Areca nut is the fourth most commonly consumed psychoactive substance worldwide after alcohol, nicotine, and caffeine. Areca nut use is common among South Asian, Southeast Asian, East Asian, and Pacific Island communities in the U.S. that have traditionally used areca nut and continue to do so.¹

Areca nut is a carcinogen. When consumed alone, it has major health risks such as oral and esophageal cancer, and when combined with tobacco, a user’s risk of premature illness and death is greatly increased.² Despite the known health harms of areca nut and the prevalence of its use among South and Southeast Asian immigrants in the U.S., few federal, state or local policies are in place to regulate the sale of the areca nut or its use, particularly by youth.

Effective legal policies and cessation resources for areca nut usage could impact and help a
range of immigrant groups. This fact sheet provides a brief overview of areca nut products, existing federal regulation, and insights for communities interested in learning more about options for state, local, and territorial policy. Any policies adopted must be chosen with an eye to improving public health, while not causing disparate adverse impacts on already-stressed immigrant communities.

Areca Nut Products

Areca nut (also referred to as “betel nut”) is the seed of the areca catechu palm tree, and is indigenous to Asia, the South Pacific, and parts of East Africa. Areca nut products are available in the U.S. in Asian food businesses and specialty shops that serve immigrant communities. Areca nut products vary widely and are sold as premade products, and products custom-made for immediate consumption (Table 1). Areca nut has been chewed for thousands of years, but manufactured individual packets of dry powdered ready to-chew areca nut products with tobacco (gutka), and without tobacco (pan masala) were not commercially available until the 1980s in India. Introduction of these products greatly increased sales, and gutka is now exported worldwide.
Betel quid is a common cottage industry or custom-made areca nut product that varies from country to county. Typical ingredients are chopped up, powdered or granulated areca nut, slaked lime (calcium oxide and calcium hydroxide), sweetening agents (i.e., coconut or dried dates), spices (i.e., fennel seed, cardamom, saffron, anise seeds, turmeric, mustard or clove), and tobacco all wrapped in a fresh ‘betel leaf’ of the pepper plant Piper betle or added to the mouth as loose ingredients.\(^9\) The tobacco used can be sun dried, fermented, boiled with molasses, perfumed or in a concentrated extract.\(^10\) Flavorings can include mint, rose petals, and menthol.\(^11\)

Areca nut alone and betel quid with and without tobacco are all classified as Group 1 carcinogens (carcinogenic to humans) by the International Agency for Cancer Research (IARC).\(^12\) The growing use of areca nut with tobacco worldwide has heightened the urgency to address this public health threat.\(^13\)

### Table 1: Areca Nut Products\(^14\)

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Definition</th>
<th>Packaging</th>
<th>Product Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Premade manufactured</strong></td>
<td>Made in advance for sale in a manufacturing environment</td>
<td>Sealed in labeled commercial packaging (i.e., brightly colored plastic sachets)</td>
<td>• Gutka</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Whole areca nuts and pieces</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Powdered areca nut</td>
</tr>
<tr>
<td><strong>Premade cottage industry</strong></td>
<td>Usually handmade in advance for sale</td>
<td>Often sold in non-commercial packaging (i.e., cellophane, tinfoil packet, plastic bag)</td>
<td>• Gutka</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Betel quid with tobacco (pan, paan, tombol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Betel quid without tobacco</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Dohra</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Mainpuri (kapoori)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Mawa</td>
</tr>
<tr>
<td><strong>Custom-made</strong></td>
<td>Made to order by hand for immediate consumption from two or more components (including premade products, i.e., zarda)</td>
<td>No packaging or non-commercial packaging</td>
<td>• Betel quid with tobacco (pan, paan, tombol)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Betel quid without tobacco</td>
</tr>
</tbody>
</table>

* Detailed descriptions of areca nut products from countries around the world are available at [https://cancercontrol.cancer.gov/brp/tcrb/smokeless-tobacco](https://cancercontrol.cancer.gov/brp/tcrb/smokeless-tobacco)
Federal Regulation of Areca Nut

