases
Particular observations, not concerning LUZ capital
Correspondence with GISCO
Coherence between National Reports and GISCO shape files (number of LUZ, names etc.)
References
Documentation used for building the sheet (National Reports and other sources)

AUSTRIA

Summary

◇ Austrian cities have been included in Urban Audit since the Pilot Phase (Wien, Graz) **(1; 2)**, then in UA II (Linz) **(2; 3)**, and in UA III (Salzburg, Innsbruck) **(4; 5)**. In total, five cities are concerned.

□ LUZ definitions have not changed between UA II and UA III (*"The spatial units of Vienna and Graz were the same as in the data collection 2001"* **(4)**).

○ Each LUZ corresponds to one NUTS 3 (except for Wien), not only in UA II (*"The proposal for the larger urban zones was to take NUTS 3- regions to get a functional urban region"* **(2)**) but also in UA III (*"For the new cities Salzburg (AT004C) and Innsbruck (AT005C) the Larger Urban Zone is the surrounding NUTS3-Region"* **(4)**). Apparently some commuting data have been used previously, but no details are provided in National Reports (*"For the definition of the larger urban zone of a city we used commuting data"* **(2)**).

Building blocks

◇ NUTS 3, elementary administrative unit (i. e. *Gruppen von Politischen Bezirken*)

□ No aggregation

○ Wien: NUTS 3 aggregation (no details concerning the nature of the links)

Particular cases

Linz: The LUZ *"is not the best solution, because in the NUTS3-region of Linz is another big city called Wels. But Linz and Wels are functionally related, so we decided to take also the NUTS3-region for Linz"* **(2)**.

Correspondence with GISCO

Same number of LUZ¹¹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Schrittwieser, Karin. (Undated). *Urban Audit II Final report for the European Commission*. Wien : Statistik Austria.
3. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
4. Schrittwieser, Karin. (Undated). *Urban Audit 2004 Austria Final Report for the European Commission*. Wien : Statistik Austria.
5. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.

¹¹ Files downloaded and checked July 5, 2010

BELGIUM

Summary

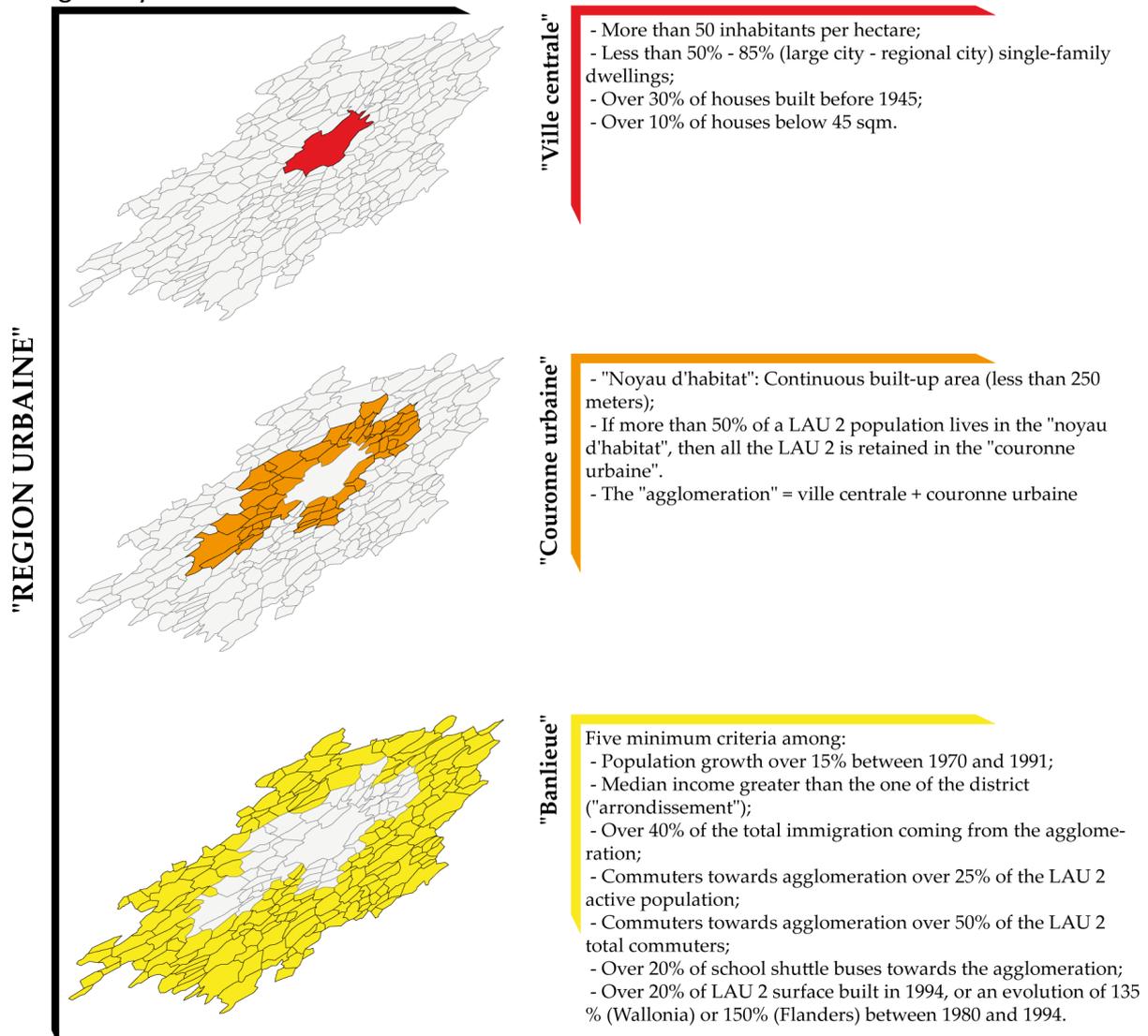
◇ Belgian cities have been included in Urban Audit since the Pilot Phase (Brussels, Anvers) **(1)**, then in UA II (Liège, Charleroi, Gand, Bruges) **(2; 3)**, and in UA III (Namur) **(4)**. In total, seven cities are concerned.

□ LUZ definitions have not changed between UA II and UA III **(5)**.

○ LUZ correspond to the Belgian functional region called « région urbaine » (« *Les « large urban zones » ont été établies à partir de : “Les régions urbaines belges en 1991”* » **(3)**). The criteria are functional ([elles] « *reposent sur des critères de fonctionnalité* » **(6)**). These criteria were formulated in 1996 **(7)**.

Construction data came from 1991 census **(8)**.

The figure below describes the different steps for building the “régions urbaines”, translated in English by us:



Source: Van der Haegen, H, Van Hecke, E et G., Juchtmans. *Les régions urbaines belges en 1991*. [éd.] Institut national de Statistique. *Etudes statistiques*. 1996, n°104

Building blocks
<p>◇ LAU 2, aggregation (i.e. Gemeenten / Communes): “ville centrale + couronne urbaine + banlieue”.</p> <p>□ Links: mainly based on commuters (threshold 25%).</p>
Correspondence with GISCO
<p>Same number of LUZ¹²</p> <p>http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1</p>
References
<ol style="list-style-type: none"> 1. ERECO. (2000). <i>L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes</i>. Luxembourg: Office des publications officielles des Communautés européennes. 2. Eurostat. (2004). <i>Urban Audit, Methodological Handbook, 2004 edition</i>. Luxembourg: Office for Official Publications of the European Communities. 3. (Undated). <i>Deuxième rapport sur le projet Urban Audit II</i>. 4. Eurostat. (2008). <i>European Regional and Urban Statistics Reference Guide</i>. Luxembourg : Office for Official Publications of the European Communities. 5. (Undated). Rapport sur le projet Urban Audit II : Demande de données historiques 1991-1996 et données 2001. 6. Doulou-Ouamba, Marlène. (2008). <i>Audit Urbain III</i>. s.l. : Service Publique Fédéral Economie, PME, Classes Moyennes et Energie. 7. Van der Haegen, H, Van Hecke, E et G., Juchtman. (1996). <i>Les régions urbaines belges en 1991</i>. [éd.] Institut national de Statistique. <i>Etudes statistiques</i>. n°104. 8. Hermia, J-P. (Undated). <i>Une nouvelle délimitation spatiale du phénomène périurbain bruxellois</i>.

¹² Files downloaded and checked June24, 2010

BULGARIA

Summary

◇ Bulgarian cities have been included in UA II (Sofia, Plovdiv, Varna, Burgas, Pleven, Ruse, Vidin), then in UA III (Stara Zagora) **(1; 2; 3; 4)**. In total, eight cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ LUZ are defined with a functional approach. Two steps are followed:

1st step: *“Finding the settlements (LAU2 [i.e. Naseleni Mesta]) that have more than 20% commuters (out of the employed residents) in both directions to the City Core (incoming and outgoing migration are added)”*.

2nd step: *“Aggregating the data for the respective municipality (i. e. LAU 1) and checking again for the criterion” (4)*. Apparently, this choice is due to lack of data (*“Even though the NUTS5 data is the most suitable for defining the functional urban zones in the case of Bulgaria, due to data availability reasons a combination of NUTS4 units (Obshtini) was chosen” (5)*).

Data come from the 2001 Census (*“A particular question in the Census card addresses the location where the individual works/studies and lives” (5)*).

Building blocks

◇ LAU 1, aggregation (i.e. *Obshtini*)

□ Links: based on commuting data (threshold 20%).

○ Sofia: Aggregation of one NUTS 3 (i.e. *Oblasti*) and several LAU 1 (*“The whole NUTS3 level unit (Oblast) was included in the newly formed LUZ, as well as several neighboring NUTS4 territorial units” (5)*).

