

This document arises from the Joint Action on Reducing Alcohol Related Harm (RARHA) and from the Deep SEAS project which have received co-funding from the European Union Health Programme



## **LOGO OF DEEP SEAS PROJECT**

# **RARHA SEAS COMMON DATA BASE GUIDELINES**

## **I. GENERAL COMMENTS**

### **1. Names of variables**

Each input variable name corresponds with relevant number of the question, it consists of abbreviation of the questionnaire section name, lower dash and number or character of the question, e.g. the question: “WB\_1. How is your health in general?” – variable name: WB\_1 or the question “HD\_2. Who are these people? – HD\_2a\_1. Household member” – variable name: HD\_2a\_1.

### **2. Variable types**

There are two types of variables:

- 1) Input variables – data entered directly from the questionnaire.
- 2) Target variables – data used in analyses created on the basis of input variables after various transformations.

Sometimes target variables serve as input variables to construct more complex target variables.

Data base consists of 173 input variables and 58 target variables.

### 3. Global codes

Code	Responses	Comments
0	Does not apply	Results only from skips as shown in the questionnaire
One or more “9” codes corresponding with variable width	No answer	No answer means also “I do not know”, “I cannot say”, “difficult to say”, “do not remember” or “I refuse”
sysmis (system-missing)		Only for input variables from optional questions, which were not included into a national questionnaire. In target variables sysmis may mean missing values resulting from variables transformations.

### 4. Checking data consistency

In case of the majority of related variables consistency was checked and inconsistent answers were corrected if it was possible and feasible. For instance for respondents who declare generic frequency of drinking (F) lower than frequency of drinking of the most frequently drunk alcohol beverage (BSQF) the generic frequency was replaced by frequency of drinking of this beverage. In some cases, inconsistency was tolerated for example between BSQF and RSOD questions.

### 5. Data weighting

In five samples the data were considered self-weighting meaning that they reflect properly target population. In fifteen samples weights were constructed on national level to adjust to population data. For cases from samples with self-weighting data weight variable was set to 1.

## II. COMMENTS TO PARTICULAR SECTIONS

### 1. Establishing drinking/abstainer status (F)

#### Input variable:

Variable name	Variable label
F_1b	Frequency of drinking

#### Target variable:

Variable name	Variable label
Consumers	alcohol consumers

- Abstainers – all who confirmed either 10 or 11 among response categories provided.
- Drinkers – all who confirmed either of 1 to 9 in responses to F1, no matter if any drinking was reported in BSQF section.

### 2. Generic frequency of drinking (F)

#### Input variable:

Variable name	Variable label
F_1b	Frequency of drinking

#### Target variable:

Variable name	Variable label
rf_1b	frequency of drinking (number of days in year)

The question on overall or generic frequency of drinking was intended to capture drinking of any alcoholic beverage; that means beer, wine, spirits, or any other alcoholic beverage even in small volumes. This question was asked after the BSQF section to avoid a filter effect which could increase the estimated abstinence rate (Sierosławski, Foster, and Moskaiewicz 2013).

Frequency of drinking scale was converted into number of drinking days in the following way:

Frequency of drinking scale	Range	Middle point (number of drinking days)
1) Every day	365	365.0
2) 5 – 6 times a week	364 – 207	285.5
3) 3 - 4 times a week	156 – 208	182.0
4) 1 - 2 times a week	52 – 104	78.0
5) 2 - 3 times a month	24 – 36	30.0
6) Once a month	12	12.0
7) 6 - 11 times a year	6 – 11	8.5
8) 2 - 5 times a year	2 – 5	3.5
9) Once a year	1	1.0
10) No during last 12 moths	0	0.0
11) Never during in lifetime	0	0.0

### 3. Beverage Specific Quantity-Frequency (BSQF)

To reduce the confusion related to the concept of “average” the adjective “usual” volume consumed was applied. In most countries, with the exception of Denmark and Norway, the question consisted of two steps. First respondents selected a container i.e. reporting units (e.g. 33 cl cans/bottles or 50cl cans/bottles), which had been predefined specifically by country, based on the most common glasses or bottles or cans used in that country. Then they reported number of units they usually consume on one drinking day.

