

Green Paper on Alcohol Policy

Ministry of Social Affairs 2014

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1 Introduction

1.1 Legal grounds

The Government of the Republic that took office in spring 2011 has established the updating of alcohol policy as one of its goals in the four-year action programme: „national alcohol and tobacco policy shall be reviewed to ensure the reduced consumption of alcohol and tobacco, followed by imposing stricter penalties for making these products available to the minors. We shall develop a system for early detection of alcohol abuse and counselling to anticipate and prevent the development of chronic alcohol dependence and ensure treatment and rehabilitation services to people who have the motivation to give up alcohol.“ (1). Activities to be launched to reach this goal will include the development of a concept for national alcohol and tobacco policy or the "Green Paper on Alcohol and Tobacco Policy". During the planning stage for the implementation of the resolution it was decided to draw up two different Green Papers, as the legal space surrounding these two substances is different at the Estonian and international level.

1.2 Description of situation

Estonia is among the countries which consume the largest quantities of alcohol and thus, suffers extensive damages resulting from alcohol. In 2012, 10.6 litres of absolute alcohol per capita was consumed in Estonia. (This data was supplied by the Estonian Institute of Economic Research, based on the outcomes of the census.) According to calculations, carried out by using different methodologies, alcohol caused dire economic damages (loss of health, crime) that total to 1.6-2.5 % of GDP, plus indirect expenses resulting from damages suffered by families and society in general. (3) The scope of damages is amplified by consumption culture, characterised by consumption of large quantities of alcohol at a time, and this fact supports alcohol consumption links to accidents and crime. Consumption of alcohol among younger population is also characteristic of Estonia and this has serious consequences for public health and development capacities of the society in general.

1.3 Goals of alcohol policy

The main goal of alcohol policy is to decrease social, economic and health damages, resulting from consumption of alcohol, to ensure that children and young persons with supporting growth and development environment and offer all people a safer living environment. For that purpose, the consumption of alcohol in general must be decreased, paying special attention to spheres characterised by major damages – consumption of alcohol among the young, and accidents, crime and violence, chronic diseases resulting from the consumption of alcohol.

It was decided to observe the following documents for the purpose of the development of conceptual alcohol policy document:

- The Government of the Republic has, with a memorandum of 22.01.2009 (4), identified the main priorities of alcohol policy: reducing health damages caused by alcohol, prevention of alcohol consumption among younger persons, decreasing the total alcohol consumption.

- The World Health Organisation has laid down the basics for alcohol policies in the document „Global Strategy to Reduce Harmful Use of Alcohol“.
- Scientific paradigm shall apply for the purposes of alcohol policy development and, above all, proven measures shall be suggested.
- Specificities of Estonia shall be observed for the purposes of alcohol policy development.

The following goals were determined for the alcohol policy:

- To reduce total alcohol use.
- To reduce harmful use of alcohol.
- To prevent alcohol use among young persons.
- To ensure safe environment, reduce alcohol-related crime, social problems and health damages.
- To develop treatment and rehabilitation services to people who have the motivation to give up alcohol.

The following indicators will be used to measure the achievement of the goals:

- **Alcohol use is stably under 8 litres of absolute alcohol per capita per annum.**
- **The age for the first use of alcohol has increased; the proportion of young persons who have used alcohol and experienced drunkenness has dropped.**
- **The number of alcohol-related injuries and death caused by injuries has been decreased.**

1.4 European and global alcohol policy

Global strategy to reduce harmful use of alcohol

On 21 May 2008, 193 member states of the World Health Organisation (WHO) adopted resolution WHA 63.13 at world health assembly, by approving the „Global Strategy to Reduce Harmful Use of Alcohol“ (5). In September 2011, member states of the WHO European region endorsed the European action plan for the implementation of the aforementioned strategy.

The strategy emphasises the importance of alcohol as the cause of health damages although only a half of the global population uses alcohol, alcohol is still the third-important risk factor as the cause for early mortality and health damages and also the largest source for loss of health among the working age population. In its recommendations, WHO relies upon a large number of research projects, carried out in its member states, and analyses carried out by top global experts. WHO sees that an operating alcohol policy should be all-inclusive, intersectoral and consistent. Both the strategy and the action plan observe the same structure where different aspects of alcohol policy are divided between 10 spheres. Estonian Green Paper on Alcohol Policy observes the same global structure and recommendations for member states and also consolidated WHO recommendations regarding the evidence-based measures.

EU Alcohol Strategy for 2006-2012

In 2006, the European Commission adopted a strategy to support member states in reducing alcohol damages. (6) The strategy focuses on 5 main spheres: protecting the young, children and embryos, preventing injuries and deaths in traffic caused by alcohol, reducing alcohol-related harm among adults and at work places, increasing awareness by collecting and distributing scientific research materials.

Estonian national concept document for alcohol policy relies, methodology-wise, on WHO global strategy and the European action plan as the most recent international alcohol policy document relying most heavily on scientific evidence. The global strategy divides different alcohol policy measures under 10 different spheres:

- Increasing awareness and political commitment;
- Health services' response;
- Community action;
- Drink-driving policies and countermeasures;
- Availability of alcohol;
- Marketing of alcoholic beverages;
- Pricing policies;
- Reducing the negative consequences of drinking and alcohol intoxication;
- Reducing the public health impact of illicit alcohol and informally produced alcohol;
- Monitoring and surveillance of alcohol use and resulting harm.

1.5 Compilation of Green Paper on Alcohol Policy

Based on international documents and research-supported evidence and considering the context of Estonia, seven different work groups were established to shape Estonian alcohol policy:

- Treatment and counselling services
- Information dissemination and networking
- Environment of use and reducing harm, incl. prevention of drink-driving
- Decreasing the availability of alcohol
- Marketing regulations
- Pricing and taxation policies, restricting distribution of illicit alcohol
- Monitoring and surveillance

The main working methods of the work groups were meetings, seminars and written consultations. The proposals, adopted by the work group, are included in the policy document. Differences in opinions, experienced in the work group, were referred for settlement to an inter-ministerial committee. All the differences were recorded and included as annexes to this document.

The following individuals took part in the work of the work groups:

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Kersti Pärna	University of Tartu, Department of Public Health
Andres Lehtmets	Estonian Psychiatric Association
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Tiina Roosimägi, Tiina Tõemets	Estonian Health Insurance Fund
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Peeter Võrk, Tarmo Noop, Margus Kastein	Estonian Beer Association
Sirje Potissepp	Estonian Food Industry Association

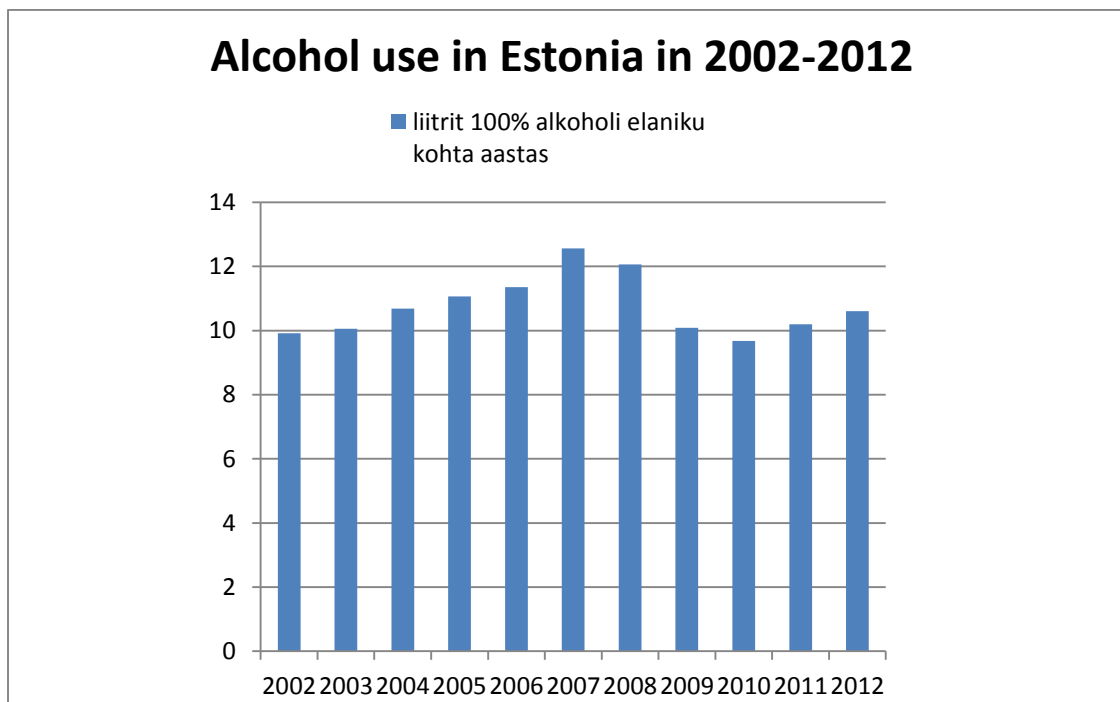
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Pille Luiga, Marili Kohava, Kati Arumäe , Varmo Rein	Police and Border Guard Board
Indrek Ints, Tiina Laube, Janek Innos	Rescue Board
Vivika Eha	Veterinary and Food Board
Urmel Reinola, Kerstin Siim	Estonian Road Administration
Marietta Loorents	Tax and Customs Board
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2 Overview of the current situation