Correspondence with GISCO

Same number of LUZ¹³

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. (Undated). Urban Audit, Phase III - Historic data Interim Report 2006.
3. Eurostat. (2009). *Annuaire régional d'Eurostat 2009*. Luxembourg : Office des publications officielles des Communautés européennes.
4. Tsvetarsky, Serguey. (Undated). *Phare 2005 - Project: Urban Audit IV*. Sofia.
5. Tsetarsky, Serguey et Kotzev, Alexander. (2004). *Eurostat Pilot Phase - Urban Audit II - Phase 1 - Final Report Bulgaria*. Sofia.

¹³ Files provided by Urban Audit October 5, 2010

CROATIA

Summary

◇ Croatian cities have been included in UA III (Zagreb, Rijeka, Slavonski Brod, Osijek, Split) **(1)**. In total, five cities are concerned.

□ Croatia did not participate to UA II.

○ LUZ are defined with a functional approach, and the definition was specifically adopted for Urban Audit ("*Larger Urban Zones (LUZ) were created by CBS [Central Bureau of Statistics] only for UA needs on the basis of the nearest neighborhood*" **(2)**). Two steps are followed:

1st step: "*Larger urban zones around selected cities have been chosen in the following way: We have investigated for each city which municipalities and towns on the NUTS 5 level have commuting rate over 20% (according to the data from Census 2001)*".

2nd step: "*we have created continuous larger urban zones (no holes or gaps)*" **(2)**.

The construction data come from the 2001 census **(2)**.

Building blocks

◇ LAU 2, aggregation (i.e. *Gradovi i općine*)

□ Links: based on commuting data (threshold 20%)

Particular cases

Split: "*Only one exception was Split LUZ in which municipality of Zagvozd was included even if it has no common border with the other components of the Larger urban zone*" **(2)**.

Correspondence with GISCO

Same number of LUZ¹⁴

References

1. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
2. Crostat. (2008). *Urban Audit Final Operational Report*. s.l. : Republic of Croatia Central Bureau of statistics.

¹⁴ Files provided by Urban Audit, October 5, 2010

CYPRUS

Summary

- ◇ Only one city, in UA II and III **(1; 2)** (Lefkosia).
- LUZ definitions have not changed between UA II and UA III.
- Lefkosia LUZ corresponds to one LAU 1:
“The district of Lefkosia was taken as a proxy for the Larger Urban Zone (LUZ) based on data, from the 2001 Population Census, on commuting flows to the core city” (1): “in most municipalities and communities in the district of Lefkosia, other than those eight that are considered urban, reside a large percentage of commuters to the urban area of the district (for the purpose of employment): at least 40% (for the majority) when calculated individually” (2).

Building blocks

- ◇ LAU 1, elementary administrative unit (i.e. *Eparchie*)
- No aggregation

Correspondence with GISCO

Same number of LUZ¹⁵

References

1. (Undated). *Urban Audit 2001 Data Collection Project: Final Report (Reporting country: Cyprus)*.
2. (2008). *Urban Audit 2006/2007 Data Collection Exercise Final Report Member State: Cyprus*.

¹⁵ Files provided by Urban Audit, October 5, 2010.

CZECH REPUBLIC

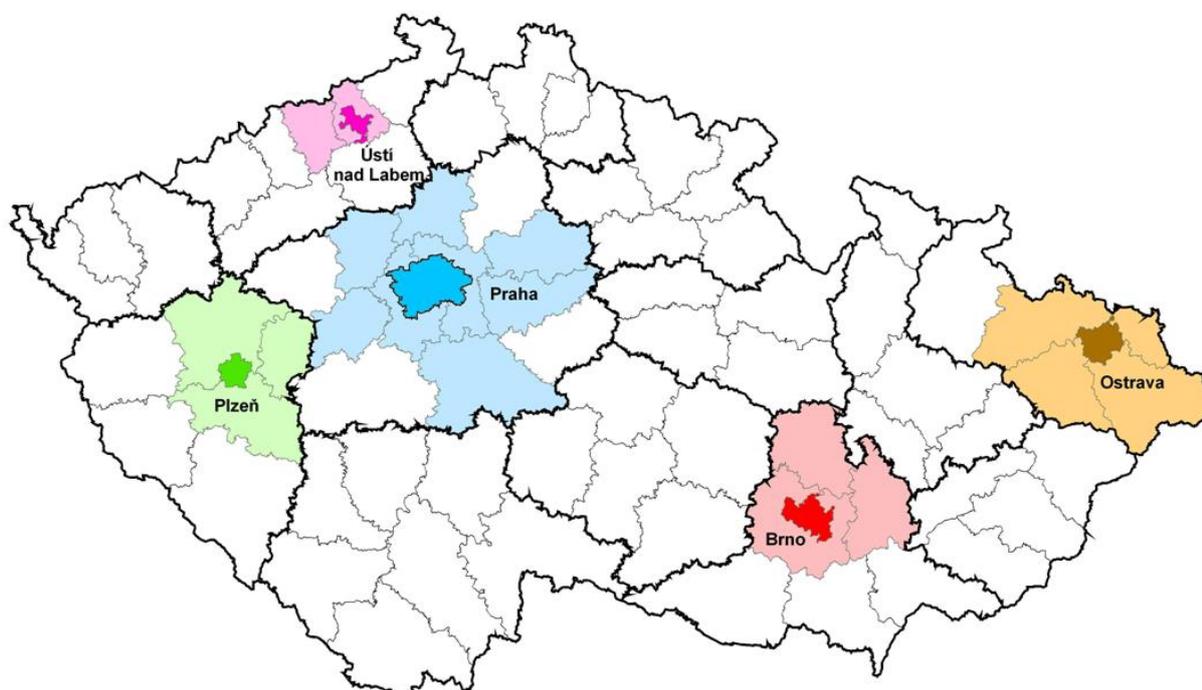
Summary

◇ Czech cities have been included in UA II (Brno, Ostrava, Plzen, Praha, Usti nad Labem) **(1)**, then in UA III (Olomouc, Liberec, Ceske Budejovice, Hradec Kralove, Pardubice, Zlin, Karlovy Vary, Jihlava **(2)**). In total, thirteen cities are concerned.

□ Czech Republic did not transmit National Report for UA III.

○ LUZ are defined in UA II with a functional approach. They correspond to an aggregation of LAU 1 (*"Larger Urban Zones (LUZ) have been defined as groups of LAU 1 units, as the NUTS 3 regions were excessively large"* **(4)**). According to the UA II National Report, LUZ have been built using commuting data from Census 1991, but the methodology is not detailed (*"Delimitation of the adequate functional LUZs was based mainly on the commuting into work and schools from census 1991"* **(5)**). According to the Manual of Data Quality Aspects, the perimeters have been confirmed by Census 2001 (*"[LUZ] have been delimited as aggregates of LAU-1 units (okresy). (...) Inclusion of individual LAU 1 districts was (...) confirmed by Census 2001, once available"* **(3)**).

The map below gives the delimitation of the five LUZ of UA II. The grey lines correspond to LAU 1 units and the black lines to NUTS 3 **(3)**.



Source: Czech Statistical Office. (2005). *Urban Audit - Czech Republic - Manual of data quality aspects (Phase 1, 2 and historical data)*.

Building blocks

◇ LAU 1, aggregation (i.e. *Okresy*)

□ Links: based on commuting data. Methodology has not been provided in National Report.

Particular cases
- Kladno: the City Core has no LUZ because it is part of Praha LUZ ¹⁶ .
Correspondence with GISCO
Same number of LUZ ¹⁷ http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1
References
<ol style="list-style-type: none"> 1. Eurostat. (2004). <i>Urban Audit, Methodological Handbook, 2004 edition</i>. Luxembourg: Office for Official Publications of the European Communities. 2. Eurostat. (2008). <i>European Regional and Urban Statistics Reference Guide</i>. Luxembourg : Office for Official Publications of the European Communities. 3. Czech Statistical Office. (2005). <i>Urban Audit - Czech Republic - Manual of data quality aspects (phase 1, 2 and historical data)</i>. 4. Czech Statistical Office. (2005). <i>Urban Audit - Final Report on Phase 2 - Czech Republic</i>. Praha. 5. Czech Statistical Office. (2004). <i>Urban Audit II – Final Report on Phase 1</i>. Praha.

¹⁶ According to information transmitted by Urban Audit, January 2009.

¹⁷ Files downloaded and checked July 21, 2010

DENMARK

Summary

◇ Danish cities have been included in Urban Audit since the Pilot Phase (Copenhagen) **(1)**, then in UA II (Århus, Odense, Aalborg) **(2; 3)**, and in UA III **(4; 5)**. In total, four cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ Each LUZ corresponds to one NUTS 3:

“The level of the regions [i.e. Amter] in which the cities are placed, [called the larger urban zone], (...) is an administrative unit managed by a Council, and is elected every four years” (4). These Amters have disappeared on December 31, 2006 but LUZ definitions remained the same for UA III: *“Denmark did not wish to change their LUZ yet. A big regional reform is foreseen for 2007 and in connection with this, new non-administrative NUTS 3 regions will have to replace the old “Amter” or counties” (6).*

Probable changes in LUZ definitions will occur for the next Urban Audit (UA IV).

Building blocks

◇ NUTS 3, elementary administrative unit (i.e. *Amter*).

□ No aggregation

○ Copenhagen: aggregation of several LAU 1 (i.e. *Kommuner*) and several NUTS 3:

“The capital region has been officially delineated to include the municipality and three counties (Amter):” (2), i.e, Copenhagen LUZ includes *“(...) the municipality of Copenhagen and Frederiksberg and the regions of Copenhagen, Frederiksberg and Roskilde” (4).*

Correspondence with GISCO

Same number of LUZ¹⁸

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Danmarks Statistik, Befolkning og Uddannelse. (2004). *Final report concerning agreement N° 2002CE160AT181 about Urban Audit*.
3. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
4. Statistics Denmark, Population. (2007). *Final Report Concerning Agreement N° About Urban Audit 2004 Collection*.
5. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
6. Carlquist, Torbiörn. (2006, August 30). The Larger Urban Zones in the Urban Audit data

¹⁸Files downloaded and checked July 5, 2010

collection. *Globalisation Impact on Regional and Urban Statistics*. Wrocław.

