

## A3.5 Unrecorded alcohol

Clara Vital, Cláudia Urbano, Casimiro Balsa and Esa Österberg<sup>1</sup>

### Introduction

Drinking alcohol is an important public health problem. It is an even more important problem when there are many different ways of acquiring the substance. The amounts of alcohol acquired from some sources are recorded and published in official alcohol consumption statistics. Alcohol consumption figures may be based on data on alcohol taxation or data from formal off- and on-premise alcohol sales, while other ways of acquiring alcohol go beyond these official statistics, like amounts of alcoholic beverages smuggled into the country or amounts of alcoholic beverages travellers are importing when returning to their home countries. Unrecorded alcohol consumption is estimated to be a significant part of all alcohol drunk by human beings. According to the World Health Organization (WHO), worldwide almost a quarter of all alcohol consumed consists of unrecorded alcohol. In the area of WHO EURO the corresponding figure is 17 per cent (WHO 2014). That is why questions screening unrecorded alcohol can be important in a survey research on alcohol consumption.

As WHO states, unrecorded alcohol refers to alcohol that is not taxed in the country where it is consumed because it is usually produced, distributed and sold outside the formal channels under government alcohol control. Unrecorded alcohol consumption in a country usually includes consumption of home-made or informally produced alcohol (legal or illegal), smuggled alcohol, drinking of alcohol intended for industrial or medical uses, and alcohol obtained through cross-border shopping (which usually is recorded in a different jurisdiction). Sometimes these alcoholic beverages are traditional drinks that are produced and consumed in the community or in homes. Home-made or informally produced alcoholic beverages are mostly fermented products made in Europe from sugar, wheat or fruits. Unrecorded consumption also includes so-called surrogate alcohol, commonly ethanol that has not been produced as beverage alcohol but is used as such, e.g. mouthwashes, denatured alcohol, medicinal tinctures, aftershaves and perfumes (WHO 2014). In this chapter we present information on unrecorded alcohol supply, based on the set of optional questions that eight different surveys added to their RARHA SEAS. These included Croatia, Finland, Greece, Hungary, Poland, Portugal, Spain and Spain-Catalonia<sup>2</sup>.

### Estimating unrecorded alcohol consumption

Throughout its history alcohol and drinking alcohol have been controlled some way or another. Earlier in history alcohol control was based almost totally on informal alcohol control, i.e. on different norms and traditional habits, not on laws and official regulations. When official regulations grew stronger and more comprehensive, different kinds of measures of alcohol consumption also became more readily available and it became easier to estimate and calculate the amount of alcohol consumed. For instance if only the landowners had the right to distil spirits and if the size of the stills or the quantity which the landowners were allowed to distil were regulated, one had the possibility of estimating the total amount of spirits production in a country. Likewise, if alcohol production and sales were taxed, the amount of taxes collected was a good basis for an estimate of alcohol consumption.

Taken together, taxing alcoholic beverages and putting different kinds of alcohol control measures into effect also increased our knowledge of the alcohol field and often gave some

<sup>1</sup> We thank the following persons who contributed with material to this RARHA SEAS Unrecorded alcohol report Begona Birme (Spain), Iva Franelić (Croatia), Anna Kokkevi (Greece), Martina Markelić (Croatia), Jacek Moskalewicz (Poland), Ljiljana Muslić (Croatia), Lidia Segura Garcia (Spain-Catalonia), Ioanna Siamou (Greece) and Erica Vandlik (Hungary).

<sup>2</sup> Although both samples are coming from one sole country (Spain) for practical purposes they will be presented separately in the text, figures, tables and maps under the names "Spain" for the national sample and "Spain-Catalonia" for the Spanish Autonomous Community of Catalonia.

tools for estimating the level of alcohol consumption in that society. Throughout history, new control measures have also changed some elements of unrecorded alcohol consumption to recorded alcohol consumption. For instance nowadays, because of increased control over travellers' alcohol imports, in Norway we know exactly how much alcoholic beverages have been sold tax free to incoming travellers. Despite these increasing possibilities it is, however, even today not an easy task to measure unrecorded alcohol consumption. The availability of statistical data on unrecorded alcohol consumption also varies between different countries because not all countries are eager to keep statistical records of alcohol consumption or actively collect survey or other data on unrecorded alcohol, and when collecting this kind of survey data, they do not use the same kind of standardized questions. The availability of data also varies because the amount of different unrecorded alcohol items may vary greatly from country to country which clearly guides interest in collecting data on unrecorded alcohol consumption.