2.1 Consumption of alcohol and consumption habits of population

The determining factor for the purposes of the scale of alcohol-related harm is the quantity of consumed alcohol; however it is also important by whom, when and how alcohol is used. Adult women should not consume more than 1-2, men more than 2-3 units of alcohol per day (1 unit –10 grams of absolute alcohol, i.e. ca 1 strong drink (4 cl), glass of wine (12 cl) or 250 ml 4% beer). Children, the young, and pregnant women should not use any alcohol. (7) Alcohol is extremely dangerous during embryo stage or as a child, as the brain keeps growing, approximately, until the age of 21; younger adults are also more susceptible to the impact of alcohol and harmful use of alcohol will have considerable negative impacts on the development of mental abilities in an individual. There is no such thing as a “safe quantity” of alcohol for driving purposes, any quantity shall slow down the responses of a driver and will increase the threat of accidents. When large quantities of alcohol are used, the risk to be killed or injured as the consequence of an accident or crime will simultaneously be added to the general harmful effects of alcohol. (7)

In 2012, 10.6 litres of absolute alcohol were used in Estonia per capita (the information was supplied by the Estonian Institute of Economic Research). This is 5.7% more than in 2010. In 2011, 12 litres of absolute alcohol was consumed by each individual older than 15 years. (2) According to the World Health Organisation, the consumption of absolute alcohol in quantities exceeding 6 litres per person will result in major harm to public health. (8)



Litres of 100% alcohol per capita per year

The studies, carried out by the Estonian Institute of Economic Research, show that the opinion of population, regarding its alcohol use, has not changed much over years. In 2011, 69% of the respondents answered that they use little or no alcohol and 29% describe their use of alcohol as moderate. The share of alcohol users is larger among the younger population. The consumption of alcohol among younger persons is worrisome as more than

80% of individuals younger than 16 years have tried some alcohol. Traditional celebrations, social drinking and relaxation, but also tasting experience are mostly suggested as the reasons for alcohol consumption.

87% of adults consume alcohol. Weak alcoholic beverages are used more often than strong alcohol; people mostly drink beer and wine. 15% of alcohol consumers drink beer a couple of times per week and 5% - every day. 52% of wine consumers drink wine a couple of times per month. 4% of alcohol consumers drink vodka a couple of times per week or every day.

Alcohol consumption frequencies are also different by socio-demographic groups. Vodka is mostly consumed by men and regionally, by the population of North-Eastern Estonia; by education, the proportion of vodka consumers is higher among people with elementary and basic education. Wine consumers are, more frequently, women, people living in urban areas and having higher education and income levels. Men prefer beer. Younger population prefers cider and mixed drinks/cocktails.

In addition to the consumption of legal alcohol, there is also consumption illegal alcohol, i.e. illicit alcohol, moonshine and surrogates. A look at a longer timeline shows that the consumption of illegal alcohol has dropped and in 2011, the share of illicit alcohol was 6% of the total alcohol consumption. However, according to the expert opinion of the Estonian Institute of Economic Research, illicit alcohol forms 22-27% of strong alcohol market. (2)

Alcohol consumption in Estonia is characterised by drinking to reach intoxication and consumption of large quantities of alcohol at a time; „binge-drinking” is also quite common and acceptable (9). The specificities of the described consumption pattern include strong relations between alcohol consumption and violence, including self-inflicted violence. As a comparison we can suggest the so-called continental drinking culture, where alcohol consumption is mostly linked to food culture and smaller quantities are consumed at the same time. With such a consumption pattern, the relations between alcohol consumption and violence are weaker and the harmful effects of alcohol are somewhat smaller (9). More frequent incidence of alcohol poisoning, alcoholic cardio-myopathy and sudden death in Eastern Europe, Estonia included, has been proven; in Estonia this is linked to the habit of consuming large quantities of alcohol at a time. (10, 11)

2.2 Impact of alcohol on health, economy and society in general

Impact of alcohol on health

According to a WHO report, alcohol holds the **third** place in global rating, after high blood pressure and smoking, as a health risk factor. Alcohol is behind ~10% of burden of diseases or, largely, 40,000 disability adjusted life-years per annum. 99% of alcohol-related losses are attributable to men and the major share is made up of losses, linked to **premature deaths**. According to WHO 2012 report, in Estonia, alcohol is the reason for the death of 12% of females and 28% of males, aged 15-64. (9)

Alcohol-related health problems are mostly expressed in **alcohol addiction** (incl. deprivation symptoms, loss of control, social alienation), **regular consumption** (incl. liver cirrhosis, cognitive disturbance, in total, more than 120 diseases and disturbances), **intoxication** (incl.

alcohol-related crime, risk behaviour, traffic accidents, injuries etc.). In Estonia, harm resulting from both regular consumption and intoxication have a high level. (9)

Main alcohol-related diseases in men are coronary ischemia, liver cirrhosis and stroke. Women lose the largest number of years of life as the consequence of liver cirrhosis, followed by another major alcohol induced contributor, stroke, and breast cancer. Liver cirrhosis, the most common factor that influences the loss of years of life, contributes 23% of alcohol-related health loss (9).

Death by injury

In the European context, Estonia stands out by a large number of deaths by injury and injuries in general – compared to the Nordic countries, for example, Estonians face a 2-3 times higher risk to die from an injury. As the immediate factors behind deaths by injury were studied among persons aged 18-64 in Estonia, it was found that alcohol intoxication is among the leading causes for permanent or life-threatening bodily injuries. 65% of all the studied victims of death by injury, aged 18-64, were drunk during the fatal event. Most frequently they were registered to have severe intoxication (58%), while respectively, 25% and 17% victims had the moderate and minor intoxication (12).

34% of loss of health, caused by alcohol, is attributable to external reasons and 60% of these are present at the age of a young adult (15-44 years). This means that very high proportion of alcohol-related deaths by injury incur among the population of the best working-age. In 2011, Estonia held the first place, both among men and women, in the ranking of non-deliberate or accidental deaths by injury in the sphere of poisonings whereas excessive drinking of ethyl alcohol was the main identified cause of such poisonings. Either poisoning or suicide holds the first position as the reason for death by injury among the men aged 20 to 60 years. The majority of the middle aged people (82%) who committed suicide were excessive users of alcohol (13).

Traffic injuries and violence are among the most important reasons for health loss; in total, these two categories contribute approximately one half of the years of life lost as the consequence of external reasons.

Death by fire and drowning

In 2013, 47 people lost their lives in fire and 99 people were injured. It's worth noting that 66% of people who died as the consequence of fire were drunk. Combined use of alcohol and cigarettes is often the problem in these cases – an intoxicated person will set the bed or armchair on fire by dropping burning cigarettes. According to the statistical information, available from the Ministry of Interior, in 2013, 56 people died as the consequence of drowning and approximately one half of them were intoxicated by alcohol. Going swimming after using alcohol is a large risk factor as people lose their co-ordination and often over-estimate their abilities.

Traffic accidents

According to the initial data from the Police and Border Guard Board, in 2013, 160 traffic accidents, involving human injuries, were caused by intoxicated drivers of motor vehicles; 25

people were killed and 227 were injured (in total, the number of traffic accidents, involving human injuries, was 1,377; 81 people died and 1,722 were injured). According to the police, approximately 1% of drivers of motor vehicles have been caught, intoxicated with alcohol or suffering from residual alcohol effects; therefore, we can say, for traffic accidents that take place because of intoxicated drivers of motor vehicles, that major damages are caused by a small group of people (14).

Crime

In 2012, 4.5 murders per 100,000 inhabitants were committed in Estonia; in most European countries the respective figure is below 2. Most people who committed a murder were intoxicated by alcohol and alcohol was found in the blood of one half of the victims (15).

Approximately one half of cases of family and domestic sexual abuse are related, according to a survey conducted, to use of alcohol. A survey, conducted in 2005, showed that 41,000 women per annum suffered violence; 7,000 received permanent or life-threatening bodily injuries; half of the cases involved use of alcohol (16).

Alcohol-caused economic losses

According to the World Health Organisation, consumption of absolute alcohol in quantities that exceed the level of 6 litres per capital will result in major harm to public health, economic and social problems. Illness, resulting from harmful use of alcohol, and resulting loss of working days, treatment expenses and premature death total to **2-5% of the GDP**. (8, 17).

According to Alcohol in Europe report, which was commissioned by the European Commission, 25 billion euros of alcohol excise duty was collected to state treasuries in 2003. Expenses, attributable to alcohol-related damages, totalled to **270 billion euros** in 2003 (18). The report includes no information about alcohol-related harm, which is expressed in abuse of children and unhealthy living environment, domestic abuse and breaking of families and other social phenomena. However, it's quite clear that these phenomena represent obstacles to human resource development and have negative impact on social welfare and economic development.

Basic studies, which were used for the report, also analysed alcohol-related harm in the UK, which reveals that indirect alcohol-related losses, for example – resulting from crime, reduced productivity of work, injuries, illnesses, death etc. factors – totalled to 20 billion pounds (18). If the proportion of losses, suffered in Estonia, had the same proportion, this would total above 1 billion euros per annum. However, the population of the UK only drinks 8 litres of alcohol, as opposed to ca 10 litres in Estonia; therefore, the estimated losses are even higher.

