Fighting poverty through alcohol misuse prevention in Malawi – revised summary report (December 2013)

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ABSTRACT

Abstract heading

The ALMA project has been developed and carried out in a collaboration between researchers from Norway and Malawi and reference group consisting of policy makers and stakeholders in Malawi. The aim is to support the stakeholders' goals by producing national data on alcohol misuse, and by increasing the country's own capacity to collect this data on a long-term basis through researcher collaboration and training. The study also shed light on the association between alcohol misuse and poverty as well as alcohol policy in the Malawian context.

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1 Introduction

This revised summary report replaces the summary report published in November 2013. This revision contains some new information in addition to the revised content. There are some changes in the statistical analyses. The content of tables and figures are mostly unchanged, but some of the statistical testing has been corrected. Following discussions with the reference group and comments and feedback from a large dissemination conference in Lilongwe late November 2013, we have updated the 'way forward' chapter of this revised report.

Alcohol misuse is associated with medical, psychological and social harm (WHO, 2007, 2011a). A link between alcohol use and poverty has also been argued for in several studies (Baklien & Samarasinghe, 2003; Gururaj, Girish, & Benegal, 2006; Samarasinghe, 2009). Policy and interventions that can effectively prevent alcohol misuse are expected to contribute to poverty reduction, and hence the development, implementation and enforcement of contextually relevant alcohol policies is crucial (Room, Graham, Rehm, Jernigan, & Monteiro, 2003). For such policies to be effective, they need to be based on solid research data and evidence (Lavis, Posada, Haines, & Osei, 2004). Evidence-based policy making is an approach that helps people make well-informed decisions about policies, programmes and projects by putting the best available evidence from research at the heart of policy development and implementation (Davies, 2004). Faced with public health issues such as alcohol misuse, policy makers wanting to make evidence-based decisions should explore what can be learned from the global research evidence regarding the effectiveness of interventions to prevent such misuse. In addition, to evaluate the relevance of this evidence for their own setting, policy makers need local, contextually based evidence, including evidence regarding the frequency and distribution of alcohol misuse in their own country or region. Currently many developing countries suffer a shortage of basic statistical and other related data that is fundamental to the development of good policies (Carden, 2009).

The Government of Malawi has acknowledged the potential damage that alcohol misuse is having on its population, and the manner in which this misuse may serve to perpetuate poverty. Malawian policy makers and other stakeholders, including NGOs working in the area of alcohol and drugs, have clearly expressed a desire to address this issue using an evidence-based approach. However, the government lacks relevant information on alcohol consumption, and existing alcohol policies are therefore not based on national research evidence (Ntaba, 2008). The 'Fighting Poverty Through Alcohol Misuse Prevention in Malawi' (ALMA) project has been developed and carried out in collaboration with a reference group consisting of

policy makers, program executors and stakeholders. The overall aim was to support the goals of the reference group by producing national data on alcohol use and misuse, and by contributing to increasing the Malawi's capacity to collect these data on a long-term basis through research collaboration and training. The study also sheds light on the association between alcohol use and poverty within the Malawian context.

2 Background

Alcohol is the most widely consumed drug in the world, about half of the population above 15 years world-wide have consumed alcohol in the past year. It is difficult to interpret patterns in drinking, because moderate consumption of alcohol is widely accepted in many countries (WHO, 2007, 2011a). Substances, in particular alcohol, have important cultural and symbolic meanings in many societies. However, alcohol intoxication can lead to a number of temporary impairments in the user and, for many, exaggerated consumption of alcohol leads to dependence and more permanent impairment. In addition, alcohol misuse contributes to morbidity and mortality (Rehm, Gmel, Sempos, & Trevisan, 2003). Studies from across the world argue for a link between alcohol misuse and poverty; where alcohol use can lead to further impoverishment in already poor contexts (Baklien & Samarasinghe, 2003; Braathen, 2008a; Gururaj, et al., 2006; Odejide, 2006). Baklien and Samarasinghe (2003) describe two elements of alcohol culture; i) Poverty culture – people's coping strategies to handle their life/poverty situation, and ii) Alcohol culture – how people behave when they drink, and norms and attitudes that surround different drinking situations.

A review of the literature on drug use and abuse in Africa (Odejide, 2006) concludes that substance abuse with its ills thrives in developing countries in Africa. People who are poor use substances to feel better and to escape from their otherwise difficult lives, but it only further impoverishes them, and contributes to the destruction of families, health and societies. In most African countries, young people (age below 15) constitute 40-50 % of the population, and this group is the most vulnerable to substance use and its effects. This leads to a decline in countries' workforce, and the productivity of the nation. Odejide (2006) calls for more focus on substance use and abuse, more resources (human, financial and facilities) to control substance use and more sharing of information on drug abuse across the African continent.

There are limited data on the extent to which alcohol is a problem in Malawi. In 2009 a nationwide STEPS survey (MoH & WHO, 2010) showed that among adults (aged 25 to 64) 30.1 percent of males and 4.1 percent of females consumed alcohol

while 19.2 percent and 2.3 percent of males and females respectively were considered heavy drinkers (MoH & WHO, 2010). Similar findings can also be found in WHO's Global Status Report on Alcohol and Health (WHO, 2011a, 2011b). In a southern African context alcohol consumption in Malawi seems to be on the same level as neighbouring countries such as South Africa and Zambia, but slightly higher than countries like Kenya, Zimbabwe and Namibia (Rossow & Clausen, 2013). In an international perspective all these African countries have substantantially lower alcohol consumption levels compared to most Western countries.[1]

In some societies, mood-altering substances, in particular alcohol, have important cultural and symbolic meanings (Babor et al., 2003), and alcohol consumption can play an important role in differentiating, symbolizing, and regulating gender roles (Babor, et al., 2003; Joffe, 1998; Warner, 1997). Across the world, including Malawi, women are less likely than men to use and to misuse substances (Bisika, Konyani, & Chamangwana, 2004; Braathen, 2008a; Bøås & Hatløy, 2005; Eide, 1997; Ibanga, Adetula, Dagona, Karick, & Ojiji, 2005; Martinez, Roislien, Naidoo, & Clausen, 2011; Wilsnack, Wilsnack, & Obot, 2005). Studies have shown that men inflict more problems than women when they drink alcohol, which may have negative consequences not only for the users themselves, but also for their families, friends and society in general (Braathen, 2008b; WHO, 2005; Wilsnack, et al., 2005).

In alcohol treatment and prevention programmes social norms are commonly included when studying drinking patterns. Social norms can be understood as common understandings or comprehensions of suitable behaviour for a group member (Cialdini, Reno, & Kallgren, 1990), or as both explicit rules in a society and implicit rules taken for granted (Hogg & Vaughan, 2011). Social acceptance of drinking behaviours varies from one culture to another, as well as within cultures based on demographic differences like gender, age, religion and socioeconomic status (Houghton & Roche, 2001). Norms are commonly targeted in alcohol prevention programs. They are more or less suitable targets for interventions based on how closely they are associated with alcohol use in any given population (Hansen & McNeal, 1996). It is therefore interesting to see how closely they are related to alcohol use in different subgroups within Malawi. In this report we group the sample into men and women, but any groups of interest could have been focused on as long as the survey-sample is large enough. It is common to split social norms into injunctive and descriptive norms (Cialdini et al., 1990). Injunctive norms deal with how we believe other people who are important for us think we should behave, while descriptive norms focus on how we believe others will behave or what we consider to be normal behaviour in given situations.

[1] http://www.economist.com/blogs/dailychart/2011/02/global_alcohol_consumption

Attitudes are other common targets for prevention programs and, as for social norms; the correlation to the behaviour in question is of primary importance. The usefulness of targeting attitudes depend entirely on how closely related they are to alcohol use in any given population or subgroup of that population (Hansen & McNeal, 1996).

3 Objectives of the ALMA project

The aim of the project was to meet Malawian policymakers' and stakeholders' expressed need for empirical evidence that could be used in the development of national alcohol policies and relevant interventions. The main objective of this study was to document, describe and explore patterns of alcohol use in the Malawian population.

Specific objectives:

1. To determine the prevalence of alcohol consumption and misuse in Malawi
2. To explore:
   - the association between alcohol use/misuse and different dimensions of poverty
   - the association between alcohol use/misuse and gender
   - the general drinking pattern among adult population in Malawi
3. To explore people's opinions and experiences of current and future policy and interventions related to alcohol use.

4 Methodology

The project used a triangulation of methods and collected both quantitative and qualitative data as well as a review of relevant policies and literature. The project consisted of the following four work packages (WP):

1. Method development (WP1)
2. Survey (WP2)
3. Qualitative study (WP3)
4. Influencing policy & practice & dissemination (WP4)

This project has been subject to strict ethical considerations and has obtained ethical clearance from research ethics committees in both Malawi and Norway.

Added permission was sought from relevant national and traditional authorities to collect data from the respective research sites.

4.1 WP1 – Method development

The research team, in close collaboration with the reference group, developed the research methodology for WP2 and WP3. While the research team has vast knowledge of qualitative and quantitative research methods, the reference group holds invaluable contextual and cultural knowledge, which was essential to the development of data collection methods suitable for Malawi.

4.2 WP2 – Survey

The survey was carried out by the Centre for Social Research (University of Malawi), the National Statistical Office (NSO) of Malawi, SINTEF (Norway) and University of Oslo (Norway). A draft research instrument was developed based on internationally established measures on alcohol use. The draft was adapted to the Malawian context through a comprehensive process comprising several workshops and a pilot.

The content of the survey was guided by findings from previous qualitative studies in Malawi (Braathen, 2008a, 2008b), a detailed literature review and discussions with the reference group (WP1). The survey provides demographic information of the selected households and individuals. Alcohol consumption of the individuals selected was measured both through beverage specific quantity-frequency as recommended by Gmel, Graham et al. (2006). Binge drinking is assessed as recommended by Stahre et al. (2006). The survey covers the most important psychosocial predictors of alcohol use, including attitudes, alcohol expectancies, self-efficacy expectations, different types of norms and social influence and self-image. Indicators on socio-economic status (proxy for poverty indicators) were scales on nutrition intake, asset scale, and level of education.

The sample for the survey was based on the National sampling frame and drawn by the National Statistical Office (NSO) of Malawi and is representative of the general population aged 18 and older, covering regional and district level. To ensure representativity, a stratified, multi-stage cluster design was applied. The sample should, for instance, match the distribution of the adult population from the three regions of Malawi, and rural/urban proportions in Malawi. Care should be taken in over-interpreting analyses at sub-regional level as the number of persons in each groups are reduced.

A representative sample of the general population aged 18+ covering regional and district level was selected. The survey provides demographic information about persons in randomly selected households. The sample size was based on a sampling

frame from the 2008 Population and Housing Census provided by the National Statistical Office (NSO) in Malawi. To determine the sample size, the following parameters were used: a confidence level of 95%, confidence interval of 3 and that there were 2,869,933 households in Malawi in 2008 then approximately 1,067 households was required to give a representative sample for Malawi. Given that 10 households were selected in an enumeration area (EA) for interview then 107 enumeration areas representing both rural and urban areas in Malawi's three regions (North, Central and South) were required. In each household one male and his spouse were chosen to participate in the survey. This gave a sample size of at least 2,000 individuals. In selecting the EAs, 85% were selected from rural areas and 15% from urban areas and this was determined by the rural/urban share of the population in Malawi. The rural EAs were then distributed at regional level according to the population of each region as follows: 13% in the north, 42% in the centre and 45% in the south. Table 1 below summarises selection of the EAs.

