

ELECTROMAGNETIC FIELDS

Report

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ELECTROMAGNETIC FIELDS

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TABLE OF CONTENTS

INTRODUCTION.....	3
EXECUTIVE SUMMARY	7
1. ENVIRONMENTAL FACTORS AND HEALTH.....	9
2. ELECTROMAGNETIC FIELDS: AWARENESS AND CONCERNS ABOUT POTENTIAL HEALTH RISKS	41
2.1 Sources of electromagnetic fields.....	41
2.2. Concerns about electromagnetic fields	64
3. INFORMATION ON POTENTIAL HEALTH RISKS OF ELECTROMAGNETIC FIELDS	67
3.1 Exposure to information about potential health risks of EMFs.....	67
3.2 How information on EMFs affects levels of concern about possible health risks	70
3.3 Satisfaction with the information on potential health risks	72
3.4 Reasons for dissatisfaction.....	74
4. WAYS OF BEING INFORMED.....	76
4.1 Main channels for receiving information on potential health risks	76
4.2 Preferred ways of receiving information on potential health risks of EMFs	77
5. THE ROLE OF PUBLIC AUTHORITIES AND OF THE EU.....	86
5.1 Effectiveness of protection provided by public authorities against potential health risks	86
5.2 Measures to be taken by the EU to support the national authorities.....	88
CONCLUSION.....	95
 ANNEXES	
TECHNICAL SPECIFICATIONS	
QUESTIONNAIRE	
TABLES	

INTRODUCTION

While electromagnetic fields (EMFs) occur naturally (e.g. in storms, the Earth's magnetic field etc.), the development of man-made electricity and rapid technological progress over the past century have multiplied their sources and diversified their characteristics. Exposure to man-made sources of EMFs has therefore increased dramatically due to the demand for electricity, wireless technologies (especially for telecommunications), and changes in work practices and social behaviour. As a result, all EU citizens are now exposed to EMFs through sources such as high-voltage power lines, household electrical appliances, computers, radar, radio and television broadcast facilities and mobile telephones.

Over the last decade, as mandated by *Council Recommendation (1999/519/EC) of 12 July 1999 on the limitation of the exposure of the general public to electromagnetic fields (0Hz – 300 GHz)*, the European Commission (EC) has periodically monitored the potential health effects of EMFs, requesting the review of scientific literature by independent scientific committees and has financed research. It has also disseminated information and contributed to the establishment of a regulatory framework for the protection of workers and the public and for the placing of products on the market. More information is available at the following Commission website:

http://ec.europa.eu/health/electromagnetic_fields/policy/index_en.htm .

In view of the persistent high level of public concern and the sustained media coverage of this issue, a first Eurobarometer on electromagnetic fields was commissioned in 2006 (EB66). In view of the many scientific, technological and policy developments since then, it was felt that a new Eurobarometer, asking mostly the same questions, would deliver valuable information on trends in the level of public concern. This time, a new question was also included to identify the views of the EU public on the role that the Commission should take in this field.

This report analyses the 2010 survey results both in terms of average figures across the 27 Member States and for individual countries. Where major changes have occurred over the last four years, it also brings them to the reader's attention. In addition, it analyses the way the answers vary according to the respondents' socio-demographic characteristics (age, gender etc.) and a number of other indicators.

This report presents the results of the survey in five main sections:

- **Environmental factors and health**

The first section looks at the environmental issues that most concern the public across the EU as a whole.

- **Electromagnetic fields: awareness and concerns about potential health risks**

This section addresses whether particular man-made objects are sources of electromagnetic fields and, after having identified them, it looks at the corresponding level of public concern about the potential associated health risks. These data are compared with those observed in the report four years previously.

- **Satisfaction with information on potential health risks of electromagnetic fields**

The third section reports on how satisfied is the public who has received information on this subject and, if relevant, the reasons for dissatisfaction. The report also examines the effect this information has on the levels of concern.

- **Ways of being informed**

The fourth section examines both the methods by which the public actually receives information on the subject and, if a choice were available, how citizens would prefer to receive this information.

- **The role of public authorities and of the EU**

The final section looks at whether the public believes that public authorities act effectively in protecting citizens from potential health risks related to electromagnetic fields and asks what role they would like the EU to take to support national authorities.

This survey on Europeans' views on the general subject of electromagnetic fields was commissioned by the European Commission's Directorate General for Health and Consumers (DG SANCO), and coordinated by the Directorate-General for Communication (DG COMM). It was carried out by TNS Opinion & Social network between 12 March and 1 April as part of the Eurobarometer wave 73.3. It covers all 27 EU Member States and 26,602 European citizens were interviewed face-to-face.

The methodology used is that of Eurobarometer surveys as carried out by the Directorate General for Communication ("Research and Speechwriting" Unit A.2)¹. A technical note on the manner in which interviews were conducted by the Institutes within the TNS Opinion & Social network is appended as an annex to this report. This note indicates the interview methods and the confidence intervals.

The Eurobarometer web site can be consulted at the following address:

http://ec.europa.eu/public_opinion/index_en.htm

We would like to take the opportunity to thank all the respondents across the continent who gave their time to take part in this survey.

Without their active participation, this study would simply not have been possible.

¹ http://ec.europa.eu/public_opinion/index_en.htm

In this report, the countries are represented by their official abbreviations. The abbreviations used in this report correspond to:

ABBREVIATIONS

EU27 European Union – 27 Member States

DK/NA Don't know / No answer

BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
CY	Republic of Cyprus
LT	Lithuania
LV	Latvia
LU	Luxembourg
HU	Hungary
MT	Malta
NL	The Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	The United Kingdom

EXECUTIVE SUMMARY

The aim of this survey was to assess the public perception of the potential health effects of electromagnetic fields (EMFs). Among the 15 environmental factors presented as potential threats to health, the sources of electromagnetic fields appear in the lowest five positions, with high voltage power lines and mobile phone masts coming first with 35% and 33% respectively believing that they affect their health to a large extent. Mobile telephones – perhaps the most widespread objects generating EMFs – are viewed by 26% of the poll as affecting people's health to a great extent, a fall of two points over the past four years. The lowest figures were found in Denmark, the Netherlands and Finland, where more than half of the respondents believe that mobile phones have no effect on health, and the highest were found in Italy, where respondents consistently indicated a significantly higher level of concern than other EU citizens across the board. Summing up the figures for people who believe that their health is affected to a great extent with those of people who believe that their health is affected to some extent, the differences between health issues decrease significantly (from 90% for chemicals to 70% for high voltage power lines and mobile phone masts and 67% for mobile phone handsets).

While more than two thirds of the respondents believe that their health is affected to some extent by high voltage power lines, mobile phone masts and mobile phone handsets, only 46% say that they are very concerned or fairly concerned about the potential health risks of EMFs and 51% are not very concerned or not concerned at all.

Surprisingly, there has been a noticeable decrease in EU respondents' awareness of the sources of EMFs the past four years. However, the three objects of which the public is most aware are mobile communication masts and mobile telephones, both with an awareness level of 59%, closely followed by high voltage power lines (58%). Awareness about high voltage power lines is the only one that has remained roughly stable. This is perhaps best illustrated by the fact that 23% of those polled in 2006 spontaneously said that all the proposed items emitted EMFs, while only 9% did so this time.

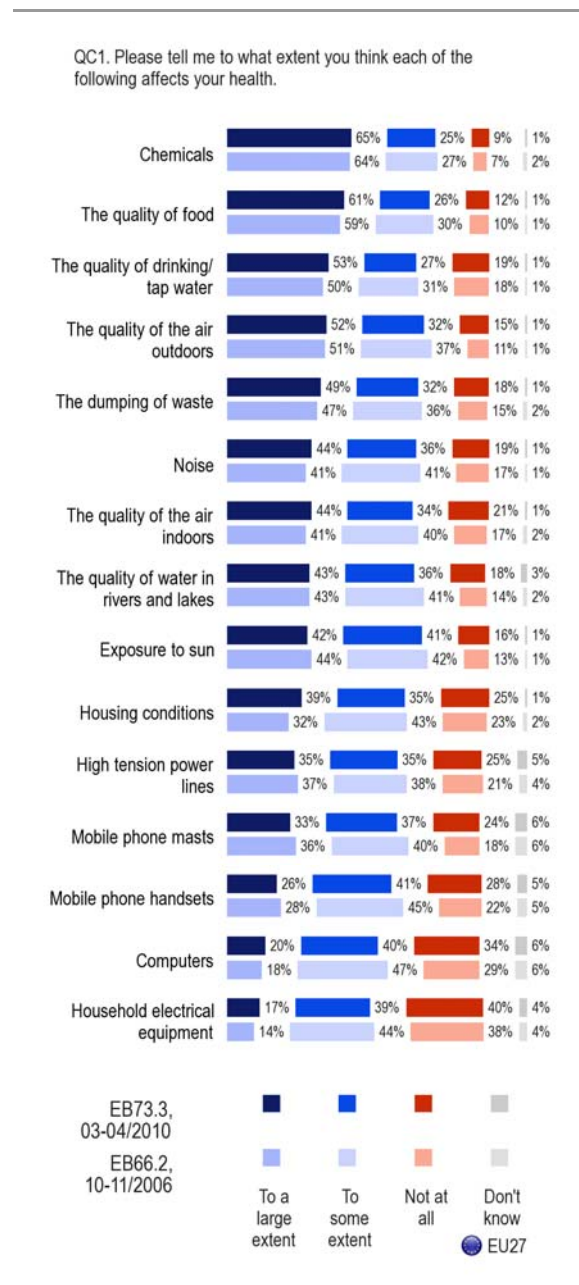
Only 20% of EU27 respondents say that they have received some information on the potential health effects of EMFs. However, while only 28% of respondents who had received this information said they were satisfied with it in 2006, 58% said so this time, with the highest scores recorded in Belgium (67%), Finland and Denmark (68%), Ireland (69%), Latvia (70%) and the UK (76%). On the down side, 40% of respondents receiving information are not happy with it and almost half (46%) of this segment say that the information is insufficient. 15% of this segment discounts the information as not being objective.

With respect to the channels of communication through which people receive information, television and newspapers and magazines come first, with 55% and 38% of preference respectively. The Internet is growing in importance with 19% of respondents now claiming to receive information via this new medium. However, when asked about what would be their preferred channel to receive information, television remains in first position at 59% of the total poll, but this is a marked fall from the 68% recorded four years ago. A similar fall is seen amongst those preferring newspapers and magazines, with figures declining from 36% to 31%. The Internet, however, has risen in popularity, from 11% to 15%. It is interesting to note that this latest figure is actually lower than the 19% of respondents who currently receive information in this way.

Finally, the survey counted 58% of people who do not believe that public authorities protect them from potential health risks linked to EMFs. Particularly high figures on this point are noted in Greece (75%), Latvia (72%), Lithuania (71%) and Slovenia (70%). In the light of this overall criticism of the public authorities, nearly half of the respondents (48%) feel that the European Union should inform the public as to these potential health risks. The corresponding figures are even higher in three southern European countries: Cyprus (77%), Greece and Slovenia (both 67%). Finally, 39% believe the EU should set safety standards for products and a further 36% believe it should develop guidance for public health protection.

1. ENVIRONMENTAL FACTORS AND HEALTH

In this first chapter, respondents are asked to what extent they believe their health is affected by a number of different objects.²



² QC1. Please tell me to what extent you think each of the following affects your health... The quality of the air outdoors ; The quality of the air indoors; The quality of drinking/ tap water; The quality of water in rivers and lakes; Noise; The dumping of waste; The quality of food; Chemicals; Exposure to sun; Housing conditions; Mobile phone masts ; Mobile phone handsets; Household electrical equipment; Computers; High tension power lines. ANSWERS: To a large extent; To some extent; Not at all; Don't know.

This broad view of the potential health hazards present in everyday life enables us to rank specific subjects. This question covers both natural and man-made sources, ranging from air, water and noise to chemicals and objects that create electromagnetic fields.

When a comparison is made with chemicals, which are respondents' main concern, views are markedly different particularly where they believe a particular item presents no risk at all. Only 9% of the total poll believe that chemicals present no health risk at all. However, when this 'no risk' factor is looked at in the context of items producing EMFs, a totally different picture emerges. A quarter (24%) of respondents believe mobile phone masts have no adverse effects upon their health and this figure increases steadily to 25% for high voltage power lines, 28% for mobile phone handsets, 34% for computers and 40% for household electrical equipment.

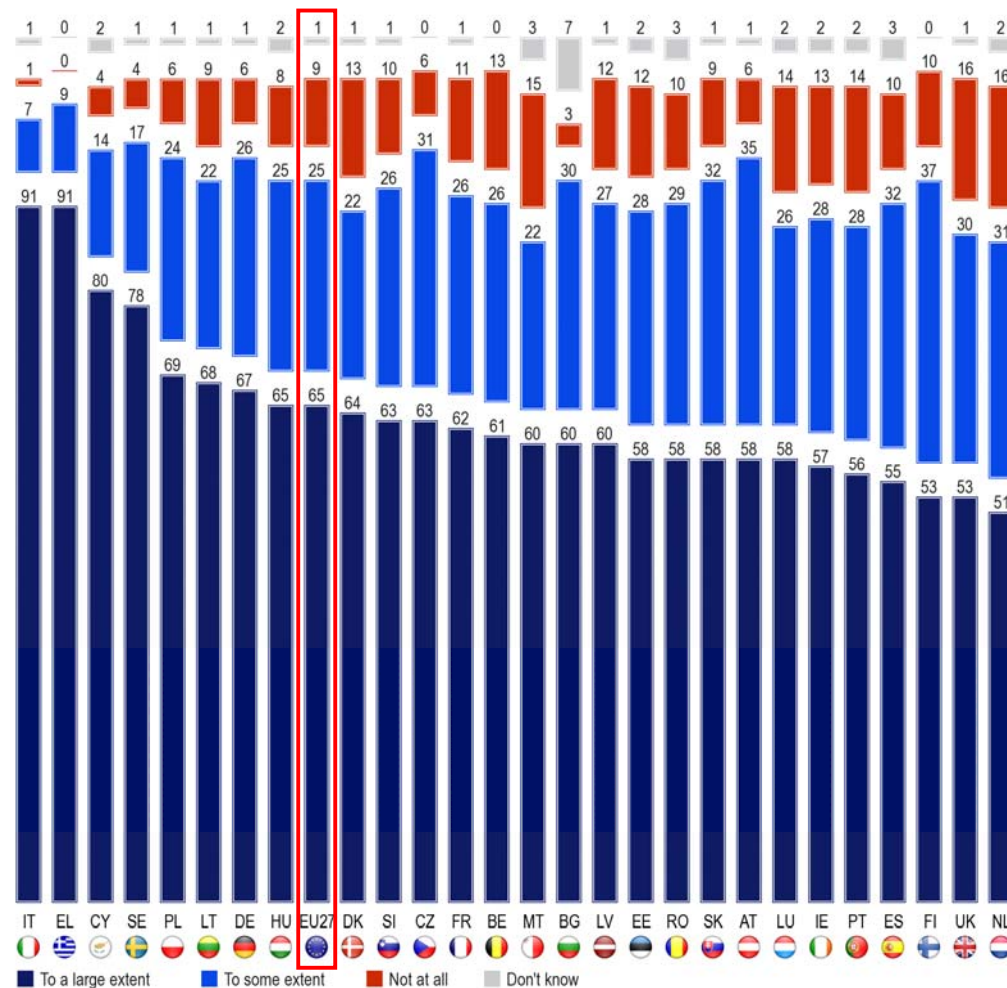
Overall, in the four years since these questions were last asked, there has been little change in EU respondents' concerns over matters which affect their health and the ranking of those concerns remains virtually identical. However, two interesting remarks can be made. Firstly, when presented with a whole range of health hazards, the five specific items which generate EMFs are the five items at the bottom of this list. Secondly, while there is no change at the top of the list (chemicals and food), there appears to be a slight decrease in the belief that people's health is affected by the items at the bottom of the list. This is true in particular for high voltage power lines, mobile phone masts and mobile phone handsets (a decrease of 2-3% in the number of people who believe their health is greatly affected and a decrease of 3-4% in the number of people who believe their health is affected to some extent). Thirdly, Italy stands out as it appears both to buck this overall trend and to show the highest level of belief in adverse effects overall.

Chemicals

Mirroring the 2006 findings, the subject that gave rise to most public concern was chemicals. Nearly two-thirds (65%) of respondents believe that their health is affected to a *great extent* by chemicals - a strong indictment of a man-made problem. A further 25% feel that chemicals affect their health to some extent whereas 9% believe that these substances have no effect at all. A further 1% cannot form an opinion on the matter. Only small changes are noted in the EU average since EB66.

QC1.8. Please tell me to what extent you think each of the following affects your health.

Chemicals



Turning to national results, several differences stand out across the EU. Very large numbers of people in Greece, Italy (both 91%) and Cyprus (80%) feel that chemicals affect human health to a great extent. Very small proportions of people in these countries believe that chemicals do not have any effects on human health (0% in Greece, 1% in Italy, 4% in Cyprus). At the other end of the scale, chemicals are believed to have no effect at all by a relatively large proportion in the UK, the Netherlands (both 16%) and Malta (15%). It should be noted, however, that the majority in these countries too believe that chemicals affect human health to a great extent.

Since the 2006 study, the public in Italy has become more wary of the effects of chemicals, with the proportion who believe that chemicals affect human health to a large extent increasing from 78% to today's 91%. Since the last survey, there has also been a noticeable increase in the corresponding Swedish figures from 64% to 78%, while, in Hungary the figure falls from 81% to 65%.

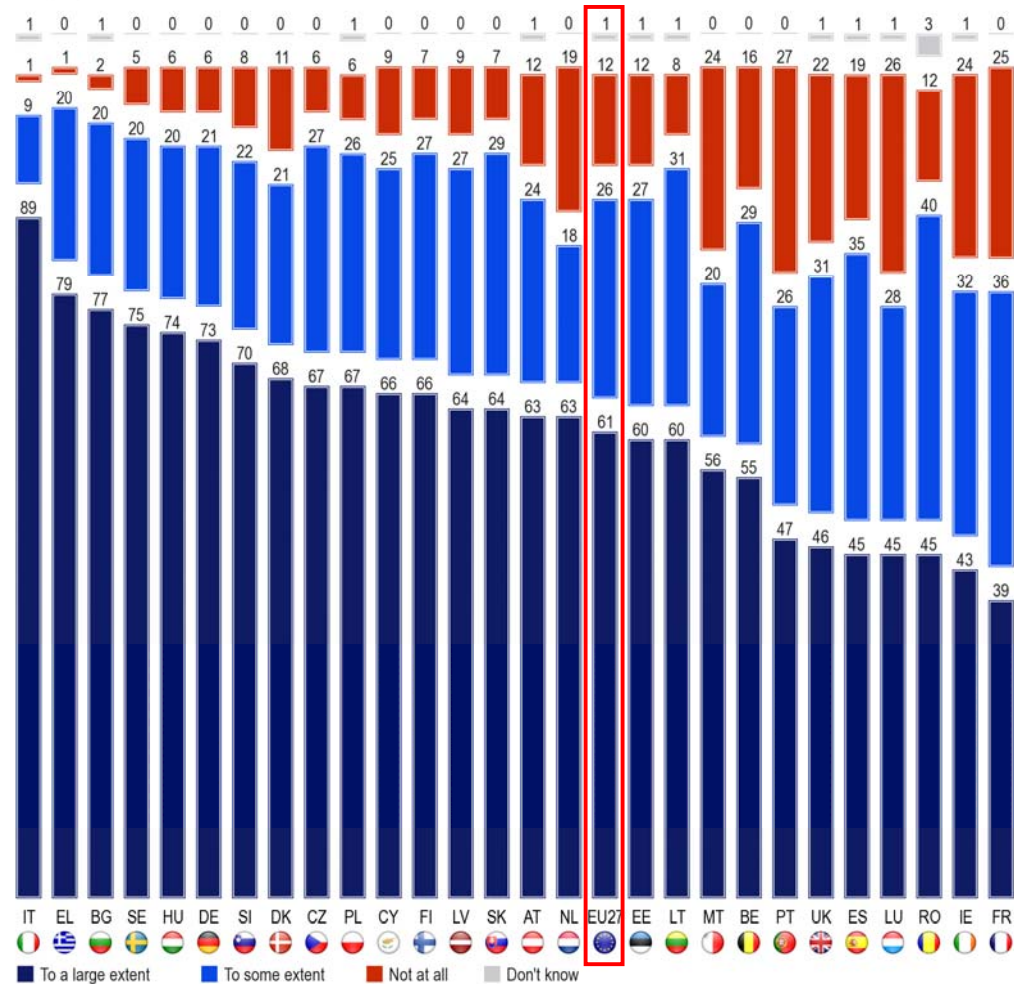
In socio-demographic terms, education and occupation have a significant influence; 71% of respondents educated to age 20 or beyond believe that chemicals have a great affect on their health; this compares with just 61% of those who left school at the earliest opportunity. This issue is also of major concern to 70% or more of the self-employed, managers and other white-collar workers compared with just 60% of the unemployed and 61% of the retired.

The quality of food

After chemicals, the second most important issue of public concern is the quality of food. Roughly six in ten respondents (61%) consider this affects their health to a major extent. A further quarter (26%) believe that the quality of food affects human health to some extent, whereas 12% report that it has no effect whatsoever. One percent of the poll is unable to form an opinion. As was the case for chemicals, these figures are very similar to the situation noted four years previously.

QC1.7. Please tell me to what extent you think each of the following affects your health.

The quality of food



The impact of the quality of food on human health is of great importance to respondents in Italy with almost nine out of ten (89%) reporting that this issue affects their health to a large extent. High figures are also recorded in Greece (79%) and Bulgaria (77%). Very low proportions (1-2%) in these countries believe that the quality of food has no effect whatsoever on their wellbeing.

At the same time, relatively high proportions of respondents in Portugal (27%), Luxembourg (26%) and France (25%) consider that this item has no effect on health at all. However, the relative majority in these countries too do believe that the quality of food affects their health to a great extent.

Concern over this issue has increased in several countries over the last four years, not least in Malta (+13 points), Italy (+11 points), Germany (+11 points). A decrease in concern is noted primarily in Portugal where today's figure (47%) has declined by 13 points (60% in EB66).

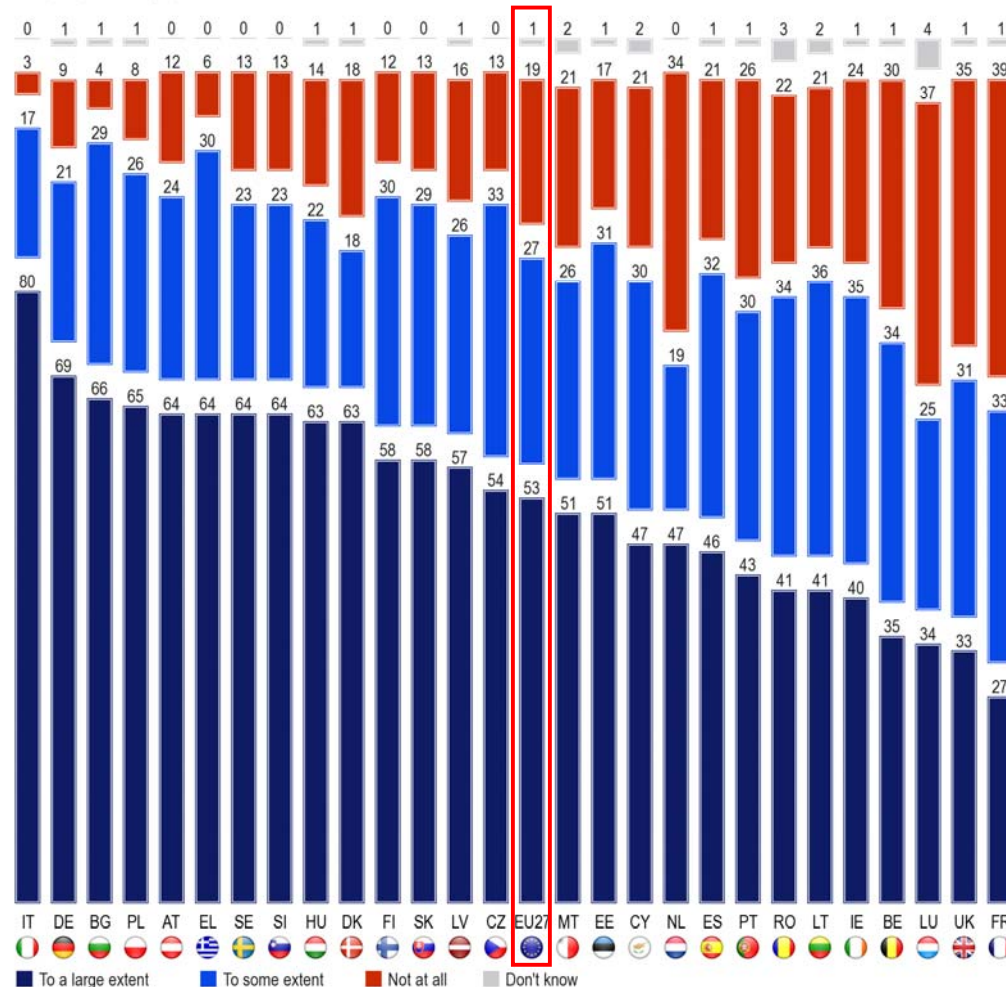
A socio-demographic analysis reveals that this item is cited by 53% of the least educated group compared with 69% of those educated to age 20 or beyond. Occupation is also a major driver with 70% of managers, the self-employed and other white-collar workers holding this view compared with 55% of the unemployed and 57% of manual workers and the retired.

Quality of drinking/tap water

The quality of tap water is also a major cause of public concern. An EU average of 53% believe it has a major effect on health and an additional 27% say that it has some effect. Around a fifth (19%) believe that it has no effect at all and a further 1% have no opinion. Only small changes have occurred since 2006.

QC1.3. Please tell me to what extent you think each of the following affects your health.

The quality of drinking/ tap water



Looking at the proportions of people that see the quality of tap water as affecting their health to a large extent, respondents in Italy (80%), Germany (69%) and Bulgaria (66%) are in the lead with rather small numbers of respondents (3-9%) feeling that this item has no effect on health at all. A very different opinion is reported in France (39%), Luxembourg (37%) and the UK (35%) where a majority believe that the quality of tap water has no impact.

The perceived effect of the quality of drinking water has increased in several countries since the last survey; in Germany, the proportion of respondents that judge this issue to have a large effect has risen substantially from 48% in 2006 to today's 69%. This pattern is also seen in Italy where the figure has risen from 69% to 80%.