In Estonia, loss of years of life, resulting from premature death and illnesses, has been appraised within the context of both alcohol and injury induced deaths. Annual economic loss, attributable to loss of years of life and value that was not created during these years, as the consequence, was expected to be 2 billion kroons (ca 130 million euros), as minimum, while the total economic loss, resulting from premature death and illnesses, related to harmful use of alcohol, may have been, in current prices of 2006, around 6 billion kroons (more than 380 million euros). These calculations do not include social losses, unemployment, crime etc., related to harmful use of alcohol (3).

Alcohol and young persons

Use of alcohol among young persons is an issue of concern. Use of alcohol among the age group from 10 to 24 years is the most crucial risk factor for alcoholism as people who start regular alcohol consumption as teenagers face higher risk of health-damaging risk behaviour and abuse of alcohol as an adult. Alcohol is directly linked to the three most common reasons for mortality among the young: traffic accidents, unintentionally inflicted injuries and murders. Use of alcohol among young persons is a serious and increasing concern. Already back in 2003, a survey showed that more than 80% of young persons 16 years old and younger had tried alcohol. A survey, held among young persons aged 15-16 in 2011, showed that 95% young persons have tried alcohol and one third of them have tried alcohol before they were 12 years old (19).

Young persons mostly imbibe mixed drinks/cocktails and ciders or strong alcohol; the number of young persons who drink a lot and often has steadily grown. Two third of the young persons questioned stated that weak alcoholic beverages are **readily available**; the opinion is a bit different with respect to strong alcoholic beverages – only a half of the young

persons questioned found these readily available. As it was the case earlier, alcohol use is mostly related to positive feelings among the young persons; based on the results of the survey young persons consider excessive smoking as more harmful for health than daily use of alcohol (19).

Smoking can be used as a comparison to alcohol use; the respective levels have started to show a decline among young persons, as the consequence of stricter rules on advertising tobacco products and restrictions to smoking in public places.

Drug and alcohol use among young persons is increases and people are younger when they start their drug use habits. Minor offenders themselves list negative influence from companions and friends, alcohol consumption, problems with studies and broken families as the main reasons for their offence. **As many as 75% of young persons who are force to face the juvenile committee mention alcohol as a serious reason for their problematic behaviour.** Many children who lack support at home end up at the committee repeatedly; unemployment, illness, vulnerability, but also alcohol and abuse are the main problems, suffered by families of problematic children (20).

Alcohol and genders

The distribution of health loss, related to alcohol, between men and women, is highly unequal; alcohol causes premature death of 12% of females and 28% of females (9). Therefore, alcohol is one of the main reasons for the life span of Estonian men being ca 10 years shorter than that of women. Alcohol is also an important risk factor for gender-based domestic violence.

Expectation of Estonian population to the Alcohol Policy

A study, conducted in 2012 by the Estonian Institute of Economic Research, reveals that according to the Estonian population, harmful use of alcohol among adults and use of alcohol among children in general is seen as a problem and therefore, general reduction of alcohol use is seen as necessary. **According to every other respondent, Estonian national alcohol policy should include strict restrictions.** (2)

Studies demonstrate rather critical approach of the population towards advertising alcohol. People are most critical about large-scale outdoor advertising billboards; according to the population, there should be a ban on advertising alcohol on these boards. The population finds the use of radio and TV to push alcohol also rather condemnable. People described points of sale of alcohol as the most suitable channel for advertising alcohol; according to every other respondent, there should be no restrictions on advertising alcohol in points of sale of alcohol.

According to the population, alcoholic beverages shouldn't be available at sports events; there is also disapproval regarding sales of alcohol in filling stations and shops located in apartment houses. The population is less reproachable about selling alcohol at concerts and other cultural events. Estonian population is concerned about excessive alcohol consumption among Estonians and people wish for a stricter national alcohol policy.

In general, alcohol is readily available in Estonia. One fourth of the population finds that alcohol is too available and 70% finds it to be normally available. For one fifth of consumers

the closest point of sale that supplies alcohol, is the house where they live or the house next door and 68% of the population need 10 minutes to get to the closest point of sale that supplies alcohol. If we were to compare the availability of alcohol by place of living of population and regions, we can conclude that in Tallinn and other larger cities people can buy both strong and weak alcohol from a point of sale located either in the very house where they live or the house next door. Alcohol retail sale network is not as dense in rural settlement, however, as many as 2/3 of rural population will not be required to spend more than 10 minutes to reach the closest point of sale that supplies alcohol.(2)

2.3 Implemented measures and legal environment

The Alcohol Act lays down special requirements to handling alcohol, restrictions to the use of alcoholic beverages, organisation of supervision over the compliance with special requirements and restrictions and responsibility for the violation of law. Sales and advertising of alcohol, etc. is covered in Estonia, apart the Alcohol Act, a number of legal acts, incl. Alcohol, Tobacco, Fuel and Electricity Excise Duty Act, the Traffic Act, the Advertising Act, the Penal Code etc. The Alcohol Act allows local governments to impose restrictions certain aspects of to retail sale of alcohol and limit outdoor advertising of alcohol. Supervision over the compliance with the aforementioned legislation is carried out by the Police and Border Guard Board, the Veterinary and Food Board, the Consumer Protection Board, the Tax and Customs Board, local governments (more specifically see Annex 1).

3 Expected influence of decreased alcohol consumption on public health and economy

Permanent reduction of alcohol consumption levels below 8 litres per capita, given as absolute or 100% alcohol, has been repeatedly suggested as one of the benchmarks for the Estonian Alcohol Policy during discussions that have taken place over recent years. As alternative benchmarks are not available, the current analysis of influence will focus on description of various scenarios, showing how alcohol consumption levels, dropping to 8 litres of absolute alcohol per capita as the consequence of modification of alcohol policy, could influence mortality and loss of years of life among the Estonian population. Earlier risk burden studies, conducted as concerted effort of the Ministry of Social Affairs, University of Tartu and the WHO, were used as the methodological bases for the analysis. These studies use the presence of different levels harmful use of alcohol among gender and age groups of the population, mortality and loss of health among the same groups and the impact of alcohol on mortality and illnesses, resulting from various diseases, established at global level by employing specific research projects, to determine the influence of alcohol use on health. Therefore, by being aware of alcohol use, influence of alcohol on incurrence of diseases and the incidence of such diseases among the population, we can determine the proportion of death and loss of health, caused by harmful use of alcohol, as the consequence of the diseases.

However, the given analysis of influences largely represents an estimate of the rate of alcohol-induced mortality and loss of health after the consumption of alcohol will drop below the expected level of 8 litres. As we deal with a fictitious situation here and there is no information available in Estonia about the distribution of the appropriate distribution of harmful use of alcohol and general loss of health among gender and age groups of the population, the only methodological option would be to extrapolate the required two indicators by using the available data. We know, based on earlier risk burden studies, what was the distribution of different levels of harmful alcohol use and incidence of death and loss of health among gender and age groups in two different points of time. We also know the quantities of absolute alcohol that were consumed, per capita, in Estonia in the given years. Using this information, we can calculate the share of people, per gender and age group, who use harmful quantities of alcohol, provided that the changes in alcohol consumption at population level are uniformly expressed among all gender and age groups.

Prognostic models answer, by nature, to the question „What if ...?“. When using the questions, it is always recommended to compare, simultaneously, a number of alternative scenarios to obtain a better understanding of resulting differences in estimated influences and outcomes, which are linked to different choices available for changing the policy. Therefore, apart the “8 litres” scenario, current analysis of influence also serves to identify the influence of alcohol use on public health in a situation where efficient measures that will contribute to reduced use of alcohol won't be applied and alcohol consumptions rates will show an increase again, from the level of 2011, simultaneously with the expected growth of the GDP. The situation that prevailed in 2011 will be the third compared situation for the purposes of the analysis.

For each and every one of these three scenarios, numbers of deaths and disability adjusted life-years for different gender and age groups were determined during the analysis. Additionally, monetary value of statistic life was used to determine the monetary value of

deaths, induced by harmful use of alcohol. Air pollution health impact evaluation reports, earlier compiled and published by the Ministry of Environment, were used as the source of methodology, as these reports focus on determining the monetary value of reduced public health on the bases of social opinion of human life and individual's expected contribution to the society and the development of its prosperity (GDP) (66). Such an ethical and principal approach works well with the basic values of the Ministry of Social Affairs and the Hippocratic Oath, which states that each human life is a value in itself and forms the foundation for health care system in general. Earlier studies, carried out in Estonia, have also shown that 1.5% decrease in mortality of adults will result in a GDP that is higher by 14% in 25 years, unless mortality rate is not decreased. The described methodological approach is also supported by the fact that Estonian and global research projects, described in the other parts of the current Green Paper on Alcohol Policy, have demonstrated different economic impacts, resulting from harmful use of alcohol, but until today we still miss an approach, which relied upon basic social values, like the one used for air pollution health impact evaluation reports.

Influence on proportion of excessive users

As described in the methodology of the previous analysis, this relies on earlier risk burden analysis methodologies. These studies used the average daily absolute alcohol value, which is shown in Table 1 and comply with the definition of risk limit for alcohol use, to define the risk limits for alcohol use.

