

# Alcohol in the Shadow Economy

Unregulated, Untaxed, and Potentially Toxic

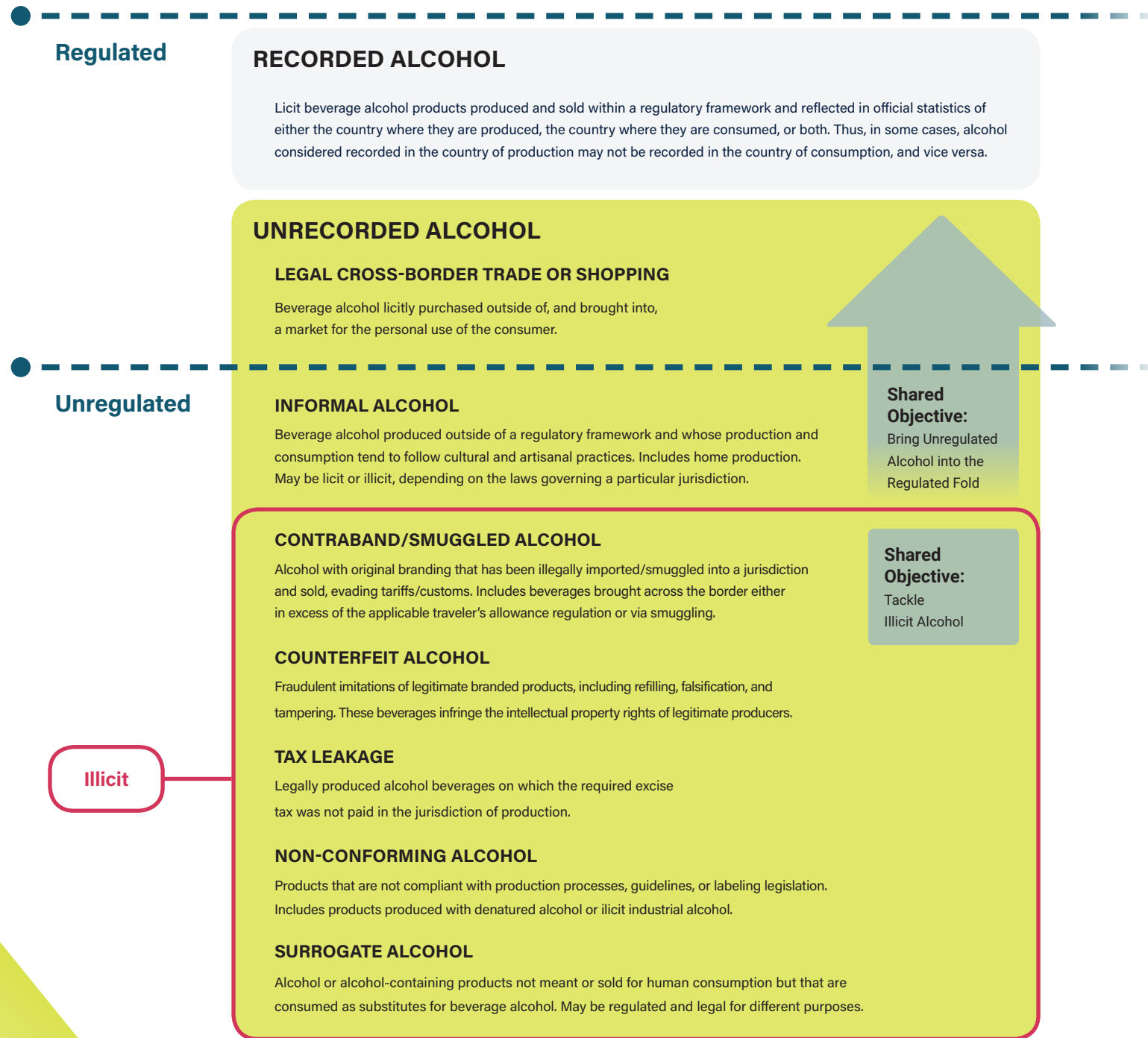


JUNE 2018

Figures provided by  
Euromonitor International



# Taxonomy of Unregulated and Unrecorded Alcohol



Adapted from IARD Taxonomy of Unrecorded Alcohol[1].

The International Alliance for Responsible Drinking (IARD) is a not-for-profit organization dedicated to addressing harmful drinking worldwide and promoting responsible drinking, amongst those who choose to drink. IARD is supported by its member companies from all sectors of the regulated alcohol industry – beer, wine, and spirits – in their common purpose of being part of the solution to reducing the harmful use of alcohol. For more information on our membership and what we do, please visit [www.iard.org](http://www.iard.org).

