

Noncommercial Alcohol in Three Regions

An Overview of Terms

A significant portion of alcohol produced, sold, and consumed around the world is not reflected in official statistics. This issue of ICAP Reviews focuses on the prevalence of some such beverages—termed here “noncommercial alcohol”—in three regions: Sub-Saharan Africa, central and eastern Europe, and southern Asia.

We target a subsection of what WHO calls “unrecorded alcohol.”ⁱ Addressed in this Review are traditional drinks produced, whether legally or illegally, for home consumption or limited local trade, as well as unregistered and counterfeit products. Also included is the consumption of a range of nonbeverage or “surrogate” alcohols (derived from medicinal compounds, automobile products, and cosmetics), a relatively widespread phenomenon in some areas, particularly among problem drinkers in the lowest socioeconomic brackets. Drinks made illicitly are at times adulterated by such liquids, for example, to increase alcohol concentration.

“Noncommercial alcohol” is defined in this ICAP Review as traditional drinks produced for home consumption or limited local trade, unregistered and counterfeit products, and nonbeverage—or surrogate—alcohols.

Parts of this Review report on “unrecorded alcohol” when assessing results of studies that have used the broader WHO term, but the bulk of the discussion focuses on noncommercial beverages, as defined above.

Because it is not taxed, regulated, or recorded, little is known about noncommercial alcohol, its production, consumption, and related outcomes. Although the production of many noncommercial beverages meets high quality standards (1), much of what is included under this heading may be contaminated and toxic. The latter category poses a threat to public health—particularly in developing and transition countries—but the magnitude of the problem is unclear. Moreover, lack of data about noncommercial alcohol contributes to the limitations

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of official per capita consumption figures in describing actual drinking behavior and informing policy.

Existing studies have focused on noncommercial alcohol from either a global or a country-level perspective. However, global research paints too broad a picture, obscuring key trends and issues. On the other hand, country-level work may be too narrow in scope because many of the factors associated with noncommercial alcohol consumption are not bounded by national borders and thus cannot be addressed without looking at country clusters. This ICAP Review explores the topic from a regional perspective, aiming to provide a comprehensive yet sufficiently detailed account of the actual alcohol consumption and information useful to policy-makers.

This publication builds on ICAP’s existing work: the 2004 book *Moonshine Markets* (1), which looked at the patterns of “local alcohol” production and consumption in six countries (Brazil, India, Mexico, Russia, Tanzania, and Zambia); and the ICAP Blue Book, which gives a brief, international overview of noncommercial alcohol.

The three papers below were each written by a regional expert, familiar with local research and able to discern regional trends. Each paper provides a literature review of published work and introduces new data, recently obtained by the authors. Possible targeted interventions, appropriate for local and regional conditions, are then proposed. An effort was made to retain the unique style, structure, and emphasis of each paper, so as to give the reader a better idea of the issues surrounding noncommercial alcohol in the three regions. Thus, the only commentary in this review accompanies the paper on Sub-Saharan Africa to underscore some of that paper’s

i WHO’s term “unrecorded alcohol” mainly covers the following: home production (licit/illicit), travelers’ imports and cross-border shopping, smuggling, surrogate alcohol, tourist consumption, and beverages with alcohol content below the legal definition of alcohol (37, p. 15).

key proposals, as seen from the perspective of another regional expert. The paper on central and eastern Europe compares the noncommercial alcohol markets in countries of that region to their Western neighbors. And the paper on southern Asia focuses on one popular noncommercial beverage, *kasippu*, and the regulatory developments that have surrounded it in Sri Lanka.

It is hoped that this ICAP Review will contribute to a better understanding of the informal alcohol sector, identifying available local and international research and highlighting areas for further work. The dearth of basic data on noncommercial alcohol in many countries is a clear obstacle to quality international analysis; ICAP hopes to help bridge this gap as it prepares to continue work on this topic in the coming years.

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Noncommercial Alcohol in Sub-Saharan Africa

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Definitions

Within the African context, noncommercial alcohol, as defined in this Review, primarily consists of homebrewed beers, some fruit-based beverages, palm wine, and home-distilled drinks. Although the word “noncommercial” may suggest that these beverages are not produced at an industrial or large-scale level, they are commoditized. In some rural African settings, a majority of women engage in the production and sale of these beverages as their main commercial activity and as a means of supporting their families. In some countries, homemade beer may be the most widely consumed alcohol and is quite significant in economic terms.

As a unifying characteristic, these products generally exist outside the traditional oversight by governments and the public health community, making the monitoring of drinking behavior, safety regulations, quality assurance, and official revenue generation difficult (1). From a legal perspective, these beverages are also sometimes referred to as “illicit” or “illegal.” The utilization of such terms varies widely and depends on the availability and enforcement of laws in different countries. However, in view of the sociocultural and economic importance of these drinks and their popularity among considerable segments of the African population, the terms “illicit” and “illegal” are not often applied.

Sub-Saharan Africa in Context

Sub-Saharan Africa (SSA) comprises 46 of the 53 countries in Africa. Its total population is estimated at about 0.8 billion people, with a population growth of 2.3% per annum (2). The seven North African countries are not included in the present discussion because they share sociocultural and economic features—the focus of this work—with the Middle East rather than SSA.

The SSA countries range significantly in population size: Nigeria is the largest, with an estimated population of more than 130 million, and Seychelles is the smallest, with fewer than 100,000 people. According to the World Bank’s Africa Development Indicators (ADI), marked progress has been recorded in the economic growth of SSA countries between 1995 and 2005, reversing the collapses of 1975–1985 and the stagnations of 1985–1995 (2). The improved economy during the 1995–2005 period has witnessed expanding diversity in income levels and

growth across Africa. Sixteen countries grew by more than 4.5% a year during this period, and several (including Ghana, Mozambique, Senegal, Tanzania, and Uganda) diversified their economies and exports. A number of SSA nations have benefited from the global economic growth, which has been fairly steady over that decade (2); further stimuli came from the rapidly expanded trade with the rest of the world, increased foreign direct investment, and policy improvements in many countries.

Despite this upturn in economic trends, the ADI have also shown that the volatility of growth—an outcome of conflict, bad governance, and unstable world commodity prices—has been greater in SSA than in any other region over the past 30 years. Socioeconomic and health indices in SSA remain largely suboptimal and reflect wide variations across the region. For example, the 2004 poverty headcount ratio at USD 1 a day was recorded in 41% of the population, admittedly a reduction from 47% in 1990. South Africa has SSA’s highest real gross domestic product (USD 160.8 billion); Guinea Bissau, the lowest (USD 213 million). SSA’s highest gross national income (GNI) per capita is in Seychelles (USD 6,666), while the lowest is in Burundi (USD 105). The adult literacy rates also vary widely: Seychelles has the highest rate of 92%, while the lowest rate of 24% is in Mali and Burkina Faso. Between 1990 and 2005, the life expectancy at birth in SSA declined from 49.2 to 47.1 years (2). Although the life expectancy increased in 25 countries by an average of eight years, it declined in 21 more populous countries by an average of four years. HIV/AIDS, malaria, and armed conflict have contributed to these falling life expectancies.

The Importance of Alcohol in SSA

Alcohol is a ubiquitous part of everyday life in Africa, cutting across the rural/urban, gender, and class divides (3). Its presence is prominent in several life domains, including religious and symbolic, social, psychological, economic, and political spheres.

Alcohol has always played a central role in African traditional religion as a medium for communication with ancestors, even in societies heavily influenced by Christianity and Islam. According to Ngokwey (4) and Anigbo (5), African society’s corporate welfare is reaffirmed by the traditional emphasis on sharing and group cooperation in beer and palm wine production and

consumption. An important social value lies in the fact that drinking of alcohol in Africa serves as a unifying leisure activity across the class spectrum, especially among men, and demarcates the separation of leisure from work. Drinking settings serve as important meeting places for people to exchange vital and mundane information. Further, alcohol is used to mark important social occasions and life stages, such as friendship pacts, marriage, funerals, and widowhood (5, 6).

A specific example is that of the Kofyar people in the Jos area of Nigeria, where production and use of the native brew was described as playing a socially harmonizing role:

The Kofyar make, drink, talk and think beer.... Among equals, the presenting of beer is a mark of esteem and affection. A jar will be saved for a close friend, and institutionalized friendship among male contemporaries is by means of a named drinking society. Beer is given during courtship by a man to a woman, and the public exchange of beer is typical.... Friends or lovers frequently drink together simultaneously from the same *calabash*.ⁱⁱ Occasions which involve the entire community are difficult to imagine apart from beer. (7)

In another example, the veneration of palm wine as a traditional drink is the focus by which the widely popular Nigerian student cultural club, the “Kegites,” seeks to promote the indigenous culture (8).

Cultural norms strongly influence drinking patterns. The age at which one is allowed to drink is significant. Sanctions against women who drink too much or drink specific types of alcohol have also been reported (9). For Africa’s poor, drinking carries considerable psychosocial value. This group utilizes drinking occasions to stimulate or vent its feelings on important personal, local, national, and even international issues; drinking peers usually provide the much-needed sympathetic ear and support, unavailable from the broader society.

Alcohol has always played an important role in the economy of SSA. Historically, it has provided a medium of exchange, facilitating economic reciprocity within the community in the form of barter (10). Alcohol was used as a currency in early European trading conquests and labor recruitment (11). Moreover, palm wine and the traditionally fermented drinks from sorghum and millet have provided basic food and drink in many African countries. For example, in Botswana, an estimated 15% to 20% of all grain consumed by households has been in the form of sorghum beer (12); and in Ouagadougou, Upper Volta (now Burkina Faso), around 50% of family grain consumption in the 1970s was in the form of homebrews (13).

ii African bottle gourd. In western Africa, hollowed out and dried *calabashes* are commonly used as household containers and drinking bowls.

Noncommercial Alcohol: A Historical Overview

The Pre-colonial Period

The consumption of traditional beverages was widespread during the pre-colonial period and exhibited several unique features (3). First, the indigenous drinks were fermented, not distilled. Sorghum and millet beers and palm wine dominated, generally ranging between 2% and 4% of alcohol by volume (ABV) (14). Second, alcohol production and consumption tended to be highly seasonal, especially with respect to the grain-based beers (15). Third, alcohol was strongly associated with male elders, who held the highest status in Africa’s rural communities; older men received preferential access to alcohol. Finally, during this period, the consumption of low-alcohol drinks, woven into special community-wide ceremonies and occasions marking lifecycle passage, was a distinctly social experience.

Colonial and Early Postcolonial Periods, 1880–1980

A most notable feature of the colonial and early postcolonial periods (1880–1980) was the displacement of sorghum and millet by maize. Throughout much of eastern and southern Africa, higher-yielding maize was edging out the lower-yielding indigenous sorghums and millets. Maize thus became the primary grain in alcohol production, facilitating the discovery of faster brewing techniques (16).

At the turn of the 20th century, sugar became readily available in African towns, and its ethanol-enhancing properties were quickly exploited (17). Fermented sugar drinks tended to boost alcohol content to 6–8% ABV. The introduction of distillation techniques by well-travelled returning soldiers and contract laborers was another significant development during this period (18, 19). However, the production of distilled drinks was generally banned in rural and urban areas on health and safety grounds. The state, as exemplified in Namibia (20) and South Africa (21), began to produce officially authorized brews and outlawed local cottage alcohol production, subjecting women brewers and distillers to campaigns of harassment.

In the first two decades after national independence—mainly during the 1960s and 1970s—the industrial production of alcohol expanded rapidly throughout the continent. Several African governments invested in breweries as a revenue generating business, although high import costs were embedded in the beer brewing package. Large-scale legal manufacture of opaque beer, *chibuku*, and clear larger beer were notable at this time, especially in eastern Africa (16).

Some changes in the mode and pattern of drinking also took place. First, alcohol consumption intensified in terms of the widening availability and array of beverages, their increasing strength, the number of regular drinkers, and the amount consumed on an annual per capita basis. Second, the purpose of drinking was gradually transformed from being limited to public ceremonies where relatively few imbibed, to a leisure pastime communally shared by broader sections of the population. Third, whereas drinking was formerly limited by seasonal supply, the market now offered year-round availability (22). Furthermore, the consensually agreed distribution of alcohol in favor of older men began to erode, as did the gender difference in consumption. Drinking became informal, narrowing social distances in most rural areas, as commoditized consumption of alcohol increasingly displaced gift and ceremonial-exchange drinking. Finally, marked differences emerged between urban and rural drinking modalities during the 1960s and 1970s (e.g., 23). Urban migration, fuelled by the Africanization of white-collar segments of the economy, gave educated Africans disposable incomes hitherto unrealized. While the rural poor drank locally produced cottage-industry beer and working-class drinkers relied primarily on cheap manufactured *chibuku*, middle-class drinkers preferred more expensive bottled larger beer, a sign of “having made it” financially.

Economic and Political Upheavals of the 1980s and 1990s

Alcohol production and consumption patterns were affected by the protracted economic and political upheavals of the 1980s and 1990s. SSA's economic crisis, precipitated by two successive oil-price spirals—one in the mid-1970s and the other in 1979—seriously undermined the viability of peasant agriculture (24). As agriculture floundered, the relative affluence of urban government and parastatal employees quickly dissolved. National governments fell into debt and became subject to the conditionality of the structural adjustment programs enforced by the World Bank and the International Monetary Fund.

Growing unemployment and the rapidly declining purchasing power of male heads of households led to a resurgence of the informal sector in a wide range of activities. Formal-sector employees either relocated to the informal sector or worked extra hours after official office hours to help make up the shortfall in income. Other family members, notably unemployed wives, entered the informal sector on a full- or part-time basis. Most, without educational qualifications or technical training, were forced to offer goods or services that were an extension of their homemaking skills, such as homebrewing or distilling (24, 25, 26, 27).

As the purchasing power of the middle-class beer-drinking stratum declined, the market for the far cheaper alcohol products of the informal sector expanded. The brewing industry also suffered from capacity underutilization that characterized this period. The gradual drying up of the legal bottled beer supplies gave the informal sector space for market expansion. The bottled beer market, formerly so prevalent and reflective of urban modernity, was shrinking and being replaced by relatively cheap distilled drinks from cottage industries. The high alcohol content of the latter was attractive to drinkers experiencing hard times (e.g., 28).

In some ways, the economic liberalization policies helped mitigate the illegality of producing noncommercial alcohol (27). In conformity with international financial institutions' emphasis on open markets, and sensitive to the need to encourage income-earning for economically distressed households, municipal and rural governments eased, if not abandoned, controls on so-called “illicit” alcohol production (29). During the 1980s, peasant households throughout much of the continent faced a collapse of crop marketing infrastructure and the removal of subsidized productive inputs. In this context, rural alcohol production became an important income-diversifying activity, particularly for women (26). Many rural women had no other marketable skills, and alcohol production represented a lucrative and, at times, only option.

Late 1990s and 2000s

As reform programs gained donor approval and national markets were opened to foreign investment in the late 1990s and 2000s, there was a resurgence in legal bottled beer sales (3). The African middle classes reclaimed their role as “modern” consumers. The homebrewing cottage businesses faced stiff competition from the rapidly expanding bottled beer markets, as illustrated by the study of women brewers in Mathare Valley, a Nairobi shantytown, in the 1970s and 1990s (30). In the 1970s, approximately four out of every five women, an estimated 1,000 women, were brewing *buzaa* maize beer for their livelihood. By the 1990s, a South African multinational firm was manufacturing *chibuku*, and the women's business had been replaced by male entrepreneurs owning roughly 10 large bars with commercial licenses to sell factory-produced *chibuku*. Only a few women dared to sell locally distilled *chang'aa* and marijuana, both of which were easier to conceal from police than beer. The revival of legally manufactured beer does not necessarily undermine the informal distilled drinks sector. Several recent case studies suggested an escalation of home-made spirits consumption in rural areas, as reported from Uganda (19), Guinea Bissau (31), and Ethiopia (32).

