

Mixed-methods evaluation of a ban on tobacco advertising and promotion in Banyuwangi District, Indonesia

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ABSTRACT

Introduction Tobacco advertisement bans in Indonesia are rare and seldom evaluated. The recent introduction of an outdoor tobacco advertisement (OTA) ban in Banyuwangi District, East Java, Indonesia provided an opportunity to evaluate such policy.

Methods Using a mixed-methods approach, we undertook an observational study of OTA in 15 locations where such advertising had been prohibited. We also interviewed a sample of 114 store-owners/storekeepers and 131 community members, and conducted in-depth interviews with government officials and the Public Order Agency (POA), the designated enforcement agency.

Results In phase 1 we found only one location was free of advertisements. We identified 667 advertisement points and 1283 advertisement materials in the study location; of these, 7% and 7.8% were within 25 m of schools and religious sites, respectively. Phase 2 showed that 68% of the respondents were unaware of the regulation, but many supported an OTA ban. In-depth interviews revealed that not all members of the POA were familiar with the regulation. POA members believed they will enforce the regulation better if higher level regulation for ban on tobacco advertisements, promotions and sponsorships was made and digital application is available to support surveillance.

Conclusion Policy violations were evident 1 year after the launch of OTA ban in Banyuwangi. Tobacco advertisements are still visible, including near schools and religious sites, potentially stimulating adolescents to smoke. Regional regulation and setting specific violation reductions as a performance indicator for POA could improve compliance. App-based technology could assist violation surveillance and reporting, as could awareness-raising campaigns that encouraged community support to report violation through the apps.

INTRODUCTION

To date, Indonesia remains the only country in Asia that has neither signed nor ratified the Framework Convention on Tobacco Control. As a result, tobacco control policies are limited, and smoking prevalence in 2013 among those aged 10+ has reached 56.7% in males and 1.9% in females.¹ A 2014 survey of teenagers aged 13–15 years found that 18.3% smoked (33.9% of boys, 2.5% of girls),² an increase from a similar survey in 2006, where 24.5% teenage boys and 2.3% teenage girls smoked.³ A 2016 national survey reported that 8.8% of Indonesian children aged 10–18 years smoked (17.2% in boys and 0.2% in girls), which is still far from the government target to reduce it

to 5.4% by 2019.⁴ Most of these children started smoking before they were 16 years old (66.7%) and smoked cloves cigarettes (68.7%).⁴ It is not a surprise therefore that there were nearly 2 million cases of tobacco-related diseases and 230 862 tobacco-related deaths in the country in 2015 alone. It was estimated that due to tobacco use the country bears a total economic loss of US\$45.9 billion in that year.⁵ Tobacco advertising in Indonesia is both creative and aggressive,⁶ promoting associations between smoking and emotional control, and using varied themes, such as masculinity, modernity and traditional values.⁷ Tobacco promotions are also ubiquitous; a 2015 evaluation undertaken in five Indonesian cities found tobacco billboards were visible from 32% of schools, while 85% of schools were surrounded by stores that featured tobacco advertisements, promotions and sponsorships (TAPS).⁸ A 2017 survey of 10 cities found 2868 TAPS featured on routes children and adolescents use when going to school, extracurricular lessons, shopping centres, religious sites or to social settings.⁹ Findings from the Global Youth Tobacco Survey show these promotions are effective as 50% of Indonesian children reported noticing tobacco advertising at the point of sale.²

Several studies show that tobacco advertising appeals to youth and is associated with greater odds of smoking susceptibility.¹⁰ A study of Indonesian high school students (n=1943) reported that 32.4% of those surveyed found at least 1 out of 15 cigarette advertisements shown to them encouraged them to smoke.¹¹ In addition, respondents' perceptions of and attitudes towards TAPS were also associated with smoking initiation and current smoking.¹¹ More generally, systematic reviews and meta-analyses assessing the effects of exposure to tobacco product displays from the point of sale report these increase both smoking and smoking susceptibility.^{12–13} Evaluations following the removal of tobacco point of sale displays found the policy had reduced the proportion of adolescents noticing these displays and had also led to declines in smoking susceptibility and behaviour.^{14–15} Collectively, these findings suggest TAPS bans could deter smoking initiation among Indonesian youth.