The way data on unrecorded alcohol is collected is also one reason why available statistical data on the amount of unrecorded alcohol consumption varies according to different estimates. For instance, some studies (e.g. Lachenmeier, 2016) point out that the amount of unrecorded alcohol consumption in the EU is 13% of all alcohol consumed while others (e.g. Rehm & Poznyak, 2015) report well over 20%. According to WHO's Global status report on alcohol and health 2014, a total of 10.9 litres of ethyl alcohol per person was consumed in Europe. Of the total alcohol consumption 1.9 litres consisted of unrecorded alcohol, representing 17% of total alcohol consumption.

The WHO has attempted to estimate the amount of unrecorded alcohol consumption in all seven countries where an optional section on unrecorded alcohol was applied in the course of the RARHA SEAS survey (Croatia, Finland, Greece, Hungary, Poland, Portugal and Spain). The WHO collected data show that the unrecorded alcohol consumption in Croatia was estimated to be 4.5 litres pure alcohol per capita for population older than 15 years in the second half of the 1990s ([http://www.who.int/substance\\_abuse/publications/en/croatia.pdf](http://www.who.int/substance_abuse/publications/en/croatia.pdf)). The corresponding figures were 4.0 litres in Hungary ([http://www.who.int/substance\\_abuse/publications/en/hungary.pdf](http://www.who.int/substance_abuse/publications/en/hungary.pdf)), 3.0 litres in Poland ([http://www.who.int/substance\\_abuse/publications/en/poland.pdf](http://www.who.int/substance_abuse/publications/en/poland.pdf)), 2.0 litres in Greece as well as in Finland ([http://www.who.int/substance\\_abuse/publications/en/greece.pdf](http://www.who.int/substance_abuse/publications/en/greece.pdf), [http://www.who.int/substance\\_abuse/publications/en/finland.pdf](http://www.who.int/substance_abuse/publications/en/finland.pdf)), and 1.0 litres in Portugal and Spain ([http://www.who.int/substance\\_abuse/publications/en/portugal.pdf](http://www.who.int/substance_abuse/publications/en/portugal.pdf), [http://www.who.int/substance\\_abuse/publications/en/spain.pdf](http://www.who.int/substance_abuse/publications/en/spain.pdf)). According to the WHO Global status report on alcohol and health 2014, unrecorded alcohol consumption was generally on the decrease in these countries between the second half of the 1990s and the years 2008–2010. In 2008–2010 the level of unrecorded alcohol consumption in all these countries was around 2 litres of pure alcohol per inhabitant 15 years and older.

## The context of unrecorded alcohol

In Croatia there is a tradition of home production of wine and spirits for personal use. There is regulation for registering production of alcoholic beverages even if it is home production. However, there is no research on unrecorded supply. According to The Law on Excise Duties (<http://www.zakon.hr/z/545/Zakon-o-tro%C5%A1arinama>) all producers of alcoholic beverages are obligated to register their production to the Ministry of Finance (Custom Administration), and, depending on the amount of alcohol produced, are obligated to pay excise tax (producers who produce 20 litres of pure alcohol and less per year are exempted from paying excise tax but not from paying a flat rate). Excise tax is calculated differently for different types of alcoholic beverages. The previously mentioned law also regulates penalties for not respecting the rules and regulations. Illegal production and/or sale of home or informally produced alcoholic beverages is detected through case by case reporting and by police work. Penalties for illegal production and/or sale include fines, criminal prosecution and seizures.