Noncommercial Alcohol within the General Drinking Pattern

Since the government has no control over production and distribution of noncommercial beverages, it is difficult to estimate these drinks' share of total alcohol consumption. However, a number of localized epidemiological studies can help in filling this gap, at least for certain groups within the general population. For example, a 1997 survey of 542 secondary school students in rural and urban communities in southwestern Nigeria (266 males and 276 females) reported that 13.4% of the participants identified themselves as "current drinkers" (20.1% among males and 7.4% among females), and 26.4% said they had drunk alcohol in their lifetime (33.3% of males and 20% of females). In this sample, the most commonly used alcohol beverage was palm wine (60.1%), followed by beer (20.8%) and locally fermented wine and locally distilled gin (14.7%) (33).

Describing the situation in Nigeria, Obot (34) noted,

The most popular drink is western commercial beer. It has been estimated that between 1999 and 2000, for example, demand for beer grew by 143%, a demand that was increasingly difficult to meet with production capacity.... Unrecorded beverages, mainly the traditional drinks, although including smuggled spirits and wine, are next in order of consumption.... [However,] in rural areas and in poor urban communities, fermented beverages, palm wine and drinks distilled from them are consumed more than commercial alcohol, for reasons of availability and affordability.

A 1997–1998 survey, sponsored by the Economic and Social Research Council and the British Institute in Eastern Africa, examined the prevalence of noncommercial alcohol in Uganda and Kenya. The total consumption was estimated to be 4.39 liters (Uganda) and 4.18 liters (Kenya) of absolute alcohol per capita of the adult population. Among drinking males, the estimated mean annual consumption was 8.5 liters of absolute alcohol in Uganda and 14.6 liters in Kenya (35).

According to data collected for the Botswana Epidemiology Network on Drug Use (BENDU) from nine treatment facilities in 2002, alcohol was the most common primary substance of abuse, reported by 70% of the 185 patients. Homebrews were the most common type of alcohol abused in the sample (36).

Finally, "unrecorded alcohol" in SSA countries, as defined and estimated by a group of WHO alcohol experts, is comprised mainly of noncommercial beverages, although it may also include smuggled drinks (37, 38). As **Table 1** demonstrates, the consumption of these beverages is not only comparable to that of legal drinks in volume terms but exceeds the recorded figures in some countries. Eight country examples, offered below, provide further insight on the most popular noncommercial beverages in various parts of SSA.

Table 1. Estimates of Unrecorded Alcohol Consumption and Total Recorded Alcohol Consumption, WHO Data (after 1995)*

Country	Estimated unrecorded alcohol consumption	Total recorded alcohol consumption
Botswana	3.0	5.38
Burkina Faso	3.3	4.38
Burundi	4.7	9.33
Cameroon	2.6	3.66
Eritrea	1.0	1.54
Ethiopia	1.0	0.91
Ghana	3.6	1.54
Kenya	5.0	1.74
Nigeria	3.5	10.04
Mauritius	11.0	3.16
Rwanda	4.3	6.80
Senegal	0.8	0.48
Seychelles	5.2	3.61
Swaziland	4.1	9.51
Uganda	10.7	19.47
Zimbabwe	9.0	5.80

*In liters of pure alcohol per capita for population aged over 15 years.

Source: WHO, 2004 (37, see also 38).

Noncommercial Alcohol in Eight SSA Countries: What Beverages Are Popular?

The selection of the eight country examples has taken into consideration the four main regions of SSA, namely central Africa (Central African Republic, Democratic Republic of the Congo), eastern Africa (Ethiopia, Kenya), southern Africa (Botswana, Mozambique), and western Africa (Ghana, Nigeria). Five of the featured countries are English-speaking (Botswana, Ethiopia, Ghana, Kenya, Nigeria), two are French-speaking (Central African Republic, Democratic Republic of the Congo), and one is Portuguese-speaking (Mozambique). The emphasis of the sections below is on the kinds of drinks prevalent in a given country. Where available, however, the historical and cultural aspects of noncommercial alcohol production and consumption are discussed.

Botswana

Botswana is a landlocked nation in southern Africa, bordered by South Africa to the south and southeast, Namibia to the west, Zambia to the north, and Zimbabwe

to the northeast. The economy, closely tied to South Africa's, is dominated by mining (especially diamonds), tourism, and cattle. The country's estimated population in 2007 was 1.9 million people, almost equally split between urban (49%) and rural (51%) dwellers. In 2008, life expectancy at birth was 50.16 years for the general population, 51.28 years for men, and 49.02 years for women (39).

Alcohol beverages produced in Botswana mainly fall into the following categories: bottled beer; factory- and homemade sorghum beer, or *bojalwa*; *khadi*, a home-made wine; and *nyola*, a homebrew. A WHO country report described *khadi* as a "designer drink," prepared from a variety of locally available ingredients to suit individual consumer tastes (40). Depending on the mixture, *khadi* may be between 2% and 20% ABV (41). A number of other local drinks with high alcohol content exist and are given various ominous appellations, including *tho-tho-tho* ("the dizzy spell," often over 80% of alcohol by volume), *a lala fa* ("you sleep right there"), *chechisa* ("hurry-up"), *laela mmago* ("say goodbye to your mother"), *monna-totta* ("real man"), and *motes o teng godimo* ("there is home in heaven") (40). An estimated 65 million liters of *bojalwa* and 26 million liters of *khadi* were produced in Botswana in 1981, two-thirds of all alcohol produced and imported that year (41).

Central African Republic

This former French colony became the independent Central African Republic (CAR) in 1960. It is landlocked, bordered by Cameroon, Chad, the Democratic Republic of the Congo, and the Republic of the Congo. Subsistence agriculture and forestry are the backbone of CAR's economy, with over 70% of the population living in rural areas. The country's landlocked position, poor infrastructure, largely unskilled workforce, and a legacy of bad governance impede economic development; income distribution is extraordinarily unequal. In 2008, CAR's population was 4.4 million people, with 41.3% aged 14 years or younger; life expectancy at birth was 44.22 years for the general population, 44.14 years for men, and 44.29 years for women (42).

Although Western-style beverages, notably, red wine and European beers, are available, few Central Africans can afford them; cheap noncommercial alcohol is widely consumed, especially in rural areas (43). CAR's predominant traditional beverage is *hydromel*, a honey-based drink, available only during honey harvest times:

Only honey from bees that make the sweetest kind is used. Men collect the honey, and women prepare the *hydromel*. To begin, the honeycomb is crushed into hot water, then germinated sesame seeds are added to begin the fermentation process.... The mixture ferments in a pot that is made especially for this purpose. Traditionally,

hydromel was a beverage that a couple would share with friends and neighbors, a very local production and consumption, but in the 1980s, the need for money led to its commercialization, and some women specialize in its sale. (43)

Other popular drinks include spirits distilled from local ingredients, such as corn and manioc, and wine from the sap of palm trees. Homebrews from millet, manioc, and bananas are also prepared: "These drinks are more refreshing than they are potent" (43).

Democratic Republic of the Congo

The Democratic Republic of the Congo (République démocratique du Congo) is the third largest country by area in Africa. Often referred to today as DR Congo, DRC, or RDC, it was once known as Congo Free State, Belgian Congo, Congo-Léopoldville, Congo-Kinshasa, and Zaire. Though located in central Africa, the nation is economically and politically affiliated with southern Africa as a member of the Southern African Development Community (SADC). It borders the Central African Republic and Sudan to the north; the Republic of the Congo to the west; Burundi, Rwanda, Tanzania, and Uganda to the east; and Angola and Zambia to the south. In July 2008, the country's population was estimated at 66.5 million people, with 47.1% aged 14 years or younger; life expectancy at birth was 53.98 years for the general population, 52.22 years for men, and 55.8 years for women (44).

DR Congo's alcohol market is dominated by home-distilled beverages, which have nearly replaced traditional homebrews because they are cheaper and easier to obtain than beer (45). Depending on the region, these drinks are made from cassava, maize, bananas, sugarcane, or palm sap and bear such colorful monikers as *kasiksi* ("I regret") and *mokoyo* ("the dog that bites").

At the same time:

When it comes to food and drink, palm wine has a pivotal position; it is honored and celebrated and is much more than just a thirst-quencher. A dignitary passing through a village will be offered a *calabash* of palm wine, and will be expected to express himself exhaustively about its character, strength and so on. Men offer palm wine to each other, and those who have no palm trees of their own buy the wine. Four different species of palm are used for palm wine production: *Elaeis guineensis*, *Raphia vinifera*, *Raphia laurentii* and *Borassus aethiopicum*. The wine is tapped into beautifully decorated *calabashes* and is left to ferment, its sweetness disappearing while its content of alcohol (and vinegar) increases. It has an alcoholic content of 5% to 7%. (45)

Ethiopia

Unlike the rest of SSA, Ethiopia escaped colonial rule, with the exception of the Italian occupation during the World War II. It is a landlocked country in eastern Africa, west of Somalia. In 2008, Ethiopia's population was estimated at 78 million people, with 43.1% aged 14 years and younger; life expectancy at birth was 49.43 years for the general population, 48.26 years for men, and 50.64 years for women (46). Ethiopia has a significant Muslim minority (32% of the population, according to the 1994 census), who may abstain from alcohol for religious reasons.

The country's traditional alcohol drinks can be divided into three main groups (32, 47). The first group is *t'älla* and *t'ädj*, dubbed "the good ones" and perceived as harmless social drinks. *T'älla* is beer, which is normally 6% to 7% ABV; it is usually made by women, but men also prepare it in monasteries and church compounds. *T'älla* is almost never sold in bars but is the beverage of choice for family occasions and Christian religious celebrations. It is very popular and highly valued as its production requires considerable skill and patience. The *t'ädj* is the typical Ethiopian honey wine or mead. Reserved for the upper classes in the past, it is now widespread among all social groups, drunk on secular holidays and at weddings and served in bars and small cafés across Ethiopia. The alcohol content of *t'ädj* can vary from 8% to 14% ABV.

The second group consists of the "local beers," collectively referred to as *bordè*. These beverages are typical for southwestern Ethiopia; they are seen as drinks for the lower classes, always produced by women from fermented maize, sorghum, barley, or a mixture of the three. *Bordè* can be very thick in consistency and may, when necessary (e.g., during long walking trips in the countryside), substitute meals.

The third group is the local *araqé*, or *katikala*, a home-distilled drink. With alcohol content from 30% to almost 50% ABV, this beverage is more expensive than beer and is popularly viewed as very strong and challenging to the drinker:

Even though it is accepted and widespread [in rural communities], it has the aura of being dangerous and unreliable, and of being a sure and quick way to drunkenness.... In contrast to *t'älla* and *t'ädj*, it is a "bad drink." (47)

Ghana

Ghana is a western African country, bordering the Gulf of Guinea, between Cote d'Ivoire and Togo. In 1957, it became the first sub-Saharan country in colonial Africa to gain independence. In mid-2008, Ghana's population of 23 million fell into the following age groups: 37.8 % were 0–14 years; 58.7 %, 15–64 years; and 3.6%, 65 years and over. According to these estimates, life expectancy

at birth was 59.49 years for the general population, 58.65 years for men, and 60.35 years for women (48).

A WHO report described Ghana's traditional alcohol beverages as follows (49):

Pito (local brew made from millet) is widely consumed.... The brewing of *pito* is traditionally associated with the people in the northern part of the country, but migration has led to its production throughout the country. The industry is mostly controlled by women between the ages of 18 and 67 years old. *Pito* is golden yellow to dark brown in colour with taste varying from slightly sweet to very sour. It contains lactic acid, sugars, amino acids, 2% to 3% alcohol and some vitamins and proteins. There are four types of *pito* in Ghana: *nandom*, *kokmba*, *togo* and *dagarti*. The peculiar characteristics of each lies in the differences in their wort extraction and fermentation methods (50, 51).

Palm wine (*nsafufuo*) is widely consumed and is produced from sugary palm saps. The most frequently tapped palms are raffia palms and the oil palm. Fermentation starts soon after the sap is collected and within an hour or two becomes reasonably high in alcohol content (up to 4%). Within 72 hours the alcohol content will increase to around 4.5% to 5.2% by volume.

Burukutu is a popular alcoholic beverage of a vinegar-like flavour prepared from sorghum grains (52). *Akpeteshie* (local gin) is distilled from fermented palm wine or sugarcane juice, and requiring a simple apparatus of two tins (usually four-gallon kerosene tins) and copper tubing. The standardized alcohol strength of *akpeteshie* today is between 40% and 50% by volume (53).

Palm wine was originally the drink of choice in southern Ghana, replaced by rum and schnapps during the period of the slave trade (53). Men, thus, have come to favor distilled spirits, seen as "hot" or "strong," over palm wine or beer. Drinking distilled spirits was a sign of prestige in pre-colonial Ghana, and, as such, a behavior controlled by the elders and the politically powerful. Women did not consume alcohol; young men drank rarely, and then only as a result of the beneficence of the rich and the powerful (53).

With growing urbanization in the past 100 years, however, many young men moved to the mines or the cities, where they got the disposable income for alcohol and were free to drink. Alcohol consumption in Ghana, as in many other male-dominated cultures, then became the basis of peer group socializing. Young men gathered after work to drink together and, for some, relieve stress.

Increasingly, *akpeteshie* replaced imported spirits, much to the distress of colonial rulers who were unable to tax it. Illegal *akpeteshie* bars became important fora for the independence movement: It was here that Nkrumah'sⁱⁱⁱ

iii Kwame Nkrumah (1909–1972) ruled Ghana and its predecessor state, the Gold Coast, from 1952 to 1966.

Convention People's Party mobilized support. However the social divide grew after Ghana's independence. The new elite began to drink at home and in comfortable hotel lounges, while the poor continued to drown their sorrows in palm wine and *akpeteshie* bars (53).

Kenya

Kenya is a country in eastern Africa, bordering the Indian Ocean, Ethiopia, Somalia, Sudan, Tanzania, and Uganda. It gained independence from British colonial rule in 1963. In mid-2008, the country's population was 37 million people, with 42.2% aged 14 or younger; life expectancy at birth was 56.64 years for the general population, 56.42 years for men, and 56.87 years for women (54).

Chang'aa, a distilled drink, is perhaps the most predominant noncommercial beverage among Kenya's poor. It is made from a variety of grains and contains 20% to 50% ABV. Normally produced in small illegal distilleries,

chang'aa is the drink of choice for those who cannot afford beer (55).

Among other popular beverages are such noncommercial products as *busaa*, a traditional brew from finger millet malt; palm wine, especially popular along Kenya's coastal areas; *muratina*, a sour alcohol drink from sugarcane and muratina fruit; banana beer, a mixture of bananas and cereal (often sorghum) flour; and *urwaga* banana beer, made from bananas and sorghum or millet (55). Consumption of drinks fortified with surrogates has also been reported.

Drinking experiences among a group of Kenyan poor are illustrated in the **Case Study** below. Although the case study focuses on refugees in a remote area, the reported findings are comparable to mainstream communities across the country (see the **Commentary** below). Moreover, the intervention applied in this context is promising for the rest of the country and SSA in general (see "Intervention and Policy").

Case Study: The Kakuma Refugee Camp Experience, Kenya

In September 2006, under the auspices of the United Nations High Commissioner for Refugees (UNHCR) and WHO, the present author conducted an assessment of substance use and HIV/AIDS vulnerability in the Kakuma Refugee Camp (KRC) and the local community in Kenya. This involved the collection of secondary data (reports by the United Nations, governments, and nongovernmental agencies and published journal articles) and primary research (mapping, key informant interviews, and focus group discussions).