Areca nut is predominantly imported to the U.S., and is regulated by the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA).\(^\text{15}\) Raw shelled areca nuts, and processed areca nuts (i.e., cooked, dried, ground) are subject to USDA inspection and can be imported from all countries via all ports without a USDA permit.\(^\text{16}\)

The FDA does not have regulations specific to areca nut, but does regulate areca nut as an imported food or, when mixed with tobacco, as a tobacco product. The FDA inspects imported food for safety and labeling, and issues import alerts when products are refused admission for sale in the U.S.\(^\text{17}\) Import alerts are not legally binding, but provide guidance to food producers and inspectors.\(^\text{18}\) In 2019, the FDA issued an import alert for a packaged snack product from India, in part because the product contained the “unsafe food additive” betel nut.\(^\text{19}\) The FDA also has issued import alerts for betel nut paste and shelled betel nut for containing illegal or undeclared colors and artificial sweeteners.\(^\text{20}\) These import alerts indicate that the FDA can refuse entry of foods with areca nut, but typically permits importation of areca nut on its own.

Imported and domestic tobacco products containing areca nut are subject to the FDA’s smokeless tobacco regulations, because they are chewed or sucked in the mouth (as opposed to smoked).\(^\text{21}\) These products must have warning labels, cannot be sold to anyone under 21 years old, and self-service displays and free product samples are only permitted in adult-only facilities.\(^\text{22}\)

State, Local, and Territorial Policy Options

The lack of federal regulation of areca nut means that, as with other public health policies, state, local and territorial governments are in a position to lead. New areca nut policies can be modeled on successful tobacco policies, keeping in mind that there are differences between the affected users and the industry to be regulated. Research about products used locally, where products are purchased, and cultural and spiritual practices are essential prior to crafting effective public health measures. Another important step is to review existing tobacco policies to see how they do or do not apply to areca nut with tobacco products. This review can be used to craft policy and enforcement guidance specific to areca nut with tobacco products, and to identify policy gaps. This section provides examples of how areca nut products with and without tobacco are addressed in existing policies, options for new policies, and some lessons learned from other countries.
Product Definitions

Areca nut products with tobacco fall under existing broad state and local definitions of tobacco products (i.e., “any substance containing tobacco including but not limited to...”) that cover smokeless tobacco or chewing tobacco. State and local regulators can raise awareness about these products by including them in guidance and enforcement documents for use by inspectors and tobacco retailers. New policies with more precise product definitions can support effective policy enforcement and be used to regulate areca nut products without tobacco. More precise definitions also may be needed to apply minimum price laws and tobacco tax rates to specific products, and to limit sales of particular products.

Reducing Availability

One approach to the regulation of harmful products is to reduce their availability in the community. In New York, gutka can only be sold in tobacco-only shops, and cannot legally be sold by other retailers like convenience stores, Asian food markets, or specialty stores.23 The law defines gutka as “a product containing lime paste, spices, areca and tobacco.”24 In response to bans on similarly defined gutka product sales in India, manufacturers there began selling the product in two separate packets — one with tobacco and one with the areca nut, lime, and
flavorings. Policymakers should be aware that these two-step products also could be used to evade gutka sales restrictions in the U.S.

**Flavor Restrictions**

Tobacco products with areca nut also frequently contain spices, flavors, and sweeteners. State and local governments have enacted policies to restrict sales of flavored tobacco products because of their particular appeal to young people. For example, Massachusetts restricts sales of flavored tobacco products to smoking bars, and requires that they be consumed on the premises. The policy uses a broad definition of tobacco products that includes smokeless tobacco, but does not explicitly reference gutka or betel quid. Even a narrow reading of the policy indicates that products with a mixture of tobacco, areca nut, spices, flavorings or sweeteners are flavored tobacco products that can only be legally sold in smoking bars. To reduce attempts to evade its restrictions on flavored tobacco sales, Massachusetts also prohibits the sale of “tobacco product flavor enhancer[s]” in any establishment other than a smoking bar. Packets of areca nut, lime, and spices intended to be mixed with chewing tobacco could be considered a tobacco flavor enhancer.