# It is in everyone's interest to bring unregulated alcohol into the legal, regulated sphere.

Alcohol production and trade exist both within and outside of government regulation; the relative size of each depends on the region of the world and social, cultural, and economic factors. Both segments are well established and people often – knowingly and unknowingly – interact fluidly with both of them.

The regulated alcohol market is recorded in government statistics; unregulated alcohol, which is largely illegal, is more difficult to assess and falls into the “unrecorded” sphere (see Taxonomy of Unregulated and Unrecorded Alcohol). This segment is complex and diverse and includes everything from high-quality artisanal homebrew to illicit drinks that may contain methanol or other toxic ingredients. In 2014, the World Health Organization (WHO) issued its *Global Status Report on Alcohol and Health* and estimated, based on 2010 figures, that unrecorded alcohol made up an average 25% of all alcohol consumed worldwide [2].

Alcohol produced and sold illegally outside of government regulation is the most problematic part of unrecorded alcohol; it is untaxed, circumvents restrictions around availability, is of inconsistent quality, and, depending on the ingredients used to make it, is even potentially toxic. This report considers these wide-reaching implications and brings together recent data on the illicit market, compiled by the global market research firm Euromonitor International. While illicit alcohol is also widespread across Asia and parts of Europe, this report focuses on data from Africa and Latin America.

Unregulated alcohol is more widespread in lower-income countries than in more affluent ones. Yet, whether in mature or emerging economies, it is largely consumed in some of the world's poorest communities and, because it lacks quality and production standards, may contribute to an already significant problem of ill health. While home-produced artisanal alcohol may be part of cultural heritage and largely unproblematic, the illicit sector is not only large but also comes at a significant cost.

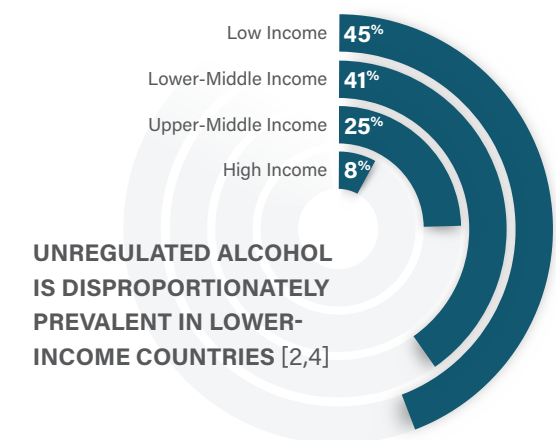
**HUMAN COST:** The deaths in early 2018 of almost 150 people in Indonesia from poisoning

by adulterated alcohol serve as a reminder that unregulated alcohol can cost lives<sup>3</sup>.