The Kakuma Camp is situated in northwestern Kenya, close to the country's borders with Ethiopia, Sudan, and Uganda. The host community, the Turkana, is among the poorest in Kenya.

The first arrivals in KRC were the 12,000 "Lost Boys and Girls of Sudan," who were subsequently joined by Ethiopians from other camps in northeastern and central Kenya and Somalis from camps near Mombasa and Nairobi. At the time of the assessment, the camp's population was 94,707 people. About four-fifths of the refugees were from the Sudan, with the rest from DR Congo, Eritrea, Ethiopia, Rwanda, Somalia, and Uganda. The majority of the camp's inhabitants (72%) were aged under 25 years.

The assessment revealed that traditional brews were widely available in both KRC and the local community. The most popular beverages were *busaa*, *kaada*,

and *chang'aa*. *Busaa*, mentioned above, is a product of dried maize or sorghum; the cereals are ground, fermented, boiled, and then filtered with a cloth. *Kaada* is the result of yeast fermentation, with the addition of water and sugar. *Chang'aa* requires distillation of fermented millet, maize, yeast, or sorghum.

The production of traditional brews was widespread in the camp, notably among the Sudanese, Ugandans, and Rwandese communities. The Somalis were not known to engage in alcohol brewing. The Sudanese respondents indicated that brewing of alcohol was a popular occupation in southern Sudan before they became refugees in Kenya. The brews were relatively cheap and affordable to many in KRC and the local community alike. Under Kenyan laws, only *chang'aa* (the distilled product) was strictly illegal. *Busaa* and *kaada* were considered illegal, unless the brewer and seller had obtained a government license.

The ready availability of the traditional brews in KRC was facilitated by the fact that the refugees collected maize and sorghum—the main ingredients needed to produce the brews—as food rations from the United Nations. Many refugees, therefore, used their food rations to produce alcohol. Others sold rations to ready buyers in the camp and the surrounding community, who also used these provisions for brewing.

Mozambique

The Republic of Mozambique is a Portuguese-speaking country in southeastern Africa, bordered by the Indian Ocean to the east, Tanzania to the north, Malawi and Zambia to the northwest, Zimbabwe to the west, and South Africa and Swaziland to the southwest. In mid-2008, its population was 21 million people, with 44.5% aged 14 years or younger; life expectancy was 41.04 years for the general population, 41.62 years for men, and 40.44 years for women (56).

One of the world's poorest countries at the time of its independence in 1975, Mozambique was further weakened by government mismanagement and a brutal civil war (1977–1992). However, a series of macroeconomic reforms from late 1980s, donor assistance, and political stability since the multi-party elections in 1994 have led to dramatic improvements in the country's growth rate.

Little is published about the alcohol situation in Mozambique. According to WHO, the country's main traditional drinks are palm and cashew wines (57), the latter being far more prevalent. Cashew season has been marked by an increase in drunkenness; for this reason, cashew cultivation was prohibited for a time.

Nigeria

Nigeria is a western African country, bordering the Gulf of Guinea to the south, Benin to the west, Cameroon to the east, and Chad and Niger to the north. It gained independence from British colonial rule in 1960. The country's July 2008 population estimate was 138 million people, with 42.2% aged 14 and younger; life expectancy at birth was 47.81 years for the general population, 47.15 years for men, and 48.5 years for women (58). Fifty percent of Nigeria's population is Muslim; some areas in northern Nigeria extend the Sharia law to the penal code, thereby criminalizing alcohol production and sale.

As reported by Heap (59),

Nigerians have practiced the art of manufacturing low-alcoholic drinks for ages. Liquor consumption has always been a multifaceted affair, mixing concerns on personal, communal and ritual levels throughout the life cycle of the individual within the village context: from naming ceremonies, entertaining guests at weddings, chieftaincy installments and funeral obsequies to pouring libations to the ancestors.

Obot (34) further elaborated on the central social role of alcohol in Nigeria:

Except where it is banned for religious reasons, alcohol is present in ceremonies around birth, death, and all other life stages in between. It is a cultural artifact used in the settlement of disputes and the appeasement of the gods,

an economic commodity which provides employment for women who brew local beverages, a source of tax revenue for government and like cars and other objects of display, a status symbol in a society where conspicuous consumption is a valued tradition.

Although different age groups and men and women are not explicitly separated during ceremonies, elders and men are expected to drink more than either younger people or women (60).

Obot described three categories of traditional beverages produced and consumed in Nigeria (34, see also 61, 62):

- (i) fermented products, such as *burukutu* from maize and *pito* from millet or guinea-corn, with alcohol content of 3% to 6% ABV;
- (ii) palm wine, tapped from raffia and oil palm trees (unbottled palm wine has a lower alcohol content—around 3% ABV—than bottled palm wine, which is normally around 4% ABV);
- (iii) gin-like distillates *ogogoro*, *kinkana*, *kai kai*, and *apetesi*, ranging from 40% to 80% ABV.

Complications from Production and Consumption of Noncommercial Beverages

Few studies have specifically investigated the adverse consequences of producing or consuming noncommercial alcohol. Most available reports cover all types of beverages, with little or no distinction made between commercial and noncommercial products. Of relevance here are the several studies whose respondents were known or reported to *primarily* produce or consume noncommercial beverages. These typically focused on specific groups, generally at the bottom of the social and economic scales.

For example, a 1996 study in Botswana examined an impoverished population among the Basarwa people, hunter-gatherer tribes of the Kalahari Desert. Increased noncommercial alcohol consumption among this group in the 1990s was seen as a contributing factor to a growing number of reported trauma and injuries from fights and family violence (63). Researchers also described reports of poaching as an outcome of "alcohol-induced adventurism," school drop-outs due to problem drinking, prostitution among young women in a squatter camp to buy alcohol, and child neglect.

"Habitual drinkers" among the Basarwa people were found to exhibit "self-neglect," especially poor personal hygiene and "forgetting" to eat while drinking, which often resulted in malnutrition (63). Reported negative physical outcomes included having pale skin and red eyes, experiencing weight loss, and, in more serious cases, developing alcohol psychosis. Respondents also

reported spending a significant proportion of household income on alcohol, diverting funds from food, clothing, and other essentials. Diminished productivity and debt were notable among problem drinkers.

In a rural Ugandan population, where noncommercial beverages accounted for most of alcohol consumed, the rate of HIV prevalence was two times higher among respondents who had ever consumed alcohol, when compared to nondrinkers, 10% and 5%, respectively (64). In 2005, Ugandan news reports noted that tribal leaders of the rural Iteso tribe linked heavy consumption of the local brew among men to impotence and domestic violence, as “the men sleep for eight hours a day, and the rest of the time is spent on drinking” (65).

In 2000, 140 Kenyans died, many went blind, and others were hospitalized after consuming an illegal brew from sorghum, maize, or millet, called *kumi kumi* (66). Common in poor Kenyan communities, this and similar cheap drinks are infamous for high alcohol content, often fortified with methanol, formalin, and car battery acid.

Finally, a qualitative study of *akpeteshie* in the northwestern region of Ghana found that consuming this traditional gin was on the rise among both men and women, increasingly associated with sexual abuse and rape (67).

It must be noted here that commercial beverages consumed in excess or by certain high-risk populations may lead to many of the complications described in this section. However, the additional concerns raised around noncommercial beverages are two-fold. First, there is the lack of regulated standards in their production, with some drinks failing to meet acceptable hygienic and content specifications. Second, some producers have been reported to add surrogates (e.g., methanol and car battery acid, as in the Kenyan example above) to distilled drinks to increase their alcohol strength and facilitate higher income. Both practices have been associated with major adverse consequences.

Findings from the Kakuma Refugee Camp provide a further example.

Kakuma Study Findings and Quotes

The UNHCR/WHO study at the Kakuma Refugee Camp, introduced in the **Case Study** above, revealed the following negative outcomes, linked to the production and consumption of the noncommercial beverages in the camp and the local community: unsafe sexual practices, diarrhea, organ system damage, trauma, gender-based and domestic violence, depression, child abuse and neglect, and diversion of funds from food and other family expenses.

Quotes from the participants of the study illustrated some of these outcomes:

“Some users...engage in physical assaults and lawlessness. They are at a higher risk of contacting HIV. Drinking *chang'aa* goes hand in hand with promiscuity.” (District officer, KRC)

“Users do not look healthy physically. They become dependent on the substance and their life revolves around its use. *Chang'aa* use often accompanies prostitution. Users also engage and suffer more from physical assaults.” (Officer commanding the police station, KRC)

“I brew because I want my children to survive. When my customers buy my brew and buy my body, even if I die, my children will inherit my brewing business. I could get KES 1,000 per week from brewing. From selling my body, customers give me KES 5 per round and can make up to KES 200 per week.”^{iv} (A female brewer, KRC)

“The face of the typical user is usually bloated...and he suffers from pitting leg edema. He could also suffer from liver cirrhosis and tuberculosis. He typically engages in violent and criminal behavior, including breaking into houses at night. He is prone to HIV, as he does not use condom and keeps several partners who are also *chang'aa* users.” (Chief with a nursing background, KRC)

“The commonest problem in [the Kakuma Refugee Camp] is domestic violence from *chang'aa* consumption. Other cases associated with *chang'aa* drinking include cases of defilement, violence, rape, and child molestations.” (Protection officer, UNHCR)

“Some of the effects of *chang'aa* consumption include fighting...; family separation as a result of assaults, diversion of family resources, and inability to play a positive role in the family...and sexual indiscretion—people become ‘loose’ and some become commercial sex workers.” (Associate field safety adviser, UNHCR)

“Due to the poor hygienic conditions associated with the preparation of *busaa*, diarrheal diseases are commonly found in areas of high [noncommercial alcohol] production, such as...in the Sudanese communities.” (Medical doctor, KRC)

Intervention and Policy

In the context of the SSA countries—considering the limited economic resources and the important traditional role of these beverages in the region—what can be done to address the negative outcomes from noncommercial alcohol production and consumption?

During the 2006 ICAP Workshop on Self-regulation in Cape Town, South Africa, the issue of noncommercial alcohol and the informal sector (producers, as well as

^{iv} KES (Kenyan Shilling) 1,000 equals approximately USD 14.83; KES 5 is about USD 0.07; KES 200 is USD 2.97.

sellers) was stressed (68). In the communiqué issued at the end of the meeting, *The Cape Town Declaration*, three of the eight listed commitments were of relevance to this paper: (i) setting standards for alcohol production, distribution, retail, and consumption; (ii) addressing and engaging informal production, distribution, and consumption; (iii) encouraging affordable alternatives to illicit alcohol. These three issues are addressed in turn.

Further, the present author delivered a draft of this paper before experts from governments, the beverage alcohol industry, public health, and nongovernmental organizations (NGOs) from 15 SSA countries at the ICAP Africa Region Conference, held in Dar es Salam, Tanzania, in September 2008. The interesting discussion, comments, and recommendations that followed the presentation are also reflected in this section

Setting Standards for Alcohol Production, Distribution, Retail, and Consumption

Setting standards for alcohol production, distribution, retail, and consumption is an important requirement, which every government must implement to ensure close monitoring and regulation of production methods, consumption rates, and adverse consequences. However, an extensive literature search has failed to reveal that any SSA country is currently implementing these measures in the informal sector.

Some reasons for this may be postulated. First, many of the SSA countries are currently struggling with major political, economic, and health crises and are therefore not likely to treat regulation of the informal alcohol sector as a priority for budgetary allocation or action planning. Second, any interdiction activity against the informal sector may be perceived as “politically sensitive” in many SSA countries, as it would target the already deprived and marginalized stratum of the society. Not many governments would be prepared to face the political backlash of possible revolt and anger of the downtrodden masses. Third, many SSA governments only pay lip service to the issue of regulation of even the formal sector. Oshodin (60) gave the following description of the situation in Nigeria:

Compared with many other countries, the Nigerian government is not very strict in implementing policies regulating alcohol production, distribution, and consumption. For example, existing laws regulate when and where alcohol can be sold, [but] they are not strictly enforced.

Fourth, many SSA countries have not revised the alcohol regulatory laws and ordinances enacted more than half a century ago. Obot (34) noted the following on Nigeria:

Except for vestiges of colonial liquor control legislation, for example the 1958 Ordinance to Regulate the

Importation, Manufacture and Sale of Intoxicating Liquor, there is no recognizable alcohol policy in Nigeria. The ordinance, which imposes some restrictions on production and sale, is not part of the Federal laws and restrictions are not enforced.

Thus, SSA governments have a central role to play in recognizing the complexity of the issues involved in reaching the informal alcohol sector. The governments need to institute and/or update the necessary legislative framework and ensure its enforcement. However, if they are to achieve the desired results of upholding standards in the informal sector, governments must go the extra mile to mobilize and encourage other stakeholders—NGOs, community groups, local and international funding agencies, formal alcohol manufacturers and distributors, academia, and others—to formulate and implement an agreed action plan.

Addressing and Engaging Informal Production, Distribution, and Consumption and Encouraging Affordable Alternatives to Illicit Alcohol

Some findings of the Kakuma Refugee Camp study (see the **Case Study** above) are relevant to this discussion and highlight possible policy recommendations on the twin objectives of engaging the informal sector and encouraging affordable alternatives to illicit alcohol.

KRC Project Background

In 2006, the production and consumption of noncommercial alcohol were ubiquitous in the Kakuma Refugee Camp and the local community, with a number of production and sales points scattered across the entire area. Locally produced beverages included the fermented drinks *busaa*, *kaada*, and *ginzee* and the distilled *chang'aa*. Some reasons given for the massive production and consumption of noncommercial alcohol in KRC and the local community included: (i) traditional practices—the drinks were used during ceremonies such as weddings and dowry agreements; (ii) ease of preparation—the food rations supplied by UNHCR included all necessary ingredients; (iii) socializing—drinking was the main means for social interaction and entertainment in the camp; (iv) earning a living; (v) unemployment and idleness—the production, sale, and consumption of noncommercial alcohol provided an important outlet for activity; (vi) lack of alternative income-generating opportunities.

Production and sale of local drinks in KRC and the local community tended to be accompanied by commercial sex work. Many of the women brewers/distillers and sellers were subjected to violent sexual attacks from drunken customers and were at an elevated risk of contacting sexually transmitted infections, including HIV/AIDS. Several physical, psychological, psychiatric, and

socioeconomic adverse consequences were described as being closely associated with the consumption of noncommercial beverages.

KRC Legislative Framework

Kenyan laws clearly prohibit the production and sale of *chang'aa*, as illustrated in the Chang'aa Prohibition Act:

This Act states that anyone who is arrested for brewing or producing *chang'aa* (meaning any spirits which are distilled otherwise in accordance with a license issued under Part IX of the Customs and Excise Act, and by whatever name called and includes spirits commonly known as *enguli*, *kali*, *kangari*, “kill me quick,” etc.) shall (i) be guilty of an offence and liable to a fine not exceeding ten thousand shillings^v or to imprisonment for a term not exceeding two years or to both fine and imprisonment; (ii) on conviction of any person for an offence under this Act, the court shall order the forfeiture and destruction of all *chang'aa* and any implement, apparatus or utensil used in connection with the commission of the offence.

The Traditional Liquor Act sets out in detail the procedures for obtaining a license for the production and sale of traditional drinks, defined as “any intoxicating liquor manufactured by traditional African methods, other than distillation, which is offered, or intended to be offered for sale in a state of continuing fermentation without further processing.” This Act covers the production and sale of traditional Kenyan brews like *busaa* and *kaada*.