Table 1: Numbers of EAs sampled by region and rural/urban

			Sample	No. of
	Population 2008	%	households	Selected EAs
Malawi Population	13077160	1.00	1067	107
Rural	11073851	0.85	904	90
Urban	2003309	0.15	163	17
Rural by region	11073851	1.000	904	90
North	1468415	0.133	120	12
Central	4678082	0.422	382	38
South	4927354	0.445	402	40

The EAs in each stratum were arranged following the 2008 Census district distribution and the required number of EAs was selected systematically. An interviewer visited respondents in their homes. Because of relatively high illiteracy rates in Malawi, the interviewer read the questions out loud and filled in the responses. Home visits were also necessary because a majority of the houses do not have a formal address. In each EA a household listing was conducted using a short questionnaire. Only those aged 18 years and above participated in this study. Single-headed and child-headed households were excluded from this study. Only those households with both head of household and spouse participated in the study. There were two questionnaires: one for heads and the other for spouses. While we had wanted to interview 1,067 heads and spouses, the survey captured as many as 1,795 households. This excluded those households where only the head or the spouse was interviewed. Finding both head and spouse was a major challenge in most cases and the team resorted to making appointments. Field work for the study

lasted for 5 months: it started in June 2012 and ended in October 2012. A total of 10 research assistants were engaged to collect data after being thoroughly trained by researchers from SINTEF, University of Oslo and Centre for Social Research (UoM). This training lasted for 2 weeks and included a pilot to test the data collection instruments. Data was entered in CSPro software and then imported into SPSS for analyses.

According to the Malawian population data sheet from 2012 (updated from the 2008-figures presented in Table 1), approximately 45% of the population was adult (18 years+) in all three regions, therefore the regions' proportions of adults did not differ from the whole Malawian population and could be compared directly to our sample of 31,676 households: North = 1.9 million (13% of population versus 9% (n = 2,876) of sample), Central=6.3 million (43% versus 45% (n = 14,142)), South=6.7 million (45% versus 46% (n = 14,658)). Thereby the distribution of the sample from the North was short by 3.7 percentage points, while both Central and South areas included less than two percentage points too many participants compared to the population's distribution. According to the Malawian population data sheet from 2012, distribution between rural (84% of population, 12.5 million people) and urban areas (16% of population, 2.3 million) had to be adjusted, since adults (18+ years versus children) in Malawi's rural areas constitute 44% and 52% in the urban areas. After excluding children, proportions of adults in rural/urban areas should ideally be 82% (5.5 million) versus 18% (1.2 million). The rural/urban proportion obtained in our household-sample was 80% (n = 25,469) versus 20% (n = 6,207). All in all, these differences in distributions between the whole population and the sample were small enough to be neglected in the further analyses.

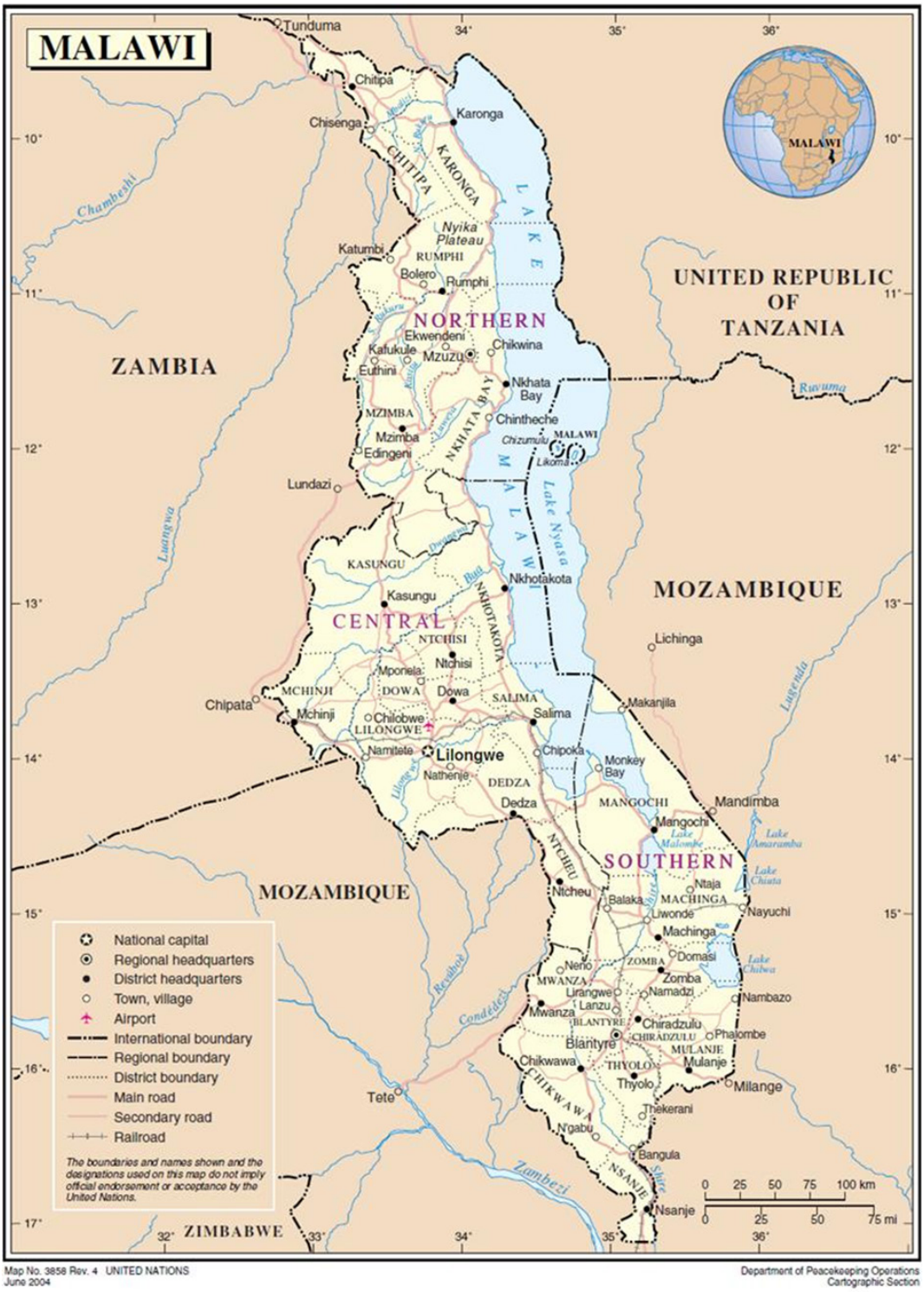


Figure 1. The sample by districts

Figure 1 shows the districts that are included in the sample (marked with black dots). The chosen age group represents almost half of the general population in Malawi (MDHS 2005, Chapter 2). Approximately 5000 households stratified according to 200 different Enumeration Areas (EA) representing both rural and urban areas in Malawi's three regions (North, Central and South) were selected.

Sample used in the analyses; From the 31,676 households, 5,209 singe-adult-households, and households in which neither the head nor the spouse had used alcohol the previous 12 months were excluded before the sample for the survey was chosen. A random selection of 1,795 households was included and both heads and spouses in these 1,795 households were interviewed separately with two almost identical standardized questionnaires. Average number of persons in the 26,469 households was 4.9, very similar to the 5.1 number of persons in the 1,795 selected households. In the 1,795 households, mean male and female ages were 41.5 years (SD = 14.5) and 35.5 years (SD = 13.0) respectively.

Alcohol consumption was measured through beverage-specific frequency/quantity items. The seven beverage-types were Chibuku; Masese; Carlsberg green, stout or special brew; all other types of beer and cider; wine; Kachasu (local gin); sachets and bottled imported/industrial spirits. Frequency was measured on nine-point scales ranging from "every day or nearly every day" to "never last 12 months". Seven quantity items had ten-point scales ranging from "none last 12 months" to "13 or more drinks". For each beverage-type frequencies were coded as number of days last 12 months and quantity were transformed to standard units (SU) defined as 12.5 grams 100% alcohol. Interviewers presented pictures of SU of the beverage types in question. Litres alcohol was calculated through the formula: (Sum of all SU*12.5*0.789)/1000. Binge drinking was measured by asking how many days during the last 12 months men drank 5 SU and women drank 4 SU. Response options were the same nine used for the frequency-items above. Scores were transformed into number of binge drinking days last 12 months.

Socio-economic status (SES) was measured by 27 items on common household possessions. All items were added together to form an SES scale. The scale was based on experiences from previous household surveys in southern Africa. See for instance Kamaleri and Eide (2010).

Dietary diversity was measured by the Household Dietary Diversity Score (HDDS) (Swindale, 2006). The assessment was based on 12 different food groups consumed in the household in the past two weeks during day and night. A sum score of 12 represents the highest food diversity.

4.3 WP3 – Qualitative study

The qualitative study was carried out by a team comprising a total of four researchers from University of Malawi, Centre for Social Research, SINTEF (Norway) and Hedmark University College (Norway). These were assisted by three research assistants (interpreters). The aim of the qualitative study was to explore people's opinions on current and future policy and interventions related to alcohol. This part

of the project aimed at including the community perspective in future policy and intervention by providing empirical evidence on these issues.

A review of relevant policies in Malawi was carried out, as well as qualitative in-depth interviews with members of the community, relevant local and national stakeholders and other relevant key informants. WP3 was divided into three major research phases:

1. Stage 1: Desk study
    - Policy identification and review
    - International plans and strategy docuements: Identification and review
    - Malawi: Background information
2. Stage 2: Interviews with key stake holders
    - Policy makers
    - NGOs
    - Treatment facilities
    - Law enforcement
3. Stage 3: Fieldwork in three local communities
    - Community mapping: chief
    - In-depth semi-structured interviews: Individual and groups
        - Local government/ traditional authorities
        - Members of the community
        - Ormal/ informal alcohol outlets
        - Law enforcment: local
        - Health facilities
        - Educational institutions
        - Religious leaders

Study areas: Three study areas were purposively selected based on characteristics of high alcohol consumption and high levels of poverty (found in WP2) in each of Malawi's three regions;

1. Northern Region (NR): rural village (Mzimba district)
2. Central Region (CR): rural village (Dedza district)
3. Southern Region (SR): urban township (Blantyre district)

Informants: We conducted a total of 69 in-depth individual (62) and group (7) interviews, in addition to several informal conversations and observations in the field. The informants were divided into the following regional and informant groups:

Table 2: Informants WP3

Informant category/ Region	NR	CR	SR	National level
Traditional Authorities (TA/ Village Headman/ Group Village Headman)	3	2	3	
Community members (CM)	4	4	2	
Workers/ owners of formal alcohol outlets (Bar/ Nightclub)	2	4	2	
Brewers/ distillers/ sellers of informal alcohol	3	3	2	
Police (official and community based)	2	2	2	
School (teachers/headmasters)	3	1	2	
Official offices	1	1	1	1
Non-government organisations (NGOs)	1		1	1
Traditional healers (TH)	1	1	1	
Health providers (hospital/ clinic)	2	2	1	
Religious leaders	1	2	2	1
Psychiatric wards				2
Total	**23**	**22**	**19**	**5**

Representatives from the formal alcohol industry in Malawi were invited to participate as informants in the study, as we thought it important to get their point of view. Unfortunately, in the end they backed out of appointments and neglected to answer emails and phone calls, and we were unable to talk to them.

4.4 WP4 - Influencing policy & practice & dissemination

The aim of this work package is to disseminate the results of this study to those responsible for national government alcohol policies. Our dissemination strategies have included on-going communication with the reference group, presentation of conference papers, this report, journal publications and the national dissemination conference in Malawi (November 2013). The responsibility for the activities in this WP has been divided between the research team and the reference group.