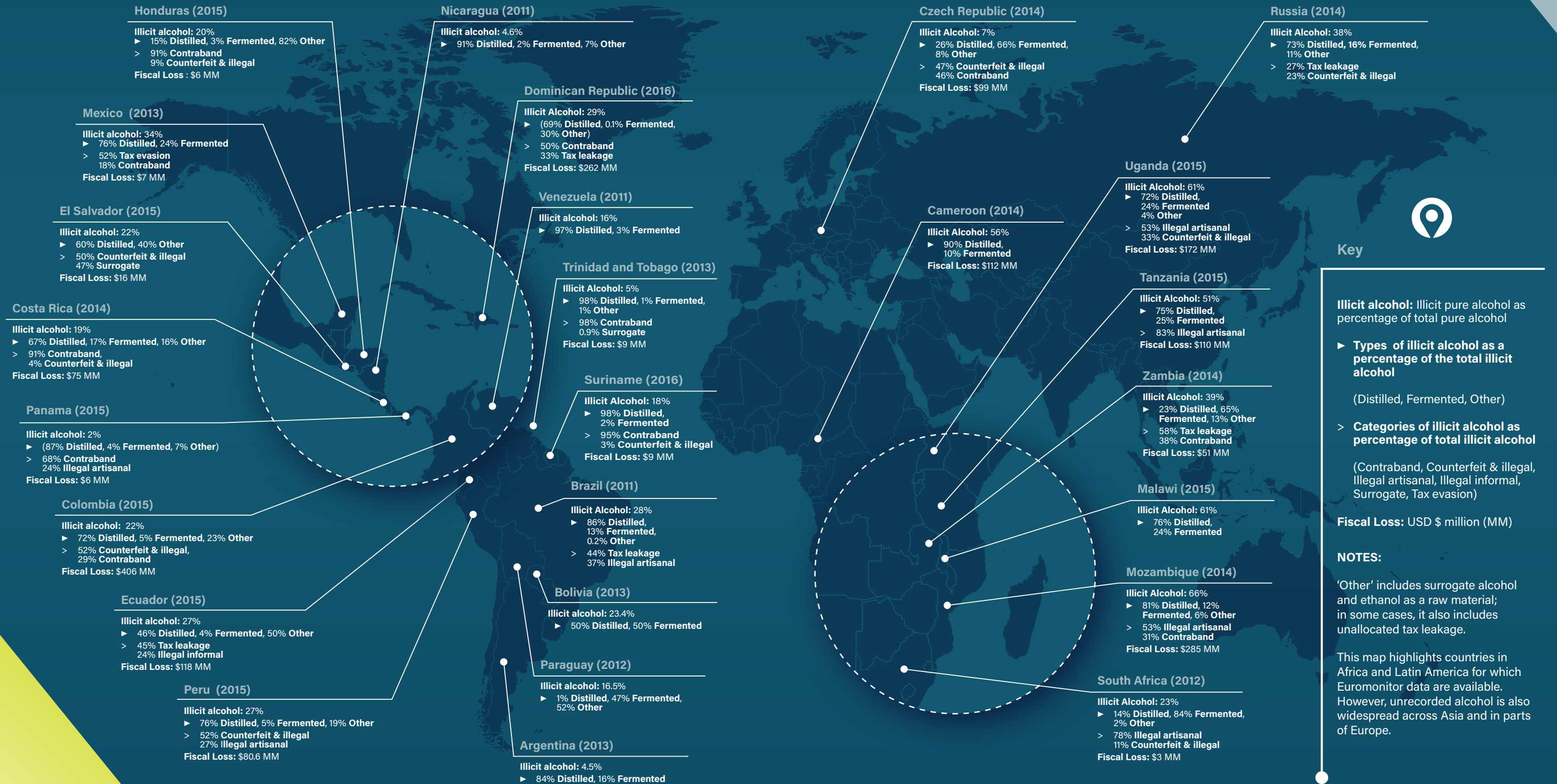
**SOCIETAL COST:** Unregulated and illicit alcohol has the greatest impact on the poorest and most vulnerable in society, whether in the world's poorer or wealthier nations. Therefore, bringing unregulated alcohol into the regulated sector can contribute to breaking the cycle of ill health and to reducing health inequalities.

**ECONOMIC COST:** Illicit alcohol is responsible for significant fiscal loss to government. The combined fiscal loss in just 18 of the countries included in this report adds up to more than USD \$1.8 billion. Illegal alcohol, particularly counterfeit and smuggled products, can erode confidence in government standards, enforcement, and in the integrity of legitimate, regulated brands.

Tackling the unregulated market is everyone's business; governments, communities, and legitimate producers share a commitment to reducing harmful drinking and to common objectives: bringing unregulated alcohol into the regulated fold and putting a stop to illegal production and trade. These objectives can only be achieved where there is an enabling regulatory framework that allows legitimate businesses to thrive and does not encourage a shadow economy. Partnerships between government, the private sector, and civil society in a whole-of-society approach can help promote a virtuous circle of growth and health that is in everyone's interest.



# Illicit alcohol accounts for a sizeable proportion of total alcohol, particularly in low- and middle-income countries.





## The production, distribution, and retail of illicit alcohol is unregulated, with significant social and health implications.



**ILLICIT ALCOHOL  
CAN COST LIVES...**

### **TAINTED OPLOSAN KILLS 141 IN INDONESIA** [3, 5-8]

Police seized alcohol made with mosquito repellent and cough medicine following the country's worst-ever alcohol poisoning case in 2018; 141 people died from organ failure after drinking homemade *oplosan* containing toxic ingredients. Poisonous alcohol also caused 24 deaths in 2016, and more than 12 people died after drinking a tainted New Year's cocktail in 2014. Deputy National Police Chief Muhammad Syafruddin said: "I have ordered all the police chiefs in Indonesia to make these cases stop, zero victims, meaning to reveal the roots [of this problem]." Saugianto Tandra, researcher at the Center for Indonesian Policy Studies (CIPS) highlighted that "[r]estricted distribution and sales of alcohol is creating unintended consequences." Pointing to regulations such as the ban on sales in convenience stores, she suggested that "people are turning to unrecorded (bootleg) alcohol instead."