Table 1. Limits for alcohol use and risk use by average daily absolute alcohol consumption, according to the WHO recommendations.

Risk	Men	Women
Limited	<20g	<10g
Moderate	20-40g	10-20g
Harmful	40-60g	20-40g
Dangerous	>60g	>40g

As expected, the results of the analysis showed that harmful use of alcohol is more common among men than women (table 2). Also, among men the incidence of harmful use is considerably less sensitive to general changes in alcohol consumption. This is largely attributable to the fact that among men, compared to women, the proportion of men that use alcohol in dangerous quantities, is much higher and the general level of excessive use is also higher. In conclusion, it was found out that the share of excessive users of alcohol among the population was around 35% in 2011. However, if the alcohol policy is not changed in the nearest years and alcohol consumption rates will start to grow again in the society, we may find that as the prosperity of population increases, the share of excessive users of alcohol among the population may increase to 45% by 2014 while the amount of absolute alcohol, consumed per capita, will go up to 11.4 litres instead of the 10.2 litres, registered in 2011. It's also worth noting that the share of excessive users of alcohol among the population used to be around 45% also in 2006, but reached the all-time high in 2007.

Table 2. Share of excessive users of alcohol (the total for groups of harmful and dangerous users) in comparison of men and women for three different scenarios.

	Men	Women	Total
2011	51%	20%	35%
2014	55%	34%	45%
8 litres	47%	7%	27%

Impact on mortality rates

Harmful use of alcohol has considerable effect on the incidence of numerous diseases that would otherwise never occur. Disease-inducing effect of alcohol is often revealed in human body via numerous mechanisms. In the case of intestinal tumours, for example, local physical damages represent an important factor while changes in hormonal balance play an important role in the case of breast cancer. Alcohol also encourages growth of blood vessels that will ensure, apart other influences that facilitate growth of tumours, the availability of blood supply that tumours need to flourish. Apart chronic diseases, alcohol is an important contributor to incidence of injuries and enhanced risk behaviour in general, as various self and social control mechanisms will be disturbed.

The most serious consequence of diseases is premature death and the current analysis revealed that in 2011, 1,440 deaths attributable to harmful use of alcohol took place, almost 80% among men. Compared to general mortality, the incidences of death, attributable to harmful use of alcohol, contributed slightly above 9% of total deaths. In the case of 2014 scenario, the number of deaths, attributable to harmful use of alcohol, would increase above 1,500 and contribute almost 11% of the generally declining mortality rate. However, decrease of alcohol use below the level of 8 litres would decrease the number of alcohol-related deaths to 1,130, which would attribute about 7% of mortality rate of 2011 and 8% of the estimated mortality rate for 2014. Considering the outcomes of the referred report that discussed relations between health and macro-economy, apart immediate effect, decrease in the number of deaths attributable to harmful use of alcohol would result, in long-term perspective, in considerable benefits for Estonian macro-economy. It's also important to state that among men, above all, the number of deaths attributable to harmful use of alcohol peak at the best productive age.

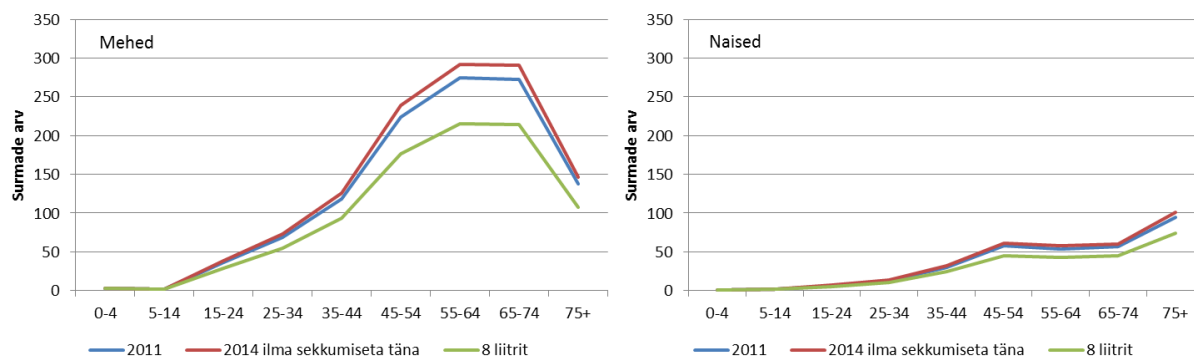


Figure 1. Alcohol-related deaths by gender and age groups for three different scenarios

Impacts on loss of health

Each and every premature death involves loss of time that could have contributed for living and into the society. Time spent ill also involves a loss. We won't lose all the time spent ill, but depending in the seriousness of the disease some of our productivity and active legal capacity may be lost. For the purposes of loss of health, aggregate loss for the society, resulting from premature mortality and time spent ill will be measured.

In 2011, the Estonian population lost slightly more than 50,000 years of life as the consequence of alcohol-related diseases and premature mortality, which exceeds the estimated loss of health, predicted for that specific year, by more than 10%. Again, it's important to mention that a large share of such loss of health is attributable to men, more specifically, men of working age. If the attempt to decrease alcohol use permanently below the level of 8 litres were a success, this would result in decrease in loss of health, resulting from excessive use of alcohol, by 22% and the respective indicator would drop below the limit of 40,000 years of life. Considering increase in rate of loss of health, incurring in the case of non-modification of the alcohol policy, which will result in increased use of alcohol by 2014, the loss of health, related to alcohol use of 8 litres per capita, would even be lower by 34%. If we use a better context to describe the number of disability adjusted life-years and assuming that every individual in Estonia could have the life expectancy of 80 years, the difference of 2014 and scenario and alcohol use of 8 litres per capita, when using the loss of health as comparative factor, we could avoid losing the annual contribution of 260 people.

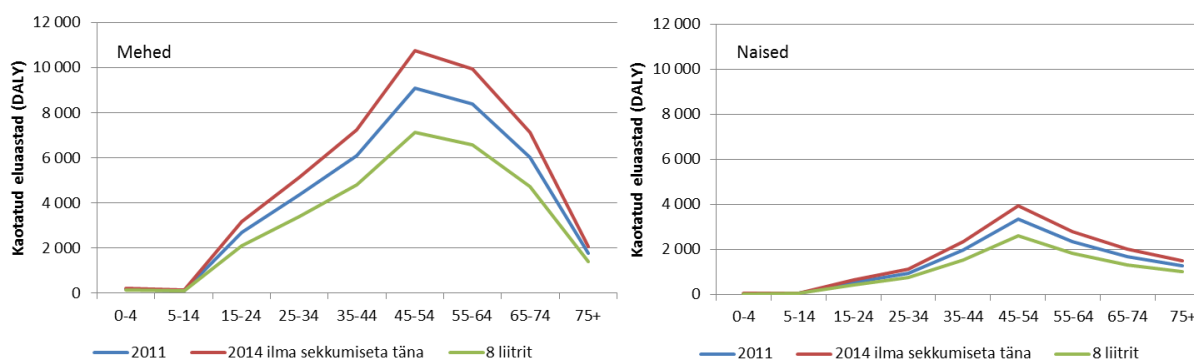


Figure 2. Alcohol-related loss of health by gender and age groups for three different scenarios, expressed as disability adjusted life-years or DALY.

Expected influence of decreased alcohol consumption on economy

Monetary value of lost lives

Based on the methodology, published by the Ministry of Environment in air pollution health impact evaluation report, the monetary value of a loss of a statistical human life in totalled, for the purposes of this analysis, slightly above €1.43 million in 2011 (and the estimated value on 2014 is expected to be €1.58 million). Accordingly, in 2011 the statistical monetary loss, resulting from harmful use of alcohol, totalled approximately to €2.1 billion (table 3). By 2014, the increase in loss of lives and growth of value of statistical lives would be above €2.4 billion. However, in the case of alcohol consumption below 8 litres per capita the monetary value of lost lives would be €1.6 billion or almost one billion euros less than the worst estimated result.

Table 3. Value of lost lives, million euros.

	Men	Women	Total
2011	1 616	442	2 057
2014	1 905	521	2 425
8 litres	1 268	347	1 614

In conclusion, we have to admit that excessive use of alcohol has huge impact on health and represents a health behaviour risk factor that is a major reason for poor health. Decrease of population, slow increment of population, considerable loss of human resources among population of working age and far extending macroeconomic influences will make the interventions, aimed at reducing harmful use of alcohol, important tools for improving public health and Estonia's economic situation – also on long-term perspective.

The influence of reduced alcohol consumption on economic spheres that involve production and handling of alcohol is difficult to value, for several reasons. Apart domestic consumption, production volumes are also influenced by export whereas turnover and profit are influence, apart production volumes, by internal distribution by assortment and price ranges of products.

Trade sector is more strongly influenced by purchase power of consumers than the price or availability of specific type of product, considering, above all, that according to the information available from Statistics Estonia, majority of the retail sellers do not specialise in alcohol. However, we can't rule out the impact of measures being stronger than average on single entrepreneurs, who focus on handling of alcohol; the influence of the measures on tourism also needs to be considered.

International experience shows that at the end, reduced alcohol consumption will have a positive effect on economy (18). It will be expedient to observe the effect of measures on economy during the implementation of the Green Paper.