In Finland alcohol availability has been strict and alcohol prices have been very high. Therefore, tax free alcohol and boarder trade have played an important role in Finnish unrecorded alcohol consumption. The amount of travellers' alcohol imports have, however, been restricted by the quotas of tax free alcohol imports which in the beginning of the 1990s were still only 1 litre distilled spirits and 1 litre of wine (or 2 litres of wine) and 2 litres of beer. In January 2004

these quotas were abandoned for alcohol imports from other EU countries, and in May 2004 Estonia, with clearly lower alcohol prices than Finland, joined the EU. Estonia is a neighbouring country of Finland on the other side of the Gulf of Finland, a two hours boat trip away. From May 2004 it has been possible to import unlimited amounts of alcoholic beverages tax free from Estonia for personal consumption. This meant that since 2004 travellers' alcohol imports have been the most important source of unrecorded alcohol in Finland. In the 1950s and 1960s home production of alcoholic beverages were still important sources of unrecorded alcohol even if home distilling was an illegal activity.

In general, people living in the rural areas of Greece are accustomed to cultivating a few vines in order to produce wine and ouzo/tsipouro for their own use. On the other hand, there are no available research data that confirm this view or give the amount of this production. The legislation regulating the production and supply of alcoholic beverages (wine, ouzo / tsipouro, beer) has been in force since 2001 in Greece (Law 2629/2001). Moreover, according to the Ministry of Rural Development and Food, a wine producer that produces up to 10 hectolitres of wine for their own use is not obliged to declare this amount to the competent state services. Up to now, there is no information in a legal document on unrecorded alcohol beverages and on availability and affordability of unrecorded alcoholic beverages in Greece.

From 1938 the production, distribution, export and import of spirits had been a state-monopoly in Hungary. After the political system changed in 1990, spirits distillation became a main activity of registered professional commercial distillers; private persons could use their services for brandy production, and spirits became the subject of excise taxation. In 2010 the distillation market was liberalized by the government, making home distillation official and also making it exempt, up to a limit, from excise taxation. Since then, the liberalized home distillation rules have been tightened and now distillation requires preliminary registration and tax-payment. However, besides legal, registered distillation there was always a massive illegal spirits production in Hungary which completely by-passed the official registration obligations and taxation.

At different periods of Hungarian history, regulation restricted this illegal or semi-legal activity, but in contrast to this, more and more room for unregistered distillation was allowed, or rules, easy to bypass by home or illegal distillers, were created. Similarly, for a long time wine production for a had been subject to taxation; traditionally wine was one of the products subjected to decima (tithe)-paying for the church and landlords. After the political system changed in 1990, wine became a product subject to excise taxation; actually, however, the rate of excise tax on grape-wine is zero, and home production is legal up to a limit for personal and family consumption (1.000 litres/year for vineyard owners and 500 litres for those not having a vineyard but only buying grapes). This regulation provides a great opportunity for home (non-registered) production and consumption, and there is no doubt that this type of wine production finds ways into the illegal or non-registered market.

The latest research regarding the estimated proportion of nonregistered alcohol consumption was carried out by Hétfa and Bellresearch Institute in Hungary in 2012. According to the results, 30% of the total wine consumption and 40% of the total spirit consumption derived from unregistered alcohol production. Availability of non-registered beverages is common in Hungary and the affordability of these products – especially in the case of spirits – is much greater than that of registered spirits.

In Poland the modern State alcohol monopoly for spirits was introduced just after Poland regained independence in 1918 and then reintroduced in 1944. The beginning of the 1990s witnessed rapid transition to a market economy, and demonopolisation and privatization of the alcohol sector. However, the production of spirits requires a special permit from the regional authorities. Without a permit distilling spirits is illegal and punishable. Alcoholic beverages, in particular spirits, are heavily taxed and relative prices of vodka and other spirits are still high compared to neighbouring countries including EU members and Belarus, Russia and Ukraine. On the other hand, compared with the period of state monopoly, alcohol affordability and availability increased as the number of alcohol outlets rose from less than fifty thousand in the late 1980s to over two hundred thousand by the 1990s. Since the very beginning of the economic transition, new entrepreneurs have attempted to take advantage of high taxes in