### **TOURISTS REPORT POISONING IN MEXICO** [9, 10]

More than 150 U.S. tourists reported that they had suffered from symptoms, including vomiting and blacking out, after drinking alcohol at resorts in 2017. In February 2018, police seized approximately 20,000 gallons of illegal alcohol and reported that 235 gallons of it contained high levels of methanol.

### **OVER 70 DEAD IN RUSSIA IN 2016 AFTER DRINKING BATH TINCTURE CONTAINING METHANOL** [11-14]

The International Business Times reported that such products are widely consumed in Russia as surrogates for beverage alcohol, along with other cheap alcohol substitutes including perfume, surgical spirits, and cleaning products. These goods are exempt from the sales restrictions and excise tax applied to alcohol beverages, which means that they are cheaper and easier to access; the surrogate products are sold from street kiosks and even vending machines. The Guardian website reported that 1,200 Russians died from methanol poisoning in the first nine months of 2016.

### **LIBYA: TOXIC BOKHA CAUSES MORE THAN 100 DEATHS** [15]

Although Libya prohibits alcohol, unrecorded and illicit production and trade are widespread and illegal producers sometimes add methanol to the home-distilled drink *bokha* to increase its alcohol content. In 2013, a tainted batch of *bokha* killed over 100 people, and more than 1,000 people were hospitalized with complications including kidney failure, brain damage and coma; 15% lost their sight. A state of emergency was declared in Tripoli's hospitals, with one doctor stating that this was the worst health crisis she had ever seen.

### **METHANOL POISONING KILLS DOZENS IN THE CZECH REPUBLIC** [16]

A tainted batch of counterfeit alcohol caused 38 deaths in 2012, with many more suffering permanent health damage. The poisonings continued for several years after the first wave, with 51 deaths in total; in 2017, customs officials confirmed that there was still a "real danger" of consumers buying methanol-tainted counterfeit alcohol.

...AND OFTEN AFFECTS THE POOR AND VULNERABLE THE MOST, CONTRIBUTING TO THE VICIOUS CIRCLE OF ILL HEALTH AND WIDENING HEALTH INEQUALITIES.

### **HARMING THE POOREST: COUNTRY LIQUOR AND UNRECORDED ALCOHOL IN INDIA** [17, 18]

A 2014 survey in five Indian states indicated that over 31% of current drinkers consumed the cheap distillate, country liquor, which is illegal in some states, and 29% reported drinking what is often illegal homemade alcohol. Consumption of both is confined largely to lower-income populations. Compared with those who drink legal, recorded alcohol, consumers of illegal and homemade alcohol were more likely to be poor, less educated, and report harmful outcomes.

### **DEPENDENT DRINKERS: SAMOGON IN BELARUS** [19]

The main form of unrecorded and unregulated alcohol in Belarus is *samogon*: a home-distilled drink made from fermentation of grain, sugar, and other raw materials. Its quality varies considerably; while much is of a high standard, some is produced using accelerants that can include chicken manure, asbestos sheeting, or rubber from car tires. Unrecorded alcohol comprises around 30% of total sales in Belarus and has been associated with serious health outcomes and deaths; over 50% of alcohol-dependent individuals are estimated to drink *samogon*. The consumption of surrogate alcohol, such as medicinal tinctures and industrial solvents, is also widespread among the homeless and among the poor and indigent treated for alcohol-dependence in clinics.

### **"KILL ME QUICK": POVERTY AND ILLEGAL ALCOHOL IN KENYA** [20-22]

One of the major types of home-produced and illegal alcohol in Kenya is the spirit-based beverage *chang'aa*, consumed by the poorest and most marginalized members of society, often with serious consequences. Its very name means "kill me quick". Not only can the methanol in *chang'aa* be lethal, but the drink is often made with contaminated water; animal carcasses and other organic matter may be

added to speed up fermentation. It is among the cheapest beverages available and is commonly found in slums, where it is the drink of choice among those intending to get drunk. One variant of *chang'aa*, called "jet-five", is reportedly spiked with jet fuel; another with embalming fluid (largely formaldehyde) from mortuaries. The dependent poor commonly use *chang'aa*, and many of its consumers are diagnosed with mental illness.