5 Summary of key findings

In the qualitative (WP3) fieldwork in 2012 we visited a rural village in Northern Malawi. This particular village was chosen because the survey fieldwork had showed high levels of alcohol consumption there. This village is not representative of all rural villages in Malawi, but it tells the story of a place where many or most men drink alcohol. This village was chosen to get an understanding of the context of high alcohol consumption. The overall picture is that in this context alcohol has serious consequences; it impacts on families' economies, violence, education and more. In this village we met a woman named Maria[2]. Maria is a woman in her fifties. She runs a local shebeen at the trading centre in the village. In her shebeen she brews and sells local wine and she also sells Kachasu, which she buys from the nearest town about half an hour away by motor vehicle. Maria's shebeen is also her home; her business is in the biggest room, and she lives in a smaller room next door. Maria does not drink; neither do most of her female friends, family or neighbours. Her husband drinks, as do most men in the village. The women are not happy about their husbands' drinking, they say it makes them irresponsible, and hence they don't contribute to the household chores. Despite this Maria has made a living out of brewing and selling alcohol. She does this because it is the only income big enough for her to support her family. She is the mother of six children; three of which are

[2] This is not her real name.

still in school. While school is 'free' in Malawi, we were told that families have to pay for books and uniforms, and if they don't have these or they are in a bad condition, the children risk being thrown out of school. For Maria and other women who make a living out of informal alcohol brewing and selling, 'paying for school' is cited as the main reason for doing it. These women would happily do other businesses if they could make the same amount of money, but few businesses are as profitable as the informal alcohol industry. Maria is also a grandmother, and the day that we visited her in her shebeen her grandson of about 3 years was there with her. In the shebeen there were also about ten male customers, all visibly drunk, even though it was morning. Some of the men were drinking alcohol sachets, which are small plastic bags of 30ml containing a strong spirit, usually with a sweet flavour. These sachets were very cheap, and could be bought in the shops and bars at the trading centre. The little child in the shebeen, clearly comfortable with the drunken customers, was sitting on their laps, sucking the remains out of the half-empty sweet alcohol sachets. Sachets were also seen on the ground at the trading centre, and at the school located next to the shops, bars and shebeens. We were told that young children were commonly seen drinking sachets in the village, and even at school. Sachets are relatively new in Malawi, only a few years old. We were told that they were more visible in the first years, but they are still easily available throughout Malawi today (at least during our fieldwork period in 2012). Some people told us that sachets had been banned; others told us that they were allowed. The men in the shebeen explained that the reason they were drinking alcohol was because they had nothing else to do. They were on the lookout for jobs, but the village and even the nearby town and city offered few employment opportunities. Adding to this most of the men had little or no education or work experience, making them even less employable.

Maria explained that she does not need a permit to sell local wine or Kachasu, but if she wanted to sell regulated alcohols such as Carlsberg or Chibuku, she would need to get a permit at the boma (the nearest city). And indeed, when we visited a local bar who sold such alcohol types, they had a permit. Such permits were issued by a district council sub-office in a town about half an hour away by car. In an interview with officials at this sub-office we were told that kachasu brewing is illegal, selling of regulated alcohol requires a licence, and Masese brewing is taxed. The main problem that they face at this office is that they don't have enough staff or transport available to travel around to collect licences, so people have to come to them. This is not always done.

The knowledge of laws, policies and interventions regarding alcohol is low in this community. Most people have thoughts about health and social problems related to

alcohol use, about age limits, permits and licensing, opening hours and so on. These thoughts are not always consistent with what we know and see in relevant policy documents. Our experience is that people are positive and open to legislation and information, and they say that they will do whatever they are told to do by traditional authorities and by the government. At community level the village headman/ group village headman are influential figures. People respect these authorities and they listen to them and follow their instructions. In Maria's community we interviewed both the village headman and the group village head. Neither of these had accurate knowledge of what the laws and policies are around alcohol production and sales in Malawi. The village headman told us in an interview that he felt that alcohol was very bad, leading to irresponsible behaviour. He wanted more enforcement of alcohol legislation, more education and better role models. He said that he, himself, did not drink alcohol, but this was disputed by other community members who told us that they saw the village headman irresponsibly drunk almost on a daily basis. The group village head, on the other hand, openly told us that he drank alcohol on a daily basis.

Both men and women that we spoke to in this village expressed a wish for the alcohol situation to change. Wives wanted their husbands to stop drinking and be more responsible. Men wanted a job so they could stop drinking. Informal alcohol producers wished they could find another business as profitable so they could stop producing. But people felt trapped in these negative patterns and struggled to find a way out.

5.1 Characteristics of alcohol consumers in Malawi

From the survey sample of 31,676 households (63,352 individuals) 27.3% (n = 8,662) of the males and 1.6% (n = 505) of the females reported to have drunk any alcohol in the last 12 months. The proportion of both males and females combined is 14.5%. These figures include single-adult households and can be seen as representative of the adult population of Malawi.

The following results are from analysing the above described subsample of 1,795 households in which at least one of the head of household or spouse reported drinking some alcohol in the last 12 months. These figures are thus representative for all households in Malawi with men and women who drink and not for the general population of Malawi. The sample is drawn to enable analyses at regional level.

In the analyses below, different statistical techniques have been applied to test the distribution of mean values of alcohol use on selected socio-demographic variables. The text indicates when there is a statistically significant association between variables. With regards to the female sub-sample, lack of statistical significance in most of the analyses are due to low number of alcohol using women resulting in low statistical power, and not to lower associations in the analyses than for the men.

Table 3. Number of respondents (N), means and standard deviation (SD). Men's figures are outside, females' within parenthesis.

	N	Mean	SD
Litres 100% alcohol last year	1776 (156)	8.05 (1.51)	12.59 (2.49)
Binge drinking days last year	1776 (156)	96.27 (31.07)	95.44 (49.84)

Mean consumption of alcohol per year measured in 100% alcohol is 8.05 litres among alcohol using men and 1.51 litres among alcohol using women. If we include all Malawians 18 years+, average total consumption for men is 2.20 litres 100% alcohol and 0.02 for women. In this report, 'litres of alcohol' is coded as 100% pure alcohol per year. Thereby we get one litre pure alcohol out of 20 litres of 5% beer as well as from 10 litres of 10% wine as well as from 2.5 litres of 40% gin. On average, male alcohol users drank 5 or more SU 96 days during the last 12 months, while the corresponding figure for female alcohol users were 4 or more SU 31 days during the last 12 months.

Table 4. Alcohol use by age-groups (litres 100% pure alcohol per year), 156 women and 1776 men.

Age category	Females	SD	Males	SD
18 – 24	1.07	1.90	5.94	11.75
25 – 29	0.52	1.20	9.53	14.48
30 – 34	0.79	1.13	8.15	11.84
35 – 39	1.17	2.02	9.07	15.66
40 – 44	1.12	1.46	7.48	10.81
45 – 49	1.75	1.72	7.51	11.41
50 – 54	2.93	4.12	9.06	11.28
55 – 64	1.97	3.34	7.15	10.58
65 +	1.59	2.26	6.77	10.94

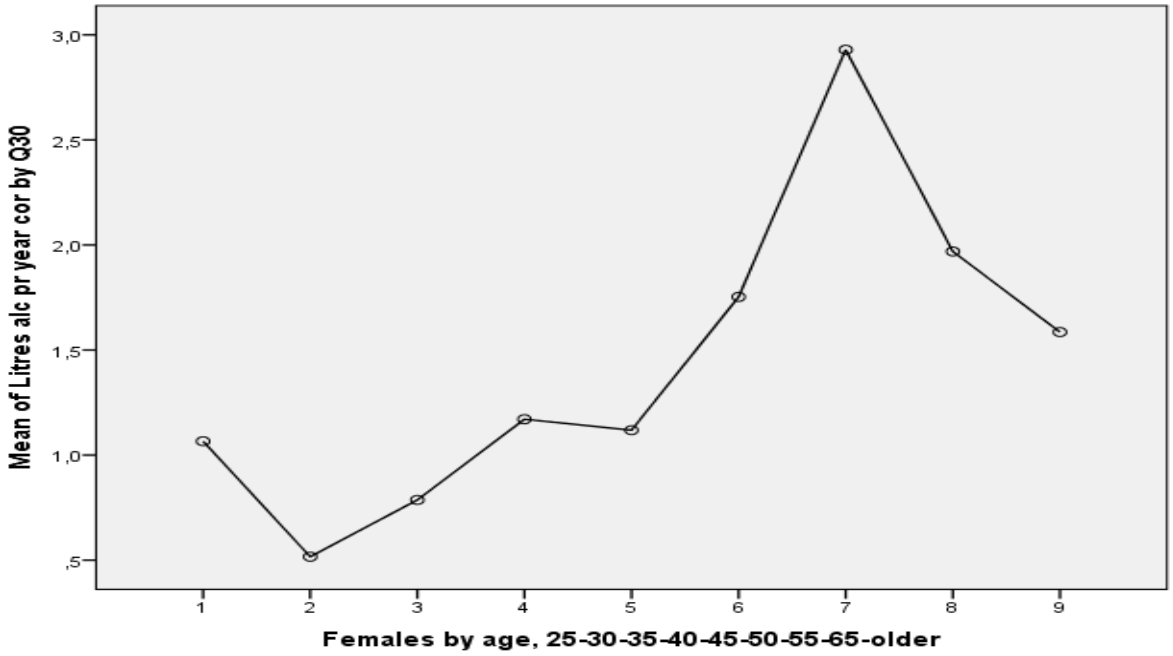


Figure 2. Alcohol use by age group (females)

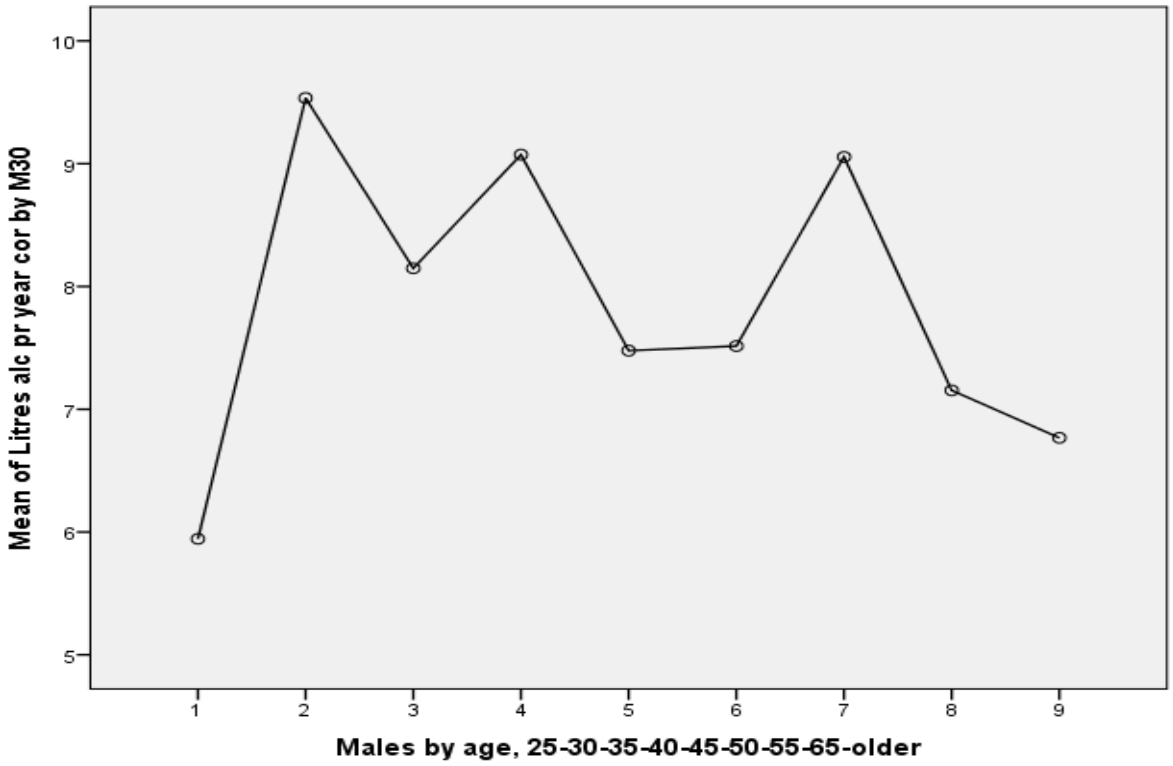


Figure 3. Alcohol use by age groups (males)

Figure 2 shows an increase by age group for females peaking in the age category 55 – 60 years and then dropping again for the two oldest age groups. For males (Figure 3), the pattern is different in that the youngest age group score lowest, followed by a marked increase and then a gradual reduction with increasing age.