Areca nut products that contain a mixture of tobacco, areca nut, and spices or flavorings (i.e., gutka and betel quid) can be included in flavor restriction policies and in policy guidance and enforcement materials to help retailers and inspectors identify products. Jurisdictions seeking to regulate flavored tobacco also can consider regulating mixtures of areca nut, lime, and spices intended for use with tobacco as tobacco flavor enhancers.

**Excise Taxes, Minimum Package Size, and Minimum Price Laws**

States and local jurisdictions with taxing authority can reduce underage tobacco use by keeping tobacco prices high. Effective tobacco price policies include excise taxes, minimum package sizes, and minimum price laws. Areca nut products with tobacco can be taxed as chewing tobacco, smokeless tobacco, or moist snuff, depending on the jurisdiction. Including products like gutka and betel quid in minimum package size and minimum price laws and enforcing existing policies against covered products are strategies to increase their cost and restrict access to single-serve areca with tobacco products.

**Minimum Legal Sales Age & Required Signage**

The minimum legal sales age for any product containing tobacco under federal law is 21 years old. Smokeless tobacco products containing areca nut are subject to this policy nationwide. State and local lawmakers can enhance enforcement efforts and raise awareness about tobacco
products with areca nut by addressing these products in state law. For example, New York law specifies that the minimum legal sales age for gutka is 21, and requires tobacco businesses that are permitted to sell gutka to post signs with the minimum legal sales age for the product.

The Commonwealth of the Northern Mariana Islands (CNMI) is the only U.S. jurisdiction with a minimum legal sales age standard for areca nut without tobacco. In the CNMI, a person must be at least 18 years old to purchase areca nut, and retailers are required to post signs saying “BETEL NUT SALE IS PROHIBITED TO PERSONS UNDER THE AGE OF 18.” The CNMI’s law also calls for compliance checks where buyers below the legal age attempt to purchase areca nut.

Self-Service Displays
Requiring that tobacco products be kept behind a store counter facilitates age verification, reduces shoplifting of products by youth, and reduces exposure to advertising on product packaging. Smokeless tobacco products, including those with areca nut, are prohibited by federal law from being sold via self-service displays, except in adult-only facilities, nationwide. The CNMI also requires that areca nut without tobacco be kept underneath or behind the sales counter of retailers and out of reach of the store customers.

Areca Nut Use in Schools
Schools can play an important role in preventing youth initiation of harmful products. School policies should address areca nut products with and without tobacco, because areca nut use typically begins with areca nut and then adds tobacco over time. California state law makes the possession or use of tobacco products containing “betel” grounds for suspension or expulsion of a student, but does not address student areca nut use without tobacco. Ohio takes a more comprehensive approach by prohibiting the use or possession of areca nut products with and without tobacco in schools. States and individual school districts seeking to address areca nut use through disciplinary policies should be careful to avoid overly punitive measures that could disproportionally impact students from immigrant populations with a tradition of areca nut use.

Prohibiting Tobacco Products with Areca Nut in Parks and Recreation Areas
Parks and recreation departments can be motivated to regulate areca nut use to promote public health and to prevent betel quid spitting which is bright red and can cause unsightly stains. The City of Arcadia, California prohibits tobacco use in any City park property or recreation area, including tobacco products containing “betel.” Areca nut products without tobacco are not included in the policy.
Areca Nut Retailer Licensing

Another regulatory option is to require areca nut retailers to obtain a license. This approach is similar to the best practice of retailer licensing in tobacco control and is an appropriate policy approach in jurisdictions such as the CNMI, an island where 20 percent of the adult population reportedly uses areca nut. However, areca nut retailer licensing likely would not be feasible to address use among a small subset of immigrant populations in the continental U.S.

