

Analysis of Results from Cannabis Pilot Trials in Swiss Cities – Part Two, mid-2024 to mid-2025

Executive Summary

Conducted by

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Abstract

In several Swiss cities and municipalities, the implementation of pilot trials to gather insights into the regulation of cannabis is continuing. The pilot trials are being conducted based on the experimental article introduced in 2021 in the Federal Narcotics Act and the associated ordinance. According to the latest figures from June 2025, around 10 400 adults are participating in the seven ongoing pilot trials. This corresponds to slightly less than five percent of the people who, according to the Federal Statistical Office, reported having consumed cannabis in the last month in 2022 (around 220 000 people). Different sales models are being tested in pharmacies, in specialized cannabis shops (some simulating a for-profit sales model and others that are not-for-profit), in associations ("social clubs"), and in the Drug Information Center (DIZ) of the City of Zurich, which all provide a controlled access to cannabis products.

The data available up to July 2025 shows that participants in the pilot trials are generally satisfied with the product quality, as well as the advice and information provided. So far, the pilot trials have also proceeded without any notable incidents or negative effects on health or public order. Some of the trials report improvements in mental well-being, which is attributed to the elimination of procurement stress and the reduction of stigmatization. For the majority of participants, legal outlets are now the main source of supply. After just one to two years, a large proportion of participants – in both non-profit and for-profit models – appear to be turning away from the illegal market, which is becoming less important for their supply.

Smoking products with a high THC content remain the most popular. However, interest in a broader range of products with new product categories (vaporizers, e-liquids, edibles) and products with lower THC content is increasing, and in some cases, changes towards lower-risk forms of consumption are observable. According to initial evaluations of the first 12 months of study participation, the average monthly amount of THC purchased per study participant remains relatively stable.

Sales staff at all points of sale have been trained on issues relating to consumption and addiction. In their interactions with consumers, the non-profit models place a particular focus on prevention, while the for-profit models tend to emphasize the personal responsibility of study participants in areas such as the use of medical advice and prevention.

Discussions with international experts from fields such as public health, criminology, psychology, and market regulation confirm the uniqueness and potential of the Swiss approach. Findings from other countries underscores the importance of a strict regulation to introduce a non-commercial system, clear guidelines for packaging and advertising, and coherent governance at the national level if public and individual health is to be protected effectively.

These findings provide important guidance for the debate on a possible regulation of cannabis in Switzerland that would combine public health, safety, and youth protection.

Keywords: Cannabis; regulation; sales model; controlled access; non-medical use; pilot trials; prevention; youth protection; Swiss cities; Article 8a Narcotics Act.

Content and background of the study

With the amendment to the Narcotics Act, which came into force on May 15, 2021, a so-called experimental article was introduced (Article 8a). The article is the legal basis for temporary pilot trials in Swiss cities and towns (hereinafter referred to as "Swiss cities" for simplicity) to test various models for regulating non-medical cannabis. The pilot trials are being conducted as part of scientific studies. They test various sales models with the study participants. These take place in pharmacies, in specialized cannabis shops (with simulated for-profit and non-profit sales models), in associations such as "social clubs," and in a drug information center. The aim of these trials is to document the effects of different regulatory approaches on the health of consumers, public health, consumption behavior, youth protection, socioeconomic aspects, as well as on the illegal market, public order, and crime (see Article 2 of the Ordinance on Pilot Trials under the Narcotics Act).

The Federal Council commissioned the Federal Office of Public Health (FOPH) to inform politicians and the public about the results achieved at the latest after completion of the pilot trials. Following a call for tenders, the University of Lausanne (Institute of Social Sciences) and the University of Applied Sciences and Arts Northwestern Switzerland (Institute for Nonprofit and Public Management) were commissioned to analyze the pilot trials during the first two years of their implementation. In November 2024, a first annual report¹ was published on the results of the period from 2023 to mid-2024, while this second annual report provides an update (covering the period from mid-2024 to mid-2025) and expands on the findings presented. As in the first annual report, the present report examines the impact to date on individual and public health, consumer behavior, the protection of minors, socioeconomic factors, public order and safety, and illegal trade. In addition, it investigates the similarities, differences, and special features of the individual pilot trials – in terms of study design, management and implementation processes, measures taken, and results achieved. The authors of the report are political science specialists who analyze the projects from a governance perspective and are independent of the seven pilot trials.

Methodological aspects and scope of the study

This report is based on four different modules: Firstly, an analysis of the political and media environment, building on the findings presented in last year's report and providing an update for 2024.

Secondly, case studies were conducted on the seven pilot trials, including a short summary of last year's results and an update with this year's results. These updates are based on interviews with a total of 33 stakeholders (pilot trial managers, implementation partners, and national stakeholders) as well as on the annual reports of the pilot trials.