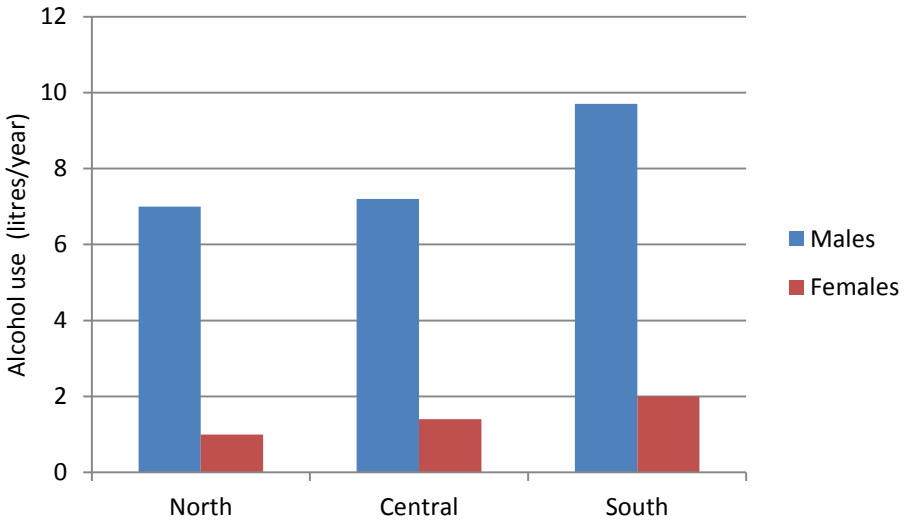


Figure 4. Alcohol use by Region and Gender

Figure 4 shows variation in total alcohol consumption (100% pure alcohol) per year in that males in the South Region scores highest with 9.7 litres, followed by the Central Region with 7.2 litres and lastly the North Region with 7.0 litres. The regional differences among women follow the same pattern. A statistically significant difference in alcohol consumption was found among males.

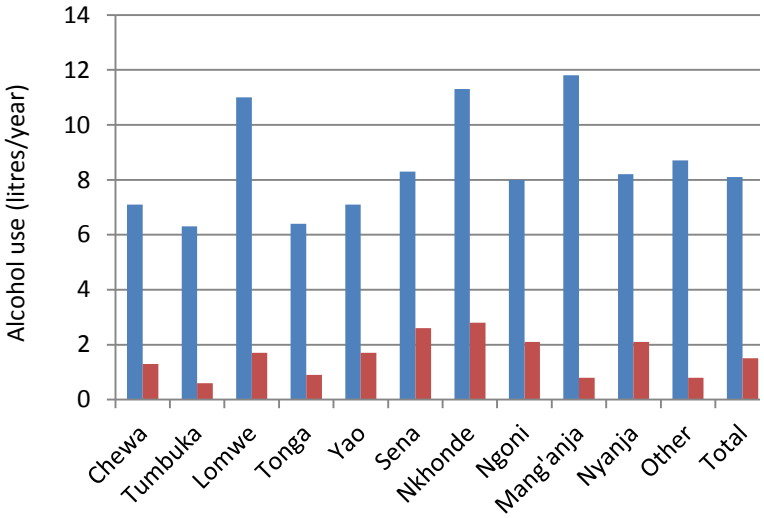


Figure 5. Alcohol (100% pure alcohol per year) by tribes

Variation in alcohol consumption among different tribes is statistically significant among men who drink. Three tribes are particularly high: Mang'anja, Nkhonde and Lomwe. Among females, it is particularly Nkhonde and Sena and Lomwe that score high. In the interpretation of this analysis, it should be noted that the information on tribe affiliation is based on individual response and does not imply that all individuals are located in the tribal area they have stated.

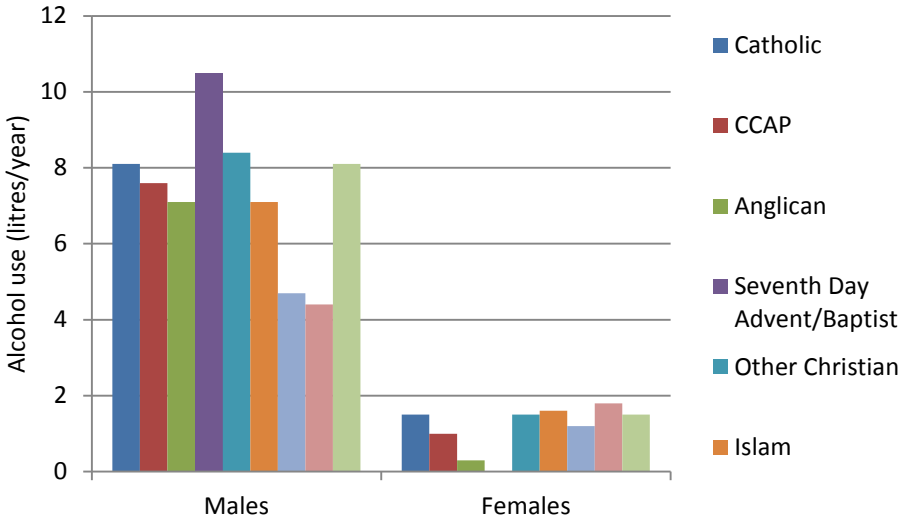


Figure 6. Alcohol use by religious affiliation and gender

Seventh day advent/baptists score highest and muslims lowest among males, while those who state that they are not affiliated to any religion score lowest. Those who stated "no religion" reported less than half (44%) of the corresponding figure for Seventh Day Advent/Baptist and somewhat more than half (56%) of the reported consumption among "other Christian. The difference between Seventh Day Adventists/Baptists and the other groups is near significant for men. Among females, variation between groups is marginal.

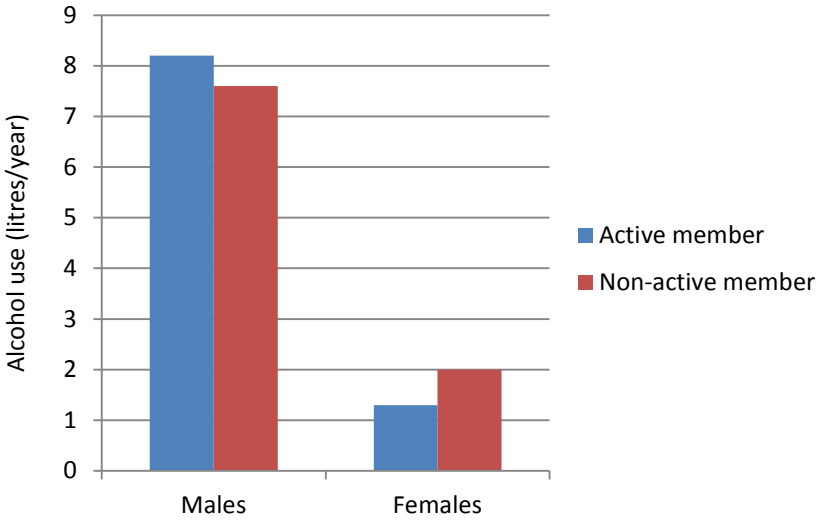


Figure 7. Alcohol use by religious engagement

Among both men and women, there is an observed difference between those who say that they are/are not active members of their respective religious communities. Among men, those with active engagement score higher than their non-active counterparts, while for women the non-active score highest.

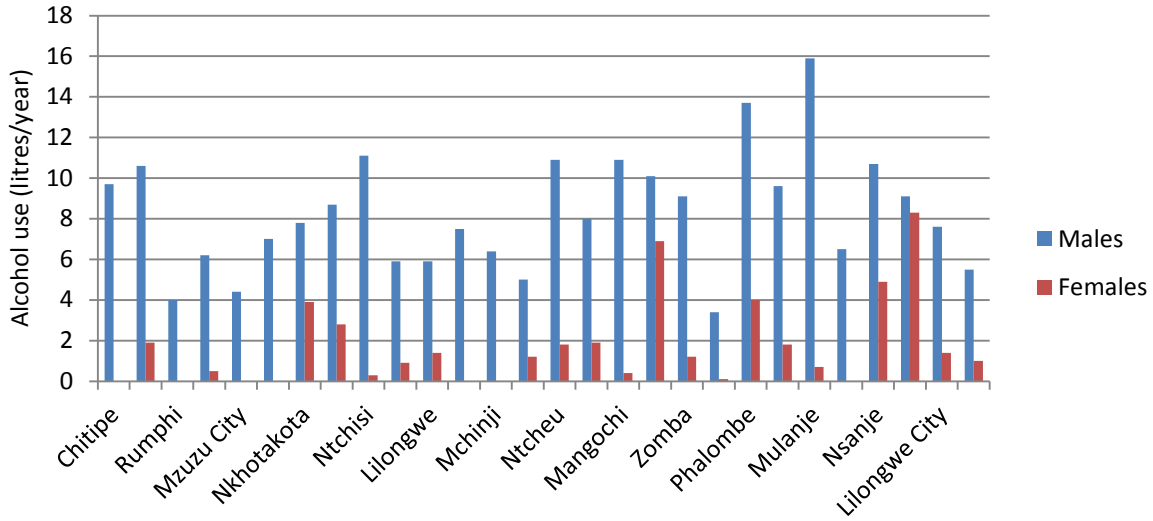


Figure 8. Alcohol use by district and gender

The districts included in Figure 8 are: Chitipe, Karonga, Rumphi, Mizimba, Mzuzu City, Nkhatsbay, Nkhotakota, Kasungu, Ntchisi, Dowa, Lilongwe, Salima, Mchinji, Dedza, Ntcheu, Balaka, Mangochi, Machinga, Zomba, Chiradzulu, Phalombe, Thyolo, Mulanje, Chikwawa, Nsanje, Mwanza, Lilongwe City, Blantyre City (in this order). The figure breaks down reported alcohol consumption by districts that are included in the sample. The interpretation of these figures for women must be made with care as the number of individuals per district is on the low side. Bearing in mind the insecurity and the need to avoid capitalising on random errors in the data, Figure 8

nevertheless shows that the seven districts that are marked in the tables as highest on consumption are all in the south of the country. In two of the districts with high male consumption, female consumption is almost as high as for males, while this is not the case in all districts. While male consumption is highest in Mulanje, Phalombe and Ntchisi, female consumption is highest in Mwanza, Machinga and Nsanje. For both genders, the differences between districts are statistically significant.

Table 5. Socio-economic status, level of nutrition intake and alcohol use

	Mean alcohol use	
SES/ Possessions	Male	Female
Low	8.7	1.9
Medium	7.7	1.3
High	8.0	1.5
Nutrition intake	Male	Female
Low	8.0	1.7
Medium	7.4	1.7
High	8.9	0.8

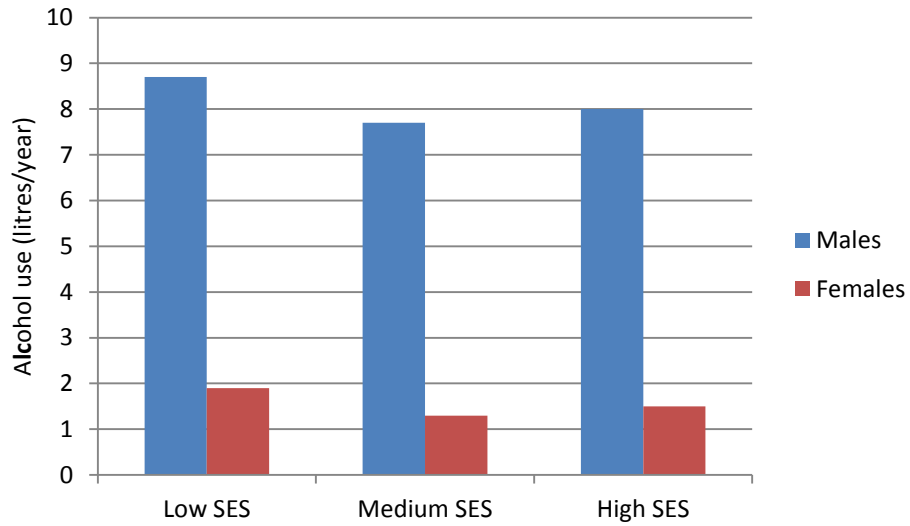


Figure 9. SES (Possession scale) and alcohol use by gender

In Table 5 and Figure 9 is shown the result of analysing socio-economic status, measured by means of a possession scale, by gender. Although differences between SES groups are small, for both males and females, the lowest SES is associated with the highest level of alcohol use. Medium SES is associated with the lowest level, and high SES is between the two other categories.