7. Christiansen, Henning. (Undated). *Urban Audit II - State of the Art - Country: Denmark*.

ESTONIA

Summary

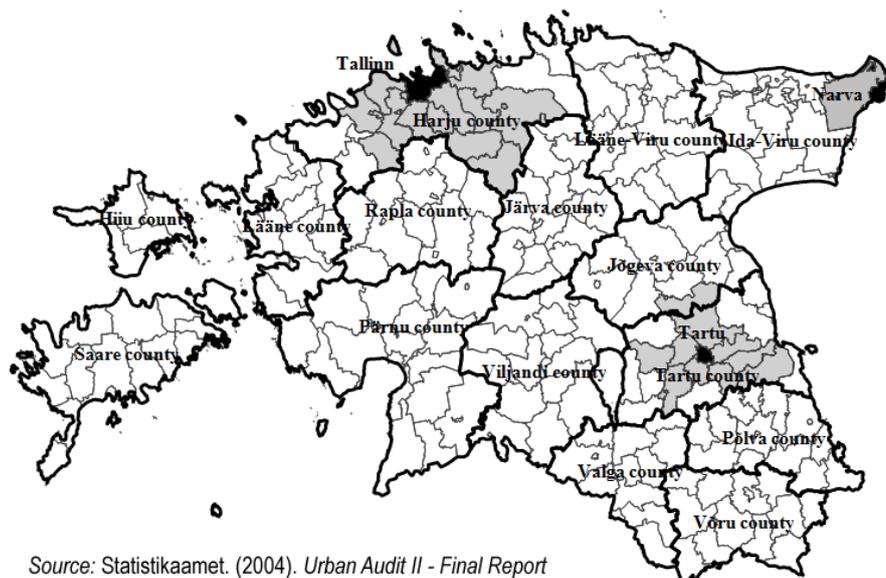
◇ Estonian cities have been included in Urban Audit since the second one (Tallinn et Tartu **(1)**), and in UA III **(2)**. In total, two cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ Each LUZ corresponds to one LAU 1:

*“In 2002 the working group headed by Professor Jussi S. Jauhiainen of Finland analyzed upon request of the Ministry of Internal Affairs the development potential of Urban Regions of Estonia ” **(3)** . However, it seems that these Urban Regions were not used as LUZ and that LAU 1 were chosen instead. Indeed, a proposal was presented to Eurostat “to define Harju [the county that contains Tallinn] and Tartu counties as LUZs for the above-mentioned cities. The LUZ of Tartu does not exactly overlap with the Urban Region of Tartu specified by Professor Jussi S. Jauhiainen. However, the differences are not very big and considering the administrative concept, both the cities Tallinn and Tartu definitely influence the counties surrounding them” **(3)**.*

The map below gives Urban Regions (grey area) and LAU 1 (bold black line) **(4)**.



Source: Statistikaamet. (2004). *Urban Audit II - Final Report*

Building blocks

◇ LAU1, elementary administrative unit (i.e. *Maakond*)

□ No aggregation

Correspondence with GISCO

Same number of LUZ¹⁹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

¹⁹ Files downloaded and checked July 21, 2010.

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
3. Statistikaamet. (2004). *Urban Audit II - Final Report*.
4. Statistikaamet. (Undated). *The Report on quality aspects and meta information*.

FINLAND

Summary

- ◇ Finnish cities have been included in Urban Audit since the Pilot Phase (Helsinki) **(1)**, then in UA II (Tampere, Turku, Oulu) **(2)**, and in UA III **(3)**. In total, four cities are concerned.
- LUZ definitions have not changed between UA II and UA III.
- LUZ correspond to an aggregation of LAU 2 and the list of building blocks is given in the UA III National Report **(4)**. However, the rules of aggregation are not described (*"The suitable area divisions for (...) LUZ (...) were defined together with Eurostat"* **(5)**).

Building blocks

- ◇ LAU 2, aggregation (i.e. *Kunnat / Kommuner*)
- Links: No information
- Helsinki: The LUZ corresponds to *"the functional urban region called the Helsinki Region. This functional region is already used in the NORDSTAT database (Nordic Cities and Regions) and in the Finnish City Indicators database"*²⁰

Correspondence with GISCO

Same number of LUZ²¹
http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
4. Statistics Finland. (2007). *Eurostat - Urban Audit III - Final Country Report Finland*.
5. Statistics Finland. (2004). *Final Report: Urban Audit II Finland*.

²⁰ According to information provided by Urban Audit December 3, 2010.

²¹ Files downloaded and checked June 24, 2010

FRANCE

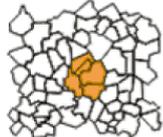
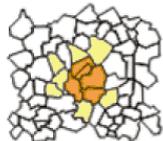
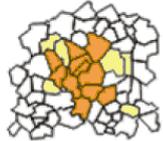
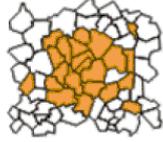
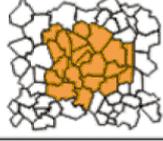
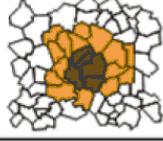
Summary

◇ French cities have been included in Urban Audit since the Pilot Phase (Lyon, Toulouse, Strasbourg, Bordeaux, Nantes) **(1)**, then in UA II (Ajaccio, Amiens, Besancon, Caen, Clermont-Ferrand, Dijon, Grenoble, Le Havre, Limoges, Metz, Nancy, Orleans, Paris, Poitiers, Reims, Rennes, Rouen) **(2)**, and in UA III (Tours) **(3)**. In total, thirty-three cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ LUZ are defined with a functional approach. They correspond to the French definition of «*aire urbaine*» (“*Ce sont donc les aires urbaines qui ont été utilisées pour représenter les LUZ de l’audit*” **(4)**). Criteria were formulated in 1996 and the construction data come from the 1999 Census **(7)**.

The figure below describes the different steps for building the “aires urbaines”, translated in English by us:

1 - Determination of the urban pole (an "unité urbaine" concentrating more than 5000 jobs).	
2 - Rural LAU 2 and "unités urbaines" characterized by at least 40% of the active population working in the urban pole are added to the urban pole.	 <div style="display: flex; justify-content: flex-end; margin-top: 5px;"> <div style="width: 15px; height: 15px; background-color: orange; margin-right: 5px;"></div> Previous zone <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px; margin-left: 10px;"></div> Added LAU 2 </div>
3 - Rural LAU 2 and "unités urbaines" characterized by at least 40% of the active population working in this previous zone (resulting of the last step) are added.	 <div style="display: flex; justify-content: flex-end; margin-top: 5px;"> <div style="width: 15px; height: 15px; background-color: orange; margin-right: 5px;"></div> Previous zone <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px; margin-left: 10px;"></div> Added LAU 2 </div>
4 - Rural LAU 2 and "unités urbaines" characterized by at least 40% of the active population working in this previous zone (resulting of the last step) are added. The process is iterative.	 <div style="display: flex; justify-content: flex-end; margin-top: 5px;"> <div style="width: 15px; height: 15px; background-color: orange; margin-right: 5px;"></div> Previous zone <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px; margin-left: 10px;"></div> Added LAU 2 </div>
5 - No more rural LAU 2 and "unités urbaines" located outside the previous zone is characterized by at least 40% of the active population working in this previous zone. The iterative process ends.	 <div style="display: flex; justify-content: flex-end; margin-top: 5px;"> <div style="width: 15px; height: 15px; background-color: orange; margin-right: 5px;"></div> Previous zone <div style="width: 15px; height: 15px; background-color: yellow; margin-right: 5px; margin-left: 10px;"></div> Added LAU 2 </div>
6 - The LAU 2 that are not contiguous to the area containing the urban pole are removed. The LAU 2 which are enclaved are added.	
7 - The "Aire urbaine" is constituted. Inside this area are distinguished LAU 2 of the urban pole and the others selected LAU 2 which compose the outer ring.	 <div style="display: flex; justify-content: flex-end; margin-top: 5px;"> <div style="width: 15px; height: 15px; background-color: #8B4513; margin-right: 5px;"></div> Urban pole <div style="width: 15px; height: 15px; background-color: #FF8C00; margin-right: 5px; margin-left: 10px;"></div> Outer ring </div>

Source: http://www.insee.fr/fr/regions/auvergne/default.asp?page=themes/donnees_detailles/aireurbaine/aire-construc.htm