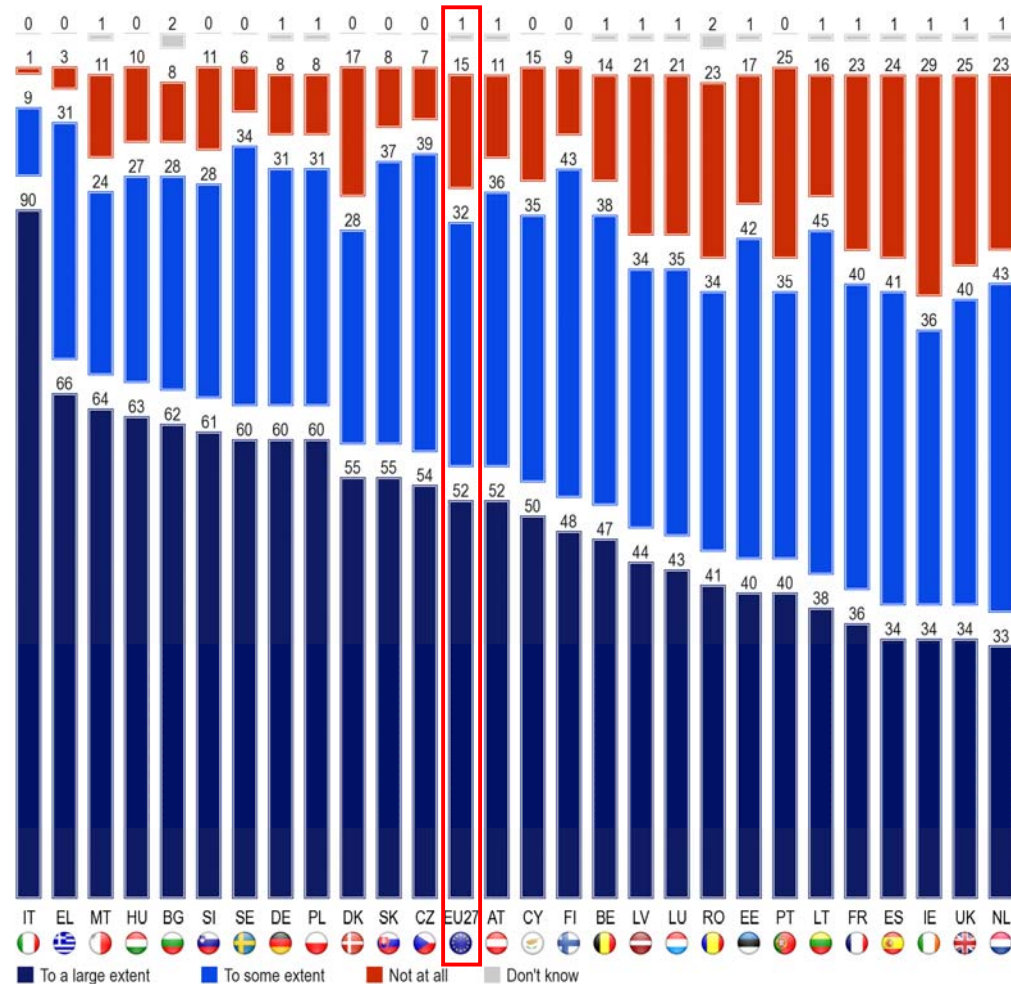
A socio-demographic analysis reveals that occupational status is a significant factor. Nearly two-thirds (64%) of the self-employed and 62% of managers had major concerns on this subject compared with 48% of the unemployed, 50% of the retired and manual workers and 51% of house persons.

Quality of the air outdoors

The fourth highest level of public concern is the quality of the air outdoors. More than half (52%) of respondents believe that this aspect affects their health to a large extent and 32% that it has some effect. A further 15% view the quality of air as having no effect on their health, which is an increase by 4 points since the previous survey. Apart from this shift, very small changes are noted in the EU average. A small proportion - just 1% of the poll - are unable to make up their mind on this issue.

QC1.1. Please tell me to what extent you think each of the following affects your health.

The quality of the air outdoors



Looking at the proportion of people that view the quality of air as affecting their health to a large extent, respondents in Italy (90%) are once more far in the lead, followed by respondents in Greece (66%) and Malta (64%). While only 1% of respondents in Italy say that outdoor air quality has no effect at all on their health, this figures rises to 29% in Ireland, 25% in Portugal and the UK and 24% in Spain.

Since the previous study, the perceived effect of the quality of air outdoors on health has risen by 12 points in Italy, whereas a significant decrease of 10 points is noted in the UK.

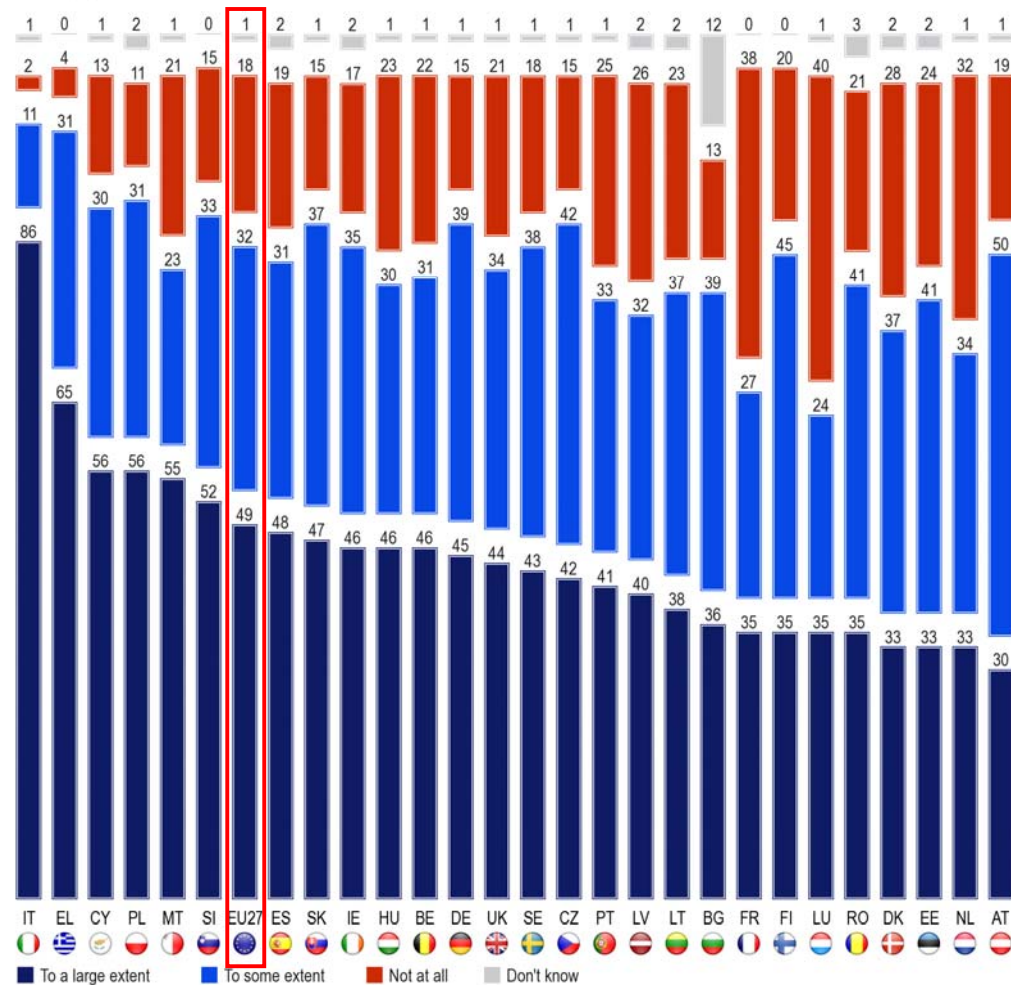
A socio-demographic breakdown of these results shows that young people are unlikely to perceive health risks posed by the quality of the air they breathe outdoors and only 44% of 15 to 24 year olds are seriously concerned about this issue compared with between 52% and 55% for all other age groups. Low levels of concern were also recorded among the unemployed (46%) compared with 62% of the self-employed.

Dumping of waste

The dumping of waste is believed by half (49%) of the EU poll to have a major adverse effect on their health and 32% see it as having some effect. A further 18% view the dumping of waste as having no effect on health. Only small changes are noted since the previous study.

QC1.6. Please tell me to what extent you think each of the following affects your health.

The dumping of waste



Again, high proportions of respondents in Italy (86%), Greece (65%) and Cyprus (56%) view the dumping of waste as having a large effect on their health, whereas this figure shrinks to 33% among respondents in the Netherlands, Estonia and Denmark and 30% in Austria.

Relatively large numbers of people in Luxembourg (40%), France (38%) and the Netherlands (32%) believe that the dumping of waste has no effect on their health. In fact, this is the majority view in Luxemburg and France. This might be a sign that these countries have very few problems with this issue.

Evolution since last the survey shows that more people in Italy now think that dumping waste affects their health to a large extent (+13 points). An opposite trend is noted in Bulgaria where this view has decreased by 15 points.

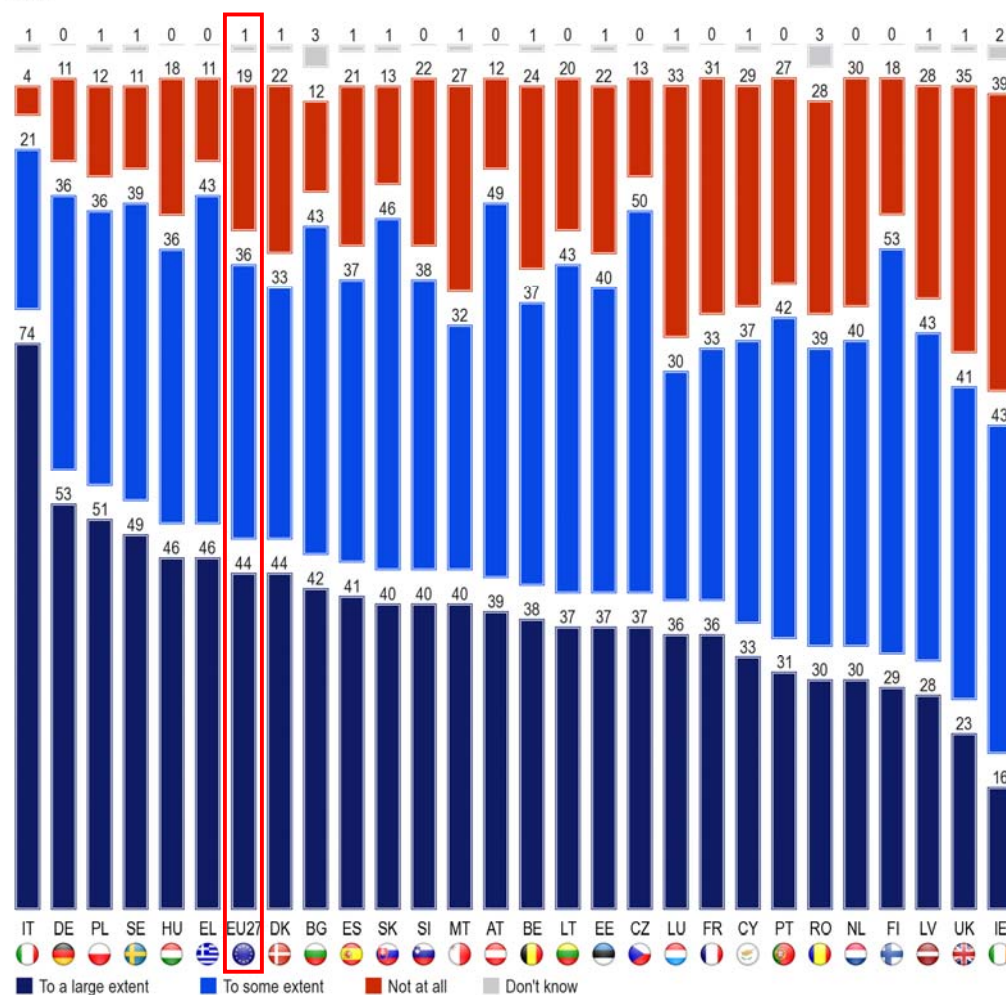
Few interesting differences are noted across the socio-demographic categories. It should be mentioned however that skill levels have a direct impact on the importance respondents place on the dumping of waste; 57% of white-collar workers (and 53% of house persons) say it has a major effect, compared with just 44% of the retired and 45% of the unemployed.

Noise

Noise, a nuisance created by the development of transport, machinery and even items as commonplace as stereo units in cars, ranks sixth in the list of public concerns cited. More than four in ten (44%) respondents believe that noise affects human health to a great extent, which is a slight, 3-point increase since 2006. A further 36% think that noise has some effect on their health and about a fifth (19%) say that noise has no influence whatsoever.

QC1.5. Please tell me to what extent you think each of the following affects your health.

Noise



At the national level, respondents in Italy (74%) are the most concerned with noise and its effect on their health, followed at some distance by interviewees in Germany (53%), Poland (51%) and Sweden (49%).

At the same time, 39% of those surveyed in Ireland, 35% in the UK and 30% in the Netherlands believe that noise has no impact on health at all.

Concern over noise and its effect on health has increased by 14 points in Italy and Sweden and 8 points in Germany. Conversely, the largest decrease is recorded in Hungary (-13 points).

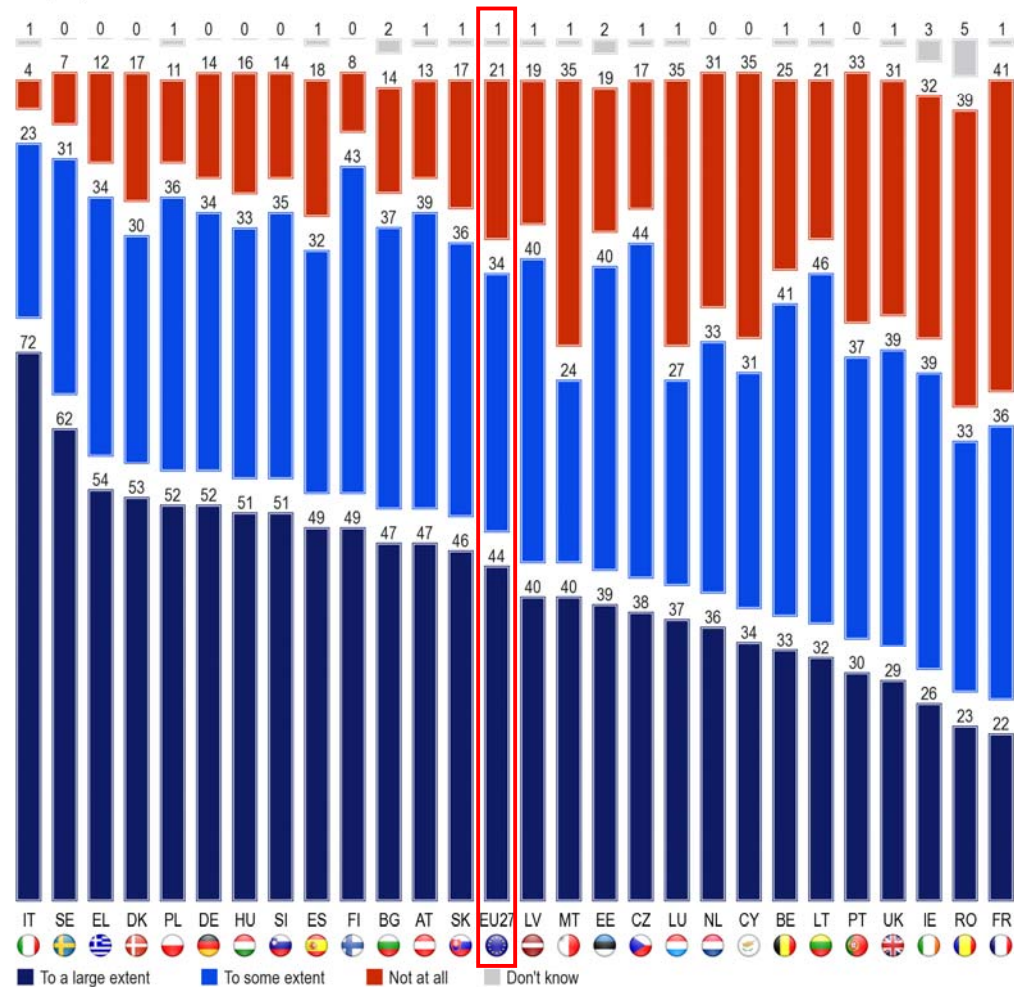
Perhaps reflecting the typical environment in which they live, only a third (33%) of the youngest age group thinks that noise has a major effect on health. In all other age groups, at least 44% hold this view, peaking at 49% of respondents aged 40 to 54.

Quality of air indoors

44% of respondents believe that the quality of air indoors has a major effect on health. This figure has increased by three points since the 2006 survey. About a third (34%) of respondents think that the quality of air indoors has some effect on their health, whereas 21% think it has no impact on health at all. As before, only a small proportion of people (1%) have no opinion on this issue.

QC1.2. Please tell me to what extent you think each of the following affects your health.

The quality of the air indoors



Respondents in Italy are also the most concerned by this issue, with 72% saying that the quality of air indoors affects their health to a large extent. They are followed by Sweden (62%). Respondents in France (41%), Romania (39%), Cyprus and Malta (both 35%), on the other hand, are more likely to believe that the quality of air indoors does not affecting their health at all.

Since the previous survey in 2006, the perceived effect of indoor air quality has risen by 12 points in Italy and +14 points in Sweden. Over the same period, public concern in Bulgaria, again, has declined by a significant 9 points.

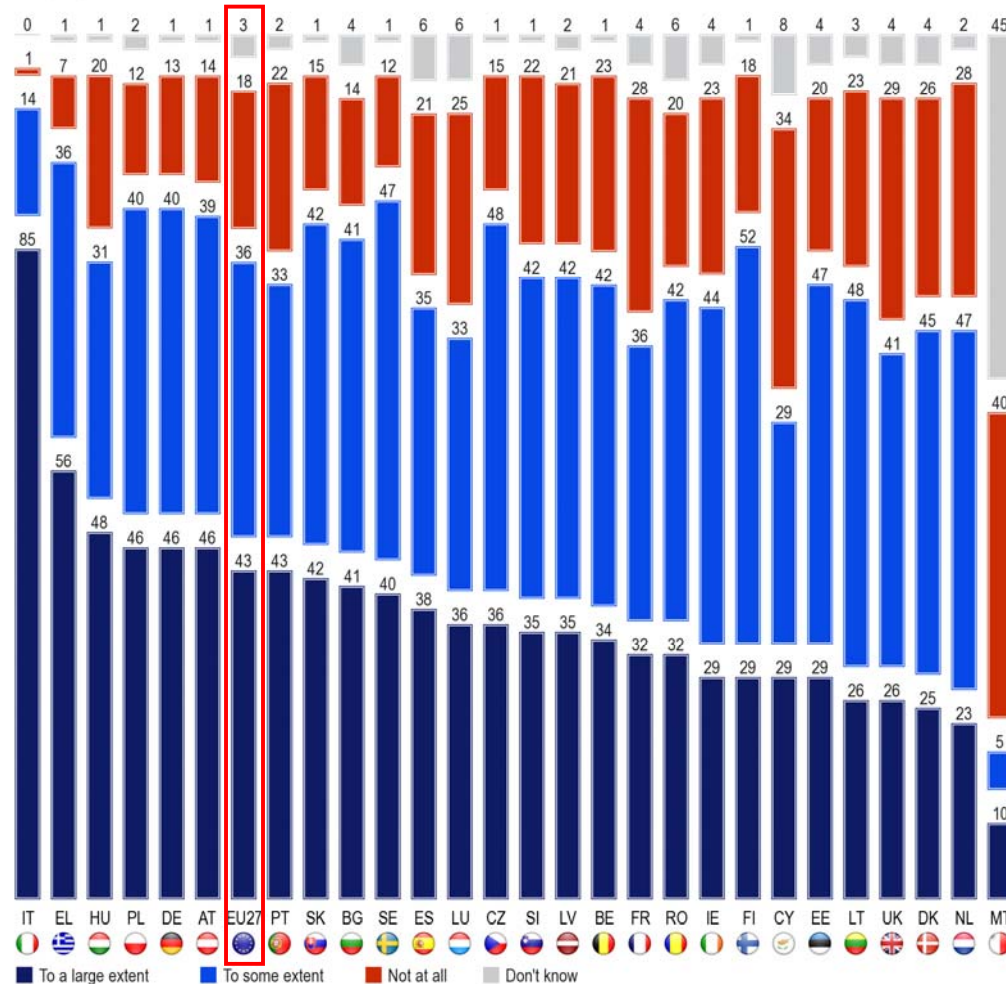
There was a ten point difference between the least educated (41%) and the most educated (51%) believing the quality of air indoors has a major effect upon health. A similar disparity exists between office workers such as managers and other white-collar workers (52%) and those that stay home such as house persons (43%) and the retired (40%).

Quality of water in rivers and lakes

As noted above, respondents show high levels of concern about the dumping of waste. This harmful and illegal habit often directly damages the quality of water in rivers and lakes, as do the over-use of pesticides and the discharge of untreated waste. In the EU, 43% of respondents believe that the quality of water in rivers and lakes has a major effect on people's health. A further 36% view this issue as having some effect on their health, and 18% see this as having no impact on health at all. Three percent of the total poll have no opinion on how the quality of water in rivers and lakes affects human health. All these figures are largely unchanged since the 2006 survey.

QC1.4. Please tell me to what extent you think each of the following affects your health.

The quality of water in rivers and lakes



Once again, respondents in Italy (85%) attach by far the largest health effects to the item in question. A majority of respondents in Greece (56%) also recognise that the quality of the water in rivers and lakes has a substantial effect on human wellbeing. A very different opinion is recorded in Malta and Cyprus where 40% and 34% respectively view this issue having no effect on health. It is reasonable to assume that these views are very much due to the environment on these islands, with few, if any, lakes and rivers. Relatively high 'don't know' rates give further reason to believe that this is the case (Malta 45%, Cyprus 8%). Nor is the quality of water in rivers and lakes believed to affect health in the UK (29%) the Netherlands and France (both 28%).

Compared with the previous wave, more respondents in Germany (+14 points) now believe that this item has a major effect on health. The opposite trend has taken place in Spain (-13 points).

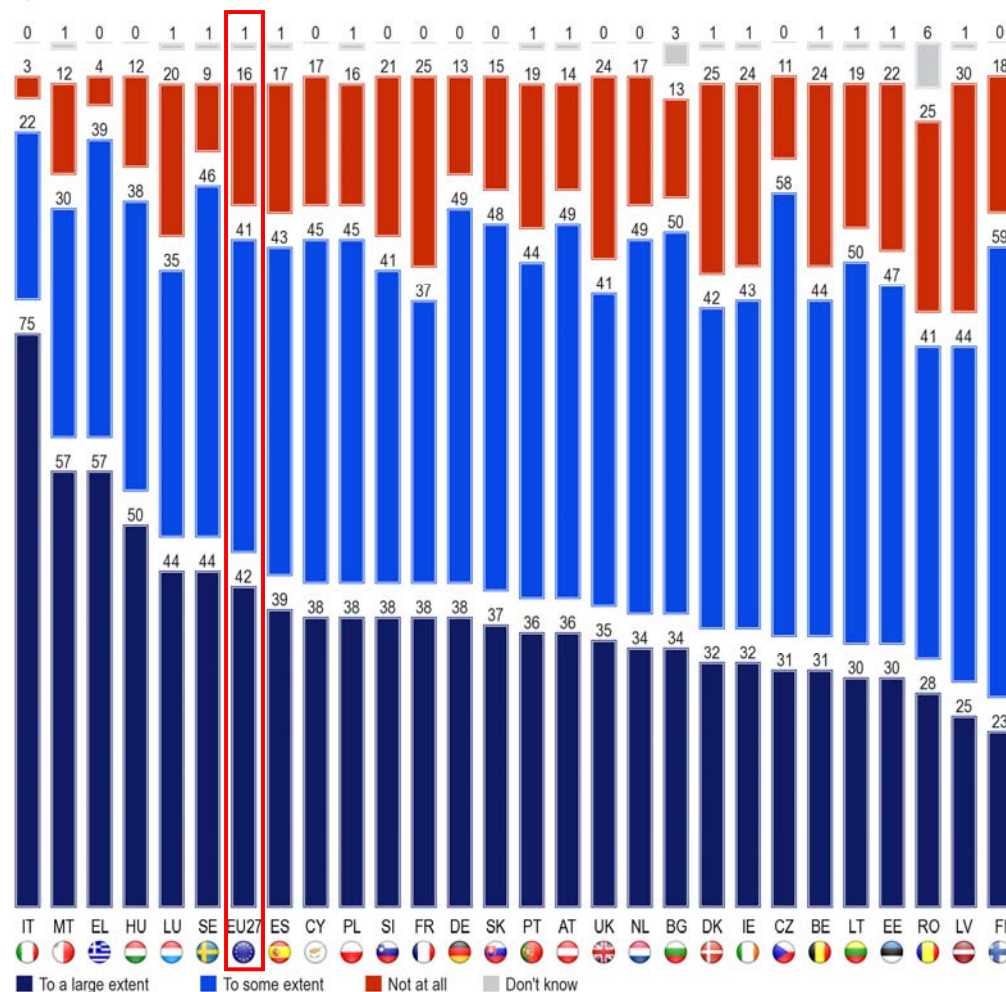
A socio-demographic analysis reveals that age and occupation are influential factors on how respondents view the health effects of the quality of water in lakes and rivers. Just 36% of the youngest age group believe that it has a major effect upon people's health, compared with 46% of those aged between 25 and 54. Turning to occupation, 53% of the self-employed and other white-collar workers also hold this opinion compared with just 38% of the unemployed and 39% of students.

Exposure to sun

Often the subject of media campaigns, exposure to sun is now of such public concern that 42% of respondents believe it affects their health to a major extent and a further 41% that it affects their health to some extent. Only 16% think that this issue has no health effects. Since 2006, only small shifts have been noted.

QC1.9. Please tell me to what extent you think each of the following affects your health.

Exposure to sun



High proportions of respondents in three of the Mediterranean countries believe that exposure to sun affects their health to a large extent: Italy again leads with 75%, followed by Malta and Greece (both 57%). However, respondents in Latvia (30%), Romania, Denmark and France (all three 25%) are more likely to believe that exposure to sun has no health impact. It should be noted, however, that the majority in all countries view this issue as affecting their health either to a major or to some extent.

It is worth noting that, while the figure in Malta has fallen from 72% to 57% over the last four years, there has been a substantial rise in the result in Italy from 61% to 75%. A major decline in concern is recorded in Belgium (from 45% to 31%).

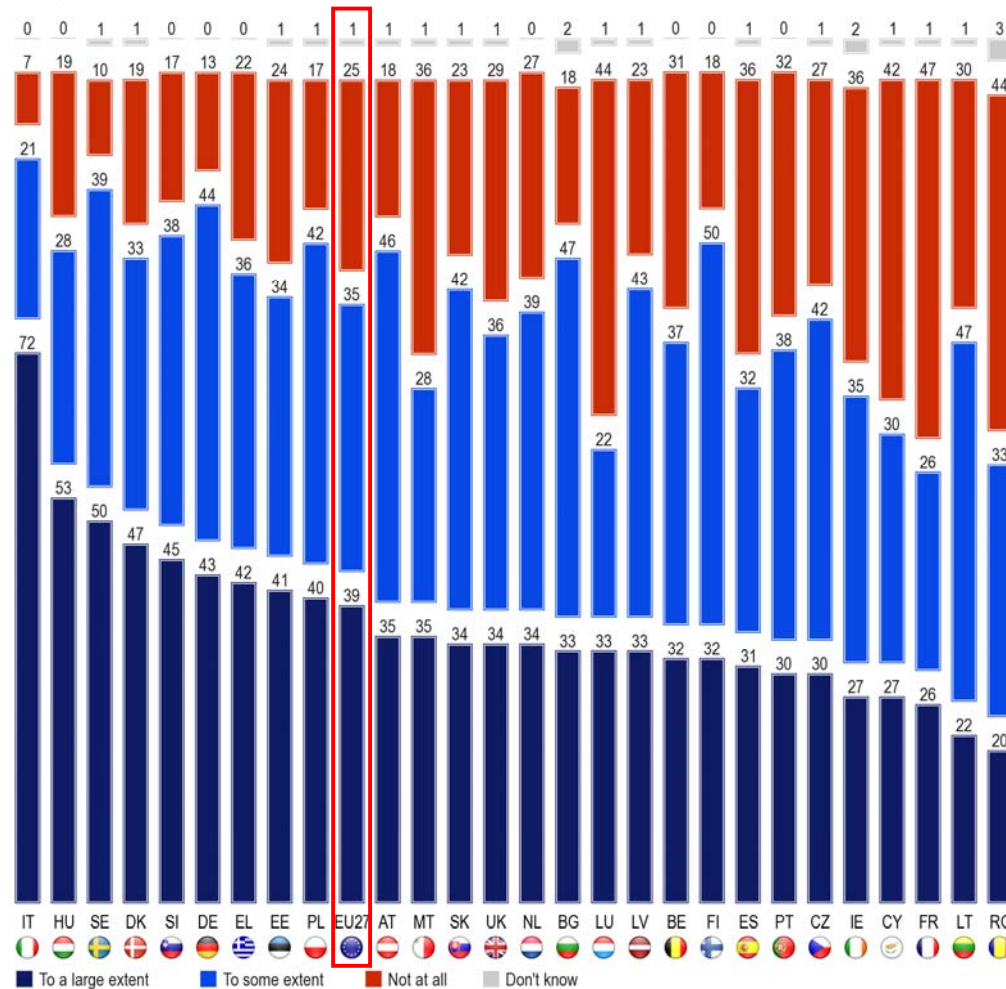
Women (46%) attach more health effects this issue than do men (37%). Though education appears to have little impact, age seems to be more influential: only 34% of the youngest age group think that exposure to the sun has a major effect on their health, compared with a minimum of 42% in all other age bands.

