

3rd European Quality of Life Survey

Sampling Report

EU27 and non-EU countries

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Table of Contents

3 rd European Quality of Life Survey.....	1
Sampling Report.....	1
EU27 and non-EU countries.....	1
1. Introduction.....	3
2. Sampling methodology.....	3
2.1. Statistical population (universe).....	3
2.2. Sample design.....	4
2.3. Organisation of the sampling process.....	6
2.3.1. Random probability sampling.....	7
2.3.1.1. Information about the sampling frames.....	9
2.3.1.2. Sampling information.....	11
2.3.2. Enumerated random route sampling.....	14
2.3.2.1. Random route methodology.....	14
2.3.2.2. The enumeration process.....	17
2.3.2.3. The quality control process.....	20
2.3.2.4. Results of back-check.....	26
2.3.3. Extra Backup Sample issued during Fieldwork.....	29
ANNEX A. Country sampling strategies (sampling plans).....	31
ANNEX B. Maps of the Random Route countries – location of the sampling points checked as a part of quality control.....	101
ANNEX C. Stratification per Country.....	114

3rd European Quality of Life Survey Sampling Report

1. Introduction

Overall the EQLS survey was conducted in 34 countries. In autumn 2011, the European Foundation for the Improvement of Living and Working Conditions (Eurofound) fielded the 3rd European Quality of Life Survey (EQLS) in the 27 EU Member States, with 7 non-EU countries following suit in 2012.

The sampling procedure for the 3rd EQLS has been an elaborate and carefully monitored process which started at the tendering phase when the basic sample design features (number of PSUs, coverage of sampling frames, etc.) were described for each country. These features were discussed and fine-tuned early on in the project and formed the basis for the presentation of formal national sampling and stratification plans. The sampling plans present a precise description of the sample design whilst the stratification plans present the distribution of the sample by region and urbanisation level on the basis of the most recently available population figures. These plans will be presented in this report together with a detailed overview of the sampling methodology used for this study.

This report hence provides a detailed description of the complete EQLS-3 sampling process.

2. Sampling methodology

2.1. Statistical population (universe)

The universe to be represented in the EQLS3 study covers all people **aged 18 and over** whose **usual place of residence is in the territory** of the countries included in the survey. Usual place of residence is defined as the address where a person usually resides. It can also be his/her legal residence. This may be different from the place where he/she actually is at the time of the survey. For the purposes of the survey, a person's usual residence is the place where they normally sleep.

In addition, they should have lived in the country for the last six months before the survey and should be able to **speak the national language(s) well enough** to respond to the questionnaire. People living in an institution (for example prisons, military barracks, hospitals and nursing homes) were not included in the survey.

Only one person per household could be selected for the survey. In most countries this selection procedure used the '**next birthday**' rule (see below for more details).

Metropolitan, urban and rural populations and all 'administrative regional units' were covered proportionally to the respective population aged 18 and over.

2.2. Sample design

In each country, a strictly random sample of individuals was surveyed. Probability sampling procedures have been used for sample selection, i.e. all members of the statistical population have a non-zero probability of inclusion in the sample.

Eurofound required an updated, good quality sampling frame (register) with addresses/persons whenever possible. The sampling frame should **cover at least 95%** of households/persons in the country. When a suitable sampling frame was not available for a country, the random route method was used for the selection of households.

For each country, GfK EU3C specified and justified the proposed sampling procedure which was then discussed and approved by Eurofound. In Ireland and Denmark these discussions resulted in being able to switch from random route to random probability sampling.

The table below gives an overview of the sample sizes and sampling method per country. RS stands for Random Sampling country, RR stands for Enumerated Random Route country. The detailed country sampling plans can be found in Annex A of this report.

Sampling method by country

COUNTRY		SAMPLE SIZE	SAMPLING METHOD
AT	Austria	1000	RS
BE	Belgium	1000	RS
BG	Bulgaria	1000	RR
CZ	Czech Rep.	1000	RS
CY	Cyprus	1000	RR
DE	Germany	3000	RR
DK	Denmark	1000	RS
EE	Estonia	1000	RR
EL	Greece	1000	RR
ES	Spain	1500	RR
FI	Finland	1000	RS
FR	France	2250	RR
HU	Hungary	1000	RS
IE	Ireland	1000	RS
IT	Italy	2250	RR
LT	Lithuania	1000	RR
LU	Luxembourg	1000	RS
LV	Latvia	1000	RS
MT	Malta	1000	RS
NL	Netherlands	1000	RS
PL	Poland	2250	RS
PT	Portugal	1000	RR
RO	Romania	1500	RR
SE	Sweden	1000	RS

SI	Slovenia	1000	RS
SK	Slovakia	1000	RR
UK	United Kingdom	2250	RS
TR	Turkey	2000	RR
HR	Croatia	1000	RR
MK	Former Yugoslav Republic of Macedonia	1000	RR
KO	Kosovo	1000	RR
RS	Serbia	1000	RR
ME	Montenegro	1000	RR
IS	Iceland	1000	RS

RS=Random Probability Sampling Countries
RR=Enumerated Random Route Countries

In total 16 countries (15 EU Member States and Iceland) are classified as **Random Probability Sampling** countries (RS).

Austria	Finland	Latvia	Sweden
Belgium	Hungary	Malta	Slovenia
Czech Republic	Ireland	Netherlands	United Kingdom
Denmark	Luxembourg	Poland	Iceland

In total 18 countries (12 EU Member States and 6 non EU countries) are classified as **Enumerated Random Route** countries (RR) because good sampling frames (covering 95% of the households/persons in a country) were not available. Samples of addresses were enumerated in advance by the national agencies.

Bulgaria	Greece	Lithuania	Turkey	Serbia
Cyprus	Spain	Portugal	Croatia	Montenegro
Germany	France	Romania	FYROMacedonia	
Estonia	Italy	Slovakia	Kosovo	

In all countries except Malta (where the country size made this option impractical), the sample was **stratified**. This means that each country/territory was divided into strata defined by region (based on NUTS level 2 where available) and degree of urbanisation.

The sample was then allocated to the strata proportionately to their total population (aged 18 and over). The population figures were obtained from reliable sources, approved by Eurofound. These sources can be found in the country sampling plans annexed to this report (Annex A).

2.3. Organisation of the sampling process

GfK EU3C provided the national agencies with a centrally designed stratification template for their population figures and sample distribution.

Each country's stratification plan had to be approved by Eurofound ahead of sampling. The approved stratification figures can be found in Annex C of this report.

Following approval, two centrally designed sheets were added to the stratification plans: one sheet with the stratification codes and one sheet with the numbering of the sampling points within each strata. The numbering system orders the sampling points sequentially starting with sampling point 001 in the first stratification code (XX001) and ending with the highest sampling point in the last stratification code. These stratification plans were provided to EF in excel.

Most countries used a **multi-stage** random sample design. First, the sampling units (Primary Sampling Units/PSU) were selected randomly in each stratum. Second, within each PSU, addresses/persons were chosen at random from the available register or, where registers were not available, by way of a random route. In each country a maximum size of addresses/persons per PSU is set (maximum size of 20 addresses/persons). The selection was done centrally by the national survey agencies.

Interviewers were provided with batches of sampling addresses/persons prior to the start of fieldwork.

Subsequently, one individual belonging to the target population (age 18 and over) was selected within each household, following the '**next birthday**' rule selecting the respondent 18+ that has the next birthday in the household. Interviewers were instructed and trained to carry out this selection.

Malta, Sweden and Iceland are the only countries where respondents were directly selected from the register (as a high quality name-based register is available). A different approach was also used in the Netherlands: instead of clustering the sample, addresses were drawn directly from the register after stratification.

For Sweden, Finland and Iceland are an exception: the selected sample could initially be contacted by telephone in order to make appointments for the face-to-face interviews.

2.3.1. Random probability sampling

After approval of the sampling and stratification plans, the GfK EU3C team provided the 16 Random Probability countries (15 Member States and Iceland) with detailed sampling instructions and with a centrally designed template in which they needed to provide:

- ✓ The names/addresses for the main sample.
- ✓ The back-up names/addresses. This is the minimum required but countries were free to draw a larger back-up sample if so desired.
- ✓ For the pilot sampling point(s), an extra 60 addresses
- ✓ In the case of address-based samples - the sample point number, stratification code (according to the stratification plan), postcode, town name, street name, street number, apartment number (if applicable) for each address.
- ✓ In the case of name-based samples - the sample point number, stratification code (according to the stratification plan), postcode, town name, (if possible the street name, street number and apartment number), the name of the selected respondent and any further details about them. These data were gathered taking into account the privacy rules applying in a specific country (please see the privacy legislation table for more details).
- ✓ Any deviations from the sampling plan. These were approved by Eurofound in advance.

The EQLS pilot (carried out in July 2011 in the EU27 Member States and in April-May 2012 in the non-EU countries) was used to check compliance with the sampling plans, and to identify any deviations or misunderstandings. For the pilot, samples were drawn using the same sampling methodology as for the main survey. This exercise, whereby the agencies supplied the sampling information for at least 60 pilot addresses, revealed minor issues as well as a few more significant issues. In the non-EU countries all issues relating to the sampling plans had been solved before the pilot stage. Hence, no specific sampling issues arose during the pilot.

- First of all, it came to our attention that Denmark purchased a sample without details of multi-unit households. For the main sample, the Central Office of Civil Registration delivered addresses which included the flat/apartment numbers.
- Second, we noticed that the version of the State Land Register to be used in Latvia was out of date (2006): a new sample was subsequently ordered. The stratification plan for Latvia was also updated when 2011 population figures became available, making it possible to have four instead of three urbanization categories. Consequently, the number of sampling points changed from 100 to 102.
- Third, the pilot revealed that the sampling plan for Slovenia was not sufficiently clear in terms of the selection of households from the Central Population Register, information which could not be obtained automatically due to privacy legislation. After consultation with Eurofound, Slovenia obtained a name-based sample from its Central Population Register. This represented a significant quality improvement. The new sample had 200 sampling points, compared to 100 in the original version.

- Besides, quality checks on the full Polish sample established that a sampling stage had been skipped in the original sampling plan: rather than directly selecting household addresses, a street was randomly selected in each of the 375 PSUs and at a subsequent stage, household addresses were randomly selected within that street. As a result, the Polish sample was a four-stage rather than a three-stage random probability sample. This was adapted in the Polish sampling plan included in annex

The final sample plans can be found in Annex A of this report.

In the following 5 countries, privacy legislation prohibited the full disclosure by the national agencies to third parties of either addresses or names of respondents:

Random Probability Countries - Privacy Legislation	
Austria	No listing of addresses
Netherlands	No listing of addresses
Poland	No listing of addresses
Finland	No listing of names
Sweden	No listing of names

For the non-EU countries there were no specific privacy legislation rules to be taken into account.

In order to maintain the measures required for quality control these 5 countries listed the number of addresses or names that had been drawn in each PSU and each individual record was assigned an unique ID for follow-up purposes.

2.3.1.1. Information about the sampling frames

The following table provides information about the sampling frames for each of the 16 Random Probability Countries (15 Member States and Iceland).

Random Probability Countries - Register Information				
Country code	Register Name	Register Description	Register Coverage	Date of issues of sample/ date sampled
BE	Orgassim	Household register (includes paradata)	100% of registered (legal) residents	Issued: February 2011; Sampled June 2011
CZ	Czech Statistical Office – Register Municipal Census	Household register (includes paradata)	95% of (legal) residents	Issued: August 2009; Update : January 2011; Sampled July 2011
DK	Danish street register, Central Office of Civil Registration.	Household register	100% of households	Issued: May 5 2011; Sampled August 5, 2011
HU	Central Population Register	Name-based list of all legal residents	99%	Issued: August 2011; Sampled August 22, 2011
IE	GEO-DIRECTORY	Household register	>95%	Issued: Q3 2010; Sampled June 2011.
LV	State Land Services register of addresses	Household register	100%	Issued: July 2011; Sampled September 2011.
LU	National Postal Services Register	Household register	100%	Issued: 2011; Sampled July 2011.
MT	Electoral Register	Name-based list of registered voters	All registered voters, excluding about 0.3% of Maltese citizens who are not registered to vote	Issued: April 2011; Sampled 20 June 2011
NL	Cendris Post-afgiftenbestand	Household register	100% of Dutch addresses	Issued: June 2011; Sampled 22 June 2011
AT	Austrian Personen-Datenbank	Household register	95% of (legal) residents	Issued: July 2011; Sampled July 15, 2011
PL	Pesel	Household register	100% of (legal) residents	Issued: June 2011; Sampled June 2011
SI	Central Population Register	Name-based register of permanent residents (includes paradata)	96% of (legal) residents	Issued: January 2011; Sampled 31 August, 2011
FI	National Population Registry	Name-based list of all legal residents	100% of (legal) residents	Issued: Continuously updated; Sampled 02 September, 2011
SE	SPAR	Name-based list of all legal residents	100% of (legal) residents	Issued: Continuously updated; Sampled August, 2011
UK	Royal Mail Postcode Address File (PAF)	Household register	97% of households	Issued: February 2011; Sampled: June 2011

Random Probability Sampling – Register information				
Country	Register Name	Register description	Register coverage	Date of issue of sample/data sampled
Iceland	National Population Registry - Statistics Iceland: http://www.statice.is/	Name-based register of citizens and legal residents, updated every month	100%	Issued: April 2012 Sampled: May 2012

Whilst the frames all cover at least 95% of the population, minor deficiencies to the registers were noticed in 6 countries, as follows¹:

Register Deficiencies		
Country code	Register Name	Deficiency
CZ	Czech Statistical Office – Register Municipal Census	Undercoverage of very new buildings which have not yet been inspected
HU	Central Population Register	For approximately 3-4% of the population the "official" (registered) domicile and the real (used) dwelling differs
LV	State Land Services register of addresses	Includes business and vacant addresses; Proportion of deadwood estimated at 25%
MT	Electoral Register	Only includes registered voters; excludes non-Maltese citizens. Share of foreign or foreign born population in Malta in 2010 was 4%
SI	Central Population Register	Excludes 4% of population that wishes not to participate in survey research
FI	National Population Registry	Proportion of deadwood estimated at 15%

¹ Malta: Eurostat, *Statistics in focus*, 34/2011, p.2.

2.3.1.2. Sampling information

The majority of the registers are household-based. Name-based registers are only used in Hungary, Malta, Slovenia, Finland, Sweden and Iceland.

Generally, three stages were needed to sample the respondent:

1. Random selection of PSUs
2. Random selection of addresses/households
3. Random selection of the respondent (using the next birthday rule)

The following table provides more detailed sampling information for each country².

² The cells highlighted yellow indicate that the sample deviates from the original sampling plan, which has been revised or updated accordingly. See Annex A for the final sampling plans.

Sampling Information - Random Probability Countries

Country code	Sample size	Stratification	PSU	Number of sampling stages	Number of sampling points	Batch size per PSU	Gross sample size	Contingency plan
BE	1000	36 Strata: NUTS2 regions X Urbanisation	Postcode clusters in municipalities	3	100	20	2500	500 back-up addresses included in gross sample
CZ	1000	33 Strata: NUTS2 regions X Urbanisation	Postal delivery district	3	130	16	3380	1300 back-up addresses included in gross sample
DK	1000	20 Strata: NUTS2 regions X Urbanisation	Households	3	180	11	2820	840 back-up addresses included in gross sample
HU	1000	21 Strata: NUTS2 regions X Urbanisation	Settlements/departments of cities	2	120	max 15	3140	1424 back-up addresses included in gross sample
IE	1000	10 Strata: NUTS2 regions X Urbanisation	Wards/Electoral Divisions	3	140	15	2800	700 back-up addresses included in gross sample
LV	1000	15 Strata: NUTS2 regions X Urbanisation	Populated points (cities/parishes)	3	102	20	3060	1020 back-up addresses included in gross sample
LU	1000	11 Strata: Electoral Districts X Urbanisation	Electoral districts	3	204	20	6120	2040 back-up addresses included in gross sample
MT	1000	No stratification	Maltese citizens aged 18+	1	0	No clustering used	2890	665 back-up addresses included in gross sample
NL	1000	51 Strata: NUTS2 regions X Urbanisation	Postal delivery points	2	0	No clustering used	2000	If necessary, a new sample will be purchased.
AT	1000	57 Strata: NUTS2 regions X Urbanisation	Post certified address code	3	200	10	2400	400 back-up already addresses included in gross sample; if necessary, a new sample will be purchased
PL	2250	87 Strata: NUTS2 regions X Urbanisation	Gmina (smallest administrative unit in PL)	4	375	12	5832	1332 back-up addresses included in gross sample
SI	1000	41 Strata: NUTS3 regions X Urbanisation	Set of 10 persons in a district	3	200	20	2000	100 sampling points (1000 names) have been purchased separately
FI	1000	12 Strata: NUTS2 regions X Urbanisation	Postcode clusters in municipalities	3	250	12	5000	3000 back-up addresses included in gross sample
SE	1000	18 Strata: NUTS2 regions X Urbanisation	Individuals aged 18+	1	0	No clustering used	2000	If necessary, a new sample will be purchased.
UK	2250	37 Strata: NUTS1 regions X Urbanisation	Census Super Output areas	3	250	20	5500	1000 back-up addresses included in gross sample

Sampling Information								
Country	Sample size	Stratification	PSU	N° of sampling stages	N° of sampling points	Batch size per PSU	Gross sample size	Contingency plan
Iceland	1000	11 strata: NUTS2 regions x urbanisation	Post code clusters	2	36	Proportional to population	5000 (of which 2000 addresses in main sample and 3000 in backup sample)	Extra addresses could be issued when target sample does not seem to be achieved towards end of field

2.3.2. Enumerated random route sampling

In 18 countries (12 Member States and 6 of the 7 non-EU countries) the sample was enumerated in advance by the national agencies using random route sampling. We first describe the random route methodology before explaining the enumeration process, the quality control process, the results of the back-check of the enumeration and the corrective actions taken afterwards.

2.3.2.1. Random route methodology

With the random route method a start address is chosen at random in each sampling point (PSU). This address forms the starting address for a cluster of sampled addresses in a PSU. The rest of the addresses in the sampling point are chosen using a systematic scheme with a fixed interval, i.e. every N^{th} address after the first one along a random route. As the random route differs in each country due to local custom and geographical differences, a precise description of each random route can be found in the respective national sampling plans (see Annex A).

All random route countries except Estonia and Lithuania used a **three-stage sample design**:

1. Random selection of PSUs
2. Random selection of start addresses (followed by the enumeration of addresses along the random route)
3. Random selection of the respondent (using the next birthday rule)

In Estonia and Lithuania, the start addresses are the PSUs which were drawn directly from the respective national registers of these two Baltic States. However, the coverage and quality of these registers is too poor for them to be used for random probability sampling purposes. Therefore, households had to be randomly selected using the random route methodology.

In other countries, the start addresses were randomly selected from official lists (e.g. street lists, telephone lists, address databases etc.) at a second stage, after the selection of PSUs. In this case, the PSU is a settlement (or locality, municipality, commune), census or enumeration area, electoral unit, postal code or in the case of Germany, the ADM area (see the German sampling plan for further information). In the majority of random route countries, the official lists do not cover isolated rural areas. The rural areas also often do not have streets. In these sampling points, the start address is a central place of interest or landmark (e.g. church, school or town hall). The following table provides more detailed sampling information for each random route country³.

³ The cells highlighted in yellow indicate that the sample deviates from the original sampling plan, which has been revised or updated accordingly. See Annex A for the final sampling plans.