### **ILLICIT ALCOHOL AND CRIME**

The production and sale of illicit alcohol are, by definition, criminal activities. However, while local and smaller-scale production of unrecorded alcohol, particularly artisanal and home production, is the norm in many parts of the world, the Organisation for Economic Co-operation and Development (OECD) reports the involvement of organized crime in the manufacture of illicit alcohol in some countries [23]. Large-scale production facilities, which are often mobile in order to evade authorities, are involved in alcohol counterfeiting. This form of illicit alcohol is particularly profitable because penalties are generally low and law enforcement is modest. Some of these facilities engage in full-scale production and packaging of counterfeit beverages.

The large scale of these operations indicates the involvement of organized crime with significant reach; for example, one Russian site was reported to produce 11,000 bottles of illicit spirits per hour. Sourcing raw materials for the production of illicit alcohol can also involve criminal activity; for example, large amounts of denatured alcohol – not intended for the production of beverages – may be diverted into the illicit market through organized networks. Other criminal operations fraudulently produce packaging, labels, and even forge tax stamps; the internet has created a new vehicle for trade in components. As with other consumer goods, the illicit alcohol market has been linked with money laundering, other criminal activity, and even terrorism.

# What drives unregulated, unrecorded, and illicit alcohol?



## POVERTY

The production of unregulated and unrecorded alcohol, including illegal beverages, is largely driven by social and economic considerations.

Across Africa, many producers of traditional local beverages are women who are often the sole earners for their families. In countries like Botswana, women also make up the majority of operators of *shebeens*, informal or semi-formal premises that sell alcohol and are frequently illegal. The most commonly produced beverages are *khadi*, a type of homemade wine that is made from seasonally available berries or wild melons, and *bojalwa*, a traditional homebrew made from sorghum. These beverages are cheaper than legally produced, regulated alcohol, and are widely perceived to be nutritious [22].

Poverty, unemployment, and a tradition of home production have been identified as drivers of illicit alcohol trade that supports many households in both rural and urban settings across Uganda [24]. These products are easily accessible and openly sold outside of regulated outlets; in many instances, they are the only choices available to those with low incomes.

## AFFORDABILITY

The issues around the affordability of different types of alcohol are closely related to poverty; consumers around the world who purchase illicit alcohol identify its greater affordability and lower relative price among their main considerations. As these beverages are untaxed and outside of regulated production that can increase cost, there is often a significant price difference between illicit and legitimate products, driving demand.

In a survey of consumers in several Indian states, almost 90% of respondents reported that they often

drank country liquor or homemade alcohol because it was cheaper than branded legal products [17, 18]. This was echoed by consumers across other countries in a study conducted in China, Mexico, Sri Lanka, Kenya, Botswana, Russia, Brazil, and Belarus; a significant proportion said that price (and, therefore, affordability) was their primary reason for choosing illicit and unregulated alcohol [22].

## AVAILABILITY

Disproportionate regulation of the availability of legal and branded products, such as severe restrictions around licensing hours or on outlets, also drives the consumption of illicit alcohol, which is easily available from unregulated and informal sources. This is particularly true in jurisdictions, such as some states in India, where alcohol sales are prohibited. Illicit alcohol is also not subject to restrictions around legal purchase age, so may be attractive to youth below the legal age limit.

In urban West Bengal, India, illicit homemade alcohol is mostly produced in *basti* (slum areas); these drinks are available almost anywhere in poor areas [22].

In Brazil, illegal beverages are cheaper than legal products and more widely available; they are also often found in formal establishments, such as bars, nightclubs, and restaurants. A 2012 study found that 57% of participants in the state of Minas Gerais and 81% in São Paulo reported drinking “unregistered” and potentially illegal alcohol. These respondents also identified easy access and availability as primary reasons for choosing unregulated products [22].

In India, both country liquor and homemade alcohol are illegal in some jurisdictions and are more available than recorded alcohol products; 80% of country liquor drinkers and 75% of homemade alcohol drinkers said that these drinks were easier to obtain [18].

In Latvia, 40% of unrecorded alcohol drinkers said that they consume contraband alcohol because there are fewer restrictions on hours and days of sale [26].