Housing conditions

The tenth public concern relates to housing conditions. 39% of respondents believe that these affect their health to a major extent and a further 35% think they have some effect. One quarter of the respondents (25%) think that housing conditions have no effect on their health. Since the 2006 survey, the proportion that view this issue as having a major effect on their health has risen by a significant 7 points.

QC1.10. Please tell me to what extent you think each of the following affects your health.

Housing conditions



Wide national variations are noted once more. Again, more respondents believe that housing conditions affect their health to a major extent in Italy (72%) than in any other country, followed by respondents in Hungary (53%) and Sweden (50%).

A different opinion is reported in France (47%), Romania and Luxembourg (both 44%) where many respondents believe that housing conditions have no impact on their health.

The figures in Sweden show a marked increase from 33% in the previous survey to 50% and a similar increase is noted in the figures from Italy – up from 56% to 72%.

While only minor variations are noted by gender, age and education, there are noticeable differences in opinion by occupation. While just 35% of the unemployed and 36% of manual workers believe housing conditions have a major effect on health, this view attracts much stronger support from 44% of managers and 46% of other white-collar workers.

The core theme of this report relates to public health with reference to electromagnetic fields, how aware the public are of these risks and their general feelings and wishes for action in this area.

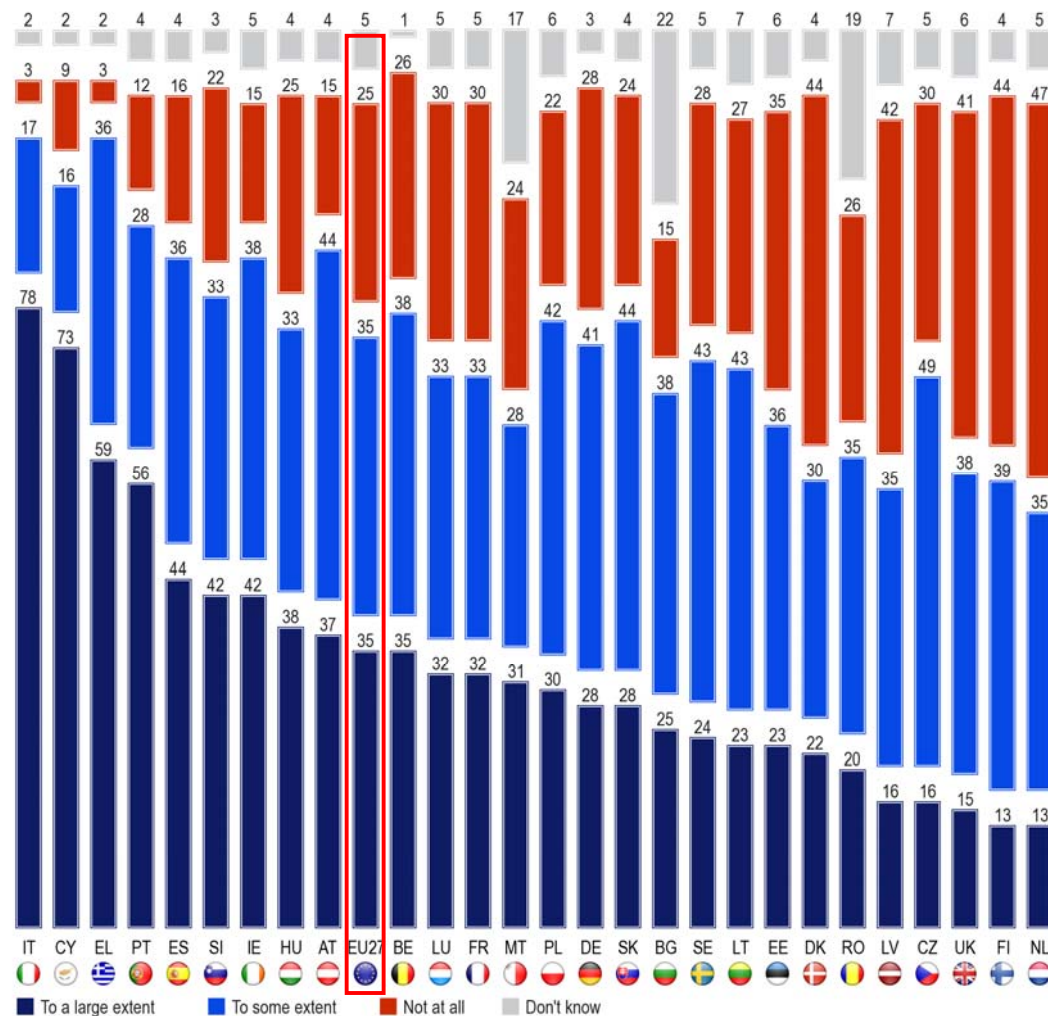
Accordingly, the remainder of this chapter looks at five items which produce electromagnetic fields. It is interesting to note, however, that in the broad context of food, water, chemicals, etc., these were in fact the five subjects giving rise to the least public health concern.

High voltage power lines

A third (35%) of EU respondents believe that high voltage power lines have a serious effect upon their health, and a further third (35%) think that they have some effect. A quarter (25%) consider that high voltage power lines have no health effects. Even so, power lines of this type are viewed as the most serious risk to health of the five items reviewed in this section. Compared with the previous study, very few differences are noted at the EU level.

QC1.15. Please tell me to what extent you think each of the following affects your health.

High tension power lines



Wide national differences are also apparent on this issue. Once more, a high proportion of respondents in Italy (78%) say that high voltage power lines have a major effect on their health. Similarly, high figures are noted in Cyprus (73%) and Greece (59%). Conversely, almost half of the respondents in the Netherlands (47%), Finland and Denmark (both 44%) do not believe that high voltage power lines have any effect on their health.

Since the previous wave in 2006, large falls in the perception of the health effects of power lines were noted in Hungary (-22 points), Luxembourg (-11 points) Sweden and the UK (both -10 points). In Italy, the proportion of respondents who believe high voltage power lines have a great effect on their health increased by 13% since 2006.

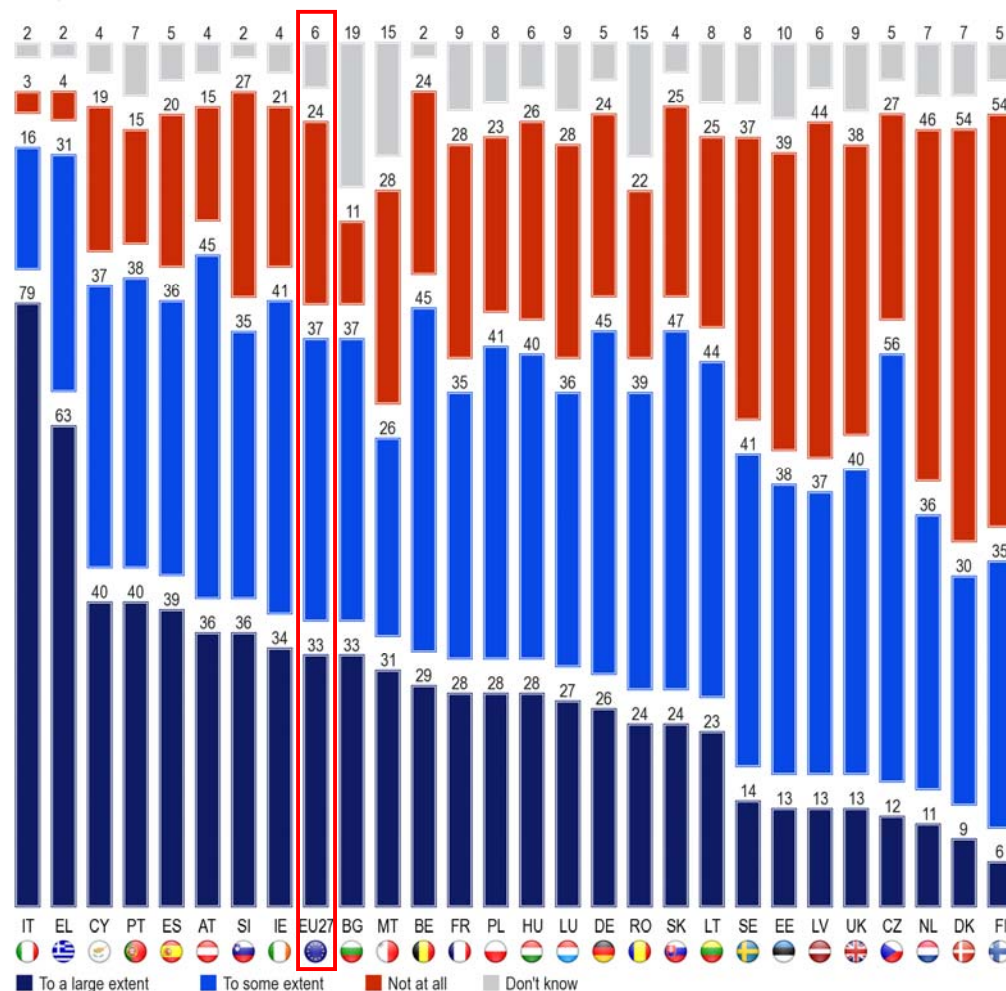
A socio-demographic analysis revealed no significant variations except for some differences reflecting occupation: 45% of the self employed believe high voltage power lines affect their health to a great extent compared with just 30% of students and 32% of the retired.

Mobile phone masts

Following on from high voltage power lines, mobile phone masts are the next most frequently cited area of health concern. 33% of respondents believe these masts have a major effect on people's health. A further 37% say that mobile phone masts have some effects on health. The proportion believing that mobile phone masts have no effect on their health (24%) has risen from 18% in the previous study. A further 6% cannot form an opinion on this issue.

QC1.12. Please tell me to what extent you think each of the following affects your health.

Mobile phone masts



Countries where high numbers of respondents feel that mobile phone masts affect their health to a great extent include Italy (79%) and Greece (63%). At the same time, the majority in Finland, Denmark (both 54%), the Netherlands (46%), Latvia (44%) and Estonia (39%) perceive these masts as having no effects on their health. It should also be pointed out that significantly high “don’t know” figures are recorded in Bulgaria at 19% – three times the EU average.

Compared to the survey carried out in 2006, more respondents in Italy now regard mobile phone masts as greatly affecting their health (+11 points) whereas respondents in Greece have become less (-8 points) likely to hold this opinion. As was noted in the previous section, noticeable falls in concern are recorded in Sweden (-9) and the UK (-13).

Socio-demographic criteria have little impact on these data, except that 41% of house people and 40% of the self-employed say that mobile phone masts have a major effect upon health compared with 29% of managers and the retired.

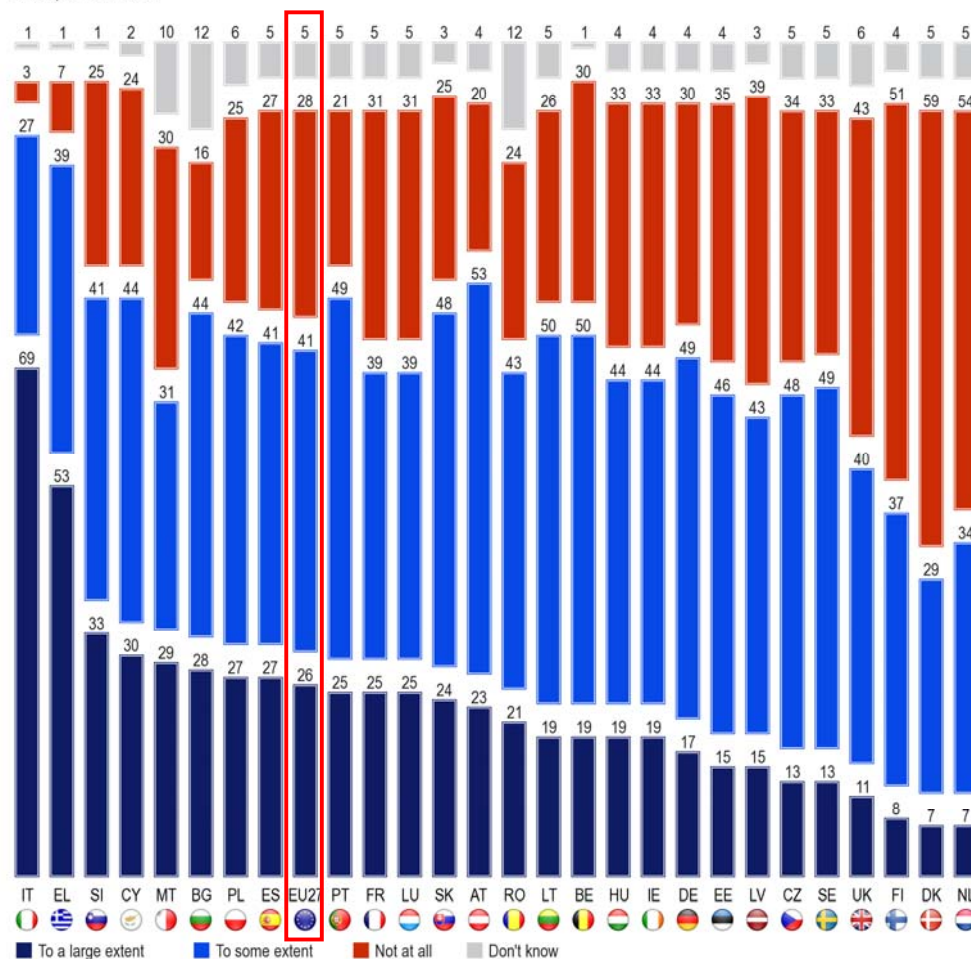
Mobile telephones

Mobile telephones, with their widespread adoption across the whole of the EU in the past decades, are not only commonplace particularly amongst younger age groups but have generated substantial claims and denials as to the possible long-term harm they may cause to users.

While as has been noted above the debate and scientific analysis continue on this subject, the current view of a quarter (26%) of respondents is that mobile phones affect citizens' health to a major extent. A further 41% think that mobile telephones have some effects on their health, whereas 28% see no link between health and this item. It is worth noting that there has been an appreciable increase, from 22% to 28%, in respondents who believe that mobile phone handsets have no effect upon their health since EB66.

QC1.11. Please tell me to what extent you think each of the following affects your health.

Mobile phone handsets



Mobile telephones are thought to have major health effects by the vast majority only in Italy (69%) and Greece (53%). The majority view in most other countries is that this issue has some effects on health. In Denmark (59%), the Netherlands (54%), Finland (51%) and the UK (43%), most respondents believe that mobile telephones have no effect on their health. A relative high proportion of 'don't know' responses is reported in Romania, Bulgaria (both 12%) and Malta (10%).

Opinion in Italy has become more wary of this issue since 2006, and the proportion of respondents who say that mobile phones have a major effect on their health has increased by 13 points. Respondents in Greece, on the other hand, are less likely to believe that they have a major effect (-11 points). The Swedish figures, again, also show a fall of 11 points.

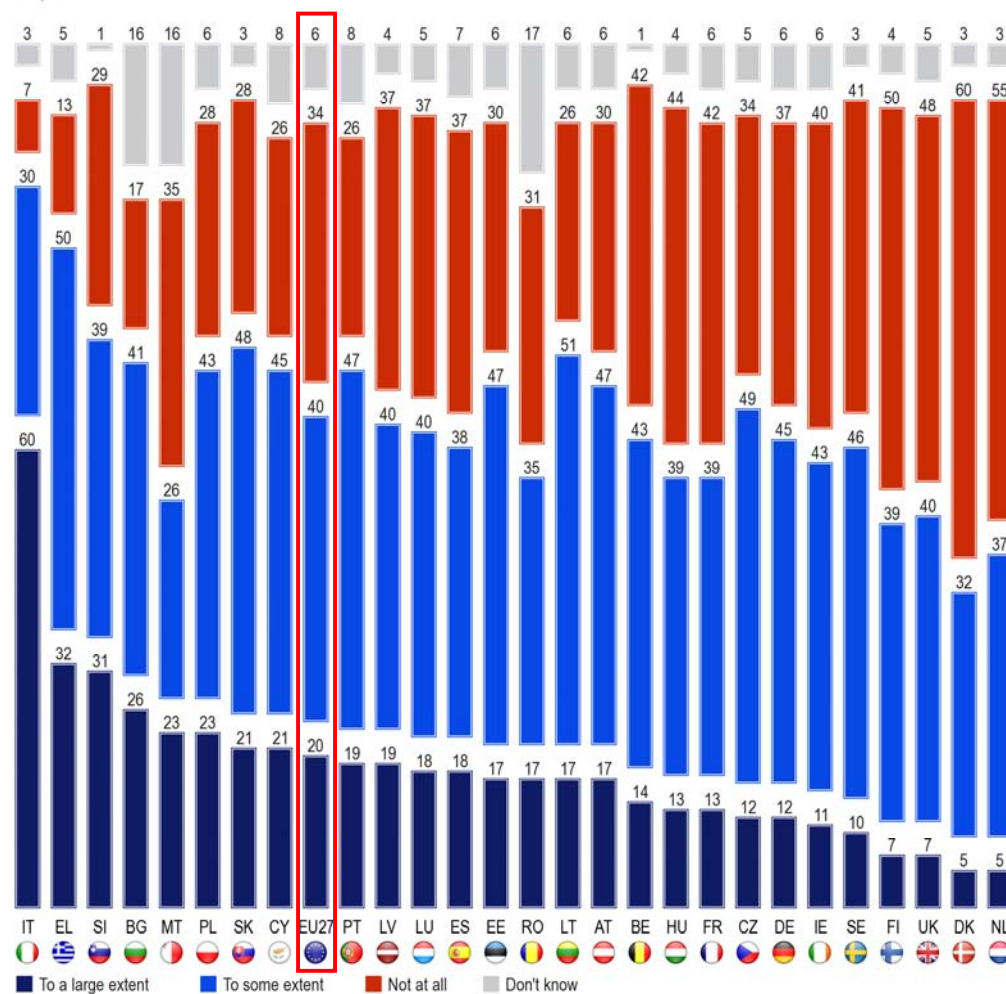
No variations are noted by socio-demographic factors for this issue.

Computers

In the list of electronic devices, computers rank as the fourth most serious risk to health although only a fifth (20%) of respondents consider that computers affect their health to a large extent. A further 40% say that computers have some effects on their health. In this latest poll, a third (34%) of respondents believe computers have no effect upon their health, which is a 5-point increase on 2006.

QC1.14. Please tell me to what extent you think each of the following affects your health.

Computers



Once again, the majority in Italy (60%) believe that this item affects their health to a great extent, which is a substantial increase from the 45% noted in 2006.

The majority view in most other countries is that computers have some health effects, but there are also several countries where respondents tend to think that these devices have no effect on their health whatsoever, not least the case in Denmark (60%), the Netherlands (55%) and Finland (50%). Since the previous survey in 2006, fewer respondents in Greece now believe that computers have a large health effect (-12 points), while opinion in Malta has moved in the opposite direction, up from 11% to 23%.

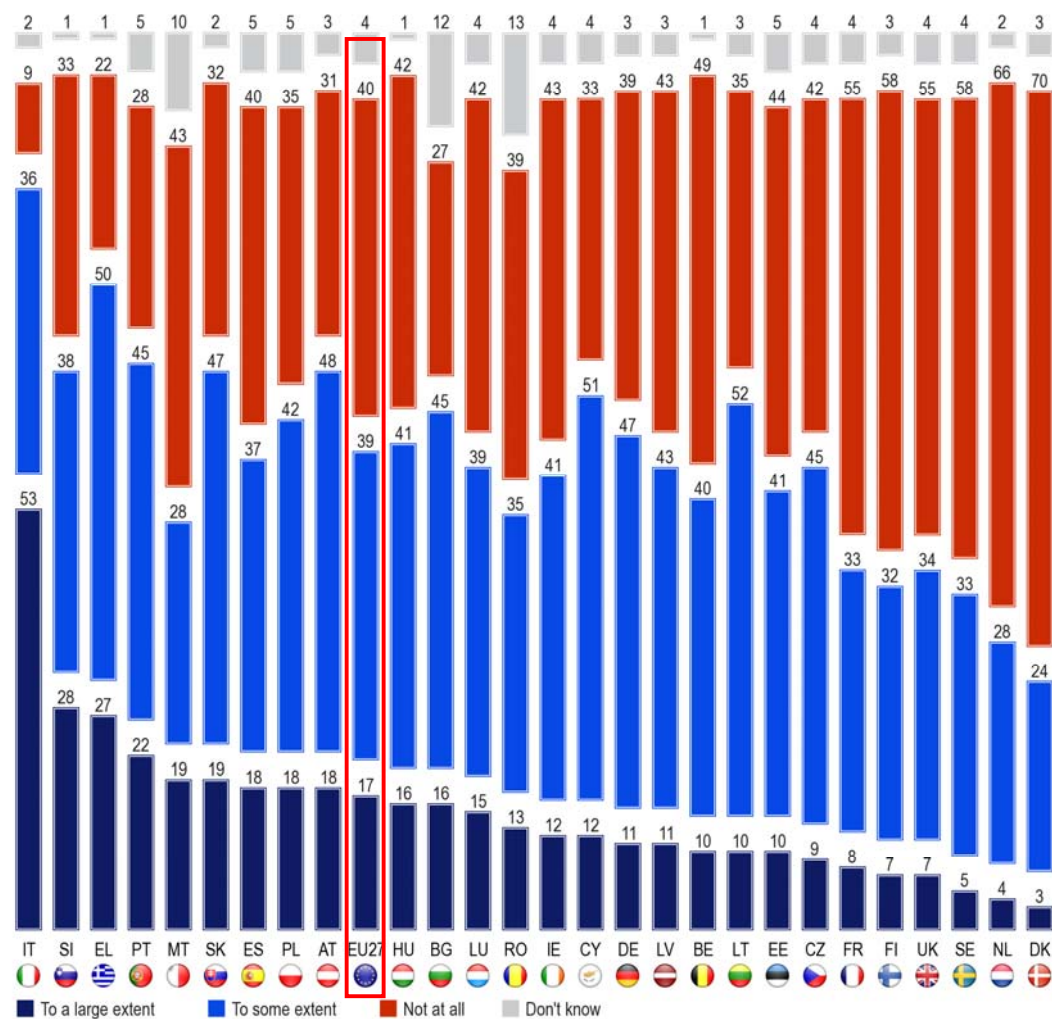
No variations are noted by socio-demographic factors for this issue.

Household electrical equipment

17% of respondents believe that household electrical equipment affects their health to a great extent. A further 39% say that this item has some health effects, whereas the majority – 40% - take the view that domestic electrical equipment has no health impact. Four percent have no opinion on this matter.

QC1.13. Please tell me to what extent you think each of the following affects your health.

Household electrical equipment



The majority view in Italy is that household equipment affects health to a major extent.

In some other countries, people believe that such equipment has some health effects but the common view in most countries is that household devices have no health effects whatsoever. High proportions of respondents who believe that domestic electrical goods have no health effects were found in Denmark (70%), the Netherlands (66%), Finland and Sweden (both 58%).

No variations are noted by socio-demographic factors for this issue.

2. ELECTROMAGNETIC FIELDS: AWARENESS AND CONCERNS ABOUT POTENTIAL HEALTH RISKS

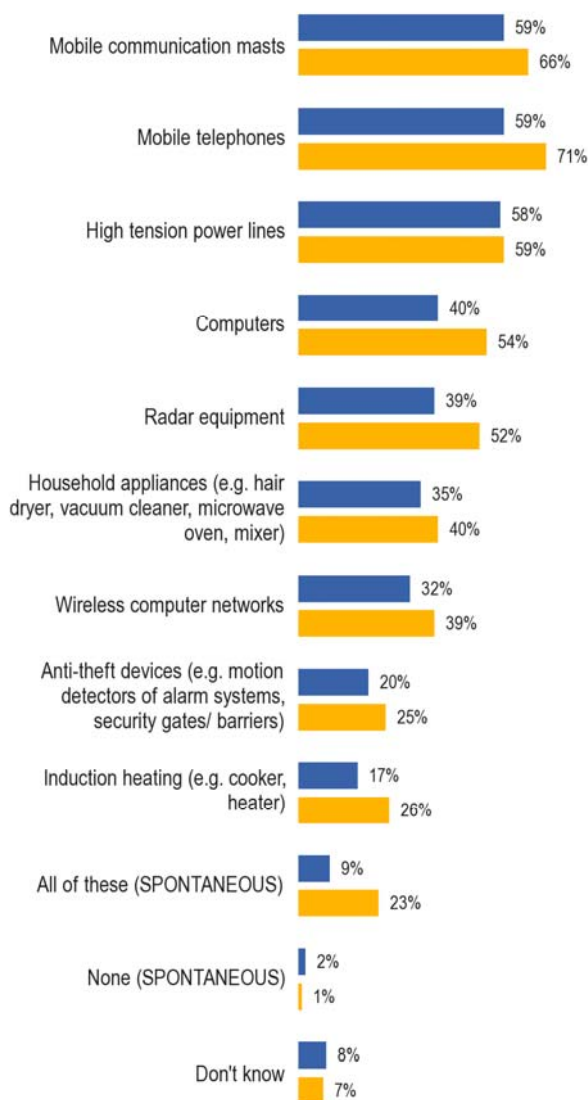
Having studied issues that people perceive as affecting their personal health, we now look in more detail at the specific area of electromagnetic fields and public awareness and concerns on a number of related aspects. As a first step, certain objects all of which generate EMF's are reviewed. Having established which of these items are believed by respondents to have this property the report then assesses their concerns about related potential health risks. In its final two sections, this chapter will focus on the effectiveness of information about potential health risks.

2.1 Sources of electromagnetic fields

Respondents were read a list of objects and asked which of them were sources of electromagnetic fields.³ Mobile communication masts (59%), mobile telephones (59%) and high voltage power cables (58%) are cited by a majority of respondents. High mentions are also noted for computers (40%), radar equipment (39%), electrical household appliances (35%) and wireless computer networks (32%). There are also some mentions, although fewer, of anti-theft devices (20%), such as motion detectors and security gates, and for induction heating systems (17%), as found in some types of cookers and heaters. About a tenth (9%) of respondents mention all of the above. Only 2% believe that none of these items is a source of electromagnetic fields.

³ QC2 As far as you are aware, which of the following are sources of electromagnetic fields? Household appliances (e.g. hair dryer, vacuum cleaner, microwave oven, mixer) ; Computers ; Mobile telephones; Mobile communication masts; High tension power lines; Wireless computer networks; Anti-theft devices (e.g. motion detectors of alarm systems, security gates/barriers); Induction heating (e.g. cooker, heater); Radar equipment, All of these; None of these.

QC2. As far as you are aware, which of the following are sources of electromagnetic fields?