Sampling Information - Enumerated Random Route Countries

Country code	Sample size	Stratification	PSU	Sampling stages	No. of sampling points	Enumerated gross main sample	Batch size per PSU	Enumerated back-up sample per PSU	Starting address	Selection of households
BG	1000	36 Strata: NUTS2 regions X Urbanisation	Settlement	3	167	2004	12	At least 8	Geographic profiling, town sq/town hall in villages	Every 3rd hh; flats treated like streets
CY	1000	9 Strata: Districts X Urbanisation	Enumeration area	3	100	2000	20	At least 10	Random selection from a street list; points of interest in areas without streets	Batches of 3 households; flats are treated like streets
DE	3000	211 Strata: NUTS2 regions X Urbanisation	ADM area	3	429	6435	15	7	Random selection from the telephone listings	Every nth hh; flats treated like streets
EE	1000	33 Strata: County (NUTS2) X Urbanisation	Starting address	2	150	2250	15	15	Random selection from the Population Registry	Every 3rd hh; flats treated like streets
EL	1000	32 Strata: NUTS2 regions X Urbanisation	Locality	3	110	1320	Average of 12	Average of 10	Random selection of block from city maps; random allocation of dwelling around landmark in rural areas	Every 3rd hh; flats treated like streets
ES	1500	65 Strata: NUTS2 regions X Urbanisation	Census area	3	300	3600	12	At least 8	Random selection from Excel list of numbered streets	Every 3 rd street; every 10 th street number; every 3 rd household
FR	2250	44 Strata: UDA Region X Urbanisation	Commune	3	450	5400	12	12	Random selection of 8 addresses per PSU from the telephone listings	Systematic random selection of 3 hhs per start address
IT	2250	58 Strata: NUTS2 regions X Urbanisation	Postal code	3	253	4554	18	22	Random selection from database of addresses	Every 2nd hh; flats treated like streets
LT	1000	30 Strata: County X Urbanisation	Starting address	2	150	3000	20	10	Random selection from the Register of Lithuanian addresses	Every 3rd hh in flats and every 2nd private house; full enumeration of very small villages
PT	1000	18 Strata: NUTS2 regions X Urbanisation	Locality	3	160	2400	15	At least 5	Random selection from a database of all streets; points of interest in areas without streets	Every 3rd HH, flats are treated like streets
RO	1500	31 Strata: NUTS2 regions X Urbanisation	Locality	3	225	2250	10	At least 10	Random selection via allocation of street letters in urban areas, point of interest in villages	Every 5th hh; flats treated like streets
SK	1000	39 Strata: Kraje Districts X Urbanisation	Municipality	3	150	1500	10	10	Random selection from the phone book and mobile phone database, separately for each municipality.	Starting with number 13, every 3rd hh in flats and every 13th private house. In rural points, more than one village has been enumerated to obtain sufficient addresses

Sampling information – Enumerated Random Route countries

Country	Sample size	Stratification	PSU	N° of sampling stages	N° of sampling points	Batch size per PSU	Gross enumerated sample	Starting address	Selection of households
TR	2000	78 strata: NUTS2 regions x urbanisation	Districts (mahalle)	3	256	16	11764 addresses: 5043 are eligible	Randomly chosen on basis of special Excel programme.	Selection of households based on street letter using Kish-like grid.
HR	1000	21 strata: 6 regions (usual classification) x urbanization	Counties (SSU: Settlements)	3	110	20	2667 addresses: 2403 are eligible	Randomly chosen from a street list; post office or grocery shop on main square is starting point in areas without streets.	Every 3rd site: 1st address if this is a house; the 3rd household if it is a multi-dwelling building.
MK	1000	16 strata: NUTS3 regions x urbanisation	Electoral unit	3	100	20	3361 addresses: 3000 are eligible	Randomly chosen from a street list; point of interest is starting point in areas without streets.	Every 3rd household. Flats treated like streets.
KO	1000	14 strata: UNMIK districts x urbanisation	Electoral wards	3	100	20	3097 addresses: 3000 are eligible	Randomly chosen from a street list.	Every 3rd household. Flats are treated like streets.
RS	1000	23 strata: NUTS2 regions and urbanisation	Municipalities	3	170	12	3117 addresses: 3109 are eligible	Randomly selected from Postal Address File; point of interest or institution is starting point in areas without postal addresses.	Every 3rd household in urban areas and every 3rd in rural areas. Flats are treated like streets.
ME	1000	6 strata: NUTS2 regions x urbanisation	Municipalities	3	50	40	3027 addresses: 2983 are eligible	Randomly selected from Postal Address File; point of interest or institution is starting point in areas without postal addresses.	Every 3rd household in urban areas and every 3rd in rural areas. Flats are treated like streets.

2.3.2.2. The enumeration process

The purpose of the enumeration is to ensure that the sample selection is completely random so as to meet the standards of random probability sampling whereby each household has a known, non-zero chance of inclusion. It is for this reason that enumeration is separate from the fieldwork and was conducted by enumerators who were specifically trained for the task. The enumeration and interviewing was done by different people to ensure the enumeration process was methodologically sound. Detailed information about the enumerators was submitted to Eurofound.

For the enumeration process, the agencies in the RR countries received detailed instructions about the enumeration method. The instructions were approved by Eurofound (see Appendix B). The agencies also received a centrally designed template in which they needed to provide their enumerated sample according to the following checklist:

- ✓ One sheet per sampling point with one row per address. For each address the name of the enumerator was included.
- ✓ The eligible addresses for the main sample (this corresponds to the maximum batch size). Ineligible addresses were sorted out and classified as such so that the random route could be traced.
- ✓ The eligible back-up addresses
- ✓ For the pilot sampling point(s), an extra 60 addresses⁴
- ✓ The sample point number, stratification code (according to the stratification plan), postcode, town name, street name, street number, apartment number, additional information to identify the dwelling in case of no street or apartment number, for each address.
- ✓ Any deviations from the sampling plan.

For the EU27 countries, due to the length of the sample design the decision was taken to first enumerate the pilot sampling points and to enumerate the main sample after the pilot.

The enumeration dates for the main sample are provided in the table below. As can be seen, in some EU27 countries it was not possible to complete the enumeration period one month prior to the start of fieldwork.

⁴ In the non-EU countries no separate batch of addresses for the pilot stage has been enumerated. The addresses for the pilot have been selected at random from the main sample.

EU27

Enumeration Information - Enumerated Random Route Countries		
Country code	Enumeration period	No. of enumerated sampling points
BG	12-07-2011 to 24-07-2011	167
CY	01-06-2011 to 20-07-2011	100
DE	29-07-2011 to 15-08-2011	429
EE	27-07-2011 to 19-08-2011	150
EL	27-07-2011 to 05-08-2011	110
ES	11-07-2011 to 29-08-2011	300
FR	18-07-2011 to 12-08-2011	450
IT	01-07-2011 to 29-08-2011	253
LT	29-07-2011 to 09-09-2011	150
PT	20-05-2011 to 06-07-2011	160
RO	21-07-2011 to 27-07-2011	225
SK	04-07-2011 to 31-07-2011	150

NON-EU

Enumeration information		
Country code	Enumeration period	N° of enumerated sampling points
TR	05.03.2012 – 14.05.2012	256
HR	05.03.2012 – 14.05.2012	110
MK	05.03.2012 – 10.04.2012	100
KO	05.03.2012 – 10.04.2012	100
RS	05.03.2012 – 12.04.2012	170
ME	05.03.2012 – 16.04.2012	50

2.3.2.3. The quality control process

The GfK EU3C team carried out two quality control steps: an initial review of the enumerated main sample and a 10% random back-check.

Initial review of sample characteristics

In the EU27, the decision to first enumerate the pilot sample (60 addresses) provided the opportunity for an additional quality check as it was possible to check compliance with the enumeration of the random route and to detect at an early stage any misunderstandings about the enumeration requirements. This stage proved very useful in highlighting the close guidance that the countries needed in doing the enumeration.

Also in the non-EU countries a first batch of enumerated addresses was checked before the countries were allowed to enumerate the full main sample.

The following checks were carried out in each country during the initial review of the enumerated main sample:

- ✓ Enumeration of all the sampling points
- ✓ Enumeration of sufficient main and back-up addresses within each sample point
- ✓ Correct number of stratification strata
- ✓ Correct number of sampling points
- ✓ Correct distribution of sampling points per strata
- ✓ Correct batch size per sampling point
- ✓ Inclusion of ineligible addresses
- ✓ Compliance with random route
- ✓ Correct application of selection interval
- ✓ Provision of name or number of enumerator for each sampling point
- ✓ Reference to enumeration period
- ✓ Provision of all the requested information

This process did not reveal any inconsistencies in Greece. The following issues were reported in other countries:

Country	Quality check GfK EU3C
Bulgaria (BG)	Did not enumerate sufficient addresses per sampling point.
Cyprus (CY)	Did not enumerate addresses for the main sample in the pilot sampling points and made errors in the numbering of sampling points in terms of stratification codes.
Germany (DE)	Needed to include a selection interval, which varied per sampling point
Estonia (EE)	Distributed its addresses incorrectly between main and back-up sample; this was a 20/10 ratio which was then corrected to 15/15.
France (FR)	The ineligible addresses were missing.
Italy (IT)	9 routes were missing.
Lithuania (LT)	Postcodes and ineligible addresses were missing and the rural areas had not been enumerated.
Romania (RO)	There was a deviation in the selection interval in small villages.
Portugal (PT)	There were errors in the interval selection.
Slovakia (SK)	Had difficulties finding enough addresses in very small villages and subsequently it was decided to enumerate the nearest randomly selected village where this problem arose. The selection interval appeared not to have been applied systematically, but this was caused by inaccurate street numbering systems.
Spain (ES)	Included the ineligible addresses in its count towards the total number of addresses and thus enumerated insufficient addresses. More importantly, it appeared that the rule of 5 addresses per street was not respected; this was subsequently adjusted to 10 addresses per street to alleviate the burden without sacrificing the quality of the sample. Finally, Spain did not enumerate addresses in the 3 sampling points that were used for the pilot.
Turkey (TR)	<ul style="list-style-type: none"> ▪ Because of earthquake in Oct 2011 city of Van has been replaced by city of Muş ▪ A high number of not eligible addresses because of enumeration strategy <i>"According to first letter of the street name or last number of street number, we assess apartment/house number. Assume that we decide to go the apartment number "5" we enumerate this, if this apartment isn't existing we coded it non-eligible"</i> → these non existing addresses will be deleted upon finalisation sample ▪ Agency needed to provide info on not eligible addresses ▪ Stratification codes needed to be added
Croatia (HR)	<ul style="list-style-type: none"> ▪ The agency only enumerated urban area because in most of these areas there is only one street without name and without house numbers. GfK EU3C instructed the agency to enumerate addresses in the rural areas as well and provided examples of descriptions to identify an address from other countries (in case street names/numbers do not exist) ▪ The agency needed to delete duplicates and addresses with smaller intervals than 'every 3rd site/flat' ▪ The agency did not provide descriptions on dwellings for addresses without street name/number → additional info had been requested ▪ In rural areas no – or to a very limited extent – street names exist

Macedonia (MK)	<ul style="list-style-type: none"> ▪ The agency needed to delete duplicates and addresses with street numbers with smaller intervals than 'every 3rd house/flat
Kosovo (KO)	<ul style="list-style-type: none"> ▪ The agency needed to delete duplicates and addresses with street numbers with smaller intervals than 'every 3rd house/flat
Serbia (RS)	<ul style="list-style-type: none"> ▪ The agency needed to provide information on whether an address is eligible or illegible (f.e. because business and not residential) ▪ The agency also needed to delete duplicates and addresses with street numbers with smaller intervals than 'every 3rd house/flat
Montenegro (ME)	<ul style="list-style-type: none"> ▪ In small towns and villages there are many addresses without street numbers → in these cases a description of dwelling has been provided ▪ The agency needed to provide information on whether an address is eligible or illegible ▪ The agency also needed to delete duplicates and addresses with street numbers with smaller intervals than 'every 3rd house/flat

These issues were all corrected before the random 10% back-check was carried out.

Back-check of enumerated samples

The next stage of the quality control process consisted of checking compliance with the random route on three levels:

- Fully compliant
- Small errors (compliance with the 'spirit' of the rules)
- Non-compliant

For each country, 10% of the sample plus two sample points have been back-checked. The selection of the sample points was done by FME, a well-known software for data management (please see figure 1 for the FME model and figure 2 for the back-check selection). The workbench selected 10% + 2 sample points for each country and immediately created Excel files that could be used for manual checking and automatic geocoding. In the non-EU countries SP's including addresses without a street name and/or number were not selected for geocoding.

The selection of points was done by adding a random number (0 – 1.000.000) to each sample (per country). Sample points were sorted and the first 10% + 2 were kept for the checking process.

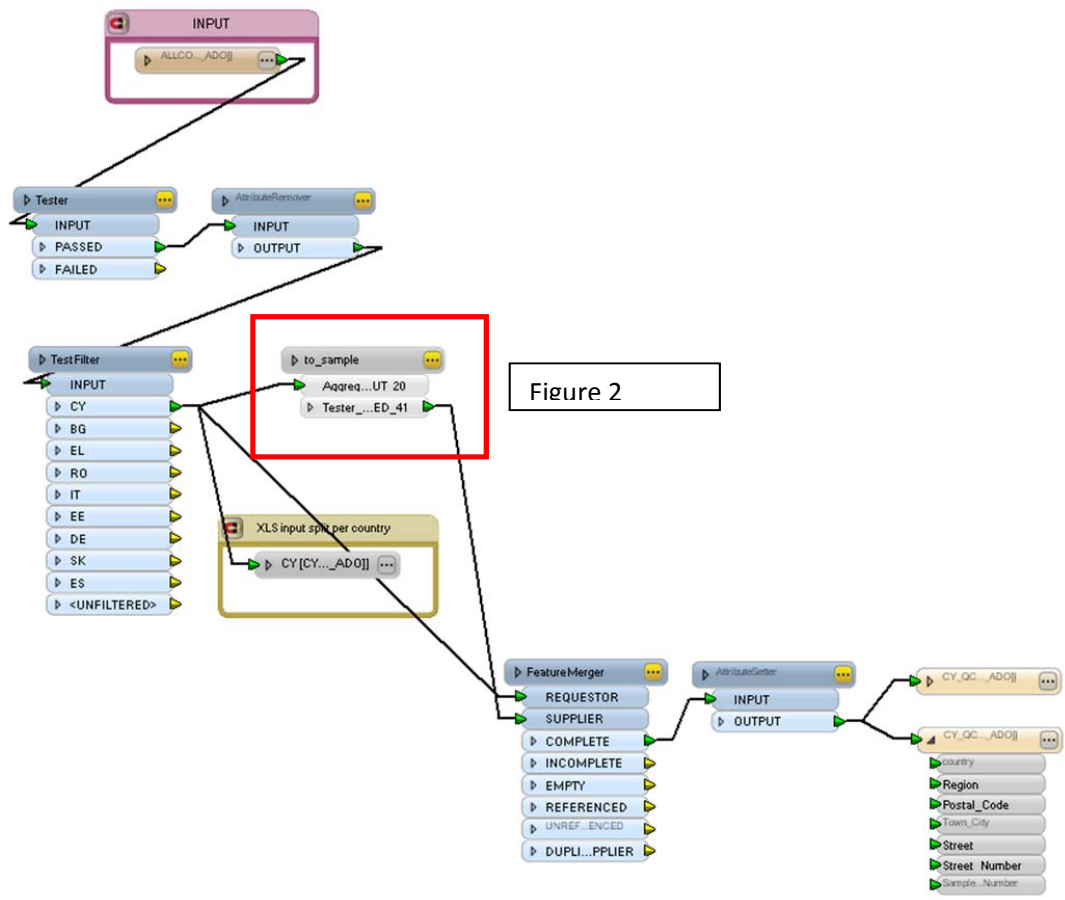


Figure 2

Figure 1: Main model

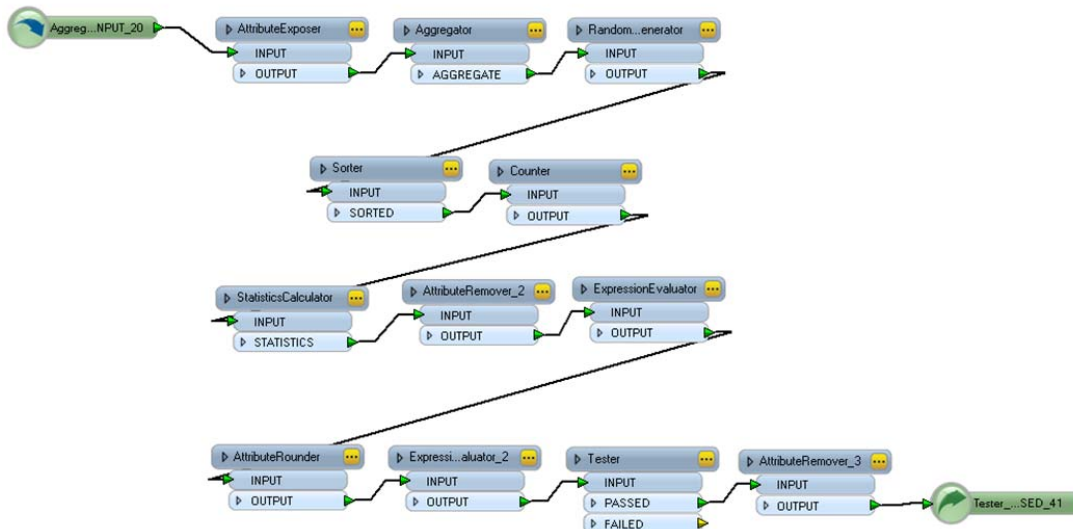


Figure 2: Select 10% +2 of samples

All Excel files generated were automatically geocoded by a geocoding engine. For each country an Excel file is made: country_checked.xls. This file combines the input data and the geocoding result. Three columns are added to facilitate the checking process: difference in latitude, difference in longitude and difference in house number with the previous record.

For each sample point, Google Maps (and similar online tools) were used to check if the addresses were located close to each other, if the house numbers were consistent with the image and if the degree of urbanization could be assessed from the image. For each sample point the degree of compliancy was indicated and a few words of feedback were provided.

For each country a screenshot was made to show the distribution of checked samples. To make this kind of mapping, an excel file was created (in FME) with all unique combinations of sample point number and village/city. These excel files were again geocoded by an alternative geocoding engine, checked manually and edited if necessary. Results were turned into a MapInfo TAB file and plotted on a map. These maps are shown in Annex B.

2.3.2.4. Results of back-check

Analysis of the back-check results revealed that the enumeration process was generally of high quality.

Geocoding worked very well in general although it is not fully effective yet as a back-check method in all countries. In particular, the system could not detect rural sampling points where street names and/or street numbers were sometimes only limited available, it was necessary to call upon the assistance of the national agencies).

Countries where the enumeration process was of very good quality are:

- Estonia and Greece, where the entire process is fully compliant
- Romania, where after a second back-check the process proved to be fully compliant
- Spain and France, where the compliance level is above 95%

Countries where the enumeration process had to be followed up with corrective measures:

- Cyprus where four sampling points had to be resent to the national agency for re-checking
- Lithuania, where postcodes were missing (and added later) and where rural areas were not enumerated at all initially

In the non-EU countries the outcomes of the geo-coding showed that overall there was a good matching and that the enumeration was compliant with the sampling plan principles.

However, in four countries, Croatia, Kosovo, Serbia and Montenegro, the addresses in some of the sampling points could not be found via the geo-coding tool. The sample points were then checked using google-maps to find evidence for their existence and sampling plan compliance. The re-checks for all the sampling points in question were satisfying.

The following table presents the full back-check results, and lists the corrective actions taken. In total, there is only one sampling point where the enumerated route was non-compliant and a second enumeration was required: SP137 in Bulgaria.

Back-Check Overview - Enumerated Random Route Countries

Country code	No. of sampling points	Number of sampling points rechecked	Number of addresses rechecked	% of SP's fully compliant	% of SP's with small errors	% of SP's with systematic deviations	% of sampling points unable to	% of sampling points non-compliant	Explanation of inconsistencies/deviations Corrective actions taken
BG	167	19	545	84%	5%	5%	0%	5%	3 SP's were sent to agency for further control. SP137 was non-compliant and has been re-enumerated; SP122 had small errors; In SP151 the enumerator went south instead of north. For both, no corrective measures were required
CY	100	12	475	50%	17%	0%	33%	0%	In SP79 and SP93 the selected streets are not next to each other. SPs 30, 47, 82 and 99 have been resent to agency for further checking. The agency adapted the SPs
DE	429	45	990	93%	7%	0%	0%	0%	In 3 SP's (181, 351 and 373), there are minor inconsistencies in the street numbers which did not require corrective measures
EE	150	17	541	100%	0%	0%	0%	0%	5 SP's were sent to agency for further back-checking. SP's 139 and 144 were found to be compliant; SP's 59, 111 and 141 are very small villages that are equally compliant
EL	110	12	320	100%	0%	0%	0%	0%	4 SP's were sent to agency for further back-checking. They are all small villages without street names (SP's 21, 24, 27 and 29)
ES	300	32	675	97%	3%	0%	0%	0%	2 SP's were sent to agency: SP210 which is compliant and SP165 where the street numbering has been corrected from even to odd
FR	450	47	1128	96%	0%	0%	4%	0%	2 SP's in very rural areas had addresses without street numbers or streets that were sent to the agency (SP267 and SP296). These are small villages that are compliant
IT	253	27	1055	93%	7%	0%	0%	0%	SP's 65 and 204 have buildings that seem smaller than street numbers indicate; agency has been asked to recheck these addresses. These addresses were checked
LT	150	17	423	82%	0%	0%	18%	0%	3 SP's are small villages without street names: SP's 81, 82 and 93. These are compliant. SP105 proved correct after having been rechecked by agency to verify existence of apartments
PT	160	17	346	94%	0%	6%	0%	0%	4 SP's were rechecked: SP's 24, 79, 87 and 125. SP87 deviated from the route due to small size of locality. The other SP's proved fully compliant
RO	225	25	500	100%	0%	0%	0%	0%	13 SP's are small villages without street names: SP's 10, 39, 41, 42, 66, 73, 131, 133 and 207. These are compliant. SP's 133, 149 and 186 were re-checked and on second check proved to be compliant
SK	150	17	340	82%	0%	18%	0%	0%	4 SP's are small villages without street names: SP's 4, 5, 22 and 30 but these are compliant. SP2 deviates due to small size of village. Small deviations were also found in SP30 and SP96 (different street numbers)

Back check overview – Enumerated samples - Random Route countries						
Country	N° of SPs	SP N° of SPs checked	N° of addresses checked	Outcomes back check	Sample points that were not found through automatic geocoding and that needed	Outcomes re-check
TR	256	28	561	Found to street level: 561 addresses (good matching) More complex to trace back as street names tend to have different pre- and suffices in the reference data	n/a	n/a
HR	110	15	323	Found to address level: 47 addresses (good matching) Found to street level: 94 addresses (good matching) Found to city level: 57 addresses (good matching) Not found: 125 addresses (38,7%) Relatively little information available number in the reference data for Croatia	71, 73, 74, 97, 101, 109	Checks via “google maps” evidenced the existence and compliance of the addresses in the sample points
MK	100	12	360	Found to building level: 4 addresses (not correct) Found to street level: 271 addresses (good matching) Not found: 85 addresses (23,6%) Almost no house number information available in the reference data for Macedonia	n/a	n/a
KO	100	12	287	Found to street level: 143 addresses (good matching) Found to city level: 11 addresses (good matching) Not found: 133 addresses (46%) Almost no house number information available in the reference data for Kosovo	28, 33, 36, 44	Checks via “google maps” evidenced the existence and compliance of the addresses in the sample points
RS	170	19	350	Selected Addresses: 350 addresses from 19 sample points Found to building level: 28 addresses (not verifiable, Cyrillic) Found to address level: 7 addresses (correct) Found to street level: 111 addresses (relatively good matching, often unverifiable by Cyrillic) Found to city level: 50 addresses (good matching) Not found: 154 addresses (44,0%). Very little information available for street numbers in the reference data for Serbia	91, 96, 104, 108, 118, 137	
ME	50	7	304	Found to street level: 152 addresses (good matching) Not found: 152 addresses (50,0%) Virtually no house number information available in the reference data for Montenegro.	12, 13, 47	

2.3.3. Extra Backup Sample issued during Fieldwork

Next to the validity checks of the random sampling and enumeration samples before the main fieldwork stage, extra samples had to be drawn during fieldwork for some countries. This helped ensure these countries reached the predetermined targets. These additional backup samples were checked by GfK EU3C on the following parameters: the occurrence of duplicate addresses and the enumeration process checks as described before, with general checks assessing the enumerating logic presented in the sampling plans and geocoding/"google maps" checks.