4 Measures to be implemented to curb excessive consumption of alcohol and decrease accompanying damages

4.1 Imposing restrictions on availability of alcohol

Sale of alcohol in retail stores will only be permissible in a separate sales area or from a service counter, employing a sales person; further measures will be implemented to separate sales of alcohol from the sales of other groups of products.

Consideration should be given to the implementation, after a reasonable period of transition, to the requirement of separating alcohol sales area from the remaining sales area by partitions.

Development of measures for implementing stricter surveillance over alcohol sales on Internet, incl. for the prevention of sales to minors, conduct of studies to map the sector.

Imposing stricter penalties for making alcohol available to minors.

Implementation of more efficient supervision over the ban to sell alcohol to minors, incl. establishment of a legal opportunity to involve minors to make purchase for the purpose of monitoring compliance with the prevention of sales to minors.

Persons younger than 30 years will be required to present personal identification document to sales person when purchasing alcohol while sales persons will be required to ask individuals to present personal identification document in the case of suspicions.

Development of additional set of influencing measures for minors, caught using alcohol, incl. educational and counselling programmes, and devise the practice for the implementation of such measures; development of co-operation between the Police and Border Guard Board, juvenile committees, local governments and the National Institute for Health Development to influence the minors.

Implementation of activities, aimed at enhancing the awareness of parents, sellers, organisers of events and public in general to increase the support of the society to prevention of making alcohol available to minors.

Initiation of a discussion regarding the raise of age limit for buying and consuming alcohol.

Regular conduct of studies on sales of alcohol to minors (incl. purchase for the purpose of monitoring compliance) and publication of results.

Development of co-operation with private sectors to prevent sale of alcohol to minors.

Support to popularisation of alcohol-free days and periods and avoidance from use of alcohol on days of national importance, incl. 1 June and 1 September.

Analysis and consideration of opportunities to diminish the number of retail

According to international studies, by restricting the availability of alcohol it will be possible to reduce alcohol consumption and resulting damages to health (5, 21, 39). WHO emphasises that by adopting a well-elaborated strategy to restrict availability of alcohol harmful use of alcohol and use of alcohol among vulnerable groups (minors, excessive users) can be reduced (5). Physical availability of alcohol may influence social and cultural norms that, on their turn, influence the patterns for alcohol consumption. Local situation and culture, spread of illicit alcohol, etc. all influence the links between availability of alcohol and consumption and must be taken into consideration for the purposes of planning national measures. Attention should be also given to non-commercial availability of alcoholic (for example, from parents to children, friends to friends etc.) and where appropriate, measures should be taken to protect vulnerable groups from the influence of alcohol (5).

In Estonia, alcohol is readily available, in general (2). When compared to the Nordic countries, strong alcohol is much more easily available – per every 100,000 inhabitants Estonia has 195 points of sale that offer strong alcohol. In Finland, Norway and Sweden the respective figures are 6.5; 5.1; and 4.5.

The largest number of points of sale that offer alcohol per 1,000 inhabitants can be found in Hiiu county (7.5), followed by Saare county (7.4) and Pärnu county (5.9). In counties with the largest number of population, for example, Harju, Ida-Viru and Tartu county, the number of points of sale per 1,000 inhabitants is, respectively, 4.6; 3.2 and 3.3. By towns, the largest number of points of sale per 1,000 inhabitants can be found in Pärnu (5.9), Viljandi (5.0), Tallinn (4.7) and Tartu (3.1). When mapping the number of points of sale per 10 km² we will see that more points of sale can be found in places with higher density of population – Harju, Ida-Virumaa and Tartu county. (2)

According to Statistics Estonia, retail turnover of 2011 (with the exception of sale and repair of motor vehicles) totalled to 3,906 million euros. The sale of shops that trade in food totalled to 1,860 million euros, sale of alcohol contributed 441 million euros of this amount. Retail sale of alcoholic beverages contributes 7.7% of total retail sale (motor vehicles excluded). Sale of alcoholic beverages contributes 20% of the total sale of food products.

Sale of **alcoholic beverages** is mostly divided by places of business (Statistics Estonia): unspecialised stores, i.e. stores that mostly sell food and consumer goods (retail chains, hyper and supermarkets, food stores etc.) - 73%; specialised food stores (mostly liquor stores) - 24%; others - 3%.

According to the register of economic activities, there are 3,468 catering enterprises by place of business; the register shows that 2,900 of these also sell alcohol. The Estonian Traders Association carried out a survey among the representatives of wholesalers and manufacturers of alcohol and tobacco products and the results showed that different channels were used to deliver the goods to 1,000-1,200 stores. (56)

Retail of alcoholic beverages in Estonia is regulated, above all, by the Alcohol Act, which regulates (restricts, bans) among other things, the sale of alcohol in stores, catering enterprises, at public events, in institutions involving children, by means of e-trade etc. Local governments play an important role in regulating the availability of alcohol. Local government units can implement the alcohol policy by regulating:

- locations for the exhibition of alcoholic beverages at a point of sale for both takeaway points of sales and those intended for the consumption of goods on the spot, the assortment of alcohol they offer and form of sales;
- retail sale of alcohol at public events (national holidays, events, sports events etc.), including banning retail sale of alcohol.

Minors describe alcohol as readily available, but compared to the recent years, the availability has somewhat reduced. According to an ESPAD study, which was conducted in 2011, 54% and 76% of 15-16 year old young persons considered, respectively, strong and weak alcohol easily available (19).

Personal identification document to prove the age of buyer was asked, in 2012, by sellers from young persons wanting to purchase alcohol in 36% of cases and in catering establishments, only in 14% of cases (65).

Legal provisions that are intended to restrict use of alcohol among minors are difficult to apply. For example, in 2012, 6,282 incidents of consumption of alcohol by minors was registered (Article 71 of the AA) and 28 purchases of alcoholic beverages by minors. However in 2012, 60 natural persons were held liable for the violation of age limit in handling alcoholic beverages to a minor (Article 67, subsection (1) of the AA) and three legal persons (Article 67, subsection (2) of the AA), under misdemeanour proceedings, and two crimes were registered, committed by an entity that had earlier been punished for a similar act under misdemeanour proceedings (Article 182¹ of the Penal Code).

The measures, described above, have been devised, considering international recommendations and positions of the parties (see Annex 2)

4.2 Imposing restrictions on sales promotion of alcoholic drinks

Giving consideration to the amendment of the Advertising Act to allow for only neutral information about the properties of a product to be included and presented in alcohol ads (ruling out the use of people, description of atmosphere and storytelling).

Restricting advertising, using the following channels:

- **Banning outdoor advertising.**
- **Adding to restrictions for printed media to disallow alcohol ads, apart front and rear pages of newspapers and magazines, also on front and rear pages of inserts and extras of newspapers and magazines.**
- **Imposing additional time limits of advertising alcohol on TV and radio: alcohol ads could be banned from 7 am through 10 pm.**
- **Development of proposals for regulating alcohol ads in Internet and supporting voluntary arrangements between publications to restrict alcohol ads.**

Only allowing alcohol to be offered for tasting in separate alcohol sales area.

Banning the use of alcoholic beverage or a trademark of alcoholic beverage for offering other products for sale and to support sales campaigns or for some other forms of advertising activities (cross-marketing).

Adding specifying provisions to the Advertising Act to treat advertisements that push free alcohol as prohibited advertising. Specification of rules imposed on presentation of mandatory health risk warning in TV and radio ads – as a written and verbal text.

Imposing mandatory format for health warning on printed ads, given as a percentage of the area of the ad, complete with a minimum size.

Introduction of changing health warning messages, including health and risk behaviour subjects (traffic, water safety etc.).

For the purposes of surveillance, penalty fine should be applied instead of warning, involving raising the upper penalty fine limits. Both the client who commissioned the ad and the entity publishing it should be fined in case of a breach of law.

Adding provisions to the Law Enforcement Act to offer, upon identification and establishment of an ad that clearly conflicts with valid regulation, surveillance officials the options and grounds to suspend publication of an advertising campaign with an accompanying obligation to initiate administrative procedure with respect to the given campaign.

Creation of an opportunity for immediate precept in the case of repeated offence without hearing out the other party.

Suggesting private sector to commission independent evaluations, on regular bases, to ensure compliance with self-regulation.

Suggesting producers of alcohol to refuse from sponsoring family and sports events, where minors participate, under alcohol trademark or producer's trademark, as a form of self-regulation.

Alcohol marketing is a process that includes several layers – it's not restricted to advertising and sales promotion of alcohol, but also includes product development, choice of market segments, targeting products, pricing policies and availability of products (58).

Traditional mass media is used to advertise alcohol, involving more and more inventive ads in the process; sponsorship is frequently used to link producers to sports and culture; creative approach is used to employ new media channels – internet, mobile marketing etc (59). Activities involving social responsibility, social marketing and educational programmes have become a part of marketing. All the possible forms of alcohol marketing must be considered for the purposes of marketing regulation. Restriction or banning of certain channels will often result in activities moving over to other channels, (still) free of restrictions.