Examples of Areca Nut Policy Language

Below are a few examples of policy language regulating areca nut products. Please note that the Public Health Law Center does not endorse or recommend any of the following policies. These examples are only select provisions of how some jurisdictions have sought to regulate areca nut. Communities considering adopting any of the language in the following provisions should read the laws in their entirety and assess whether the provision in question is practical and legal in their jurisdiction.

Sample Policy Language

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Policy Element</th>
<th>Policy Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawai’i</td>
<td>Definitions</td>
<td>“Betel nut products” means any chewable substance containing the seed of the areca palm, otherwise known as Areca catechu or betel nut.</td>
</tr>
<tr>
<td>New York</td>
<td>Definitions</td>
<td>“Gutka” means a product containing lime paste, spices, areca and tobacco.</td>
</tr>
</tbody>
</table>
| Oregon       | Definitions    | “moist snuff” means: 

...(b) Any other products containing tobacco that are not intended to be consumed by combustion. Examples include, but are not limited to:

...(B) Other chewing tobacco and other leaf tobacco products to which artificial or natural substances have been added during processing. Such substances may include but are not limited to: sweeteners, sugars, molasses, licorice, mint, eucalyptus, tobacco leaf extract, betel nut, catchu (sic.), lime, saffron, thickeners, humectants, emulsifiers, colorants, texturizers, preservatives, taste enhancers, firming agents, adhesives, and punk ash.
## Sample Policy Language

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Policy Element</th>
<th>Policy Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>Definitions</td>
<td>“Tobacco product flavor enhancer,” any product designed, manufactured, produced, marketed or sold to produce a characterizing flavor when added to any tobacco product.(^{51})</td>
</tr>
<tr>
<td>New York</td>
<td>Required Signage</td>
<td>(b) Any person operating a tobacco business wherein gutka is sold or offered for sale... shall post in a conspicuous place a sign upon which there shall be imprinted the following statement, “SALE OF GUTKA TO PERSONS UNDER TWENTY-ONE YEARS OF AGE IS PROHIBITED BY LAW.” Such sign shall be printed on a white card in red letters at least one-half inch in height.(^{52})</td>
</tr>
<tr>
<td>Ohio</td>
<td>Prohibitions (Schools)</td>
<td>No pupil shall use or possess any substance containing betel nut in any area under the control of a school district or an educational service center or at any activity supervised by any school operated by a school district or an educational service center.(^{53})</td>
</tr>
<tr>
<td>Arcadia, CA</td>
<td>Prohibitions (Parks and Recreation Areas)</td>
<td>A. It shall be unlawful for any person to use any form of tobacco products, at any time, in or upon any City park property or recreation area. Prohibited products include any product containing tobacco or nicotine, including, but not limited to, cigarettes, cigars, miniature cigars, smokeless tobacco, snuff, chew, clove cigarettes, betel, and nicotine delivery devices such as electronic cigarettes. Exceptions shall be made for the use or possession of prescription nicotine products.(^{54})</td>
</tr>
<tr>
<td>CNMI</td>
<td>Prohibitions (Self-Service Displays)</td>
<td>Condition of Premises: Areca Nut (Betel Nut) Display. A person or business entity shall ensure that any Areca Nut (Betel Nut) are displayed in accordance with this Section. Areca Nut (Betel Nut) shall not be displayed openly or in any manner in any part of the business premises generally open to the public. Such packages or bags of Areca Nut (Betel Nut) shall be secured underneath or behind the cashier counter at the point of sale, which can only be accessed by the owner or an authorized agent (cashier) of the retail establishment upon the request from a person of legal age to purchase such item or product.(^{55})</td>
</tr>
</tbody>
</table>
Endnotes


7 Id.


9 World Health Org., supra note 5.


11 Id. at 43.


13 World Health Org., supra note 5.

14 Table 1 is adapted from Nat’l Cancer Inst. & Ctrs. for Disease Control & Prevention, supra note 4.


18 Id.

20 U.S. Food and Drug Admin., Import Alert 45-02 (June 1, 2022), https://www.accessdata.fda.gov/cms_ia/importalert_118.html (betel nut products were detained in 2009 and 2014); U.S. Food and Drug Admin., Import Alert 45-07 (May 24, 2022), https://www.accessdata.fda.gov/cms_ia/importalert_118.html (betel nut products were detained in 2011 and 2018).