Building blocks
<p>◇ LAU 2, aggregation (i.e. <i>Commune</i>)</p> <p>□ Links: based on commuting data (threshold 40%)</p> <p>○ Paris: NUTS 2 (i.e. <i>Régions</i>) (“<i>Une simplification sur Paris : la LUZ est la région Ile de France. L’aire urbaine n’est guère différente en étendue et les objectifs de l’audit pour la capitale étaient de toutes manières particuliers</i>” (4)).</p>
Particular cases
<p>Pointe-à-Pitre, Fort de France and Cayenne: these cities are not delineated as « <i>aire urbaine</i> », so that they don’t correspond to a Larger Urban Zone. This is the case for all DOM-TOM cities, as “aires urbaines” have been only defined for Metropolitan France (“<i>Pas de LUZ, là où le concept d’ « aire urbaine » n’avait pas été mis en œuvre. Au moment de la collecte, c’était le cas des départements d’outre-mer dont l’étendue territoriale des communes fait qu’il est difficile de reproduire le concept en place sur la métropole.</i>”(4));</p> <p>Saint-Etienne, Marseille, Nice: these cities don’t correspond to a LUZ as their City Core is too different from the urban pole of “aire urbaine” called “unité urbaine”. Indeed, City Core in France is defined as an EPCI²² (“<i>Pas de LUZ, là où les EPCI différaient trop des agglomérations morphologiques. En effet le concept d’aire urbaine est conçu comme la zone d’influence d’un noyau qui est pris a priori comme l’unité urbaine, c’est à dire l’agglomération morphologique. (...) Saint-Etienne, dont l’EPCI est plus étendue que l’agglomération et absorbe même une seconde agglomération ; Marseille, et Nice dont les agglomérations sont chacune partagées sur trois EPCI, dont le rayonnement est donc nettement inférieur à l’aire urbaine</i> »”(4)).</p> <p>Lens: this city does not correspond to a LUZ, due to deviations between City Core and « unité urbaine » (“<i>Douai et Lens ne forment en fait qu’une seule agglomération, mais dont le contour est significativement différent du seul regroupement des deux EPCI</i>”(4))</p> <p>Aix-en-Provence, Lille, Montpellier and Toulon: these cities does not correspond to a LUZ (“<i>The cities of (...) Aix-en-Provence (...) do not have any LUZ</i>” (6)); For Lille and Montpellier, “LUZ are removed in 2007”, and for Toulon, “LUZ is removed in 2008”²³.</p>
Correspondence with GISCO
Different number of LUZ: Toulon’s LUZ is not removed in GISCO ²⁴
References
<ol style="list-style-type: none"> 1. ERECO. (2000). <i>L’Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes</i>. Luxembourg: Office des publications officielles des Communautés européennes. 2. Eurostat. (2004). <i>Urban Audit, Methodological Handbook, 2004 edition</i>. Luxembourg: Office for Official Publications of the European Communities. 3. Eurostat. (2008). <i>European Regional and Urban Statistics Reference Guide</i>. Luxembourg : Office for Official Publications of the European Communities.

²² Etablissement Public de Coopération Intercommunale: Political aggregation of LAU 2, especially for elaborating planning projects.

²³ According to information provided by Urban Audit, January 2009.

²⁴ Files provided by Urban Audit, October 5, 2010.

4. INSEE. (Undated). *Audit urbain 1999-2003, Bilan de collecte*.
5. INSEE. (2010). *Insee - Définitions et méthodes - Aire Urbaine*. Checked June 25, 2010, on Institut National de la Statistique et des Etudes Economiques : <http://www.insee.fr/fr/methodes/default.asp?page=definitions/aire-urbaine.htm>.
6. INSEE. (Undated). *Audit Urbain 2006, Bilan de collecte*.
7. *Mesurer un univers urbain en expansion*. Julien, Philippe. (2000). *Economie et Statistique* n°336, pp. 3-33.

GERMANY

Summary

◇ German cities have been included in Urban Audit since the Pilot Phase (Berlin, Hamburg, Munich, Cologne, Frankfurt am Main, Essen, Stuttgart, Leipzig, Dresden) **(1)**, then in UA II (Augsburg, Bielefeld, Bochum, Bonn, Bremen, Darmstadt, Dortmund, Düsseldorf, Erfurt, Frankfurt (Oder), Freiburg-im-Breisgau, Gottingen, Halle-an-der-Saale, Hannover, Karlsruhe, Magdeburg, Mainz, Moers, Monchengladbach, Mulheim-an-der Ruhr, Nurnberg, Regensburg, Schwerin, Trier, Weimar, Wiesbaden, Wuppertal) **(2)**, and in UA III (Kiel, Saarbrucken, Koblenz) **(3; 4)**. In total, forty cities are concerned.

□ LUZ definitions have not changed between UA II and UA III (*“Delineation of the territorial units of the cities of the previous rounds of data collection remained unchanged, i. e. of the 35 cities, the 28 Larger Urban Zones” (3)*).

○ Each LUZ corresponds to a « planning region », which is defined through a variety of criteria²⁵**(6)**. According to Klaus Trutzel (National Urban Audit Coordinator), *“at this level, the statistical offices of the Länder can provide a particularly wide variety of planning policy data, not all of which are available for individual Kreise (NUTS 3)” (5)*. It is also noticed that *“the size of the LUZ is about adequate although the labour market area of the city does not exactly match the LUZ. It might be worth comparing the real commuting areas, delimited by LAU2 units, with the LUZ for better judgments of the adequacy of the LUZ and the information collected for them”(3)*.

In 2002/2003, Eurostat checked the correlation between LUZ and functional area (defined with a threshold of 15% and 20%). The results show that LUZ fit quite well with functional areas **(7)**, except for Bielefeld and Schwerin²⁶. However, according to Klaus Trutzel, these latter remain unchanged *“for comparability needs” (3)*.

Building blocks

◇ NUTS 3, aggregation (i.e. *Kreis*)

□ Links: variety of criteria used to define “planning regions”, not specified in National Reports.

Particular cases

- Essen, Dortmund, Bochum, Mulheim and Moers: One common LUZ, Ruhrgebiet, has been defined for these five cities in the Ruhr area (*“The common LUZ for 5 Urban Audit cities in the Ruhr area was kept” (3)*) ;

- Monchengladbach, Wuppertal and Frankfurt (Oder): these cities do not correspond to a LUZ (*“The 3 cities of Monchengladbach, Wuppertal and Frankfurt (Oder) have no LUZ around*

²⁵ The “planning regions” are defined at the federal level by the BBR (Bundesamt für Bauwesen und Raumordnung). They are transmitted to the Länder which adapt them taking into account the large-scale projects proposed by local authorities. The number of planning regions is officially 97. However, some of them are subdivided by the Länder into several sub-regions. That’s why the number of 115 planning regions can be found sometimes **(6)**.

²⁶ The comparison was made between the population of the LUZ and the population of the estimated functional areas.

them" (3));

- Potsdam: this city does not correspond to a LUZ because it is part of the LUZ of Berlin²⁷.
- Stuttgart: this city was removed in UA II but added again in UA III (5)

Correspondence with GISCO

Same number of LUZ²⁸

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. Trutzel, Klaus. (2008). *Urban Audit III (2006): Final Country Report Germany*.
4. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
5. Trutzel, Klaus. (Undated). *URBAN AUDIT - State of the art*.
6. Queva, Christophe. (2007). « Les paradoxes de la Région en Allemagne, entre réseaux et territoires : la région, outil de déterritorialisation ? » *Annales de Géographie* (653).
7. Carlquist, Torbiörn. (2006, August 30). The Larger Urban Zones in the Urban Audit data collection. *Globalisation Impact on Regional and Urban Statistics*. Wroclaw.

²⁷ According to information transmitted by Urban Audit, January 2009.

²⁸ Files downloaded and checked July 21, 2010

GREECE

Summary

- ◇ Greek cities have been included in Urban Audit since the Pilot Phase (Athina, Thessaloniki et Patras) **(1)**, then in UA II and UA III (Volos, Iraklion, Kavala, Kalamata, Ioannina et Larisa) **(2; 3)**. In total, nine cities are concerned.
- LUZ definitions have changed between UA II and UA III. For UA II, NUTS 3 were used as proxy ("*NSSG [National Statistical Service of Greece] decided to use this NUTS3 level as a proxy for the large urban zone*" **(5)**).
- In UA III, a new definition is based on labour market areas ("*There was a new delimitation of the existing LUZ areas of the 9 cities according to the Labour Market Areas and the suggestion of Eurostat*" **(4)**). LUZ are defined with a functional approach, but the methodology is not specified in the National Report. According to documentation sent by Urban Audit²⁹, commuting data have been used at LAU 1 level, with a threshold of 15% people commuting from a "suburb" to the central city (demos). Construction data come from 2001 Census.

Building blocks

- ◇ LAU 1, aggregation (i.e. *Demoi/Koinotites*)
- Links: apparently based on commuting data (threshold 15%).
- Athina: the LUZ corresponds to one NUTS 3, elementary administrative unit (i.e. *Nomoi*). Some outlying islands have been excluded.

Correspondence with GISCO

Same number of LUZ³⁰

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
3. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
4. General Secretariat of the National Statistical Service of Greece. (2008). *Urban Audit 2006/2007 Data Collection - Final Operation Report*.
5. (Undated). *Urban Statistics - Final Report*.

²⁹ According to information transmitted by Urban Audit, January 2009.

³⁰ Files downloaded and checked July 5, 2010

HUNGARY

Summary

◇ Hungarian cities have been included in UA II (Budapest, Miskolc, Pecs, Nyiregyhaza **(1)**) and in UA III (Debrecen, Szeged, Győr, Kecskemét, Székesfehérvár**(2)**). In total, nine cities are concerned.

□ LUZ definitions have not changed between UA II and UA III **(3)**.

○ LUZ correspond to LAU 1 aggregation, and the methodology is not fully specified:

*“LUZs consist of the NUTS 4 level units, i. e. statistical subregions of these cities. A statistical subregion is primarily a functional unit, established on the basis of actual working, residential, transport and secondary provisional (education, health care, and trade) connections between the central city and the urban zone around” **(4)**.*

Building blocks

◇ LAU 1, aggregation (i.e. *Statisztikaikistérségek*)

□ Links: the methodology is not fully specified (see above)

○ Budapest: LAU 2, aggregation (i.e. *Települések*). The methodology is partly specified:

*“In the case of Budapest, the Larger Urban Zone is made up of the 79 settlements of the legally defined Budapest agglomeration, where the 78 settlements surrounding the capital are tightly connected with the centre. A part of the settlements in the urban zone show the morphological aspects too of an agglomeration. In 25 settlements, more than 50% of the resident population live near – the incidental distance is not more than 200 meters in the corresponding categories – urban (built-in) areas of the capital, although a morphological connection to a lesser extent can be observed in other settlements as well. However, there is a functional relation in the case of all settlements, that is why the former agglomeration, which had consisted of 44 settlements, was extended. The Budapest agglomeration with today’s boundaries and the list of the settlements included were most recently published in the Government Decree Nr. 89/1997. (V.28.). A specific feature of the past decade in Hungary was that suburbanisation started in the proximity of Budapest too. The migration loss of the capital was over 100 000 persons, and a significant proportion of those who moved out of Budapest went to live in settlements of the agglomeration” **(4)**.*

Correspondence with GISCO

Same number of LUZ³¹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.