■ EB73.3, 03-04/2010

■ EB66.2, 10-11/2006

● EU27

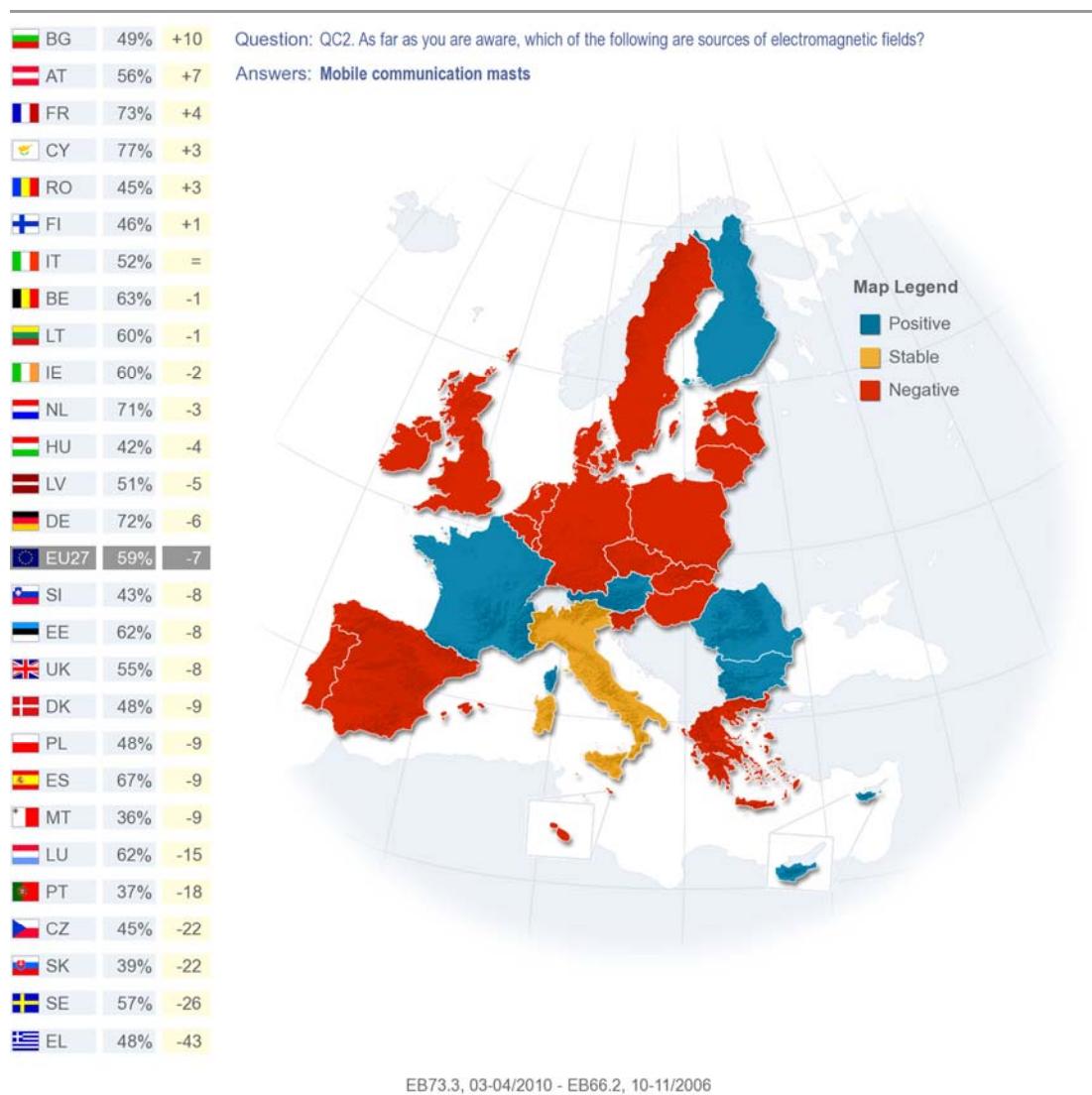
Since EB66, conducted in the autumn of 2006, there has been a noticeable decrease in public awareness of the sources of EMFs. The largest falls were recorded for mobile telephones (-12 points), mobile communication masts (-7 points) and radar equipment (-13 points).

The extent of this change in awareness is perhaps best exemplified by the fact that, in the 2006 report, nearly a quarter (23%) of those polled spontaneously said that all the elements cited were sources of electromagnetic fields. In this latest report, this has fallen to just 9%. An exception to this general view relates to high voltage power lines, which a majority (58%) believed were sources of electro-magnetic fields – a figure just slightly down from the 59% recorded in the autumn of 2006. However, overall, the public in the EU appears to be less aware of the sources of electro-magnetic fields than just a few years ago.

Over the next pages we will look in detail at each item listed above.

Mobile communication masts

Mobile communication masts are cited by 59% of EU27 respondents, and are therefore one of the two items most associated with EMFss. This figure, however, shows a fall of 7 points from the figure of two-thirds (66%) observed in 2006.



At the national level, respondents in Cyprus (77%), France (73%) and the Netherlands (71%) are most likely to cite mobile communication masts as a source of EMFs; those in Malta (36%), Portugal (37%) and Slovakia (39%) are the least likely.

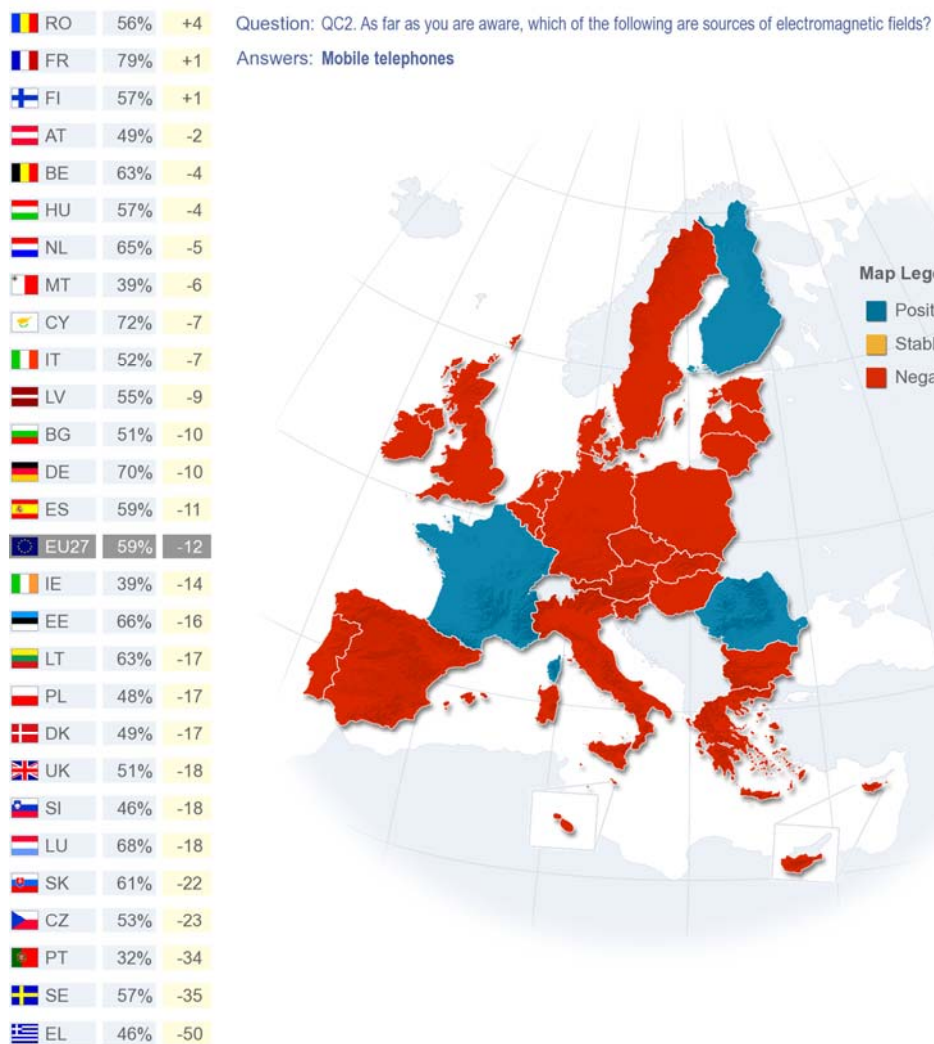
Since the previous study, the majority of countries show a decrease in mentions of mobile communication masts. A massive fall is recorded in Greece (-43 points) and Sweden (-26 points) as well as Slovakia and the Czech Republic (both -22 points). Respondents in Bulgaria (+10), Austria (+7) and France (+4), on the other hand, seem to have become more aware of the fact that mobile masts are a source of electromagnetic fields.

Education plays an important role in explaining awareness of the electromagnetic radiation of mobile masts. While just half (50%) of those who left school at age 15 or earlier see mobile communication masts as a possible source of EMFs, this figure rises to two-thirds (66%) of those educated to age 20 or beyond. A similar trend is noted for occupation: 70% of managers and 65% of other white-collar workers see these masts as a possible source of EMFs compared with just 51% of house persons.

Mobile telephones

Mobile telephones are mentioned as often as mobile communication masts. Roughly six in ten respondents (59%) recognise mobile telephones as a source of EMFs. However, there has been a significant decline from 71% to 59% in this figure relating to what must be now the most widespread objects producing electromagnetic waves.

Particularly high mentions of mobile telephones are noted in Cyprus (72%), Germany (70%) and Luxembourg (68%). Respondents in Portugal (32%), Ireland and Malta (both 39%) are less likely to mention this item as a source of EMFs. The Portuguese figures, which are now the lowest in the EU, accounted for two-thirds (66%) of the Portuguese poll just four years earlier. A similar sharp fall is seen in the Swedish figures, from a high of 92% to just 57% - two points below the EU27 average. The vast majority of EU countries, 24 out of the 27 polled, show a decrease in mentions of mobile telephones when compared to the previous study in 2006. The remaining three countries present only small increases: Romania (+4), France and Finland (both +1).

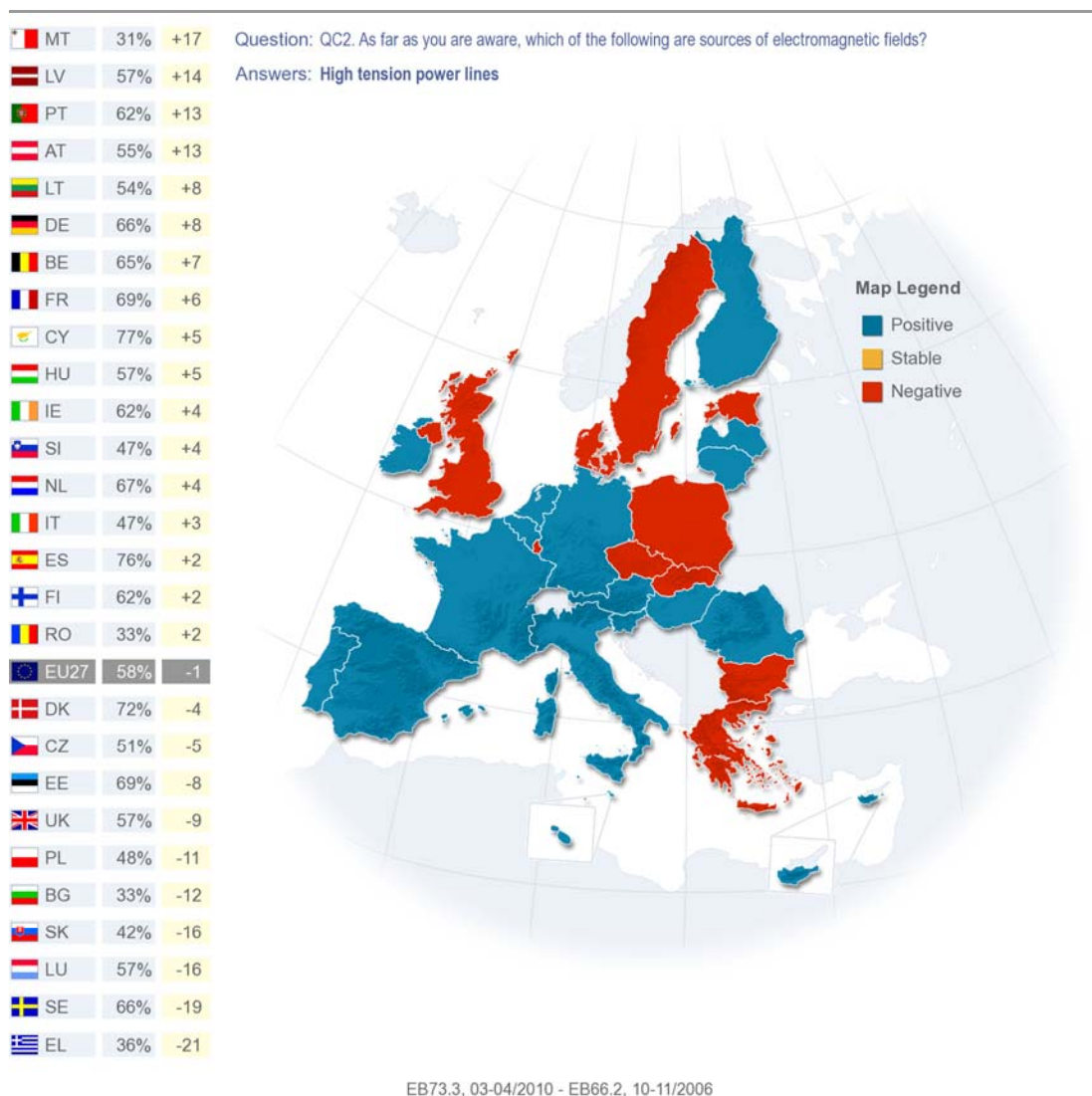


EB73.3, 03-04/2010 - EB66.2, 10-11/2006

A socio-demographic analysis reveals that education and occupation influence the association between mobile phones and EMFss. Just 48% of the least educated segment view mobile phones as a potential source of electromagnetic fields, compared with 67% of those educated to age 20 or beyond. There is a similar wide variation by occupation, with this view being held by 68% of managers compared with 53% of house persons and 51% of the retired.

High voltage power lines

High voltage power lines are cited by 58% of the respondents, making them the third most mentioned source of electromagnetic radiation. Across the EU, the belief that high voltage power lines are a source of EMFs has fallen minimally, by just one point, over the past four years.



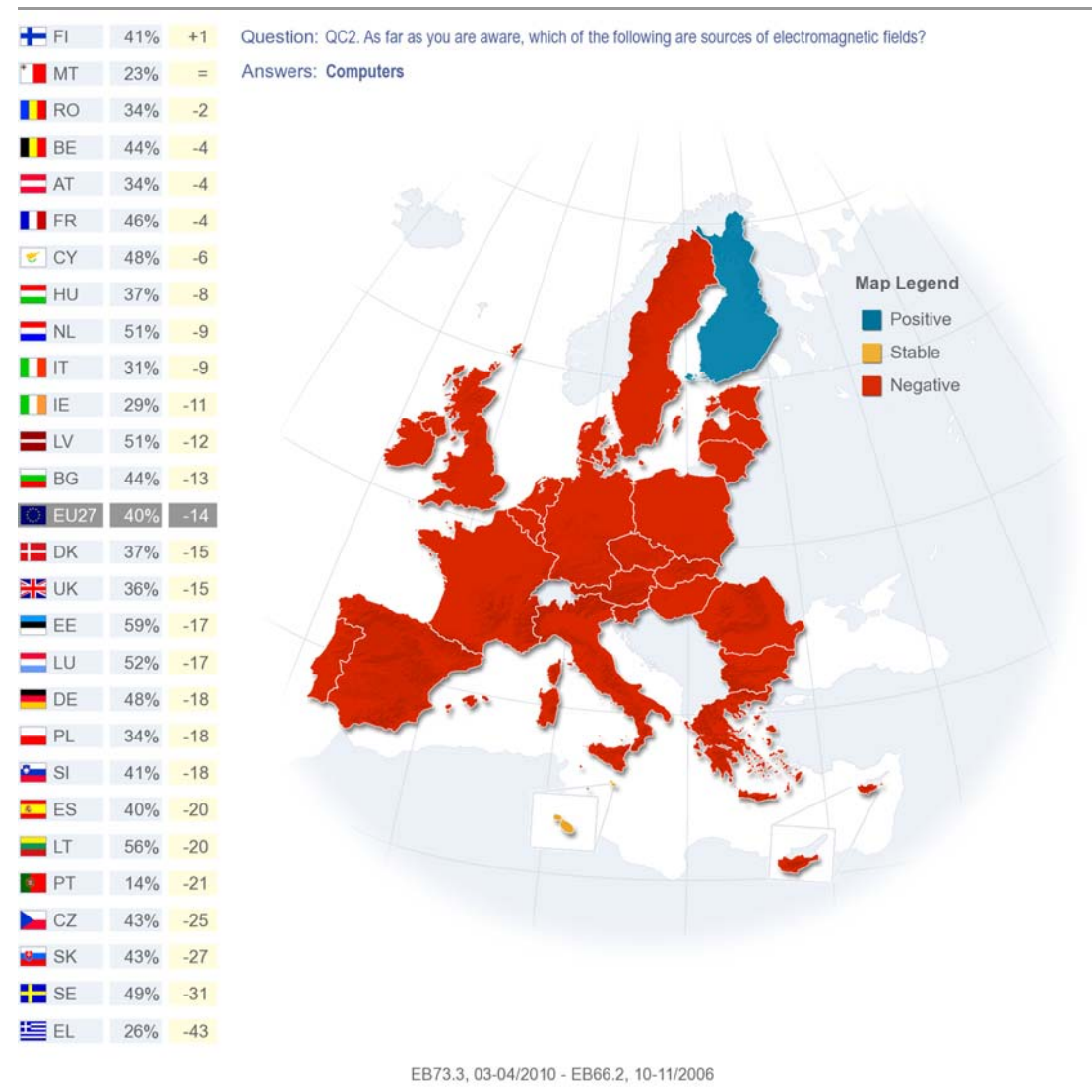
Respondents in Cyprus (77%), Spain (76%) and Denmark (72%) are most likely to cite this item as a source of EMFs. Many fewer mentions are reported in Malta (31%), Bulgaria and Romania (both 33%).

Compared with the previous study in 2006, respondents in most countries have become more aware of high voltage power cables as a source of electromagnetic radiation. Significant increases are noted in Malta (+17), Latvia (+14), Portugal and Austria (both +13). Six countries have experienced a decrease, which was particularly large in Greece (-21 points), Sweden (-19 points), Luxembourg and Slovakia (both -16).

As was noted before, age and education have a significant influence. About half (49%) of the youngest age group believe that high voltage power cables are sources of EMFs, compared with figures ranging from 57% to 64% for older age groups. Around two-thirds (68%) of the most educated segment hold this view, compared with just 53% of those who left school at the earliest opportunity.

Computers

Four in every ten (40%) respondents associate computers with electromagnetic fields. This figure is considerably higher in the Baltic countries Estonia (59%), Lithuania (56%) and Latvia (51%). Much lower mentions are recorded in most of the Mediterranean countries, including Portugal (14%), Malta (23%) and Greece (26%).



The notion that EMFss are generated by computers has become less widespread across the EU, declining from 54% to 40% in the space of four years. At the national level, large decreases are reported once more in Greece (-43 points), Sweden (-31 points) and Slovakia (-27 points).

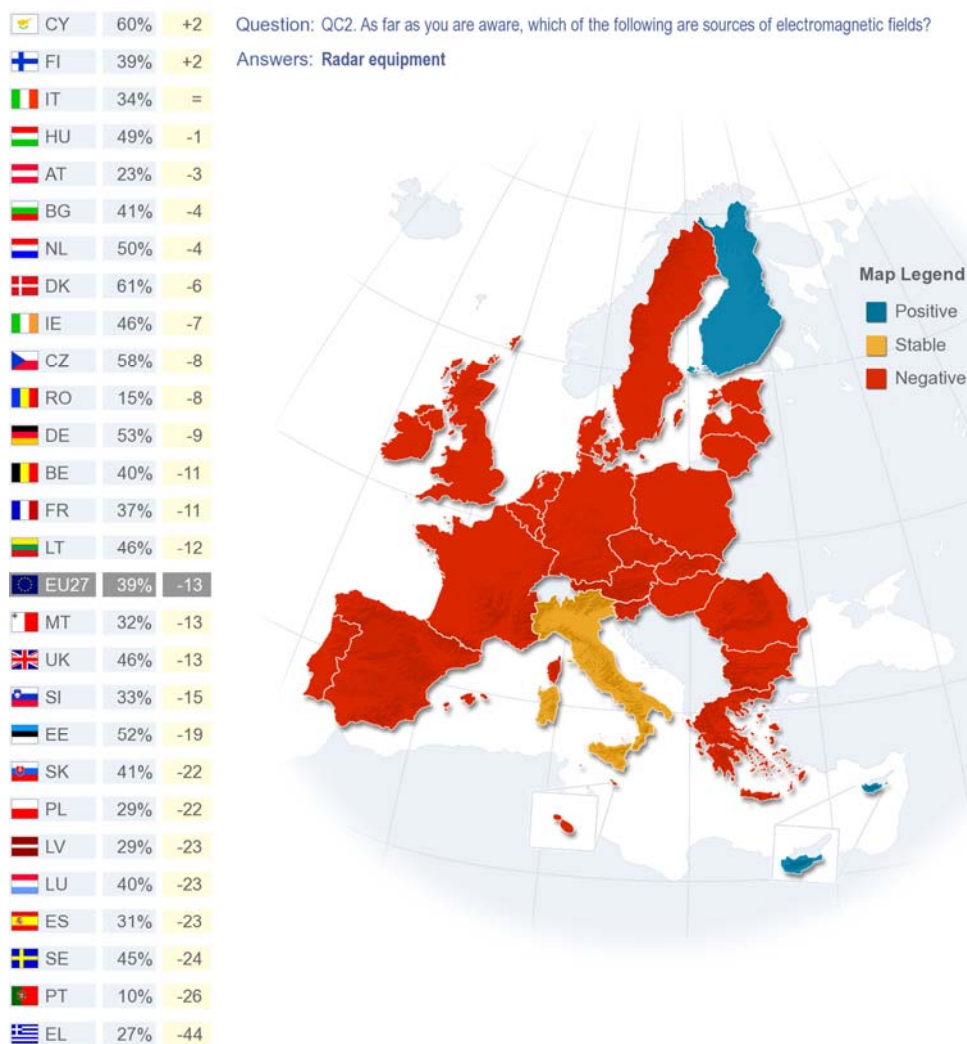
In fact, all but two countries are now less likely to associate computers with EMFss. Only Finland (+1) and Malta (+/- 0) show a stable trend.

Again, education influences the extent to which respondents cite computers in this regard. There is an 18-point difference between the 30% of the least educated and the 48% of the most educated who believe that computers are a source of EMFs. An even larger difference is observed between the 33% of the retired and 34% of house persons holding this view and 49% of managers.

Radar equipment

Across the 27 Member States, an average of 39% believe radar equipment is a source of electromagnetic fields – a figure noticeably down from the 52% recorded four years previously in EB66.

High figures are noted in Denmark (61%), Cyprus (60%) and the Czech Republic (58%), whereas much lower mentions are recorded in Portugal (10%), Romania (15%) and Austria (23%). Compared with EB66, very large decreases are recorded in several countries. The proportion of respondents that associate EMFs with radar equipment is down by 44 points in Greece, 26 points in Portugal and 24 points in Sweden.

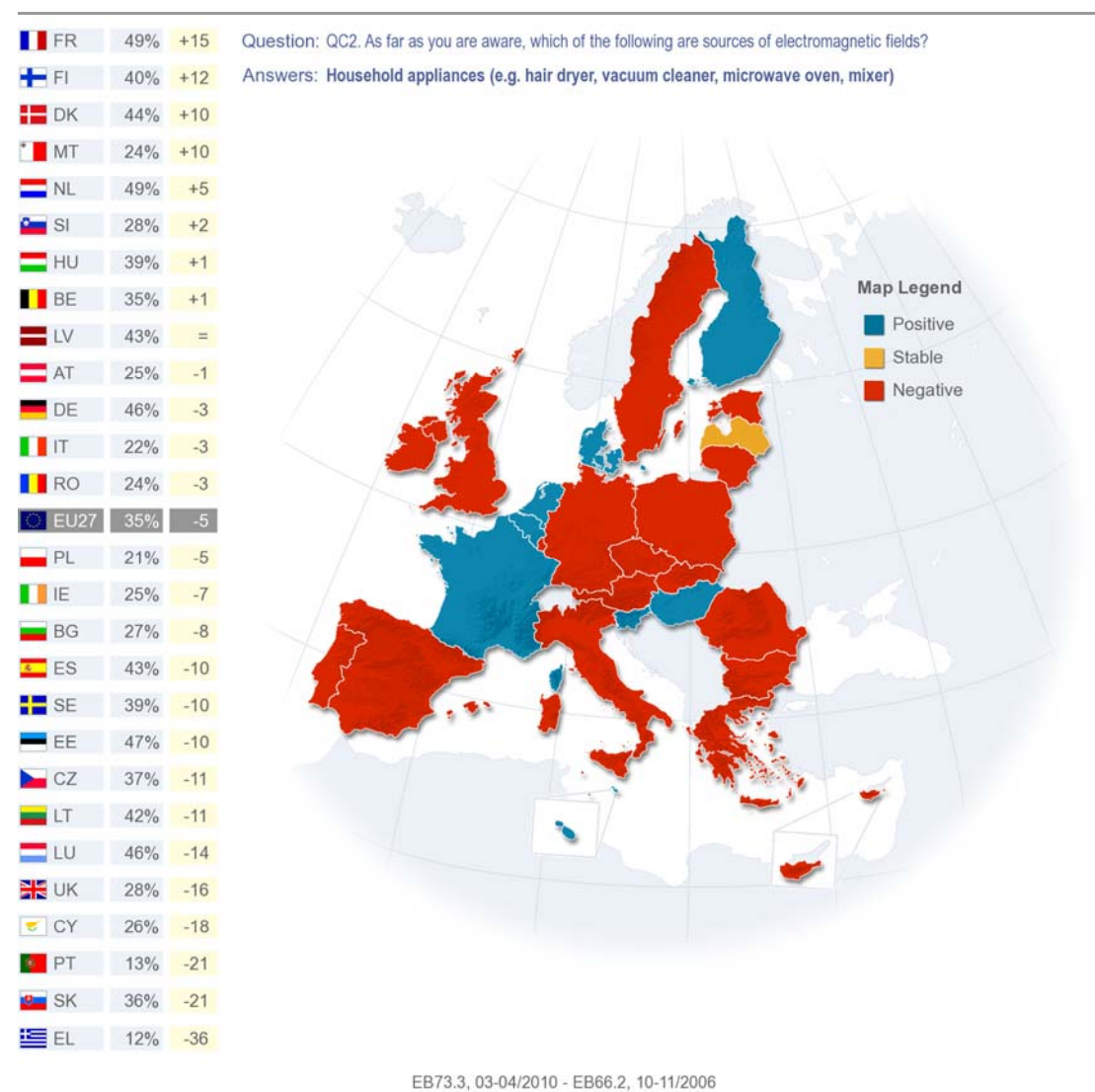


EB73.3, 03-04/2010 - EB66.2, 10-11/2006

Levels of education once again exercise a major influence on opinion with nearly half (47%) of the most educated believing EMFss can be generated from this source compared with just 30% of the least educated. A similar pattern is noted along the occupation scale. Gender also appears to play a role in this issue: while 44% of men believe that radar equipment is a source of EMFss, the figure falls to 35% among women.

Household appliances

Just over a third (35%) of EU respondents believe household appliances such as hairdryers, microwave ovens, etc. are sources of EMFss – a figure down marginally from the 40% noted in the previous survey.