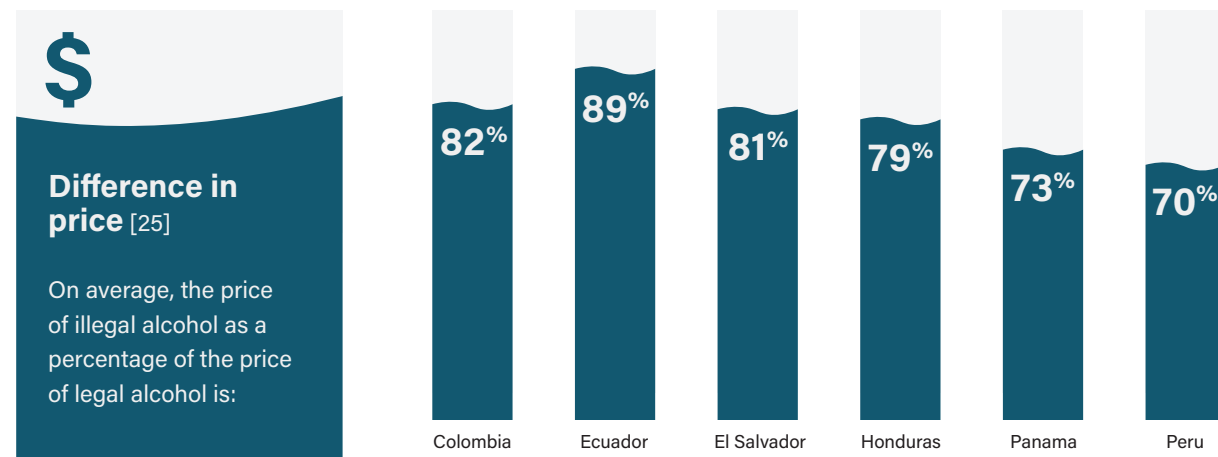
In Vietnam, approximately 70% of people who drank homemade alcohol said it was easier to purchase than branded commercial products [27].

## CULTURE

The production, retailing, and consumption of unregulated and unrecorded alcohol are also strongly driven by culture and tradition in most societies that consume alcohol. Artisanal and home-produced drinks can be found in many countries: fruit *palinkas* in Hungary; *cachaça* or *pinga*, the national drink in Brazil; palm toddies in India and Sri Lanka; *samogon* in Russia; and Botswana’s sorghum-based brew *bojalwa* are but a few examples.

The traditional aspect of these drinks is part of their appeal for consumers, who may believe they are of superior quality to branded large-scale products, or possess medicinal or other positive attributes. Many of these beverages are of high quality and comparable to regulated beverages; however, traditional beverage production lacks consistent oversight and safety standards and is often illegal. These products may be of low quality and the use of ingredients to speed up fermentation or to add potency may render them potentially toxic.

Consumers of both country liquor and home-produced alcohol in India cited their traditional aspect as among the main reason for drinking them [18]. Similar cultural links with rice wines in Vietnam were cited by those who consumed them [27]. In countries like Botswana, Kenya, or South Africa, traditional brews are often regarded as nutritious and desirable [22].



## Public-private partnerships are key to bringing alcohol production and retail into the regulated sector.



There exist numerous examples of good practice in which different sectors – government, communities, and regulated producers – have come together to share resources to combat unregulated production and retail. These examples underscore the shared commitment to protecting public health and safety.

### A CODE FOR SHEBEENS

*Shebeens* are informal outlets across Africa that sell alcohol, including homebrews. Many communities have flagged concerns about these premises, reporting disorder, noise, and crime. However, law enforcement does not generally intervene around *shebeens*, given the lack of formal regulation. As a result, some individual owners have developed their own codes for maintaining order and reducing potential harm. A broader Code of Practice for the Supply, Sale, and Consumption of Alcohol Beverages was developed by the South African Industry Association Responsible Alcohol Use (ARA) - now called the Association for Alcohol Responsibility and Education (Aware.org.za) - in collaboration with local *shebeen* operators and communities, intended to help reduce the sale of low-quality alcohol and to prevent harmful drinking [28]. The code is a pragmatic attempt to bring those operating in unregulated trade into the fold. Over the years, numerous *shebeens* have been converted into regulated taverns and are now compliant with codes and rules; however, illegal *shebeens* persist and are plentiful, particularly in poor townships and rural communities.

### ADDRESSING COUNTERFEIT DISTILLED SPIRITS

Counterfeiters often imitate legitimate and branded distilled spirits, particularly targeting emerging markets with fraudulent versions of premium global products. The EU-funded FoodIntegrity Project [29] brings together the private sector (producers, retailers,

and distributors), regulatory and enforcement bodies, researchers, and consumers to assure the integrity of food and beverage products through authentication. The project has supported the development of instruments that can be easily transported and deployed in the field to detect particular markers of counterfeit and otherwise adulterated spirits; these include sugars and flavors that are not naturally present in authentic brands, such as bubble-gum, pineapple, olive, and wintergreen.