³¹ Files downloaded and checked July 19,2010

3. Hungarian Central Statistical Office. (Undated). *Urban Audit III - Final Report*.
4. Hungarian Central Statistical Office. (2004). *Urban Audit II - Final Report*.

IRELAND

Summary

- ◇ Irish cities have been included in Urban Audit since the Pilot Phase (Dublin, Cork **(1)**), then in UA II (Galway, Limerick **(2)**), and in UA III (Waterford **(3)**). In total, five cities are concerned.
- LUZ delineations have changed between UA II and UA III. Ireland did not transmit National Report for UA III, but some information was provided by Urban Audit.
For UA II, *“the definition of the larger urban zones was based on local area development plans or in consultation with local authority planners. This applied to the LUZ zones used in the cities of Limerick and Cork”* **(4)**.
- In UA III, LUZ are defined through 3 different ways:
Two LUZ are based on functional definitions: *“the LUZs for Limerick and Waterford cities are based on commuting data from the most recent census and a threshold of 20% commuters from the surrounding areas to the central city has been applied”* ³². They correspond to an aggregation of LAU 2, probably built with the same commuters patterns than in UA II (threshold 20%).
LUZ of Cork and Galway correspond to planning regions (*Cork Area Strategic Plan (CASP)*³³ and *Galway Transport and Planning Study*³⁴).
Dublin³⁵ corresponds to an aggregation of NUT 3.

Building blocks

- ◇ LAU 2, aggregation (i.e. *Electoral districts*)
- Links: diversity of situations (see above). The methodology is not fully specified.
- Dublin: Aggregation of 2 NUTS 3 (i.e. *Regional Authority Regions*).

Correspondence with GISCO

Same number of LUZ³⁶
http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.

³² Information transmitted in October 14, 2010

³³ <http://www.corkcity.ie/casp/strategicplan/>

³⁴ <http://www.galwaycity.ie/AllServices/RoadsandTraffic/StudiesandSchemes/GalwayTransportandPlanningStudy>

³⁵ Information transmitted in October 14, 2010

³⁶ Files provided by Urban Audit October 5, 2010.

3. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
4. (2004). *Urban Audit - Irish National Report 2001*.

ITALY

Summary

◇ Italian cities have been included in Urban Audit since the Pilot Phase (Roma, Milan, Naples, Turin, Palermo, Genoa, Florence, Bari) **(1)** then in UA II (Bologna, Catania, Venice, Verona, Cremona, Trento, Trieste, Perugia, Ancona, L'Aquila, Pescara, Campobasso, Caserta, Taranto, Potenza, Catanzaro, Reggio di Calabria, Sassari, Cagliari) **(2)**, and in UA III (Padova, Brescia, Modena, Foggia, Salerno) **(3)**. In total, thirty-two cities are concerned.

□ LUZ definitions have changed between UA II and UA III.

During UA II, each LUZ corresponds to a NUTS 3: *“Provinces are administrative areas in some case without a credible geographical or statistical significance. There is no a credible alternative to consider Province as proxy of LUZ in Urban Audit II, at least at this stage”* **(4)**.

○ During UA III, LUZ definition is functional and corresponds to Local Labour System (LLS, i.e. *systemi locali del lavoro*). The methodology aggregates LAU 2 on the basis of employment (1000 jobs minimum in the LLS) and residence (*“occupied people working in A, occupied people resident in A, and occupied people resident and working in A”* **(5)**). Commuters are taken into account with a threshold of 10% (outflow) and 1% (inflow). The methodology uses a *“self-containment criteria”* with a threshold of 75% for building the LLS. This criteria is defined by *“occupied people resident and working in A/ occupied people resident in A”* **(5)**. Construction data come from *“the 1991 census intra-municipality daily commuting flows matrix”* **(4)**.

Building blocks

◇ LAU 2, aggregation (i.e. *Comuni*)

□ Links: based on commuting data (threshold (10%). The methodology is provided in the National Report **(5)**.

Correspondence with GISCO

Same number of LUZ³⁷

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
4. ISTAT. (Undated). *URBAN AUDIT II THE IMPLEMENTATION IN ITALY Final Report submitted to the European Commission*.

³⁷ Files downloaded and checked July 5, 2010

5. Istat. (Undated). *Urban Audit III - Final Country Report ITALY - Grant n. 72501-2006-001-2006-492*.
6. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.

LATVIA

Summary

- ◇ Latvian cities have been included in Urban Audit since UA II (Riga, Liepaja) **(1)**, and in UA III **(2)**. In total, two cities are concerned.
- LUZ definitions have not changed between UA II and UA III: *“The delineation of spatial units of Latvia’s territories participating in the project remained the same as in previous Urban Audit (UA) data collections”* **(3)**.
- Liepaja LUZ corresponds to one LAU 1: *“Also [LUZ] level was defined easily because functional urban zones for both cities were known. As they could be approximated with NUTS level 3 or 4 units, it was decided to create LUZ using NUTS 4 units”* **(4)**. Riga LUZ is an aggregation of LAU 1

Building blocks

- ◇ Liepaja: LAU 1, elementary administrative unit (.i.e *Rajoni* and *republikas pilsētas*³⁸)
- Riga: aggregation of LAU 1 (Riga and Ogre districts, and Jurmala city **(3)**).

Correspondence with GISCO

Same number of LUZ³⁹
http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
3. Latvijas statistika. (2008). *Urban Audit 2006 - Grant agreement No. 72501.2006.001-2006.478 - FINAL TECHNICAL IMPLEMENTATION REPORT LATVIA*.
4. Supe, Jolanta. (2004). *Data Collection Project - Urban Audit II - Latvia*. CSB of Latvia.

³⁸ A territorial reform occurred in Latvia in 2009. Before that (when UA II and UA III National Reports were written), LAU 1 were made of “districts” (i.e. *rajoni*) and “cities” (i.e. *republikaspilsētas*).

³⁹ Files downloaded and checked July 21, 2010

LITHUANIA

Summary

◇ Lithuanian cities have been included in UA II (Kaunas, Panevezys, Vilnius) **(1)** then in UA III **(2)**. In total, three cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ Each LUZ corresponds to one LAU 1. The National Report mentions some analyses before defining LUZ, but without more details: “*In co-operation with the cities, possible ways to define LUZ and SCD were examined. On the basis of analyses, the following territorial units [i.e. LAU 1] in the Urban Audit II were agreed to be used*” **(3)**.

The map below shows that one LUZ corresponds to two LAU 1 which are nested.



Building blocks

◇ LAU 1, elementary administrative unit (i. e. *Savivaldybės*)

□ No aggregation

○ Vilnius: LAU 1 aggregation (City Core (Vilnius City) + Vilnius district + Elektrenai district + Trakai district)

Correspondence with GISCO

Same number of LUZ⁴⁰

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
3. Lissauskaite, Jolita. (Undated). *FINAL REPORT ON URBAN AUDIT II*. Statistics Lithuania.

⁴⁰Files downloaded and checked July 21, 2010

LUXEMBOURG

Summary

◇ Luxembourg city has been included in Urban Audit since the Pilot Phase (Luxembourg) **(1)**, then in UA II **(2)**, and in UA III **(3)**.

□ LUZ definition has changed between UA II and UA III.

For UA II, the LUZ corresponds to an aggregation of LAU2 (*“we have defined the large urban zone (LUZ) regrouping 14 communes”***(2)**). However, according to Eurostat, the LUZ is underestimated **(4)**. For UA III, LUZ is enlarged to NUTS 0, as it can be deduced from GISCO.

○ In UA III, Luxembourg LUZ corresponds to Luxembourg country.

Building blocks

◇ NUTS 0, elementary administrative unit (i.e. whole country)

□ No aggregation

Correspondence with GISCO

Same number of LUZ⁴¹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.

2. CEPS/INSTEAD. (2003). *Urban Audit II Interim Report Luxembourg August 2003*.

3. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.

4. Carlquist, Torbiörn. (2006, August 30). The Larger Urban Zones in the Urban Audit data collection. *Globalisation Impact on Regional and Urban Statistics*. Wroclaw.

⁴¹Files downloaded and checked July 19, 2010

MALTA

Summary

- ◇ Maltese cities have been included in UA II (Valetta, Gozo) **(1)**, then UA III **(2)**. In total, two cities are concerned. The National Report for UA III was not available.
- LUZ definitions have not changed between UA II and UA III (deduced from GISCO observations).
- Each LUZ corresponds to one NUTS 3 **(3)**.

Building blocks

- ◇ NUTS 3, elementary administrative unit (i.e. *Gzejjer*)
- No aggregation

Particular cases

Gozo: The City Core and the LUZ are both defined as the same NUTS 3

Correspondence with GISCO

Same number of LUZ⁴²

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
3. National Statistics Office - Malta. (Undated). *Urban Audit Final Report*.

⁴² Files downloaded and checked July 19, 2010

NETHERLAND

Summary

◇ Dutch cities have been included in Urban Audit since the Pilot Phase (Amsterdam, Rotterdam) **(1)**, then in UA II (Arnhem, Eindhoven, Enschede, Groningen, Heerlen, s'Gravenhage, Tilburg, Utrecht) **(2)**, and in UA III (Breda, Nijmegen, Apeldoorn, Leeuwarden) **(3)**. In total, fourteen cities are concerned.

□ LUZ definitions have changed between UA II and UA III.

For UA II, each LUZ corresponds to one NUTS 3: “Statistics Netherlands nevertheless proposed to use the Dutch NUTS 3 regions (called COROP Regions) as a proxy for the larger urban zones” **(4)**.