Poland and low prices in neighbouring countries and established dense distribution networks to intercept alcohol revenues. Their activities covered a wide range of illegal and semi-legal actions such as importing huge volumes of alcohol apparently for private use, smuggling, contamination and then purification of alcohol, establishing small or medium size fruit wine producing enterprises which disappear before taxes were due to be paid. Primarily, illicit alcohol was distributed through legal outlets whose enormous numbers and unlimited hours of operation made any control effort futile. As this illicit flow of alcohol was distributed in fake original containers, an average consumer rarely realised that he or she purchased illegal stuff. Therefore, a survey approach to estimate the volume of unrecorded alcohol is not as feasible as indirect indicators e.g. first time alcoholic psychoses.

In Portugal, different authors note that the figures on recorded alcohol consumption suffer from limitations as they ignore production and consumption outside commercial channels. At the moment, the underestimation of real consumption is difficult to quantify but it can be claimed that a substantial part of alcohol beverage production is not declared. There are legislative efforts directed towards commercialisation and these focus mainly on new plantations of vines. Still, production primarily for private domestic use, domestic storage, or direct supply of small quantities of products to the final consumer or to local retail establishments is not included in the recording system.

As is the case for other countries included in this section, figures on unrecorded alcohol in Spain are limited to some references in the scientific literature (Sordo et al. 2016, Rhem et al. 2014 & Norstrom 2001) in which indirect estimation methods have been used to obtain at least an unrecorded minimum share to be taken into account when estimating national alcohol per capita consumption. According to different papers, unrecorded alcohol in Spain would account for a discrete amount (around 1 litre of pure alcohol per capita consumption) (WHO 2014).

Overall, it is assumed that Spain, being an alcohol producer country with no alcohol monopoly, wide availability and relatively lower alcohol prices than other EU countries, it is likely that unrecorded alcohol will probably be linked to traditional (mostly rural) alcohol production of small quantities for home consumption (mainly wine or some fruit-based distilled products in some Spanish Autonomous Communities). However, there is also some evidence of clandestine illegal alcohol distilling activity aimed at producing and selling fruit-based distilled spirits at cheaper prices while circumventing taxation and existing regulations. Finally, once in a while, there are published anecdotal or more in-depth reports of alcohol smuggling (Cuesta, 2014) (either adulterated or unlabelled alcoholic beverages) with alcohol distributed within nightlife settings, and eventually entailing health risks to consumers.

By including this set of questions within the RARHA questionnaire, it is likely that Spain will have some reference figures on unrecorded alcohol to start with. Additionally, it is an opportunity for the Spanish Observatory on Drugs to test survey questions on unrecorded alcohol and see if they are eligible and appropriate to be included in the Spanish series of national drug surveys.

## Questions in this study by country

In the RARHA SEAS study eight jurisdictions from seven countries put optional questions on unrecorded alcohol in their national surveys (Croatia, Finland, Greece, Hungary, Poland, Portugal, Spain and Spain-Catalonia). These optional questions vary in type and number between the seven countries that screened unrecorded alcohol consumption.

The Croatian survey asked directly how much unregistered alcohol – spirits, wine and beer (in litres) the interviewee had personally purchased in the last 12 months from abroad and how much was purchased from domestic sources.

The Finnish survey had a different set of questions. It was asked if, over a twelve month period, the interviewee had: a) ordered alcoholic beverages from foreign countries through the internet; b) acquired alcoholic beverages from foreign countries or from ships or aeroplanes trafficking between Finland and foreign countries by him/herself or by getting them from other persons; c) manufactured alcohol beverages in his/her home or acquired them from someone who had manufactured alcoholic beverages at home. The quantities in litres of distilled spirits, wines, beer, cider and long drinks ordered through the internet from foreign

countries were asked, followed by questions about the quantity of these five types of beverage acquired from foreign countries or from ships or airplanes trafficking between Finland and foreign countries. Also the quantity of litres of distilled spirits, wines, beer, cider and long drinks that were manufactured in the interviewee's home or acquired from someone who had manufactured them at home, were part of the set of question on unrecorded alcohol acquisition.