Government Regulation No 109/2012 restricts the design and outdoor tobacco advertisement (OTA) placement in Indonesia, and with decentralised government system local governments have the authority to regulate OTA in their areas. Minister of Education and Culture's Regulation No 64/2015 bans placement of tobacco advertisements within school areas, but the regulation



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did not protect the children when they walk outside of schools. In addition, a study in three cities in Indonesia reported that OTA generated only 0.12%–1.01% of the total local government income and 11.9%–38.64% of the total local government income from advertisement tax,¹⁶ which is a tax on top of the cost for renting an advertisement space.

Despite the availability of higher regulations, the lack of protection of children from tobacco outside of schools and the fact that OTA generated only a small portion of local government income, currently less than 10% of the 514 districts and cities in Indonesia have enacted bans on OTA and few evaluations have been undertaken, which may limit implementation of similar measures in other parts of Indonesia. In 2016, the Head of Banyuwangi District issued Regent’s Regulations (Peraturan Bupati/Perbup) to ban OTA on main roads and sports arenas, or within 25 m of schools and religious sites (online supplementary file 1 contains more details of the regulation).

Banyuwangi is the eastern-most district in East Java Province; although located in the largest tobacco-producing province in Indonesia, Banyuwangi strives to generate income via ecotourism and cultural tourism. The OTA ban aimed to prevent smoking uptake among youth, as well as align with the local district’s goal of enhancing its reputation as an ecotourism destination. Different from those implemented in Bali, a neighbouring tourist destination, Banyuwangi’s regulations on OTA are not made as part of smoke-free regulation. They stand as clauses within a regulation to control the density of advertisements in the district (online supplementary file 2 contains more information about Banyuwangi District and the local economy).

Because Banyuwangi has a reputation for innovation, it could become a role model for other Indonesian districts, particularly those also focusing on ecotourism. This study evaluated the enforcement of the regulations, thus providing a baseline for future assessments and a case study that could assist other districts.

METHODS

Study design

The study setting was the Banyuwangi subdistrict of Banyuwangi District, specifically 13 roads and 2 non-road locations where OTAs were no longer permitted. As this subdistrict is close to the Banyuwangi District government, we expected implementation of the new regulations to occur here first. We used a mixed-methods approach: an observational audit, a survey of the communities, and indepth interviews with government officials and members of the Satpol-PP (Public Order Agency (POA)), the designated enforcing agency. Data were collected between November and December 2017.

Phase 1: observational audit

Sampling

In phase 1, all forms of advertising, including billboards, electronic advertisements, posters, banners, store board name, stickers or any items containing tobacco brand logos, visible from the roads were recorded. We observed stand-alone advertisements and advertisements posted on stores, which we defined as retailers selling any consumer goods.

Data collection

Five teams of two trained enumerators collected the data using an Android-based data collection application.¹⁷ We measured the proximity of advertisement to schools and religious sites

Table 1 Definition used in the study

Advertisement point	A spot where a cluster of advertisements for the same brand and type are found. For example, five posters of the same Apache brand found in the same location count as one advertisement point.
Number of advertisement materials	The total number of all advertisements. For example, five posters for a similar Apache brand found in the same location equal five advertisement materials.
Store-affiliated advertisement	An advertisement placed on any part of a store and visible from the road.
Advertisement density	The number of advertisement points or advertisement materials per 100 m of street length. For sports arenas and parks, advertisement density represented the number of advertisement points or advertisement material per 100 m of the length of all the streets within and surrounding the area.
Advertisement proximity	Distance from an advertisement to the outermost fence of the nearest school or religious sites, categorised as: 1. Within 25 m. 2. Within sight.

using a mobile app¹⁸ and assessed advertisement density using Google Map.

Data analysis

We used two different measures to calculate the number of advertisements: the number of advertisement points (store-affiliated and non-store-affiliated) and the number of advertisement materials visible. As the 25 m boundary required by the regulation was considered limiting, we added a ‘within sight’ category, given advertisements visible from schools or religious sites could influence smoking behaviours. Table 1 defines the measures used in this phase.

Descriptive analysis was used to assess the number and types of advertisements in forbidden locations, and their proximity to schools and religious sites.

Phase 2: survey of the communities

Sampling

To collect information from the community, we surveyed both consumer goods store-owners/storekeepers and the general public. Data from phase 1 showed 180 consumer goods stores in the location featured tobacco advertising that was visible from the road. We randomly selected 150 of these stores using random selection command in Stata V.14. Store-owners/storekeepers of the stores and a random person intercepted near the store at the time of visits were interviewed for their knowledge and opinion of the regulation after the consenting process. The response rate for owners or manager of stores open for business at the time of interview was 84% and the response rate for the general public was 87%. Four additional staff audited 10% of the surveys.