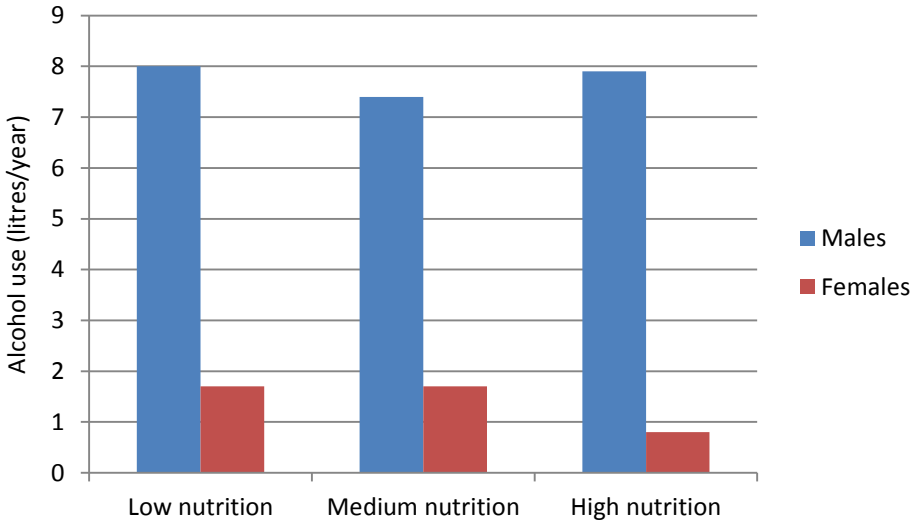


Figure 10. Nutrition intake in household by gender and alcohol use

Low nutrition intake in the household is associated with the highest level of alcohol use. The association pattern for men and women differs in that men are higher on alcohol use with high and low nutrition intake, while women are lower on alcohol use with higher nutrition intake.

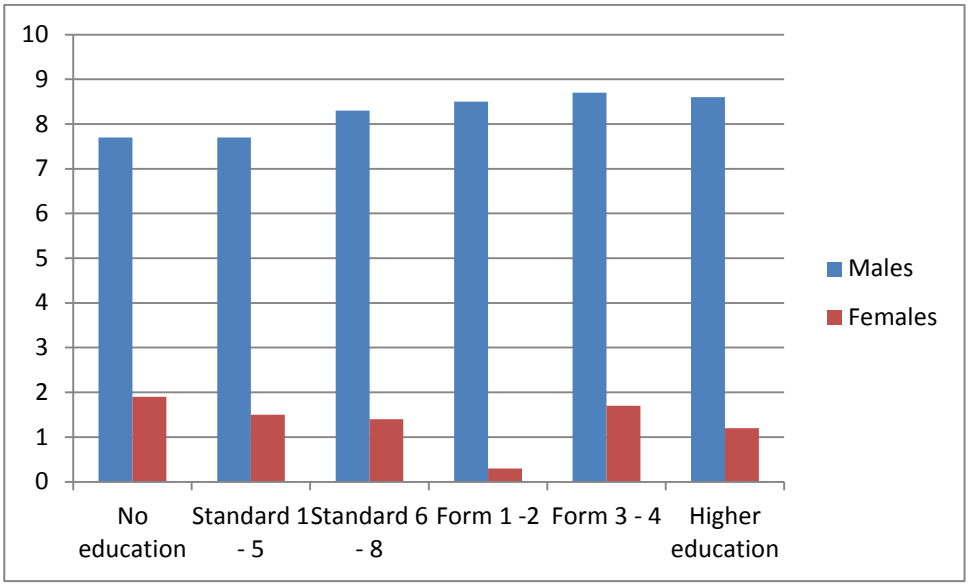


Figure 11. Alcohol use and level of education by gender

According to Figure 11, alcohol use increases by level of education for males, but for women there is a slight reduction with increased level of education.

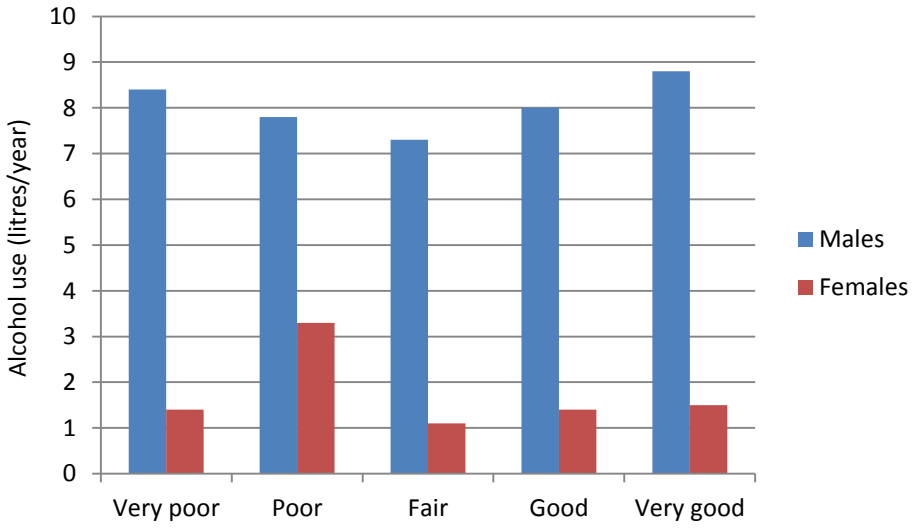


Figure 12. Alcohol use by physical health and gender

For men, alcohol use is highest among those with very poor and very good physical health. Among women, there is an even distribution across physical health categories, with the exception of those with poor physical health scoring higher than others.

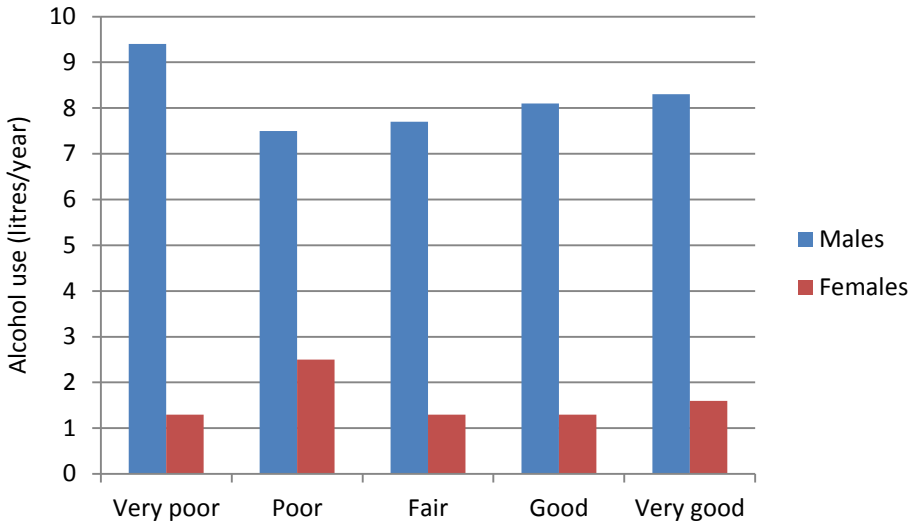


Figure 13, Mental health and alcohol use by gender

Figures 13 show different patterns for men and women. Among male respondents, very poor health is associated with high levels of alcohol use, those with poor mental health report lowest level of alcohol use, but is then increasing with improved mental health. Thus, those with very poor and very good mental health use most alcohol. Among females, those with poor mental health score highest on alcohol level, while the other categories are more or less on the same level.

5.2 Alcohol types

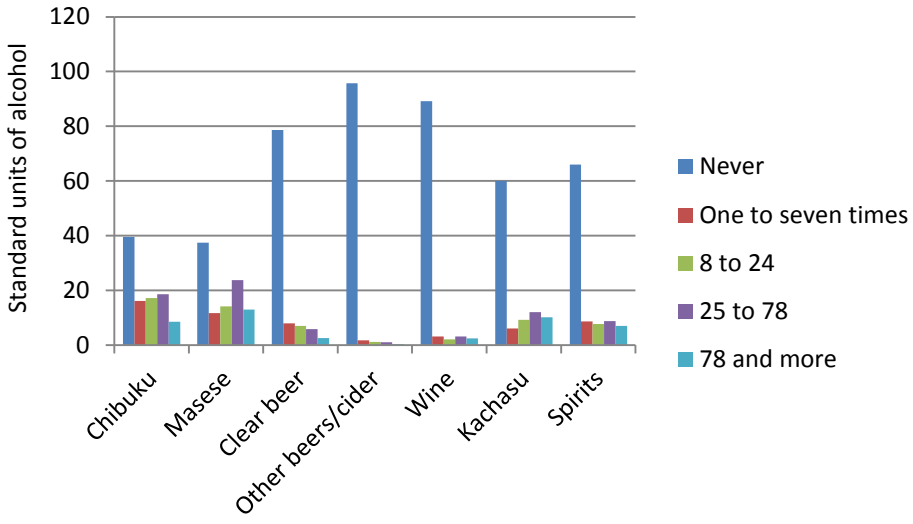


Figure 14 Frequency of alcohol types (male, %)

In Figure 14, we see that the alcohol types most frequently drunk by men in this sample are Chibuku and Masese. These are similar alcohol types (fermented beer) with relatively low alcohol content; one is industrially produced (Chibuku), while the

other is a homebrew (Masese). The second most frequent is Kachasu (homemade distilled spirits in the informal sector) and industrial spirits (including sachets and imported bottled spirits). Clear beer and wine are less frequently consumed (21.6 % and 10.8 % respectively during the last year).

5.3 Alcohol use and social norms

The tables below present Pearson's correlations between alcohol consumption and social norms split by gender, informants were asked 'how much, if any, do people who are most important for you think it is OK for YOU/ MEN/ WOMEN to drink in different situations'.

Table 6. Pearson's correlations between alcohol consumption (log) and injunctive social norms split by gender. “How much, if any, do people who are most important for you think it is OK for YOU to drink in these situations?”
** = $p < .01$; *** = $p < .001$

	Men (n = 1776)	Women (n = 156)
Situation to drink in	Alcohol consumption (log)	Alcohol consumption (log)
At a party in someone else's home	.21***	.25**
Out at a bar with friends	.19***	.22**
With friends after work before going home	.17***	.13
With friends in the street	.12***	.03

Alcohol using women report that the three situations their closest people think it is OK to drink in is at a party and at a bar. Men have more situations in which they believe their closest people think it is OK to drink in, but the correlations are slightly lower. These correlations are not very high, and if an intervention should be able to change the most important one of these injunctive norms, alcohol use could not change by more than 6.3% (r^2 = 0.25 x 0.25 = 6.3%) (Hansen & McNeal, 1996).

Table 7. Pearson's correlations between alcohol consumption (log) and injunctive social norms split by gender. “How much, if any, do you think it is OK for MEN to drink (and) in these situations?”
** = $p < .01$; *** = $p < .001$

	Men (n = 1776)	Women (n = 156)
Situation to drink in	Alcohol consumption (log)	Alcohol consumption (log)
At a party in someone else's home	.25***	.28***
For a man out at a bar with friends	.28***	.47***
With friends after work before going home	.22***	.22**
With friends in the street	.19***	.24**

In Table 7 we examine the same situations as in Table 6, but Table 7 presents the respondents' opinions about how much, if any, men should feel free to drink. Options were "none", "1-2 drinks", "up to 5 drinks", and more than 5 drinks". Correlations between alcohol using women's own alcohol use and their opinions about which situation it was most OK for men to drink was clearly out at a bar with friends. If an intervention should be able to change this norm, alcohol use could

ideally change by 22% (r^2 = 0.47 x 0.47 = 22.1%) (Hansen & McNeal, 1996). Table 8 presents the same as Table 7, but with focus on how much women should feel free to drink.

Table 8. Pearson correlations between alcohol consumption (log) and injunctive social norms split by gender. "How much, if any, do you think it is OK for WOMEN to drink in these situations?"
** = $p < .01$; *** = $p < .001$

	Men (n = 1776)	Women (n = 156)
Situation to drink in	Alcohol consumption (log)	Alcohol consumption (log)
At a party in someone else's home	.11***	.30***
For a woman out at a bar with friends	.08**	.30***
With co-workers out for lunch	.12***	.10
With friends in the street	.08***	.24**

It is a striking difference between how much male and female alcohol users think is OK for women to drink in three of these four situations. While the men's opinions had very weak relationship to their own drinking, women's opinion were clearly more closely related to their own drinking.