Evidence on influence of advertising alcohol on alcohol use

Alcohol ads represent one of the many factors that influence alcohol use. The influence of alcohol ads and movies that involve alcohol use has been studied, in detail, by employing various methodologies (econometric, longitudinal and experimental studies) and by studying the results, the Science Group of the European Alcohol and Health Forum has formed the following conclusion:

- **Alcohol marketing serves to enhance the possibility of minors starting to use alcohol and those already consuming increasing the used quantities.**
- Econometric studies have been used to explain the influence of advertising alcohol on total consumption and it has been found that every increase of the scope of alcohol advertising by 10% increased consumption by 0.3% (60). Although econometric studies, which attempt to link the scope of alcohol advertising and quantities of alcohol, consumed by society, are of serious interest, the conduct of such studies is complicated as the consequence of several methodological problems.
- The impact of marketing seems as cumulative: in the markets where young persons see more alcohol ads, they will use larger quantities.

Self-regulation

Evidence, obtained from different studies, show that voluntary systems, established by producers, are not sufficient to manage marketing, desirable for young persons (61). Supervision, exercised by parties to the market, can only be efficient under constant public and state pressure and if there is an independent committee to appraise violations. Otherwise there will be a conflict of interests where interested parties will be both involved in creation and evaluation of ads. Consistent and routine supervision of violations should be ensured.

Discussion document of the work group is attached, see Annex 3.

4.3 Pricing and taxation policies

Over the next 4 years, excise duty on alcohol should be raised, in average, by 5% per annum.

The Ministry of Social Affairs and the Ministry of Finance will be required to develop long-term framework for alcohol taxation, which will involve annual review of the tax levels, list of process participants, description of process and the list of indicators to serve as the bases for the appraisal and modification of tax level, and will ensure the following:

Alcohol must not become cheap, compared to income, and in long-term perspective alcohol should become more expensive;

Increase of excise duty on alcohol (and the influence of other instruments) should be gradual and predictable within a reasonable time frame to avoid abrupt growth of illicit market;

Taxation of alcohol should consider impact on health, impact on illicit market, changes in income of population, price level of neighbouring countries etc.

Considerable increase of excise duty on alcohol or implementation of other measures that will increase the price of alcohol should be accompanied by additional tools to fight illicit market to avoid the increase of the proportion of illicit market.

Allocation some of the excise duty on alcohol for decreasing health damages, incl. treatment.

Consideration of the option to establish minimum alcohol prices or adoption of other measures that would prevent the sales of alcohol at prices lower than the cost price. For that purpose, the Ministry of Social Affairs and the Ministry of Finance will be required to:

Collect and analyse information about international practice, regarding minimum price;

Observation of developments in the other EU states that consider the establishment of minimum prices (UK, Ireland);

Analysis of options for the implementation of minimum prices in Estonia, involving market participants and health experts in the process.

- Supporting policy changes in the European Union that will allow for the taxation of mixed drinks regardless of the methods for their production.

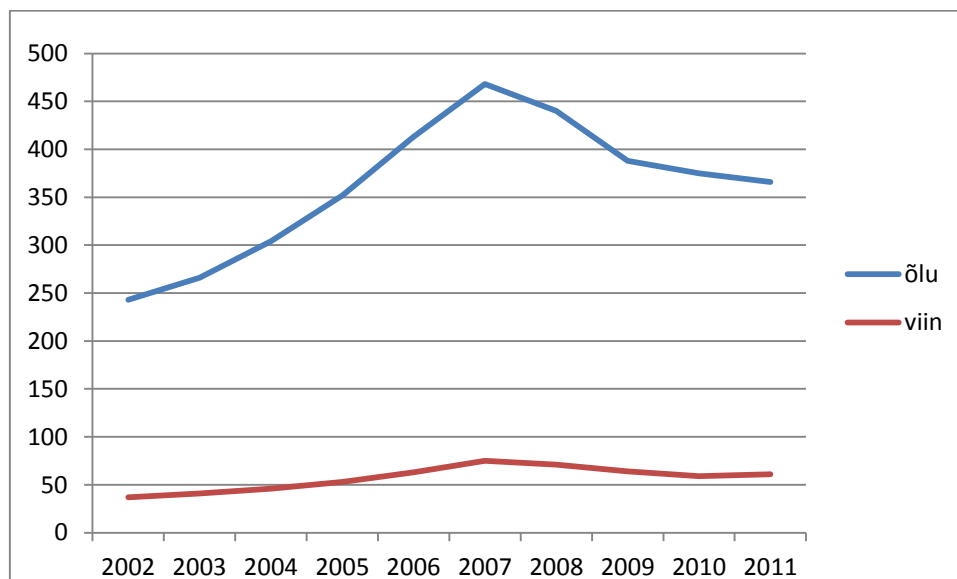
Economic availability of alcohol is one of the factors that has the strongest effect on total consumption which influences, in aggregate with the most common consumption patterns, alcohol-induced health damages (2, 5, 21, 63). Price increase will have considerably stronger effect on young persons and abusers, who are the priority target groups for the prevention of health damages (21). Therefore, WHO and international experts recommend to see, for the purposes of taxation of alcoholic beverages, that they won't become more easily available for people, considering the general purchase power (5, 21, 39).

Taxation policy represents one of the most efficient and cost-effective options among various alcohol policy measures; however, international practice and scientific research shows that governments often fail to see improved public health as one of the goals for taxation policy development (63). Various countries usually use excise duty and value added tax as taxation instruments; other pricing policy measures, for example, banning discounts, minimum price etc., are not used as often (62). Different alternatives have different effect on consumption trends and consumer groups, for example, minimum price is expected to have stronger effect on excessive consumers (18, 31, 64).

Changes in price of alcohol are reflected in consumption, both on the ability of alcohol to create dependence and alcohol-related traditions, only to a certain extent (21, 63). In countries, characterised by strong traditions in wine or beer consumption within a defined social context the price increase will have less effect on the use of alcohol, less linked to traditions. Within the cultural context of the Nordic and East-European countries, where alcohol is mostly consumed to achieve intoxication, the effect of price changes will be more immediate (21).

Until 2007 alcohol became more and more available in Estonia, mostly thanks to solid economic growth and increased income of population. Back in 2007, it was possible to buy almost twice as much of alcohol as in 2000; abrupt recession and increase of excise duty rates in 2008-2010 slowed relative cheapening of alcohol down (2).

Quantities of beer and vodka that could be bought for average net wages (litres), EKI



There are strong links between purchase power and consumption in Estonia. The links between total consumption and health are also strong in Estonia and the effect is amplified by consumption pattern, wide-spread in Estonia, which is characterised by consumption of alcohol to achieve intoxication, and large quantities at a time. In 2009 and 2010, when total consumption dropped, alcohol-related health damages also decreased (57).

By general rule, countries differentiate alcoholic beverages for taxation purposes (62,63). The European Union has, with directive 92/83, laid down minimum excise duty rates on alcoholic beverages, depending on their type, preferring fermented drinks to distilled drinks; wine has a special status with 0 rate. Economic considerations are largely behind different tax rates – for example, 0 excise duty rate on wine is applied by countries with traditionally strong wine industry.

Nevertheless, attempts have been made to use taxation as a tool to change trends. Higher taxes on strong alcohol represent the most common tool. Unlike majority of the EU states, Estonia is characterised by large proportion of strong alcohol in consumption; until 2010, measured in absolute alcohol, majority of the alcohol, consumed by Estonian population, came from strong drinks. Estonia also applies higher tax rates on strong alcohol, whereas the rates imposed on fermented and intermediate products are lower but the differences are smaller than in the Nordic countries or West Europe. Due to illicit market, Estonia has limited opportunities for the taxation of strong alcohol.

Additional taxes have been imposed on mixed drinks, attractive for young persons, to prevent recruitment of young and new consumers. The effect of this initiative is somewhat weakened by the willingness of consumers to replace one drink for another and, as a consequence, in Germany and Switzerland, for example, high taxes on mixed drinks did not reduce drinking among young persons in general (39). The effect is also weakened by the ability of industry to respond to taxation differences, for example, by replacing distilled alcohol in mixed drinks for fermented alcohol.

The influence of price increase on consumption and health in general is largely dependent on illicit market and the state's ability to have it under control. We must also consider the effect of legal cross-border trade on alcohol market, above all, in Estonia, where the alcohol price levels are very much different in neighbouring and nearest countries. In Estonia, the share of illicit market has steadily decreased over the last decade; however, since 2008 a growth can be notice again (2). While mostly vodka is illegally marketed, the proportion of illicit market has more effect on legal market of strong alcohol, but as products are replaceable, illicit market also influences the market of other alcoholic beverages.

The measures, suggested above, have been devised, considering international recommendations and positions of the parties (see Annex 4).

4.4 Preventing illicit trade in alcohol products

Imposing stricter control measures over individuals repeatedly caught dealing with illicit trade; introduction of faster system for imposing penalties both on customs border and domestically; application of detention on repeated offenders.

More efficient fighting with crime, related to illicit alcohol, in regions close to border between Estonia and Russia.

Development of cross-border co-operation with Russia to prevent organised crime, related to illicit alcohol.

Taxation of all the excise goods, unlawfully brought into the country, regardless of their confiscation.

Exercising in-depth control over people involved in illicit trade for the purposes of taxation of unlawful gains.

Application for revocation of permits and licenses, required for entrepreneurship (permits, working visas), in case of entities dealing with illicit trade.

Acquisition of modern customs equipment to detect illicit trade.