The details of the extra back up samples can be found in the table below. It has to be emphasized that not all these additional addresses were actually used.

EU27 – ADDITIONAL SAMPLES			
	Delivery date	EU3C: check + IDs	#Addresses
CZ	14.11.2011	✓	1728
SI	14.11.2011	✓	3425
IT	For SP70 (Bolzano): Some addresses that were first allocated to the backup sample were used as main sample because the main sample addresses were absent for this SP. The number of back up addresses left was sufficient and no additional sample needed to be allocated for SP70.		
SE	17.11.2011	✓	3993
LU	14.11.2011 29.11.2011 05.12..2011	✓	3425
DE	13.12.2011 09.01.2012	✓	44
PT	05.10.2011 01.12.2011	✓	970
UK	12.12.2011	✓	7245
LT	07.12.2011	✓	120
DK	14.11.2011 02.01.2011 24.01.2011	✓	5866
NL	03.02.2012	✓	2000
EL	17.11.2011 30.11.2011	✓	182

NON-EU – ADDITIONAL SAMPLES			
	Delivery date	EU3C: check + IDs	#Addresses
TR	Week 21/06/2012	✓	60
	Week 12/07/2012		301
	Week 16/07/2012		228
HR	Week 28/06/2012	✓	66
	Week 05/07/2012		20
RS	Week 02/07/2012	✓	30
	Week 06/07/2012		195
	Week 12/07/2012		34
IS	Week 14/06/2012		3000 (start using backup sample)
	Week 12/07/2012	✓	500
	Week 16/07/2012		700

ANNEX A. Country sampling strategies (sampling plans)

EU27

AUSTRIA

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Austrian Personendatenbank Address-based register of all Austrian households
Coverage:	95% of Austrian population (=residents)
Date of issue:	July 2011; Sampled: July 15, 2011
Sampling points:	200
Proposed gross sample:	2400
PSU:	Post-certified address code
Maximum cluster size:	10

Sampling stages

Stage 1 – random selection of PSUs

Austria is separated into 9 Bundesländer (NUTS 2 regions) which are classified in accordance with the number of inhabitants of 18 years and over.

Within each of the 9 Bundesländer (NUTS 2 regions) the population is divided into 9 urbanisation categories according to the population size. A grid with 59 cells is obtained, classified under Bundesland (NUTS 2 regions) and divided into nine categories of community size. Each cell covers all communities of the concerning sizes within the Bundesland. The number of sample points within the cells necessary for a representative sample is in accordance to its population size and considering the community size response rates. The communities which will be used as sample points are randomly chosen from the cells.

Stage 2 – random selection of households

After having fixed the sample point, 1 PAC (post certified addresscode) is selected at random within each sample point. With a system of fixed steps 12 households are drawn at random for each PAC.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 2.400 and the back-up sample is already included here. With a minimum response rate of 50% that would be a gross sample of 2.000 to achieve 1.000 net-interviews – we foresee 2.400 instead. These additional respondents will of course also fulfill the specified sampling requirements.

Stratification variables

NUTS2 Regions (9)

AT11	Burgenland (A)
AT12	Niederösterreich
AT13	Wien
AT21	Kärnten
AT22	Steiermark
AT31	Oberösterreich
AT32	Salzburg
AT33	Tirol
AT34	Vorarlberg

Urbanisation (9)

1	Up to 1.000 inhabitants
2	Up to 2.000 inhabitants
3	Up to 3.000 inhabitants
4	Up to 5.000 inhabitants
5	Up to 10.000 inhabitants
6	Up to 20.000 inhabitants
7	Up to 50.000 inhabitants
8	Up to 1 million inhabitants
9	Vienna (=1Mio+)

Statistical source of population data:

Microcensus 2009 Quarter 1 to 4 published by Statistic Austria. Latest update: April 1st 2009.
Community-index 2010;

BELGIUM

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Orgassim; official register of all (legal) residents in Belgium.
Coverage:	100% of Belgian addresses. contains information about family composition (age and gender).
Date of issue:	February 2011; sampled: June 2011
Sampling points:	100
Proposed gross sample:	2500
PSU:	Postcode clusters in municipalities
Maximum cluster size:	20

Sampling stages Stage 1 – random selection of PSUs

The number of clusters for each province is proportional to the size of the population in each province. For that, a list of municipalities with a population distribution (18 and over) for each province is used. The number of clusters in a municipality is proportional to the size of its population. After removing people younger than 18, a list of municipalities is prepared. This list will contain following fields: NUTS2_CODE, URBANISATION_CODE, NUMBER_OF_INHABITANTS, ZIP_CODE. The list is sorted by the fields in the order they are listed here: NUTS2_CODE, URBANISATION_CODE, NUMBER_OF_INHABITANTS. Over this list a systematic sampling is performed. The interval width equals the population size divided by 100 (PSUs). The initial position will be a random one between 1 and the size of the population. This will result in a new list of municipalities with a number of PSU's per municipality. In theory a municipality could be selected more than once given that the population size for that municipality is larger than the interval size.

The distribution of the PSU's should be representative to NUTS2 and urbanization within that NUTS2. A small error may occur as a result of the uneven division of 100 PSU's over 44 (or less) regions.

Stage 2 – random selection of households

In each postcode cluster a maximum of 22 households are selected. Interviewers receive batches of 20 addresses. The additional 2 per cluster are to account for any possible deadwood.

For each PSU the households are randomly selected using the following algorithm: First a random number is assigned generated by a deterministic random bit generator to every HOUSEHOLD inside the ZipCode. Then the households are sorted by their randomly assigned number and select the first 20.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 2.500 and the back-up sample is already included here. With a minimum response rate of 50% that would be a gross sample of 2.000 to achieve 1.000 net-interviews – we foresee 2.500 instead. These additional households will be drawn according to the specified sampling requirements.

Stratification variables

NUTS2 Regions

BE10	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest
BE21	Prov. Antwerpen
BE22	Prov. Limburg (B)
BE23	Prov. Oost-Vlaanderen
BE24	Prov. Vlaams-Brabant
BE25	Prov. West-Vlaanderen
BE31	Prov. Brabant Wallon
BE32	Prov. Hainaut
BE33	Prov. Liège
BE34	Prov. Luxembourg (B)
BE35	Prov. Namur

Urbanisation

A	Cities
B	Strongly urbanized regions
C	Somewhat urbanized regions
D	Rural and less urbanized regions

Statistical source of population data:

ORGASSIM, February 2011. This information will be linked to a static list of NUTS2 codes and urbanisation codes.

BULGARIA

Justification for RR:	Sampling frames can no longer be used due to restrictions imposed by the law for the protection of personal data
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification information:	Stratification by NUTS2 regions and urbanisation
PSU:	Settlements
No. of sampling points (SP's):	167
Gross main sample size:	2004
Enumeration:	In each SP, at least 20 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum batch size:	The maximum batch size per SP will be 12 addresses. Each SP will yield 6 completes on average.
Contingency plan:	In each SP at least 8 back-up addresses will be enumerated
Selection of start address:	Geographic profiling, centre of settlement in villages
Selection of households:	Every 3rd household; flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of 167 settlements

In the first stage, primary sampling units (PSUs) will be randomly selected, after stratification by geographic regions (NUTS 2) and level of urbanisation. The sampling points are selected on the basis of the size of the settlements in each region. A list of all settlements in each of the eight size categories in each region will be used; the settlements will be selected at random, using a computerized random selection procedure.

The proportion of respondents in different size settlements corresponds to the population living in that type of settlement. Therefore the structure of the sample corresponds to the demographic structure of the population according to the type and size of settlement.

Stage 2 – Random selection of a starting address

In each sampling point, a starting address is randomly selected, using the geographical profiling database from Domino Ltd . In small villages without streets, the centre of the settlement is used; usually this is the town square or town hall.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

From the starting point, **enumerators** will pre-select clusters of no more than 12 addresses/households (and at least 8 back-up addresses) **using the random route procedure**. A random route is defined where the route continues north, south, east or west with equal probability at each street intersection. Households are selected along the route by applying a random step (every n^{th} household). Usually the step is 3. From the starting point, enumerators walk in one of the four compass orientations using the following rule: at the first starting point they go north, at the second they go east, at the third they go south, at the fourth they go west and at the fifth they go north again, and so on. At the first intersection they turn left, at the second they go straight, at the third they turn right and at the fourth they turn left again. In case of multi-store buildings, enumerators first reach the top floor, start from the household nearest to the elevator and work clockwise and counter-clockwise (alternating) by visiting every 3rd household while walking down each floor.

Stratification variables

NUTS2 Regions

BG31	Северозападен / Severozapaden
BG32	Северен централен / Severen tsentralen
BG33	Североизточен / Severoiztochen
BG34	Югоизточен / Yugoiztochen
BG41	Югозападен / Yugozapaden
BG42	Южен централен / Yuzhen tsentralen

Urbanisation

1	Less than 1000 inhabitants
2	From 1 001 to 5 000 inhabitants
3	From 5 001 to 20 000 inhabitants
4	From 20 001 to 50 000 inhabitants
5	From 50 001 to 100 000 inhabitants
6	From 100 001 to 200 000 inhabitants
7	From 200 001 to 500 000 inhabitants
8	More than 500 001 inhabitants

Statistical source of population data:

National Statistical Institute, Latest update : Microcensus 2009, consisting of the following parameters:

- Population by region, district and type of settlement with age and gender on an individual level for all Bulgarian residents aged 0-79 years old.
- For all residents above 80 years old we have only cumulative data for their total number by region, district and size of settlement.

CYPRUS

Justification for RR:	Unavailability of a complete sampling frame
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by district and urbanisation
PSU:	Enumeration area
No. of sampling points (SP's):	100
Gross main sample size:	2000
Enumeration:	In each SP, at least 30 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum batch size:	The maximum batch size per SP will be 20 addresses. Each SP will yield 10 completes on average
Contingency plan:	In each SP at least 10 back-up addresses will be enumerated
Selection of start address:	Randomly chosen from a database of all streets
Selection of households:	Every 3rd household; flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of enumeration areas

After stratification, 100 enumeration areas will be selected randomly with a probability selection proportionate to their size. The distribution of the primary sampling units selected among the 5 districts and among urban & rural areas within each district will be proportionate to their respective size.

Stage 2 – Random selection of a starting address

A database with all streets is used to select the starting addresses. Moreover, at the actual moment of selection, maps are consulted for verification.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

From the starting point, clusters of 30 addresses/households are pre-selected by enumerators using standard random route procedure.

Standing at the starting address, enumerators face the street and turn left. They then identify the next 2 immediately neighboring addresses as the next in the sample – a batch of 3 households (1 seed + 2 random walk addresses) has been selected together. They continue along the route counting houses/flats/apartments, leaving 3 addresses before identifying the next 3 neighboring addresses as the next in the sample.

Every apartment is treated as a separate housing unit. Enumerators start at the top of the building, working their way down. If there is no easy access to the building, they count the doorbells starting at the top left end and ending at the bottom right. When leaving the apartment building, enumerators continue with the first housing unit encountered next to the building.

Stratification variables

Districts

		URBAN	RURAL
1	Nicosia	x	x
2	Limassol	x	x
3	Larnaca	x	x
4	Paphos	x	x
5	Famagusta		x

Urbanisation

1	Urban
2	Rural

The survey will not take place in the occupied areas of Cyprus.

Statistical source of population data: Population and Household Projections 2002-2052- Issued by the Statistical Service of Cyprus, December 2003

CZECH REPUBLIC

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Czech Statistical Office – Register Municipal Census; Household register
Coverage:	>95% of all legal residents of the Czech Republic. The frame contains information about each Czech address and family composition. Some new buildings may not yet be covered. It excludes the homeless as well as those living abroad, or those living in a vacation property or second home.
Date of issue:	August 2009; Latest update: January 2011; Sampled: July 2011
Sampling points:	130
Proposed gross sample:	3380
PSU:	Postal delivery district
Maximum cluster size:	16

Sampling stages

Stage 1 – random selection of PSUs

The selection of 130 postal delivery districts from all municipalities in the Czech Republic is proportionate to the size category of the municipality in its region. From the stratification matrix we know how many districts we need in the regions we need. On the basis of the stratification matrix – from which we know how many districts are needed in each region - all the postal delivery districts are ranked (numerated) and then randomly selected, e.g. if there are 1000 districts and 100 need to be chosen, the first is picked at random and after that every 10th district is selected.

Stage 2 – random selection of households

In each postcode cluster a maximum of 16 households are selected. The selection process is the same as at stage 1.

Stage 3 – random selection of respondents

In each household the respondent is randomly selected using the “next birthday” rule.

Contingency plan

A gross sample of 3.380 households will be selected, which includes 1300 back-up households. With 130 sampling points a gross sample of 2.080 would be needed to achieve 1000 interviews on the basis of a minimum response rate of 50%. These additional 1300 households will be drawn according to the specified sampling requirements.

Stratification variables

NUTS2 Regions

CZ01	Praha
CZ02	Střední Čechy
CZ03	Jihozápad
CZ04	Severozápad
CZ05	Severovýchod
CZ06	Jihovýchod
CZ07	Střední Morava
CZ08	Moravskoslezsko

Urbanisation

1	Big cities above 100 000 inhabitants
2	Cities 20 – 99 ths. inhabitants
3	Smaller cities 5 – 19 999 inh.
4	Urban areas 1 000 4 999 inh.
5	Other communities 1 – 999 inh.

Statistical source of population data:

Czech Statistical Office. Latest update: January 2010.

GERMANY

Justification for RR:	Since registration offices are decentralised in Germany (i.e. every community has its own responsibility), central population lists are not available.
Sample size	N=3.000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
PSU:	ADM area
No. of sampling points (SP's):	429
Gross main sample size:	6.435
Enumeration:	In each SP, at least 22 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office staff)
Maximum batch size:	The maximum batch size per SP will be 15 addresses. Each SP will yield 7 completes on average
Contingency plan:	In each SP, at least 7 back-up addresses will be enumerated
Selection of start address:	Random selection from the telephone listings
Selection of households:	Every nth hh; the selection interval differs per sampling point and depends on the distribution of private households in the area; flats treated like streets

Description of random selection steps

Stage 1 – Random selection of areas

The primary sampling units (PSUs) of the first stage are 53.000 areas equally distributed all over Germany. They are assorted within each stratum according to counties and in big communities to municipal districts. The sampling units are randomly selected in proportion to the number of private households within the strata. So the respective margins of the sample correspond with the distribution of the private households in the same margin categories.

Stage 2 – Random selection of a starting address

In each ADM area a start address is randomly drawn from the electronic telephone book. The start address is not part of the sample.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

A random route is defined by listing the private households from the start address, in the following order: in the given street in the direction of the rising street numbers. Within a property from the front to the back house, respectively from the right to the left if there are several buildings with one house number. Within a house they move from below to the top and on the floor from the right to the left.

Enumerators must note the names of the door- or bell boards. They only write down private households. They walk a route until they have enumerated 30 addresses. If they need more addresses, they turn right at the corner of the start address and continue with the listing in this new street.

At blind alleys they cross to the other side of the street; if they end, they turn again at the first possibility. If by turning to the right they get into a street that they have already listed, they proceed as in blind alleys. Furthermore, it may happen that they have to cross the street, for example when, whilst turning to the right into a street they have already passed. The rule is that they must not list the street zigzag but that they always stay on one side of the street.

Stratification variables

NUTS2 Regions

DE11	Stuttgart
DE12	Karlsruhe
DE13	Freiburg
DE14	Tübingen
DE21	Oberbayern
DE22	Niederbayern
DE23	Oberpfalz
DE24	Oberfranken
DE25	Mittelfranken
DE26	Unterfranken
DE27	Schwaben
DE30	Berlin
DE41	Brandenburg - Nordost
DE42	Brandenburg - Südwest
DE50	Bremen
DE60	Hamburg
DE71	Darmstadt
DE72	Gießen
DE73	Kassel
DE80	Mecklenburg-Vorpommern
DE91	Braunschweig
DE92	Hannover
DE93	Lüneburg
DE94	Weser-Ems
DEA1	Düsseldorf
DEA2	Köln
DEA3	Münster
DEA4	Detmold
DEA5	Arnsberg
DEB1	Koblenz
DEB2	Trier
DEB3	Rheinhessen-Pfalz
DEC0	Saarland
DED1	Chemnitz
DED2	Dresden
DED3	Leipzig
DEE0	Sachsen-Anhalt
DEF0	Schleswig-Holstein
DEG0	Thüringen

Urbanisation

BIK-Regionsgrößen (10er-Einteilung)

		Häufigkeit	Prozent	Gültige Prozente	Kumulierte Prozente
Gültig	bis unter 2.000 Einwohner	1365112	2,1	2,1	2,1
	2.000 bis unter 5.000 Einwohner	1889153	3,0	3,0	5,1
	5.000 bis unter 20.000 Einwohner	5300195	8,3	8,3	13,4
	20.000 bis unter 50.000 Einwohner	7619035	12,0	12,0	25,4
	50.000 bis unter 100.000 Einwohner (Strukturtyp 2,3,4)	5209370	8,2	8,2	33,5
	50.000 bis unter 100.000 Einwohner (Strukturtyp 1)	1588780	2,5	2,5	36,0
	100.000 bis unter 500.000 Einwohner (Strukturtyp 2,3,4)	9453080	14,8	14,8	50,9
	100.000 bis unter 500.000 Einwohner (Strukturtyp 1)	9849065	15,4	15,4	66,3
	500.000 Einwohner und mehr (Strukturtyp 2,3,4)	5929728	9,3	9,3	75,6
	500.000 Einwohner und mehr (Strukturtyp 1. Kernbereich)	15544780	24,4	24,4	100,0
	Gesamt	63748297	100,0	100,0	

Source: MA Radio 2009

Population 18+

Statistical source of population data:

Media Analysis Radio 2009 (weighted according to the 2008 Microcensus of the National Bureau of Statistics).

DENMARK

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage random probability sampling
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Danish street register, Central Office of Civil Registration. Name and household based list of all legal residents.
Coverage:	100% of households
Date of issue:	May 2011; Sampled: May 5, 2011
Sampling points:	180
Proposed gross sample:	Main: 1.980; Back-up: 840
PSU:	Households
Maximum cluster size:	11

Sampling stages

Stage 1 – random selection of sampling points

Denmark will be divided into 34 areas depending on the 5 regions, the former 11 counties (now known as provinces) and urbanisation within each province. According to the official statistics, the proportion of persons 18 years+ in each area has been calculated and on this basis, 180 sampling points will be drawn at first stage. In each of the 34 areas the required number of sample points is calculated.

Stage 2 – random selection of households

For each of the selected sample points and within each of these areas now arising, 11 households will be drawn from the Danish street register at random within a radius of approx. 500 m.

Household addresses will be drawn from the Danish street register (Vejregister) which is part of the Central Office of Civil Registration. This street register has been updated in February 2011. A specialised software is then used that put x and y coordinates on all addresses in Denmark. Analysis on national statistics provides information on distribution of interviews by area and sample point.

The software then randomly selects the number of dots equal to areas with a radius of approx. 500 m. The program knows how many areas with a radius of approx. 500 meters there are in each single area and sample point.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 2.820 of which 840 are back-up.

Stratification variables

NUTS2 Regions

DK01	Hovedstaden
DK02	Sjælland
DK03	Syddanmark
DK04	Midtjylland
DK05	Nordjylland

Smaller islands which are not connected to mainland will be excluded.

Urbanisation

Description	Population size 18+
Central Copenhagen (the municipalities of Copenhagen and Frederiksberg)	491.122
The Suburbs (Greater Copenhagen)	437.198
Aarhus, Odense, Aalborg	402.009
Cities 10.000 or more	1.159.728
Cities 0 - 10.000	1.472.473
Cities 0 - 10.000 (Rural Area)	387.066
Total	4.349.596

Statistical source of population data:

Danish Statistical Bureau. Most recent update: 1st Quarter 2011

ESTONIA

Justification for RR:	The Population Registry cannot be used for random probability sampling because the data is of poor quality since large numbers of residents do not live where they are officially registered. It will be used instead to randomly select the starting addresses.
Sample size	N=1000
Sampling design:	Stratified two-stage random route with physical enumeration
Stratification:	Stratification by county and settlement type. This corresponds to the NUTS classification system but is more detailed
PSU:	Starting addresses
No. of sampling points (SP's):	150
Gross main sample size:	2.250
Enumeration:	In each SP, 30 addresses along the random route will be enumerated in advance by staff other than the interviewers (regional coordinators)
Maximum batch size:	The maximum batch size per SP will be 15 addresses. Each SP will yield 7 completes on average.
Contingency plan:	In each SP, 15 back-up addresses will be enumerated
Selection of start address:	Randomly from the Population Registry. In rural areas not covered by the frame, the enumerator will start the route from a place of interest
Selection of households:	Every 3rd household; flats are treated like streets

Description of random selection steps

Within each of the 16 counties, the distribution of sampling points is divided proportionally based on settlement type (4 types: capital city; big town; town; village or rural settlement). In case of capital city (Tallinn), the districts are used instead.