Table 9 presents the relationship between male and female alcohol users' own drinking and their descriptive norms. All respondents were asked about males and females at about their own age, and how many of them they believed drank some alcohol at least once a week.

Table 9. Pearson correlations between alcohol consumption and descriptive social norms split by gender.
** = $p < .01$; *** = $p < .001$

	Men (n = 1776)	Women (n = 156)
	Alcohol consumption	Alcohol consumption
How many of the men you know drink some alcohol at least every week	.20***	.12
How many of the women you know drink some alcohol at least every week	.14**	.43***

In Table 9 we find that men's alcohol use were not strongly related to the drinking of males and females they know, and the difference between r of .20 and .14 does not seem to be of importance. But for women's own alcohol use there is a big difference in their own drinking relating to how many of women they know who drink at least every week. Almost 18.5% of women's variance in drinking could be explained by how often women they know were drinking. The frequency of drinking among men they know had an insignificant and very small correlation to the women's drinking. The interpretation of these figures could be that women's alcohol use depend quite a lot on how other women drink, while men's drinking were quite unrelated to other men's frequency of drinking. Even though it was statistically significant, other men's drinking could only explain 4.0% of the variance in the male respondents' own total alcohol consumption.

5.4 Alcohol use and attitudes to alcohol use

Table 10. Pearson correlations between alcohol consumption and attitudes to alcohol use among males and females split by gender.
** = $p < .01$; *** = $p < .001$

	Men (n = 1774)	Women (n = 156)
	Alcohol consumption	Alcohol consumption
Adult males drinking one or two drinks	.19***	.13
Adult females drinking one or two drinks	.07**	.27***
Adult males drinking five or more drinks	.21***	.28***
Adult females drinking five or more drinks	.09***	.30***

The question was: How is your general feeling about males and females drinking "one or two drinks" and "five or more drinks"? Table 10 shows that men's drinking were practically speaking (although statistically significantly related) unrelated to what they meant about women's drinking (r of .07 and .09) as less than one per cent of the variance in men's alcohol use could be explained by these attitudes. The attitudes to other men's alcohol use was closer related to their drinking, but not more than 4.4% of the variance in total alcohol consumption could be explained by their attitudes to other males drinking five or more drinks. Attitudes were more important for women's drinking as 9.0% of the variance in their total alcohol consumption could be explained by their attitudes to other females drinking four or more drinks. Contrary to the male's opinions about the drinking of the opposite sex, women's attitudes to men drinking five or more drinks were almost as closely related to women's total alcohol consumption, explaining 7.8% of the variance in their alcohol use.

These preliminary results relating social norms and attitudes to alcohol consumption thereby indicate that men's drinking does not seem to be closely related to these potential intervention program targets, while women's alcohol use were closer related to both social norms and attitudes and thereby much more prone to be influenced by an intervention than men's. However, there are so few women drinking so the potential gain in a large campaign is limited, except if the target should be to prevent more women from starting to drink. There the potential is huge. Further, the questionnaire includes results on several other potential potent targets for future interventions which will be explored in further analyses in months to come.

5.5 Alcohol use in the southern African context

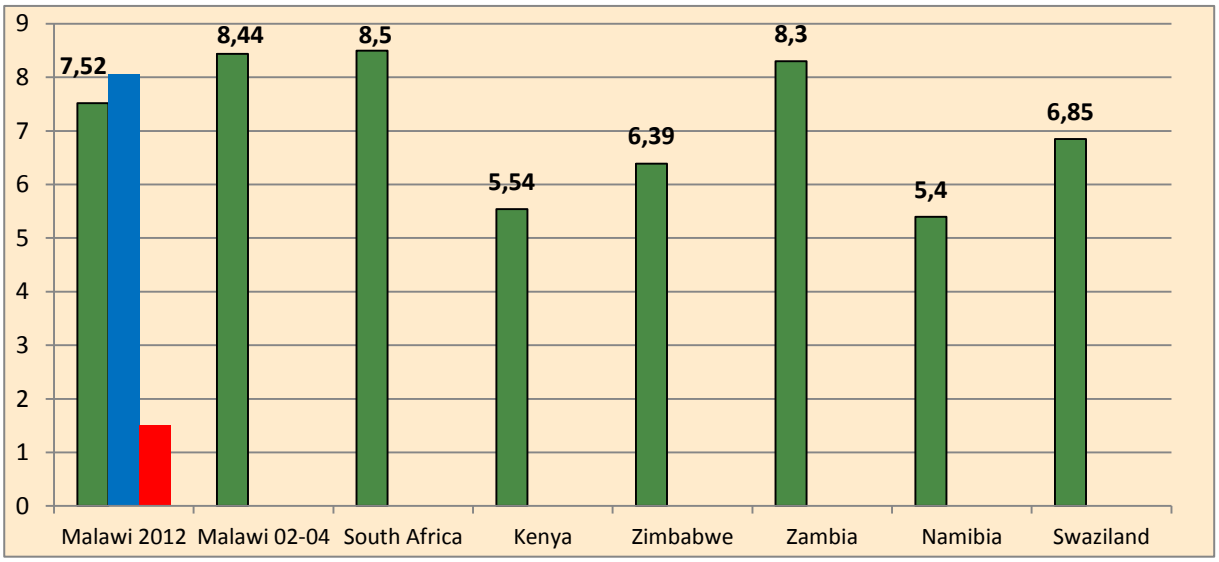
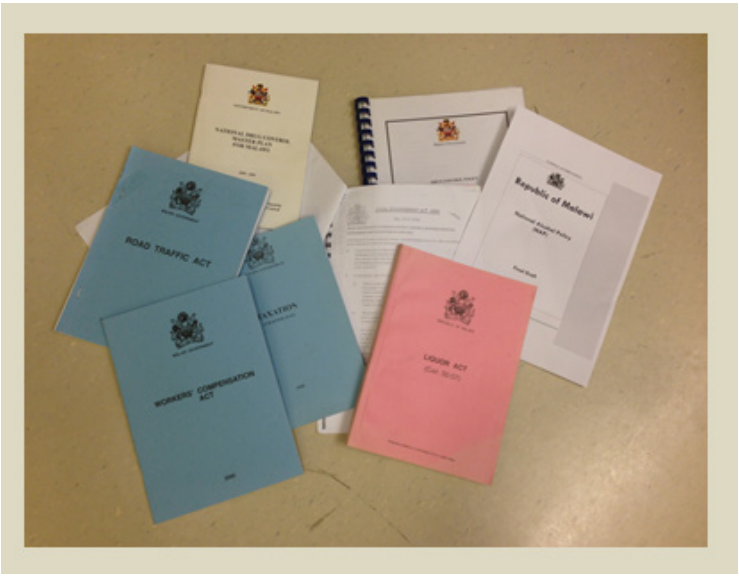


Figure 15

Figure 15 shows a comparison between litres 100% alcohol consumed in Malawi in 2012 in our survey and a WHO survey from 2002-2004 (Rossow & Clausen, 2013). The figure shows that the Malawian total consumption has dropped from 8.44 litres to 7.52 litres during the ten year period 2002/04 - 2012. We also note that the Malawian consumption level in 2002/04 was almost the same as the South African and Zambian level (8.50 and 8.30 litres), and higher than the level in Zimbabwe and Kenya (6.39 and 5.54 litres), as well as Swaziland and Namibia (6.85 and 5.40 litres). These are some of the neighbouring countries which are most relevant to compare to Malawi.

The Malawian mean consumption has been estimated through the following formula: All alcohol users = ((1776 men * 8.05 litres) + (156 women * 1.51litres)) / 1932 alcohol users = 7.52 litres 100% alcohol per alcohol using inhabitant. The other countries' total consumption per alcohol users were estimated via the formula (exemplified here by the Malawian figures from 2002/04 from Table 1 in Rossow & Clausen, 2013): 12.8 SU per week * 52 weeks * 10 gram per SU / 0.789 specific weight for alcohol / 1000 to obtain the measure in litres = 8.44 litres 100% alcohol per year. A word of caution is that differences in alcohol level might be partly due to methodological differences (like inclusion/exclusion criteria of the participants in the samples) between how the surveys have been designed. However, methodological differences within the WHO-survey must be expected to be insignificant and should not distort comparisons between the countries within the WHO-study.

5.6 Alcohol policy in Malawi



For the purpose of this report, we have chosen to define policy as encompassing more than an explicit course of action by an actor. We have chosen to acknowledge that policies may take many forms including practices, statements, regulations and laws. Through a process of consultation and research, we identified a number of policies, plans and regulations from Malawi that could be relevant for the field of alcohol in the country. The consultation process comprised meetings and conversations with members of the reference group in both Norway and Malawi. We also read relevant alcohol policy literature from Malawi, Africa, as well as from Europe, to establish what policies could be relevant to this field of research and development. However, we found that not all identified policies were relevant to the current discussion of alcohol in Malawi, simply because there seemed to be little or no explicit mention of alcohol in these documents. The table below lists the identified policies and or assessment of the degree of relevance to the qualitative study.

Table 11. Alcohol policies in Malawi

Policies/ Acts / Plans	**Alcohol mentioned**	**Relevance to study**
Liquor Act (rev. 2000)	Yes	High
Consumer Protection Act (2003)	No	
Dangerous Drugs Act	No	
Drug Control Policy (Year Unknown)	Yes	Medium
Health Sector Strategic Plan (2011-2016)	Yes	High
(Mental health Bill – draft 2004)	No	
Mental Health Policy (2000-2004)	Yes	High
Mental Treatment Act (1968)	No	
(National Alcohol Policy – draft 2013)*	(Yes)	(High)
National Drug Control Master Plan (2005-2009)	Yes	Low
Occupational Safety (2000)	No	
Pharmacy, medicine and poisons act (1985)	Yes	Low

Public Health Act (1968) (new draft not yet passed)**	No	
Road Traffic Act (2004)	Yes	Medium
Taxation Act (2008)	No	
Workers Compensation Act (2000)	No	

*Draft versions of the National Alcohol Policy were available throughout the study period and highly influenced the development of the interview guide.
**The draft Public Health Act was not made available during the study period.

Following are summaries of the identified policies which explicitly mention alcohol. This will give an insight to the degree of relevance the policies have had on the development of the interview guide as a tool to explore the attitudes and experiences of people to alcohol policies and interventions.

The Liquor Act was found to be the most relevant document to the qualitative study. It is here one finds alcohol-specific definitions and laws regulating production, distribution, retail and consumption.

The Health Sector Strategic Plan is important because it places alcohol among the top 10 risk factors for many health problems and injuries. Alcohol adversely affects behaviour and can be linked to tuberculosis, sexual transmitted infections, mental health, trauma, gender based violence and to non-communicable diseases, such as cancer. This plan also introduces strategies, such as alcohol taxation for health sector revenue, and the notion of promoting healthy settings, which would affect, among other things, food advertising, use/sales of alcohol, road safety and workplace safety.

Mental Health Policy is also important because it lists strategies to meet the mental health needs of drug and alcohol use/abusers. It also sees the importance in identifying health threatening alcohol advertisements in order to eliminate, modify or control them, and advocating regulation on sale of alcohol. Furthermore, it defines some indicators on specific aspects of substance abuse, like proportion of alcohol related mortality, prevalence of alcohol use among youths, proportion of schools with alcohol abuse education and proportion of facilities providing counselling and referral services for alcohol abuse.

The Road Traffic Act is important because it regulates driving under the influence of intoxicating liquor and thus indirectly tries to reduce the high burden of morbidity and mortality of road traffic accidents. However, though included in the guide, very few of the informants drove cars and thus were not familiar with this act.

The other policies are less important because they are less specific regarding alcohol. For example, one of the main objectives of the Drug Control Policy is to reduce the demand for alcohol, tobacco and other drugs. Though the policy is concerned with the negative aspects of drug abuse to its population and mentions alcohol abuse specifically when describing policies for youth and education, it emphasises illicit drug crops, such as cannabis, and drug trafficking. It does however mention the need for encouraging alternate income generating activities for women who produce illicit gin. The same policy also mentions the development of a drug master plan as one of its main purposes.