Thirdly, two systematic literature reviews were conducted on the topics of advertising and marketing of cannabis products as well as youth protection in connection with legalization. Also, a supplementary literature analysis on relevant governance studies was done.

Fourthly, in-depth interviews were held with nine international experts from various fields (public health, psychology, epidemiology, economics, criminology, political science, sociology, behavioral research). The challenges and effects of cannabis regulation abroad and the related scientific findings and sought informed insights about the different sales models tested in Switzerland were discussed in these interviews. The combination of these modules and data has resulted in a comprehensive overall picture on the pilot trials.

Framework conditions and political developments

The regulations according to the Ordinance on Pilot Trials under the Narcotics Act (BetmPV) are as follows:

- The pilot trials must include a safety concept as well as a health and youth protection concept (Art. 2 and 22 BetmPV).
- They are limited to a duration of five years, with the possibility of a two-year extension, and to the participation of 5 000 consumers (Art. 5 and 6 BetmPV).
- They are geographically limited and must sell cannabis that is grown in Switzerland to organic standards (Art. 5, 7 and 8 BetmPV).

¹ Mavrot Céline, Hadorn Susanne, Novet Baptiste (2024). *Analyse des résultats des essais-pilotes de cannabis dans les villes suisses - Première partie, 2023 à mi-2024*. Etude sur mandat de l'Office fédéral de la santé publique. Université de Lausanne, Institut des sciences sociales et Fachhochschule Nordwestschweiz, Institut für Nonprofit und Public Management.

- Pilot trials must monitor the health of participants and appoint a study physician responsible for this (Art. 19 BetmPV).
- Sales staff must be trained, and advertising for cannabis products is prohibited (Art. 12 BetmPV).
- Consumption of cannabis in the public space is prohibited, as is the passing on of the product by pilot trial participants to third parties, and there is a ceiling on the individual purchase quantity (Art. 16, 17 BetmPV).
- Lastly, the pilot trials must rigorously document the effects of the sale on various aspects, particularly social, health, and safety aspects (Art. 27, 32 and 33 BetmPV).

In addition, the National Council's Social Security and Health Committee (SSHC-N) has drafted a preliminary draft of a possible future Federal Act on Cannabis Products (Cannabisproduktegesetz, CanPG). The SSHC-N launched a consultation on this draft on August 29, 2025, which runs until December 1, 2025. The key points are summarized below, although this summary does not claim to be exhaustive:

- The cultivation of cannabis for personal use and the purchase of cannabis products will be permitted for adults. The sale to minors will remain strictly prohibited, as will any form of advertising, sales promotion, or sponsorship.
- The commercial cultivation and production of cannabis products will only be permitted with a federal license. The products must meet high quality standards and must be sold in neutral packaging.
- Sales cannot be profit-oriented and are limited to a small number of outlets that must have a license from their canton. Cantons can also take over sales themselves or transfer them to municipalities. In addition, the federal government can grant a single license for online sales.
- The profit-oriented activities of cultivation and production must be clearly separated from non-profit-oriented sales. Cannabis is to be monitored via an electronic tracking system from cultivation to sale.
- A steering tax is planned for cannabis products to restrict consumption and steer consumers towards less harmful products.
- The costs of enforcement are to be covered by fees and compensation.
- Administrative and criminal penalties are provided for in the event of violations. The zero-tolerance policy for cannabis use in road traffic remains in place.
- The federal government and the cantons are to cooperate in implementing the law and coordinate their measures.

Overview of ongoing pilot trials

According to the latest figures from mid-2025, a total of around 10 400 consumers is participating in the ongoing pilot trials. This corresponds to slightly less than 5 percent of the ≈220 000 people who, according to figures from the Federal Statistical Office, reported having consumed cannabis in the last month in 2022.²

The University of Basel analyzed raw data from the pilot trials as part of a separate mandate (Stoffel 2025, unpublished³). The overall sample across all pilot trials is as follows: 78 percent of participants are male, around 20 percent are female, and 2 percent fall into the 'diverse' category or did not provide information about their gender. At around one-third, the proportion of study participants with a university degree is high. Furthermore, there is an underrepresentation of younger age groups (within the group of adult cannabis users) and, according to feedback from pilot trial leaders, an underrepresentation of people with low cannabis consumption (i.e., the pilot trials tend to represent people with high consumption).