○ For UA III, LUZ correspond to the functional region called “stadsgewest”:

“More data came available [since UA II] for another proxy being 'stadsgewest', which represents better the relation of the city with its surroundings” **(5)**. The methodology used is described in a reference document **(6)** and on the Statistics Netherlands website **(7)**, but in Dutch language. It seems that two steps are followed:

The agglomeration is first delineated, starting from built-up area criteria (land use map from 1996), and then using some thresholds (population > 100 000 inh., employment > 50 000 persons and market area > 150 000 persons).⁴³

The functional area surrounding the city is then built using following criteria⁴⁴: commuters (data from Labour Force Survey realized between 1995 and 1997); residential migrations (Survey realized between 1996 and 1997); urban infrastructure information.

Building blocks

◇ LAU 2, aggregation (i. e. *Gemeenten*)

□ Links: based on commuting data and residential migrations. The methodology is not specified in the National Report.

Particular cases

Almere: “The exception is Almere, which territory is part of the stadsgewest Amsterdam, and by consequence has not a stadsgewest of its own” **(5)**.

Correspondence with GISCO

Same number of LUZ⁴⁵

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés

⁴³<http://www.cbs.nl/nl-NL/menu/methoden/begrippen/default.htm?ConceptID=876>

⁴⁴<http://www.cbs.nl/nl-NL/menu/methoden/begrippen/default.htm?ConceptID=877>

⁴⁵Files downloaded and checked July19, 2010

européennes.

2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.

3. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.

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5. Statistics Netherlands. (2008). *Urban Audit 2006 - The implementation in the Netherlands*. 2008.

6. Vliegen, Mathieu. (2005). *Grootstedelijke agglomeraties en stadsgewesten afgebakend*. Voorburg/Heerlen : Centraal Bureau voor de Statistiek.

7. Centraal Bureau voor de Statistiek. (2010). *CBS - Home*. Checked July 19, 2010, on CBS: <http://www.cbs.nl/nl-NL/menu/home/default.htm>.

NORWAY

Summary

◇ Norwegian cities have been included in UA III (Oslo, Bergen, Trondheim, Stavanger, Kristiansand and Tromsø). A total of six cities are concerned.

□ Norway did not participated to UA II

○ LUZ correspond to the functional region called “storbyregioner” **(1)**. The documentation relating to LUZ has been transmitted by Statistics Norway to Urban Audit in Norwegian language **(2)**. It seems that LUZ definitions are largely based on criteria related to travel times and commuting data. According to information transmitted by Urban Audit, “*Commuting was the leading criterion, travel times the adjustment instrument applied for the creation of the regions. A rule states that municipality’s center with over 10 percent commuting levels to a bigger center is affiliated with this center if it does not represent a separate commuting area*”⁴⁶.

Building blocks

◇ LAU 2, aggregation (i.e. *Kommuner*)

□ Links: probably mainly based on commuting data (threshold 10%)

Correspondence with GISCO

Same number of LUZ⁴⁷

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ROG. (2005). *Data for storbyregioner/Urban Audit – avgrensing og inndeling av regionene.*
2. Det kongelige Kommunal og- regionaldepartement. (2003). *Storbymeldingen: Om utvikling av storbypolitikk.*

⁴⁶Information provided by Urban Audit on December 3, 2010.

⁴⁷ Files downloaded and checked July 21, 2010.

POLAND

Summary

◇ Polish cities have been included in UA II (Warsaw, Lodz, Krakow, Wroclaw, Poznan, Gdansk, Szczecin, Bydgoszcz, Lublin, Katowice, Bialystok, Kielce, Torun, Olsztyn, Rzeszow, Opole, Gorzów Wielkopolski, Zielona Gora, Jelenia Gora, Nowy Sacz, Suwalki, Konin, Zory **(1)**), then in UA III (Czestochowa, Radom, Plock, Kalisz, Koszalin) **(2)**). In total, twenty-eight cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ LUZ definition is based on an aggregation of neighboring units (LAU 2 and LAU 1).

“Due to the lack of flow statistics (i.e. journeys to work) (...)” **(3)**, functional urban region could not be built.

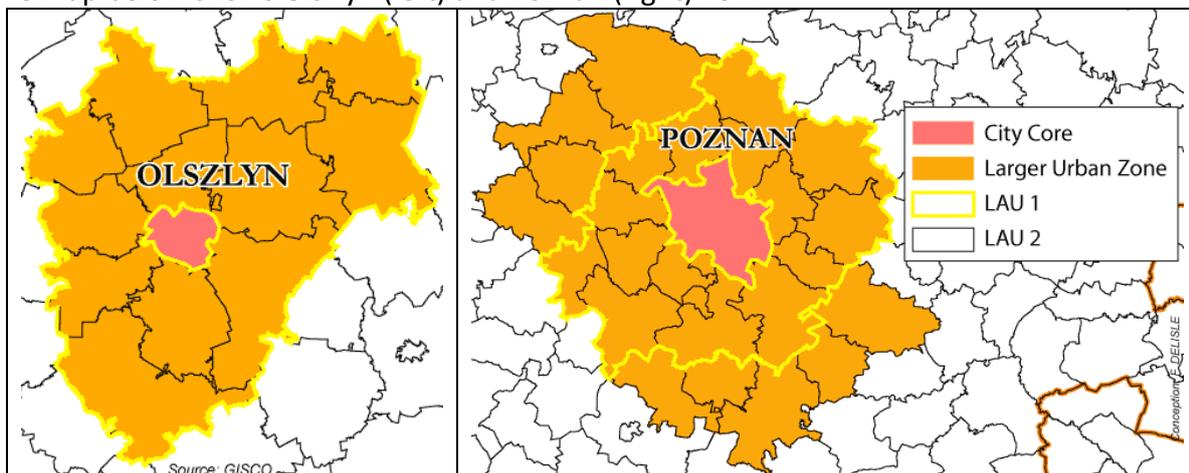
The methodology depends on City Core size **(3; 4; 5)**:

Population up to 100 000 inh.: LUZ corresponds to the surrounding LAU2 contiguous to the City Core (see for example, Suwalki at North-East);

Population between 100 and 250 000 inh.: LUZ corresponds to the surrounding LAU 1 that is contiguous to the City Core or to the LAU 1 containing the City Core (in most of the cases, the City Core is itself one LAU1, included inside another bigger LAU 1). (see for example Olszlyn, map below).

Population above 250 000 inh.: LUZ corresponds to the surrounding LAU 1 that is contiguous to the City Core, except if in some part of the ring, LAU 1 outer limit fits with local LAU 2 outer limit (see map below at the north-west and at the south-east of Poznan). Then, new LAU 2 are locally added (4 at the north-ouest and 5 at the south-east).

The map below shows Olszlyn (left) and Poznan (right) LUZ.



Probable changes in LUZ definitions will occur for next Urban Audit (UA IV).

Building blocks

◇ LAU 2, aggregation (i.e. *Gminy*) and/or aggregation of LAU 1 (i.e. *Powiat*)

□ Links: based on contiguity and city core size.

Correspondence with GISCO

Same number of LUZ⁴⁸

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
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3. CENTRAL STATISTICAL OFFICE. (2008). *Urban Audit 2006 - Final Country Report (Poland) - Grant agreement no. 72501.2006.001-2006.484*.
4. Felczak, Dominika. (2003). *Urban Audit II Poland - Intermediate report summarising tasks 1 and 2 of Urban Audit program*. Central Statistical Office of Poland.
5. Młodak, Andrzej. (Undated). *Polish experiences and possibilities in realisation of the URBAN AUDIT programme*. Central Statistical Office.

⁴⁸ Files downloaded and checked June 24, 2010

PORTUGAL

Summary

◇ Portuguese cities have been included in Urban Audit since the Pilot Phase (Lisbon, Oporto, Braga **(1)**), then in UA II (Aveiro, Coimbra, Setubal, Funchal, Ponta Delgada **(2)**), and in UA III (Faro **(3)**). In total, nine cities are concerned.

□ LUZ definitions have changed between UA II and UA III.

For UA II, each LUZ except Lisbon and Oporto, corresponds to one LAU 1: *“For all medium sized cities, it seems preferable to use NUTS 4 as a proxy for the functional urban region”* **(4)**. Lisbon and Oporto are defined as functional areas, with the methodology that has been used for all cities in UA III. For UA III, all LUZ are defined as functional areas.

○ LUZ are defined as functional areas, following three different steps, described on the map below **(5)**. The construction data come from Census 2001 **(5)**.

LARGER URBAN ZONE



Etape 1

Identification of the “freguesias” (LAU level 2) that have a working commuting intensity to the urban audit’s cities (município) of more than 15% of the working resident.

Etape 2

Quantify the proportion of working people in all those “freguesias” belonging to a same “município” in the total of working people of the “município” they belong to. We have selected only the “municípios” where there was at least 50%

Etape 3

When needed, we have imposed the continuity spatial criterion to the core city

Source : Instituto Nacional de Estatística. Urban Audit III in Portugal, Final Report for the European Commission within the Framework of the Grant Agreement for an Action. 2008. Agreement Number 72501-2006-001-2006-485.

Building blocks

◇ LAU 1, aggregation (i.e. *Municípios*)

□ Link: based on commuting data (threshold 15% at LAU 2 level, see map above)

Particular cases

Setúbal: *“According to results Setúbal is the only city that still remains with “Luz identical to city” ”* **(5)**.

Correspondence with GISCO

Same number of LUZ⁴⁹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
4. (Undated). *Urban Audit II in Portugal, Final Report for the European Commission within the Framework of the Grant Agreement for an Action*.
5. Instituto Nacional de Estatística. (2008). *Urban Audit III in Portugal, Final Report for the European Commission within the Framework of the Grant Agreement for an Action*.

⁴⁹ Files downloaded and checked June 24,2010

ROMANIA

Summary

◇ Romanian cities have been included in UA II (Alba Iulia, Arad, Bacau, Braila, Bucharest, Calarasi, Cluj-Napoca, Craiova, Giurgiu, Oradea, Piatra Neamt, Sibiu, TarguMures, Timisoara **(1)**) then in UA III **(2)**. In total, fourteen cities are concerned.

□ No information concerning evolution between UA II and UA III in National Reports

○ LUZ definition is based on an aggregation of neighboring units (LAU 2).