Stage 1 – random selection of starting addresses

After stratification, every Nth address within a strata is subsequently randomly selected from the excerpt of the population registry as a starting address for the random route. The selection interval is proportionate to size. In rural areas not covered by the frame, a place of interest is the starting point.

Stage 2 – random selection of respondent

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

A random route is defined where the route continues north, south, east or west with equal probability at each street intersection. Households are selected along the route by applying a random step (every 3rd household).

Enumerators then walk in one of the four compass orientations using the following rule: at the first starting point they go north, at the second they go east, at the third they go south, at the fourth they go west and at the fifth they go north again, and so on. At the first intersection they turn left, at the second they go straight, at the third they turn right and at the fourth they turn left again.

Selection of households along this route is every 3rd household. In case of multi-storey buildings, enumerators first reach the top floor, start from the household nearest to the elevator and work clockwise and counter-clockwise (alternating) by enumerating every 3rd household while walking down each floor.

Stratification variables

Population data: Settlement type per county (18+)

	Capital city (Tallinn)	Big towns (Tartu, Narva, Pärnu, Kohtla-Järve)	Other towns	Rural settlements
TOTAL ESTONIA	328733	210982	225054	328269
HARJU MAAKOND	328733		35093	66254
HIIU MAAKOND			2991	5190
IDA-VIRU MAAKOND		92500	33412	15527
JÕGEVA MAAKOND			10296	19483
JÄRVA MAAKOND			12786	16403
LÄÄNE MAAKOND			10708	11655
LÄÄNE-VIRU MAAKOND			23574	30475
PÕLVA MAAKOND			7693	17405
PÄRNU MAAKOND		36295	9370	26300
RAPLA MAAKOND			10871	18525
SAARE MAAKOND			12155	16134
TARTU MAAKOND		82187	5583	32104
VALGA MAAKOND			15270	12203
VILJANDI MAAKOND			22325	22847
VÕRU MAAKOND			12927	17764

The remote areas, which will be excluded, are a few tiny islands with very small populations.

Statistical source of population data:

Statistics Estonia, updated 1 January 2010.

GREECE

Justification for RR:	Lack of good sampling frames : only exhaustive frames include telephone directories and elections catalogues but these are biased in their coverage.
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
PSU:	For rural areas: village or community (1 PSU per village or community) – For semi-urban areas: Town or municipality (1 PSU per town or municipality) – For urban areas: city block within city or municipality (2 PSUs per city/municipality with the exception of metropolitan areas i.e. Athens and Thessaloniki where PSUs will correspond to municipality within the greater city area
No. of sampling points (SP's):	110
Gross main sample size:	1.320
Enumeration:	In each SP, on average 22 addresses along the random route will be enumerated in advance by staff other than the interviewers (field managers)
Maximum batch size:	The maximum batch size per SP will be 12 addresses. Each SP will yield 9 completes on average
Contingency plan:	In each SP, approximately 10 back-up addresses will be enumerated
Selection of start address:	Random selection of block from city maps; random allocation of dwelling around landmark in rural areas
Selection of households:	Every3rd hh; flats treated like streets

Description of random selection steps

Stage 1 – Random selection of PSUs

Each PSU corresponds to a specific location or community which is to be selected to represent this cell of NUTS II region by urbanisation level. These PSUs are used as input for the actual selection of the communities which will be used for sample drawing. This is done as follows: For each NUTS II region by urbanisation level cell, a list of all locations is compiled and sorted in increased community population size. The aggregate population is then created. From this list and according to the number of PSUs in each specific cell, the actual location (village or municipality) is selected with systematic random sampling.

Stage 2 – Random selection of a starting address

After the selection of locations, starting points are selected by randomly allocating one city block (when the location is a city) selected from an official city map or a starting point is allocated randomly from the dwellings around a landmark (in the case of small villages with no available maps)

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

A random route is defined where the route continues north, south, east or west with equal probability at each street intersection. Households are selected along the route by applying a random step (every n^{th} household). Usually the step is 3.

Enumerators then walk in one of the four compass orientations using the following rule: at the first starting point they go north, at the second they go east, at the third they go south, at the fourth they go west and at the fifth they go north again, and so on. At the first intersection they turn left, at the second they go straight, at the third they turn right and at the fourth they turn left again.

Selection of households along this route is every n^{th} household (usually 3^{rd}). In case of multi-store buildings, enumerators first reach the top floor, start from the household nearest to the elevator and work clockwise and counter-clockwise (alternating) by enumerating every 3^{rd} household while walking down each floor.

Stratification variables

NUTS2 Regions

GR11	Ανατολική Μακεδονία, Θράκη / Anatoliki Makedonia, Thraki	
GR12	Κεντρική Μακεδονία / Kentriki Makedonia	
GR13	Δυτική Μακεδονία / Dytiki Makedonia	
GR14	Θεσσαλία / Thessalia	
GR21	Ήπειρος / Ipeiros	
GR22	Ιόνια Νησιά / Ionia Nisia	Not included
GR23	Δυτική Ελλάδα / Dytiki Ellada	
GR24	Στερεά Ελλάδα / Sterea Ellada	
GR25	Πελοπόννησος / Peloponnisos	
GR30	Αττική / Attiki	
GR41	Βόρειο Αιγαίο / Voreio Aigaiο	Not included
GR42	Νότιο Αιγαίο / Notio Aigaiο	Not included
GR43	Κρήτη / Kriti	

These NUTS II regions were also excluded on the EQLS 2007. They correspond to 6%-7% of the total population and incur so high fieldwork costs due to travelling (and possible accommodation) expenses that they consist a most non-efficient solution both cost-wise and time-wise.

Urbanisation

1	Athens (> 1.000.000)
2	Thessaloniki (500.001 – 1.000.000)
3	Urban (10.001 – 500.000)
4	Semi-urban (2001 – 10.000)
5	Rural (< 2000)

Statistical source of population data:

Hellenic Statistical Authority. Latest update : Census 2001.

Permanent population for people 18+ in Greece is distributed by geo area (NUTS II) and urbanisation level.

SPAIN

Justification for RR:	No availability of frame with sampling units (addresses or names)
Sample size	N=1500
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
PSU:	Census areas
No. of sampling points (SP's):	300
Gross main sample size:	3600
Enumeration:	In each SP, at least 20 addresses along the random route will be enumerated in advance by staff other than the interviewers (back-office staff)
Maximum batch size:	The maximum batch size per SP will be 12 addresses. Each SP will yield 5 completes on average.
Contingency plan:	In each SP at least 8 back-up addresses will be enumerated
Selection of start address:	Randomly chosen from Excel list of streets with numbers
Selection of households:	Every 3 rd street; every 10 th street number; every 3 rd household

Description of random selection steps

Stage 1 – Random selection of census areas

A special software program which lists all census areas is used. The selection of census areas is determined proportionate to size of population for each stratum. The programme selects a specific number of census areas corresponding to each of the cells by region and habitat size. The number of census areas depends on the number of interviews that must be achieved in each region/ habitat size cell. The formula used to select the census areas is an Access random function based on the current date and transformed into a number.

Stage 2 – Random selection of a starting address

From an Excel list of streets with numbers, one will randomly be chosen as starting point.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

In each census area, every 3rd street is selected for enumeration. Per street no more than 5 residential properties will be selected, with an interval of 10. If the street numbers represent single household units, they are all enumerated. In the case of multi-dwelling buildings, enumerators start on the top floor and enumerate the 3rd household to their right and then every 3rd household on each floor working their way down. In each census area, this process is carried out until 20 households have been enumerated.

Stratification variables

NUTS2 Regions

ES11	Galicia
ES12	Principado de Asturias
ES13	Cantabria
ES21	País Vasco
ES22	Comunidad Foral de Navarra
ES23	La Rioja
ES24	Aragón
ES30	Comunidad de Madrid
ES41	Castilla y León
ES42	Castilla-La Mancha
ES43	Extremadura
ES51	Cataluña
ES52	Comunidad Valenciana
ES53	Illes Balears
ES61	Andalucía
ES62	Región de Murcia
ES63	Ciudad Autónoma de Ceuta
ES64	Ciudad Autónoma de Melilla
ES70	Canarias

The Autonomous Cities of Ceuta and Melilla will not be included as they are remote small cities.

Urbanisation

1	Up to 10.000
2	10.001-50.000
3	50.001-100.000
4	100.001-500.000
5	500.001 – 1.000.000
6	More than 1.000.000

Note : including the 6th split to separate the two largest cities in Spain from others with smaller size.

Statistical source of population data:

Municipal Register (Padrón) from INE (National Institute of Statistics). Latest update: January 2010.

FINLAND

Sample size:	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Sampling frame:	National Population Registry; name-based register of citizens and legal residents
Coverage:	Covers 100% of Finnish addresses; deadwood is expected to be as high as 15%
Date of issue:	Updated continuously; Sampled: 02 September 2011
PSU:	Postcode clusters in municipalities
Sampling points:	250
Proposed gross sample:	5000
Maximum cluster size:	20

Sampling stages

Stage 1 – random selection of PSUs

We will select first municipalities in URB-FI-areas. Selection is based on population in the area (18+). Secondly, postal codes are randomly selected inside the municipalities.

Random selection is made from a postal code list, choosing every nth postal code. The number depends on how many postal codes one municipality includes and how many PSUs are needed in one municipality.

Stage 2 – random selection of households

In each postcode cluster with a maximum of 20 households are selected (exception: municipalities with only one postal code, but a large number of inhabitants. In this case, sampling is done at street level). The addresses are selected randomly within the postal codes by the company from which the sample is ordered. This is also the case in municipalities with only one postal code: the company providing the addresses does the random selection; the streets are selected like the "postal codes".

As is standard in Finland, due to low population density, the first contact with the household will be done by telephone. This is done to contact the respondent. Practically all residents aged 18+ have a phone number (98 % mobile+ some elderly people only landline). The telephone numbers are in the sample. The rationale behind this is that it is difficult to enter buildings and homes. Most entrances in urban areas are locked and people do not let strangers in easily in they just ring the bell. All actual interviews are carried out in the home, face-to-face.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 5.000 and the back-up sample is already included here. With a minimum response rate of 50% that would be a gross sample of 2.000 to achieve 1.000 net-interviews – we foresee 5.000 instead. These additional households will be drawn according to the specified sampling requirements.

Stratification variables

NUTS2 Regions

FI13	Itä-Suomi
FI18	Etelä-Suomi
FI19	Länsi-Suomi
FI1A	Pohjois-Suomi

Note : NUTS2-region FI20 (Ahvenanmaa) is not included. FI20 is an autonomy island in which live 27 899 mainly Swedish speaking inhabitants (statistics 31st October 2010). It is normally left out in surveys (also in EWCS).

Urbanisation

1	Urban communities/cities
2	Densely populated communities
3	Rural communities

Statistical source of population data:

Statistics Finland, 31.12.2009

FRANCE

Justification for RR:	A good sampling frame is not available in France
Sample size	N=2.250
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by 9 UDA regions and urbanisation
PSU:	Communes
No. of sampling points (SP's):	450
Gross main sample size:	5.400
Enumeration:	In each SP, 24 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office staff)
Maximum batch size:	The maximum batch size per SP will be 12 addresses. Each SP will yield 5 completes on average
Contingency plan:	In each SP, 12 back-up addresses will be enumerated
Selection of start address:	Random selection from the telephone listings
Selection of households:	Systematic random selection of 3 household per start address

Description of random selection steps

Stage 1 – Random selection of ‘communes’

The primary sampling units (PSUs) of the first stage are the INSEE ‘communes’. After stratification, they are randomly selected, respective to size.

Stage 2 – Random selection of 8 starting addresses per PSU

In each commune, 8 starting addresses are randomly drawn from the France Telecom electronic telephone book. The start addresses are only included in the sample if they are part of multi-household dwellings and selected during the random route.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

From each start address, the enumerator selects three households. If the start address is a single home, the enumerator selects the 3rd home to the right and then the 5th and 7th homes. If the start address has two households, the 'other' household is enumerated and the enumerator then moves on 3 addresses to the right. If the start address has three households, the 3rd household is selected and then the enumerator moves on 3 addresses to the right. If there are more than three households in the dwelling, the 3rd, 5th and 7th letter box are enumerated.

Stratification variables

UDA Regions

UDA01	RP
UDA02	BP Est
UDA03	BP Ouest
UDA04	Nord
UDA05	Est
UDA06	Ouest
UDA07	Sud Ouest
UDA08	Sud Est
UDA09	Méditerranée

Urbanisation

1	Rural area
2	Less than 20,000 inhabitants
3	20,000 to 99,999 inhabitants
4	100,000 to 199,999 inhabitants
5	200,000 inhabitants or more
6	Paris area

Statistical source of population data:

INSEE. Census data 1999 with updates in 2007 and 2009

HUNGARY

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified two-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Central Population Register; name-based list of all legal residents
Coverage:	99% of all legal residents of Hungary. For 3-4% of the population the “official” (registered) domicile and the “real” (used) one differ
Date of issue:	February 2011
Sampling points:	120
Proposed gross sample:	2820
PSU:	Settlements/departments of cities
Maximum cluster size:	15

Sampling stages

Stage 1 – random selection of sampling points

In case of villages and cities with less than 50.000 inhabitants, the settlement is the sampling point; in case of large cities (more than 50.000 inhabitants) there can be more than 1 sampling point within the settlement and departments of cities are the sampling points.

Firstly $7 \times 3 = 21$ strata (taking into account 7 regions and 3 settlement sizes) will be formed. The number of sampling points to be selected within each stratum will be calculated according to the population weights of strata but at least 2 sampling points are foreseen for each of them. At this stage, the selection of sampling point will be absolutely random.

In Hungary, there are approx. 3200 settlements. They will be classified into the above 21 strata taking into account their population sizes and geographical locations, so we will have 21 lists of settlements. From these 21 lists the foreseen number of sampling points will be selected randomly.

Stage 2 – random selection of respondents

Number of respondents will be more or less equal at each sampling points (some 8 to 10 people). The selection of respondents will be absolutely random from the Central Register sampling frame.

Contingency plan

15 addresses per sample point (1.800 addresses) should be sufficient, considering that the normal response rate in Hungary is about 64-65%. To be safe, 840 back-up addresses are included in the gross sample. However, should the main sample get close to being exhausted, all re-approachable addresses will be checked for cooperation again, before using the back-up sample.

Stratification variablesNUTS2 Regions

HU10	Közép-Magyarország
HU21	Közép-Dunántúl
HU22	Nyugat-Dunántúl
HU23	Dél-Dunántúl
HU31	Észak-Magyarország
HU32	Észak-Alföld
HU33	Dél-Alföld

Urbanisation (3)

1	Metropolitan (50.000+ inhabitants)
2	Urban (between 10.001 and 50.000 inhabitants)
3	Rural (less than 10.000 inhabitants)

Statistical source of population data:

Central Office for Statistics. Latest update : 2010.

IRELAND

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Sampling frame:	GEO-DIRECTORY
Coverage:	>95%. No known coverage problems
Date of issue:	Quarter 3, 2011; Sampled: June, 2011
Sampling points:	140
Proposed gross sample:	2.800
PSU:	Wards/Electoral Divisions
Maximum cluster size:	15

Sampling stages

Stage 1 – random selection of PSUs

In order to achieve the target number of interviews, the population will first be stratified by region and urbanisation. Electoral Divisions will then be randomly selected in each stratum proportional to population. Each selected ward/electoral division will represent a primary sampling point.

Stage 2 – random selection of households

The GeoDirectory sampling frame only contains households (institutions and businesses have/will be removed). From the frame, 20 households are randomly drawn in each sampling point. 15 of these households will be provided to interviewers who are instructed to call on these households up to five times to select a respondent for interview. If insufficient interviews are achieved the reserve 5 addresses will be provided to interviewers to use at the relevant sampling point.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 2.800 and the back-up sample is already included here. With a minimum response rate of 50% that would be a gross sample of 2.000 to achieve 1.000 net-interviews – we foresee 2.800 instead. These additional households will be drawn according to the specified sampling requirements.

Stratification variablesNUTS2 Regions

IE01	Border, Midland and Western
IE02	Southern and Eastern

Urbanisation

	Town size
1	100,000 + (cities)
2	10,000 - 100,000
3	5,000 - 10,000
4	1,500 - 5,000
5	Less than 1,500

Statistical source of population data:

Census 2006 for the geographic selection of sample (as there are no updates available at the level of urbanisation within county or region). For population figures and weighting, the updated population estimates which are based on the Quarterly National Household survey (2010) will be used.

ITALY

Justification for RR:	A good quality sampling frame with addresses/persons is not available
Sample size	N=2.250
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
No. of sampling points:	253
PSU:	Postal codes
Gross sample size:	7084
Enumeration:	In each PSU, 28 addresses along the random route will be enumerated in advance by staff other than the interviewers (internal staff)
Maximum cluster size:	The maximum cluster size per PSU will be 18 addresses. Each PSU will yield 9 completes on average
Contingency plan:	In each cluster 10 back-up addresses will be enumerated
Selection of start address:	Randomly chosen from a database of all streets
Selection of households:	Every 2nd household; flats are treated as streets

Description of random selection steps

Stage 1 – Random selection of postal codes

Using a list of postal codes, they will be assorted within each stratum after stratification. The postal codes are randomly selected in proportion to the number of addresses within the strata.

Stage 2 – Random selection of a starting address

In each postal code, a street address will be randomly selected as the start address from a database using software designed for this purpose.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

Once a street is randomly selected, together with a street number, the following route will be followed: If the start address is to the left of the middle of the street enumerators add 2 and start from there, each time adding 2 until the end of the street is reached. If it is to the right of the middle, they deduct 2 and start from there, each time deducting 2 until the end of the street is reached. At the end of the street, at the intersection, enumerators first turn left, then they go straight, then they turn right and finally they turn left again. In case of apartment buildings, enumerators start on the top floor with the apartment to the right. They enumerate every 2nd apartment working their way down. Afterwards they continue along the random route.

Stratification variablesNUTS2 Regions

ITC1	Piemonte
ITC2	Valle d'Aosta/Vallée d'Aoste
ITC3	Liguria
ITC4	Lombardia
ITD1	Provincia Autonoma Bolzano
ITD2	Provincia Autonoma Trento
ITD3	Veneto
ITD4	Friuli-Venezia Giulia
ITD5	Emilia-Romagna
ITE1	Toscana
ITE2	Umbria
ITE3	Marche
ITE4	Lazio
ITF1	Abruzzo
ITF2	Molise
ITF3	Campania
ITF4	Puglia
ITF5	Basilicata
ITF6	Calabria
ITG1	Sicilia
ITG2	Sardegna

Urbanisation

1	Up to 10,000 inhabitants
2	10,001-100,000 inhabitants
3	100,001-500,000 inhabitants
4	Over 500,000 inhabitants

Statistical source of population data:

ISTAT (National Institute of Statistics). Last update : 2009.

LITHUANIA

Justification for RR:	Lithuania has a frame: Lithuanian Register of Addresses. It covers around 90% of all households; however there is no list of exact addresses with flat numbers and also it is not clear how many of those flats are not occupied. Therefore, only the first stage of random probability sampling i.e. a number of sampling units (clusters – primary sampling unit – PSU) will be selected randomly from each stratum, can be satisfied with the use of this frame. The frame cannot provide the second requirement i.e. within each sampling unit addresses/persons will be enumerated. Moreover, the frame doesn't cover all rural areas.
Sample size	N=1000
Sampling design:	Stratified two-stage random route with physical enumeration
Stratification:	Stratification by county and urbanisation
PSU:	Address from Lithuanian Register of Addresses; villages in rural areas
No. of sampling points (SP's):	150
Gross main sample size:	3000
Enumeration:	In each sampling point, at least 30 addresses along the random route will be enumerated in advance by staff other than the interviewers (regional coordinators)
Maximum cluster size:	The maximum batch size per SP will be 20 addresses. Each SP will yield 10 completes on average
Contingency plan:	In each SP, at least 10 back-up addresses will be enumerated
Selection of start address:	Randomly from the Register of Lithuanian addresses. In rural areas not covered by the frame, the enumerator will start the route from a place of interest in a village
Selection of households:	Every 3rd hh in flats and every 2nd private house; in very rural sampling points the following rules apply: In rural villages of 30 houses or less enumerate all houses, move to next village and enumerate every house along the route until 30 addresses have been obtained

Description of random selection steps**Stage 1** – Random selection of starting address

The method for selecting a starting address within the 40 stratification cells (10 county units * 4 settlement types) will be done randomly from the Register of addresses of Lithuania, using a special program called VZD LT.

Stage 2 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

If the starting point is the side of the street where there are only odd houses/apartment numbers (path is only on one side of the street), go to the end of the street, turn right, continue to go the same odd side of the street. When the end of the street is reached again, turn left, continue to go the same odd side of the street. In case the end of the street is reached and there is no turn right, turn left, and when end of the street is reached, turn right. In the area of block flats every third flat in every block is visited. In the area of private houses every second private house is visited. In rural areas, the following system applies:

In villages of 30 houses or less all houses are enumerated and the same is done in the next village until 30 addresses have been obtained.