KRC Camp Policing

All interviewed security officers described the challenges they faced in controlling the widespread production and sale of traditional brews in KRC and the local community, despite the existing regulations. Officers from the local government and UNHCR collaborated to carry out periodic raids on illegal manufacturers (particularly of *chang'aa*) and their facilities. During such raids, the production implements were destroyed. Many of the brewers escaped, fearing arrest, but some were caught and prosecuted. However, the officers considered such enforcement methods ineffective, as those prosecuted were normally able to pay the necessary fines and return to their business of *chang'aa* production. The officers suggested shifting the emphasis to programs aimed at educating the public about health hazards of illegal drinks and providing alternative means of livelihood to illegal producers and sellers.

The observation and mapping visits to KRC and the local community revealed that the brewing and sale of non-commercial beverages was done in the open. Interviewed brewers and distillers indicated that the police officers

were often corrupt, behaving as “police in the daytime and customers at night.”

KRC Interventions

An NGO, the National Council of Churches in Kenya (NCCK), had embarked on the innovative Vulnerable Women's Project at the time of the Kakuma study. As this project is relevant to the goals of engaging the informal sector and providing attractive alternatives to it, some description of the initiative is in order.

The project began with a pilot in October 2005, involving eight women, all either commercial sex workers (CSW) or CSW and illegal brewers, who were given KES 8,000 to start an alternative business. These women proved to be good entrepreneurs, and the average return on the grant was KES 17,230 within a five-month period.

Following the pilot study, NCCK had recruited 133 women in KRC and 152 women in the local community. A total of five workshops were held. Identification and recruitment of participants was conducted through local women's groups. Some of the key features of the project were as follows:

- NCCK had trained 12 peer educators (former CSWs from KRC and the local community) to conduct HIV and reproductive health training for women selected for the project. In addition to information on anatomy, sexually transmitted infections, HIV/AIDS, and family planning, the training covered alternative income-generating activities, finance management, and record keeping. An emphasis was placed on developing positive life skills, negotiating for safer sex, and linking the acquired information to behavioral change.
- Fifty-five to 60 women were trained at once, later divided into groups of 10. Each group developed a business and received an NCCK grant. In September 2006, there were 36 groups in operation, 22 in KRC and 14 in the local community.
- Several conditions were attached to the grant: (i) Ownership of the business belonged to the group and not an individual; (ii) NCCK could visit each group in the market place and at home; (iii) no member of the group continued being a CSW or an illegal brewer; (iv) profit was shared equally in a fair and transparent manner; (v) to benefit from the shares, a member had to be seen as fully participating in the business. NCCK regularly evaluated the income of the grant.

Interviewed participants of the project noted a number of factors that may have lowered the probability of success: (i) The grant amount provided was quite limited.; (ii) the women could not compete favorably with bigger businesses in the market; (iii) no shelter was provided for the women in the market, and they had to put their

^v Approximately USD 148.26.

trade items on the ground; (iv) no transportation (e.g., bicycles) to carry goods to and from the market was made available.

These limitations notwithstanding, the participating former illegal brewers had the following positive comments to make about the project:

“People now respect us.”

“We have more money and are able to give our children a more balanced diet than before.”

“Domestic violence has reduced.”

“We feel more able to negotiate safer sex.”

“Drinking has reduced. A habit once formed is difficult to stop, but drinking and sex work have reduced.”

“We feel much happier now as we are more sober. If you have come before, you would have met us drunk by now (i.e., at 10 am).”

Learning from the KRC Experience: Opportunities for Intervention

Based on the experiences of the KRC Vulnerable Women’s Project, a number of recommendations can be proposed with respect to the following specific questions related to addressing and engaging informal production, distribution, and consumption and encouraging affordable alternatives to illicit alcohol.

1. How can the informal alcohol producers, distributors, and servers be engaged to follow responsible practices? SSA governments should recognize all factors—social, cultural, economic, and political—that enable the informal alcohol sector. While the enactment and enforcement of legislation are crucial, they are unlikely to produce the desired results of positive engagement when implemented solely on their own.

At the 2008 Dar es Salaam ICAP Africa Region Conference, delegates were unanimous in the view that governments should consider decriminalizing some activities in the informal sector and provide support and tools for development of quality standards. They based these recommendations on the fact that noncommercial alcohol remains ubiquitous and relevant in the social, cultural, and economic life of the majority of the poor in most SSA countries. Further criminalization could only serve to drive the activities of producers, retailers, and consumers underground.

NGOs, working in collaboration with government, funding agencies, and the local communities, are central to the engagement of the producers and sellers of noncommercial alcohol. Reputable NGOs in the social and health

sectors could be encouraged to undertake activities similar to those implemented by NCKC in the KRC and the local community in Kenya. The NGOs would need to be supported to strengthen their human and infrastructural capacity to facilitate full engagement of the informal sector. To gain the confidence of the producers, distributors, and servers, NGOs would need to work from the social responsibility, health, and human rights perspectives rather than from purely legal or interdiction angles. Participating NGOs should be adequately funded in order to undertake needs assessment, organize training workshops, implement definitive interventions, evaluate projects, and disseminate findings.

2. How to encourage affordable alternatives to illicit alcohol?

The KRC Vulnerable Women’s Project provided a model of how this can be achieved. First, as recommended above, governments would need to consider decriminalizing some activities in the informal sector to allow for unhindered access to key players. Second, relevant NGOs working with other stakeholders (government, community leaders, legal alcohol producers, funding agencies, and others) would need to mobilize the informal alcohol producers, gain their confidence, and identify their needs. The producers’ needs should be analyzed and interpreted broadly from the health, social, human rights, poverty alleviation, and crime prevention perspectives. The NGOs should then implement Alternative Income Generating (AIG) programs, employing the KRC or similar models. To ensure success, the AIG programs should be adequately funded, meticulously implemented by trained practitioners, and regularly evaluated. The best practices of the AIG programs should be widely disseminated to encourage replication in other communities and countries.

3. How to reach the consumers of noncommercial alcohol and address the issue within the context of poverty, where illicit products are consistently cheaper than their legal counterparts?

The KRC project has shown that consumers of noncommercial alcohol can be reached through well-established community groups already in existence in many SSA countries. As these consumers are generally of low socioeconomic status, governments and NGOs could address the popularity of these drinks within the context of the poverty alleviation programs, now implemented in many SSA countries.

Every citizen is interested in being and staying healthy. As shown in the KRC study, many participants recognized the multiple physical, psychological, psychiatric, social, and economic adverse consequences of producing and consuming noncommercial beverages. Populations could therefore be readily engaged by NGOs and governments on the issue of the informal market, using several

ongoing health and social projects as entry points. Producers and consumers of noncommercial alcohol would likely benefit from the preventative lessons disseminated through these projects.

Conclusion

The production and consumption of noncommercial alcohol remains widespread—particularly among the poor rural and urban segments of society, the majority in many SSA countries. Despite the apparent displacement of some of its historical importance by the more commoditized drinks (e.g., Western beer, wine, and spirits), noncommercial alcohol continues to have a role in the religious, symbolic, social, psychological, and economic realms of life of the average African.

This significance notwithstanding, a number of adverse (sometimes severe and fatal) social and health consequences have been reported in relation to the production and consumption of noncommercial alcohol in many SSA countries. To facilitate greater access to and encourage positive engagement with the producers, retailers, and consumers of noncommercial alcohol, governments should work toward decriminalizing some activities in this sector. Multi-sector partnerships can implement projects aimed at setting standards in the informal alcohol sector, engaging producers and consumers, encouraging affordable alternatives, and eliminating or minimizing some of the identified adverse consequences. Unless urgent and concerted efforts are made to implement these measures, the poor in SSA will continue to produce and consume noncommercial alcohol.

Noncommercial Alcohol in Sub-Saharan Africa: Which Way Now? A Commentary

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Prof. Moruf Adelekan has written persuasively on the significance of a certain group of alcohol beverages, variously known as “noncommercial alcohol” (to emphasize the economic relevance of this drink category) and “illicit” or “illegal” alcohol (to emphasize the legal aspects). Whatever the term, they cannot be ignored in the total equilibrium of all alcoholic beverages: Within the context of SSA countries, noncommercial beverages often have stronger impact on society than the commercial alcohol in terms of prevalence and outcomes. Therefore, a consideration of noncommercial alcohol must be part of discussions on alcohol issues and policy.

Although any policy must take cognizance of local religious, cultural, and traditional values, these have largely been sidelined, as more people consume alcohol outside the culturally prescribed limits and commercialized production, drinking to relieve the stresses of poverty in a region that records some of the worst economic performance in the last 30 years.

To an extent, the consumption of alcohol is influenced by its availability, which in turn is determined by cost. Unlike noncommercial alcohol, commercial beverages are more expensive if one takes into account the costs

of production, distribution, and legal levies, making the former less costly and therefore more accessible.

Prof. Adelekan has ably put the African history of formal and informal alcohol markets within a time frame predating colonial times to the present. Increasing availability of new raw materials and hitherto unknown but crude distillation technology has bolstered production of noncommercial alcohol, which now has both higher ethanol content and higher risks of impurities than in the past. This has arisen out of the attempt to meet the growing consumer appetite and changes in drinking styles and fashions, fuelled by fluctuating economic fortunes that at times pushed people to “Western” beverages as a sign of affluence. However, with the aid of economic liberalization policies that helped in some ways to mitigate the illegality of producing noncommercial alcohol, drinkers were later pushed back to the less expensive illegal products.

Backed by the improving economic performance in many African countries between 1995 and 2005, legal alcohol has been slowly reclaiming its status, but at the expense of increased recklessness in the production of noncommercial alcohol. Examples of such recklessness include the use of surrogates to increase

the strength of illegal beverages and attempts by the informal producers to appeal to drinkers of legal drinks (e.g., through the production of *chibuku* in Kenya)—all in response to the pressures of competition for the market.

Despite limited data in this area, the evidence from Nigeria on the market share of commercial and noncommercial beverages (as referenced by Prof. Adelekan) suggests a dominance of the informal sector among young people and the poor in both rural and urban settings. Consumed by the lower socioeconomic classes, noncommercial alcohol accounts for two-thirds of the total alcohol intake in Botswana and up to four-fifth of consumption in Uganda.

All alcohol drinks are potentially associated with health, social, and economic complications. However, those who choose noncommercial alcohol face higher risks, partly because of impurities and indeterminate alcohol levels of illegal drinks, and partly because these drinkers are more vulnerable than the mainstream on account of other extraneous factors.

Countries cannot afford to ignore the impact of noncommercial alcohol as they focus the attention on the legal alcohol market. The informal sector costs more to society in terms of complications that are hard to tackle through formal health, economic, and legal channels and do not contribute to the common kitty funding government action.

No readily available prescriptions that will apply to all situations exist, but a starting point and the most important step is to accept that noncommercial alcohol presents a problem and must be addressed. The

solutions must be evidenced-based and strategically inclusive of all key stakeholders. They must also be acceptable, affordable, and, most importantly, sustainable to the actors they affect.

Different countries will have different viable options. One such option is described in Prof. Adelekan's study in a remote refugee camp in Kenya. The key discovery of that study is that illegal producers, sellers, and consumers did not like what they were doing, but had little other option until viable opportunities were offered to them through the KRC intervention. In this commentator's experience, the study's findings are representative of noncommercial alcohol production, consumption, and outcomes in other poor communities across Kenya. The KRC intervention offers a promising way forward. However, the topic of noncommercial alcohol would be more likely to capture public attention and elicit large-scale response if the study is replicated among populations with whom most Kenyans can easily identify. Government, who has the final say on matters of policy, will be more likely to take action if findings are popularly seen as representative of the broader sections of society.

Achieving evidence-based policies requires collective effort of researchers, who will look for unbiased, objective evidence; funders, including the formal alcohol industry, willing to let the researchers get on with their work; manufacturers and consumers of noncommercial alcohol; religious and other opinion leaders; local, national, and international NGOs; intergovernmental agencies; and, of course, the goodwill of the governments concerned.

Noncommercial Alcohol in Central and Eastern Europe

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The burden associated with problem drinking in central and eastern Europe (CEE) is the highest in the world (69, 70). According to the estimates by an international group of experts, alcohol consumption was responsible for 13.6% of premature mortality cases among men aged 20 to 64 years in Poland, 16.3% in the Czech Republic, 22.8% in Lithuania, and 25.2% in Hungary (71). Several studies indicated that problem drinking was the key factor in the mortality crisis in the former Soviet Union (72, 73, 74). According to recently published data, based on the results of research undertaken in the town of Izhevsk (Russia), around 41% of deaths among men aged 25 to 54 years may be attributed to the abuse of beverage and nonbeverage (surrogate) alcohol (72).^{vi} The high level of alcohol-related problems in the region is caused by a combination of such factors as the high volume of alcohol intake, prevalence of unrecorded^{vii}—and, included under that umbrella, noncommercial—consumption, and harmful drinking patterns (69).

Having a clear idea of alcohol indicators is key to developing a comprehensive alcohol policy and monitoring the alcohol situation in a given country. However, statistics on these data are not always available, because, in many countries, apart from alcohol offered through legal channels, there exists a substantial informal market (37). In western Europe (WE), illegal alcohol consumption is relatively low, ranging from 1.2 to 2.3 liters per capita of the adult population (75); the highest level of such drinking in WE takes place in the Scandinavian countries, where policies tend to be strict (76). Although still a challenge, estimating the informal alcohol sector in WE is possible from available official statistics. A different situation is observed in CEE, where the level of noncommercial alcohol makes up a significant share of all alcohol consumed (73, 77, 78). This renders official statistics on alcohol sales

nearly useless in describing the real alcohol situation in a given country. Thus, for example, liver cirrhosis mortality rates in Hungary rose 3.6 times in the period between 1980 and 1994, as alcohol sales fell (79, 97).

Noncommercial alcohol has recently become the subject of much attention from alcohol policy experts (76, 80, 81). A steep rise in illegal production and sale has led to failure of many government interventions, conducted at different periods in different countries around the world (76, 82, 83, 84). This rise could not be stemmed even by such tough sanctions as high fines and prison terms (83). Persistence of the informal sector in large part leads to a decrease in government revenue from alcohol taxation and sales, strengthens organized crime, and causes significant harm to public health, since illegal alcohol may be of low quality (81, 85). The market share of noncommercial alcohol varies in different countries and across time (e.g., 75, 86).

Sources of Noncommercial Alcohol

Since production and distribution of noncommercial alcohol are not monitored by the state, such beverages are untaxed and evade quality control. This brings forth two important consequences: (i) noncommercial drinks are significantly cheaper than their commercial counterparts, increasing the competitiveness of the informal sector; (ii) noncommercial products often fall below quality standards for human consumption and may contain harmful impurities.

In CEE, the main source of noncommercial alcohol is home production, whether illegal or semi-legal.^{viii} Counterfeit drinks, manufactured under false trademark with infringement of property rights, have also caused much concern. Finally, a visible minority of drinkers use surrogates for their highly intoxicating effect as substitutes for licensed beverage alcohol.

It should be noted that, when one broadens the focus to the sources of unrecorded alcohol (as defined by WHO) in the region, import of foreign products is second only to home production; this includes tourist imports and

vi In countries where alcohol is either expensive or otherwise difficult to obtain, some people consume surrogate alcohols. Surrogates are comprised of a group of substances of varying chemical composition that are not intended for human consumption. "True surrogates" include liquids produced from ethanol (industrial alcohol with different degrees of purity, denatured alcohol, varnish, cologne, aftershave, and medical compounds). "False surrogates" are liquids that do not contain ethanol, but still trigger psychotropic effects, similar to alcohol intoxication (e.g., methanol, butanol, amyl alcohol, and ethylene glycol). Both true and false surrogates are referred in this ICAP Review as "surrogates."

vii The WHO definition of "unrecorded alcohol" is used throughout this paper—see footnote ii in the Introduction to this ICAP Review.

viii The Hungarian government, for example, allows noncommercial brandy-makers to sell an allotted amount of their products on the market.

smuggled beverages. Smuggled alcohol can be delivered in large quantities as part of organized crime or in small batches, exceeding the maximum allowed under customs regulations, by tourists. Smuggling of Georgian alcohol into Russia in the 1990s by criminal groups is an example of a large-scale, highly organized operation (73); excessive tourist imports of alcohol from Belarus to Poland, brought with an intent to sell, is an example of small-scale smuggling.