The Greek survey had a last year prevalence question about the acquisition of home-made alcohol produced at the interviewee's home or at somebody else's home such as a relative, friend, or a known or unknown person. Those answering affirmatively, were then asked how many bottles of home-made ouzo or tsipouro ('raki' or 'tsikoudia') were brought home, as well as how many bottles of home-made wine were brought home. The measurement of unrecorded alcoholic beverages in the Greek RARHA SEAS study included only home produced ouzo or tsipouro (~40 per cent alcohol) and wine. Time and space limitations related to the CATI methodology adopted in the study led to the omission of questions regarding alcohol acquired from abroad (e.g., traveller's taxfree imports, smuggling) or other sources, and questions on beer, the production or importation of which is anticipated to be negligible.

The Hungarian survey included questions about home production (and if so, total amount in litres) of spirits, wine and beer. Considering the total amount in litres of the three different types of home-made beverages, respondents were also asked how much the interviewee drank, how much his/her family drank and how much his/her friends and neighbours drank. It was also asked, how many litres the interviewees acquired from unrecorded/illegal commercial sources per types of alcoholic drinks, such as: home produced or bought from abroad by someone else (friend); from other non-official commercial sources (e.g. market, unregistered producer or place where it is possible to buy alcoholic drink without tax stamp). The interviewees were also asked about bringing any kind of alcoholic drinks from abroad for personal use, and if so, how many litres of alcoholic drinks were brought from abroad for personal use.

The Polish survey begins by asking if the interviewee had travelled to another country in the last 12 months. Just for those who had travelled, the next question was about how many times and how much spirits (e.g. vodka, gin, whisky, brandy) were brought by the interviewee from abroad. The same two questions were repeated about bringing back wine and beer. Then, the same structure of questions was asked about the acquisition of particular alcoholic beverages outside of the regular market (e.g. home made, smuggled, purchased directly from farmers or other producers and produced by yourself). For beverages acquired outside of the regular market, questions were asked about how many litres were from abroad, were own home production, were home produced by somebody else or had other sources.

The Portuguese survey had a set of questions on how much alcohol (in litres, for spirits, wine and beer separately) the interviewee personally had acquired (e.g. brought from abroad, produced at home or gotten from a home producer and alike) in the past 12 months, a) from abroad (traveller's duty free imports), b) from aboard (other sources), c) own home production and d) home production of somebody else.

The Spanish survey included a set of five questions on unrecorded alcohol, dealing with a) alcoholic beverages brought from other countries (either tax-free imports or purchased and also acquired as a gift), b) alcoholic beverages that were craft production (either interviewee's own production or another person's craft production from where the interviewee could have purchased it or acquiring it as a gift) and c) alcohol coming from sources other than beverages (such as alcoholic contained in products for industrial or pharmaceutical use). All five questions were broken down into types of beverages (spirits, wine and beer) and the interviewee was requested to provide a figure (number of liters) for each if applicable. Finally, all questions used a last 12-months reference. Both Spanish surveys applied an identical set of questions.

Different ways of screening unrecorded alcohol acquisition had to be harmonized in order to produce comparable data. The immediate indicator was the percentage of people who had acquired home-made beverages or brought alcoholic beverages from abroad. Another approach is to calculate the volume of different alcoholic beverages that were acquired from unrecorded sources. Finally, this volume can be presented as a share of unrecorded consumption in the total alcohol consumption. All these indicators will be presented in the following sections of this chapter.



## Results in the countries that collected unrecorded data in RARHA SEAS

The measurement of unrecorded alcoholic beverages is important, as it is one of the key components of alcohol consumption in many countries and because it is linked to the level of alcohol-related problems. (Moskalewicz et al. 2000; Rehm & Gmel 2008).