Data collection

Using Android-based data collection apps on mobile device,¹⁷ we asked respondents their identity, socioeconomic status, their knowledge of tobacco harm, their knowledge of local existing tobacco control regulations (the existence of a regulation prohibiting smoking in designated places, prohibition to display OTA in designated places, prohibition of sales to minor and sales in schools) and their opinions on them. We also asked if they received any incentives from the tobacco companies or the advertisement agencies for placing an advertisement on their stores.

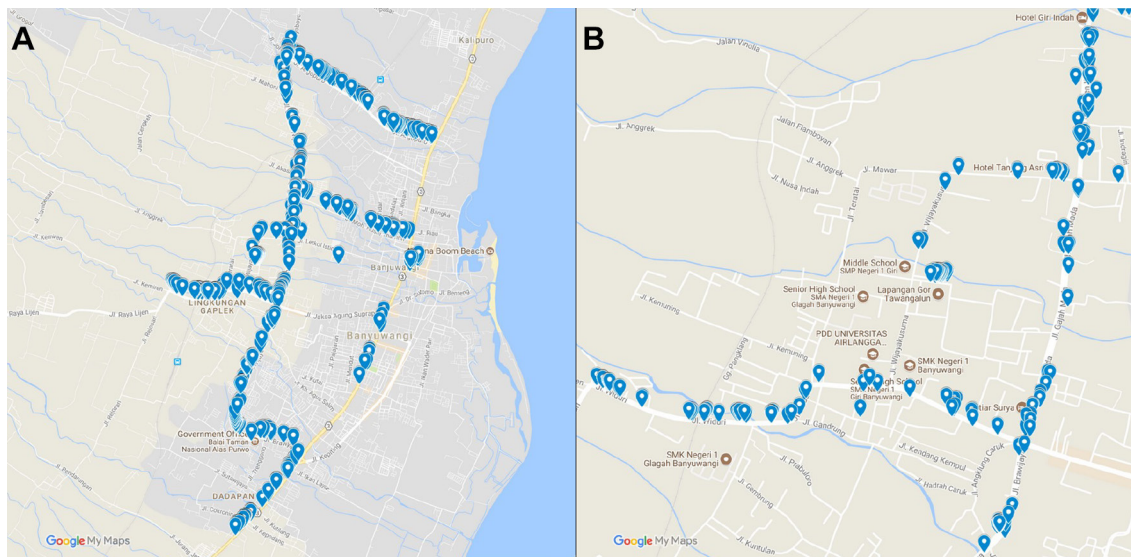


Figure 1 (A) Distribution of advertisement points in the study location. (B) Example of advertisement distribution near schools and sports arena complex.

Data analysis

Descriptive statistics (frequencies and percentages) were computed using Stata V.14.

Phase 3: indepth interview

Sampling

We recruited seven informants including government officials involved in making the legislation, those providing advertisement permits and POA using a snowball approach, and conducted indepth interviews where we explored participants' views on the regulation, impediments and potential improvements.

The semistructured interviews took on average 40 min and were recorded and transcribed; we analysed the data using a thematic analysis approach.

RESULTS

Phase 1: observational audit

We identified 1283 advertisements at 667 advertisement points in the study location (figure 1A). Only one street was free of OTA. Almost 80% of the advertisement points were store-affiliated and two of four locations having all OTAs on stores were close to schools and sport complexes (figure 1B). Of the 667 advertisement points, 7% were within 25 m of schools and 7.8% were within 25 m of religious sites; 16% of advertisements were visible from schools and 18% from religious sites.