The usual intake of particular alcohol beverage was calculated in the national data bases and it was then included into common data base in terms of centilitres of 100% alcohol. The capping of extreme volumes was applied at the level of 50 cl of 100% alcohol per drinking day: all values higher than 50 were set to 50 cl of 100% alcohol.

**Input variables:**

Frequency of drinking:

Variable name	Variable label
bsqf_1b	Frequency of beer drinking
bsqf_3b	Frequency of wine drinking
bsqf_5b	Frequency of spirits drinking
bsqf_7b	Frequency of first additional beverage drinking
bsqf_9b	Frequency of second additional beverage drinking
f_1b	Frequency of drinking

Quantity of drinking:

Variable name	Variable label
bsqf_2	quantity of beer on usual drinking day (cl of 100% alc)
bsqf_4	quantity of wine on usual drinking day (cl of 100% alc)
bsqf_6	quantity of spirits on usual drinking day (cl of 100% alc)
bsqf_8	quantity of first additional beverage on usual drinking day (cl of 100% alc)
bsqf_10	quantity of second additional beverage on usual drinking day (cl of 100% alc)

**Target variables:**

Variable name	Variable label
cbsqf_beer	beer annual consumption in cl of 100% alc – capped
cbsqf_wine	wine annual consumption in cl of 100% alc – capped
cbsqf_spir	spirits annual consumption in cl of 100% alc – capped
cbsqf_adbev	additional beverages annual consumption in cl of 100% alc - capped
cbsqf_alc	alcohol annual consumption in cl of 100% alc – capped
c1cbsqf_alc	alcohol annual consumption in cl of 100% alc - capped - after second capping

Country specific variables including type of container and number of containers are not included into this data base. Instead there are target variables cbsqf\_2; cbsqf\_4; cbsqf\_6; cbsqf\_8; cbsqf\_10 containing quantities of three basic and two additional alcohol beverages

recalculated into cl of 100% alcohol with the extreme values (above 182.5 litres of 100% alcohol) capped.

The algorithm of calculation of core target variables related to annual alcohol consumption was as follows:

The frequencies of drinking of each particular beverage were converted into number of drinking days in the same way as frequency of drinking in generic frequency of drinking section (see point 2).

To derive the beverage-specific usual quantity of alcohol drunk in centilitres of 100% alcohol, the number of units of each alcoholic beverage the respondent reported was first multiplied by a predefined volume of a unit (e.g. 33 cl or 50 cl; separately for each beverage). The result of this calculation was then multiplied by alcohol content (in per cent) of the beverage (separately for each beverage). To derive beverage-specific annual consumption, in cl of 100% alcohol, the number of drinking days of a given beverage was multiplied by the usual quantity in cl of 100% alcohol. To estimate total average annual alcohol consumption across beverages, the annual volumes of consumption of each alcoholic beverage in centilitres of 100% alcohol were summed. If data on consumption of a particular alcoholic beverage were missing, the estimation was done on the basis of the available data. That means the missing data were set to zero to prevent calculating missing data on overall alcohol consumption. Only in the case of respondents who were not able to provide information on drinking of any alcoholic beverage and were not abstainers, the data on alcohol consumption was considered missing. For instance, if a respondent reported frequency and quantity of beer and wine, but was not able to estimate quantity or frequency of spirits drinking, his consumption was estimated on the basis of two beverages only.

#### **4. Risky Single Occasion Drinking (RSOD)**

Risky Single Occasion Drinking (RSOD) is defined as consumption of at least 60 grams of 100% alcohol by males on one occasion and at least 40 grams of 100% alcohol by females. These volumes for an average human being may cause intoxication expressed as 0.5‰ BAC. The threshold of 60/40 grams of pure alcohol on one occasion seems to be too low to identify episodes of higher intoxication e.g. BAC over 1‰. To explore the more extreme end of the distribution of volume consumed on one occasion, a question about frequency of drinking

120+ grams of pure alcohol for males and 80+ grams of pure alcohol for females was also applied.

The frequency of RSOD was investigated using a standard frequency scale used throughout all questions on frequency of alcohol consumption.