In villages of more than 30 houses, the normal step procedure is used moving on to village X, village Y, etc. until the required number of addresses (30) has been obtained

Stratification variables

Counties (Note : Nida is not included, it is peninsula, and it is difficult to reach.)

1	Vilnius
2	Kaunas
3	Klaipeda
4	Šiauliai
5	Panevėžys
6	Tauragė
7	Telšiai
8	Marijampolė
9	Alytus
10	Utenos

Urbanisation

1	Big cities (more than 200 000 inhabitants)
2	30 000 - 200 000 inhabitants
3	2 000 - 30 000 inhabitants
4	Less than 2 000 (rural area)

Statistical source of population data:

Statistical Department of Lithuania. Last update: beginning of 2011. Available in different splits by age, region, gender, etc.

LUXEMBOURG

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by electoral districts and urbanisation
Sampling frame:	National Postal Services –listing of all households
Coverage:	100%
Date of issue:	2011; Sampled: July 2011
No. of sampling points:	204
PSU:	Electoral districts
Proposed gross sample:	6120
Maximum cluster size:	20

Luxembourg specific stratification information

TNS ILRES uses a multi-stage stratified sample design. The primary sampling unit employed is the electoral district. Luxembourg is divided into 4 electoral districts (North, East, Centre and South), for getting a better representation of the Centre district, TNS ILRES divides the Centre district into Luxembourg-City (capital) and the rest of the Centre district. This is the smallest electoral unit used for national elections. The electoral districts are furthermore subdivided into cantons. Luxembourg has 12 cantons (North 5 cantons, East 3 cantons, Centre 2 cantons and South 2 cantons). Each canton is subdivided into municipals. In all, Luxembourg has at the moment 116 municipals (North 43 municipals, East 26 municipals, Centre 22 municipals and South 25 municipals). Municipal is the smallest administrative unit in Luxembourg.

The maximum number of “official” sample points is 116 (each single municipal). TNS ILRES has divided (where possible) the municipals in smaller units, containing a limited set of post codes. This exercise has enabled TNS ILRES to create approx. 480 sample points (PSUs), containing on average about 400 addresses. The number of municipals required within each electoral district is calculated and is combined with EUROSTAT density classification.

Sampling stages

Stage 1 – random selection of PSUs

The random selection of the sample points and the households is the same. It is based on the **pseudorandom number generator (PRNG)**, also known as a **deterministic random bit generator (DRBG)**, which is an algorithm for generating a sequence of numbers that approximates the properties of random numbers.

Pseudo-random numbers are chosen with equal probability from a finite set of numbers. The chosen numbers are not completely random because a definite mathematical algorithm is used to select them, but they are sufficiently random for practical purposes. The current implementation of the **Random** class is based on Donald E. Knuth's subtractive random number generator algorithm.

The random number generation starts from a seed value. If the same seed is used repeatedly, the same series of numbers is generated. One way to produce different sequences is to make the seed value time-dependent, thereby producing a different series with each new instance of **Random**.

Stage 2 – random selection of households

See stage 1

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 6.120 and the back-up sample is already included here. These additional respondents will of course also fulfil the specified sampling requirements.

Interviewers will receive 20 households per sampling points. Only after they have visited all 20 households at least 4 times, will they receive a back-up batch of 10 households.

Stratification variables

Electoral districts

1	Luxembourg Ville
2	Reste Centre
3	Sud
4	Nord
5	Est

Urbanisation

1	Densely populated areas: > 500 inhabitants per sq.km; min 50.000 inhabitants in area
2	Intermediate populated areas: > 100 inhabitants per sq.km
3	Thinly populated areas: remaining areas

Statistical source of population data:

STATEC : 2010; yearly updated figures from 2001 Census.

LATVIA

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	State Land Services – Register of addresses (household level)
Coverage:	100%, but it includes businesses and vacant addresses (deadwood). The proportion of deadwood is 25%. There are 2 main reasons for this high amount of deadwood in Latvia – in cities or around cities there are a lot of new, vacant buildings. Owners built these houses during economical growth and didn't manage to sell before crisis. Now they have a lot of dark, unoccupied buildings, where nobody has lived. In the country area there are a lot of derelict houses, because people have moved to capital city or abroad.
Date of issue:	July 2011; sampled: September 2011
Sampling points:	102
Proposed gross sample:	3060 (to account for deadwood)
PSU:	Populated points (cities/parishes)
Maximum cluster size:	20

Sampling stages

Stage 1 – random selection of PSUs

The total number of required interviews in settlement types within the regions is calculated according to population distribution.

Stage 2 – random selection of households

The selection of households within settlement type is done randomly (number of households is derived from the population distribution). Households are selected by random choice in MS Access. Random choice is done from the whole list of households within each region and settlement type.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

A gross sample of 3.060 households will be selected, which includes 1.020 back-up households. With 102 sampling points a gross sample of 2.040 would be needed to achieve at least 10 interviews per sampling point on the basis of a minimum response rate of 50%. These additional 1.020 households will be drawn according to the specified sampling requirements.

Stratification variablesNUTS2 Regions

	Rīga
	Pierīga (Rīga district exc. Capital)
	Vidzeme
	Kurzeme
	Zemgale
	Latgale

Urbanisation

1	Capital
2	Large city
3	Town
4	Rural area

Statistical source of population data:

Latvia Population Register, 2011.

MALTA

Sample size	N=1000
Sampling method:	Simple random probability sampling (no stratification or clustering)
Sampling frame:	Electoral Register: name-based list of registered voters.
Coverage:	All registered voters, excluding about 0.3% of Maltese citizens who are not registered to vote. The approximate figure of people not citizens aged 18+, excluded from the frame is 4%.
Date of issue:	April 2011; Sampled: June 20, 2011
Sampling points:	The number of sampling points in this case is equal to the number of interviews
Proposed gross sample:	2890
PSU:	Maltese citizens aged 18+

Sample design

In this type of probability sample all units in the population will have an equal chance of being selected. This sampling method is very efficient to adopt and monitor. The methodology in using this sampling design will guarantee that:

- Under no circumstances more than one person from the same household will be interviewed.
- No proxy interviews or replacement of the selected respondent with another member of the household will be allowed.
- At every address, up to 4 calls will be made, at different times of the day and on different days of the week (including weekend), to attempt to achieve an interview with the randomly chosen respondent.

The outcome of every attempt will be recorded on the contact sheet.

Contingency plan

A gross sample of 2890 has been drawn. To get 1000 completes at 50% rate we will need 2000. Should the need arise we will use the extra addresses included in the gross sample as contingency.

THE NETHERLANDS

Sample size	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified two-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Cendris Postafgiftenbestand – Register of all Dutch addresses (at household level)
Coverage:	100% of households. Feedback from 5 th ESS round is that the problems surrounding out-of-date information at household level are no longer as serious as previously reported. According to the ESS, Cendris is now a reliable sampling frame.
Date of issue:	June 2011; Sampled: 22 June 2011
Sampling points:	6000 (each gross address is a sampling point)
Proposed gross sample:	6000 N=2000 main sample + 2 back-up samples of n=2000
PSU:	Postal delivery points
Maximum cluster size:	No clustering

Sampling stages

Stage 1 – random selection of PSUs

After stratification by region and degree of urbanization, 2000 postal delivery points will be randomly selected from the total population of postal delivery points in the Netherlands (total of 7.3 million postal delivery addresses).

Stage 2 – random selection of respondent

In each household the respondent is randomly selected using the “next birthday” rule.

POLAND

Sample size	N=2250
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	Pesel; name-based list of all citizens and legal residents
Coverage:	100% of all legal residents of Poland
Date of issue:	June 2011; Sampled: June 2011
Sampling points:	375
Proposed gross sample:	5832
PSU:	Gmina (smallest administrative unit in Poland)
Maximum cluster size:	12

Sampling stages

Stage 1 – random selection of PSUs

Drawn randomly in the grid of voivodship (province) by town size.

Stage 2 – random selection of households

In gminas, secondary sampling sets are drawn, which are household addresses. In each cluster a maximum of 12 household addresses will be used. Number of clusters depends on the number of inhabitants 18+ in gminas.

The owner of addresses database is PESEL organization (Government owned, part of Ministry of Internal affairs and Administration). They do not grant access to this base as a whole. We are requesting the particular number of clusters in particular gminas and they are make all random drawing procedures.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

In addition to the main gross sample of 4.500 to achieve 2.250 net-interviews , 1332 back-up addresses are included in the sample (on average 2 per sample point). In 268 smaller gminas and in 10 bigger gminas there are 2 back-up addresses and in 97 gminas of more than 100.000 inhabitants there are 8 back-up addresses. In 10 gminas of more than 100.000 inhabitants PESEL failed to draw reserve sample so in these SP's there are only 2 back-up addresses.

Stratification variables

NUTS2 Regions

PL11	Łódzkie
PL12	Mazowieckie
PL21	Małopolskie
PL22	Śląskie
PL31	Lubelskie
PL32	Podkarpackie
PL33	Świętokrzyskie
PL34	Podlaskie
PL41	Wielkopolskie
PL42	Zachodniopomorskie
PL43	Lubuskie
PL51	Dolnośląskie
PL52	Opolskie
PL61	Kujawsko-Pomorskie
PL62	Warmińsko-Mazurskie
PL63	Pomorskie

Urbanisation

1	village
2	town up to 20 th. inhabitants
3	town 20-50 th. inhabitants
4	town 50-100 th. inhabitants
5	town 100-200 th. inhabitants
6	town 200-500 th. inhabitants
7	town more than 500 th. inhabitants

Statistical source of population data:GUS (Central Statistical Office). Latest update : 31.12.2010.

PORTUGAL

Justification for RR:	The frame is not widely used for surveys in Portugal and experience is lacking. Enumeration appears to be a safer alternative
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
PSU:	Locality (city, town or village)
No. of sampling points (SP's):	160
Gross main sample size:	2.400
Enumeration:	In each SP, at least 20 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum batch size:	The maximum batch size per SP will be 15 addresses. Each SP will yield 7-8 completes on average
Contingency plan:	In each SP at least 5 back-up addresses will be enumerated
Selection of start address:	Randomly chosen from a database of all streets
Selection of households:	Every 3rd household; flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of localities

Based on the stratum definition (as a combination of region and urbanization degree) 160 localities will be randomly selected. For determining the selection interval, the NUTS Region and locality size are entered into a special program which then provides all the localities in that size-category. The required number of localities is then randomly selected. Within each stratum, the sample is distributed in randomly chosen localities, a number of which is determined by using special software, proportional to the population of each locality.

Stage 2 – Random selection of a starting address

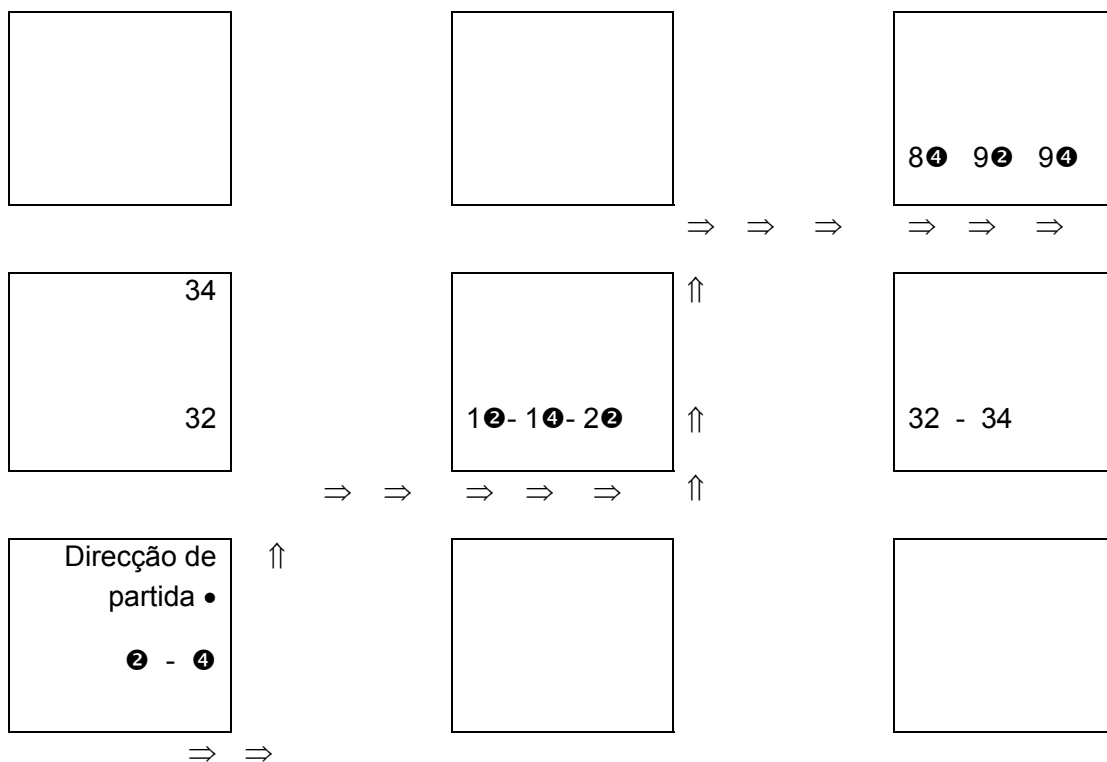
In each locality an address will be randomly selected from the list of street names. The interval selection is adapted to the size of each locality. The starting point is randomly chosen from the list of streets with numbers. In rural localities without street numbers, the starting point is a cultural place (house of culture, church etc).

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

The random route procedure is based on street numbers, for example the “2” and the “4”, meaning that during their random route all doors that have the number ending with a “2” or a “4”, like, 2, 4, 12, 14, 22, 24, 32, 34, etc. will be pre-selected.



To select households in a building it is necessary to take into account the range of systematic flats. In every building the households are counted from top to bottom, and within each floor, in a clockwise direction, from the stairs. Thus, regardless of what range used, the first household selected is always in the building immediately to the left side of the starting point on the top floor, left side of the stairs.

The second household is, for example with a systematic range of 5, following the 5th household, starting to count in the household next door, and so on: the counting interval goes automatically to the floor below and to the next building. All buildings outside the universe (church, store, office, etc.), are not considered in this count.

Stratification variables

NUTS2 Regions

PT11	Norte	
PT15	Algarve	
PT16	Centro (P)	
PT17	Lisboa	
PT18	Alentejo	
PT20	Região Autónoma dos Açores	Not included
PT30	Região Autónoma da Madeira	Not included

Regions PT20 and PT30 will not be sampled.

Azores and Madeira islands are regions that are very remote and hard to access, and so these were not considered in the sample. In terms of % of total population of country Azores represents only 2,3% and Madeira 2.4%.

Urbanisation

	Description	Inhabitants
1	Big conglomerations	100.000 or more inhabitants
2	Urban communities	10.000 to 99.999 inhabitants
3	Secondary communities	2.000 to 9.999 inhabitants
4	Small communities	Less than 2.000 inhabitants

Statistical source of population data:

Census 2001. INE (National statistics Institute).

ROMANIA

Justification for RR:	Sampling frame with information of the survey population is not available in Romania
Sample size	N=1.500
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
PSU:	Localities
No. of sampling points (SP's):	225
Gross main sample size:	2.250
Enumeration:	In each SP, at least 20 addresses along the random route will be enumerated in advance by staff other than the interviewers (field supervisors)
Maximum batch size:	The maximum batch size per SP will be 10 addresses. Each SP will yield 7 completes on average
Contingency plan:	In each SP at least 10 back-up addresses will be enumerated
Selection of start address:	Random via allocation of street letters in urban areas; in villages without streets points of interest will serve as the starting point
Selection of households:	Every 5 th household; flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of localities

After stratification, localities will be randomly selected using “black box” software which chooses the localities taking size into consideration. Within a stratum each locality has the same probability to be chosen and included in the sample.

Stage 2 – Random selection of a starting point

Each enumerator is randomly allocated a range of street letters which represent the starting point in each locality. A letter is randomly allocated to each fieldwork interviewer in urban localities. In rural localities, the starting point is a point of interest in that village (church, museum, etc).

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

The random route starts from this point on every street, on the right side, with the household with the smallest number. By means of a statistical step of 5, every fifth household will be selected. The enumerator will always go on the right side of the streets, and the household will be selected as follows:

-In the case of streets with single-unit homes: the household with the smallest number from the street will be the first to be enumerated, and then every 5th household will be selected and so on.

- In the case of the streets with blocks of flats, enumerator start on the right side of the street, beginning with the smallest number of the street. In every block of flats/ scale of the block of flats, they start with the top floor and then begin enumerating the apartment with the highest number on that floor. Every 5th apartment will subsequently be enumerated, by counting the doors from the right to the left, standing in front of the door of the visited apartment and starting with the apartment next to the one already visited. They then move down to the next floor and continue the counting from the right to the left standing with the back to the scale, until reaching the ground floor. In the next block of flats, the same procedure is repeated.

Stratification variables

NUTS2 Regions

RO11	Nord-Vest
RO12	Centru
RO21	Nord-Est
RO22	Sud-Est
RO31	Sud - Muntenia
RO32	Bucureşti - Ilfov
RO41	Sud-Vest Oltenia
RO42	Vest

Urbanisation

1	Rural
2	City under 50.000
3	City 50.000 - 199.999
4	City 200.000 +
5	Bucuresti

Statistical source of population data:

NSI. National Institute of Statistics. Last update : July 2010.

Based on the 2002 census and updated yearly.

SWEDEN

Sample size	N=1000
Sampling method:	Stratified simple random probability sampling (no clustering)
Stratification:	Stratification by NUTS2 regions and urbanisation
Sampling frame:	SPAR – Name-based register of citizens and legal residents
Coverage:	100%
Date of issue:	Continuous
Sampling points:	The number of sampling points in this case is equal to the number of interviews
Proposed gross sample:	2000
PSU:	Individuals aged 18+

Sample design

The sampling design is a simple random sample of individuals without clustering. As it may be very cumbersome to include all possible relevant factors for stratification purposes, a well-defined simple probability sampling design within each defined region, using the SPAR registry as sampling frame, can guarantee a wide geographical spread and heterogeneous spectrum of respondents.

Within each region, a simple random sample of qualified individuals is taken. This is facilitated using SPAR, which is a name-based register covering all citizens and legal residents in Sweden. There is thus no need to select households and to select a respondent within the household with this design as individuals are the primary sampling unit: they are directly drawn from SPAR.

However, as is standard in Sweden, due to low population density in certain regions, first contact with the sampled individuals may be done by telephone. Telephone screening is only done to contact respondents. ITESCO AB will be used to find the telephone numbers (fixed and mobile numbers) of the respondents selected from the SPAR sample. The coverage of telephone screening is approximately 90%. ITESCO is NOT a selection frame on its own. When people do not have a phone number, they are then contacted in person by an interviewer.

Stratification variables

NUTS2 Regions

SE11	Stockholm
SE12	Östra Mellansverige
SE21	Småland med öarna
SE22	Sydsverige
SE23	Västsverige
SE31	Norra Mellansverige
SE32	Mellersta Norrland
SE33	Övre Norrland

Urbanisation

The three major urban areas are identified as additional regions in the NUTS 2 structure. These three metropolitan areas are: Stockholm, Gothenburg and Malmoe, which belong to SE11, SE23 and SE22 respectively. There are middle-sized cities in other NUTS regions, but are smaller compared with the three defined metropolitan areas.

SE11	Metropolitan Stockholm
SE12	Östra Mellansverige
SE21	Småland med öarna
SE22A	Sydsverige excluding Malmoe
SE22B	Metropolitan Malmoe
SE23A	Västsverige excluding Gothenburg
SE23B	Metropolitan Gothenburg
SE31	Norra Mellansverige
SE32	Mellersta Norrland
SE33	Övre Norrland

Statistical source of population data:

SCB (Statistiska Centralbyrån) – Statistics Sweden. Latest update : December 2009.

SLOVENIA

Sample size	N=1000 (to be achieved)
Sampling method:	Random probability sampling
Sampling frame:	Central Population Register; Name-based register of all permanent residents.
Coverage:	96% of all citizens and legal residents. The proportion of people who are not registered is estimated to be very low (below 0.5%); it also excludes 4% of people, who do not want to participate in research surveys
Date of issue:	Updated daily (Central Population Register of Slovenia)
Sampling points:	200 – main sample (+ 100 – backup sample)
Proposed gross sample:	2000 main sample + 1000 backup sample
PSU:	Set of permanent residents (10) in a district (sampling unit)
Sampling design:	Stratified two-stage probability sample

Sampling stages:

The population to be sampled is first classified into primary units, each of which consists of a collection of the basic sampling unit, the secondary unit. A sample of these primary units is taken, constituting the first stage, and these are then subsampled with respect to their secondary units: this constitutes the second stage.

Stage 1 – Random selection of primary units (sampling units) within strata.

Selection of districts is proportional according to the types of settlement (6 types) and regions (12, NUTS 3 - statistical regions) and takes into account the size of population in individual category.

Stage 2 – From the Central Population Register, for all chosen districts there is a list of persons, which matches the target population. A constant number of persons (10) is randomly selected within each sampling unit. Persons in each sampling unit are sorted on basis of address, before random selection.

Contingency plan

100 back-up sampling points (1000 names) have been obtained in case the main sample is not sufficient. These sampling points have been drawn according to the methodology of the main sample.