OTA density was 3.36 advertisement points/100m or 6.45 advertisement materials/100m (table 2). Of the six main roads used by intercity trucks and buses (Jl Argopuro, Jl R Wijaya, Jl Brawijaya, Jl S Parman, Jl Hayam Wuruk and Jl Gajah Mada), two had the highest advertisement point density and four had

Table 2 Number and percentage of tobacco advertisement points, materials and density

	Total ad		Non-store-affiliated ads		Store-affiliated ads		Road length m	Ad point density n/100 m	Ad material density n/100 m
	Total ad points n	materials n	n	%	n	%			
Jl Argopuro	118	196	37	31.4	81	68.6	2600	4.54	7.54
Jl R Wijaya	110	280	16	14.5	94	85.5	1500	7.33	18.67
Jl Brawijaya	108	252	31	28.7	77	71.3	3300	3.27	7.64
Jl S Parman	64	96	0	0.0	64	100.0	2000	3.20	4.80
Jl MH Thamrin	49	69	3	6.1	46	93.9	1900	2.58	3.63
Jl Hayam Wuruk	47	108	7	14.9	40	85.1	700	6.71	15.43
Jl Widuri	46	68	14	30.4	32	69.6	1000	4.60	6.80
GOR Tawang Alun	35	49	1	2.9	34	97.1	1230	2.85	3.98
Jl Gajah Mada	25	56	15	60.0	10	40.0	1000	2.50	5.60
Jl HOS Cokroaminoto	20	31	0	0.0	20	100.0	850	2.35	3.65
Taman Sri Tanjung	19	25	6	31.6	13	68.4	610	3.11	4.10
Jl Mawar	12	23	4	33.3	8	66.7	900	1.33	2.56
Jl Ahmad Yani	11	25	0	0.0	11	100.0	1200	0.92	2.08
Jl Wijaya Kusuma	3	5	0	0.0	3	100.0	850	0.35	0.59
Jl Simpang Gajah Mada	0	0	0		0		240	0.00	0.00
Total	667	1283	134	20.1	533	79.9	19880	3.36	6.45

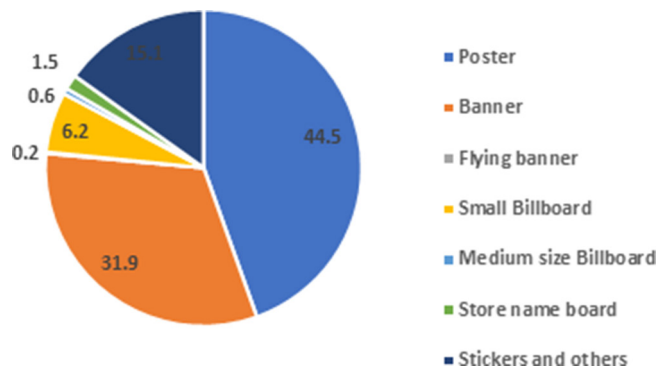


Figure 2 Proportion of type of advertisement.

the highest advertisement material density. Of the advertisements observed, 20% featured Gudang Garam brands, 19.1% showed Djarum brands and a further 16.5% featured British American Tobacco brands (Dunhill and Lucky Strike). Other brands shown were of Philip Morris brands (Sampoerna, Magnum, Marlboro, Dji Sam Soe and U series) with 12% and Japan Tobacco (Apache brands) with 7.7%; the remaining brands accounted for <10% of the observations.

We found 770 stores selling consumer goods in the study location; of these, 180 (23.4%) featured OTA that was visible from the road, and sports arenas had the highest percentage of stores featuring OTA (63.6%). Large billboards no longer featured OTA, and posters accounted for 44.5% of the 667 advertisement points, followed by banners (31.9%) (figures 2 and 3). Most advertisements (84%) had both graphic health warnings and ‘smoking kills’ text, 3% had one or the other, and 13% had neither a graphic nor a text health warning.

Phase 2: community survey

Of the 150 stores with OTA randomly selected for survey, we obtained information from 114 store-owners/storekeepers and 131 members of the public (3 stores had the same owners/keepers, 14 stores were closed at the time of visit and 19 owners/keepers declined to take part in an interview). Exactly 34.2% of owners/keepers and 55% of the general public were male. Sixty-eight per cent of the respondents were unaware of the OTA regulation (67.5% of the owners/keepers and 68.7% of the general public). More than half of the interviewed owners/

keepers (57.7%) reported receiving incentives (eg, cash, free cigarettes or other small promotional items such as calendars, t-shirts or umbrellas) for placing advertising in their stores.

Around half of the respondents (53.5% of the owners/keepers and 48.1% of the general public) did not approve of tobacco advertisements being placed in public spaces. However, 92.2% of the respondents (90.4% of the owners/keepers and 93.9% of the general public) agreed with the OTA regulation.