Frequency of drinking scales were converted into number of drinking days in the same way as frequency of drinking in generic frequency of drinking section (see point 2).

Additionally the question on maximum number of standard drinks on one occasion in the last 12 months was applied to get a reference point for the calculation of volume of alcohol attributed to RSOD. The maximum number of standard drinks was stored in a relevant variable on the level of national data bases only, because the volume of standard drink varied from country to country. The common data base includes that volume calculated in grams of 100% alcohol (cRSOD\_1a). The volume in grams was also converted into the volume in cl (rsod\_1cl).

**Input variable:**

Variable name	Variable label
rsod_2b	Frequency of drinking 4/6+ drinks
rsod_7b	Frequency of drinking 8/12+ drinks

**Target variable:**

Variable name	Variable label
cRSOD_1a	Max vol of 100% alc in grams – capped
rsod_1cl	Max vol of 100% alc in cl
rrsod_2b	frequency of drinking of 40/60 g alc (number of days in year)
rrsod_7b	frequency of drinking of 80/120 g alc (number of days in year)
rsod_2cl	conversion of 40/60 g alc into cl alc
rsod_7cl	conversion of 80/120 g alc into cl alc
RSOD6_add	alcohol consumption attributed to 4/6 drinks occasions
RSOD12_add	alcohol consumption attributed to 8/12 drinks occasions
cRSOD_add	alcohol consumption attributed to binge drinking occasions (RSOD) – capped

The volume of alcohol attributed to RSOD was calculated as follows:

The frequency of consuming at least 60 grams of 100% alcohol for males on one occasion and at least 40 grams of 100% alcohol for females was converted into the number of drinking days in the same way as frequency of drinking described earlier (rrsod\_2b; rrsod\_7b).

The 40, 60, 80 and 120 grams of pure alcohol were converted into centilitres of pure alcohol (rsod\_2cl; rsod\_7cl).

Firstly, the part of the volume of alcohol attributed to 60-120 /40-80grams of pure alcohol was estimated (RSOD6\_add; RSOD12\_add). For respondents having at least 60/40 grams on one occasion but not having 80/120 grams on one occasion, the number of days with consumption of at least 60/40 grams was multiplied by the value of the midpoint between 60/40 grams and maximum intake on one occasion. For respondents having 80/120 grams of pure alcohol on one occasion the number of days with consumption of at least 60/40 grams minus number of days with consumption of at least 120/80 was multiplied by 90/60 grams which was a midpoint between these two thresholds.

Secondly the part of the volume of alcohol attributed to 120/80 + grams of pure alcohol was estimated by multiplying the number of days with consumption of at least 120/80 grams by the midpoint between 120/80 grams and maximum intake on one occasion.

Finally, these two parts were summed up to get the volume of alcohol attributed to any RSOD drinking (RSOD\_add).

## 5. Overall alcohol consumption (BSQF + RSOD)

### Input variable:

Variable name	Variable label
F_1b	Frequency of drinking
rrsod_2b	frequency of drinking of 40/60 g alc (number of days in year)
c1cbsqf_alc	alcohol annual consumption in cl of 100% alc - capped - after second capping
cRSOD_add	alcohol consumption attributed to binge drinking occasions (RSOD) – capped



**Target variable:**

Variable name	Variable label
alc_ccon_day	mean alcohol consumption on usual drinking day - BSQF (after second capping) / F_1
alc_crsod_day	mean alcohol consumption on binging day – cRSOD_add / rrsod_2b
alc_crsod_day_adj	adjusted mean alcohol consumption on binging day - RSOD / rrsod_2b – adjusted (RSOD-BSQF)
alc_crsod_add_adj	annual alcohol consumption attributed to binge drinking occasions - adjusted ((RSOD-BSQF)*rrsod_2b)
calc_con3	total annual alcohol consumption capped BSQF + RSOD (bsqf + adjusted rsod_add)
c1calc_con3	total annual alcohol consumption capped BSQF + RSOD (bsqf + adjusted rsod_add) - capped (third capping)

To estimate overall alcohol consumption, we combine data on usual drinking (BSQF) and binge drinking (RSOD) in the following way:

Firstly, two new variables were calculated – alcohol consumption on average binge day (alc\_crsod\_day\_adj) based on consumption attributed to RSOD and usual alcohol consumption on average day (alc\_ccon\_day) based on BSQF estimates. Both variables were calculated by division of annual consumption by relevant frequency of drinking represented by number of drinking days.