Methods to Assess Noncommercial Alcohol Consumption

Assessing the magnitude of noncommercial alcohol consumption is a challenge. Assessment methods can be either direct or indirect. Direct methods include population surveys, which may draw on national screenings. Such surveys are often employed to gauge real levels of alcohol consumption in WE (74). Researchers in CEE must overcome serious obstacles in using self-reported responses, given cultural tendencies to hide alcohol-related problems (87).

Several indirect methods to measure the informal sector have been developed and implemented in CEE. In 1980, the State Statistics Service began examining noncommercial alcohol consumption in the former Soviet Union (73). The estimates were based on an analysis of sugar sales, sugar being the main raw material for *samogon*, the traditional homemade spirit. Other agricultural raw materials, such as grain and fruits, as well as grapes used for home wine production, were not considered. These assessments ceased in 1988, because of sugar shortages on the Soviet market.

Nemtsov measured the real level of alcohol consumption in Russia by examining forensic reports on accidental and violent deaths and using blood alcohol coefficients (BAC), estimated from the ratio of BAC-positive and BAC-negative cases (73). Results indicated that, in the period between 1981 and 2001, the level of unregistered alcohol consumption fluctuated from 4.2 liters per capita in 1984 to 8.9 liters in 1993, which comprised 40% and 178% of official sales figures, respectively.

A study in Belarus—which used the Autoregressive Integrated Moving Average (ARIMA) time-series analysis and focused on the dynamics of such indicators as the level of violent deaths involving alcohol intoxication, incidence of acute alcohol poisoning, and prevalence of alcohol psychosis—reported that the rates of noncommercial alcohol consumption fluctuated significantly in the period between 1980 and 2005 (88). After leveling off in the mid-1980s, such consumption rose sharply in the second half of the 1980s and early 1990s, after which it began to gradually diminish. In 2003, this figure

was 4 liters per capita (4.3 liters per capita of the adult population) or 43% of official alcohol sales in Belarus.

Elsewhere, Norström proposed the now-classic indirect method of assessment, based on the data for per capita recorded alcohol consumption and alcohol-related mortality (89). The method is based on the difference between the actual mortality figures and those that may be predicted from the official consumption data. This difference (the so-called “white noise”) reflects the influence of factors beyond recorded drinking. This method has helped assess the magnitude of the informal sector in WE (75).

Limitations of the approaches that base the estimates of the informal sector on alcohol-related mortality and official records of per capita drinking should be noted. Mortality is not affected only by how much alcohol is consumed—particularly across a population—but also by the kind of beverages consumed, the drinking patterns, and other factors (e.g., the number of treatment and counseling facilities available to problem drinkers) (e.g., 37). These variables can change significantly, influencing the quality of estimates and hampering cross-country comparison.

In areas where noncommercial alcohol is produced from grapes, the informal market can be estimated by calculating the difference between the total area of vineyards and the area of vineyards cultivated for commercial purposes. Thus, in Bulgaria, the total area of vineyards is estimated to range from 96,000 to 110,000 hectares. According to available records, 71,500 hectares are cultivated for commercial purposes, while the rest is likely used for noncommercial alcohol production.^{ix}

Regional Variations in Noncommercial Alcohol Production and Consumption

Despite the ongoing homogenization of alcohol consumption within Europe in recent decades, three historically distinct alcohol cultures still exist in the countries of CEE, distinguished by beverage preferences, drinking patterns, and the degree of social tolerance with respect to alcohol (69). Countries in the south of the region (Bulgaria, Hungary, Romania, Slovenia) have been traditionally described as “wine countries,” where the Mediterranean drinking pattern predominates, characterized by regular consumption of wine with food and the general acceptance of alcohol as part of the diet.

ix Personal communication with P. Lazarov (September 2008). See: FAO Investment Centre & European Bank for Reconstruction and Development Cooperation Programme. (2005). *Bulgaria: Bank lending to small and medium sized enterprises in rural areas. An analysis of supply and demand*. Available: <ftp://ftp.fao.org/docrep/fao/008/af101e/af101e01.pdf> Това е убийствено за обикновените хора, казва Иван Георгиев, един от клиентите на Андонов..

Countries at the center of the region (the Czech Republic, Slovakia) have been labeled “beer countries,” although recent trends there betray a notable rise in the consumption of distilled spirits. In the former Soviet Republics (Belarus, Estonia, Latvia, Lithuania, Russia, Ukraine) and Poland, the Nordic drinking style predominates, characterized by an irregular intake of large doses of distilled spirits.

As a rule, noncommercial beverages in CEE are represented by traditional alcohol drinks, reflective of local drinking cultures. Thus, for example, the main noncommercial drink in Belarus, Estonia, Latvia, Lithuania, Poland, Russia, and Ukraine—the so-called “vodka belt”—is homemade vodka, variously referred to as *samogon*, *gorilka*, *bimber*, consumed in large doses with an expressed goal of reaching intoxication. Home wine production also occurs in these countries, but is less widespread. In the south of the CEE region, home production includes both wine and spirits distilled from fruits and berries. For example, Hungary has a popular distilled fruit drink, *palinka*; Slovakia, *domaka*; and the Czech Republic, *slivovitsa*. In Bulgaria, the most common noncommercial drinks are *rakiya*, a grape brandy, containing 50% to 60% ABV, wine, and homemade grain beer, with alcohol content of around 4%.^x

Prevalence of Noncommercial Alcohol Consumption

Although noncommercial alcohol accounts for a significant portion of all alcohol intake in CEE, the information on the levels and patterns of its consumption is insufficient. Sociological studies can provide a general sense of this shadow market. Thus, according to the results of a national survey conducted in Estonia, the proportion of individuals buying noncommercial alcohol diminished from 36% of the adult population in 1998 to 13% in 2002; in 2004, 6.7% of the adult population consumed illegal or surrogate alcohol (90). Among these individuals, 59% consumed *samogon*, 23% used other ethanol-based surrogates (primarily aftershave and lighter fluid), and 18% drank illegal (counterfeit) vodka. Survey results also showed that the consumers of such substances tended to have low education and income. A 2002 survey in Bulgaria reported that 22% of respondents bought illegal alcohol;^{xi} and, according to a 1991 study in Moscow, 27% of men and 8% of women occasionally consumed *samogon* (91). Interviews of men aged 25 to 54 years, conducted in Izhevsk between 2003 and 2005, revealed that 7.5% of respondents drank surrogates in the past

year, and 2.1% used them daily (72). Among men reporting the consumption of surrogate alcohol, 38% used aftershave, 17% chose ethanol-based medications, and 45% had a combination of liquids (mainly aftershave, medical compounds, and industrial alcohol). It should be noted that Izhevsk is a typical Russian city, so the results of this study may be representative of the country’s urban population, although religious and cultural variations do exist from one Russian region to another.

It is likely that the Izhevsk findings were substantially understated, since survey samples rarely include alcohol-dependent individuals, the primary drinkers of surrogates in Russia. A survey of rural populations in different regions of Russia may illustrate the magnitude of under-reporting in the above studies: According to the survey, the majority of respondents (86% to 95%) preferred *samogon* to state-produced vodka (92); the rural population consumed at least 4.8 times more *samogon* than legal vodka. Recently published results of a series of national surveys in the former Soviet republics revealed that, along with legal alcohol, noncommercial alcohol was purchased by 55% of men and 54% of women in Moldova, 45% men and 30% of women in Russia, and 60% of men and 51% of women in Ukraine (93). According to a survey in the city of Grodno (Belarus), 61% of men and 40% of women occasionally consumed *samogon* (88).

Table 2 below presents figures for recorded alcohol consumption, estimates of “unrecorded” consumption, and the total alcohol intake in CEE in 2003, as reported by the WHO Global Alcohol Database (94). As the table demonstrates, the level of recorded alcohol consumption varied from 5.86 liters per capita in Bulgaria to 13.6 liters in Hungary. Countries with high levels of recorded consumption included Moldova, the Czech Republic, and Croatia. The average level of recorded drinking in the region was 9.8 liters per capita, which is 2.3 times higher than the average global estimate (4.4 liters). The level of unrecorded alcohol consumption also varied widely from 1 liter in Estonia and the Czech Republic to 12 liters in Moldova. The average estimate of unrecorded drinking in the region was 4.4 liters, which is 2.6 times higher than the average global estimates (1.7 liters). The highest average level of total alcohol consumption was reported in Moldova (25.18 liters), and the lowest was in Bulgaria (8.86 liters). Countries with relatively high levels of total alcohol intake included Hungary (17.6 liters), Croatia (16.75 liters), Ukraine (16.59 liters), Russia (15.22 liters), Belarus (14.94 liters), and Lithuania (14.79 liters). The average total alcohol consumption in the region was 14.2 liters, 2.3 times higher than global estimates (6.2 liters). The share of unrecorded alcohol in the structure of total alcohol consumption varied from 7.1% in the Czech Republic to 63.3% in Ukraine (78). The complexity of measuring unrecorded consumption is a substantial

x Personal communication with P. Lazarov (September 2008).

xi Personal communication with P. Lazarov (September 2008). See: Vitosha Research. (2002). *Скритата икономика в България*. Available: *Декември 2002 г.* http://www.online.bg/vr_new/grey/december2002.htm.

Table 2. Recorded, Unrecorded, and Total Alcohol Consumption in CEE in 2003*

Country	Recorded alcohol consumption (in liters)	Unrecorded alcohol consumption (in liters)	Total alcohol consumption (in liters)	Relative weight of unrecorded consumption (in %)
Belarus	10.04	4.90	14.94	32.8
Bosnia and Herzegovina	9.05	3.00	12.05	24.9
Bulgaria	5.86	3.00	8.86	33.9
Croatia	12.25	4.50	16.75	26.9
Czech Republic	12.99	1.00	13.99	7.1
Estonia	9.00	1.00	10.00	10.0
Hungary	13.60	4.00	17.6	22.7
Latvia	9.61	2.30	11.91	19.3
Lithuania	9.89	4.90	14.79	33.1
Poland	8.09	3.00	11.09	27.1
Republic of Moldova	13.18	12.00	25.18	47.7
Romania	9.74	4.00	13.74	29.1
Russian Federation	10.32	4.90	15.22	32.2
Slovakia	10.35	4.00	14.35	27.9
Slovenia	6.74	3.63	10.37	35.0
Ukraine	6.09	10.50	16.59	63.3

*Per capita consumption in liters of pure alcohol for population aged over 15 years.

Source: WHO Global Alcohol Database, 2003 (94).

limitation, which often accounts for the significant gradient in the existing estimates. Thus, according to reports by leading alcohol experts (95), the level of unrecorded drinking was 5 liters in Estonia and 7 liters in Latvia, which substantially exceeded the figures provided by the WHO Global Alcohol Database; according to local experts in Slovenia, this index ranged between 7 and 8 liters per capita (96).

Noncommercial Alcohol as a Factor in High Alcohol-related Mortality

There is reason to believe that the high alcohol-related mortality in the countries of CEE is facilitated to a considerable degree by the high level of noncommercial alcohol consumption. Homemade beverages often contain aliphatic alcohols—toxic to liver cells (or hepatotoxic)—whose concentration varies widely, depending on the method of production and the raw materials used (80). Thus, for example, it is assumed that the high liver cirrhosis mortality rates in Hungary are caused by heavy intake of homemade alcohol (97). A chemical analysis of homemade beverage samples revealed that 82% contained methanol, 94% had 2-butanol, and 100% contained 1-propanol, isobutanol, and isoamyl alcohol. Moreover,

the level of these substances in the samples was considerably higher than in comparable legally produced beverages. The concentration of admixes in homemade alcohol varied considerably, and the concentration of 1-propanol (41.0 mmol/liter) and isoamyl alcohol (42.7 mmol/liter) reportedly approached potentially hepatotoxic levels. Animal studies showed that a 65.1 mmol/liter concentration of 1-propanol, 1-butanol, 2-butanol, isobutanol, and isoamyl alcohol was 2, 4, 2.6, 3.5, and 5.4 times, respectively, more toxic to the liver than ethanol (79). All studies of *samogon* samples in Izhevsk reported concentrations of 1-propanol, isobutanol, and isoamyl alcohol; the concentration of isobutanol—38.7 mmol/liter (72)—far exceeded the maximum accepted concentration, recommended by the Council of Europe, which is 2.5 mmol/liter (98). The presence of 1-propanol, isobutanol, and isoamyl alcohol was found in samples of *samogon* from rural regions in northwestern Estonia (86); the average concentration of isobutanol (34 mmol/liter) was significantly higher than maximum accepted levels.

Meanwhile, according to some experts, the main culprit for extremely high mortality rates from alcohol poisoning in Russia is not the consumption of surrogates or homemade spirits, since the latter generally meet quality

standards, but the prevalence of heavy drinking (99). This argument is plausible, but for one reservation. The alcohol concentration of a drink also plays a role in elevating the risks. According to the chemical analysis of surrogates in Izhevsk, samples of industrial alcohol generally contained 94% of alcohol by volume, and medical compounds contained 66% of alcohol (100). Since the surrogates are frequently consumed in undiluted form, such high alcohol concentration is a risk factor for alcohol poisoning (i.e., an alcohol overdose). The results of research conducted in Izhevsk confirmed the negative role of surrogates, concluding that their consumption made a considerable contribution to all-cause mortality. Among individuals who reported surrogate use, the relative risk of dying from causes directly related to problem drinking (e.g., alcoholic psychosis, alcoholic cardiomyopathy, alcoholic cirrhosis of the liver, and acute alcoholic poisoning) was 25.5 and the all-cause mortality risk was 5.3 in relation to individuals who consumed only legal alcohol beverages (101).

Noncommercial Alcohol after the Disintegration of the Eastern Bloc

The problem of illegal alcohol consumption in the countries of CEE has become particularly acute after the fall of the Eastern bloc, facilitated by the loss of government as key player on the alcohol arena (82). State oversight of alcohol production and sale was particularly disrupted in those countries where vodka is the dominant beverage. Thus, for example, taking advantage of opening markets and inadequacies in customs and tax legislations, millions of liters of alcohol were illegally imported into Poland in the period between 1989 and 1991 (78). The alcohol was consequently sold, untaxed, preventing significant sums of money from reaching state coffers. This so-called “schnapsgate” scandal sparked a political outcry, partially responsible for the parliament’s decision to expedite the amendments to customs and tax legislations to reflect new economic realities, which lowered such “grey” imports considerably.

Following the repeal of state alcohol monopoly in 1992, Russia’s alcohol market (as well as markets in Ukraine and Belarus) became fragmented, including many private producers and importers operating without a license or registration. The country was flooded by a wave of homemade, counterfeit, and imported alcohol of low quality (83, 84). In the first half of the 1990s, the level of illegal alcohol consumption in Russia grew to 8.2–8.9 liters per capita, the highest recorded rate in the country’s history (73). During this period, even state commercial enterprises sold unlicensed alcohol. Checks conducted in 1994 and 1995 found that 36.6% of alcohol products sold through government channels were manufactured illegally (83). Quality deteriorated. According to the

data from the State Statistics Service, 21.6% to 45.1% of all vodka sold during that period did not meet quality standards (83). Sales of large volumes of counterfeit vodka through government channels undermined the population’s trust in the formal sector, further encouraging *samogon* production. At the same time, a temporary repeal of criminal charges for home *samogon* production may have been an important factor in amplifying non-commercial alcohol consumption in the mid-1990s.