In interviews done by the audit team who revisited 10% of the interviewed store-owners/storekeepers, we found that those who did not receive incentives were willing to remove the advertisements, but those who received a contract valued by money wanted to finalise the contract. Another important point found was that some of them were willing to comply as long as other stores were also compliant to the regulation, indicating the importance of consistent enforcement.

Phase 3: indepth interview

We identified three themes after analysing the indepth interview transcripts: knowledge and acceptance of the regulation, surveillance systems and violation reporting, and performance measurement.

Knowledge and acceptance of the regulation

Not all POA participants were familiar with the regulation, which had not been publicised to them or to the wider community. Those aware of the regulation supported its intention of promoting health and keeping roadways clean and more organised, although one informant suggested revisiting the regulation as tobacco advertisement tax represents potential income for Banyuwangi.

Most POA participants supported stronger regulation at a higher level (Peraturan Daerah/Perda) than was enacted. They thought a Perda would entail wider stakeholder consultation, including tobacco industry and advertising agencies, which would increase awareness of the policy and facilitate enforcement. However, government participants noted this change was not a priority.

...It’s better to make a Perda...it’s better if we create [the regulation] together. So this government also needs to hear what the community wants.... (informant 1)

...Perbup is only...what do you call it....only temporary....a Perda will have approval from members of parliament and all [stakeholders] will be involved. Because it’s stronger... legally.... And it will ease [enforcement]. (informant 2)

Surveillance system and violation reporting

Three teams comprising 27 POA members monitored compliance. However, their many other duties limited the time available for enforcement. Although the Banyuwangi Government has a web-based compliant reporting system, this system has not been promoted and had not been used to report violations. POA participants suggested that app-based surveillance systems would facilitate their role.

....we need to improve the system, both the IT system and coordination system....up to android level so...we can coordinate with the head of subdistrict, head of villages and Satpol-PP...they can take pictures for example [to check] if this [advertisement] has permit or not, has paid tax or not, there...our communication coordination will be better, because we...the IT is very...very important. (informant 1)



Figure 3 Samples of types of advertisements: (A) store name board, (B) banner, (C) poster, (D) poster, and (E) stickers and others.

Performance measurement

Although the POA had the responsibility for managing policy implementation and for postimplementation evaluation, they had no specific targets to achieve in their key performance indicator, an omission that hindered effective enforcement. Nor did POA have a success indicator to evaluate the number of tobacco advertisement permits granted. The lack of a database also inhibited effective monitoring, particularly of recidivist offenders.

DISCUSSION

Although large tobacco billboard advertisements were no longer displayed in Banyuwangi, violations of the regulations occurred in all locations except Jl Simpang Gajah Mada. Many of the respondents surveyed were unaware of the regulation, although only a small percentage disagreed with it. Regulatory enforcement had been hindered by community members and enforcers' lack of awareness, unavailability of a real-time surveillance and reporting system, and an absence of specific performance indicators.

Tobacco advertisements were still found near schools in Banyuwangi, at similar levels to cities with no regulations controlling tobacco advertising,¹⁹ although the advertisement format differed, with posters, rather than billboards, being the dominant vehicle used. The use of POA to enforce the policy paralleled the system used in Jakarta and Bogor, although it was less robust. The policy itself was also more rigorous in Bogor and allowed for mobile courts to facilitate prosecutions and focus on priority areas.²⁰ Both Jakarta and Bogor had encouraged community members to report violations through social media or via apps, and both had undertaken community awareness campaigns.

Opponents of TAPS bans argue this measure decreases the government's revenue.²¹ We detected a similar claim during the indepth interviews. However, Banyuwangi's income from advertisement tax did not decrease after the advertisement ban, a finding that parallels reports from Bogor, where income increased during 2008–2013, even after the TAPS ban. Banyuwangi's income from advertisement tax was actually greater in 2017 (Rp2.64 billion) compared with that in 2016 (Rp1.75 billion) and in 2015 (Rp2.17 billion), mostly due to increase in advertisement tax per square metre.

Unlike Bogor City and Jakarta, which have involved the general public in violation reporting, Banyuwangi uses a rudimentary system. The limited number of POA members, and reliance on POA alone, further hinders effective enforcement and means at least some illegal tobacco advertisements are unlikely to be detected. There is an urgent need to develop a web-based or app-based surveillance system that allows community members to report violations of tobacco advertising policies in Banyuwangi.