For UA II, LUZ are built with *“bordering communes situated around 15 km in the near vicinity of the cities” (3)*, except Bucharest (see below). These communes must be relevant with a law from 1968, *“abrogated in 1989, in which was considered suburban communes (term that is not used anymore) for each city of county” (3)*. *“In conclusion, LUZ were formed adding to the city the bordering suburban communes that are urbanized, industrialized and other well economic develop communes” (3)*.

For UA III, *“Romania proposed to be attached to the cities the bordering urbanized communes situated near vicinity of the municipalities selected as Urban Audit cities” (4)*.

Building blocks

◇ LAU 2, aggregation (i.e. *Comuni/Orase/Municipiu*)

□ Links: distance criteria (15 km) and juridic criteria (law from 1968, see above)

○ Bucharest: aggregation of LAU 2, using a distance criteria (20 km) and a selection of LAU 2: *“we selected the communes and cities around 20 km from Bucharest, that are nearly integrated into city and well economically developed” (3)*.

Correspondence with GISCO

Same number of LUZ⁵⁰

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. (Undated). *Urban Audit II for Candidat Countries Romania - Intermediate Report*.
4. Romania National Institute of Statistics. (2007). *URBAN AUDIT HISTORICAL DATA*.
5. Romania National Institute of Statistics. (2008). *Urban Audit - Final Operational Report Romania*.

⁵⁰Files downloaded and checked July 21, 2010

SLOVAKIA

Summary

- ◇ Slovakian cities have been included in UA II (Bratislava, Košice, B. Bystrica, Nitra **(1)**), and in UA III (Prešov, Žilina, Trenčín, Trnava**(2)**). In total, eight cities are concerned.
- LUZ definitions have not changed between UA II and UA III.
- Each LUZ corresponds to one LAU 1 (“*District at the level of LAU1 was selected as LUZ in all cities*” **(3)**), except the LUZ of Bratislava (see below) **(4)**. According to the National Report, “*all proposals for LUZs are based on the employment zones, which were specified within the research work done for the SO SR [Statistical Office of the Slovak Republic] last year and we have agreed them also with the cities contact persons*” **(4)**.

Building blocks

- ◇ LAU 1, elementary administrative unit (i.e. *Okresy*)
- No aggregation
- Bratislava: NUTS 3 (i.e. *Kraje*) **(4)**.

Correspondence with GISCO

Same number of LUZ⁵¹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
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4. Olexa, Michel. (2005). *Urban Audit II - PHARE 2001 Project - Intermediate Report for the Slovak Republic*. Bratislava.

⁵¹Files downloaded and checked July 19, 2010

SLOVENIA

Summary

- ◇ Slovenian cities have been included in UA II (Ljubljana, Maribor) **(1)**, and in UA III **(2)**. In total, two cities are concerned.
- LUZ definitions have not changed between UA II and UA III.
- Each LUZ corresponds to one NUTS 3 (“NUTS3 level [equals LUZ]” **(3)**). In Slovenia, NUTS 3 correspond to statistical regions, used as functional and planning areas⁵² (“Data were collected for city Ljubljana (large size city) and for city Maribor (medium size city) namely for the following spatial units: Podravska statistical region (Ljubljana LUZ) and Osrednjeslovenska statistical region (Maribor LUZ)”**(4)**).

Building blocks

- ◇ NUTS 3, elementary administrative unit (i.e. *Statistične regije*).
- No aggregation

Correspondence with GISCO

Same number of LUZ⁵³

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
2. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*. Luxembourg : Office for Official Publications of the European Communities.
3. Statistical Office of the Republic of Slovenia. (Undated). *Urban Audit II - Quality Report on Data Collection - Country: Slovenia*.
4. Statistical Office of the Republic of Slovenia (SORS). (Undated). *Final Report - URBAN AUDIT 2006 - (Grant agreement NO 72501-2006-001-486)*.

⁵²http://www.stat.si/vodic_oglej.asp?ID=360&PodrocjelD=2

⁵³Files downloaded and checked July 19,2010

SPAIN

Summary

◇ Spanish cities have been included in Urban Audit since the Pilot Phase (Madrid, Barcelona, Valence, Seville, Saragossa, Malaga) **(1)** then in UA II (Badajoz, Las Palmas, Logrono, Murcia, Oviedo, Palma di Mallorca, Pamplona/Iruña, Santander, Santiago de Compostela, Toledo, Valladolid, Vitoria/Gasteiz) **(2)**, and in UA III (Bilbao, Cordoba, Alicante/Alacant, Vigo, Gijon, Santa Cruz de Tenerife) **(3)**. In total, twenty-four cities are concerned.

□ LUZ definitions have changed between UA II and UA III.

For UA II, each LUZ correspond to one NUTS 3 **(2)**:

“The administrative Spanish units were adapted to the three spatial levels defined in the Project. The Spanish statistical information has been obtained for these different spatial units: national, region (autonomous communities), provinces, municipalities, districts and sections” **(4)**. However, in the years after UA II, some analyses showed that Spanish LUZ were overbounded (*“Countries where the LUZ were over-bound include (...) Spain”* **(5)**).

○ In UA III, LUZ definition is functional and based on commuting data:

“A new design for the LUZ has been done for the 25 core cities, according to the community census table program for 2000/2001 which contains data on commuting between municipios. In some cases we tried to approach the non official Spanish NUTS level 4 division” **(3)**. This definition was adopted specifically for Urban Audit needs.

Construction data come from census 2001.

Building blocks

◇ LAU 2, aggregation (i.e. *municipios*)

□ Links: based on commuting data (threshold 15%)⁵⁴

○ Madrid: NUTS 3, elementary administrative unit (i.e. *Provincias*)⁵⁵

Particular cases

L’Hopitalet de Llobregat: this city does not correspond to a LUZ because it is part of Barcelona LUZ.

Correspondence with GISCO

Same number of LUZ⁵⁶

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

⁵⁴This threshold is deduced from our computations and observations, based on an Excel file sent by Urban Audit on December 7, 2010.

⁵⁵ According to information transmitted by Urban Audit January 2009. However, two LAU 2 (i.e. *Municipios*) are missing on GISCO.

⁵⁶ Files downloaded and checked July 5, 2010.

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. (2004). *Final Report, Grant Agreement of Urban Audit II in Spain Agreement number-2002 CE 16 0 AT 186*.
4. (Undated). *Final Country Report Spain*.
5. Carlquist, Torbiörn. (2006, August 30). The Larger Urban Zones in the Urban Audit data collection. *Globalisation Impact on Regional and Urban Statistics*. Wroclaw.

SWEDEN

Summary

◇ Swedish cities have been included in Urban Audit since the Pilot Phase (Stockholm, Göteborg) **(1)**, then in UA II (Malmö, Jönköping, Umeå) **(2)**, and in UA III (Uppsala, Linköping, Örebro) **(3)**. In total, eight cities are concerned.

□ LUZ definitions have changed between UA II and UA III.

For UA II, LUZ definition of Jönköping and Umea correspond to “Local Labour Market Areas” (“for the last two cities (Jönköping and Umeå) ‘Local Labour Market areas’ were used to form the LUZ” **(2)**).

○ In UA III, LUZ definition corresponds to the Local Labour Market Areas defined by Eurostat (“For the other seven cities ‘Local Labour Market areas’ defined by Eurostat were used to form the LUZ” **(3; 2)**). By checking GISCO data and maps, one can deduce that these LUZ delineations do not correspond to the two kinds of functional areas used by the Swedish statistics, the A-Region (*arbetsmarknadsregioner*) and FA-Region (*funktionella analysregioner*) **(4;5)**.

Building blocks

◇ LAU 2, aggregation (i.e. *Kommuner*)

□ Links: No information

○ Stockholm: NUTS 3, elementary administrative unit (i.e. *län*) **(3)**

Correspondence with GISCO

Same number of LUZ⁵⁷

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

References

1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Statistiska centralbyrån. (Undated). *Urban Audit II - Final Report*. Stockholm : s.n., Undated.
3. Final Country Report [Sweden].
4. COMMIN. (2010). *COMMIN | The Baltic Sea Conceptshare*. Checked October 29, 2010, on COMMIN | The Baltic Sea Conceptshare: <http://commin.org/en/bsr-glossaries/national-glossaries/sweden/arbetsmarknadsregion.html>.
5. Statistics Sweden. (2010). *Lokala arbetsmarknader - – egenskaper, utveckling och funktion*. Örebro : Statistiska centralbyrån.

⁵⁷ Files downloaded and checked June 24, 2010.