The negative outcomes during this transitional period in Russia’s history included a sharp rise in alcohol-related mortality. For instance, during the period from 1991 to 1994, fatal alcohol poisoning became 3.4 times more prevalent (a rise from 11.2 to 37.8 deaths per 100,000 people), and liver cirrhosis mortality rates rose by a factor of 2.2 (from 9.5 to 20.1 deaths per 100,000 people) (83). After a gradual introduction of measures against illegal alcohol production, import, and sale, the share of non-commercial beverages within the structure of general consumption began to diminish (84, 102). In Belarus over the recent years, the alcohol market became better monitored by the government; as a consequence, illegal imports were substantially reduced (88). Moreover, as part of the national alcohol program, the Ministry of Internal Affairs embarked on a campaign against *samogon* production, leading to a drop in its consumption. Notably, the profile of noncommercial alcohol in Belarus at present is different from that observed in the 1980s. If in the past much of these beverages were composed of traditional drinks, intended for home consumption, in recent years, the main source of such alcohol is illegal production from small factories, situated in sparsely populated, inaccessible places.

Recent developments in the alcohol arena in Russia illustrate the complexity and the varied nature of problems surrounding noncommercial alcohol. In 2006, amendments were introduced to the federal law “On Government Regulation of Ethanol, Alcohol and Alcohol-containing Products” No. 171 (dated 22 November 1995), which seriously affected the alcohol situation in the country. First, the authorized capital stock was substantially raised for alcohol producers and retailers, thus squeezing out small producers and traders from the formal market. Second, the Uniform State Automated Information System (Единая государственная автоматизированная информационная система, ЕГАИС) was implemented, which serves as an electronic registry of ethanol, alcohol, and alcohol-containing products. Third, changes have been made to existing procedures on excise stamps and import licenses for alcohol. Inadequate coordination of actions by various government agencies during the implementation of these measures resulted in a temporary deficit of legal vodka. Under the conditions of continued demand, the deficit provoked an epidemics of poisonings from surrogates (industrial alcohol,

antiseptics, and household chemicals). Hospitals in different regions of Russia were accepting thousands of people (predominantly, heavy drinkers) diagnosed with toxic hepatitis. To discourage the consumption of surrogates, the government then imposed taxes on the production of industrial alcohol and approved new denaturing materials. The use of denaturing additives can be effective in lowering the attractiveness of surrogates as alternatives to legal alcohol (80, 99). However, their incorrect use has been known to provoke an increase in the consumption of surrogates. Thus, a change of a denaturing agent in a window cleaning solution—which retained its predecessor’s unpleasant smell and taste but was no longer harmful to health—sparked an epidemic of surrogate alcohol consumption in the late 1960s in Finland (103). In general, the countries of WE use more effective denaturing agents than their counterparts in CEE, which may be one of the reasons for the varying levels of surrogate consumption between the regions (80, 99).

Possible Reasons for Higher Levels of Noncommercial Alcohol Consumption in Central and Eastern Europe, in Comparison to Western Europe

From the policy perspective, understanding the reasons for considerable differences in noncommercial alcohol consumption in CEE and WE is crucial. Some of the more significant factors may be: (i) a lower standard of living in CEE, when compared to WE; (ii) the existence of more comprehensive and flexible alcohol policies in WE, which allows for better means to influence alcohol consumption, enforce laws, and implement interventions to minimize risk.

Income level is an important factor in shaping drinkers’ attitudes toward illegal alcohol. Many studies found that the main consumers of noncommercial beverages belong to society’s lower socioeconomic tiers (85, 100, 104). On the other hand, as income levels rise, consumption of unlicensed alcohol tends to drop, driven by consumers’ general preference for more expensive drinks of higher quality—when they can afford it. An econometric model of alcohol consumption in Russia, based on the data from a nationally representative survey conducted under the auspices of the Russia Longitudinal Monitoring Survey (RLMS), revealed that high income levels were associated with a diminished likelihood of surrogate consumption and a high likelihood of drinking legal vodka, wine, and beer (105). As a rule, the primary consumers of noncommercial alcohol were heavier drinkers, since they tended to drink large amounts of alcohol but were limited financially. Therefore, the comparatively high prevalence of noncommercial alcohol in the countries of CEE may be a reflection of large numbers of problem drinkers in the region. The Nordic countries may serve as an example of

how raising the standard of living can lower the demand for illegal beverages (75). In the late 1980s, early 1990s, Finland experienced an explosion in home wine production (76), which can be explained primarily by economic recession and related demand for cheaper alcohol. The consumption of homemade alcohol began to ebb by the mid-1990s, as the economic situation improved, even though the methods for home production were simplified and the price of homemade beverages dropped in relation to legal alcohol.

It must be noted that WE and CEE countries differ not only in the magnitude of the informal sector, but also in its structure. In WE, a considerable share of unrecorded alcohol comes from tourist consumption or travelers’ imports (75), whereas, in CEE, noncommercial alcohol holds the most weight (73, 78, 81). In Russia, a considerable part of illegal alcohol is represented by unregistered production at licensed factories. State inspections revealed a number of cases when factories worked in two shifts: Daytime production was registered, while nighttime production remained off the books (and untaxed) (83).

Government’s Role as the Key Player: Influencing Noncommercial Alcohol Consumption in Central and Eastern Europe

Understanding the extent of the alcohol market is in government’s interests, since unregistered production diverts funds from state revenue. In the former Soviet Union, 12% to 15% of revenue budget came from the taxation and sale of alcohol (83, 92). In the 1990s, as the government’s ability to enforce policies deteriorated, the revenues derived from alcohol sales dropped dramatically. According to expert estimates, unregistered production and sale cost the government approximately USD 700 million in Russia (98). Therefore, the challenge of lowering illegal alcohol consumption is a key aspect of modern alcohol policy. The question facing governments today is what mix of measures is most effective and least likely to produce the unintended outcome of feeding the shadow economy.

The experience of many government interventions, including those in the early-1980s Poland and the mid-1980s Soviet Union, showed that restrictive policies inevitably lead to a rise in unrecorded alcohol production and consumption (78, 82, 83, 92, 102). In WE, the level of unrecorded drinking is high in countries with strict alcohol policies and high taxation (75). Unintended increases in illegal production and smuggling are key arguments employed by the opponents of restrictive alcohol policies. At the same time, it can be argued that countries with strict policies and high taxation have lower overall levels of alcohol consumption—including

of unrecorded alcohol—when compared to countries with soft alcohol controls (37). In this view, the governments do not only lower the access to alcohol, but also ensure high revenues, even if overall sales drop. However, before such measures can be implemented in a country, the drinking culture and drinking patterns have to be taken into account; comparatively low levels of per capita measures may mask harmful drinking patterns among certain segments of population, resulting in high levels of alcohol-related harm.

Various tools exist for affecting the informal alcohol market. As the historical experience of many countries suggests, attempts to control it through policy measures are not always successful (76, 92). During the 1985–1988 anti-alcohol campaign in the former Soviet Union, even the toughest sanctions (high fines and prison terms) were unable to stop the growth of *samogon* production (83). Thus, when government is unable to reach the informal sector, a possible solution to bridging the difference between the price of legal and illegal beverages may be the lowering of taxes. Under these conditions, lowering the tax on alcohol does not lead to losses in revenue because the levels of legal alcohol sales increase (106). However, alcohol policy does not offer universal solutions: What works in some countries may be inappropriate for others.

Along with government involvement, other sectors should play a part in lowering the prevalence of noncommercial alcohol. The ongoing formation of civil society in CEE will likely help the involvement of other stakeholders on this issue.

Mechanisms for Tackling Noncommercial Alcohol Consumption

An important factor influencing high levels of noncommercial alcohol consumption in CEE is its lower price in comparison to legal beverages. According to McKee and colleagues, research in Izhevsk revealed that the comparative price of surrogates—relative to their pure alcohol content—is almost 6 times lower than that for licensed drinks (81). This helps explain the popularity of surrogates among problem drinkers in the lower socioeconomic brackets. As for *samogon*, its consumers are often people with low income, whose motivation is the low cost of home production, which is 4–5 times below the legal price for *samogon* producers and 2–2.5 times below the legal price for buyers (104). Since the standard of living is lower in rural areas of the former Soviet Union than in urban areas, *samogon* production remains a predominantly rural phenomenon (92).

The elimination of economic motivators for consuming noncommercial alcohol can only be achieved through lowering the price of licensed alcohol by 2–2.5 times (an

equivalent of about USD 1–1.5 for 0.5 liters of vodka). Opponents of such an approach warn that this may lead to increased alcohol consumption among the general population, and consequent problems. It should also be noted that, in the past two decades, the price of legal alcohol products dropped relative to incomes and food prices (83). Thus, the currently discussed ideas of producing cheap “national” vodka as means of fighting illegal alcohol production in Russia may appear inadequate.

The wide availability of surrogates is one of the factors accounting for their high consumption in the region. According to studies in Russia and Estonia, aftershaves and colognes are sold in kiosks, advertised in 80–200 ml bottles with attractive packaging, which may be targeted at potential drinkers (81, 85). Limiting the sale of such products and discouraging any advertisements that may appeal to drinkers would likely lower their attractiveness and reduce consumption. Another strategy to discourage ingestion of surrogates is the use of alternative materials for the production of nonbeverage substances. For instance, in many WE countries, lighter fluid is manufactured from paraffin (85).

One of the reasons for consuming *samogon* in the post-Soviet space is the belief that it is safer than licensed alcohol. A survey of rural populations in different regions of Russia revealed that 55% of respondents explained their preference for *samogon* by the fears of accidentally consuming counterfeit vodka (104). Thus, initiatives to ensure the quality of licensed alcohol, a campaign against counterfeiters (drawing on the expertise of legal producers), and educational initiatives in the media regarding the potential risks of *samogon* and surrogate alcohol can be effective strategies for lowering noncommercial consumption.

Conclusion

The data in this study illustrate some of the issues related to the production and consumption of noncommercial alcohol in CEE. The key aspects of alcohol policy aimed at reducing the prevalence of such beverages in the region should include cross-sector efforts by the government, NGOs, public health workers, and representatives of the formal alcohol industry. Initiatives to modify noncommercial alcohol consumption can be effective only if they are implemented within a comprehensive effort to minimize harm from problem drinking in society.

Noncommercial Alcohol in Southern Asia: The Case of *Kasippu* in Sri Lanka

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This paper examines the emerging patterns of noncommercial alcohol production and consumption in Sri Lanka, set against an overview of the situation in some other countries of southern Asia. As in other regions, the popularity of noncommercial beverages in many countries of southern Asia is driven by the significant price differential between commercial and noncommercial alcohol: The latter is cheaper because such beverages avoid taxation and are normally manufactured with low-cost ingredients, unchecked by official quality controls. The loss of revenue to the government is phenomenal, and the challenge to public health from alcohol poisoning and injuries may be high. An in-depth discussion of one of Sri Lanka's popular illegal traditional beverages, *kasippu*, is presented as an illustration of these and other issues that may surround noncommercial alcohol in the region.

Alcohol Consumption in Southern Asia

The WHO Global Status Report on Alcohol (37) provides the following estimates of per capita alcohol consumption by individuals aged over 15 years (see **Table 3**).

Table 3. Recorded Alcohol Consumption in Select Countries of Southern Asia*

Country	Recorded alcohol consumption
Pakistan	0.02
Nepal	0.08
Indonesia	0.10
Sri Lanka	0.20
Bhutan	0.57
India	0.82
Malaysia	1.06
Vietnam	1.35
Singapore	2.73

*Per capita consumption in liters of pure alcohol for population aged over 15 years.

Source: WHO, 2004 (37).

These estimates do not include noncommercial alcohol, which may explain the higher reported levels of drinking in such countries as Singapore, where the figures from the formal sector are reflective of actual drinking trends. The official statistics for India, Sri Lanka, and Pakistan are relatively low, given the marked prevalence of noncommercial beverages in these countries.

As argued by Haworth and Simpson (1), one should not accept simplistic direct associations between recorded per capita consumption and the occurrence of alcohol-related problems in society. Many moderating factors need to be taken into account. Cross-cultural studies have pointed to the considerable variations in drinking patterns, beverage preference, and the prevalence of noncommercial products.

A range of socioeconomic factors play a role in determining who drinks, what, and how. Religion and culture, for example, may account for the relatively high rate of alcohol abstinence in southern Asia: Around 68% of the population report to be abstainers in Sri Lanka, 75% in Singapore, 79% in India, and nearly 95% in Indonesia and Pakistan (37). Countries with high alcohol abstinence rates tend to have a significantly lower percentage of drinking among women. Moreover, heavy episodic or "binge" drinking is also relatively low in southern Asia, ranging from 4% to 8% of drinkers in India, Sri Lanka, and Vietnam (37). However, it is unclear how representative these figures are of the actual alcohol consumption. Individuals with low disposable income—a significant portion of the general population in many countries of the region—are the primary consumers of cheaper, noncommercial beverages; information on their drinking patterns and problems is as limited and inconsistent as the figures on the noncommercial drinks they choose.

Noncommercial Alcohol

Market Share of the Informal Sector

Several attempts have been made by industry experts and international agencies to measure the size of the noncommercial markets in southern Asia. According to industry data, India's informal sector is thought to produce around 300 million cases of alcohol a year

(comprised of drinks averaging 50% ABV), double the official production. In Malaysia, illegal noncommercial alcohol is nearly three times more prevalent than legal beverages, accounting for 3.4 and 1.08 liters of adult per capita alcohol consumption, respectively (37). And, although the noncommercial alcohol market in Sri Lanka has not been reliably assessed, it likely accounts for at least two-thirds of total alcohol intake in the country (37, 107, see **Table 4**).

Variations exist within countries as much as among them. For example, according to a 2004 study in India, most of alcohol consumed in Goa was legally produced and recorded (67%), while illegally produced noncommercial beverages accounted for 85% of all alcohol intake in Vellore, 90% in Ahmadabad, and 91% in New Delhi (108). All alcohol is illicit in some areas—as in the Indian state Gujarat—given their prohibition on the sale of alcohol.

Noncommercial Products

The composition of the noncommercial alcohol market in Sri Lanka and its neighbors is diverse, consisting primarily of traditional beverages—some of which are legally produced for home consumption and limited local trade—and illicit drinks, mass produced by clandestine, small-scale outfits. For example, homemade rice wine *tuak* or *tapai* and unregistered *samsu*, a range of traditionally distilled drinks, are popular in Malaysia. In rural areas, *samsu* is still a significant source of income for local shopkeepers (109). In northern India, popular traditional spirits are produced from sugarcane; in the south, local drinks are fermented from coconut palm sap (*toddy*) and cashew fruits (*feni*). A WHO report (110) described noncommercial alcohol production in India as mostly small enterprises that use cheap locally available raw materials. These beverages tend to be high in alcohol content and often include surrogates, added to increase the drinks' strength.

In Sri Lanka, *arrack*, a distillate from grains or palm juice, is the most popular traditional beverage, followed by local *toddy*. Legal and illegal variants of both drinks are widespread, distinguished mainly by the quality of the ingredients and the safety precautions during the manufacture.

Legal *toddy* is brewed from the sugary nectar of the coconut or palmyra tree and is sold in taverns. Once supplied, the *toddy* is stored in vats or clay pots. The taverns have to sell their *toddy* on the day of delivery, as it turns into vinegar the following day. Growing prices of legal beverages from high alcohol taxation, challenges to production and transportation of *toddy*, and the relative ease with which cheap *arracks* can be procured have made the legal *toddy* business an uncertain one, albeit homemade *toddy* continues to be consumed in some rural areas (free of quality controls and taxation).