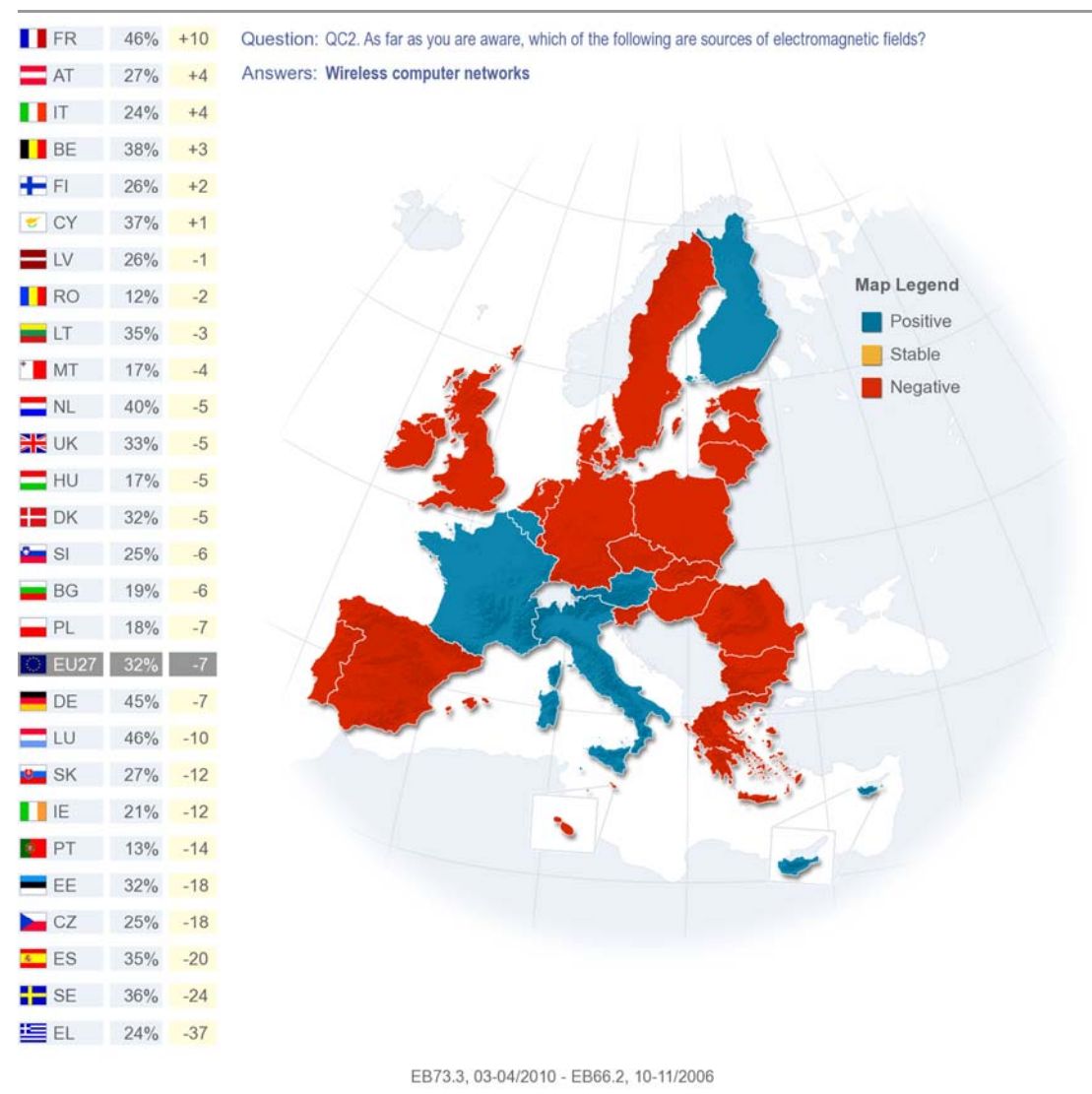
Household appliances are viewed as a source of electromagnetic radiation by a high proportion of people in France, the Netherlands (both 49%) and Estonia (47%). Fewer respondents in Greece (12%), Portugal (13%) and Poland (21%), on the other hand, view such devices as a source of EMFss.

In France, the figure has risen by 15 points over the last four years. Similarly large increases are noted in Finland (+12), Denmark and Malta (both +10). Substantial shifts in opinion in the opposite direction are recorded in Greece, Portugal and Slovakia. In Greece the figure is down 36 percentage points, which is a trend also noted for the previous items. In Portugal and Slovakia the decrease is slightly weaker (-21 points).

A socio-demographic breakdown reveals that education and occupation influence respondents' awareness of this issue. Just 27% of the least educated believe that household appliances are indeed a source of EMFss, compared with about four in every ten (42%) of those educated to age 20 and beyond. Occupation is also a key factor in this belief with 30% of the retired and 29% of house persons believing household appliances to be a source of EMFss in contrast to managers where the figure reaches 42%.

Wireless computer networks

A third of EU respondents (32%) believe wireless computer networks are a source of EMFss – a figure down from 39% just four years previously.



Large numbers of respondents in several countries see wireless networks as a source of EMFss, not least in France, Luxembourg (both 46%) and Germany (45%). Far fewer respondents view this item as a source of electromagnetic radiation in Romania (12%), Portugal (13%) and Malta (17%).

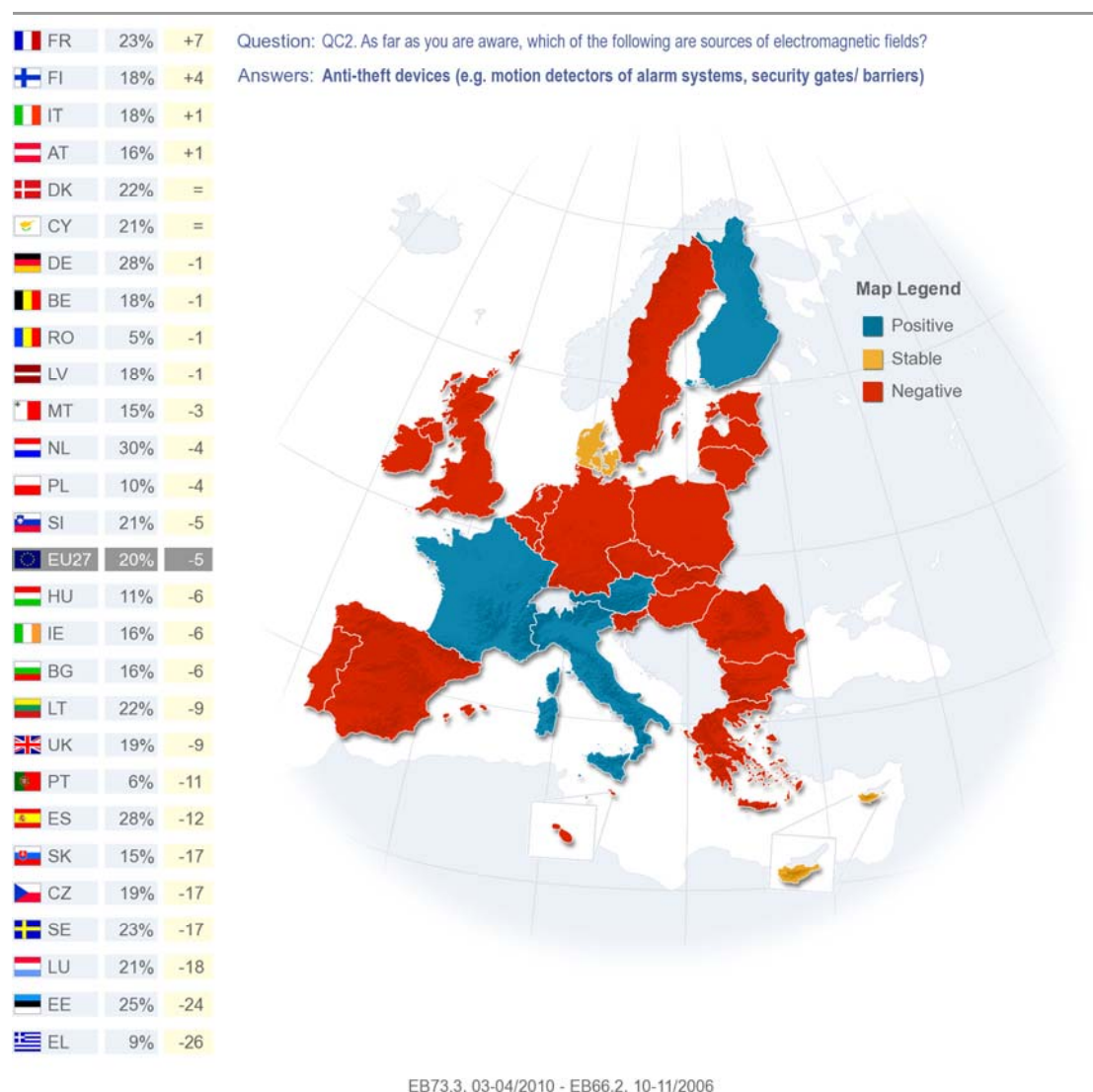
Large shifts have occurred over the last four years. The only significant increase is noted in France (+10 points).

Large decreases, on the other hand, are recorded in many countries, including Greece (-37 points), Sweden (-24 points) and Spain (-20 points).

Age, education and occupation appear once more to influence people's awareness of the issue. Turning first to age, only 25% of people aged 55 or more believe wireless networks are a source of EMFs, compared with a minimum 35% in all other age groups. A similar pattern is noted for education. While 21% of the least educated think that these networks are a source of EMFs, the figure doubles to 42% among those educated to age 20 or beyond. Almost half (46%) of managers associate wireless networks with EMFs – a figure twice as high as the 23% recorded among house persons and the retired.

Electronic anti-theft devices

Anti-theft devices do not particularly concern EU27 respondents as a source of EMFs and the 20% of the poll citing this item as a source is five percentage points lower than the 25% recorded four years previously. At the same time, relatively high figures are seen in the Netherlands (30%), and in both Spain and Germany (28%). At the other end of the scale, we find Romania (5%), Portugal (6%) and Greece (9%).

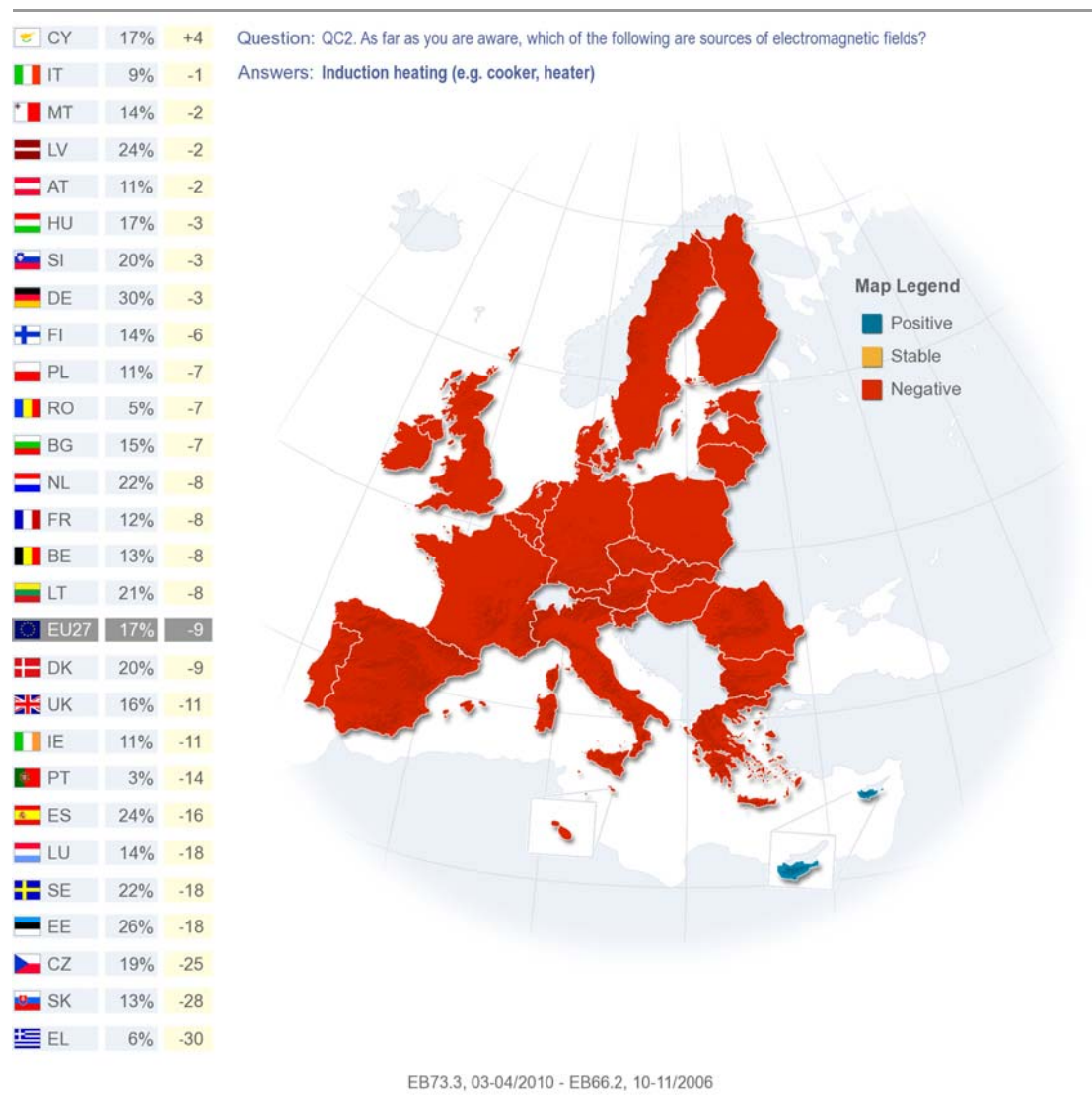


Only four EU countries report increases, and these are fairly weak. However there are significant declines in the figures in Greece (-26 points), Estonia (-24 points) and Luxembourg (-18 points).

26% of the most educated group view anti-theft devices as a source of EMFs, which should be compared with 14% of those who left school aged 15 or earlier. A similar disparity is noted between the 27% of managers holding this view and just 16% of the retired and 17% of house persons.

Induction heating devices

Just one in six (17%) of EU respondents believe EMFs are generated by induction heating devices, such as cookers and heaters, and this low figure shows a marked fall of nine points from the 26% recorded in 2006.



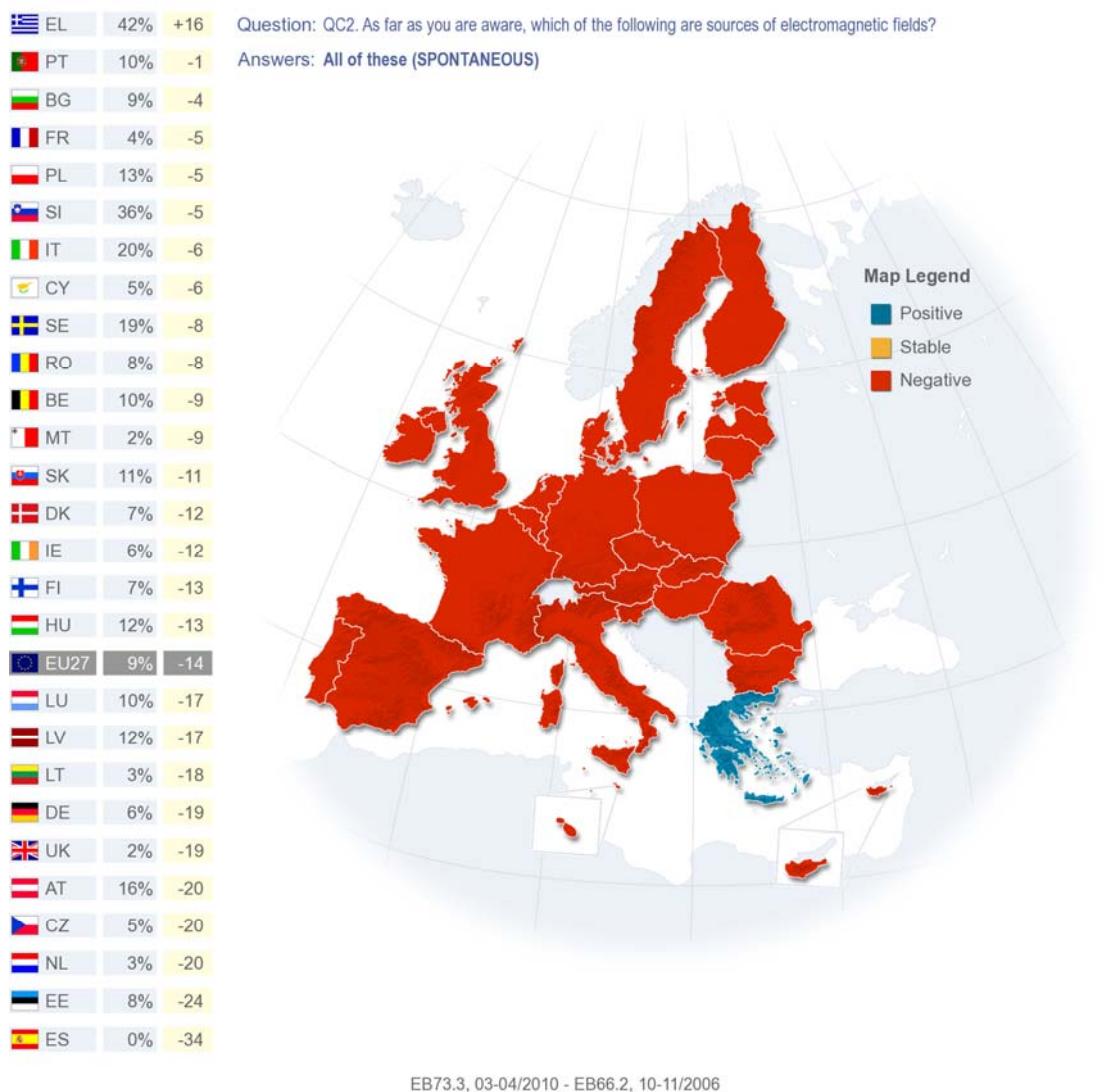
Rather low proportions of people mention induction heating as a source of EMFs, with the exception of respondents in Germany (30%) and Latvia (24%). In several countries, this issue receives hardly any mentions: Portugal (3%), Romania (5%) and Greece (6%).

Across the 27 Member States, the idea that induction heating is a source of EMFs has fallen in every country with the exception of Cyprus which shows an increase of just four points. In percentage terms, the falls are particularly striking in Greece (-30), Slovakia (-26) and the Czech Republic (-25).

Hardly any variation is noted across the socio-demographic factors. However, information has a major influence. While 24% of respondents who had received information on the potential health risks of EMFs say they believe that induction heating devices are a source of these fields, the figure falls substantially to just 15% of those not in receipt of this information.

Spontaneous responses

It is worth noting that when asked this question on specific items, 9% of EU citizens spontaneously state that everything on the list is a source of electromagnetic fields. This EU average figure, however, shows a significant downward trend from a relatively high 23% noted in 2006.



The figures which make up this EU27 average range from 42% in Greece - the only average to have increased since the previous survey, by 16 points. This figure might explain the very low mentions by Greek respondents of each separate item. A high proportion of respondents in Slovenia (36%) also report that all these items are sources of EMFs.

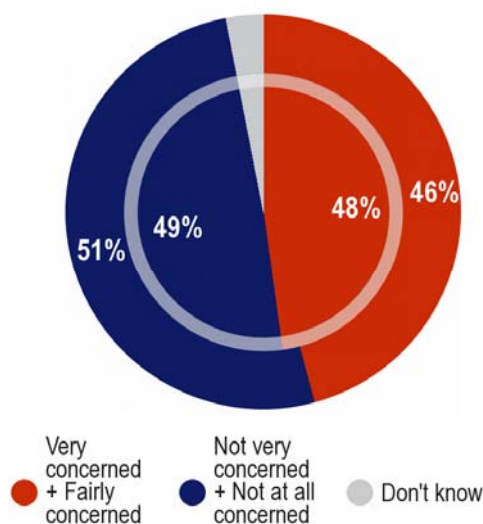
In most countries across the EU large decreases are noted when compared with EB66. A major downward movement is seen in Spain (-34 points), Estonia (-24 points), the Netherlands, the Czech Republic and Austria (all -20 points).

2.2. Concerns about electromagnetic fields

Having looked at what items respondents in the European Union associate with their health, and which are seen as sources of EMFs, the report now turns to the important issue of the level of public concern about the potential health risks from EMFs.

Our results show that the EU public is evenly divided on the matter. While 46% of respondents say that they are indeed concerned about the potential health risks of EMFs, a slightly larger proportion of the poll (51%) say they are not very concerned or even not at all concerned about this issue.⁴ A further 6% have no opinion on the matter.

QC3. How concerned are you about the potential health risks of electromagnetic fields?



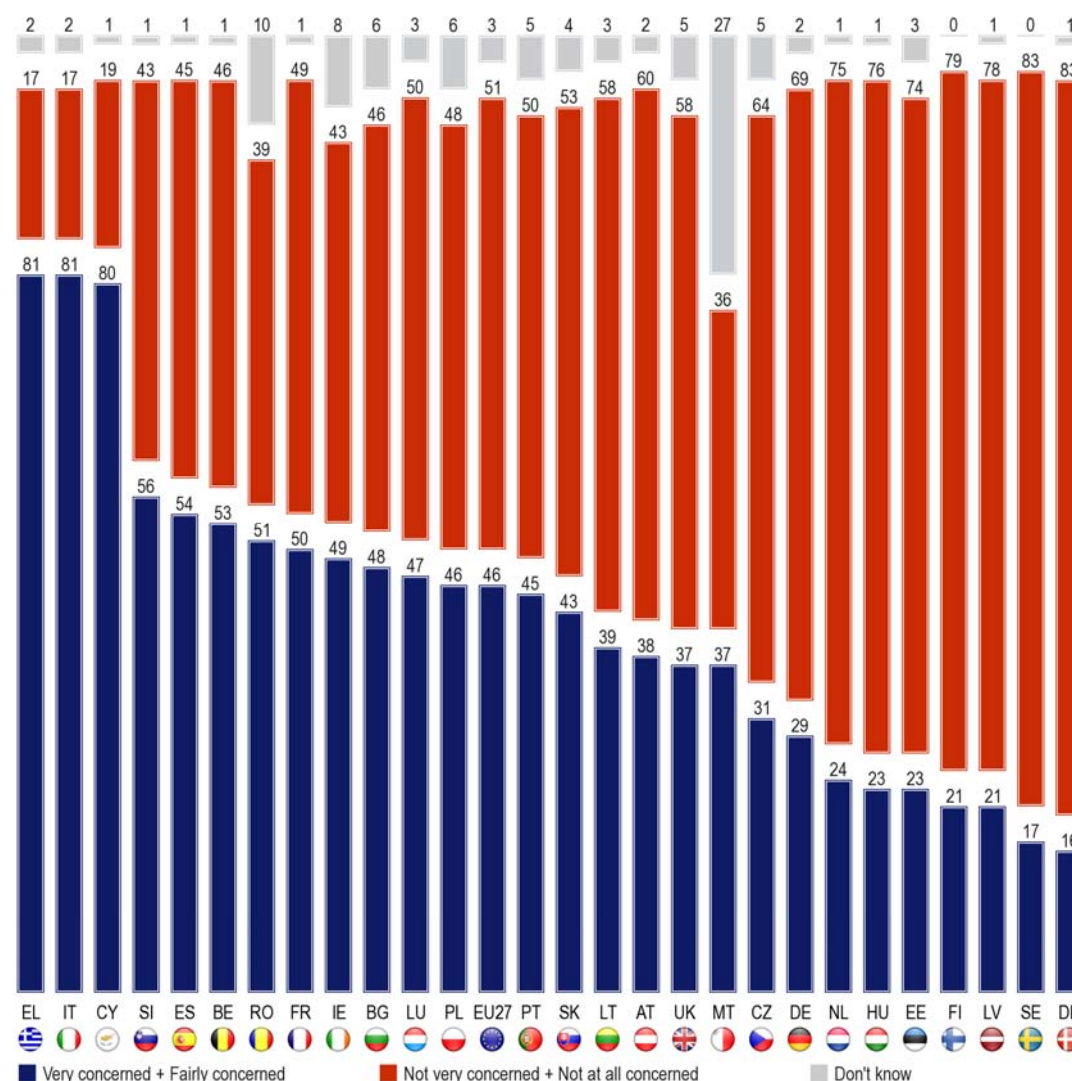
Inner pie : EB66.2, 10-11/2006
Outer pie : EB73.3, 03-04/2010

EU27

⁴ QC3 How concerned are you about the potential health risks of electromagnetic fields? ANSWERS: Very concerned; Fairly concerned; Not very concerned; Not at all concerned; Don't know.

Since EB66, four years ago, there has only been a slight decrease (-2 points) in the proportion of respondents concerned about the potential health risks of electromagnetic fields. Conversely, we can note a slight increase (+2 points) in the number of respondents who are not concerned about the issue.

QC3. How concerned are you about the potential health risks of electromagnetic fields?



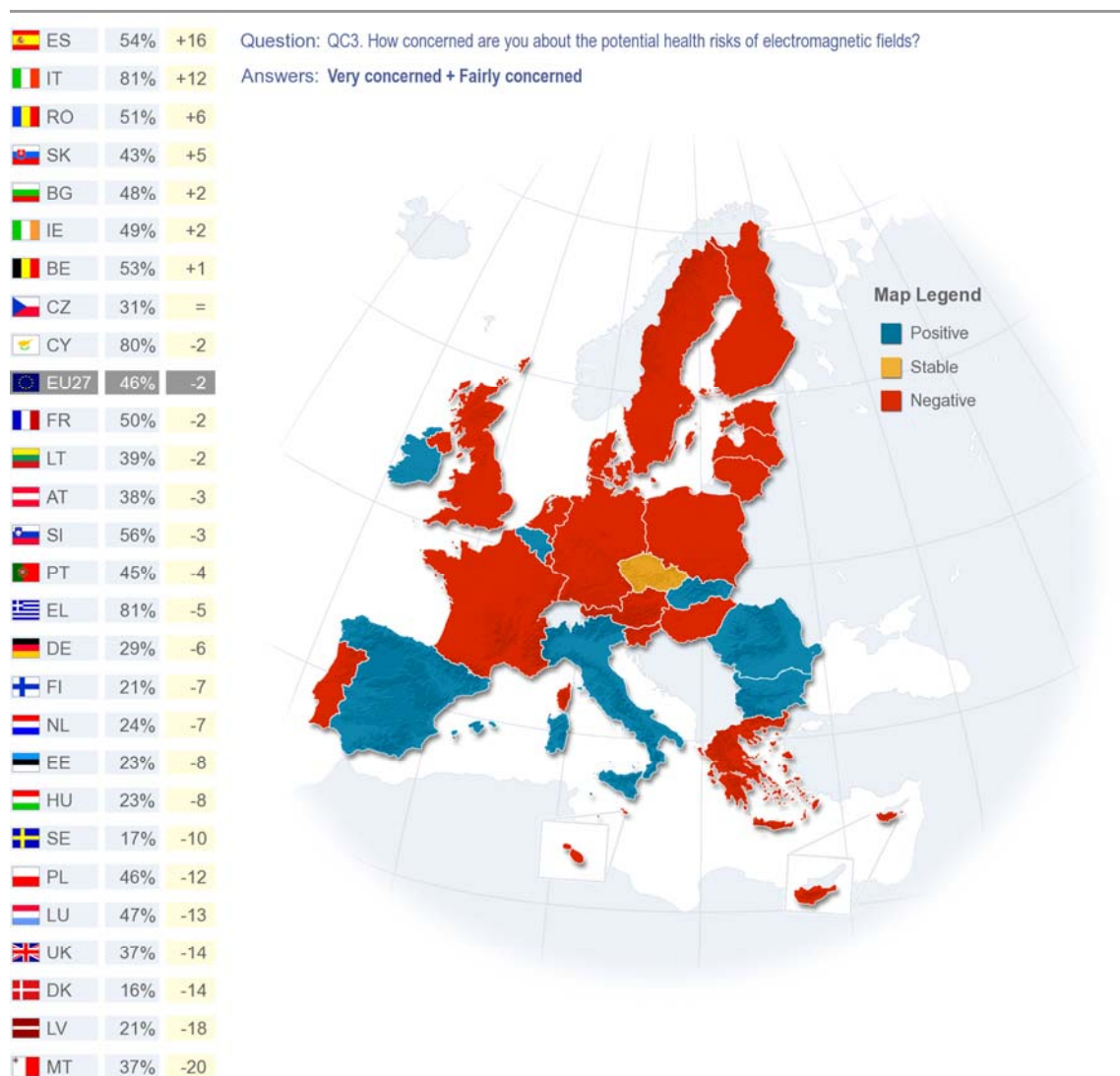
There are significant differences between countries. The vast majority of respondents in Greece and Italy (both 81%) and Cyprus (80%) say that they are concerned about the potential health risks associated with EMFs.