In summary, the pilot trials are continuing to run smoothly and there have been no reports of problems with public safety. According to feedback from the pilot trials and analysis of policy and media coverage, there are still no known negative reactions to the trials, neither in the neighborhoods around the respective sales outlets nor among the general public. The media continues to report on the pilot trials in an informative and (cautiously) positive manner. Although individual critical points or challenges (such as the difficulty of reaching particularly vulnerable population groups with the pilot trials or the cooperation of

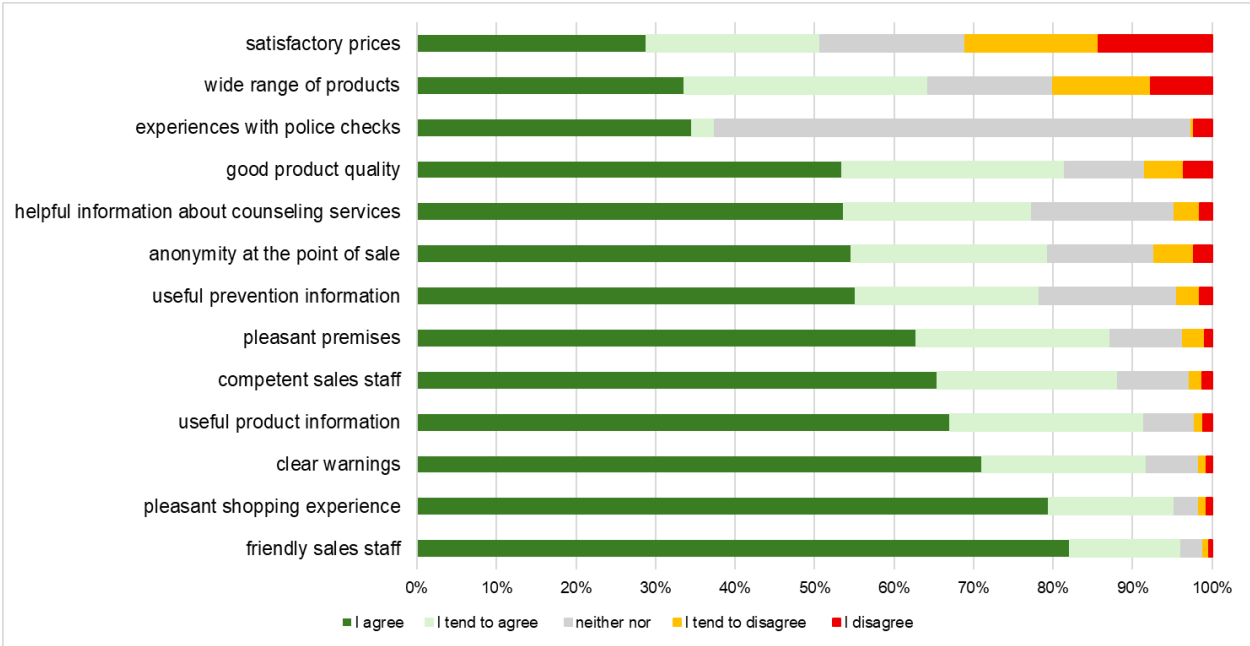
² It should be noted that, due to the eligibility criteria, the pilot trials are only accessible to around one-third of the Swiss population.

³ Stoffel, S. (2025). *Erstellung des Datensatzes und Auswertung von Rohdaten der Pilotversuche mit Cannabis in der Schweiz* (unveröffentlichter Bericht, Universität Basel, Institut für Pharmazeutische Medizin). Commissioned by: Federal Office of Public Health (FOPH).

a pilot trial with a foreign company) are mentioned, this has not yet led to a broader media debate. Regarding the political context, it can be noted that there have been hardly any new parliamentary motions in the cities and cantons where the pilot trials are currently underway that would reflect any questioning of the pilot trials. In some cases, it has even been decided (with the approval of the FOPH) to extend the pilot trial (Weedcare) or there are plans to increase the number of participants (ZüriCan).

Figure 1 provides an overview of various aspects of the study participants' satisfaction with the pilot trials. It should be noted that these results are based on data from three pilot trials (Cann-L, Grashaus, and Weedcare) and therefore do not allow for a conclusive assessment of the satisfaction of all study participants with the pilot trials.

Figure 1 : Overview of study participants' satisfaction with the pilot trials



Source: Own representation based on Stoffel (2025, pp. 23-25)

Note: The presentation is based on data from three pilot trials

In summary, there is a high level of satisfaction, particularly with aspects such as the friendliness of sales staff and the overall shopping experience, the clarity of warnings on packaging, product and prevention information, advice on low-risk consumption, and the anonymity/privacy afforded in shops. The quality of the products is also generally rated positively, with just under a tenth (somewhat) dissatisfied. In contrast to the other categories, a comparatively high proportion of just under a third are rather dissatisfied or dissatisfied with the prices and around a fifth with the product selection. A more differentiated evaluation of the raw data based on the data from all pilot trials regarding the satisfaction of the study participants with individual aspects of the various pilot trials has not yet been carried out. This means that any differences between the various models tested – such as satisfaction with the different product ranges or anonymity/privacy in different types of sales outlets – cannot yet be evaluated.