Illegal *arrack*, called *kasippu*, is a primitive beverage from sugar and yeast. It is one of the most popular illegal alcohol beverages in Sri Lanka, often attracting customers away from legal drinks, particularly commercially produced *toddy*. The example of *kasippu* and government responses to it warrant further exploration, as they present a glimpse of the issues surrounding popular illegal beverages in the region.

Sri Lanka's Kasippu

Government Policy and Kasippu

Before describing the *kasippu* market, an overview of the legal and political environments that surround and, at times, enable it is in order. Sri Lanka's government policy on alcohol production and sales has been ambivalent over the years. One consistent strategy, explicit in policy statements, however, has been the push to reduce the

Table 4. Alcohol Consumption in Sri Lanka, 2006

	<i>Illicit</i>	<i>Legal spirits</i>	<i>Legal beer</i>
Total volume (million liters)	230	70	50
Alcohol content (% ABV)	30%–60%	30%	5%
Total volume (pure alcohol, million liters)	70	18	3
Percent of the market	77%	19%	3%

Source: Industry Estimate.

number of alcohol-selling establishments, leading to a downward trend in licenses issued for such premises (see **Table 5**).

The availability of legal alcohol products is already limited in most of Sri Lanka, with the exception of the Western Province (the most densely populated area) and some principal towns. According to a 2006 study, around 3,000 registered outlets sold legal alcohol across the country, an area of 64,000 square kilometers. This roughly equals to one outlet, on average, for an area of 21 square kilometers. As a comparison, an estimated 250,000 outlets carried cigarettes (111).

Legal sales are further restricted by days and times when alcohol-selling venues are allowed to operate—e.g., mandatory closures apply on the many secular and religious holidays. Moreover, alcohol establishments cannot be located close to places of worship and schools. Young people must be 18-years-old to purchase an alcohol beverage, although enforcement is uneven.

Until 2006, Sri Lanka did not have a comprehensive policy regime on alcohol production and sale. The 2006 Tobacco and Alcohol Act attempts to regulate the promotion of alcohol products and consumer access. The regulatory framework that groups alcohol together with tobacco and, hence, imposes blanket regulations that apply to both has been viewed by the alcohol industry as problematic, especially in terms of the interpretation and application of laws to particular contexts. It has been argued that increasing restrictions on the sale and promotion of branded alcohol may, inadvertently, depress the market for legitimate brands, stimulating the demand for noncommercial alcohol (see the section below).

The Excise Department of Sri Lanka netted a sum of LKR 104 million^{xii} in the first six months of 2007 through arrests made on unlicensed traders. It arrested 30,000 suspects and carried out 29,000 successful raids during that period.

The excise tax structure makes the retail prices of legal alcohol products high and prices of imported foreign drinks prohibitive for a vast majority of consumers (see **Table 6**).

It is evident that successive governments of Sri Lanka have been increasing excise duties and taxes on the import, production, and sale of alcohol, benefiting from significant revenue streams by doing so. Government proclivity to raise excise taxes in an attempt to bridge widening budget deficits will likely continue in the future and may override the need for policy imperatives that govern the production and sales of alcohol.

xii LKR (Sri Lanka Rupee) 104 million is equivalent to approximately USD 977,496.

Table 5. New Licenses to Sell Alcohol, Issued in Sri Lanka

<i>Year</i>	<i>New licenses issued</i>
2003	214
2004	156
2005	123
2006	35
2007	34

Source: Excise Department, 2008.

Table 6. Excise Tax Structure in Sri Lanka

<i>Product</i>	<i>Tax (in LKR)</i>
Coconut and processed arrack	421 (proof Lt.)
Foreign drinks	550 (proof Lt.)
Beer (5% ABV)	37.50 (bulk Lt.)
Wine	275 (proof Lt.)

Source: Excise Department, 2008.

The lack of a holistic policy regime in Sri Lanka is reflected in the ambivalence with which excise duties and taxes have been imposed on different types of alcohol. For instance, governments have progressively increased the price of low- to medium-grade *arrack* (the most popular local brew) over the years, a product consumed largely by the working classes. Meanwhile, the excise duty on the more expensive beer was reduced for some time, although the tax break was eventually revoked without a clear rationale given for either of the decisions.

It may be argued that such inconsistent and, on occasion, self-defeating policy initiatives with regard to alcohol have more to do with myths and popular fallacies, guided by emotion, than with real facts on alcohol use and abuse. These myths and fallacies are largely underpinned by the prevailing religious and cultural attitudes.

It is of little wonder then that the topic of alcohol in Sri Lankan society cannot generate reasoned discussion. Societal views on drinking are often contradictory: Although alcohol is generally perceived in a negative light, particularly by the middle class, heavy and uncontrolled drinking of largely illegal noncommercial alcohol by the poor is tolerated. Opinion leaders are often responsible for opposing the establishment of legal alcohol outlets in the community, while, on occasion, turning a blind eye on the sale of illicit beverages behind a school or a temple (112).

2006 Tobacco and Alcohol Act

Given its centrality to government action on alcohol, the 2006 Tobacco and Alcohol Act must be described in further detail. After much debate and deliberation, the Act was passed by the parliament and is now in force. Noncompliance with sections of the Act has far-reaching and serious implications for relevant corporations, including their partners and directors, who would become liable and hence punishable.

Section 16 of the Act allows “any authorized officer at any reasonable time to enter any place where he believes any alcohol product is manufactured, preserved, packaged, exposed for sale or stored, and examine any such alcohol product and take samples thereof” (113).

Apart from such product tests and search operations, the Act’s relevance to alcohol production is limited. However, it is stringent on the promotion and advertising of alcohol: Little is left in terms of formal marketing communication for companies engaged in alcohol manufacture and sale. Section 36 of the Act defines an “advertisement” as “any writing, still or moving picture, sign, symbol or distinctive colours or other visual image or any audible message or any combination of the aforesaid that promote or is intended to promote an alcohol product” (112).

The Act prohibits company- and brand-associated sponsorship (Section 37) and free distribution and sampling of products (Section 38); it also prohibits the sale or distribution of items that bear the trademark, characteristic symbols, colors, distinctive logo, or brand names of an alcohol product (Section 39). The Act defines any drink containing 1% ABV or more an “alcohol beverage” (112).

The intent of the Act is to protect public health. However, the question that needs to be raised is how the increasingly frequent upward price revisions and limitations on the availability and promotion of legal products—coupled with the social stigma already surrounding alcohol consumption in Sri Lanka—are going to impact the legal alcohol market vis-à-vis illegal beverages, *kasippu* in particular. Will the possible shrinkage of the legal sector lead to the growth and expansion of the *kasippu* market?

Alcohol beverages are generally expected to respond to price fluctuations in the same way as other commodities, as reflected in the price to earnings ratio. Babor and colleagues (114) found that during “happy hours,” when the normal prices of drinks are substantially reduced, there is a significant increase in the consumption of alcohol by both casual and heavy drinkers. Edwards and colleagues (115) take the position that taxation should be used to control alcohol demand. According to Edwards et al.,

...the contention that alcohol taxation is irrelevant to public health is factually unsustainable. The evidence is

clear: Other things being equal, a population’s consumption of alcohol will, to a usually significant degree be influenced by price. Moreover, given that heavier as well as lighter drinkers are affected, price changes are likely to translate into changes in the prevalence of alcohol problems.

The position with regard to using higher taxes to depress the market has the support of the European Commission (116). In its White Paper on growth, competitiveness, and employment, it is said that, “An increase of excise duty on alcohol products provides a source of additional budget revenue and a means of preventing widespread social problems, and achieve savings by reducing the need to treat alcoholism.”

In Sri Lanka, given the large and thriving illicit alcohol market, along with marked price sensitivities of the predominantly low-income consumers, the logic that may be applicable to the developed world may not be relevant. Research on the impact of price on alcohol consumption suggests that price revisions have in fact pushed consumers away from legal alcohol to the illicit *kasippu* market (117). Subsequent studies by Abeyasinghe (112) and Baklien and Samarasinghe (118) confirm this observation. It appears that the higher the price for legal alcohol, the more people turn to *kasippu*, for, as the authors state, “such are the perils of aping European policies in the very different social and economic environment of a country such as Sri Lanka” (118). In this context, based on previous studies, the case for the active promotion of legal *toddy* and a reduction in the price of low-end branded *arracks* may well have to be objectively, rather than emotionally, examined.

Economic, Social, and Physical Accessibility of Kasippu

Although no formal study has been undertaken to gauge the number of illegal outlets selling *kasippu*, it is evident that this noncommercial beverage is widespread, especially in semi-urban and rural areas. The physical availability of *kasippu*, however, is not the only determinant of this drink’s popularity. As identified by Holder (119), five factors influence the extent of “accessibility” of a given beverage: (i) constant physical access; (ii) availability due to price against income; (iii) high alcohol content; (iv) availability through convenient packaging; (v) access via friends and family.

These factors contribute to the attractiveness of *kasippu* to consumers. With the exception of the last factor—access through friends and family—which is common to legal alcohol products as well, all items above tend to depress the legal alcohol market and encourage the demand for *kasippu*. For example, its round-the-clock availability through illegal channels and the closure of

legal outlets by 9.00 pm and during numerous religious festivals and public holidays make *kasippu* far more physically accessible than legal *arrack*.

Kasippu is also the cheapest alcohol beverage in the country. A comparison of prices among the main types of alcohol available in Sri Lanka is offered in **Table 7**. It should be noted that there are different brands and strengths of legal *arrack*; in addition, the price of *toddy* and *kasippu* vary by region and across drinking establishments. Nevertheless, it is clear from the table that the price differential between *kasippu* and other beverages—branded *arrack* in particular—is considerable. Overall, it seems that the consumption of *kasippu* vis-à-vis beer and legal *arrack* is facilitated by its relatively low price and easy social and physical accessibility. It is essentially the poor man's drink (see the discussion below on the consumers of *kasippu*).

Abeyasinghe (112) observed that the perception of *kasippu*'s quality is another important factor in consumer choices. Drinkers tend to visit those outlets where beverage quality is thought to be superior. According to buyers, "good quality" *kasippu* must exhibit the following attributes: clarity, absence of an unpleasant odor (often described as a "rubber smell"), and, above all, high alcohol content.

Clarity and smell are easy enough to test; assessing alcohol content, however, is often a challenge for the potential buyer. Dilution is an essential part of the *kasippu* trade, motivated by the sellers' attempt to maximize profits. Abeyasinghe (112) identified a number of methods consumers use to confirm that dilution is not excessive. Some customers rub *kasippu* on the forearm and then blow on the wet spot; if this produces a cooling sensation, the drink is considered to be of acceptable quality. Pouring a little *kasippu* into a saucer and setting it alight with a match is another method. The product passes the test if the resultant flame is blue. Finally, sampling one's *kasippu* before purchase is the ultimate test of quality; "free sampling" is commonly offered to potential buyers as a way to encourage purchase. High alcohol concentration in *kasippu* normally raises its price, but also makes it more likely that the seller will dilute the product, without the consumer readily discerning such a reduction of alcohol content.

Cheap and reusable packaging contributes to *kasippu*'s low cost and convenience of handling by producers, sellers, and consumers alike. In Sri Lanka, *kasippu* is not always sold in bottles, but can be kept in buckets and then sold in tumblers and in terms of "shots" (a typical "shot" of *kasippu* generally approximates 10 gram of pure alcohol). *Kasippu* is also sold in quarter bottles or used *arrack* bottles; take-away plastic bags are another common mode of packaging.

Table 7. Price Comparison by Alcohol Type in Sri Lanka

Beverage type	Price per unit (%)
Legal <i>arrack</i>	100
Legal beer	200
<i>Toddy</i> (legal/illegal)	40
<i>Kasippu</i>	25

Source: Industry Estimates.

Finally, as discussed above, strict promotional restrictions on legal alcohol—branded *arrack* and beer in particular—may help stimulate the growth of the illicit alcohol market, enhancing the popularity of *kasippu*.

Consumers of *Kasippu* and the Subculture of *Kasippu* Drinking

Abeyasinghe (112) identified three main types of *kasippu* drinkers, all at the high-risk end of the drinking patterns spectrum:

- (i) *Less dependent consumers* typically "gulp down" *kasippu* on their way home after work. These individuals see their drinking as a way to relieve stress and exhaustion after a hard day's work.
- (ii) *More dependent consumers* visit *kasippu* outlets several times a day to maintain a continuous state of inebriation. They are heavy *kasippu* consumers who are either already alcohol-dependent or are on their way to developing dependence. Their work and lives revolve around the *kasippu* bar.
- (iii) *Highly dependent consumers* are chronic, alcohol-dependent drinkers, who begin drinking *kasippu* in the morning before work to control alcohol withdrawal effects and rely on heavy alcohol consumption to overcome the symptoms of delirium tremors.

Most *kasippu* drinkers are poor daily wage earners. With the exception of the estate sector,^{xiii} the consumption of *kasippu* by women is unusual. However, women are often engaged in the manufacture and sale of this beverage.

A set of beliefs and behaviors further characterizes and differentiates the market for *kasippu* in Sri Lanka. Baklien and Samarasinghe (117) observed that, in most social settings, the drinkers offer a range of reasons for their consumption. Perceived medicinal properties of the beverage are often invoked. For example, it is believed by many drinkers that consuming *kasippu* before bed cures

xiii Sri Lanka's Department of Census and Statistics defines the *estate sector* as follows: "Plantation areas, which are more than 20 acres in extent and having not less than 10 residential labourers."

headache and other “body pains.” Consuming *kasippu* to relieve stress and to forget problems, as well as drinking because there is nothing else to do, are also prevalent.

For many *kasippu* consumers, spending money on the drink is regarded as a way to assert one’s masculinity and bolster self-esteem, as illustrated by one respondent, “Nobody recognizes me. I have no place in this society. If I smoke and drink, people will see me as a man” (117).

Paradoxically, many studies suggest that *kasippu* drinkers are somewhat ashamed of consuming this beverage outside the *kasippu* bar. The community at large has a negative view of *kasippu* drinkers, women in particular often avoiding men intoxicated on *kasippu* (e.g., 117, see the discussion on the Badulla study below).

The social stigma and guilt associated with this beverage in the broader society has facilitated the development of a subculture of *kasippu* drinkers, whose life rotates around *kasippu* establishments. This subculture in turn helps maintain the largely excessive drinking patterns associated with *kasippu* and promotes further drinking, often leading to a range of chronic and acute problems and the onset of alcohol dependence (112).

Overall, the culture of *kasippu* seems to have its own modes of manufacture, transport, distribution, sale, and consumption, distinct and separate from those common for other drinks available in the country. There is little interaction between *kasippu* consumers and typical drinkers of legal *arrack*. The convivial drinking associated with religious and public holidays, marking of lifecycle events, and celebrations with friends are commonplace in Sri Lanka, but the types of *arrack* normally consumed on such occasions are not *kasippu*. The element of “fun” and sociability that generally accompanies (legal) *arrack* drinking occasions is not evident in the consumption of *kasippu* (118). A *kasippu* drinker quickly “gulps down” the beverage and moves on, often to his home. Positive group interaction and networking that may surround alcohol consumption are largely absent from *kasippu* establishments.

Health and Socioeconomic Problems

A number of health and socioeconomic problems have been linked to *kasippu*. For example: “4.5% of admissions to the General Hospital for alcohol-related problems were below 25 years age. 13.5% were between 25 and 30 years. Of them, 7% to 8% drank *kasippu* and 9% drank *toddy*” (112). According to some estimates, 60% of male suicides in Sri Lanka are linked to alcohol dependence, much of which involves *kasippu* (112). Female respondents often relate their husbands’ drinking to the incidence of family violence.