### SAFE, LOW-COST BEER: SENATOR KEG AND IMPALA

Legally produced and branded beverages are unattainable for many people in low-income communities across Kenya; this encourages the unregulated production, sale, and consumption of low-quality, low-cost alcohol. These brews are often contaminated with methanol, fertilizers, battery acid, and other ingredients during the production process. However, 60% of consumers in Kenya are reported to drink this dangerous alcohol [30].

In 2004, Diageo developed Senator Keg [30, 31], an affordable and safe alternative brew that relies on low-cost ingredients sourced from local growers. It has brought some previously unlicensed and illegal producers into the regulated manufacturing process, as well as bringing informal distributors into the fold; many outlets that were previously in the shadow economy are now licensed, with training for staff in good practice and standards of hygiene. The end result is a high-quality beer that is regulated, compliant with standards, yet competitively priced so that it is accessible to the poorest consumers who were previously at greatest risk from contaminated illegal alcohol. Senator Keg has been a globally acclaimed success and has provided market growth and tax benefits while serving an important public health goal for consumers and government.

AB InBev's Impala beer in Mozambique [32], and earlier efforts by SABMiller in South Africa [33], offer similar examples that have brought benefits to stakeholders both public and private. The main

ingredient in Impala is the local smallholder crop cassava. By using locally-sourced crops, and working with government to create a special excise rate, Impala can be sold at two-thirds the price of a mainstream lager. This has created an affordable, high-quality alternative to illegal alcohol that is safer for consumers. It has also provided the government with gains from increased tax revenue from sales of a now regulated product. Benefits have extended along the entire value chain to thousands of cassava farmers who now have a profitable, sustainable market for their crop. The initiative demonstrates the commitment shared by local businesses, communities, and governments to promoting a virtuous circle of growth, developing, and improved health.

### USING LOCAL KNOWLEDGE, IMPROVING EDUCATION

Police in Uttar Pradesh, India, engaged with local villagers and NGOs to target racketeers and illegal alcohol production, following a spate of deaths from tainted illegal alcohol. Acting on tips from locals, the police conducted raids of manufacturing facilities and seized alcohol; as well as this, they launched broader education campaigns about the potential health and safety risks specifically associated with drinking illegal alcohol [34].

In rural Sri Lanka, a community education program addressed harmful drinking patterns through street performances, poster campaigns, leaflets, and individual and group discussions. The campaign contributed to significant reduction in illegal alcohol outlets, a decline sustained for two years [35].



### PARTNERSHIPS WITH LAW ENFORCEMENT

The Polish Spirits Industry Employers Organization (PPS) collaborated with police, tax authorities, customs officials, and local communities to tackle both the illegal production and trade of distilled spirits [36]. A partnership with police and public and private laboratories between 2010 and 2014, made possible the testing of samples of illegal alcohol that had been supplied by consumers, private detectives, police, and the customs service. The results indicated that the illegal alcohol was not food-grade, and that some samples were contaminated with various substances; the tests also revealed that 84% of samples contained chloroform. PPS also worked with the police, the Ministry of Finance, and the customs service to arrange various training sessions for customs officials, police officers, judges, and other public officials between 2009 and 2016, and collaborated with private detectives, police, and the customs service to uncover sources of illegal spirits.

Similar alliances have been built in Colombia, led by the International Federation of Spirits Producers (IFSP) [37], where effective collaboration with law enforcement in Bogota has resulted in 12-year prison sentences for over 10 high-ranking members of a spirits counterfeiting organization; over 200,000 bottles of counterfeit branded spirits were seized in raids.



# What can partners do to bring production and retail into the regulated sector?

A responsible, regulated alcohol market rests on partnerships and common engagement among governments, communities, producers, and retailers of regulated alcohol beverages. The specific roles and mandates of all partners can be harnessed for the collective good, bringing trade into the regulated sphere and supporting the shared public health goal of reducing harmful drinking.