Stratification: Stratification by NUTS3 regions and urbanisation

Stratification variables

NUTS2 Regions

SI01	Pomurska
SI02	Podravska
SI03	Koroška
SI04	Savinjska
SI05	Zasavska
SI06	Spodnjeposavska

SI07	Jugovzhodna Slovenija (ali Dolenjska)
SI08	Osrednjeslovenska
SI09	Gorenjska
SI10	Notranjsko-kraška
SI11	Goriška
SI12	Obalno-kraška

All regions will be included

Urbanisation

Variable is named type of settlement

Less than 2000 inhabitants (urban)	less than 30% of households involved in farming
Less than 2000 inhabitants (nonurban)	more than 30% of households involved in farming
2.000-10.000 inhabitants	
More than 10.000 inhabitants	
Maribor	second largest city in Slovenia
Ljubljana	largest city in Slovenia

Statistical source of population data:

Central Population Register. Latest update: January 2011.

SLOVAKIA

Justification for RR:	No reliable sampling frame available
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by Kraje districts and urbanization. In Slovakia there are only 5 NUTS regions. To optimize sampling, we suggest using “kraje” – districts
PSU:	Municipalities
No. of sampling points (SP’s):	150
Gross main sample size:	1.500
Enumeration:	In each SP, at least 20 addresses along the random route will be enumerated in advance by an interviewer not working in the sampling point
Maximum batch size:	The maximum batch size per SP will be 10 addresses. Each SP will yield 7 completes on average
Contingency plan:	In each batch at least 10 back-up addresses will be enumerated
Selection of start address:	Randomly selected from the phone book and mobile phone database, in each municipality
Selection of households:	Starting with the 13 th unit, every 3rd hh in flats and every 13th single house. In some rural points, more than one village has been enumerated in order to obtain sufficient addresses

Description of random selection steps

Stage 1 – Random selection of municipalities

After stratification by region and urbanization, the selection of municipalities shall be carried out by random selection generator.

Stage 2 – Random selection of a starting address

Within each municipality, starting points shall be randomly selected from phone book and mobile phone numbers' databases. The random selection will run separately for each municipality and the selection interval will depend on the size of the municipality.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the "next birthday" rule.

Description of the random route

The track of the random route shall begin at the starting point, which will be defined by the name of the street and the house number. The enumerators will turn their back to the house and start the route by turning right. When they arrive at the crossroads within the random route track, they will always turn right. Within the random route track, only the houses on the right sight of the street (from the viewpoint of the random route direction) shall be selected.

Algorithm of household identification

The key number to select the house, door, and household will be the **number 13**.

The first household to contact in case of dealing with single-family homes will be the thirteenth house on the right from the starting point. Every thirteenth household shall be identified.

When dealing with residential buildings with several floors (block of flats), the enumerator shall first select the thirteenth door on the right from the starting point and then every third door. In case there are two stairways in a block of flats with one entrance door, the interviewer will always choose the right hand-side. Enumeration shall begin on the top floor.

Stratification variables

Kraje districts

SK01	Bratislavský kraj
SK02	Trnavský kraj
SK03	Trenčiansky kraj
SK04	Nitriansky kraj
SK05	Žilinský kraj
SK06	Banskobystrický kraj
SK07	Prešovský kraj
SK08	Košický kraj

Urbanisation

<u>1</u>	less than 1000 inhabitants
<u>2</u>	from 1 000 to 4 999 inhabitants
<u>3</u>	from 5 000 to 19 999 inhabitants
<u>4</u>	from 20 000 to 49 999 inhabitants
<u>5</u>	from 50 000 to 99 999 inhabitants
<u>6</u>	More than 100 000 inhabitants

Statistical source of population data:

Census 2009. Latest update : January 2010.

UNITED KINGDOM

Sample size	N=2.250
Sampling method:	Random probability sampling
Sampling design:	Stratified three-stage probability sample
Stratification:	Stratification by <u>NUTS1</u> and urbanisation. The use of NUTS1 is standard (also done on EQLS2, EWCS and ESS).
Sampling frame:	Royal Mail Postcode Address File (PAF) – Register of all residential addresses
Coverage:	>97%. There is no reliable information on the completeness of coverage of PAF as there has been no recent comparison exercise. Since it is impossible to get letters delivered without being on PAF, it is quite possible that coverage is 100%. In practice the main problem is the other way round – addresses appear on PAF that have been demolished since the last revision and it includes addresses for homes that have not yet been built. It also includes some non-residential addresses
Date of issue:	February 2011; Sampled: June 2011
Sampling points:	250
Proposed gross sample:	5.000
PSU:	Census Super Output areas. These are aggregations of postal codes. Postal codes themselves are too small and postcode sectors are too large for sensible use
Maximum cluster size:	20

Sampling stages

Stage 1 – random selection of PSUs

All super output areas (SOAs) in the country will be stratified first by region (NUTS1), then by a four-way urban/rural indicator, and then in each of the resulting strata will be ranked using the Index of Multiple Deprivation (a summary variable produced by the government for classification of local areas based on Census and other official data for housing, employment, income, health and disability, benefits, crime etc). In the UK, IMD is used on national social surveys (e.g. ESS, BSA) because so many of the things that are measured correlate to some extent with living standards, and so making sure the sample represents the total population in terms of this Index helps reduce the design effect.

From this stratified list, 250 SOAs will be selected with a probability proportional to size.

Stage 2 – random selection of households

In each SOA a maximum of 20 households are selected (plus a further 2 in the reserve sample). From a random start point 22 addresses will be selected on a simple one in n basis, with the last two designated as reserve addresses.

Stage 3 – random selection of respondent

In each household the respondent is randomly selected using the next birthday rule.

Contingency plan

We foresee a gross sample of 5.500 and the back-up sample is already included here. With a minimum response rate of 50% that would be a gross sample of 4.500 to achieve 2.250 net-interviews – we have sampled 5.500 addresses instead. The main sample includes 5000 addresses (20 per sampling point + allowance for deadwood). Each sampling points also contains 2 back-up addresses. These additional respondents have been sampled according to the specified sampling requirements.

Stratification variables

NUTS1 Regions

1	North East
2	Yorkshire and The Humber
3	East Midlands
4	West Midlands
5	London
6	South East
7	South West
8	Wales
9	Scotland
10	Northern Ireland

Urbanisation

1	Metropolitan counties
2	Other 100% urban areas (population density >7 pph)
3	Mixed urban/rural (population density 1.5 - 7 pph)
4	Rural (population density <1.5 pph)

Statistical source of population data:

Office for National Statistics. Latest update: 2009

NON-EU

TURKEY

Justification for RR:	List of address registries are not distributed by official institutions
Sample size	N=2.000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
No. of sampling points:	256
PSU:	Districts (mahalle)
Gross sample size:	5120
Enumeration:	In each PSU, 20 addresses along the random route will be enumerated in advance by staff other than the interviewers (field managers)
Maximum cluster size:	The maximum cluster size per PSU will be 16 addresses. Each PSU will yield 8 completes on average
Contingency plan:	In each cluster 4 back-up addresses will be enumerated
Selection of start address:	Randomly chosen from special Excel program
Selection of households:	Every nth household according to Kish-like grid; flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of districts

The 256 districts will be randomly drawn after stratification by NUTS2 regions and degree of urbanization with the help of a special program which is based on Excel and designed by GfK Turkey.

Stage 2 – Random selection of a starting address

Per district, two starting streets will be randomly selected with the same tool.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

The random route method in Turkey is based on a Kish-like grid selection of street letters and number. Using the grid, enumerators search for the door number of their starting street. If, for example, the name of the pre-defined street is Karaca, they go to column K on the grid and enumerate the apartment with door number 46. They then move to the next door number, in this case 40.

	First Letter of the Street Name																										
	A	B	C	Ç	D	E	F	G	H	I	İ	K	L	M	N	O	Ö	P	R	S	Ş	T	U	Ü	V	Y	Z
1	44	40	54	48	45	51	45	50	46	51	41	46	59	51	49	51	50	45	54	52	57	54	45	42	59	54	48
2	55	55	46	44	54	60	54	40	44	42	43	40	53	58	41	18	56	46	51	59	43	51	9	56	42	43	3
3	33	38	30	31	33	35	33	38	39	39	31	32	35	31	36	30	36	38	35	30	33	32	36	33	32	37	36
4	36	39	34	35	38	31	38	35	34	30	30	34	30	39	37	34	35	33	38	34	32	33	31	38	30	12	38
5	26	26	27	26	21	23	21	20	25	26	20	25	26	21	20	26	21	22	23	28	24	22	22	21	26	20	27
6	7	25	26	21	26	27	26	22	22	3	35	26	21	22	21	22	24	27	27	25	27	20	28	24	27	28	25
7	17	19	19	15	16	14	16	13	10	19	10	11	18	14	17	19	18	13	10	14	18	17	19	10	12	15	12
8	18	18	15	19	12	17	12	8	13	15	14	13	16	18	6	17	10	15	4	7	15	19	5	18	18	16	15

Stratification variables

NUTS2 Regions

TR10	İstanbul
TR21	Tekirdağ, Edirne, Kırklareli
TR22	Balıkesir, Çanakkale
TR31	İzmir
TR32	Aydın, Denizli, Muğla
TR33	Manisa, Afyonkarahisar, Kütahya, Uşak
TR41	Bursa, Eskişehir, Bilecik
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova
TR51	Ankara
TR52	Konya, Karaman
TR61	Antalya, Isparta, Burdur
TR62	Adana, Mersin
TR63	Hatay, Kahramanmaraş, Osmaniye
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir
TR72	Kayseri, Sivas, Yozgat
TR81	Zonguldak, Karabük, Bartın
TR82	Kastamonu, Çankırı, Sinop
TR83	Samsun, Tokat, Çorum, Amasya
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane
TRA1	Erzurum, Erzincan, Bayburt
TRA2	Ağrı, Kars, Iğdır, Ardahan
TRB1	Malatya, Elazığ, Bingöl, Tunceli
TRB2	Van, Muş, Bitlis, Hakkari
TRC1	Gaziantep, Adıyaman, Kilis
TRC2	Şanlıurfa, Diyarbakır
TRC3	Mardin, Batman, Şırnak, Siirt

All 26 regions are represented by 26 cities (marked as red in the table above) in each region.

Urbanisation

1	Urban - population higher than 150.000
2	Semi Urban - population between 150.000 and 20.000
3	Rural - population lower than 20.000

Statistical source of population data:

Turkish Statistical Institute / Turkstat. Latest update : 2010

CROATIA

Justification for RR:	No official source with addresses available
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by regions and urbanisation. Given Croatia doesn't have a NUTS 2 level, the usual region classification (6 regions) will be applied.
No. of sampling points:	110 (+20 back-up)
PSU:	Counties (SSU: Settlements)
Gross sample size:	2600
Enumeration:	In each SSU, 20 addresses along the random route will be enumerated in advance by staff other than the interviewers (regional coordinators)
Maximum cluster size:	The maximum cluster size per PSU will be 20 addresses. Each PSU will yield 9-10 completes on average
Contingency plan:	In each of the 20 back-up sampling points, 20 additional addresses will be enumerated
Selection of start address:	Randomly selected from a database of streets; point of interest in rural settlements without streets
Selection of households:	Every 3rd site: 1st address if this is a house; the 3rd household if it is a multi-dwelling building

Description of random selection steps

Stage 1 – Random selection of settlements (SSUs)

After stratification, settlements will be selected randomly using a database which list the settlements in each of the 21 counties.

Stage 2 – Random selection of a starting point

Starting points will be randomly selected from a database with all streets. If a settlement has no streets, enumerators will start at the post office. If there is no post office, the starting point is the "main" grocery shop (on the main square).

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the "next birthday" rule.

Description of the random route

From the starting point, a separate team of enumerators will proceed towards the increasing house numbers and will choose every third house or apartment, including both sides of the street. When they come to their first crossroad or turn, they will take a left turn. On the next crossroad they will take a right turn, and will continue in that rhythm. Therefore, they will move in a zigzag pattern (left, right, left, right, etc.), choosing every third site, taking into consideration all houses and apartments on both sides of the street. When they come across a house (detached, semi-detached or terraced), which in its entirety is occupied by one household, this is the first address. If they come across an apartment building, they will go to the top floor, and starting from the top of the building they will count and choose the third apartment

Stratification variables

Regions

1	Zagreb and surroundings
2	North Croatia
3	Slavonia
4	Lika, Kordun, Banovina
5	Istria, Primorje, Gorski Kotar
6	Dalmatia

Urbanisation

1	up to 2000 inhabitants
2	from 2000 to 10000
3	from 10000 to 100000
4	over 100 000

Statistical source of population data:

Census. The Central Bureau of Statistics of Croatia. Last update : 2

FYROM

Justification for RR:	No reliable sampling frame available
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS3 regions and urbanisation
No. of sampling points:	100
PSU:	Electoral unit
Gross sample size:	3000
Enumeration:	In each PSU, 30 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum cluster size:	The maximum cluster size per PSU will be 20 addresses. Each PSU will yield 10 completes on average
Contingency plan:	In each cluster 10 back-up addresses will be enumerated
Selection of start address:	Randomly selected from a database of streets
Selection of households:	Every 3 rd HH. Flats treated like streets

Description of random selection steps

Stage 1 – Random selection of electoral units

After stratification, 100 electoral units will be randomly selected from a database which lists the electoral units in each region. The selection is random by using the RAND function in Excel, sorting the electoral units and choosing the first N of units needed.

Stage 2 – Random selection of a starting address

From a database of all streets, a starting address is randomly selected in each electoral unit. In PSUs without streets, a point of interest is the starting point.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

Using the start and step rules, enumerator select every 3rd house. For example, if the start is 4 and the step is 3, the enumerator who stands before the starting address, on the right side of the street selects the fourth house and continues with every third house (step is 3).

In apartment blocks, the enumerator goes to the top floor and from the apartment with the highest number takes 4 numbers and selects that apartment (start is 4).

For example: if there are 40 apartments in the building, the enumerator selects the apartment with number 36 (because start is 4) and moved on to apartment number 33, continuing in that order (because step is 3) until reaching the first floor.

After completions, the enumerator follows the step and moves on to the next unit, where the procedure for selection of households continues.

Stratification variablesNUTS3 Regions

1	Skopski
2	Pelagoniski
3	Poloski
4	Vardarski
5	Istocen
6	Jugozapaden
7	Jugoistocen
8	Severoistocen

Urbanisation

1	Urban
2	Rural

Statistical source of population data:

Census. The Central Bureau of Statistics of Republic of Macedonia 2001 . Last update : 31 .12 2009. www.stat.gov.mk

KOSOVO

Justification for RR:	No suitable sampling frame (poor coverage, systematic biases)
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by UNMIK districts and urbanisation
No. of sampling points:	100
PSU:	Electoral wards
Gross sample size:	3000
Enumeration:	In each sampling point, 30 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum batch size:	The maximum batch size per sampling point will be 20 addresses. Each sampling point will yield 10 completes on average
Contingency plan:	In each sampling point 10 back-up addresses will be enumerated
Selection of start address:	Randomly selected from a database of streets
Selection of households:	Every 3 rd HH; Flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of municipalities

After stratification, 100 electoral wards will be randomly selected proportionately to their size from national list of electoral wards. The selection is random by using the RAND function in Excel, sorting the wards and choosing the first N of units needed.

Stage 2 – Random selection of a starting address

In each electoral ward, for the main sample, 2 streets will be randomly selected from the database and in each street 10 street numbers are then pre-selected using random route procedures following the rule of START and STEP (systematic). As back-up 1 street per ward will be randomly selected from the database and in this street 10 street numbers are again pre-selected using random route procedures following the rule of START and STEP (systematic).

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

Using the systematic rule of START and STEP, enumerators select every 3rd household.

For example, if the start is 4 and the step is 3, the enumerator who stands before the starting address, on the right side of the street selects the fourth house and continues with every third house (step is 3).

In apartment blocks, the enumerator goes to the top floor and from the apartment with the highest number takes 4 numbers and selects that apartment (start is 4).

For example: if there are 40 apartments in the building, the enumerator selects the apartment with number 36 (because start is 4) and moved on to apartment number 33, continuing in that order (because step is 3) until reaching the first floor.

After completion, the enumerator follows the step and moves on to the next unit, where the procedure for selection of households continues.

When reaching an intersection, enumerators turn left at the first, go straight at the second, turn right at the third and turn left again at the fourth intersection and so forth.

Stratification variables

Regions

1	Prishtina
2	Urosevac
3	Gnjilanje
4	Pec
5	Mitrovica
6	Prizren
7	Gjakovica

Urbanisation

1	Urban
2	Rural

Statistical source of population data: Kosovo Statistical Office <http://esk.rks-gov.net/eng/>.
Census, April 2011

SERBIA

Justification for RR:	No suitable sampling frame (poor coverage, systematic biases)
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
No. of sampling points:	170
PSU:	Municipalities
Gross sample size:	3060
Enumeration:	In each sampling point, 18 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum batch size:	The maximum batch size per sampling point will be 12 addresses. Each sample point will yield 6 completes on average
Contingency plan:	In each sampling point 6 back-up addresses will be enumerated
Selection of start address:	Randomly selected from the Postal Address File
Selection of households:	Every 3 rd HH in urban areas and every 3 rd in rural areas Flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of municipalities

After stratification, 170 municipalities will be randomly selected proportionately to their size from a database which lists the municipalities in each region. The selection is random by using the RAND function in Excel, sorting the municipalities and choosing the first N of units needed.

Stage 2 – Random selection of a starting address

In each municipality a start address will be randomly selected from the Postal Address File. This address will be excluded from the sample. The interval selection is adapted to the size of each municipality. In rural municipalities without a postal address, the starting point is a point of interest or institution.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

In case a postal address exists, the random route starts at the selected postal address. From there enumerators select every 5th household in urban areas and every 3rd household in rural areas moving up the street in terms of street numbering. The start address is not included in the sample.

In case there is no postal address, the supervisor picks a point of interest or institution as the start of the random route. The enumerator starts on the right side, with the household with the smallest number and from there enumerates every 3rd household.

Flats are treated like streets as follows. Enumerators start with the top floor and then begin enumerating the apartment with the highest number on that floor. Every Nth apartment (5th in urban areas and 3rd in rural areas) will subsequently be enumerated, by counting the doors from the right to the left, standing in front of the door of the selected apartment and starting with the apartment next to the one already selected. They then move down to the next floor and continue the counting from the right to the left standing with the back to the scale, until reaching the ground floor. In the next block of flats, the same procedure is repeated.

When reaching an intersection, enumerators turn left at the first, go straight at the second, turn right at the third and turn left again at the fourth intersection and so forth.

Stratification variables

NUTS2 Regions

1	Belgrade
2	East Serbia
3	West Serbia
4	Vojvodina

Urbanisation - size of settlement

1	Up to 5.000 inhabitants
2	5.001 - 10.000
3	10.001 - 20.000
4	20.001 - 50.000
5	50.001 - 100.000
6	100.001 - 150.000
7	150.001 - 250.000
8	over 250.000

Statistical source of population data:

Census data, Statistical Office of The Republic of Serbia. Latest update : 2002

MONTENEGRO

Justification for RR:	No suitable sampling frame (poor coverage, systematic biases)
Sample size	N=1000
Sampling design:	Stratified three-stage random route with physical enumeration
Stratification:	Stratification by NUTS2 regions and urbanisation
No. of sampling points:	50
PSU:	Municipalities
Gross sample size:	3000
Enumeration:	In each sampling point, 60 addresses along the random route will be enumerated in advance by staff other than the interviewers (field office personnel)
Maximum batch size:	Per sampling point batches of 40 addresses will be given to interviewers. Each sampling point should yield 20 completes
Contingency plan:	In each sampling point 20 back-up addresses will be enumerated
Selection of start address:	Randomly selected from the Postal Address File
Selection of households:	Every 3 rd HH in urban areas and every 3 rd in rural areas Flats are treated like streets

Description of random selection steps

Stage 1 – Random selection of municipalities

After stratification, 50 municipalities will be randomly selected proportionately to their size from a database which lists the municipalities in each region. The selection is random by using the RAND function in Excel, sorting the municipalities and choosing the first N of units needed.

Stage 2 – Random selection of a starting address

In each municipality a start address will be randomly selected from the Postal Address File. This address will be excluded from the sample. The interval selection is adapted to the size of each municipality. In rural municipalities without a postal address, the starting point is a point of interest or institution.

Stage 3 – Selection of respondents

In each household, the respondent is randomly selected using the “next birthday” rule.

Description of the random route

In case a postal address exists, the random route starts at the selected postal address. From there enumerators select every 5th household in urban areas and every 3rd household in rural areas moving up the street in terms of street numbering. The start address is not included in the sample.

In case there is no postal address, the supervisor picks a point of interest or institution as the start of the random route. The enumerator starts on the right side, with the household with the smallest number and from there enumerates every 3rd household.

Flats are treated like streets as follows. Enumerators start with the top floor and then begin enumerating the apartment with the highest number on that floor. Every Nth apartment (5th in urban areas and 3rd in rural areas) will subsequently be enumerated, by counting the doors from the right to the left, standing in front of the door of the selected apartment and starting with the apartment next to the one already selected. They then move down to the next floor and continue the counting from the right to the left standing with the back to the scale, until reaching the ground floor. In the next block of flats, the same procedure is repeated.

When reaching an intersection, enumerators turn left at the first, go straight at the second, turn right at the third and turn left again at the fourth intersection and so forth.