The National Drug Control Master Plan states that Malawi has three main drugs of abuse: cannabis sativa, alcohol and tobacco. However, though it mentions drug and alcohol reduction programmes, and education programmes, its main emphasis is also on illicit drugs, like cannabis.

The least relevant of all the policies identified was the Pharmacy, Medicine and Poisons Act. Though alcohol is mentioned, it is in relation to its interaction with medicinal products.

After reviewing the available policies, we decided to base our interview guide mostly on the Liquor Act, which is a public act; the major legal document regarding alcohol in Malawi, and one which we thought the majority of the respondents would or should have some kind of familiarity with.

5.6.1 Knowledge and attitudes of policies

People in Malawi are generally very positive to policies and laws. It is a society where authorities, especially traditional authorities, are greatly respected. Many informants emphasised that if traditional or national authorities tell them to do something, they will do it. When community members were asked what they thought alcohol legislation should look like, most of them did not have any opinions on the subject, but instead expected the government to just tell them what to do and they have faith in the government to make relevant laws. As one group village headman put it; *"Government should just make laws that will direct people on how to use alcohol. There is nothing I can do about alcohol related issues, but if the government gives me instructions, I will call together the village headmen and do as the government says. ... If the government says or orders something, then the people will obviously obey."*

However, implementing policies is not as simple as community members might think. We found that despite the fact that Malawi has a Liquor Act dating back many decades, people's general knowledge of the act is low. At community level most people had never heard of the Liquor Act. The few who were familiar had inconsistent knowledge regarding the legality of different types of alcohol, alcohol licensing, age limitations and opening hours. Some villages have made their own regulations for these issues at traditional authority level, but these are not always consistent with the Liquor Act. For instance, in a rural township in Southern Malawi, the village head has decided that Kachasu brewing is illegal. The need to define their own laws regarding certain traditional brews stems from the ambiguity in the use of the terms found in the Liquor Act. Following are the definitions of liquor, spirits, beer, traditional beer and opaque beer:

Table 12. Alcohol definitions from Liquor Act

	Definitions
Liquor	Intoxicating liquor
Intoxicating liquor	Any spirits, wine, beer, cider or potable liquor intended for human consumption, which, on analysis of a sample thereof at any time, is found to contain more than two per centum by volume of proof spirits.
Spirits	Spirits of any description manufactured by a process of distillation, and includes all liquors mixed with spirits, and all liquid mixtures, compounds or preparations made with spirits;
Beer	Includes ale, stout, lager, and any other description of beer, and any liquor which is made or sold as a description of beer or as a substitute for beer and which on analysis of a sample thereof at any time is found to contain more than two per centum of proof spirits, but does not include opaque beer or traditional beer.
Traditional beer	Any liquor brewed by a process of fermentation, by traditional methods, from one or more of the following ingredients, that is to say, millet, barley, sorghum, maize, cassava, or any prescribed cereal, tuber or root, or from any concentrate, extract or product of any such ingredient or from any combination of any such ingredients, concentrates, extracts or products, but shall not include any liquor brewed from any other ingredient, or any distilled liquor.
Opaque beer	Liquor brewed by an industrial brewing process, which, if brewed by traditional methods, would be traditional beer.

Based on these definitions, one would be able to categorize all intoxicating liquors under the Liquor Act based on, for example, alcohol content, but the Liquor Act makes distinction in types of intoxicating liquors and has own bylaws by district for opaque beer and/or traditional beer. Here is a confusing element in the law. Whereas Carlsberg beer can fall under the general laws of the Liquor Act, Chibuku, which is also manufactured and can reach very high levels of alcohol content the longer it is stored, can be defined as opaque beer and is therefore regulated differently. Another ambiguity arising from the law, is that the bylaws were most likely created to regulate traditional intoxicating liquor such as Masese, Ntonjani and Chikokeyani, which are all fermented by traditional methods, however there is no inclusion or exclusion of traditional distillation methods, like those used to make

Kachasu. Throughout our study, there was no consensus among our informants, including community members, our reference group, police or in different levels of government, whether Kachasu was legal or illegal. One could choose to define Kachasu under spirits, since it is manufactured by distillation process, and thus regulated under the Liquor Act, or one could choose to define Kachasu as either legal / illegal, since it is not mentioned in the Liquor Act specifically.

Ambiguity in the law regarding the definition of different intoxicating liquor, affects the understanding of whether or not licenses are needed. For community members, in general, Kachasu brewing and drinking is part of an accepted norm, and therefore is treated as such, without much thought about whether it is legal or illegal. When asked whether they thought, Kachasu was legal or illegal, the majority of community informants answered it was legal or else it would be regulated.

Therefore, for those making/selling traditional liquor, even where certain bylaws would apply, there was a consensus that regulations, opening hours and licenses did not apply. One brewer, for example, never closed and was willing to wake up in the middle of the night to sell to anyone who knocked on her door. On the other hand, most bar owners selling Chibuku or other liquors falling under the general laws of the Liquor Act, are aware of their obligations regarding licenses and therefore opening hours. Those who did not know at first were made aware of this requirement during a license check campaign or by the local police.

Another ambiguous aspect of the Liquor Act causing confusion among informants deals with the age limit for buying and selling liquor. When informants were asked whether there was a legal age for buying alcohol, most answered eighteen years, but some answered twenty-five or older. This confusion can stem from the use of the term "young person" in the Act, which is defined as any person who is or appears to be under the age of eighteen years. The Liquor Act states that those holding a license, who supply liquor to a young person, shall be liable to a fine or imprisonment. Likewise, a young person cannot be employed to sell liquor. However, "under exceptional circumstances," young persons might be allowed to sell liquor. The bylaws governing traditional liquor also have similar restrictions. Some bylaws restrict opaque beer to be supplied to young persons, while others restrict both opaque beer and traditional beer to be supplied to young persons. These differences in the law regarding the supply of liquor from district to district, as well as what constitutes a young person goes a long way in explaining the different perceptions from the different informants. In fact, the law does not say anything about a drinking age, just about the legal age a person can be supplied with liquor.

5.6.2 Implementation of laws

Knowledge of laws is only part of the problem in implementing policies and enforcing laws. Contextual reality is another. Lack of resources, both human and capital, affects the enforcement of laws. Rural police, for example, say that they are unable to run information campaigns about alcohol laws or enforce alcohol laws because they do not have cars which they can use to travel around to the different communities. In fact, one policeman said that they relied on the community based police (CBP) to safeguard their own community and physically transport perpetrators to them. One city government informant in the southern region stated that they were only able to check bar licenses once a year and in only a few places because they lacked money to pay the police to help them more often. For example, one bar owner selling Carlsberg was open for a whole year before the police came by and told him that he needed a license to operate. Licences seem to be accessible to most bar owners, but failing to show a valid license does not seem to lead to grave consequences. Therefore, there is no incentive to keep a valid license and in the end it is cheaper to get one when one is caught rather than when it expires. Lack of human and capital resources will also be a barrier in implementing policies and enforcing laws which might be used to regulate alcohol content in the future. We found that there was no quality control of any of the traditional liquors being brewed or distilled in Malawi. Therefore, both ingredients and alcohol content could vary greatly. Capital resources are also limitations in terms of enforcing the age limit in accessing liquor. Authorities are not able to enforce laws which are dependent on a system of universal identification, when none is available and the cost of getting one is great.

Though lack of resources is most definitely a barrier, we found that there are existing structures at community level which could be utilized more effectively in implementing alcohol policies and enforcing laws. The traditional authorities and the community based police are such structures. Currently, these two work together in resolving disorderly behaviour, conflicts and crime in the community. The community based police are volunteers chosen by the community and trained by the police to protect their community. It could also be possible to keep them updated regarding current alcohol laws and their function, when it comes to alcohol, could be one of educator rather than enforcer. What seems very important in implementing policies and enforcing laws is to remember the contextual realities at community level.

5.7 Access to knowledge about alcohol

In the qualitative component (WP3) we asked most of the informants where they get knowledge about alcohol related issues from. Below we will outline what the different informant categories who responded to this question said about this.

Several of the traditional authorities (Traditional Authority/ Village Headman/ Group Village Headman; often referred to as chiefs) said that they educate people on the dangers of alcohol and irresponsible drinking, as well as encouraging them to stop this behaviour. The extent to which – and in what way- this is done varies. We observed and got information from the communities that some chiefs drink alcohol themselves – some even excessively. One local brewer said that chiefs who drink themselves are not very influential when it comes to advising people about responsible drinking, while those who do not drink, they are quite educative, influential and informative; *"It is hard to remove a speck in another's eye while you have a plank in yours."* The traditional authorities themselves expressed concern for the lack of help and information from the government, stating *"they do not advertise what they want to do"*. It was emphasised by many informants in mostly all informant categories that traditional authorities are very influential figures at community level. As one local woman said about the village headman in her community; *"He is quite an influential man, such that when he summons people, they do come to hear what he has in store for them."*

As for the community members, they mostly do not know how to get information. People who own or work in drinking places say people get information from newspapers, radio and TV. One informant said that; *"Health clinics know about health. It could be very good if they can teach and help the community"*. One young man mentioned the Life Skills Program in school as a useful source for information about alcohol. Other helpful methods, according to a bar employee, are to involve the chiefs, traditional healers and the police to speak to the community members. Women brewing and selling informal alcohol had many suggestions on what to do to inform people about alcohol related issues, for example involving the government and chiefs more than they are today. One brewer stated; *"The government should encourage people to work first before going to drink".* Another suggested that the brewers themselves should be targeted as they can target *"those who do not drink*

responsible". According to several of the informal alcohol brewers, there are no places to get information about alcohol.

The police, including community based police, said that they educate people about the effects of alcohol. One mentioned that *"the new policy should be about educating the children"* while others say that the poor should be targeted specifically. In the urban site in the southern region, the police also reached out to schools. One may question if they do this to all as one Headmaster told us "*the police never came to our school even though they should have".* Also, the police collaborate with some NGOs and social welfare. The police teach about the danger of alcohol and dangerous drugs. One policeman also felt that the government and Ministry of Health should focus stronger on the danger of drinking alcohol without eating, and that all information should be in relevant local languages. The community based police points out that they get involved when families have problems like wife beatings and advising parents if their child is found drunk. One problem though for them giving advice on responsible drinking is that many of the receivers of the information are drunk when it's given to them. Overall it seems that when the police informs or advise people, they mostly relate it to crimes and not issues related to the general public who are not involved in crime.

License collectors generally do not inform people about consequences of alcohol consumption, as he mostly targets places with license to sell alcohol. But they had opinions about education on alcohol. First, they mentioned hospitals and health clinics as important actors. Furthermore, they felt that the government should arrange community level meetings, involving the churches and traditional authorities to contribute to teaching and advising people. They expressed that while life skills programmes in school are fine; they are not helpful when the kids are not in school.

Teachers (also Life Skills teachers) and headmasters believed there should be more information about people visiting selling places to advise them about alcohol. Life Skills teachers believed the program has an effect on the children. Some also thought schools should teach the communities through meetings (drama, song and dances) creating awareness together with the community leaders. It was expressed that educational programs help, but not always. They felt that village headmen should have stronger support and that the alcohol industry should take part in educational programs. The key is information given from all who have the knowledge.

We visited one District Council who said that the Community Based Police and the chairpersons of markets have time to talk to people about responsible drinking. *"They sometimes use such days to educate people"* the informant said.

Health employees in hospitals and clinics felt that the government should be more involved and *"maybe more involved when it comes to young people",* as one stated. In addition they felt that parents should be better trained to help their children. Young people learn from radio, TV, schools and advertisements. When it comes to dangers of alcohol, many Muslims are taught in the Mosque and Christians in churches. Health providers stressed that information should be targeted at the general population and encourage everyone to work together, also traditional healers and hospitals. The overall view of health providers was that law enforcement on alcohol and alcohol abuse should be stronger, and that information given to the people should be strengthened. When people are discharged from health institutions, they teach them about the hazards of alcohol and advise them to stop drinking. Special nurses are trained for counselling, including alcohol related counselling. Health institutions sometimes also talk to students at colleges.