Two groups of respondents were distinguished on the basis of comparison of those two variables. The first group is composed of people whose average usual consumption (BSQF) per drinking day was equal to or higher than their average binge (RSOD) consumption per binge drinking day and those who did not report binge drinking in the RSOD section. For them, no adjustment to BSQF volume is needed, as binge drinking is the ‘typical consumption’. For them, overall annual alcohol consumption was calculated just on the basis of their BSQF consumption. They constitute roughly 50% of all drinkers.

The second group includes the remaining consumers. For them, the reported usual quantity of alcohol consumed under-estimates the arithmetic means of quantities consumed on various drinking occasions. Therefore, a better estimate for that group is obtained by adding the consumption on binge drinking occasions that is in excess of the typical consumption. The latter was re-calculated as a product of a number of RSOD days per year multiplied by the difference between binge (RSOD) consumption per binge drinking day and usual (BSQF) consumption per usual drinking day.

## 6. Subjective drunkenness (DR)

The word drunkenness was not used in the formulation of the question on subjective drunkenness taking into account its cultural sensitivity at least in some countries as well as translation challenges. Instead the question focused on behavioural symptoms, that means drinking enough to feel unsteady on feet or so speech was slurred.

### Input variable:

Variable name	Variable label
dr_1b	Frequency of intoxication
DR_2a	Vol of 100% alc in grams needed for intoxication

### Target variable:

Variable name	Variable label
rdr_1b	Frequency of intoxication (number of days in year)
cDR_2a	Vol of 100% alc in grams needed for intoxication –capped

For analytical purposes, frequency of drunkenness was explored using a standard frequency scale converted into the number of days when drunkenness was reported (the conversion rules as frequency of drinking in generic frequency of drinking – see point 2).

The question about volume of alcohol usually needed to be drunk was answered by providing the number of country specific units. The results were recalculated into grams of pure alcohol which retained in the data base

## 7. Unrecorded availability (UA)

Unrecorded availability was explored by country specific questions leading to commonly defined variables. Common data base includes following variables:

Variable name	Variable label
ua_as	Quantity of spirits brought from abroad in litres
ua_aw	Quantity of wine brought from abroad in litres
ua_ab	Quantity of beer brought from abroad in litres
ua_ds	Quantity of spirits from domestic sources in litres
ua_dw	Quantity of wine from domestic sources in litres
ua_db	Quantity of beer from domestic sources in litres

### 8. Nationality (SD\_3)

Nationality was investigated using country specific categories of answers. The common data base includes unified nationality codes only.

#### Target variable:

Variable name	Variable label
sd_3r	nationality recoded

### 9. Social class (SD\_10 – SD\_18)

Social class of respondents is based on their current occupation. In case of respondents who were not professionally active their social class was based on their most recent employment, and for those who had never held any paid job, their social class was based on employment of the head of their household.

**Input variable:**

Variable name	Variable label
sd_10	professionally active vs non-active
sd_11	Current occupation status
sd_12	Respondent self-employed now
sd_13	Professionally non-active
sd_14	Paid work in the past
sd_15	Occupation status of non-working
sd_16	Respondent self-employed in the past
sd_17	Occupation status of a spouse/parent
sd_18	Is your spouse/parent self-employed or employed

**Target variable:**

Variable name	Variable label
social_class	social class

**10. Household income (SD\_20, SD\_20a)**

Household net income was investigated using two consecutive question. Firstly, respondents were asked directly about exact household net income expressed in national currency. For those who were not able to provide exact figures the subsequent question provided opportunity to respond selecting on the ten points scale corresponding income category.

Already in national data bases the country-specific income categories were converted into figures taking a midpoint as approximation of income. Then these figures were integrated with the variable containing exact household income.

**Target variable:**

Variable name	Variable label
sd_20c	Monthly income per capita

Household income per capita was calculated on the national data level by dividing reported income by a number of household members. The common data base includes target variable only expressing income per household member in national currencies.