Stratification variables

NUTS2 Regions

1	Northern Region
2	Central Region
3	Coastal Region

Urbanisation - Urban/Rural

1	Urban
2	Rural

Statistical source of population data:

Census data, Statistical Office of Montenegro. Latest update : 2003.

ICELAND

Sample size:	N=1000
Sampling method:	Random probability sampling
Sampling design:	Stratified two-stage probability sample
Sampling frame:	National Population Registry; <u>name-based register</u> of citizens and legal residents, updated every month
Coverage:	Covers <u>100%</u> of Icelandic addresses
Date of issue:	April 2012
Stratification:	Stratification by NUTS2 regions and urbanisation
N° of sampling points:	36
PSU:	Postcodes
Proposed gross sample:	5000
Maximum cluster size:	56

Sampling stages

Stage 1 – random selection of PSUs

Iceland can be divided into two geographical regions: the Capital area (Reykjavik and South-West), and other areas (West, North-East and South). We propose to take a stratified two-stage random sample from the National Register. The first stage is a stratification by region and urbanisation. Within each stratum sampling points will be randomly selected.

Stage 2 – random selection

Individuals will be randomly selected from the National Register.

Given it concerns a name-based register, there is no need to apply the next birthday rule.

Sample size will be 1000, i.e. completed interviews.

As is standard in Iceland, the first contact with the respondent will be done by telephone. It 's very important to start with a phonecall – there are some very thinly populated areas, it is sometimes difficult for a stranger to enter buildings, surprise visits are culturally inappropriate and frowned upon by many. Practically all residents aged 18+ have a phone number. The telephone numbers are in the sample.

All actual interviews are carried out in the home, face-to-face.

Contingency plan

We foresee a gross sample of 5.000 and the back-up sample is already included here. With a minimum response rate of 50% that would be a gross sample of 2.000 to achieve 1.000 net-interviews – we foresee 5.000 instead.

Stratification variables

NUTS2 Regions

1	Capital area: Reykjavik & South West Álftanes/Garðabær/Hafnarfjörður/Kópavogur/Mosfellsbær/Reykjavík/Seltjarnarnes
2	West/ North-East/South

Urbanisation

1	Urban communities/cities
2	Densely populated communities
3	Rural communities

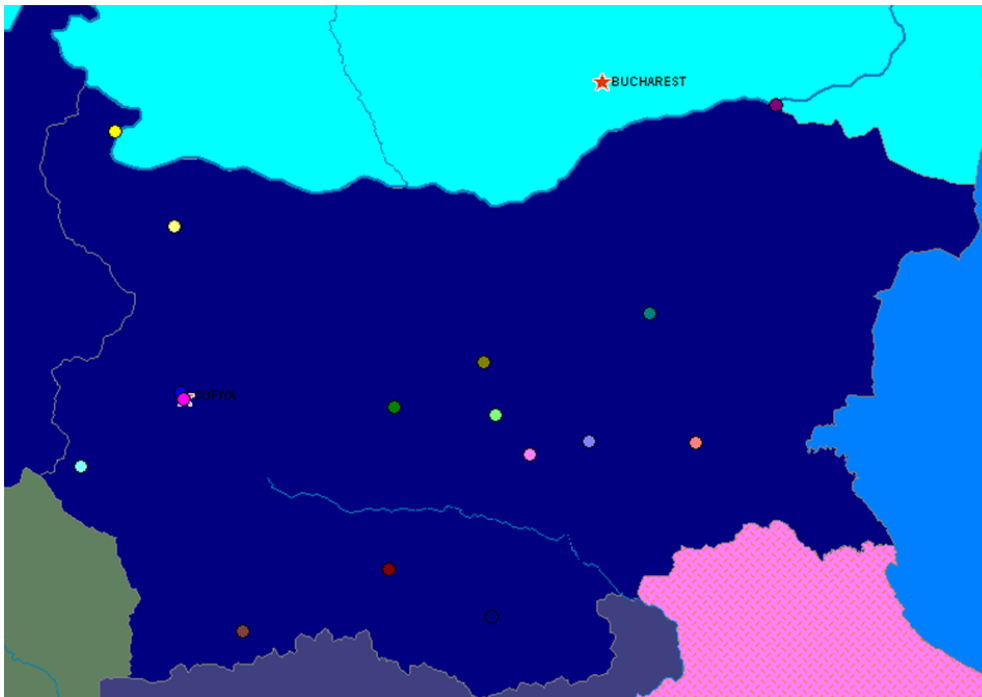
Statistical source of population data:

www.staticis.is Updated monthly

ANNEX B. Maps of the Random Route countries – location of the sampling points checked as a part of quality control

EU27

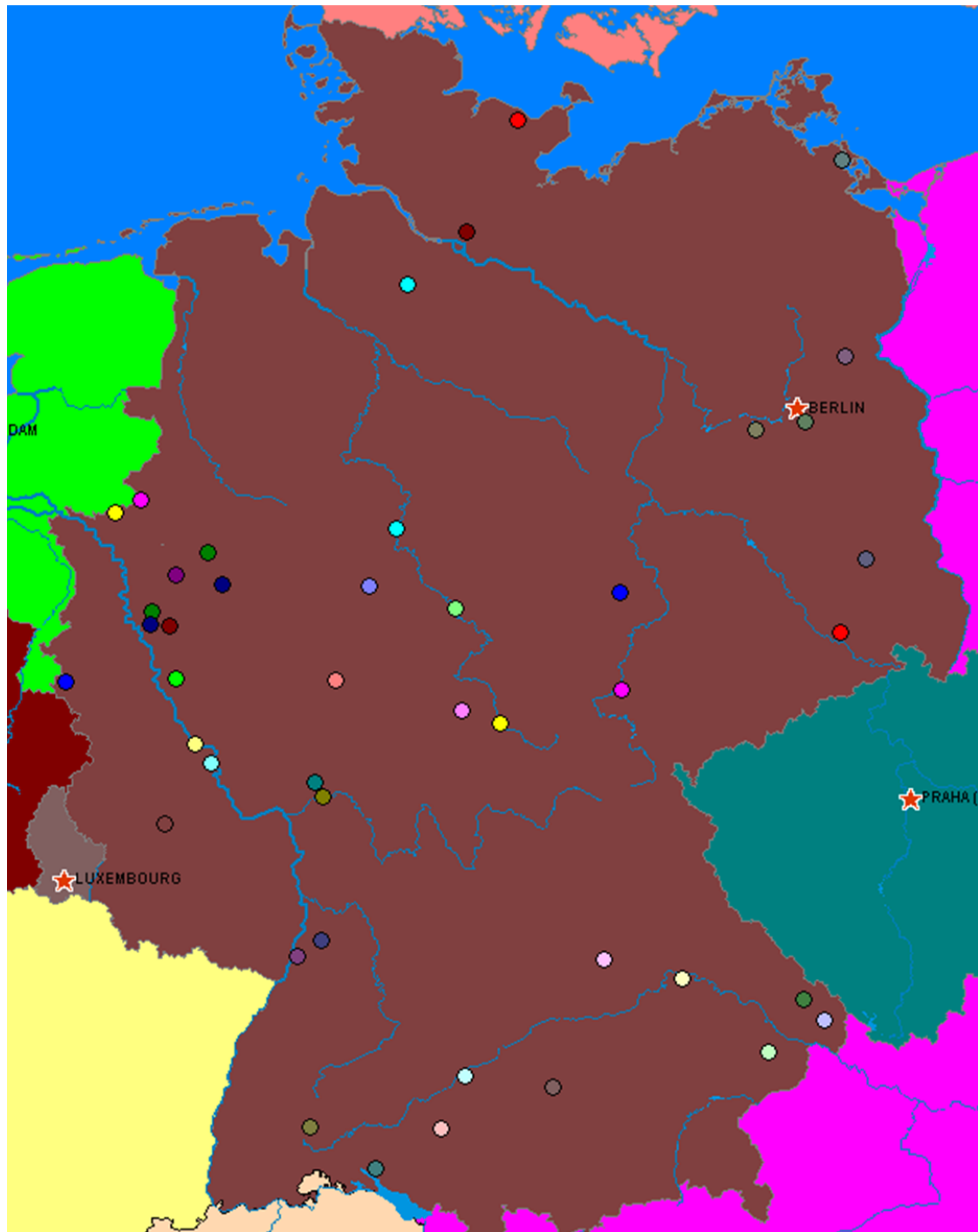
Bulgaria



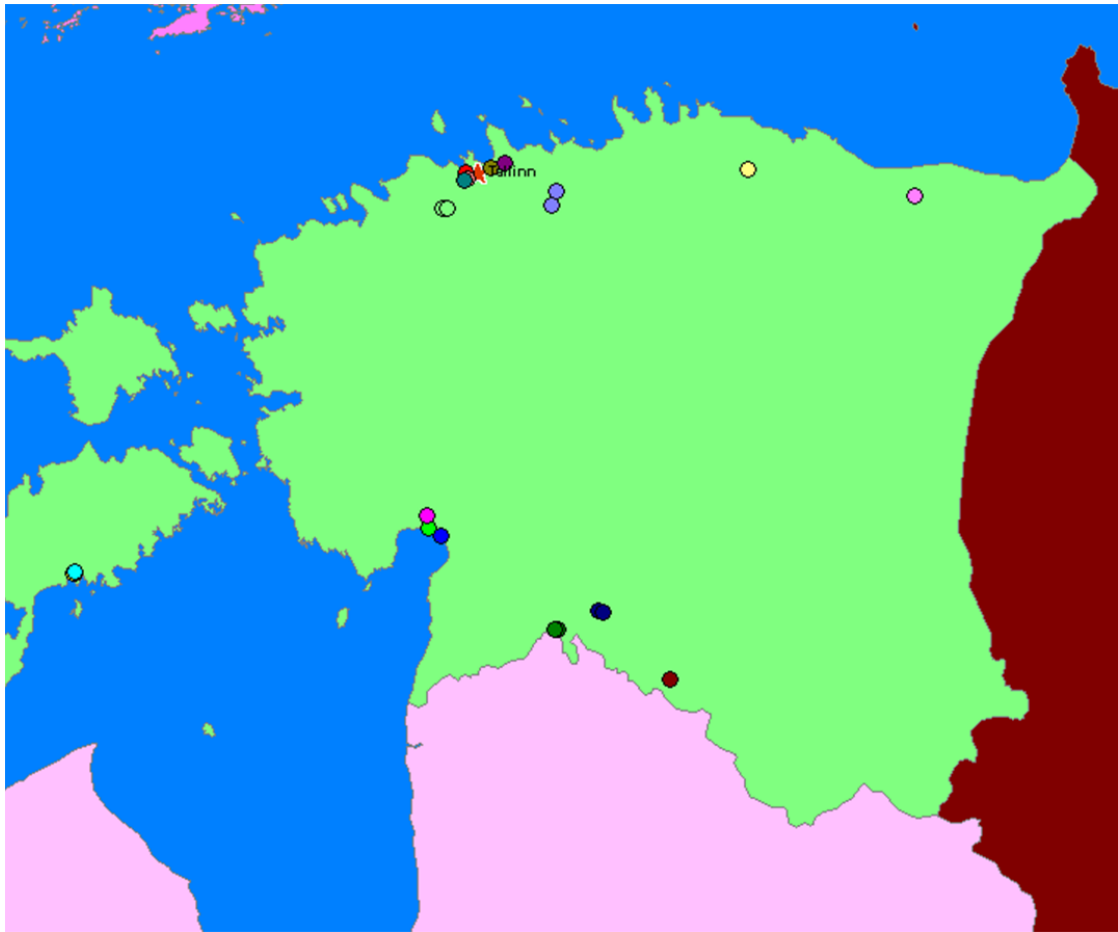
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Germany