The highest percent of daily current alcohol consumption in the country is among individuals with low education, who are in the lowest income categories of LKR 3,000^{xiv} per month or less (120). Over 10% of male respondents report spending as much as (or more than) their regular income wholly on alcohol (117). Thus, drinking *kasippu* and problem drinking in general are detrimental to income earning capacity and expenditure in many poor families, often perpetuating poverty.

A Case Study on *Kasippu*: Rural Badulla

A 2007 study, conducted by the local office of the international market research company, TNS Sri Lanka, for Ceylon Brewery Ltd., provides further illustration of the above discussion of *kasippu* and its place among the Sri Lankan poor. The study was developed by the present author, who also acted as the consultant to the project (121).

The Study Background

The objective of the study was to understand the prevalence of *kasippu* consumption, describe the predominant drinking patterns, and record their likely outcomes. The project took place in Badulla, a rural area in the hill country of Sri Lanka, with relatively high rates of *kasippu* trade.

One hundred households participated in the survey on substance use and misuse. Focus groups with identified *kasippu* drinkers and their families were then held to determine the rational and emotive determinants of the reported drinking behaviors.

Figure 1 illustrates the demographic profile of the respondents. Overall, regular consumers of illicit beverages tended to belong to lower income groups, when compared to the general area profile.

The Findings

Twelve percent of all surveyed households in Badulla reported drinking illegal beverages, of which 4% exclusively drank *kasippu*. These results were significantly below researchers’ expectations. A possible explanation for such reported low prevalence is that the stigma and guilt associated with consuming cheap illicit beverages in general and *kasippu* in particular may have motivated responses that were seen by the participants as socially acceptable.

Figure 2 identifies the drivers of illegal drinking in this study. Respondents chose illicit alcohol for a variety of reasons, key among them being the lower price and wide availability of illegal beverages when compared to their legal counterparts. The participants drank “to relax” and

xiv Approximately USD 28.20.

Figure 1. Demographic Profile of the Badulla Study Participants

Occupation	• Most are day laborers • Majority are estate laborers • Others are carpenters and farmers
Monthly income	• Monthly individual income is approx. LKR 2500-3000 • Monthly household income is approx. LKR 4000-5000 • There is labor surplus in Badulla • Wages for laborers are kept low (LKR 300-350 per day)
Other income sources	• Home garden, tea cultivation (around ¼ acres), paddy fields, animal husbandry, tapping of <i>kithul</i> trees, making <i>juggery</i> (a hard sweet) • Monthly government supplements (LKR 380-worth of goods)
Education level	• Most adults: 3 to 5 years of education • Most young people: 8 to 10 years of education • Most children attend Sunday school
Family structure	• Most families consisted of father, mother, and 2 to 4 children
Young people	• Some are employed, married, living separately from parents • Some are in school, living with parents • Some are out of school, unemployed, living with parents

“to forget problems” such as high unemployment and poverty; they also expected a range of positive physical outcomes from drinking—for instance sleeping well or relieving pain. During drinking sessions, many respondents reported “feeling intoxicated,” “blissful,” and “dominant.” It was also noted that there was little else to do in Badulla: Illegal drinking establishments often served as the only outlets for both entertainment and frustration in this geographically isolated area.

Table 8 provides several illustrative quotes from the study participants on key reasons for consuming *kasippu* and other illegal beverages.

Among *kasippu* consumers, heavy drinkers were likely to be over the age of 50 years. Drinking appeared to intensify across the lifespan, particularly once respondents no longer had expenses associated with raising children (see **Figure 3**).

Drinking illicit beverages generally took place away from home. In fact, many respondents were attracted to the secluded location of the illegal alcohol outlets (see **Figure 2**) because they preferred to drink “in secrecy” and wanted to avoid children “seeing their fathers drink.”

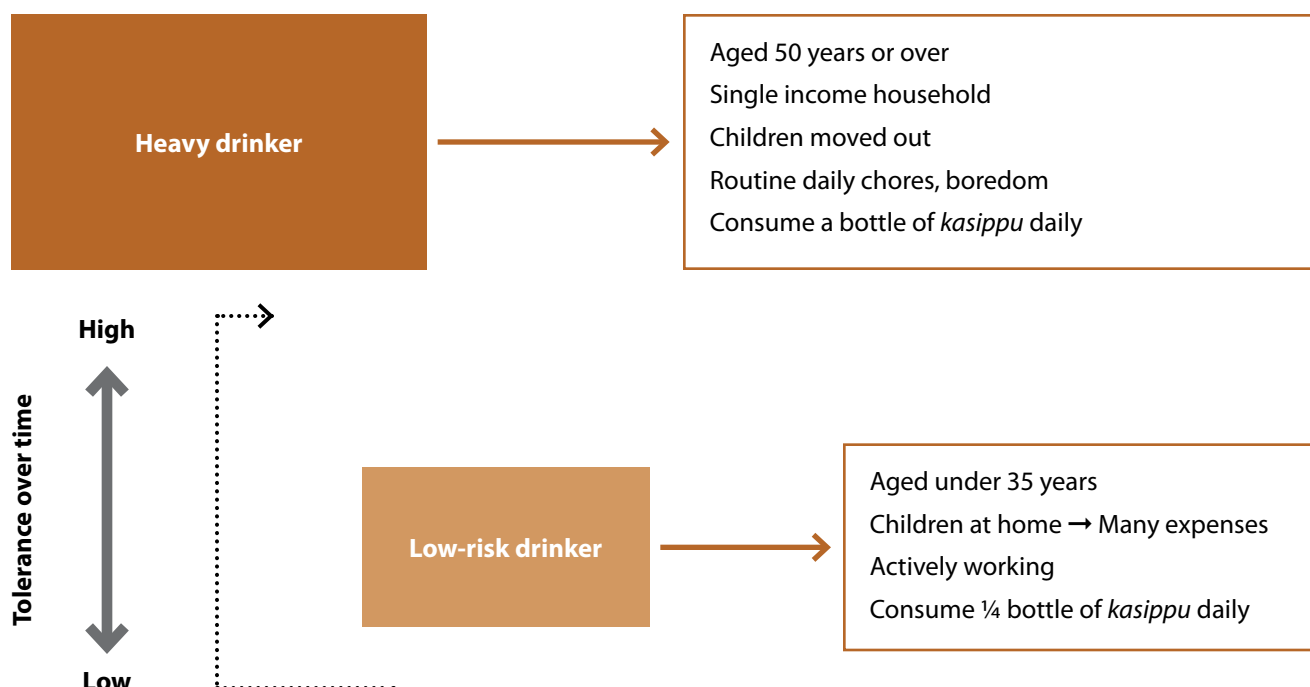
The manner in which *kasippu* was purchased and consumed by study participants is presented in **Figure 4**. Drinkers reportedly diverted their earnings from basic necessities like food and clothing, took loans from friends, or sold household possessions to buy alcohol. **Figure 5** illustrates a day in the life of a typical *kasippu* drinker.

Both figures demonstrate pathological, addicted behavior patterns. However, the study did include some relatively low-risk *kasippu* drinkers, most of whom were younger (see **Figure 3**).

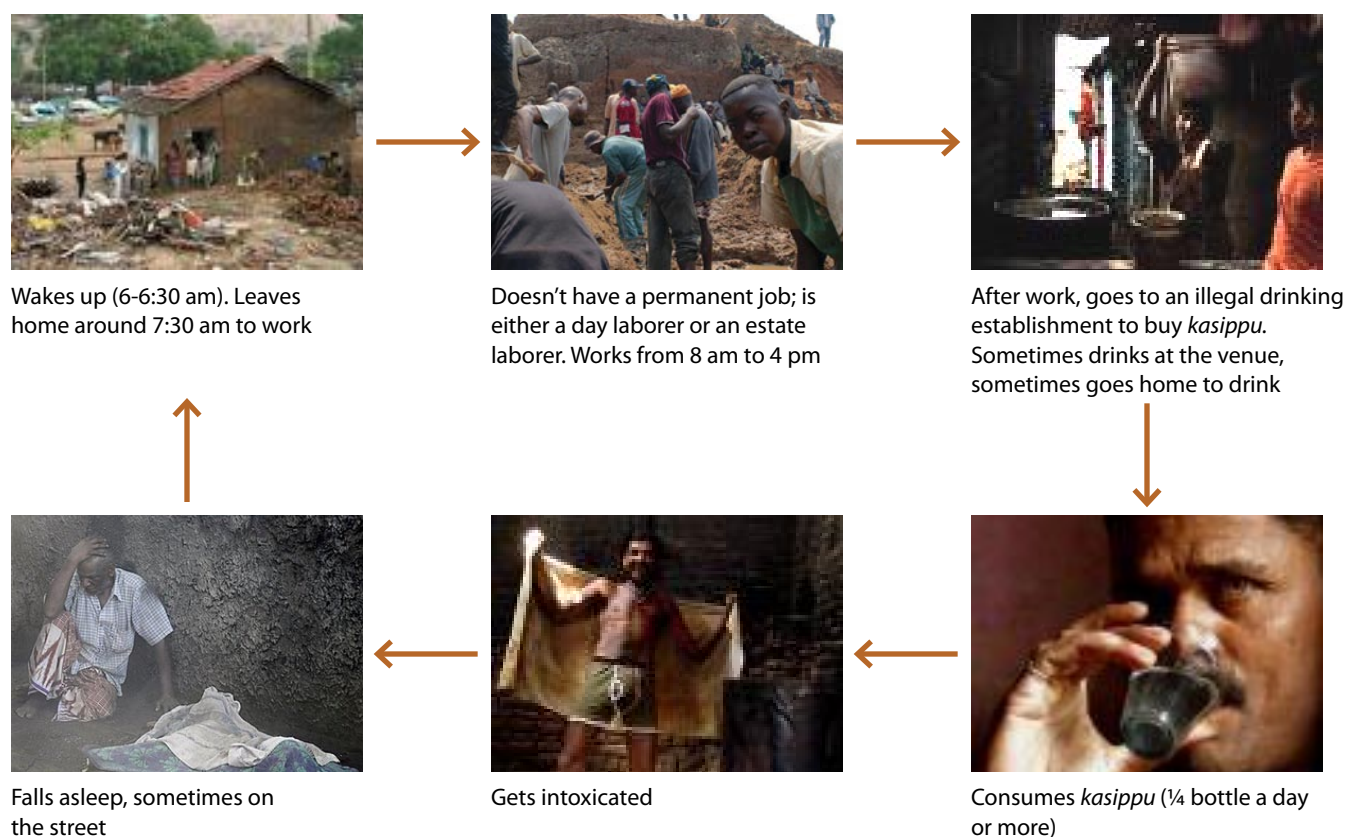
Focus group discussions suggest that consumers, their spouses, children, and society at large have disparate perceptions of and perspectives on the consumption of illicit alcohol. These views are summarized in **Table 9**. Apart from consumers, all other responders had a decidedly negative view of illicit alcohol; instances of aggression and family conflict after drinking have been mentioned.

Figure 2. Drivers of Illegal Alcohol Consumption**Table 8. Reasons for Illicit Alcohol Consumption**

Affordability "We can't afford to drink [legal <i>arrack</i>]...a bottle of [legal <i>arrack</i>] costs 450 rupees, which is very expensive, whereas a bottle of <i>kasippu</i> will be around 200 rupees." (Illicit alcohol drinker) "For 50 rupees, we can get a quarter bottle of <i>kasippu</i> every day...which we can afford." (Illicit alcohol drinker)	Wide availability "There are people in the village who produce <i>kasippu</i> [and other illegal beverages], so the availability is very high." (Wife of <i>kasippu</i> drinker) "You do not have to walk miles [to town] to purchase illegal alcohol." (Illicit alcohol drinker) "Since there is high availability of illicit alcohol at a lower price in the area.... Villagers are not willing to go to town, spending 30 to 50 rupees to get <i>kasippu</i>." (Wife of <i>kasippu</i> drinker)
Living conditions "Sometimes after work there is no water for us to wash even, which makes us feel so uncomfortable...at that time we get angry...then we go looking for <i>kasippu</i>." (<i>Kasippu</i> drinker)	Outcomes of drinking "Illegal alcohol makes us feel high...in a short time." (Illicit alcohol drinker) "We drink <i>kasippu</i> to feel intoxicated." (<i>Kasippu</i> drinker) "Not like other alcohol...when we consume a quarter-bottle of illicit alcohol, it gives a real kick and makes us high." (Illicit alcohol drinker)

Figure 3. *Kasippu Drinking over a Lifespan*Figure 4. *Purchase Patterns*

Purchase on a cash-only basis	"Distributors won't sell <i>kasippu</i> for credit, but we can buy [food, clothes] from shops on credit...so we drink with the money in hand and buy household goods on credit." (<i>Kasippu</i> drinker, Badulla) "If I don't have money, I can drink on credit for 2–3 days, but we can't do it every day." (<i>Kasippu</i> drinker, Badulla)
Part of daily earnings set aside for <i>kasippu</i>	"Attending labor jobs is the basic way to find money for their drinking." (Wife of <i>kasippu</i> drinker, Badulla)
Borrowing from family and friends	"If I don't have money...to drink, I borrow from a good friend, saying that I'll pay back tomorrow." (<i>Kasippu</i> drinker, Badulla) "They take loans from friends and drink." (Wife of <i>kasippu</i> drinker, Badulla)
Pawning/selling household possessions to drink	"If there is no money, they would even sell some items from the house and drink." (Wife of <i>kasippu</i> drinker, Badulla)

Figure 5. Daily Routine of a Typical Kasippu Drinker**Table 9. Multiple Perspectives on Kasippu Consumption**

<i>Kasippu</i> Drinker	Spouse	Children	Society
• Drinks to relieve pain and problems • Drinks to feel intoxicated and “good” • “I don’t bother anyone” • Wants to stop drinking <i>kasippu</i> and other illegal beverages • Wants the government to prevent illegal alcohol production and sale	• “The village is destroyed because of [<i>kasippu</i>]” • “I am afraid of my husband when he is drunk” • Reports frequent family conflicts • “Drinking <i>kasippu</i> is disgusting” • “Drunkards scream and curse”	• “Drunk fathers don’t set good example for children” • “I am afraid of my father when he drinks” • Report physical abuse • Dislike fathers consuming alcohol • Father’s drinking interferes with studies	• “[<i>Kasippu</i> drinkers] are irresponsible” • “Alcohol destroys people’s lives” • “I don’t pay attention to drunkards” • “Alcoholics are bad influence on the young” • “I feel sorry for the wife and children of drunkards”

Conclusion

The case of *kasippu* and the regulatory developments in Sri Lanka may serve as an example of issues faced by other countries in southern Asia. On the one hand, alcohol policy regimes of successive governments in Sri Lanka have been predicated on the increasing dependence on revenue streams from excise duties and taxes for alcohol production and import; on the other hand, the authorities have consistently attempted to restrict the consumption of alcohol by reducing the number of sales outlets and opportunities to promote individual alcohol beverages. This ambivalence in policy has confused many a manufacturer of alcohol in the country and has, in fact, hindered their attempt to entertain long-term strategic goals. It has also discouraged many large, international companies that have, at one time or another, examined the prospect of entering the small but attractive alcohol market in Sri Lanka.

The government's intent is to protect public health. In this regard, the state in Sri Lanka, as elsewhere in the region, must look beyond the confines of the legal alcohol market. The noncommercial sector is clearly significant, both in terms of its size and growth. The socioeconomic implications of the widespread consumption of noncommercial beverages have to be acknowledged by the authorities. An alcohol policy that leaves out the informal sector is, indeed, myopic. Urgent steps must be taken to not only include strategies on countering the informal alcohol market, but also to closely study the interplay between the legal and illicit markets, especially in areas inhabited by uneducated and low-income groups.

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