The opposite picture emerges in the Nordic countries and Latvia where a majority say they are not worried about the adverse health effects of EMFs. About eight in ten respondents in Denmark, Sweden (both 83%), Finland (79%) and Latvia (78%) hold this opinion.

A socio-demographic analysis reveals that young people aged 15 to 24 are also less likely to be concerned about the adverse health effects of EMFs. Only 35% of this age group said they were concerned, compared with between 46% and 51% in all other age groups.

As noted previously, the level of information on this subject is a major driver, with 55% of those who had received information on the subject expressing concern compared with just 44% of those who had not received this information.

Compared with four years ago, concern about the potential health risks of EMFs has declined in most EU countries. In the vanguard of this change of opinion are countries such as Malta (-20 points), Latvia (-18 points), Denmark and the UK (both -14 points). In Spain (+16 points), however, concern about these issues has increased and a similar, if smaller, increase is seen in Italy (+12 points).



EB73.3, 03-04/2010 - EB66.2, 10-11/2006

3. INFORMATION ON POTENTIAL HEALTH RISKS OF ELECTROMAGNETIC FIELDS

In this chapter, we will initially look at what proportion of respondents say they have received information on EMFs and whether receiving this information affects levels of concern about possible health risks.

The chapter then looks at the public's satisfaction with the content of information on potential health risks of electromagnetic fields, the way in which it was received and what changes of attitude it produced. In this latter part, we will focus on that relatively small segment of the poll which has received information on the potential health risks of electromagnetic fields.

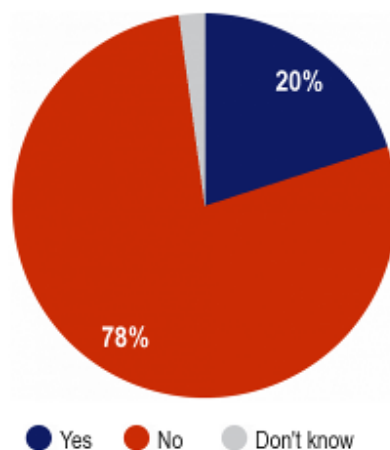
3.1 Exposure to information about potential health risks of EMFs

One of the most important criteria used when taking a decision or forming an opinion on any particular issue is information. Therefore, the survey now looks at the extent to which information on electromagnetic fields has been received by the public.

Across the EU, just 20% of the public say they have received information on the potential health risks of EMFs. The vast majority of respondents, more than three-quarters (78%), report that they have not received any information on the matter.⁵

⁵ QC4 Have you received information about potential health risks linked to electromagnetic fields?
ANSWERS: Yes; No; Don't know.

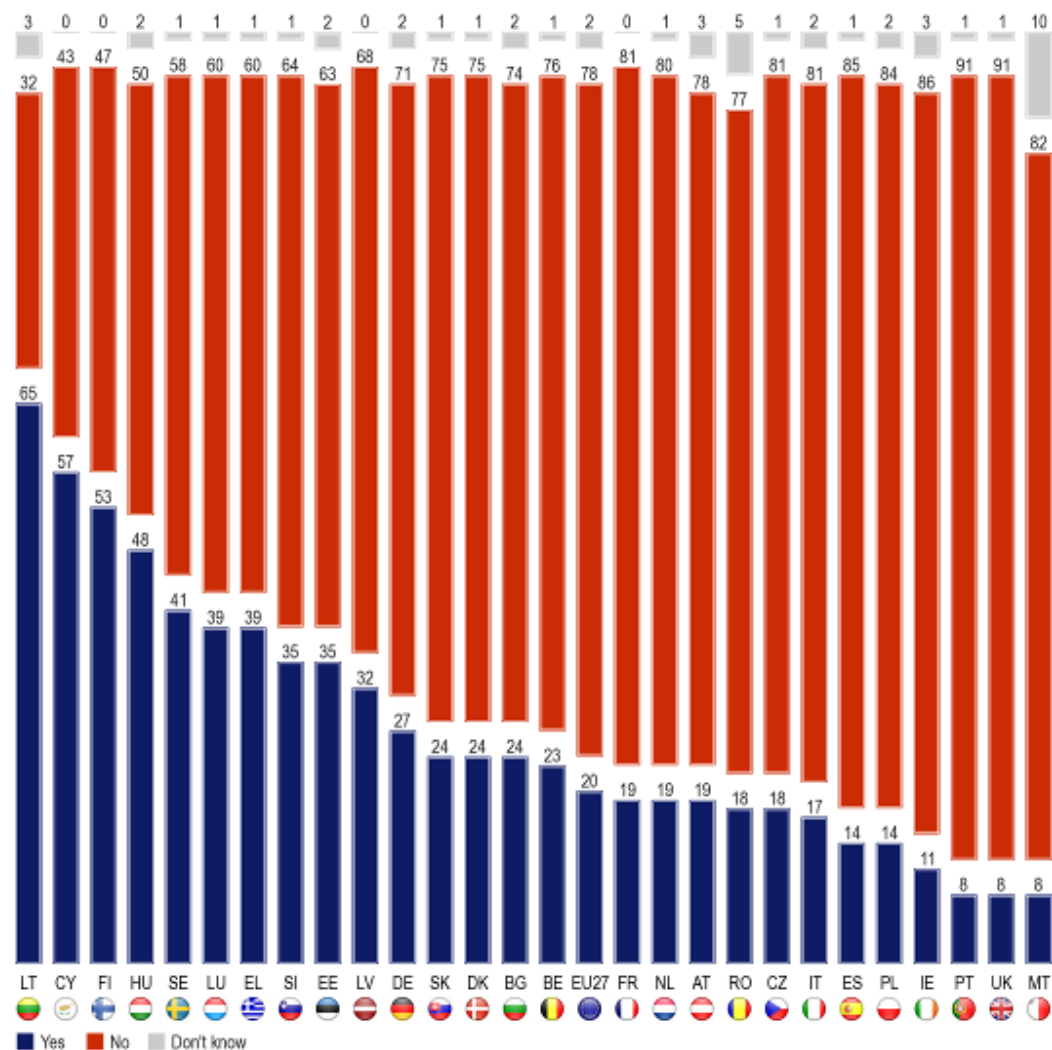
QC4. Have you received any information about potential health risks linked to electromagnetic fields?



 EU27

A majority of respondents say that they have received information on EMFs in only a handful of countries, namely Lithuania (65%), Cyprus (57%) and Finland (53%). Just 8% of respondents in Portugal, the UK and Malta, on the other hand, say they have received this information. A high 'don't know' figure of 10% is recorded in Malta.

QC4. Have you received any information about potential health risks linked to electromagnetic fields?



In terms of the socio-demographic analysis of these results, education and occupation have a significant influence. Turning first to education, 13% of those who left school at age 15 or before and 17% of those whose education ended between the ages of 16 and 19 say that they had received information on these potential health risks. Among those educated to age 20 or beyond, however, this figure rises to 30% - approaching one in three of this segment of the poll. A similar disparity is seen on the basis of occupation with 33% of managers stating they had received this information compared with just 15% of house persons, 16% of the retired and 17% of manual workers.

3.2 How information on EMFs affects levels of concern about possible health risks

An in-depth analysis considers how public concerns about the possible health risks of electromagnetic fields vary depending on whether respondents had received information on this subject. Of the total sample of approximately 26 600 people, 5 300 had received this information – 20% of the poll. Of this ‘informed’ group, 16% say they are very worried about the potential health risks and 39% are quite worried, i.e. a total of 55% had concerns at one level or another.

However, among the majority proportion of the poll who had not received this information, just 10% say they are very worried and a third (34%) say they are quite worried – a total of 44% saying they are concerned to a greater or lesser extent. This could be interpreted as an indication that information on these potential health risks has a major impact in increasing levels of concern. It could also be that people who tend to be more worried about the issue are more likely to look for information.

When the data are analysed on a country-by-country basis to check for a possible correlation between information received and levels of concern, no clear pattern emerges.

For example, totally different levels of concern were recorded in the two Member States where citizens had received the highest levels of information on the subject (Lithuania, 65% and Cyprus, 57%).

Just 39% of respondents in Lithuania are concerned about EMFs - a figure well below the EU27 average of 46%. On the other hand, this figure stands at 80% in Cyprus; this figure is almost identical to the highest figure noted (81% in Italy) where, in total contrast, just 17% had received information on this subject.

Since there are often consistent responses by socio-demographic factors on broad questions throughout this report, it would seem very probable that receiving information is a broad notion which could range from reasoned and informed data from sources such as government publications to scare-mongering in popular media.

An interesting set of data is observed amongst Nordic countries. Although the percentage of the public who have received information varies substantially from 53% in Finland to 41% in Sweden and just 24% in Denmark, levels of concern are very similar with figures of 21%, 17% and 16% respectively.

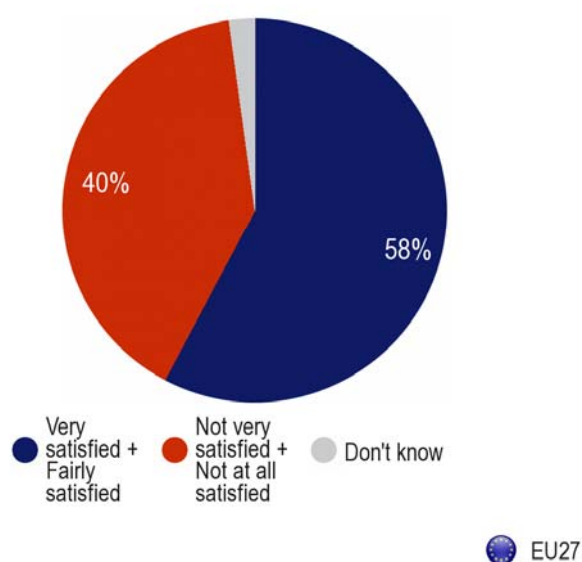
We then looked at possible variations in levels of concern over these potential health risks between those people who are satisfied with the information they received and those who are not. At first view, no clear pattern emerges from these data. For example, 35% of the respondents who say they are very satisfied with the information they received also say they are very concerned about these potential health risks – a figure similar to the 29% observed amongst those who are totally dissatisfied with the information they received.

In these two groups, 22% of those very satisfied with the information received and 21% of those not at all satisfied with this information hold very similar views, stating that they are not very concerned about these potential health issues. However, a major division is seen among those who are quite concerned about these potential health risks. The figure reaches 36% among those who are not at all satisfied with the information they received on this issue - substantially more than the 20% noted amongst those very satisfied with the information received.

3.3 Satisfaction with the information on potential health risks

To begin with, we look specifically at that segment of the poll which has received information on the potential health risks and assess how satisfied respondents are with this information.⁶ Our results show that 58% of EU respondents who have received information are **satisfied** with it. Four in ten respondents (40%) claim to be not very satisfied with the information received and a further 2% have no opinion on the matter.

QC5. Generally speaking, how satisfied are you with the information you receive about potential health risks linked to electromagnetic fields?



















Base: Those that have received information, EU27 n=5345

Again, differences are noted at the national level. Here, we only analyse countries that have a sufficiently large base ($n > 200$) to draw reliable conclusions. Countries with a base of less than 200 are excluded from the analysis.

⁶ QC5 Generally speaking, how satisfied are you with the information you receive about potential health risks linked to electromagnetic fields? ANSWERS: Very satisfied; Fairly satisfied; Not very satisfied; Not at all satisfied; Don't know.

QC5 Generally speaking, how satisfied are you with the information you receive about potential health risks linked to electromagnetic fields?
(IF 'HAS RECEIVE INFORMATION', CODE 1 IN QC4)

	Total 'Satisfied'	Total 'Not satisfied'	DK
 EU27	58%	40%	2%
 BE	67%	32%	1%
 BG	72%	23%	5%
 DK	68%	30%	2%
 DE	51%	48%	1%
 EE	65%	33%	2%
 EL	46%	54%	-
 CY	55%	45%	-
 LV	70%	27%	3%
 LT	53%	45%	2%
 LU	65%	31%	4%
 HU	61%	36%	3%
 SI	65%	33%	2%
 SK	58%	40%	2%
 FI	68%	30%	2%
 SE	65%	32%	3%

Base: Those that have received information, EU27 n=5345
country level n>200.

Information is perceived the most positively in Bulgaria (72%) and Latvia (70%), whereas respondents in Greece (46%) Germany (51%) and Lithuania (53%) are less satisfied with this material.

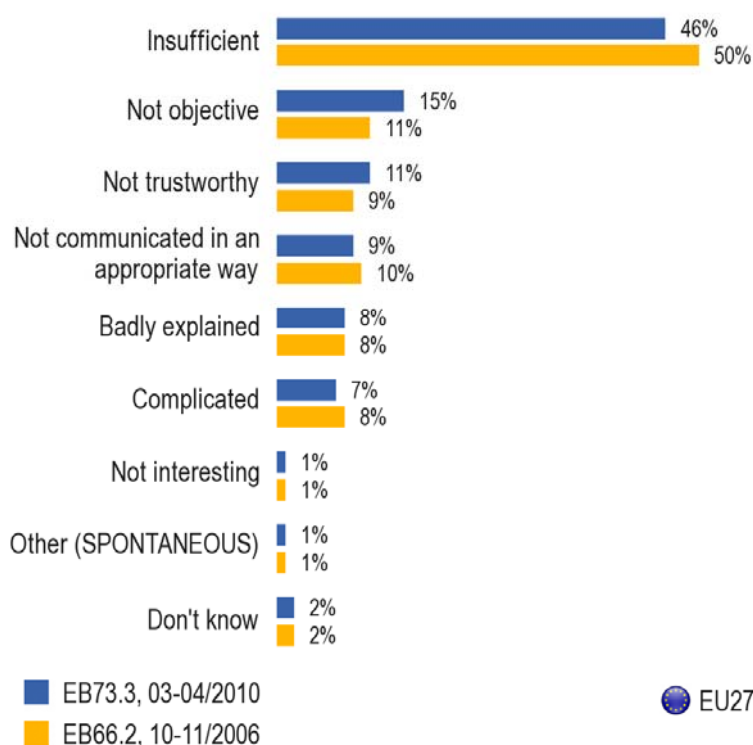
Substantial national differences go to make up this average, with citizens in Lithuania and Cyprus (45% respectively), Germany (48%) and Greece (54%) being the most likely to express dissatisfaction.

3.4 Reasons for dissatisfaction

The report now examines in more detail the reasons why respondents are not satisfied with the information they have received on the potential health risks of EMFs.⁷

Almost half (46%) of the respondents claim that the material they had received was *insufficient*. This is by far the most common response, expressed more than three times as often as the next most frequently cited objection – *not objective*, mentioned by 15% of respondents. Other reasons – not trustworthy, not communicated in an appropriate way, badly explained and complicated - ranged from 11% to just 7% of the responses. Reasons for dissatisfaction with material on EMFs have remained very stable since the previous survey in 2006.

QC7. Which of the following reasons best explains why you are not satisfied with the information you have about the potential health risks linked to electromagnetic fields? The information is...



Base: Those that received information and are not satisfied, EU27 n=2171

⁷ QC7 Which of the following reasons best explains why you are not satisfied with the information you have about the potential health risks linked to electromagnetic fields? The information is... ANSWERS: Not trustworthy; Insufficient; Not objective; Complicated; Badly explained; Not interesting; Not communicated in an appropriate way; Other (SPONTANEOUS); Don't know.

The base at national level is not sufficient to enable us to draw reliable conclusions. An analysis of the situation in separate countries is therefore not included in this chapter.

4. WAYS OF BEING INFORMED

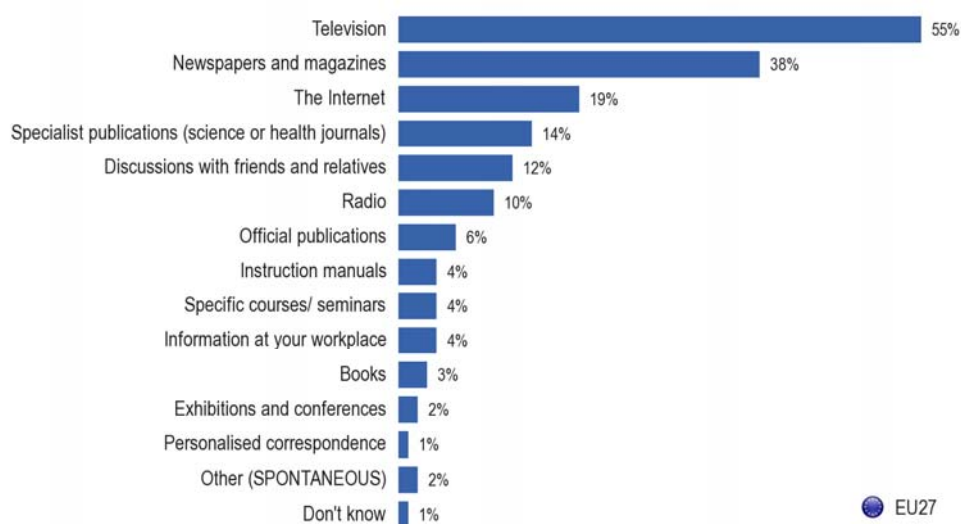
The crucial activity of informing the general public of the potential health risks of electromagnetic fields is reviewed in this penultimate chapter. As only 20% of EU respondents claim to have received information on this matter⁸, providing information on EMFs and health is an obvious measure that public authorities should consider across the EU.

This chapter begins by identifying the ways respondents have received information on EMFs. We then look at what channels respondents would prefer for receiving information.

4.1 Main channels for receiving information on potential health risks

When respondents are asked about the two main ways they received information on potential health risks linked to EMFs⁹, television (55%) and newspapers and magazines (38%) are by far the most frequently mentioned.

QC6. What are the two main ways you received this information about potential health risks linked to electromagnetic fields?



Base: Those that have received information, EU27 n=5345

⁸ See chapter 3

⁹ QC6 What are the two main ways you received this information about potential health risks linked to electromagnetic fields? ANSWERS: Newspapers and magazines; Specialist publications (science or health journals); Official publications; Books; Television; Radio; Discussions with friends and relatives; Personalised correspondence; The Internet; Exhibitions and conferences; Information at your workplace; Specific courses/ seminars; Instruction manuals; Other (SPONTANEOUS); Don't know.

The Internet is mentioned by a further fifth (19%) of respondents, followed by specialist publications (14%), discussions with friends and relatives (12%) and radio (10%). Other channels of information, such as official publications, institution manuals, seminars, information in the workplace, books, conferences and personalised correspondence are each mentioned by fewer than 6% of the respondents.

Unlike most of the issues discussed in this report, there are no comparisons with responses from four years previously, as this particular aspect was not covered in the 2006 survey. Neither is an analysis of the situation in separate countries included in this chapter. The base at the national level is not sufficient for us to draw reliable conclusions.

4.2 Preferred ways of receiving information on potential health risks of EMFs

Looking now at the two information channels through which respondents would like to receive information on potential health risks of EMFs¹⁰, **television** (59%) and **newspapers and magazines** (31%) are by far the most popular. These are followed by the Internet (15%), specialist publications, official publications and radio (all 11%). Only small number of respondents mention other sources, such as personalised correspondence, instruction manuals (both 6%), discussion with relatives (4%), books, information at the workplace (both 3%), conferences and specific seminars (both 2%).

The following table lists 13 possible channels suggested to respondents. In this report, only those for which 10% or more opted are discussed in detail.

¹⁰ QC8 From the following, which are the two main ways you would like to receive information about potential health risks linked to electromagnetic fields? ANSWERS: Newspapers and magazines; Specialist publications (science or health journals); Official publications; Books; Television; Radio; Discussions with friends and relatives; Personalised correspondence; The Internet; Exhibitions and conferences; Information at your workplace; Specific courses/ seminars; Instruction manuals; Other (SPONTANEOUS); Don't know.

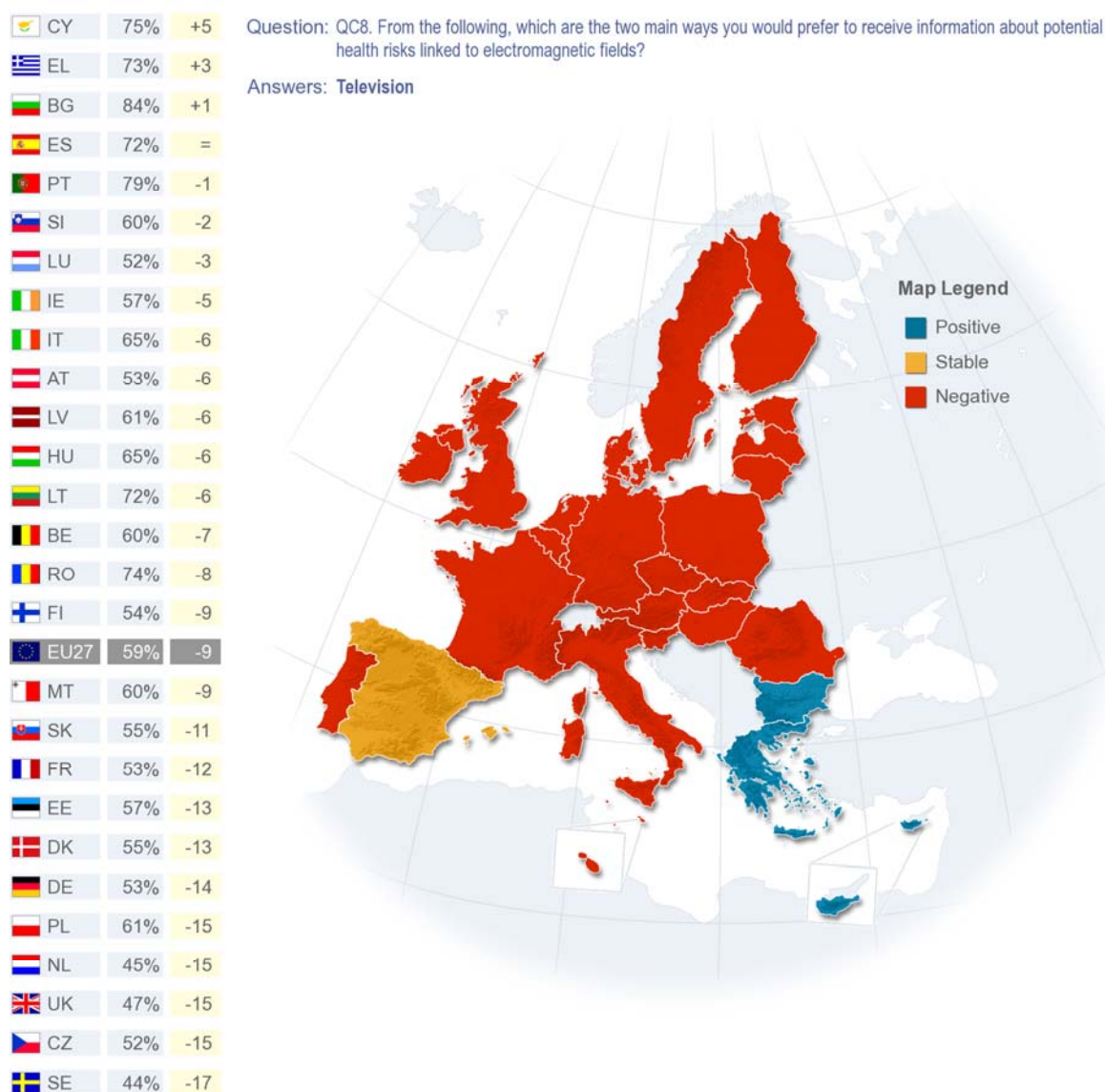
QC8 From the following, which are the two main ways you would prefer to receive information about potential health risks linked to electromagnetic fields? (MAX. 2 ANSWERS)

	Television	Newspapers and magazines	The Internet	Specialist publications (science or health journals)	Official publications	Radio	Personalised correspondence	Instruction manuals	Discussions with friends and relatives	Books	Information at your workplace	Exhibitions and conferences	Specific courses/ seminars	Other (SPONTANEOUS)	DK
EU27	59%	31%	15%	11%	11%	11%	6%	6%	4%	3%	3%	2%	2%	1%	5%
BE	60%	37%	15%	15%	13%	17%	5%	4%	3%	4%	<i>1%</i>	2%	<i>1%</i>	1%	3%
BG	84%	28%	18%	5%	5%	13%	1%	2%	6%	<i>1%</i>	<i>1%</i>	<i>0%</i>	<i>0%</i>	0%	4%
CZ	52%	28%	24%	19%	7%	8%	<i>1%</i>	14%	8%	2%	3%	<i>1%</i>	2%	0%	3%
DK	55%	36%	17%	16%	18%	12%	4%	13%	4%	3%	6%	<i>1%</i>	3%	0%	2%
DE	53%	36%	17%	11%	16%	8%	3%	11%	5%	2%	<i>1%</i>	<i>1%</i>	2%	1%	6%
EE	57%	39%	22%	9%	5%	18%	<i>0%</i>	5%	2%	2%	2%	1%	2%	1%	8%
IE	57%	37%	17%	9%	11%	20%	5%	4%	3%	2%	4%	2%	3%	1%	7%
EL	73%	25%	14%	8%	15%	9%	3%	3%	5%	4%	3%	<i>1%</i>	6%	0%	1%
ES	72%	29%	10%	<i>4%</i>	5%	15%	5%	3%	2%	3%	2%	3%	3%	1%	4%
FR	53%	29%	17%	20%	12%	15%	5%	4%	5%	4%	4%	6%	2%	0%	4%
IT	65%	29%	8%	16%	13%	<i>5%</i>	7%	5%	4%	2%	4%	<i>2%</i>	2%	1%	2%
CY	75%	28%	13%	21%	12%	13%	<i>1%</i>	3%	5%	3%	2%	<i>1%</i>	4%	1%	0%
LV	61%	24%	27%	10%	11%	12%	1%	2%	4%	4%	3%	<i>1%</i>	3%	1%	5%
LT	72%	31%	21%	<i>4%</i>	4%	19%	<i>1%</i>	4%	<i>1%</i>	<i>1%</i>	<i>1%</i>	<i>1%</i>	2%	2%	4%
LU	52%	43%	13%	14%	16%	14%	4%	5%	6%	2%	4%	3%	2%	1%	3%
HU	65%	23%	13%	12%	8%	12%	1%	5%	10%	2%	2%	<i>0%</i>	2%	1%	7%
MT	60%	25%	23%	6%	8%	20%	8%	<i>1%</i>	<i>1%</i>	2%	2%	<i>0%</i>	1%	1%	9%
NL	45%	42%	20%	10%	25%	6%	14%	14%	3%	<i>1%</i>	3%	<i>1%</i>	<i>1%</i>	1%	2%
AT	53%	42%	18%	17%	10%	10%	2%	5%	11%	5%	3%	2%	2%	1%	4%
PL	61%	<i>21%</i>	18%	6%	4%	16%	3%	5%	3%	2%	2%	<i>0%</i>	1%	0%	12%
PT	79%	35%	12%	<i>4%</i>	<i>2%</i>	7%	<i>1%</i>	<i>1%</i>	2%	2%	2%	<i>1%</i>	1%	1%	5%
RO	74%	27%	<i>7%</i>	8%	9%	19%	6%	3%	6%	2%	3%	<i>0%</i>	3%	1%	4%
SI	60%	31%	21%	10%	11%	15%	5%	7%	4%	2%	3%	<i>1%</i>	2%	3%	4%
SK	55%	24%	20%	22%	7%	11%	5%	9%	6%	3%	2%	<i>1%</i>	4%	0%	4%
FI	54%	49%	18%	13%	18%	7%	4%	6%	5%	2%	3%	<i>0%</i>	1%	1%	1%
SE	44%	35%	13%	14%	17%	11%	15%	16%	3%	<i>1%</i>	9%	<i>1%</i>	5%	1%	2%
UK	47%	36%	21%	<i>4%</i>	11%	8%	16%	2%	2%	3%	3%	1%	<i>0%</i>	2%	9%

* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

Television is by far the most popular channel for receiving information in all EU countries. While particularly high figures are recorded in Bulgaria (84%) and Portugal (79%), this medium is less favoured by respondents in Sweden (44%) and the Netherlands (45%).