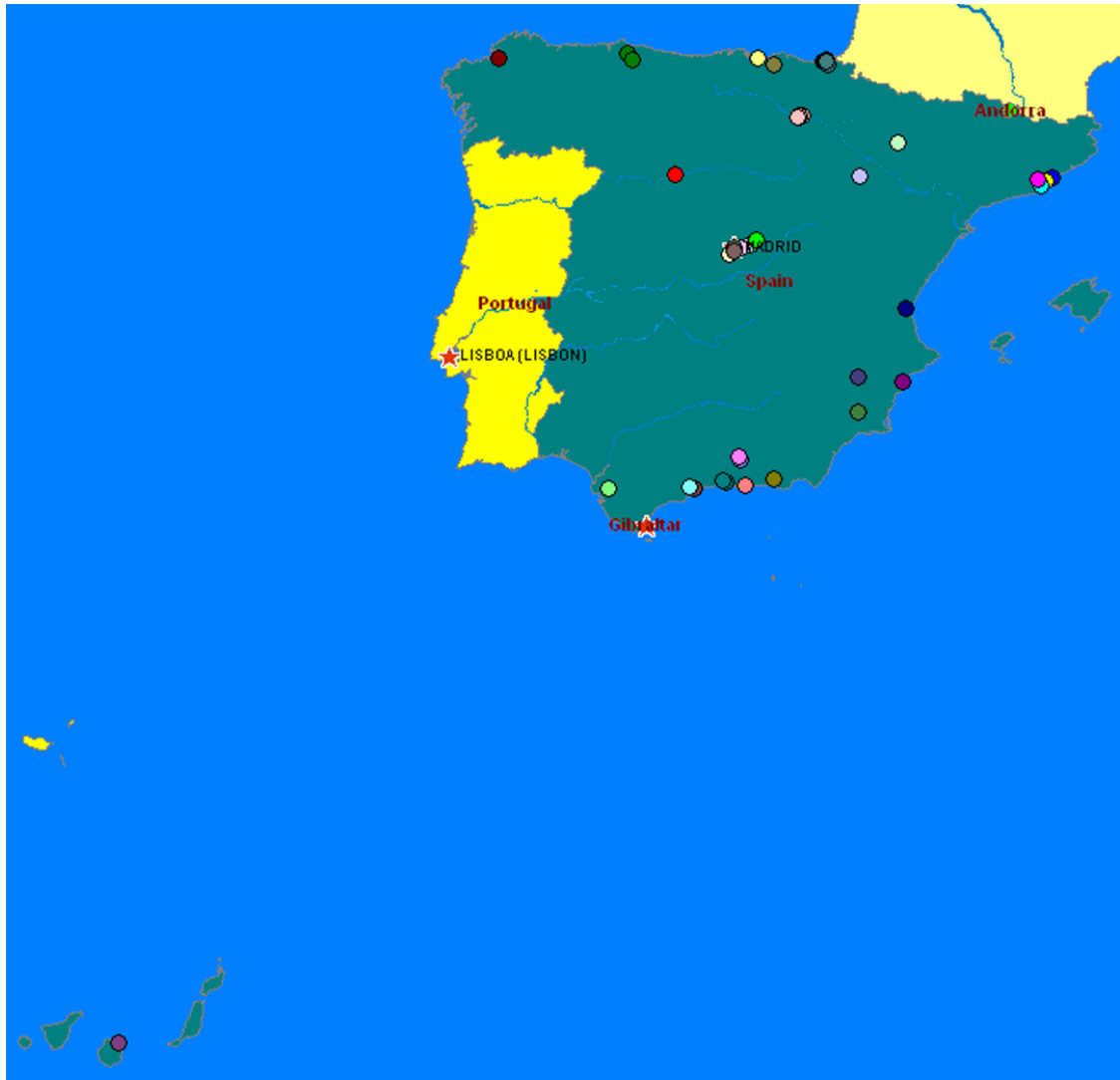
Estonia



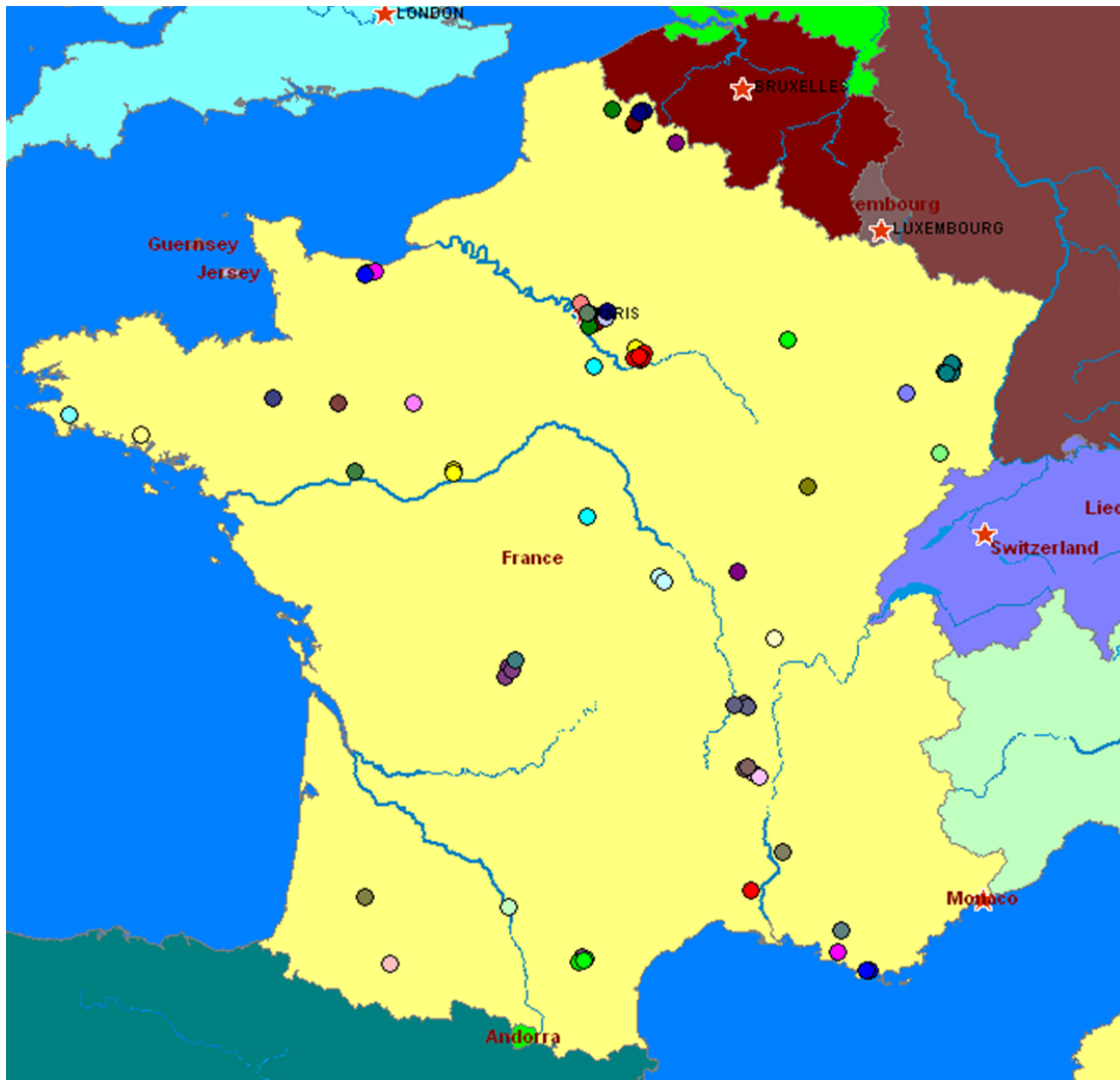
Greece



Spain



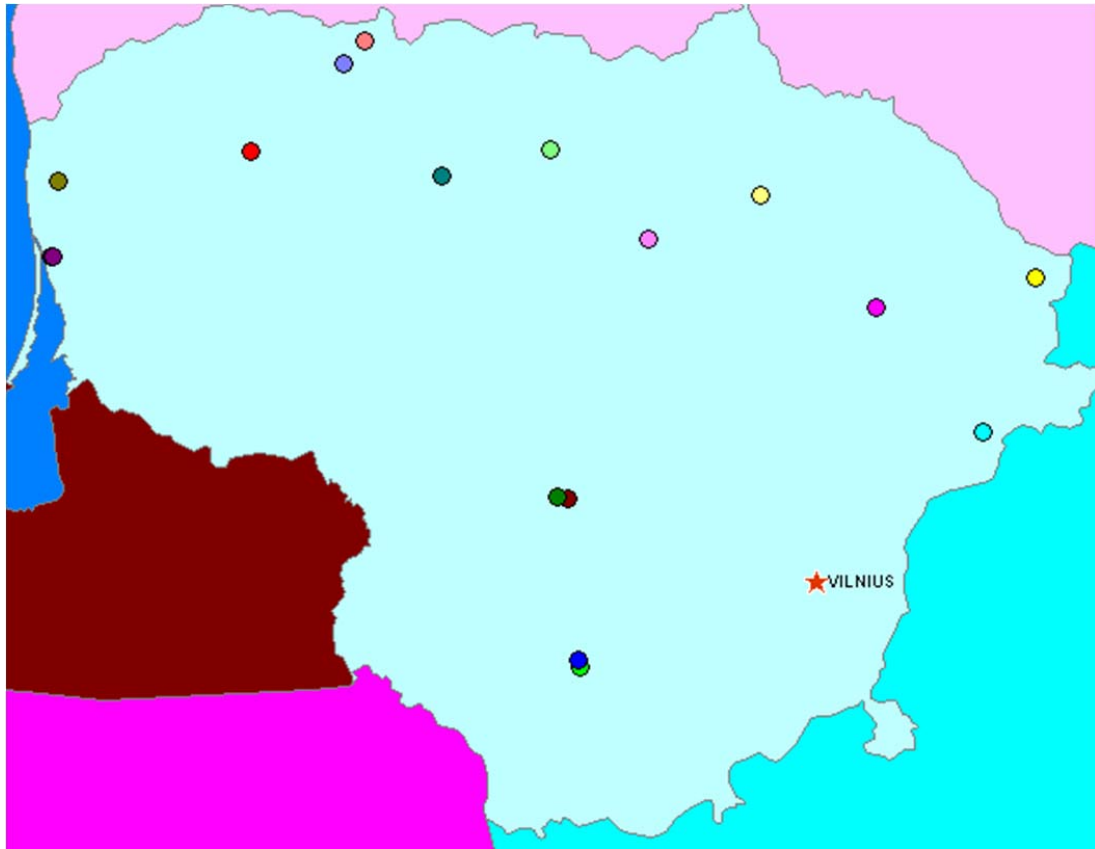
France



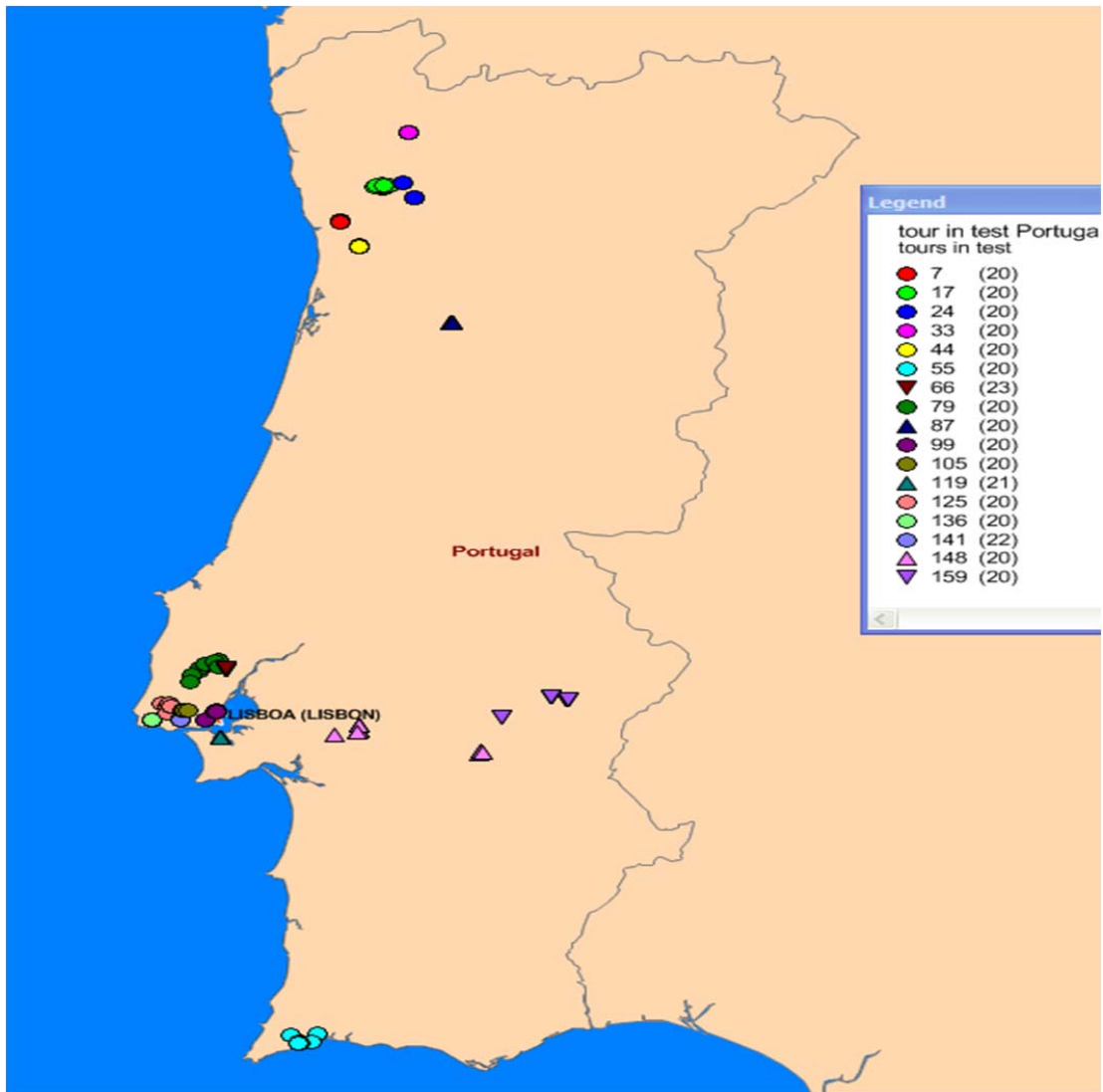
Italy



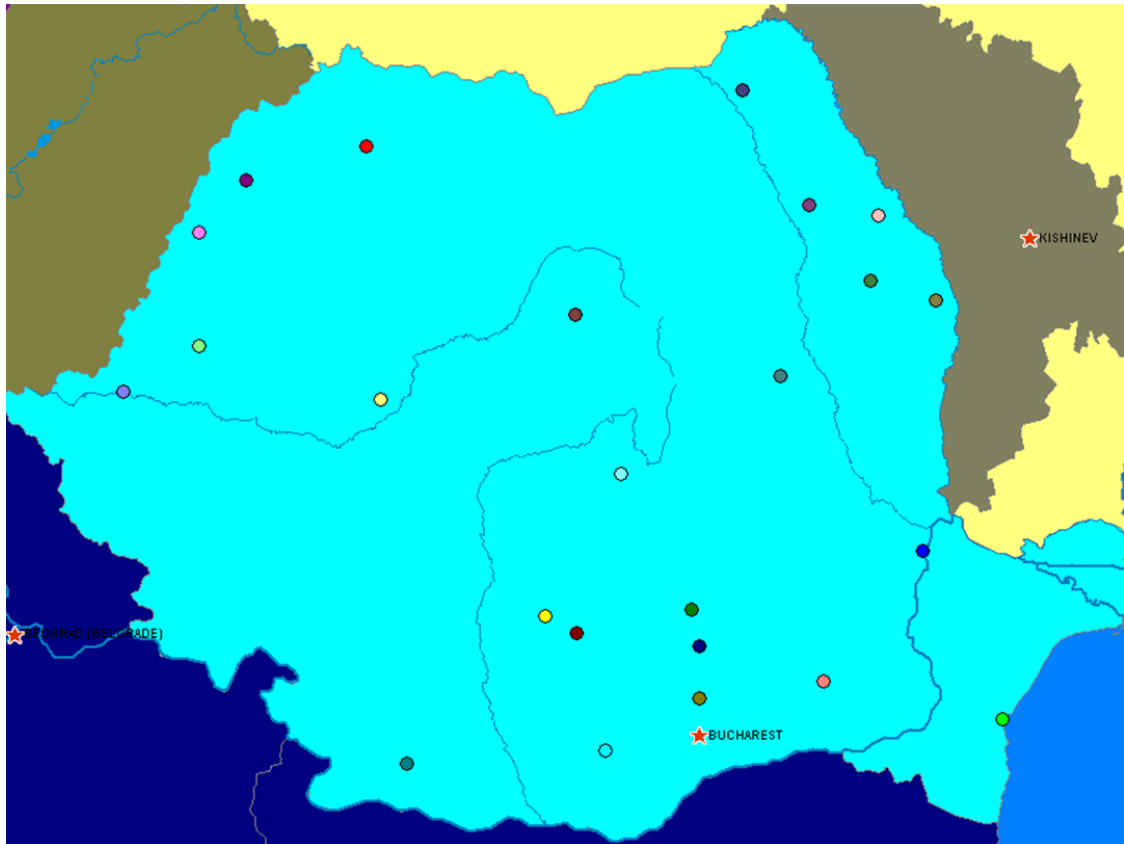
Lithuania



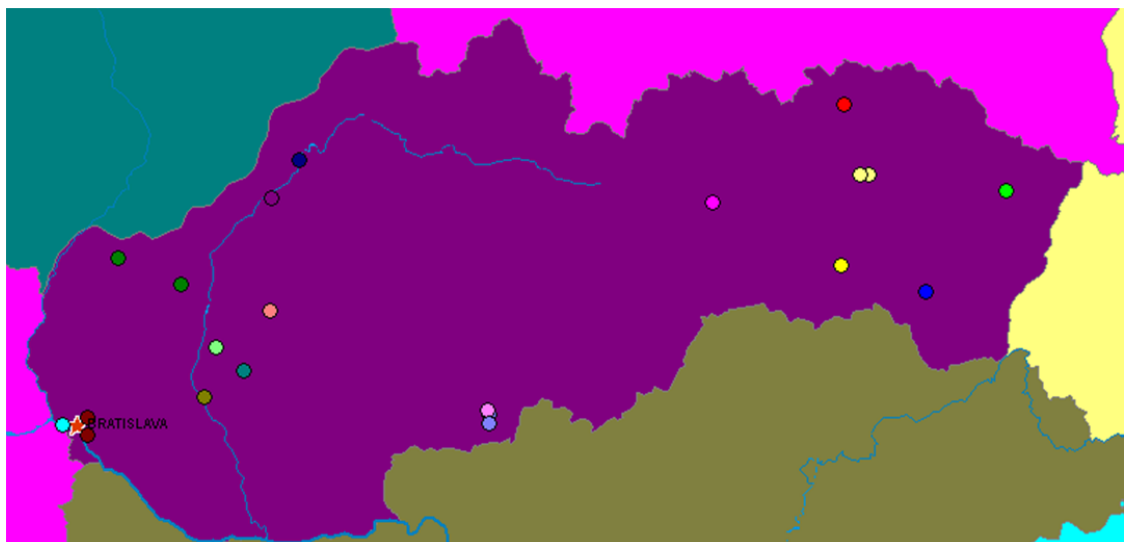
Portugal



Romania

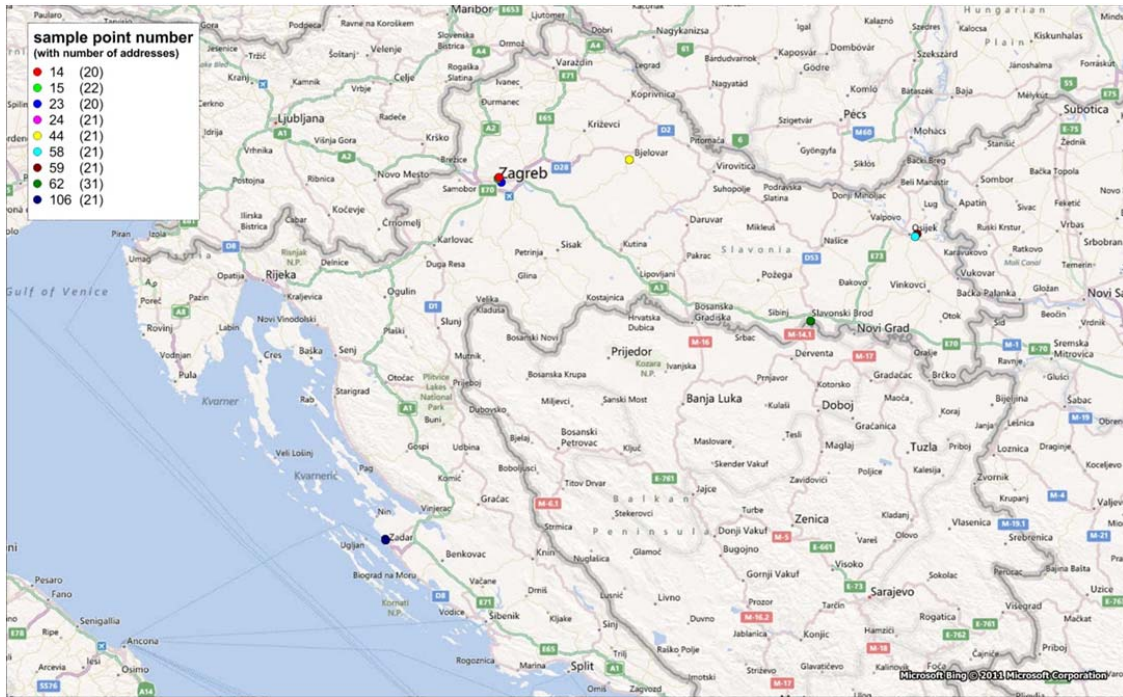


Slovakia



NON-EU

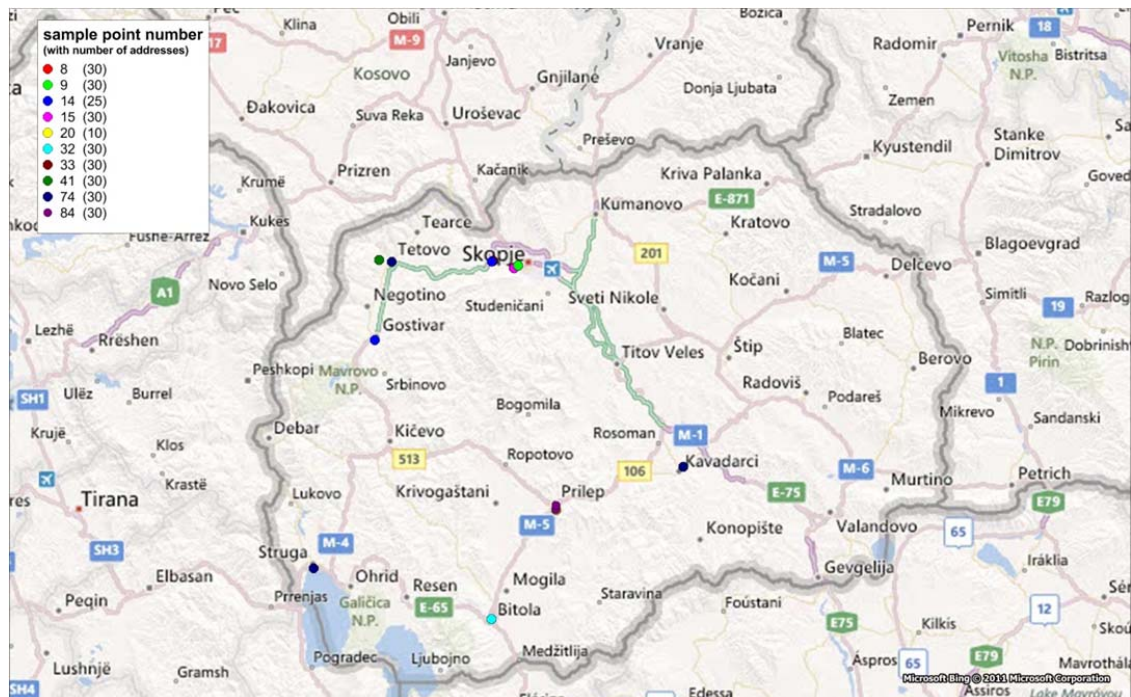
Croatia



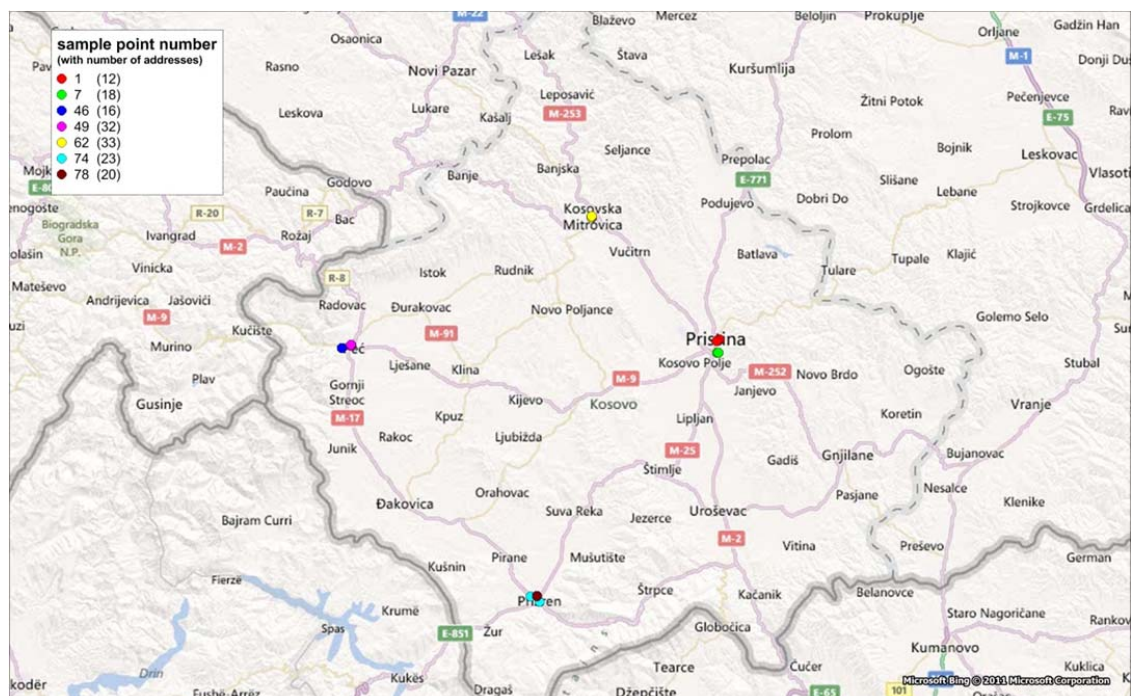
Turkey



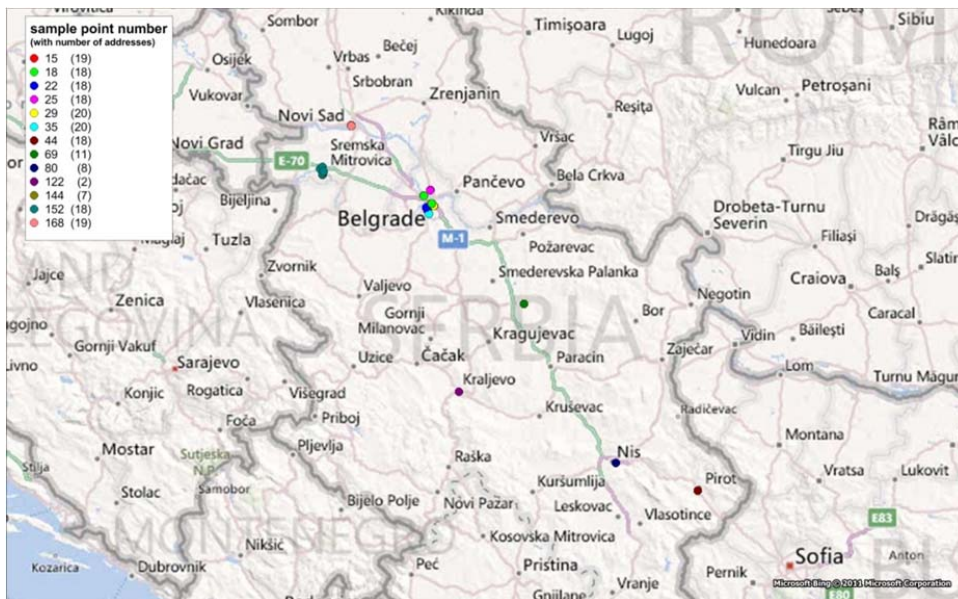
FYROM



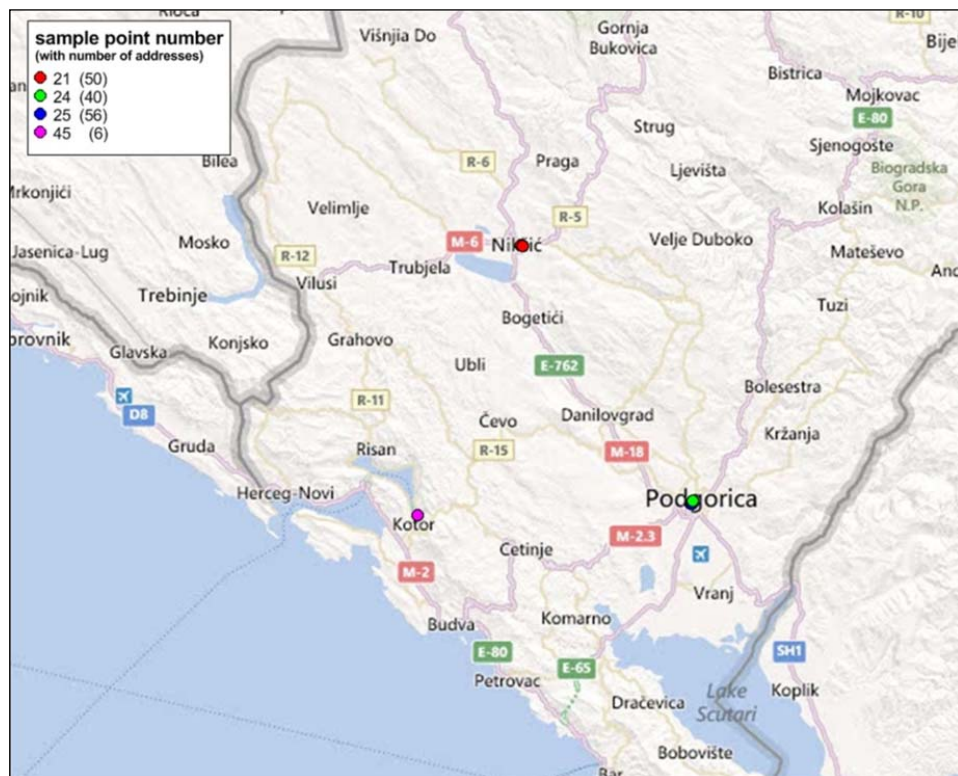
Kosovo



Serbia



Montenegro



ANNEX C. Stratification per Country



Tables Stratification
per Country.xlsx