As already mentioned, of the twenty RARHA SEAS surveys, eight included a section on unrecorded alcohol as these questions were optional ones and probably in the remaining surveys it was seen as more feasible to give priority to other questions instead. The eight surveys that collected data on unrecorded alcohol acquisition gathered a sample of 11 885 respondents, where 1500 were from Croatia, 1500 from Finland, 1519 from Greece, 2005 from Hungary, 1555 from Poland, 1500 from Portugal, 1645 from Spain and 661 from Spain-Catalonia.

The following analysis reports weighted data from those surveys that had optional questions on unrecorded alcohol consumption. As can be seen from Table A3.5.1, the mean percentage of interviewees who had acquired unrecorded alcohol either from abroad or from domestic sources was almost 20%. The overall share of those who had acquired unrecorded alcohol was clearly above the average in Finland (41.8%) and in Greece (39.8%). It should be noted that Greece in fact did not ask about acquiring alcohol from abroad, only about wine and spirits from domestic sources. According to the survey results the sources were different in Finland and Greece.

**Table A3.5.1. The share of those interviewees who had acquired unrecorded alcohol from foreign or domestic sources, per cent**

	Total	From abroad	From domestic sources
<b>Croatia</b>	27.7	9.1	24.5
<b>Finland</b>	41.4	40.2	3.4
<b>Greece</b>	39.8	--	39.8
<b>Hungary</b>	11.2	6.3	5.3
<b>Poland</b>	10.6	7.0	4.9
<b>Portugal</b>	10.8	1.7	9.9
<b>Spain*</b>	4.4	2.4	2.2
<b>Spain-Catalonia</b>	8.5	3.9	5.4
<b>AVERAGE</b>	<b>19.3</b>	<b>10.1</b>	<b>11.9</b>

\* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

The main source in Greece was home production of spirits and wine and in Finland it was alcohol obtained through cross-border shopping. As in Greece, Croatia has a high percentage of those who had acquired unrecorded alcohol from domestic sources (24.1%). Countries such as Poland (10.6%), Portugal (10.7%) and Hungary (11.5%) had a smaller share of interviewees who reported that they had acquired unrecorded alcohol either from abroad or from domestic sources. In the case of Poland and Hungary, the main source was abroad, while in Portugal unrecorded alcohol was mainly acquired from domestic sources. The surveys from Spain had a bit lower proportions: 8.5% in Spain-Catalonia and 4.4% in Spain. In both surveys, proportions of unrecorded alcohol from abroad and from domestic surveys were about similar.

Table A3.5.2 gives the share of those interviewees who had acquired different kinds of alcoholic beverages, i.e. distilled spirits, wine and beer. The share of those who had acquired beer

is smaller than that of spirits and wine. The share of those who had acquired beer is especially small from domestic sources. In Finland, where the share of interviewees who had acquired alcoholic beverages from abroad is clearly the largest, the share of those who had acquired spirits is the largest and those who had acquired beer is the lowest. In Greece, having only information about domestic sources, the percentage of interviewees who had acquired wine from domestic sources is higher than for spirits. Other figures to be regarded as high are the share of those who had acquire wine and spirits from domestic sources in Croatia, and the share of respondents who acquired wine from homemade production in Portugal.

**Table A3.5.2. The share of those interviewees who had acquired unrecorded alcohol from foreign or domestic sources by beverage type, per cent**

	Total			From abroad			From domestic sources		
	Spirits	Wine	Beer	Spirits	Wine	Beer	Spirits	Wine	Beer
<b>Croatia</b>	17.5	17.3	8.3	5.9	3.6	4.2	14.9	15.8	5.2
<b>Finland</b>	25.9	23.9	20.0	25.6	22.4	19.5	0.6	2.4	1.0
<b>Greece</b>	26.0	31.2	--	--	--	--	26.0	31.2	--
<b>Hungary</b>	3.3	5.5	3.2	3.0	4.0	2.9	3.4	3.2	0.4
<b>Poland</b>	7.0	4.8	5.0	4.2	3.8	3.9	3.7	1.3	1.4
<b>Portugal</b>	3.9	8.6	0.8	1.1	0.7	0.4	3.1	8.1	0.4
<b>Spain*</b>	2.7	1.7	0.8	1.7	0.6	0.6	1.2	1.1	0.2
<b>Spain-Catalonia</b>	4.8	4.2	1.2	2.3	2.1	0.5	3.0	2.1	0.9

\* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

As we can see in Table A3.5.3, the domestic supply of wine and/or spirits, especially in some Mediterranean countries reaches high volumes among persons who acquired unrecorded alcohol, suggesting significant consumption levels outside the regular market. Also relatively high volumes of beer from abroad among those who acquire unrecorded alcohol in Finland and Croatia suggest that also beer may represent a significant share in unrecorded consumption.