|  | <b>GOVERNMENT</b>    | <b>COMMUNITY</b>   | <b>INDUSTRY</b>   |
|--|---|---|--|
| <b>Illegal alcohol, including contraband, counterfeit, tax leakage, and non-conforming alcohol</b> | <b>Appropriate regulation and enforcement</b> <ul style="list-style-type: none"> <li>▶ Proportionate regulation of physical access and availability.</li> <li>▶ Appropriate pricing policies that avoid extreme price differentials.</li> <li>▶ Favorable fiscal incentives for production of affordable, safer alternatives</li> <li>▶ Monitoring and tracking of raw materials, notably denatured alcohol used in large-scale production</li> <li>▶ Appropriate enforcement and controls in special trade or customs zones to prevent illegal activity.</li> <li>▶ Aligning regulation across different sectors using denatured alcohol, medicinal potions and tinctures</li> <li>▶ Requirement for non-toxic denaturants or denaturants that change taste or color with ethanol</li> <li>▶ Monetary incentive to return empties (preventing refills)</li> <li>▶ Improved collaboration between law enforcement and the justice system for effective prosecution and dismantling of organized trade in illegal alcohol</li> </ul> | <b>Improving education and social control around unrecorded alcohol</b> <ul style="list-style-type: none"> <li>▶ Anonymous reporting of illegal production facilities and counterfeit service in outlets</li> <li>▶ Public education and media campaigns focused on illegal nature of outlets and beverages</li> <li>▶ Public education and media campaigns about potential harms to health and potential poisoning from adulterated alcohol beverages</li> <li>▶ Raising awareness that consuming illegal alcohol supports criminal activity</li> <li>▶ Public education about new advances in labelling and packaging, to enable consumers to identify and avoid counterfeit alcohol</li> </ul> | <b>Using resources to support governments to tackle unrecorded alcohol</b> <ul style="list-style-type: none"> <li>▶ Cooperation with law enforcement and customs</li> <li>▶ Intelligence sharing</li> <li>▶ Support of standards in denaturation across different industries</li> <li>▶ Support for spot-checking and quality control of alcohol in serving establishments</li> <li>▶ Innovation in labelling and closures and “smart bottles”</li> <li>▶ Original bottle collection by legal businesses</li> <li>▶ Technical innovation around authentication with markers</li> </ul> |
| <b>Illegal artisanal and home production</b>   | <ul style="list-style-type: none"> <li>▶ Permit/registration for home production where potential volume is high; possibly with tax exempt allowance</li> <li>▶ Use of communal equipment to ensure quality where home production is legal but unrecorded</li> <li>▶ Codes of practice around standards of production/testing</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Community education about safety and integrity standards and quality</li> <li>▶ Cooperatives for production of village alcohol</li> <li>▶ Competitions for (legal) home producers to encourage quality standards</li> <li>▶ Community policing and enforcement of order around outlets where these are unregulated and out of bounds for law enforcement</li> </ul>  | <ul style="list-style-type: none"> <li>▶ Support for testing (for example, handheld gas chromatography, supplying methanol testing strips)</li> <li>▶ Education for home producers on safety and quality production techniques</li> </ul>  |
| <b>Surrogate</b>   | <ul style="list-style-type: none"> <li>▶ Limits on size of bottles of cologne and tinctures to avoid volume production and sale</li> <li>▶ Regulation of use of flavoring in cologne</li> <li>▶ Limited sale of medicinal alcohol in pharmacies and other outlets; age verification requirements for purchase</li> <li>▶ Requirement for ill-tasting denaturants in chemical solutions to prevent drinking</li> </ul>   | <ul style="list-style-type: none"> <li>▶ Community education about the dangers of consuming non-potable products</li> <li>▶ Support for indigent and marginalized social groups</li> </ul>  | <ul style="list-style-type: none"> <li>▶ Legal purchase age (LPA) enforcement for purchase of cough medicines and other alcohol-containing products</li> <li>▶ Monitoring of denatured alcohol along the value chain</li> <li>▶ Support for use of non-toxic denaturants by chemical, pharmaceutical, cosmetics industries</li> </ul>  |

## Conclusion

Bringing alcohol production and retail out from the shadows and into the regulated and recorded sphere is good for the economy, good for public health, and good for communities.

By creating a regulatory environment that allows legitimate and responsible producers and retailers to thrive, governments can support public health goals, reduce harmful drinking, and thwart the illegal market which damages the poorest communities and evades tax. A proportionate regulatory framework encourages producers and retailers to contribute to much-needed government revenue.

The unregulated and illegal alcohol market makes a significant negative impact on the world's health, and social and economic wellbeing. Unregulated, adulterated beverages may kill people, illicit

production and trade are often associated with crime, and the unregulated sector costs governments significant revenue. In addition to its impact on government and society, the unregulated alcohol sector also poses an undue burden on legitimate producers operating within regulatory guidelines. The harm associated with unregulated alcohol is more pronounced in the poorest countries and communities, where the illegal market is often large.

Given the potentially significant impact of unregulated and illegal alcohol on society, it is in everyone's interest to join forces to address harm. Governments, civil society, communities, and businesses working together support the desired outcome: a thriving, responsible, well-regulated business sector that supports sustainable growth, development, and a shared common commitment to improved health.

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