Exercising influence on consumers to make them give up illicit alcohol. Notification of the public of risks resulting from illicit alcohol by identifying and disclosing chemical composition of illicit, unregistered alcohol, complete with the description of resulting impacts on health (co-operation between the Ministry of Agriculture (Food and Veterinary Board) and Police and Border Guard Board and the Tax and Customs Board; possible co-operation with private sector).

Notification of employers, local governments and other institutions, related to the individuals, detained for illicit trade.

Consideration of measures to be implemented to prevent the sales/handling of cosmetic products that contain alcohol and other alcohol containing liquids, which are not alcohol for the purposes of the Alcohol Act, in situations where the packaging of the product or some other attribute refers that the product is to be used for a purpose other than intended.

Development of illicit market monitoring and supporting related studies.

Development of co-operation between public and private sector for the purpose of fighting illicit market.

Illicit trade is harmful for public health, economy and also a threat for domestic security. Illicit market cuts down the opportunities for the implementation of efficient alcohol policy.

Legal alcohol bought in Russia and illegally brought to Estonia, without paying any duties, contributes the largest share of illicit alcohol; the main health risks are mostly related to excessive quantities consumed and crime that accompanies illicit trade; unpaid taxes also form a part of the harm. At the same time, there are no restrictions to avoid uncontrolled, unofficial alcohol, which can pose a threat to health, ending up on the market – which will definitely happen. Consumption of moonshine and surrogates, liquids intended for purpose other than drinking, is also not uncommon.

In long-term perspective, consumption of illicit alcohol has decreased; in 2011, the share of illicit alcohol totalled to 6% of the total alcohol used. However, according to the expert opinion by the Estonian Institute of Economic Research, illicit alcohol contributes 22-27% of strong alcohol market (2).

Low price is the main incentive that makes people buy illicit alcohol. A survey among the population showed that 56% of the respondents see low price as very important and 43% - as somewhat important; only 1% of buyers of illicit alcohol paid no attention to price. The price gap between legal and illicit alcohol has decreased over years: while in 2006 a legal low price vodka cost 1.7 times as much as illicit vodka, in 2011 the price of illicit vodka was 81% of the price of legal low price vodka (2).

The percentage of buyers of illicit alcohol among alcohol consuming population has dropped over years, only contributing 8% of all the alcohol consumers in 2011. However, the problem remains rather common as we observe the regions and consumer groups. For example, 27% of alcohol consuming population of North-Eastern Estonia and 15% of non-Estonian consumers admit to purchasing illicit alcohol. As the consequence of price sensitivity issues, the percentage of users of illicit alcohol remains high among people with lower income (2).

The Tax and Customs Board and the Police and Border Guard Board play an important role in preventing the spreading of illicit alcohol. The measures, specified above, are based on the suggestions from the Tax and Customs Board.

4.5 Decreasing alcohol consumption and damages resulting from intoxication

Implementation of more efficient supervision, on behalf of the Police and Border Guard Board (in co-operation with law enforcement units of local governments) over compliance with requirements to behaviour in public places and, on behalf of the Consumer Protection Board in co-operation with rural municipality or city governments, requirements to selling alcohol to drunk customers.

The National Institute for Health Development, the Rescue Board and the Estonian Road Administration will be expected to launch public campaigns to develop intolerance towards health risks, swimming or getting involved in traffic while drunk; the Police and Border Guard Board will launch activities to support the campaigns.

The National Institute for Health Development, in co-operation with partners, will develop a training programme, aimed at services providers, helping them to identify states of drunkenness and avoid conflicts when communicating with drunken customers, enhancing the awareness of service providers of the prohibition to sell alcohol to drunk customers; giving considerations to making such training mandatory.

Development of lodging services, complete with medical assistance, for intoxicated persons.

Submit a proposal to the European Commission for mandatory health warning to be added to the packaging of alcoholic beverages in the European Union in general.

Both Estonian and global practice shows – and research results confirm – that crime, violence and disturbance of order is more common around points of sale where alcohol is sold. But there is also evidence that in the case of appropriate interventions in alcohol selling points, above all, catering establishments may help to reduce these problems. WHO emphasises that the measures to reduce such damages support all-inclusive alcohol policies and can't ever replace measures that focus on alcohol policy.

Promotion of responsible serving and other measures that help to prevent getting drunk and drink-driving (specified in Chapter 6), earlier closing of entertainment venues and co-operation projects with local governments and police (specified in Chapter 7) are all included among measures to reduce damages.

A study, carried out as a master degree thesis of Estonian Academy of Security Sciences, showed that a fourth of all the cases of physical abuse and grave disturbance of public order in public space of city of Tartu in 2009-2011 took place in entertainment venues or within their immediate vicinity. Surveillance of this sphere has diminished: in 2003, almost 33,000 fines were imposed for drunken state in a public place, in 2010 the respective number had dropped to 8,600 (57).

As private sector plays an important role in reducing the damages, the work group devised some recommendations to private sector, in addition to the applicant national measures.

Recommendations for private sector:

Giving consideration to imposing additional requirements to retail sale of alcoholic beverages in catering establishment or implementation of practices, in co-operation with private sector, which would prevent customers from achieving the state of intoxication, i.e. serving water with alcoholic beverages, the requirement to serve food etc.

Implementation of rules in alcohol sales environment, aimed at preventing violence and destructive behaviour, for example, use of plastic packaging, or regulating sales of alcohol in catering establishments and at public events; closing sales of alcohol 1 hour before the closing of the establishment/end of event, diminishing serving sizes of drinks.

Reducing the strength of weak alcoholic beverages and package size by means of self-regulation.

Facilitation of consumption of non-alcoholic beverages by price mechanisms and attractiveness.

4.6 Prevention of drink-driving

Adding a component dealing with alcohol as a risk factor and risk limits to use of alcohol to driver training curriculum; review of driving test questionnaires and increasing the number of contact hours. Adding an in-depth component dealing with alcohol to the training of professional drivers and linking alcohol issues permanently to occupational health of professional drivers.

Provision of a training course on reasons for risk behaviour and options available for the avoidance of such behaviour to students of gymnasiums and vocational educational institutions – (included in national Traffic Safety Programme).

Requiring individuals caught driving drunk to pass mandatory training and counselling programmes (similar to the programmes developed for individuals with learner's license, caught driving drunk, according to current regulations), incl. implementation of mandatory early alcohol abuse detection and short counselling programme and provision of treatment of alcohol addiction.

The Police and Border Guard Board will be required to increase the number of random intoxication checks, incl. in border inspection posts and in harbours.

Companies providing transport services will be required to ensure intoxication checks on drivers before they commence work.

Improved availability of devices to identify intoxication.

Continued implementation of analysis-based traffic surveillance. Placing more information about risks, resulting from driving drunk, into public space.

Implementation of penal practice that would influence offenders to prevent them from committing new offences.

Continued implementation of social campaigns that aim at the anticipation of driving drunk, incl. well-devised and intensely launched campaigns for specific situations (Midsummer Day, New Year, holiday period) or a specific target group (e.g. young persons).

Continued notification of police of dangerously behaving road users, using, apart over-Estonian traffic line, also the police hotline.

Alcohol intoxication reduces considerably a person's ability to perceive the situation, respond to the situation and control his or her actions. Driving a vehicle at any, even minor, level of intoxication will enhance the risk of being in a traffic accident for drivers. It has been

identified that even 0.5 p.m. intoxication will prolong reaction period in drivers while 1 p.m. intoxication will considerably reduce driver's control over his or her movements (55). People driving while intoxicated often cause the death or bodily injuries of innocent victims.

According to the estimates, the number of intoxicated drivers on Estonian roads is much higher than in Finland.

In Estonia, the Estonian Road Administration, the Police and Border Guard Board, the Ministry of Interior, the Ministry of Economic Affairs and Communications, have been the body systematically dealing with prevention of driving drunk; the respective activities are included in development plan "National Traffic Safety Programme for 2003-2015". The measures for the prevention of driving drunk, specified above, were developed in close co-operation with the parties involved in the Traffic Safety Programme.

4.7 Measures implemented by local governments for reducing alcohol caused damages

Using national strategies, legislation and financial tools to support increase of percentage of local governments that implement multi-component local programmes for reducing excessive alcohol consumption and alcohol-related harm/damages.

Supporting, where appropriate, local governments (national strategies, legislation and financial tools) that run active health boards or committees that have the capacities to plan and implement efficient health promotion strategies, incl. alcohol policy measures.

Mapping and analysis of alcohol policy practices at local level in Estonia, followed by offering local governments knowledge and experience exchange opportunities.

Development of guidance materials and training and counselling programme for the elaboration of local alcohol policies.

Numerous research articles and political leaders all confirm that alcohol policy measures, implemented at local level, are among the most efficient ones. It's important to keep on mind that the probability to improve the situation by implementing just on measure will be lower than in the case of simultaneous implementation of several measures. Local alcohol policy, which emphasises stricter restrictions on availability (above all, among points of sale that supply alcohol) and increased attention to local public health policies have shown the best results (38-54).

In the case of Estonia we must definitely consider with the fact that our local governments are mostly small and the distances between entertaining events or venues of different authorities are also very short. Therefore, it may not be very reasonable for a smaller authority to impose the appropriate requirements alone, but with the involvement from surrounding rural municipalities and towns instead.