SWITZERLAND

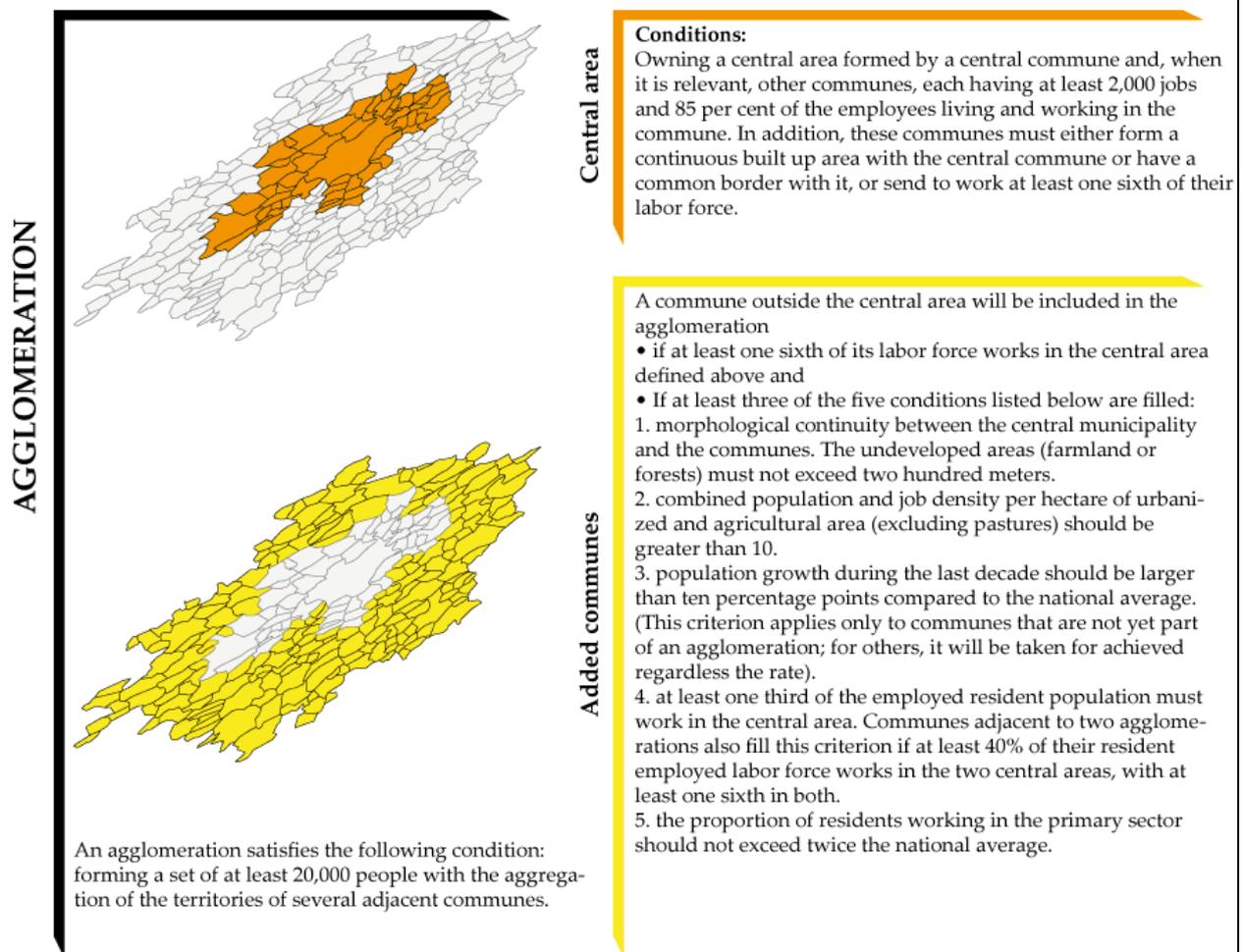
Summary

◇ Swiss cities have been included in UA III as a pilot phase (Zürich, Genève, Bern, Lausanne), and five more cities have been added (Basel, Winterthur, St Gallen, Luzern et Lugano) **(1)**. In total, nine cities are concerned.

□ Switzerland did not participate to UA II

○ LUZ definitions correspond to the Swiss functional region called « agglomération », which is described in 2000 by the Office Fédéral de la Statistique **(2)**. Criteria were formulated in 1990, actualized in 2000. Construction data come from Census 2000⁵⁸.

The figure below describes the different steps for building the “agglomérations”, translated in English by us:



Source : Schuler, Martin, Dessemontet, Pierre et Joye, Dominique. **Recensement fédéral de la population 2000 - Les niveaux géographiques de la Suisse.** Neuchâtel : Office fédéral de la statistique, 2005.

⁵⁸ <http://www.bfs.admin.ch/bfs/portal/fr/index/regionen/11/pro/01.html>

Building blocks
<ul style="list-style-type: none"> ◇ LAU 2, aggregation (i.e. <i>Gemeinden/Communes/Comuni</i>) □ Links: based on commuting data (threshold 16,66%) ○ Geneva: Aggregation of one NUTS 3 (the <i>Canton</i> of Genève) and one LAU 1 (the <i>District</i> of Nyon, in the canton of Vaud).
Correspondence with GISCO
<p>Different number of LUZ: 9 LUZs but only 4 in Gisco⁵⁹. The five cities included in the second phase are missing.</p> <p>http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1</p>
References
<ol style="list-style-type: none"> 1. Eurostat. (2008). <i>European Regional and Urban Statistics Reference Guide</i>. Luxembourg : Office for Official Publications of the European Communities. 2. Jeanneret, Barbara. (2009). <i>Audit urbain 2006/07. Rapport final pour l'Union européenne (Suisse)</i>. Office fédéral de la statistique OFS. 3. Schuler, Martin, Dessemontet, Pierre et Joye, Dominique. (2005). <i>Recensement fédéral de la population 2000 - Les niveaux géographiques de la Suisse</i>. Neuchâtel : Office fédéral de la statistique.

⁵⁹ Files provided by Urban Audit September 5, 2010

UNITED KINGDOM

Summary

◇ English cities have been included in Urban Audit since the Pilot Phase (Birmingham, Leeds, Glasgow, Bradford, Liverpool, Edinburgh, Manchester, Cardiff) **(1)**, then in UA II (Aberdeen, Belfast, Bristol, Cambridge, Derry, Exeter, Leicester, Lincoln, London, Newcastle upon Tyne, Portsmouth, Sheffield, Worcester, Wrexham) **(2; 3)**, and in UA III (Coventry, Kingston-Upon-Hull, Stoke-on-Trent, Wolverhampton, Nottingham) **(4; 5)**. In total, twenty-seven cities are concerned.

□ LUZ definitions have not changed between UA II and UA III.

○ LUZ are defined according to a local consultation process:

*“The Larger Urban Zone or LUZ (...) are built up from LAU1 (Local Authority District) spatial units” **(5)**. “ONS [Office for National Statistics] sought the recommendation of relevant Local Authorities and Government Office Regions when constructing the LUZ area for each of the 24 cities under analysis. This produced a range of forms for the LUZs, that reflect the diversity of urban experience in the UK (...). The majority of cities assembled LUZs consisting of other Local Administrative Units. These were not necessarily arranged around the city in a ‘doughnut’ formation” **(3)**.*

Building blocks

◇ LAU 1, aggregation (i.e. Lower tier authorities (districts) or individual unitary authorities, Individual unitary authorities or LECs (or parts thereof), Districts).

□ Links: Local consultation

Particular cases

Derry: *“For Northern Ireland, Derry City was not given a LUZ. This was due to its rural surroundings as to have included neighbouring LAUs would not have been representative of the area” **(3)** ;*

Stevenage and Gravesham: *“Stevenage and Gravesham are included within the London LUZ as well as being Urban Audit cities on their own account” **(5)**;*

Lincoln: *“Lincoln City Council (...) opted not to have a LUZ comprised of neighbouring LAUs. Instead, a number of electoral wards were specified as representing the true reach of the city of Lincoln in its rural locale” **(3)**;*

Leeds and Bradford: *“Leeds and Bradford share a single LUZ” **(5)**; “It was virtually impossible to distinguish the urban reach of Leeds, discounting the effect of Bradford, and vice versa. There was also the pull which Bradford had on Leeds, etc.” **(3)**.*

Aberdeen: *“The LUZ for Aberdeen contained only one other LAU, Aberdeenshire. The total area of this LUZ, however, came to nearly 6500 km². This is second only to the LUZ for London. It was decided that the reach of Aberdeen’s LUZ into its surrounding area was in part due to the relatively sparse population density in the vicinity” **(3)**.*

Wirral: This city does not correspond a LUZ⁶⁰.

⁶⁰According to information transmitted by Urban Audit January 2009 and GISCO September 5, 2010.

Correspondence with GISCO

Same number of LUZ⁶¹

http://epp.eurostat.ec.europa.eu/portal/page/portal/gisco/popups/references/administrative_units_statistical_units_1

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1. ERECO. (2000). *L'Audit Urbain, Vers un référentiel pour mesurer la qualité de la vie dans 58 villes européennes*. Luxembourg: Office des publications officielles des Communautés européennes.
2. Eurostat. (2004). *Urban Audit, Methodological Handbook, 2004 edition*. Luxembourg: Office for Official Publications of the European Communities.
3. Office for National Statistics - Regional & Local Division. (Undated). *URBAN AUDIT II Implementation for the United Kingdom Final Report for the European Commission (Eurostat)*.
4. Eurostat. (2008). *European Regional and Urban Statistics Reference Guide*.
5. (2008). *Urban Audit 3 Final Country Report: United Kingdom*.

⁶¹ Files downloaded and checked July 5, 2010

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Figures list:

Figure 1: UA II and UA III LUZ..... 7

Figure 2: A variety of representations of Urban Audit “cities” (UA III) ... 9

Figure 3: Pareto-Zipf distribution of LUZ size (UA III) 10

Figure 4: Population of LUZ in 2003-2006 (UA III) 11

Figure 5: Typology of LUZ delineation (UA III) 18

Figure 6: A European variety of LUZ commuting thresholds 21

Figure 7: Intra-national heterogeneity in UA III definitions..... 22

Figure 8: New LUZ functional definitions..... 23

Tables:

Table 1: Number of cities, countries and indicators involved in the three Urban Audit rounds 6

Table 2: LUZ number and min-max population by country (UA III)..... 12

Table 3: Availability of National Report per country and per Urban Audit round 13

Insert:

Insert 1: Selection criteria of Urban Audit cities (<http://www.urbanaudit.org/help.aspx>)..... 10

Insert 2: Main problems encountered in National Report expertise (see country-sheets in Annex for more details) 15

Insert 3: Model of the Country-Sheet 17

Annex:

Austria 26

Belgium 27

Bulgaria..... 29

Croatia 30

Cyprus	31
Czech Republic	32
Denmark	34
Estonia	36
Finland	38
France	39
Germany	42
Greece	44
Hungary	45
Ireland	47
Italy	49
Latvia	51
Lithuania	52
Luxembourg	53
Malta	54
Netherland	55
Norway	57
Poland	58
Portugal	60
Romania	62
Slovakia	63
Slovenia	64
Spain	65
Sweden	67
Switzerland	68
United Kingdom	70