Whilst television is still the most popular channel, it has decreased in popularity over the last four years (-9 points). In fact, only three countries (Cyprus, Greece and Bulgaria) are more enthusiastic about this communication medium than they were four years ago, by a maximum of five points.

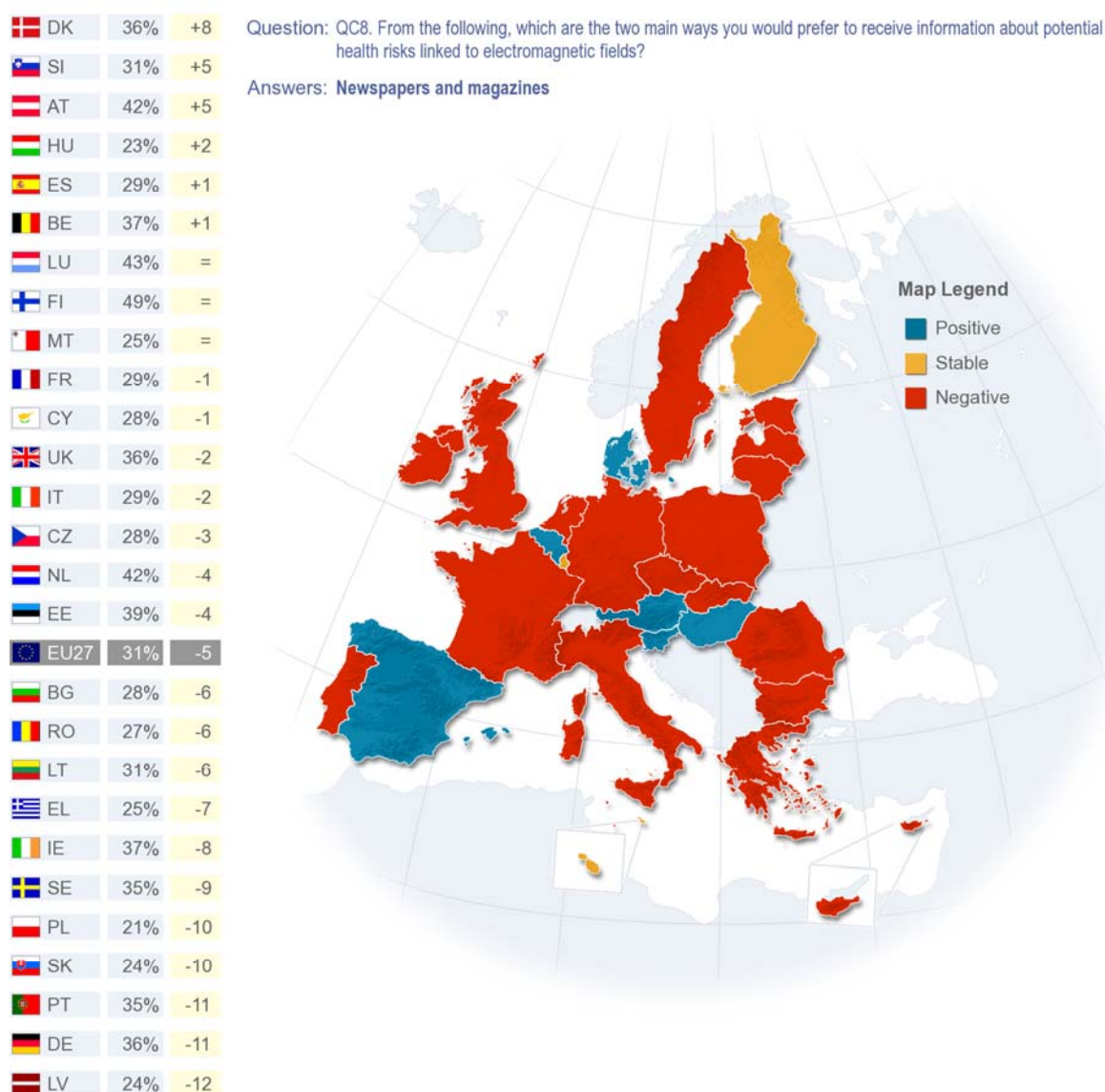


EB73.3, 03-04/2010 - EB66.2, 10-11/2006

While no significant variations are noted by gender or age, this medium is most popular among the least educated: 69% of those who left school at age 15 or earlier prefer to receive their information from television, compared with just 48% of the most educated segment. There are also noticeable variations by occupation with just 45% of managers and 55% of the self-employed selecting this medium compared with 64% of house persons and the unemployed and 63% of the retired.

Roughly a third (31%) of respondents opts for **newspapers and magazines** as one of the two ways they would prefer to receive information on these potential health risks. This figure has fallen from 36% in the previous survey.

The average conceals significant differences: 49% in Finland and 43% in Luxembourg (unchanged since 2006) compared with just 21% in Poland. While enthusiasm among respondents in Denmark for this method of communication has increased by eight points to 36%, and in Slovenia by five percentage points to 31%, the general trend for newspapers and magazines is downward and falls of ten points are observed in Poland, Slovakia, Portugal, Germany and Latvia.

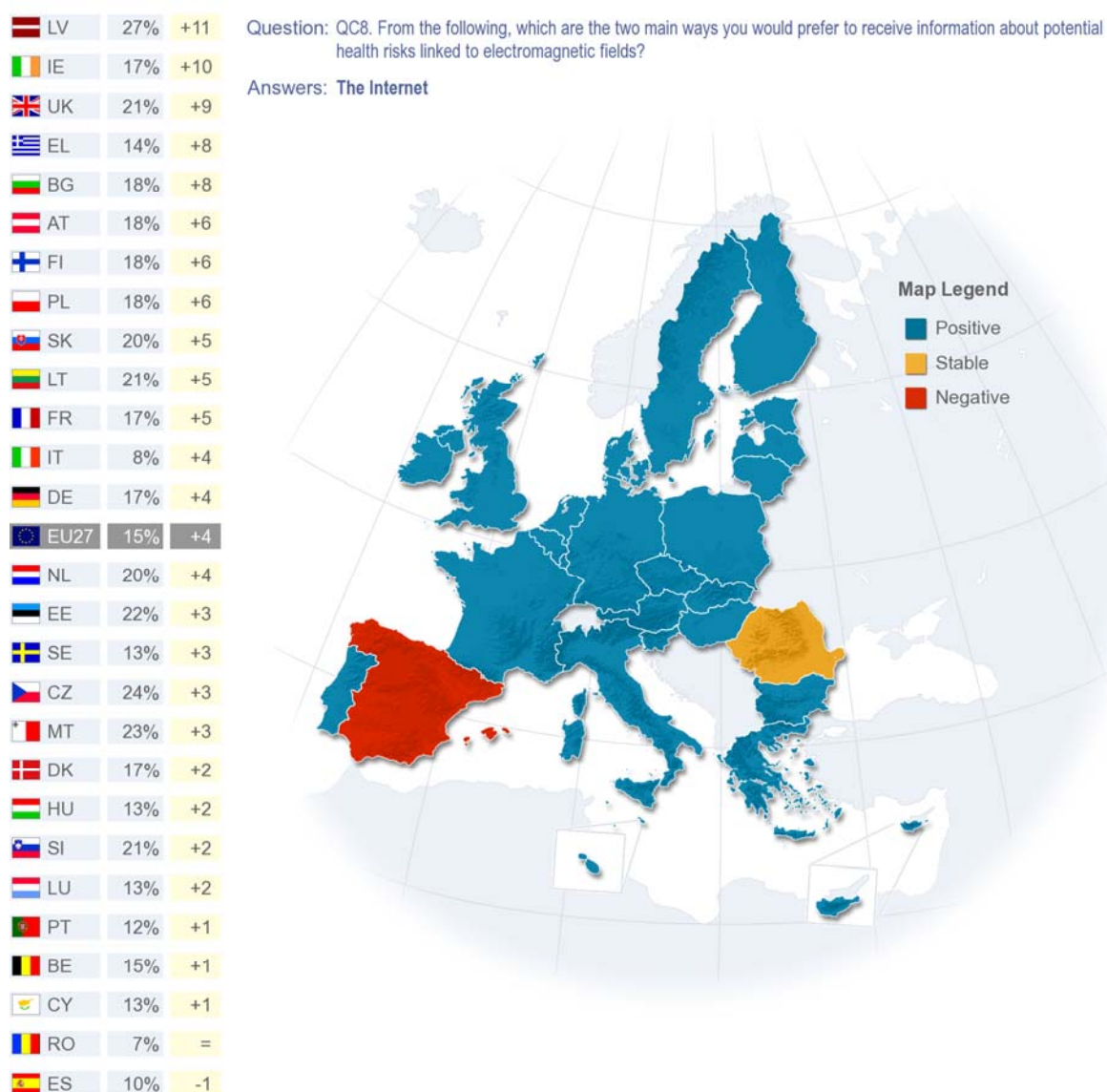


EB73.3, 03-04/2010 - EB66.2, 10-11/2006

There are no significant variations observed from a socio-demographic point of view.

About a seventh (15%) of those questioned say they would like to receive information on the health risks of EMFs over the **Internet**. This figure has risen significantly from the 11% recorded four years previously.

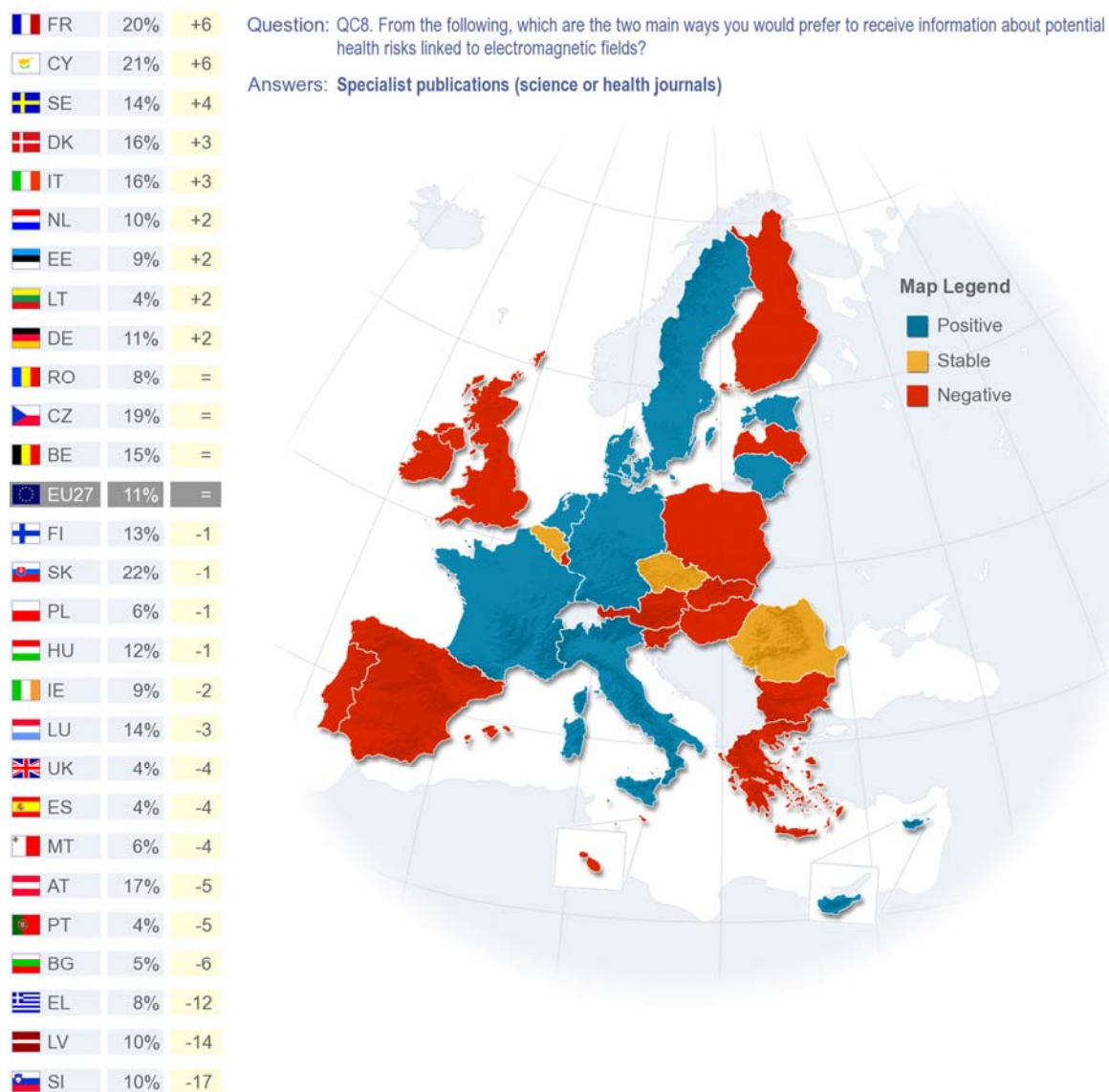
There are, however, large variations in the national data which make up the EU average, with figures of 27% in Latvia and 24% in the Czech Republic compared with just 8% in Italy and 7% in Romania. Noticeable increases in support for this new medium are seen in Ireland (7% to 17%), Latvia (16% to 27%) and the UK (12% to 21%). It is perhaps surprising to see Sweden ranking relatively low in this section as it is a country with a high level of Internet penetration.



EB73.3, 03-04/2010 - EB66.2, 10-11/2006

Preference for the Internet is best explained by age, education and occupation. While nearly a third (30%) of the youngest age group would prefer to receive information regarding EMFs via the Internet, only 5% of those aged 55 and above have the same preference. Education is also an important determinant in the selection of this medium: only 4% of the least educated opt for the Internet as a way of receiving information on this subject, and the equivalent figure for those educated to age 20 or above stands at more than five times this figure at 22%. Occupation is responsible for even more striking variations. Combining the factors of education and age, a third (32%) of students opt for this medium. A high figure of 26% is also recorded amongst managers. The figures fall to 16% for manual workers and the unemployed, 10% for house persons and even further – to just 4% – among the retired.

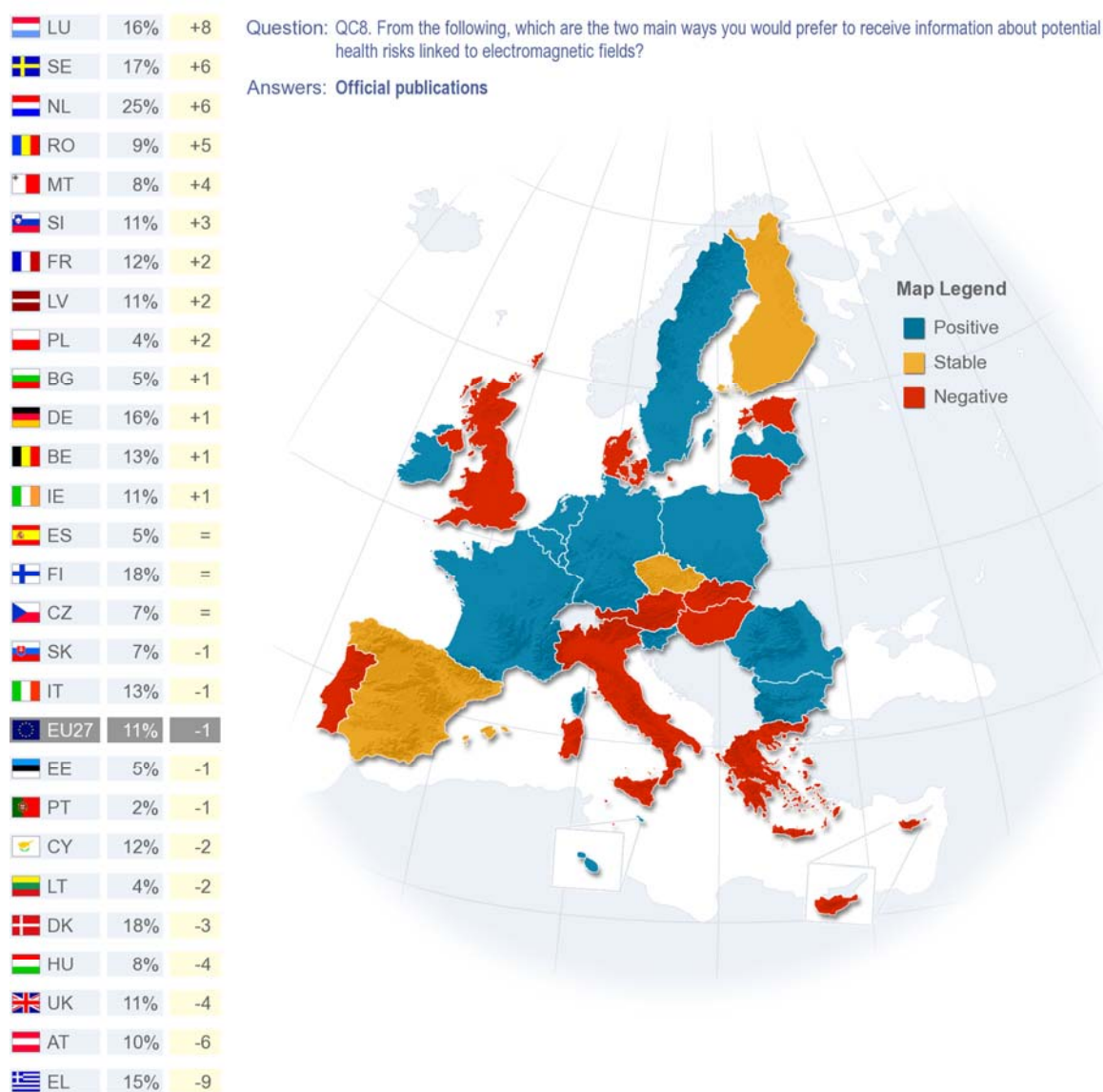
Specialist science or health publications are favoured by 11% of the poll. While high figures are seen in Slovakia (22%), Cyprus (21%) and France (20%), only 4% of those polled in Spain, Lithuania, Portugal and the UK opt for specialist publications.



EB73.3, 03-04/2010 - EB66.2, 10-11/2006

No socio-demographic variations of note are observed.

A further tenth (11%) of respondents favour **official publications**. Relatively high numbers of respondents in the Netherlands (25%), Denmark and Finland (18%) prefer this information source, which is cited by just 2% in Portugal, 4% in Poland and Lithuania.

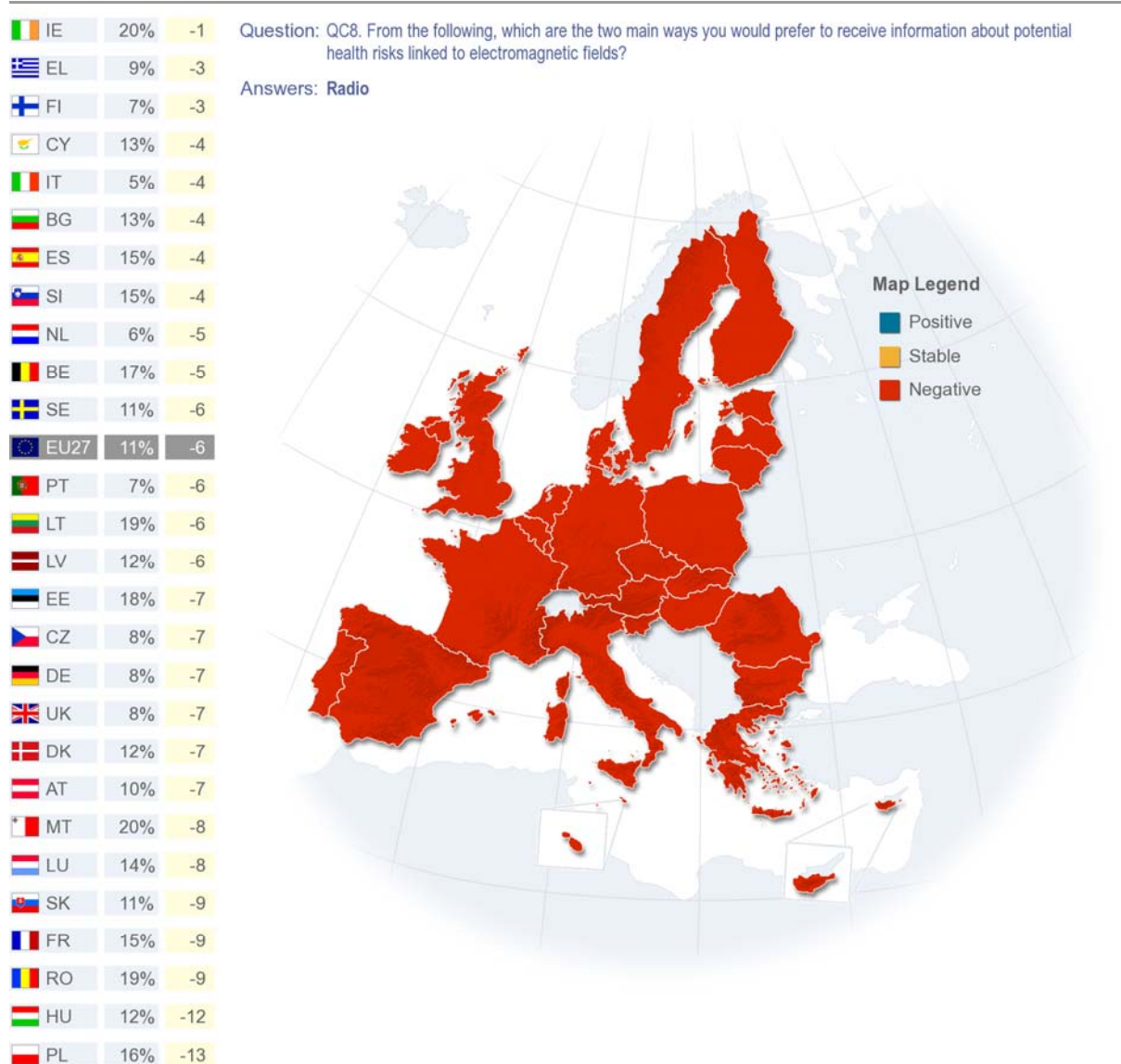


EB73.3, 03-04/2010 - EB66.2, 10-11/2006

No socio-demographic variations of note are observed.

A tenth (11%) of the poll favours **radio** as one of their two main ways of receiving this information. While a fairly large proportion of respondents in Ireland and Malta (both 20%) and Lithuania (19%) prefer this medium, only 5% of those in Italy, 6% in the Netherlands and 7% in Finland mention radio.

Across all 27 Member States, there is a decline in preference for radio, ranging from one point in Ireland to 13 points in Poland.



EB73.3, 03-04/2010 - EB66.2, 10-11/2006

The key point that emerges from this analysis is that, in general, most channels have lost ground in terms of preference. Declines are seen for all of the key channels, including television, newspapers and magazines as well as radio. Only science and health publications hold their position.

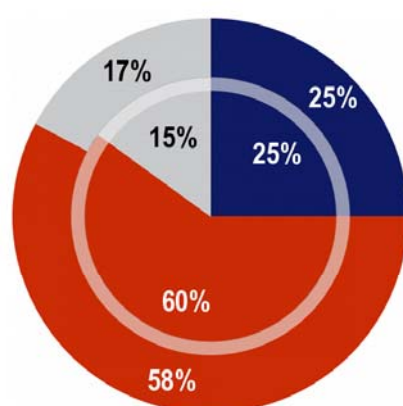
5. THE ROLE OF PUBLIC AUTHORITIES AND OF THE EU

In this final section, we analyse the role of public authorities in providing effective protection against the potential health risks of electromagnetic fields. The chapter then looks at ways in which the EU could act to support the work being carried out nationally.

5.1 Effectiveness of protection provided by public authorities against potential health risks

The first part of this final chapter looks at whether respondents believe that public authorities act effectively to protect them from the potential health risks linked to electromagnetic fields¹¹. Just a quarter (25%) of respondents believe that public bodies act effectively to protect them from the potential health risks of electromagnetic fields. However, the vast majority - 58% - believe that public authorities do not act effectively in this regard. A further 17% have no opinion on the matter.

QC9. In your opinion, do public bodies act effectively or not to protect you from potential health risks linked to electromagnetic fields?



- Yes, very effectively + Yes, fairly effectively
- No, not very effectively + No, not at all effectively
- Don't know

Inner pie : EB66.2, 10-11/2006
Outer pie : EB73.3, 03-04/2010

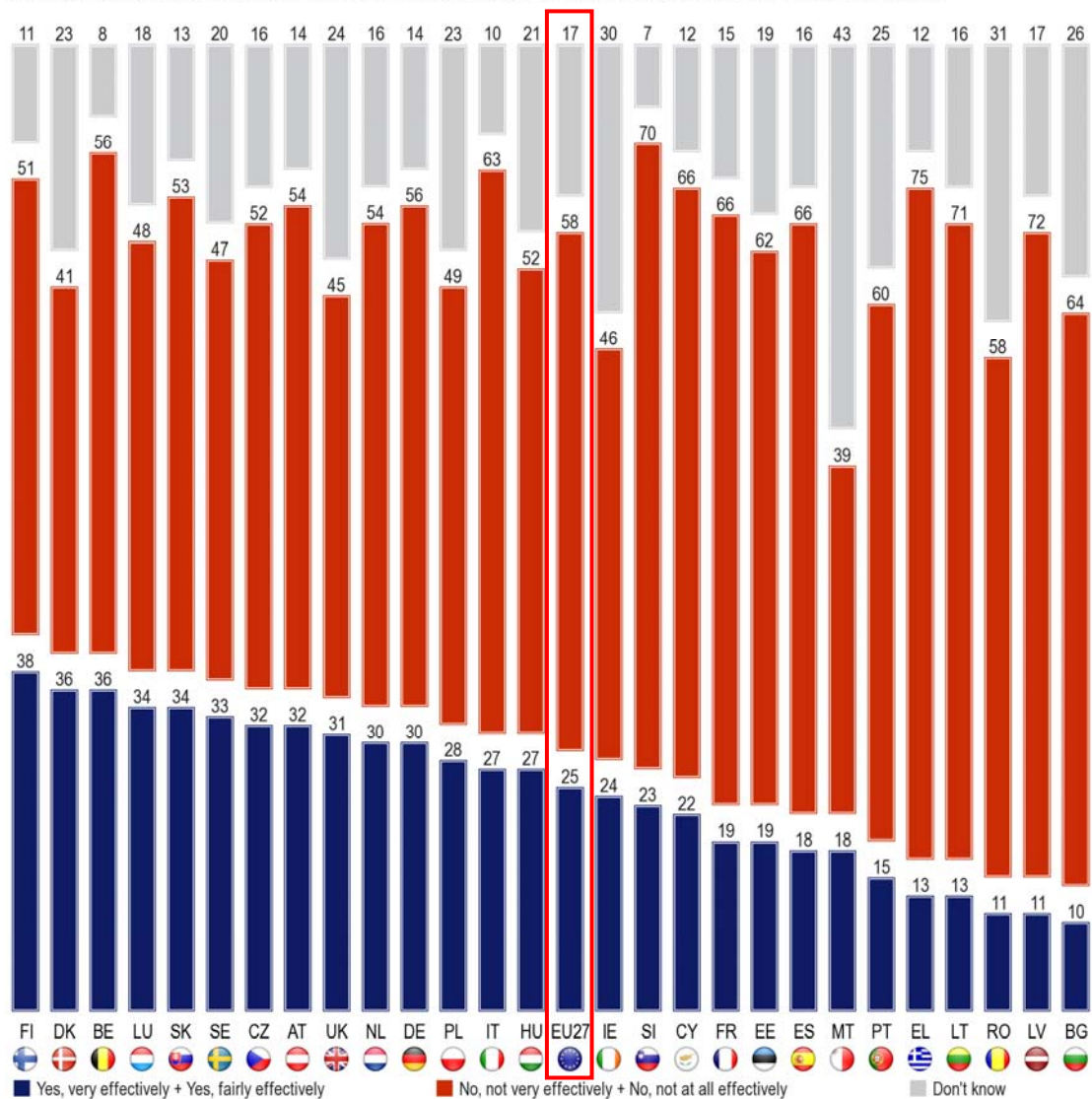
EU27

¹¹ QC9 In your opinion, do public bodies act effectively to protect you from potential health risks linked to electromagnetic fields? ANSWERS: Yes, very effectively; Yes, fairly effectively; No, not very effectively; No, not at all effectively; Don't know.