21 21 U.S.C.A. § 387(18); 21 C.F.R. § 1140.3 (defining “smokeless tobacco” as “any tobacco product that consists of cut, ground, powdered, or leaf tobacco and that is intended to be placed in the oral or nasal cavity.”). See also Shah Bros. v. United States, 34 C.I.T. 1329 (October 6, 2010) (gutka manufacturer successfully argued that gutka “is universally marketed and consumed as chewing tobacco” in a tariff rate dispute with U.S. Customs and Border Protection.)


25 Prakash C. Gupta et al., supra note 6.

26 One way to address this would be to take an approach similar to that used by New York’s regulation of for shisha (hookah tobacco) with and without tobacco. “Shisha” is defined as “any product made primarily of tobacco or other leaf, or any combination thereof, smoked or intended to be smoked in a hookah or water pipe.” N.Y. Pub. Health Law § 1399-aa (12) (emphasis added). Similarly, gutka could be more broadly defined to include products composed of lime paste, spices, and areca with or without tobacco intended to be consumed as gutka.


29 Id.

30 Id.

31 Oregon defines “moist snuff” to include substances paired with chewing tobacco and explicitly names betel as one of these substances. O.R.S. § 323.505(2)(b); O.A.R. 150-323-0310(2)(b)(B).

32 U.S. Food and Drug Admin., supra note 22.

33 Id.

34 N.Y. Pub. Health Law § 1399-mm (1).


36 CNMI House Bill No. 19-65, SS1, “To prohibit the sale, offer, or giving Areca Nut (Betel Nut) to any person who is under the age of 18 (minors); and for other purposes” (2016), http://www.cnmilaw.org/pdf/public_laws/19/pl19-66.pdf.

38 Id.

39 U.S. FOOD AND DRUG ADMIN., supra note 22.


41 The CNMI also has the following policy for school-aged children: “No person, parent or legal guardian, shall permit or allow any minor under the age of 18 years, having lawful custody, permanent or temporary, to possess or consume any Areca Nut (Betel Nut) at any given time.” Id.

42 Prakash C. Gupta et al., supra note 6.

43 CAL. EDUC. CODE § 48900(h).

44 Ohio Rev. Code § 3313.751 (B), (C). It is of note that Ohio school districts are only required to adopt a written policy for enforcement and disciplinary measures for products containing tobacco, but do not have to do so for areca nut products without tobacco. Ohio Rev. Code § 3313.751(D). The lack of written disciplinary policies for areca nut alone could lead to selective and unpredictable enforcement in districts with students from immigrant populations with a tradition of areca nut use.

45 ARCADIA, CAL., CODE OF ORDINANCES § 4290.1.

46 In practice, such a policy could be difficult to enforce because once a product like gutka or betel quid with tobacco is placed in a person’s mouth, it would be virtually impossible to distinguish it from a product without tobacco like pan masala or betel quid without tobacco.


49 H.B. 525, 2015 Leg., 28th Sess. (Haw. 2015) (reference to “betel nut products” was removed from the final version of the bill enacted into law).

50 N.Y. PUB. HEALTH LAW § 1399-aa (10).

51 MASS. GEN. LAWS ch. 270 § 28.

52 N.Y. PUB. HEALTH LAW § 1399-mm (2)(b).


54 ARCADIA, CAL., CODE OF ORDINANCES § 4290.1.