Some churches teach about alcohol, while others do not. One informant stated; *"They allow drinking despite what the bible say".* Another said "*Religious leaders can influence the chiefs, so we got the power to talk to them. Target the chief, not as an individual, but you liaise with the chief to talk to the people. People will come to meetings when the chief calls, and they listen when he talks".* One church leader expressed concern about Malawian parents; "*In Malawi we don't talk to our children, it is negligence, not culture".*

The alcohol industry did not respond to our invitations to participate in this study, but it is reasonable to say that, like the alcohol industry everywhere in the world, their information campaigns and advertising is meant to position themselves in the market. One comment about alcohol advertising was mentioned by several informant categories; they think alcohol products should be marked with warnings the way tobacco products are.
Also, a clear majority of the informants express support for a 'National day on no harmful use of alcohol', which has been suggested in the draft alcohol policy. They suggest a variety of activities that could be carried out on such a day, ranging from remembrance of people who have suffered due to alcohol related harm, education/ information about alcohol, a day for closing down alcohol sales, and more. The few that opposed to a national day are mostly those working at drinking places due to the potential downfall in business on that day. Furthermore, some informants were worried that such a day would be used by people to drink even more alcohol.

Another issue many informants brought to our attention is that far too many children drink alcohol sachets due to their availability and accessibility. Malawi Bureau of Standards recently informed us that the alcohol sachet volume has been increased from 30ml to 100ml, and producers of the sachets have been directed to change their production accordingly.

6 Summary

The overall objective of this study was to meet the expressed needs of Malawian policymakers and stakeholders for empirical evidence that could be used in the development of national alcohol policies and their enforcement. In this section we will summarise key points from the data presented above, divided into sub-chapters representing the objectives of the ALMA study. The data presented in this summary report are key findings from the project. Further analysis will be done and publications written in months to come.

In a context of poverty alcohol is a complex issue, closely interwoven with issues of education, unemployment, nutrition, health, violence and so on. Alcohol problems cannot be seen as a stand-alone issue, but has to be understood within the complex socio-cultural context in which they occur.

6.1 Prevalence of alcohol consumption and misuse in Malawi

From the survey sample of 31,676 households, 27.3% (n = 8,662) of the males and 1.6% (n = 505) of the females reported to have drunk any alcohol in the last 12 months. These figures include single adult-households and can be seen as representative of the adult population of Malawi. These figures do not deviate much from the previous STEP study (MoH & WHO, 2010), and confirms that the prevalence of alcohol consumption is relatively low in Malawi. The large number of abstainers puts Malawi among the countries in the world with lowest mean level of alcohol consumption[3]. However, Malawian alcohol users drink as much as several and more than other of the neighbouring countries in southern Africa. The overwhelming majority of women do not drink alcohol at all, and also among men alcohol abstention is very high compared to for instance European countries.

Among those who drink alcohol, mean consumption of 100% pure alcohol per year was 8.1 litres among men and 1.5 litres among women. Among those who drink, binge drinking, which may be understood as "heavy" drinking, is quite common among men. Bearing in mind the large gender difference in total alcohol consumption, binge drinking is also surprisingly high among women who drink.

6.2 Alcohol use and gender

The qualitative study, as well as previous studies from Malawi (Braathen, 2008a, 2008b), have illustrated that drinking is generally considered to be a male activity.

[3] http://www.economist.com/blogs/dailychart/2011/02/global_alcohol_consumption

There are certain circumstances where women also drink, such as traditional ceremonies, but most women socialise in ways that do not involve drinking. In areas with high alcohol consumption 'most' men are said to drink alcohol. Men's socialisation occur in places and settings where alcohol is present, and some men find it difficult to be accepted in these settings without consuming alcohol (Braathen, 2008a).

The survey confirms a highly gendered pattern of alcohol use in Malawi. Both the proportion of drinkers and alcohol intake among those who drink is much lower among women as compared to men. Men's and women's drinking patterns differ in many respects, for instance with regards to age where men has a more even distribution in different age groups where females tend to increase intake with higher age. Variation in alcohol intake between districts, tribes and religious affiliation is differs somewhat for men and women, but the low N among women makes comparison at group level problematic. In some districts/tribes/religious communities alcohol consumption is (relatively) high for both men and women, while this does not fit in all subgroups. There are thus possibly different mechanisms in place in the various districts/tribes/ religious communities that may either yield high consumption among both genders or high among males and low among females. In-depth contextual knowledge is necessary to understand these differences.

Analysing drinking norms revealed a moderate to low relationship between norms and alcohol consumption for both genders. It appears that men's drinking is acceptable in different situations, while females' drinking is restricted to fewer situations. There is also interesting gender differences in that females are more liberal than men with regards to women's drinking in different situations. Finally, attitudes towards drinking seem to be more important for women's drinking than for men.

6.3 Association between alcohol use and different dimensions of poverty

In the survey, the link between socio-economic status/poverty and alcohol consumption was measured with three types of indicators; a possession scale, a dietary diversity scale, and level of education. None of these indicators support a strong relationship between poverty/low SES and level of alcohol consumption. While there is a slight increase in alcohol use among men with higher levels of education, highest alcohol use is found among those with high *and* low scores on the possession scale, and likewise those with high *and* low scores on dietary diversity. The picture is thus not very clear cut and the results primarily show

relatively small differences between the groups on the three indicators of socio-economic status. A possible tendency towards higher consumption among high and low SES groups is also reflected in the analyses of physical/mental health and alcohol use in that very poor and very good mental and physical health are associated with higher alcohol consumption.

The qualitative component of ALMA was done in three poor areas of Malawi where alcohol consumption was high. In these areas we observed and were told about a negative cycle of alcohol and poverty. That does not necessarily mean that poverty automatically leads to increased alcohol consumption, but rather that excessive consumption of alcohol increases the negative effects of poverty. *'Having nothing else to do'* was cited by men as the major reason for drinking alcohol. Household responsibilities, including tending to children, animals, crops and keeping up the house, were left to the women. The responsibility of the men was said to be bringing in the money. Wanting to bring money to their families, men look for official employment, which there is little of in rural communities, and as a result the men have 'nothing to do', and drink alcohol instead. Many women feel that their husbands contribute very little to the household responsibilities, and to a large extent they blame this on alcohol. The more men drink, the less they contribute with money or assistance at home.

6.4 People's opinions and experiences of current and future policy and interventions related to alcohol use

The results from the qualitative study illustrate that people at community level are generally positive to alcohol legislation, policy and interventions, and they have faith in the government and respect for authorities. At community, local and national levels there are structures of influence and authority in place. In the Malawian context these structures are powerful and respected. Most people have faith in these authorities, and they listen to them and look to them for guidance. At community level the village headmen (VH), group village headmen (GVH) and traditional authorities (TA) are very influential. People at community level also have faith in local and national governments, but generally feel that decisions made at these levels should be disseminated to local communities through the traditional authorities (TA/ VH/ GVH). These structures of influence are not always constructive, especially not in the field of alcohol. Some traditional authorities promote responsible drinking or abstinence, and live as they preach. Others are heavy drinkers, sending a signal to the men, in particular, that this is acceptable and perhaps even expected of them.

When it comes to law enforcement there are also structures in place at community level, but these are rarely utilised to their full potential due to a variety of factors. At community level there is community based police (CBP) who work closely with the official police and with the traditional authorities. In the communities we visited the CBP were not involved in any alcohol law enforcement. The official police are involved in this, as are district councils, but these are mostly located in towns and cities, and rarely reach out to rural communities. The reason for this was said to be lack of staff and transport. For this reason CBP has been put in place to act as 'eyes and ears' for the official police at community level, but for some reason they have not been involved in alcohol law enforcement.

A major barrier observed to the successful implementation of laws and policies is lack of knowledge and understanding about these. Among the informants in the qualitative study there is great variation in their responses to which alcohol types they believe are legal and illegal, which ones require a permit and which do not, at what age people are allowed to buy alcohol and what the laws say about opening hours of alcohol outlets. Even key stakeholders in the alcohol field, including government, health and NGO representatives, are inconsistent, sometimes incorrect and often unsure about the understanding and description of Malawian alcohol legislation. And indeed, our review of the relevant policies in Malawi reveals ambiguity and confusion in the documents themselves, which explain how misunderstandings and lack of knowledge occur.

7 Way forward

Below we outline a few recommendations for the way forward. This section has been revised and added to from the first summary report from November 2013. During a dissemination conference followed by a reference group meeting in Lilongwe in November 2013 we got more feedback on the way forward. This has been incorporated into this section of the revised report.

In addition to this report, journal articles will be written based on the results from the ALMA study. Links or references to these articles will be posted on the project website; www.sintef.no/alma
Members of the reference group in this project are important actors and stakeholders in the future implementation of alcohol policy, laws, plans and interventions in Malawi. The reference group and the research team have identified some key areas to be considered in this process;

- Important to continue disseminating the results from the ALMA project to ensure future policy/ plans/ intervention/ laws are founded on this research evidence
- There is a need for reviewing and revising existing policies/ plans/ laws in Malawi – this has been recommended in the draft alcohol policy. This should be a government issue, rather than a research issue
    - Ensure that these are contextually relevant and feasible to enforce
- Ensure interventions/ plans are contextually relevant;
    - Differentiate according to risk for alcohol abuse
    - Concentrate on the most commonly used types of alcohol and most common contexts for alcohol consumption
- Better utilisation of local structures at community level
    - Traditional authorities (TA/ GVH/VH)
    - Police/ CBP
- Better collaboration between structures at local, regional and national level
    - Traditional authorities
    - Government
    - Hospitals/ clinics/ traditional healers
    - Educational institutions
    - Police
- Development of role models and create awareness of consequences of alcohol consumption; in schools, in communities and in families
    - Community forum
    - Open days/ market days
    - Produce posters and leaflets
    - At community level there are focal people for NCDs – there to do awareness
- Reduce ambiguity in the Liquor Act and in future alcohol policy on how different types of alcohol relates to the legislation; sales of some types of alcohol require permits, others do not.
- Reduce ambiguity in the Liquor Act on age limits for alcohol sales/ purchases
- Ensure ownership at local, regional and national level in both enforcing and increasing knowledge to policies – contextually relevant policies and interventions increases ownership
- Mainstreaming is KEY – alcohol touches upon so many issues
    - Advocate to stakeholders in the issue of mainstreaming; take alcohol into their everyday programmes
- Good communication between policy makers and researchers is crucial for contextually relevant policy research
- Mental health;

    - About to review the mental health policy; includes issues to do with alcohol use and other NCD related issues
    - Want to update 1948 mental health act – the ALMA data will be very useful

There is a general lack of research on alcohol and related issues in Malawi. While this study aims to contribute to a much-sought-after knowledge base, there is still a great need for research to further contribute to the development of future policy, plans and interventions. Identified areas for future research are;

- Further research on religious affiliation and alcohol use as well as tribe;
    - This study came up with some interesting trends with regards to differences in alcohol consumption between different tribes and different religious affiliations. While these associations should be interpreted with care due to the sampling which is representative at the Regional level, further qualitative and quantitative research is required to confirm, explore and understand these trends.
    - Study further why these variations occur, this would probably require an in-depth qualitative design to understand WHY.
- Impact of alcohol on health
    - NCDs
    - HIV/ AIDS
    - Child abuse
    - Gender Based Violence
- Harm to others from alcohol
    - Requires further qualitative and quantitative research
- Differentiation of use invites comparative research
- Studies about youth and children
    - School-based survey
    - If there is already a school-based survey (on other research issues) one could include alcohol in that
- Combine research with prevention/ implementation;
    - Study the process and measure the effect
    - The survey data has the potential for telling us what kinds of interventions may be the most fruitful
    - Evaluate implementation of laws and regulations (5 – 6 years from now)
- Alcohol consumption and road traffic accidents
- Studies on the non-drinkers/ abstainers
    - Why don't they drink? How can this knowledge be used to maintain the high number of absentees?

- There is some data on non-drinkers in the questionnaire; we can do further analysis for reasons for non-drinking

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