**Table A3.5.3. Mean volume (in liters) of unrecorded alcohol per person reporting unrecorded alcohol**

	Total			From abroad			From domestic source		
	Spirits	Wine	Beer	Spirits	Wine	Beer	Spirits	Wine	Beer
<b>Croatia</b>	6.49	34.87	32.72	2.91	4.82	34.45	6.47	37.09	24.49
<b>Finland</b>	4.57	11.30	44.94	4.48	9.58	45.06	5.68	23.51	19.09
<b>Greece</b>	13.59	68.15	--	--	--	--	13.59	68.15	--
<b>Hungary</b>	5.95	48.05	9.04	1.61	2.57	9.29	11.33	79.19	7.11

	Total			From abroad			From domestic source		
	Spirits	Wine	Beer	Spirits	Wine	Beer	Spirits	Wine	Beer
<b>Poland</b>	4.97	2.80	5.83	2.18	2.43	5.84	6.79	3.19	4.48
<b>Portugal</b>	9.30	207.19	1.91	1.74	1.33	1.63	11.09	222.12	2.30
<b>Spain*</b>	3.62	21.31	3.20	2.53	3.06	3.31	4.47	30.89	2.86
<b>Spain-Catalonia</b>	2.22	2.36	3.25	1.67	2.29	1.67	2.30	2.43	3.50

\* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.

To estimate the role of unrecorded alcohol in overall consumption, we re-calculated volumes from Table A3.5.3 into 100% alcohol and calculated overall unrecorded alcohol per capita. As shown in Table A3.5.4 these figures vary from a small fraction of one litre in Spain and Poland to about half a litre in Hungary, over one litre in Croatia and Finland, to four litres in Greece. While comparing unrecorded alcohol with recorded consumption we found that the share of the former ranges from a few per cent in Spain, Poland and Hungary to a dozen or so per cent in Croatia and Finland and to over 50% in Greece.

**Table A3.5.4. Unrecorded alcohol per respondent in litres of 100% alcohol and its percentage share in recorded alcohol consumption**

	Estimated unrecorded per respondent, litres 100% alcohol	Share in recorded consumption, %
<b>Croatia</b>	1.35	11.1
<b>Finland</b>	1.26	14.3
<b>Greece</b>	4.06	53.8
<b>Hungary</b>	0.47	4.3
<b>Poland</b>	0.17	1.6
<b>Portugal</b>	2.38	24.1
<b>Spain*</b>	0.09	1.0
<b>Spain-Catalonia</b>	0.05	

\* Spain is contributing to RARHA SEAS with two samples: a national sample covering and representative of the whole country and an additional one specially designed to be representative of the Autonomous Community of Catalonia.



## How to study unrecorded alcohol consumption in Europe

Information about unrecorded alcohol consumption is necessary when developing comprehensive alcohol policies and monitoring alcohol-related behaviour and outcomes. Having taken into account many different sources and types of unrecorded alcohol and ways of asking about it, assessing its prevalence appears to be a complex problem.

We should start to provide better estimates of the size of the market and better measures of the level of consumption (Anderson & Baumberg, 2006). Since policy measures largely depend on the type of unrecorded alcohol, insight into country specific distributions of consumption between the categories of unrecorded alcohol is also required, as much as reliable consumption data over time.