The fact that respondents' approval for the regulation was high, although only half of the respondents did not approve of OTA being placed in public places, shows that they may not understand why the regulation was made, which indicates further need for awareness-raising. Such programme should target lay people and store-owners/storekeepers and all POA officers on the ground. An evaluation of smoke-free policy in Bogor suggested that government and law officials' support in promoting policy and demonstrating compliance may improve social enforcement.²⁰

Because billboards are more visible, they are easier to control; however, tobacco companies appear to have focused more on instore promotions and invested more heavily in posters, banners

and store name boards. Posters are more difficult to control as there are many of them, and they are easily placed and difficult to peel off. Without stronger enforcement, it is likely that Banyuwangi will see rapid growth in tobacco advertisement posters, similar to what has occurred in India.²²

Other studies report that tobacco advertisements targeted youth and low-income communities,^{23 24} although we did not distinguish such tailoring. However, the fact that the main roads with the highest advertisement density were those used by inter-city trucks and buses, and two of the roads near school and sports complex had all OTA on stores, means we cannot discount deliberate placement to target young people. As our study was conducted in the subdistrict closest to the government office, our results may underestimate violations in other subdistricts.

Penalties for violating the regulation were merely a requirement to remove the advertisement, which placed additional burdens on POA. Other penalties could be considered, including using violation data from POA, as a basis for granting future permits. Rewards system based on specific performance indicators could also be used for POA.

POA are required to enforce laws with 'manners', meaning that POA members need interpersonal persuasion skills to conduct their work. Giving all POA members training to take assertive action may improve enforcement. Having a higher level regulation (Perda) that involved wider stakeholder consultation is also necessary to provide POA with a stronger basis for enforcement

What this paper adds

What is already known on this subject

- ▶ Regulations banning tobacco advertisements, promotions and sponsorships (TAPS) in Indonesia are rudimentary.
- ▶ To date only less than 5% of the 514 districts and cities in Indonesia have introduced regulations restricting TAPS.
- ▶ Results from two monitoring reports from Indonesia showed that tobacco advertisement billboards were visible from 32% of schools, and 85% of schools were surrounded by stores featuring TAPS.

What important gaps in knowledge exist on this topic

- ▶ Evaluations of the effects of introducing TAPS regulations are scarce, and this study assesses the first-year implementation of a regent's decree on outdoor tobacco advertisement in Banyuwangi District.

What this paper adds

- ▶ The study found that although people of Banyuwangi supported the regulation, implementation is lacking.
- ▶ There were still 1283 advertisements available.
- ▶ Almost 80% of the advertisement points were store-affiliated.
- ▶ There were violations within 25 m of schools and religious sites, and a higher proportion of advertisement points were still within sight from schools and religious sites, potentially stimulating smoking.
- ▶ Four important needs were identified:
 - Regional regulation (Peraturan Daerah/Perda) supporting the TAPS policy would support stronger enforcement.
 - Awareness campaigns encouraging community members to report TAPS violations should be encouraged.
 - Mobile application-based surveillance systems would improve reporting and ongoing evaluation.
 - Reducing TAPS violations should be included as key performance indicators for the Public Order Agency.

beyond the current Regent's government. A Perda would also provide rulings for all subdistricts in Banyuwangi, which may enable a total tobacco advertising ban in all areas of Banyuwangi, instead of merely setting a minimum 25 m boundary from schools to protect youth. As Banyuwangi has declared its commitment to be a child-friendly district, stronger and wider implementation of the current regulation, or better yet the regional regulation, will support this commitment.

To our knowledge this is the only study reporting an evaluation of advertisement ban policy in Indonesia. Limitations include the absence of baseline information on advertisement density or mapping in Banyuwangi or in East Java in general. However, our overview of OTA in Banyuwangi a year after the launch of the regulation could serve as a baseline to assess future successes and failures of the policy.

CONCLUSION

OTAs were still found in locations where they were not allowed, suggesting stronger enforcement is required, although some OTAs may have ongoing permits. Annual evaluation of the enforcement of the regulation is needed as is stronger measures, such as regional regulation, and use of specific targets for POA. Violation surveillance and reporting may benefit from app-based technology and community involvement after awareness-raising of the importance of TAPS ban policy.

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Contributors SKS designed the study, conducted the interviews and analysis, and prepared the manuscript. DMSKD helped design the study, conducted the interviews and analysis, and revised the manuscript. SL helped design the study, conducted the interviews and analysis, and revised the manuscript. AA helped design the study and revised the manuscript.

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