The Alcohol Act will allow local governments to impose additional restrictions and carry out supervision. Only a small share of local governments have exercised the right to impose additional restrictions. The right of supervision was used, in 2011, six times by 2 local governments and only to mete out punishment for being intoxicated in a public space.

A wide-based involvement was carried out to collect proposals, regarding alcohol policy, from local community; the initiative included one conference for the representatives of local governments, with the participation of foreign lecturers and discussions in smaller groups

(see Annex 5), which were used as the bases for the national measures, specified above, and the following recommendations for local governments.

Recommendations for local governments

- 1. Imposing additional restrictions on sales of alcohol at public events that take place in the territory of a local government, for example:**
 - 1.1. Only allowing sales (and consumption) of alcohol in a restricted territory, involving age limits (18 years), which will be checked upon entry to the territory, incl. sales of alcohol won't be permitted at events taking place in open territories;**
 - 1.2. Adoption of a regulation to lay down the types of public events where the sale (and consumption) of alcoholic beverages will be forbidden, for example, sports events, cultural events, events where children will participate etc.;**
 - 1.3. Imposing restrictions on the strength of alcoholic beverages that can be sold at public events e.g. $\leq 6\%$)**
 - 1.4. Only allowing the use of alcoholic beverages from cups with defined volume at public events (e.g. 0.33 l).**

- 2. Reducing the density of retail stores (and establishments) that sell alcoholic beverages in the territory of a local government, by imposing additional restrictions, in addition to the national restrictions, to retail sale of alcohol, for example:**
 - 2.1. Specification, in meters, the distance between child care institutions and educational institutions and retail stores (and establishments) that sell alcoholic beverages (or supplement the list of institutions that must not have points of sale that sell alcohol within their immediate vicinity);**
 - 2.2. Banning sale of alcoholic beverages in an apartment house.**
- 3. Implementation of well-considered local alcohol policy that meets the requirements, incl.:**
 - 3.1. Endorsement of local alcohol policy positions;**
 - 3.2. Development and consistent implementation of a strategy that complies with local requirements;**
 - 3.3. Establishment of a multisectoral team for the planning and implementation of the activities and offering support to their active efforts.**

- 4. Organisation over the compliance with local restrictions on sale and consumption of alcoholic beverages.**
- 5. Facilitation of the use of alternative modes of transport, incl. ensuring the availability of public transport services until the closing time of catering and entertainment venues; organisation of co-operation with organisers of event and police in the case of large-scale events.**

4.8 Increasing awareness

The following principles shall apply for the purposes of information dissemination activities:

- **Information dissemination campaigns must focus on target groups, based on the attitude and problems of the target group concerned;**
- **Consistent information dissemination will be required for the achievement of objectives;**
- **Only programmes with controlled quality, adjusted to Estonian situation and tested shall be carried out at schools.**

Provision of information regarding the influences of alcohol and tools to assess individual alcohol consumption.

Promotion of social standards that condemn excessive use of alcohol in public places and at public events and intoxicated state while support and facilitate the organisation of alcohol-free events; public sector should set an example by not offering alcoholic beverages in the premises of the authority and at public events.

Promotion of positive attitude towards reduced alcohol use and sobriety.

Offering parents support and training to avoid alcohol use among young persons.

Notification of young persons of possible legal consequences of alcohol use.

Role of information dissemination for the purposes of alcohol policy

Although the dissemination of information is important to increase awareness and knowledge, information dissemination alone will not be sufficient to introduce permanent changes in alcohol use patterns and habits (21). Least of all in a situation where messages about harmful effect of alcohol compete with messages that support alcohol consumption, both as a part of marketing campaigns, launched by producers, and social norms (22). However, dissemination of information is an important component of alcohol strategy in general, which has the role of enhancing awareness and achieving support for other policy measures. Dissemination of information will become more efficient when used in combination with other policy measures.

The efficiency of information measures has been studied and the following conclusions have been drawn:

In the case of information dissemination programmes in schools there is no evidence of long-term positive effect on behaviour, although there is some evidence that these increase awareness and influence attitude towards alcohol (21-24). **Parenting programmes** have given different results, for example, a research based on 14 studies found that 6 programmes out of 14 helped to reduce alcohol consumption (26-29). Mere **information dissemination campaigns** are not, by general rule, efficient tools to reduce alcohol-related harm and damages. Campaigns against driving drunk are the exception here, provided that other strict measures will be simultaneously applied. Campaigns that introduce risk limits to alcohol use have been launched in several countries, but there is no information available about their efficiency (30-32). **Preventive campaigns, launched by producers of alcohol,** are not efficient and they have positive impact rather on the reputation of alcohol producer than public health (33, 34). There is no evidence that **warning texts** have any influence on behaviour, but some influence on the intent to use alcohol has been identified. However, their effect has been weaker than in the case of warnings on packages of tobacco products (35).

If we were to observe the efficacy of information dissemination and educational programmes separately, the limited availability of evidence on the efficacy of programmes may result in consideration to abandon these programmes. However, this would be a slippery road, for a number of reasons. Due to the lack of information dissemination and educational programmes support to other measures may be lost; there may be gaps in knowledge. The resulting gap may be filled by programmes, funded by producers of alcohol (34, 36, 37).

The national alcohol policy information dissemination work group found that in Estonian society in general the main problem faced is supporting attitude of society towards alcohol use and the state should adopt a leading role in changing the attitude. The proposals, listed above, were drawn up, based on research and discussions in the work group (for more details, see Annex 6).

4.9 Treatment and counselling

Development of a system for early detection of alcohol abuse and counselling at first contact care level.

Development of a modern alcohol addiction treatment and rehabilitation assistance system.

Ensuring the availability of qualified staff for the provision of the required services by offering the training courses, networking and funding.

Current situation and problems in Estonia:

The incidence of alcohol addiction in Estonia, compared to the respective EU average, is high – among men and women of working age, respectively, 11% and 2.1% (the EU average being 5.4% and 1.5%)

The availability of addiction treatment is not sufficient in Estonia. Patients will be largely required to pay themselves for psychiatric treatment of psychic and behavioural disturbances, resulting from alcohol use (F10). There is no modern evidence-based system for diagnosing and treating alcohol addiction.

In-patient treatment of alcohol addiction will be limited to a short-term detoxification in the case of alcohol deprivation condition, which is offered by special medical care system. Detoxification does not include planning for further activities to reduce or end alcohol consumption. Considering the current scope of psychiatric assistance, available from medical insurance budget, it's impossible to offer services, needed to treat, addictive disturbances.

Achievement of treatment goals in case of patients with addictive disturbances assumes good co-operation and information exchange between family doctors and specialists.

The social system lacks rehabilitation or special care services that would contribute to getting rid of alcohol addiction or keeping the addiction under control and facilitating social coping of addicts. The cohesion of the health care and social system for the purposes of solving addiction problems is weak.

General awareness of people about the risks, involved in alcohol use, and alcohol addiction as a disease is low. The spread of non-evidence based methods among both patients and specialists will prevent the use of science-based methods. We tend to stigmatise people with serious alcohol problems.

There are no behavioural recommendations and counselling services to the next of kin and family members of people suffering from alcohol addiction.

Both patients and health care workers lack sufficient and systemised information about the current organisation of alcohol addiction treatment and the respective service providers.

Based on the information supplied above, the work group prepared a substantial material **for the development of treatment and counselling services** (see Annex 7).

4.10 Monitoring and evaluation of implementation and efficacy of alcohol consumption, impacts on health and alcohol policy

Annual analysis of alcohol use and excessive alcohol use related damages and consolidate and publish the information as Alcohol Yearbook.

Regular conduct of market, consumption and health implication studies by ensuring consistencies in research methodologies upon commissioning the studies.

Annual summoning of a work group that includes the representatives of parties to alcohol policy to evaluate the operation of the policy.

Monitoring of alcohol policy, alcohol consumption and alcohol-related harm/damages

The purpose of the monitoring is to maintain a regular overview of alcohol use and alcohol-related harm/damages in Estonia to evaluate the efficacy of policy measures and for the purposes of more efficient guidance and planning of alcohol policy.

So far, information has been collected and published by different establishments and organisations, depending on their own requirements. Alcohol use indicators have been calculated, since 2001, using a comparative methodology, by the Estonian Institute of Economic Research. Information about alcohol market and consumption in 2008, 2009, 2010 and 2011 is available from the yearbooks of the Estonian Institute of Economic Research; the publication of such yearbooks has been funded by different sources.

Information that forms a part of the monitoring system will be published, in the future, on regular bases by authorities concerned as annual consolidated sets.

For the purposes of avoiding duplicated data collection and to ensure uniform submission and use of Estonian information for the purposes of international databases, the monitoring system indicators were chosen on the bases of WHO global alcohol and health database indicators. Globally collected data has been supplemented in accordance with the need of Estonian institutions and organisations. More specific alcohol policy monitoring plan and list of indicators is given in Annex 8.

Annex:

1. Overview of current legislative space and applicable measures.
2. Discussion document of alcohol availability restriction work group.
3. Discussion document of alcohol promotion restriction work group.
4. Discussion document of pricing and taxation policies work group.
5. Options available to local governments for reducing alcohol-related harm – discussion document of the work group.
6. Records of discussion of awareness increasing work group.
7. Treatment and counselling services work group's material for the Green Paper.
8. Monitoring plan.

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