The situation has remained more or less the same since EB66, four years ago. Only minor changes have occurred: dissatisfaction with the protection that public authorities offer is down by two points, while the 'don't know' figure has risen by the same amount, to 17%.

In every EU country, the majority of those polled believe public authorities are not acting effectively. However, there are considerable variations between countries across the EU. The view that public authorities do not offer effective protection is particularly strong in Greece (75%), Latvia (72%), Lithuania (71%) and Slovenia (70%). Satisfaction with the protection offered is a minority view in all countries, but relatively high numbers are recorded in Finland (38%), Denmark and Belgium (both 36%). Another significant finding is that a large proportion of people have no opinion on the matter. This figure ranges from 6% in Belgium to 43% in Malta.

QC9. In your opinion, do public bodies act effectively or not to protect you from potential health risks linked to electromagnetic fields?



It is interesting to note how opinions have changed on this crucial issue on a country-by-country basis. While respondents in Spain (+15 points), Bulgaria (+8 points) and Romania (+6 points) now are more likely to believe that public authorities act ineffectively in offering protection, shifts in the opposite direction are recorded in most other countries, not least Luxembourg (-20 points), Germany (-13) and Greece (-12).

5.2 Measures to be taken by the EU to support the national authorities





























In the light of the general criticism of the role of public authorities in this aspect of public health protection, it is interesting to look at how respondents feel that the EU should act to support national authorities in this area.¹² Respondents are therefore asked how the European Union could intervene to support national authorities, which, as noted above, are seen to be doing an ineffective job in protecting them from these potential health risks.

The most frequently cited solution, given by nearly half (48%) of EU respondents, is that the European Union should **inform the public** as to the potential health risks linked to EMFs. The second and third most popular recommendations are **setting safety standards for products** (39%) and **developing guidance for public health protection** (36%). A further third (31%) of respondents cite **financing research** as a possible measure. Similarly strong support is given to **setting safety standards for working conditions** (27%) and **reviewing the status of scientific evidence** (23%). The option to **harmonise national policies** is mentioned by a sixth (16%) of respondents.

It is not possible to compare views over time as this question was not asked in the 2006 survey.





























¹² QC10 And, in your opinion, how could the European Union intervene to support the (NATIONALITY) authorities in protecting you from potential health risks linked to electromagnetic fields? RESPONSES: In developing guidance for public health protection; In reviewing the status of scientific evidence; In financing research; In harmonising national policies; In informing the public; In setting safety standards for products; in setting safety standards for working conditions; Other (SPONTANEOUS); None (SPONTANEOUS); Don't know.

QC10 And, in your opinion, how could the European Union intervene to support the (NATIONALITY) authorities in protecting you from potential health risks linked to electromagnetic fields? (MULTIPLE ANSWERS POSSIBLE)

		In informing the public	In setting safety standards for products	In developing guidance for public health protection	In financing research	In setting safety standards for working conditions	In reviewing the status of scientific evidence	In harmonising national policies	None (SPONTANEOUS)	Other (SPONTANEOUS)	DK
 EU27		48%	39%	36%	31%	27%	23%	16%	2%	1%	11%
 BE		51%	39%	43%	34%	28%	28%	27%	1%	1%	6%
 BG		41%	45%	33%	21%	28%	11%	9%	1%	1%	21%
 CZ		46%	51%	35%	20%	31%	18%	4%	2%	0%	10%
 DK		48%	49%	45%	38%	43%	32%	<i>18%</i>	2%	1%	8%
 DE		54%	53%	45%	32%	35%	33%	<i>21%</i>	3%	0%	6%
 EE		46%	45%	34%	42%	37%	15%	<i>10%</i>	2%	1%	13%
 IE		55%	47%	43%	32%	39%	26%	<i>16%</i>	0%	1%	14%
 EL		67%	52%	40%	39%	36%	26%	<i>19%</i>	1%	0%	5%
 ES		57%	36%	30%	26%	27%	17%	<i>16%</i>	1%	1%	10%
 FR		57%	32%	23%	42%	23%	30%	26%	1%	0%	5%
 IT		38%	35%	49%	31%	22%	22%	<i>14%</i>	1%	1%	8%
 CY		77%	70%	57%	47%	60%	16%	<i>14%</i>	0%	2%	3%
 LV		38%	27%	27%	33%	25%	9%	3%	4%	0%	14%
 LT		41%	35%	20%	27%	30%	9%	8%	5%	1%	15%
 LU		55%	38%	24%	37%	25%	22%	<i>19%</i>	2%	1%	8%
 HU		51%	46%	32%	27%	27%	27%	<i>14%</i>	3%	1%	8%
 MT		38%	32%	36%	25%	21%	16%	6%	1%	0%	29%
 NL		44%	45%	56%	33%	31%	27%	31%	2%	0%	7%
 AT		63%	55%	50%	29%	40%	34%	<i>16%</i>	4%	1%	4%
 PL		32%	31%	27%	27%	22%	13%	8%	3%	0%	24%
 PT		56%	33%	22%	18%	19%	11%	<i>10%</i>	1%	1%	17%
 RO		44%	27%	23%	26%	18%	9%	9%	1%	1%	28%
 SI		67%	51%	35%	35%	44%	<i>18%</i>	20%	2%	2%	4%
 SK		52%	42%	32%	27%	24%	23%	<i>13%</i>	1%	0%	7%
 FI		54%	47%	27%	47%	25%	31%	22%	3%	1%	2%
 SE		44%	54%	40%	54%	35%	52%	27%	1%	1%	6%
 UK		40%	30%	33%	23%	23%	18%	<i>10%</i>	5%	2%	20%

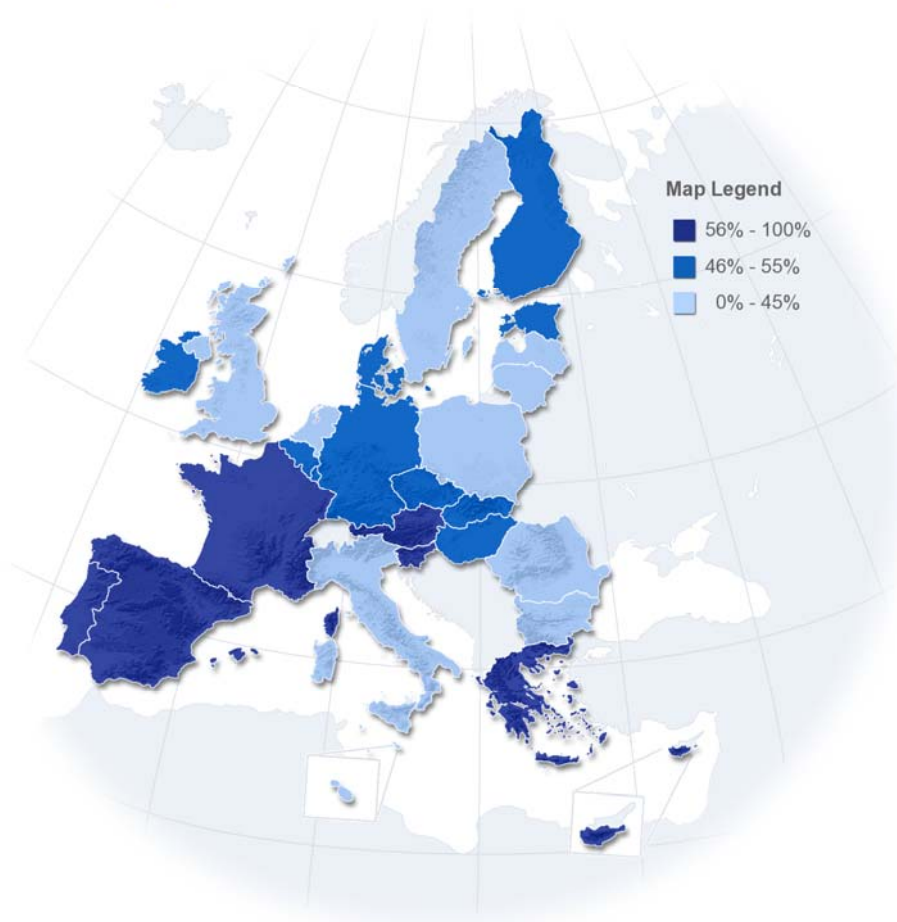
* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

Results at the national level show that the majority in 21 countries would like to see the EU providing public information. Particularly high figures are recorded in Cyprus (77%), Slovenia and Greece (both 67%). Less support for this action is reported in Poland (32%), Malta and Latvia (both 38%).

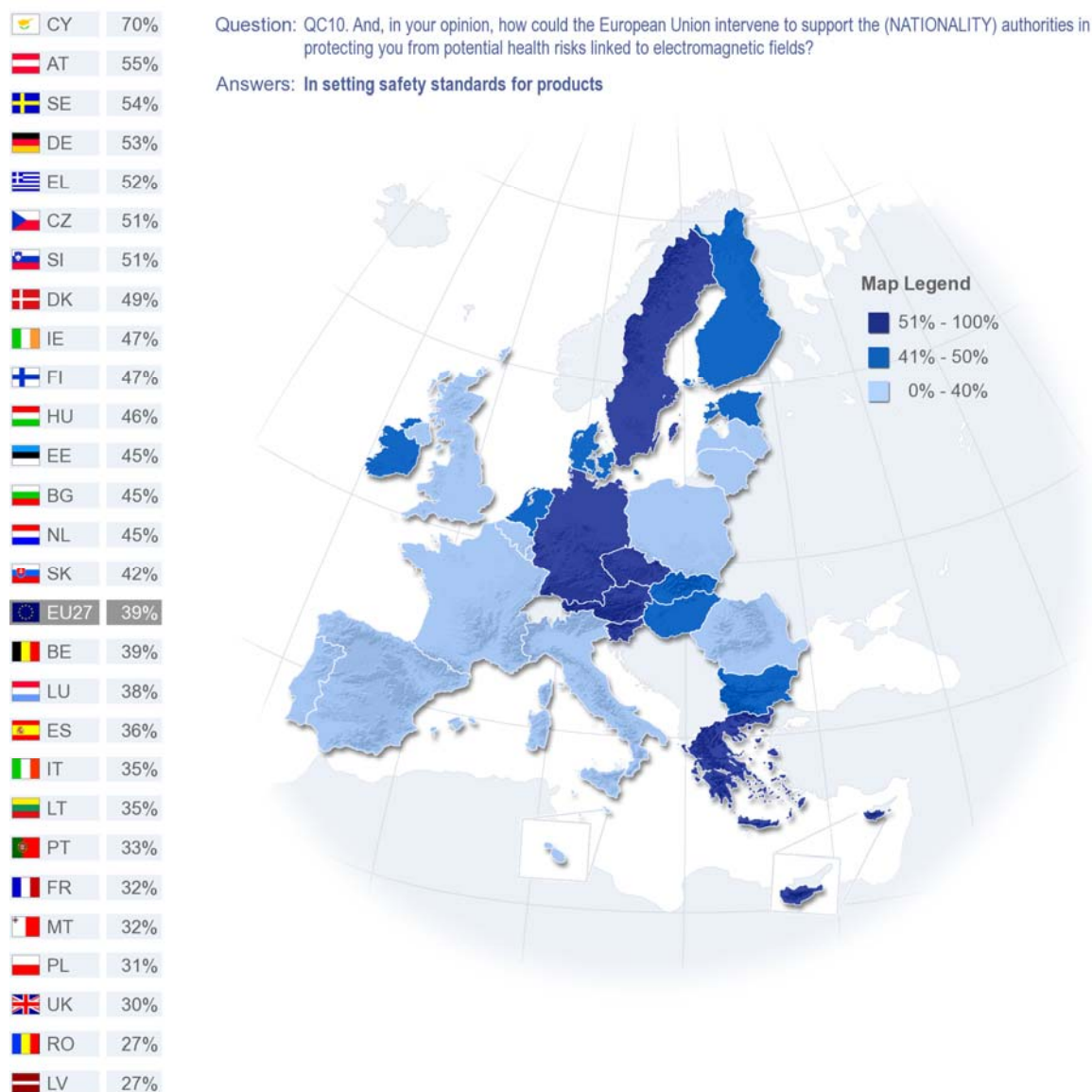
 CY	77%
 SI	67%
 EL	67%
 AT	63%
 ES	57%
 FR	57%
 PT	56%
 IE	55%
 LU	55%
 DE	54%
 FI	54%
 SK	52%
 BE	51%
 HU	51%
 DK	48%
 EU27	48%
 EE	46%
 CZ	46%
 RO	44%
 NL	44%
 SE	44%
 BG	41%
 LT	41%
 UK	40%
 IT	38%
 LV	38%
 MT	38%
 PL	32%

Question: QC10. And, in your opinion, how could the European Union intervene to support the (NATIONALITY) authorities in protecting you from potential health risks linked to electromagnetic fields?

Answers: In informing the public

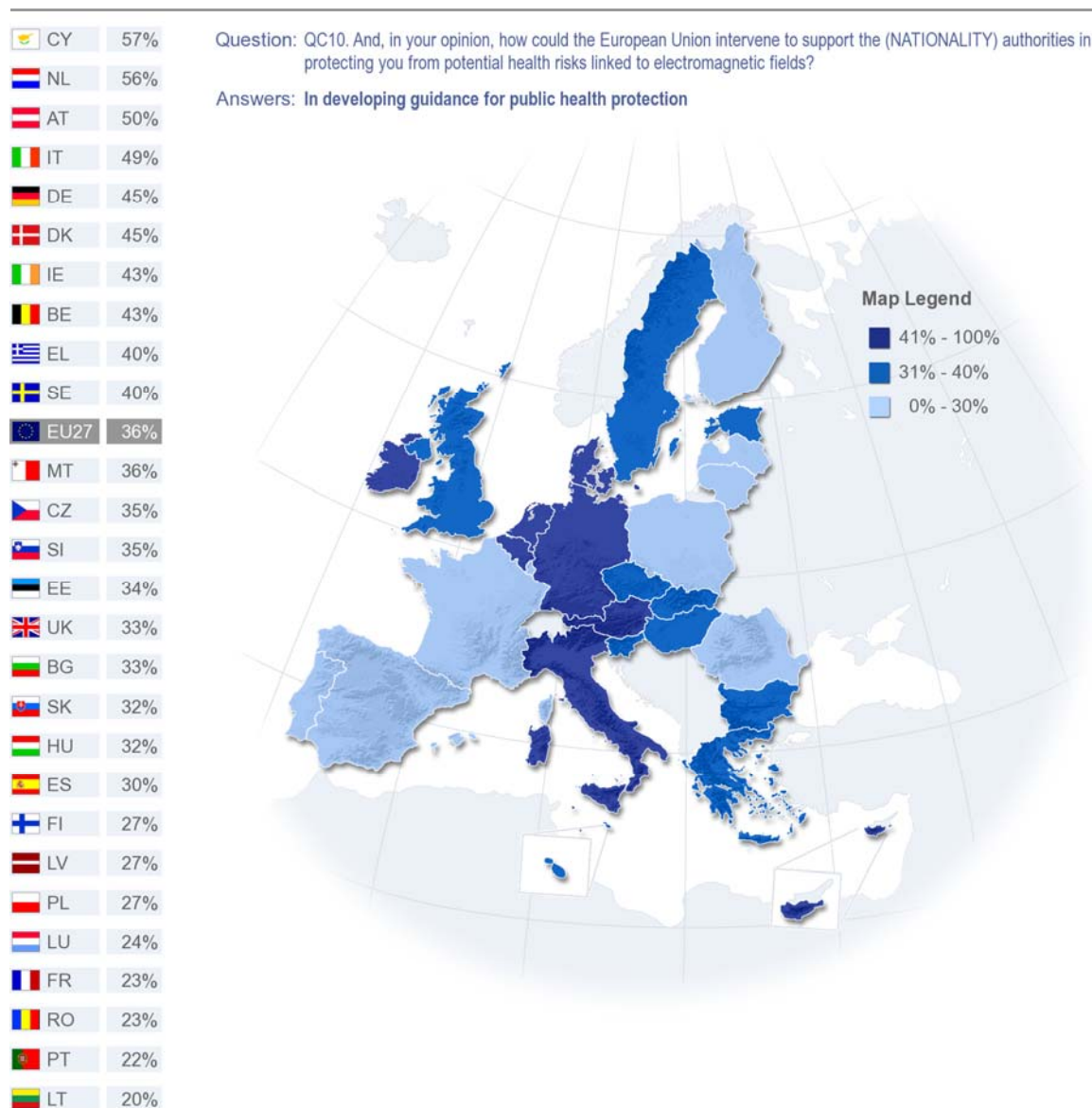


Setting safety standards for products, which is the second most favoured action at the EU level, receives particularly strong support from respondents in Cyprus (70%), Sweden (54%) and Germany (53%). The majority of respondents in the Czech Republic (51%), Denmark (49%) and Bulgaria (45%) also favour this measure at the EU level. Less support is reported in Latvia, Romania (both 27%) and the UK (30%).



Education is a major factor in responses to this question. This item is supported by just 33% of those educated to age 15 or earlier compared with 47% of those educated to age 20 or beyond. There are also noticeable variations by occupation. 50% of managers think this could be a way in which the EU should intervene to support national authorities - a view held by only 34% of house persons, 35% of students, 36% of the retired and 37% of manual workers and the unemployed.

Slightly more than a third (36%) of the total poll believe that the EU should **develop guidance for public health protection** as a method of supporting national authorities' work in this area. This is thus the third ranking measure that the respondents assign to the EU. The majority (49%) of respondents in Italy make this their first choice, as do an even larger majority (56%) in the Netherlands. However, only 22% of the Portuguese and just 20% of Lithuanians select this as a method of EU support.



This measure receives support from 41% of the most educated compared with just 31% of those who left school at the earliest opportunity. It also finds favour with 42% of managers, 40% of the self-employed and 39% of other white-collar workers compared with just 29% of the unemployed and 33% of the retired.

The other measures cited by respondents receive slightly less support. A little less than a third (31%) believe that a suitable course of action to support national authorities in this area would be for the EU to **finance research**. This measure is supported by more than half (54%) of respondents in Sweden and is also cited by 47% of those in Cyprus and Finland. However, it receives much less support in the Czech Republic (20%) and Portugal (18%).

From a socio-demographic point of view, financing research is cited by 38% of the most educated segment compared with just 24% of those who left school aged 15 or earlier. There are also noticeable differences by occupation. 38% of managers and 35% of other white-collar workers support the research option compared with just 29% of manual workers and the unemployed, 28% of the retired and 26% of house persons.

A further quarter (27%) of the total poll believe that the EU should be involved in **setting safety standards for working conditions**. This figure reaches 60% in Cyprus and relatively high levels are recorded in Slovenia (44%), Denmark (43%) and Austria (40%). In Romania and Portugal, however, support stands at only 18% and 19% respectively.

A socio-demographic analysis reveals no patterns by gender, age or education, though this measure receives strong support from managers (35%) compared with just 20% of house persons.

Just under a quarter (23%) of the total EU poll believe that the EU should be involved in **reviewing the status of scientific evidence**. While this measure is favoured by just 9% in Latvia, Lithuania and Romania, 52% of respondents in Sweden and 34% respondents in Austria support it.

This measure receives support from 29% of the most educated group compared with just 17% of those who had left school aged 15 or earlier. There is a similar variation in results analysed by occupation. 35% of managers hold this view compared with just 19% of the unemployed and 20% of house persons.

A further 16% of respondents believe EU intervention should take the form of **harmonising national policies**. This view has major support in the Netherlands (31%), Belgium and Sweden (both 27%), but is not shared in Latvia, the Czech Republic and Malta where only 3%, 4% and 6% respectively gave support to the idea.

20% of 40 to 54 year olds support this idea compared with just 11% of people aged between 15 and 24 – almost twice as many. Education has a similar impact, with twice as many (24%) of the most educated segment giving this response compared with just 12% of those who left school at the earliest opportunity. 27% of managers also opt for the harmonisation of national policies – a view held by just 12% of house persons and the unemployed.

CONCLUSION

The objective of this survey is to help understand the perception that the EU public has of the links between electromagnetic fields and health within the broader context of the substantial scientific work into the long and short term effects of electromagnetic fields over the last decade.

The broad conclusion that emerges is that when asked which factors they believe affect their health, the public regards objects that generate EMFs as less potentially dangerous than items such as chemicals, or the quality of food and drinking water. When focussing exclusively on objects that generate EMFs, power lines and mobile phone masts generate the highest level of concern (cited by 35% and 33% of the poll respectively). Mobile telephones, the most commonplace item that generates EMFs, are believed by 26% of respondents to have a significant impact on health. Overall, there has been a slight decrease (by 2 points) in the proportion concerned about the potential health risks of electromagnetic fields since the previous survey in 2006.

Surprisingly, there has been a noticeable decline in EU respondents' awareness of the sources of EMFs over the past four years. While in 2006 23% of those polled spontaneously said that the nine items presented produced EMFs, this figure has more than halved to 9%. While information levels produce variations in general public concern over health issues, concerns appear to vary much more on a country by country basis than according to whether or not people have received information on potential health risks.

Only 20% of respondents say that they have received information on the potential health effects of electromagnetic fields. It is worth noting that more than half (58%) of respondents who have received this information are satisfied with its quality – a figure more than double the 28% recorded four years ago. In terms of the way this information is received, while the major channel, television (55%), is in decline as a medium of choice, it remains as the preferred channel, followed by newspapers and magazines. It would seem that the Internet is likely to become one of the preferred channels of communication in the near future as it is chosen by more young people.

Regardless of whether or not EMFs do actually damage public health, the average EU citizen believes that public authorities do not do enough to protect them from their potential health risks. Across the EU 58% of respondents hold this view, a level reaching 75% in Greece.

In the light of this concern over national authorities' lack of action, it is unsurprising that nearly half (48%) of respondents feel that the EU should inform the public of these potential health risks as well as setting safety standards (39%) for products and developing guidance for public health protection (36%).

EUROBAROMETER SPECIAL N° 347

TECHNICAL SPECIFICATIONS

Between the 12th of March and the 1st of April 2010, TNS Opinion & Social, a consortium created between TNS plc and TNS opinion, carried out the wave 73.3 of the EUROBAROMETER, on request of the EUROPEAN COMMISSION, Directorate-General for Communication, "Research and Political Analysis".

The SPECIAL EUROBAROMETER N° 347 is part of the wave 73.3 and covers the population of the respective nationalities of the European Union Member States, resident in each of the Member States and aged 15 years and over. The basic sample design applied in all states is a multi-stage, random (probability) one. In each country, a number of sampling points was drawn with probability proportional to population size (for a total coverage of the country) and to population density.

In order to do so, the sampling points were drawn systematically from each of the "administrative regional units", after stratification by individual unit and type of area. They thus represent the whole territory of the countries surveyed according to the EUROSTAT NUTS II (or equivalent) and according to the distribution of the resident population of the respective nationalities in terms of metropolitan, urban and rural areas. In each of the selected sampling points, a starting address was drawn, at random. Further addresses (every Nth address) were selected by standard "random route" procedures, from the initial address. In each household, the respondent was drawn, at random (following the "closest birthday rule"). All interviews were conducted face-to-face in people's homes and in the appropriate national language. As far as the data capture is concerned, CAPI (*Computer Assisted Personal Interview*) was used in those countries where this technique was available.

ABBREVIATIONS	COUNTRIES	INSTITUTES	N° INTERVIEWS	FIELDWORK DATES		POPULATION 15+
BE	Belgium	TNS Dimarso	1.030	14/03/10	01/04/10	8.866.411
BG	Bulgaria	TNS BBSS	1.001	12/03/10	21/03/10	6.584.957
CZ	Czech Rep.	TNS Aisa	1.000	13/03/10	28/03/10	8.987.535
DK	Denmark	TNS Gallup DK	1.026	15/03/10	30/03/10	4.533.420
DE	Germany	TNS Infratest	1.481	12/03/10	30/03/10	64.545.601
EE	Estonia	Emor	1.000	12/03/10	29/03/10	916.000
IE	Ireland	MRBI	1.000	12/03/10	28/03/10	3.375.399
EL	Greece	TNS ICAP	1.000	12/03/10	28/03/10	8.693.566
ES	Spain	TNS Demoscopia	1.004	16/03/10	29/03/10	39.035.867
FR	France	TNS Sofres	1.008	12/03/10	29/03/10	47.620.942
IT	Italy	TNS Infratest	1.038	12/03/10	27/03/10	51.252.247
CY	Rep. of Cyprus	Synovate	507	13/03/10	29/03/10	651.400
LV	Latvia	TNS Latvia	1.005	13/03/10	29/03/10	1.448.719
LT	Lithuania	TNS Gallup Lithuania	1.016	12/03/10	25/03/10	2.849.359
LU	Luxembourg	TNS ILReS	520	12/03/10	26/03/10	404.907
HU	Hungary	TNS Hungary	1.030	12/03/10	28/03/10	8.320.614
MT	Malta	MISCO	500	12/03/10	28/03/10	335.476
NL	Netherlands	TNS NIPO	1.000	12/03/10	30/03/10	13.288.200
AT	Austria	Österreichisches Gallup-Institut	1.000	12/03/10	28/03/10	6.973.277
PL	Poland	TNS OBOP	1.000	13/03/10	29/03/10	32.306.436
PT	Portugal	TNS EUROTESTE	1.024	16/03/10	29/03/10	8.080.915
RO	Romania	TNS CSOP	1.022	12/03/10	23/03/10	18.246.731
SI	Slovenia	RM PLUS	1.015	12/03/10	29/03/10	1.748.308
SK	Slovakia	TNS AISA SK	1.030	13/03/10	28/03/10	4.549.954
FI	Finland	TNS Gallup Oy	1.001	15/03/10	31/03/10	4.412.321
SE	Sweden	TNS GALLUP	1.015	12/03/10	30/03/10	7.723.931
UK	United Kingdom	TNS UK	1.329	12/03/10	28/03/10	51.081.866
TOTAL EU27			26.602	12/03/10	01/04/10	406.834.359

For each country a comparison between the sample and the universe was carried out. The Universe description was derived from Eurostat population data or from national statistics offices. For all countries surveyed, a national weighting procedure, using marginal and intercellular weighting, was carried out based on this Universe description. In all countries, gender, age, region and size of locality were introduced in the iteration procedure. For international weighting (i.e. EU averages), TNS Opinion & Social applies the official population figures as provided by EUROSTAT or national statistic offices. The total population figures for input in this post-weighting procedure are listed above.

Readers are reminded that survey results are estimations, the accuracy of which, everything being equal, rests upon the sample size and upon the observed percentage. With samples of about 1,000 interviews, the real percentages vary within the following confidence limits:

Observed percentages	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Confidence limits	± 1.9 points	± 2.5 points	± 2.7 points	± 3.0 points	± 3.1 points