As we saw earlier, the ways of asking about, and the ways of measuring, alcohol consumption differ between European countries, which can explain some differences in the amounts of unrecorded alcohol consumption. Summarising the experiences of RARHA SEAS it can be claimed that questions on prevalence of using unrecorded sources of alcohol work relatively well as an indication of the proportion of the population acquiring alcohol which is unrecorded by beverage type and comes from domestic sources and from abroad. Questions of volumes may be more biased depending on the legal status of unrecorded alcohol and its social perception. In some countries where unrecorded alcohol is legal and has a long tradition of use, its volumes may be reported in surveys more accurately while in others, where it is more stigmatised, substantial under-reporting may affect the data collected. Therefore, there is much to be done in this field, the more so because basic research is lacking in many European countries. A new wave of the RARHA SEAS study should adopt a core set of questions about unrecorded alcohol to assess the importance of different unrecorded alcohol items in different countries, and to produce a detailed plan for how the quantity of these items could be measured. Obtaining reliable estimates of unrecorded alcohol consumption poses a real challenge!

## Key results for policy makers

In every country some of the alcohol consumed by the population falls outside the statistics. In countries with high alcohol taxes and prices, and practically no border control (like in the Nordic EU countries) travellers' alcohol imports are a crucial unrecorded item. In countries where there is hardly any alcohol control like in the Eastern European countries at the beginning of the transition period smuggling alcoholic beverages (and other illegal items) tended to be an important source of unrecorded alcohol. In vine-growing countries a major source of unrecorded consumption is domestic wine as well as domestic spirits made of wine such as aqua ardente, grappa or rakija.

Studying unrecorded alcohol consumption has become more important in recent years as for instance the World Health Organization has begun to publish alcohol consumption data for both recorded alcohol consumption and total alcohol consumption. Data on unrecorded alcohol consumption also helps individual governments to follow developments in the alcohol field and to plan alcohol control activities.

## References:

- Anderson, P., Baumberg, B. (2006). *Alcohol in Europe. A public health perspective*. London, Institute of Alcohol Studies ([http://ec.europa.eu/health-eu/doc/alcoholineu\\_content\\_en.pdf](http://ec.europa.eu/health-eu/doc/alcoholineu_content_en.pdf), accessed 20 august 2016).
- Cuesta, U., (2014). *Informe sobre los hábitos de compra y consumo de alcohol en españa y sus efectos socio-sanitarios*. Cátedra de Comunicación y Salud. Facultad de Ciencias de la Información. Universidad Complutense de Madrid.
- Lachenmeier, D. W. (nd), "Unrecorded and illicit alcohol" ([http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0020/191360/2-Unrecorded-and-illicit-alcohol.pdf](http://www.euro.who.int/__data/assets/pdf_file/0020/191360/2-Unrecorded-and-illicit-alcohol.pdf), accessed 20 august 2016).
- Moskalewicz J, Wojtyniak B, Rabczenko B. (2000). *Alcohol as a cause of mortality in societies undergoing rapid transition on market economy*. In: Cornia GA, Panicia R. *The mortality crisis in transitional economies* New York: Oxford University press, p. 83–105.

- Norstrom T, Editor (2001). Alcohol in postwar Europe: Consumption, drinking patterns, consequences and policy responses in 15 European countries. Stockholm: National Institute of Public Health. European Commission.
- Rehm, J., Kailasapillai, S., Larsen, E., Rehm, M.X., Samokhvalov, A.V., Shield, K.D., Roerecke, M., Lachenmeier, D.W. (2014). A systematic review of the epidemiology of unrecorded alcohol consumption and the chemical composition of unrecorded alcohol. *Addiction*. Volume 109: 880–893.
- Rehm, J. & Poznyak, V. (2015). *On monitoring unrecorded alcohol consumption*. *Alcoholism and Drug Addiction*. Volume 28, Issue 2, June 2015, p. 79–89.
- Sordo, L., Barrio, G., Bravo, M.J., Villalbí, J.R., Albert Espelt A., Neira, M., Regidor, E., (2016). Estimating average alcohol consumption in the population using multiple sources: the case of Spain. *Health Metrics* 14:21.
- WHO (2014). Global status report on alcohol and health 2014 ([http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf), accessed 10 august 2016).