Table 1 is an updated version of the table already published in the first annual report and summarizes the pilot trials in various dimensions:

Table 1: Comparative analysis of key dimensions within the pilot trials

	La Cannabinothèque (Vernier)	Cann-L (Lausanne)	SCRIPT (Bern, Biel, Lucerne)	Cannabis Research Zurich (Zurich)	Weedcare (Basel-Stadt)	ZüriCan (Zurich)	Grashaus (Basel-Landschaft)
Number of participants (June 2025)	Approximately 1,300	Approximately 1 500	762 ⁴	Approximately 3 200	314	Approximately 2 217	Approximately 1 100
Head of trial and study	Association ChanGE. University of Geneva. Geneva University Hospital.	City of Lausanne. Addiction Switzerland (NGO).	Research team from the Universities of Bern and Lucerne.	Swiss Cannabis Research Association. University of Zurich and Swiss Federal Institute of Technology Zurich (ETH).	Canton of Basel-Stadt. University Psychiatric Clinic Basel and the University of Basel.	City of Zurich. Zurich University Psychiatric Clinic.	Swiss Research Institute for Public Health and Addiction.
Type of point of sale	Specialist shop with a non-profit association structure.	Non-profit specialist shop operated as a health-oriented monopoly (or concession).	Pharmacies.	Specialist shops (for-profit). Pharmacies.	Pharmacies.	Pharmacies. DIZ (drug information center). Social clubs. Diversified sales in three types of outlets.	Specialist shops (for-profit).
Atmosphere at the point of sale	Neutral atmosphere, product knowledge.	Neutral atmosphere, prevention takes precedence over product knowledge.	Standard pharmacy appearance, safe sales with healthcare personnel.	<u>Specialist shops</u> : colorful atmosphere, product knowledge. <u>Pharmacies</u> : standard appearance, safe sales with healthcare personnel.	Pharmacies: standard appearance, safe sales with healthcare personnel.	<u>Pharmacy</u> : standard appearance, safe sales with healthcare personnel. <u>DIZ</u> : Specialized drug counseling center <u>Social clubs</u> : Community-promoting atmosphere, possibility of on-site consumption, and product knowledge.	Colorful atmosphere, knowledge of the product.
Sales staff	Sales staff specialized in cannabis. Trained in harm reduction and cannabis issues.	Traditional sales staff (not specialized in cannabis). Trained in harm reduction and cannabis issues.	Pharmacy staff specialized in the dispensing of narcotic products and in smoking cessation counselling, trained in less harmful consumption, harm reduction, and cannabis issues.	Sales staff specialized in management or sales, interested in cannabis. Trained in harm reduction and cannabis issues. Pharmacy staff specialized in the dispensing of narcotics. Trained in harm reduction and cannabis issues.	Pharmacy staff specialized in the dispensing of narcotics and smoking cessation. Trained in harm reduction and cannabis issues.	<u>Pharmacy</u> : Staff specialized in the dispensing of narcotic products and in smoking cessation counselling. Trained in harm reduction and cannabis issues. <u>DIZ</u> : Staff specialized on the use of psychoactive substances and harm reduction. <u>Social clubs</u> : Staff specialized in sales and interested in cannabis. Trained in harm reduction and cannabis issues.	Sales staff specialized in cannabis. Trained in harm reduction and cannabis issues.
Point of sale merchandising (e.g., sale of sweaters on behalf of the point of sale).	Neutral style. Products are visible. Merchandising.	Neutral style. Products not visible. No merchandising.	Pharmacy style. Products not visible. No merchandising.	<u>Specialist shops</u> : Appealing style. Products are visible. Merchandising. <u>Pharmacy</u> : Pharmacy style, products not visible, no merchandising.	Pharmacy style. Products not visible. No merchandising.	<u>Pharmacies and DIZ</u> : Pharmacy style, products not visible, no merchandising. <u>Social clubs</u> : Merchandising.	Specialist shop: Appealing style. Products are visible. Merchandising.
Marketing and communication	Simple and informative website. Limited presence on social media.	Simple and informative website. No presence on social media.	Simple and informative website. No presence on social media.	Elaborate (product) communication. Websites for the trial and the association appealing to a young target audience. Presence on social media.	Colorful and informative website. No presence on social media.	Simple and informative website. Limited presence on social networks (social clubs).	Elaborate (product) communication. Attractively designed website. Very proactive presence on social networks.

⁴ It should be noted that these participant numbers for SCRIPT are as of the end of 2024.

Table 1: Comparative analysis of key dimensions within the pilot trials (continued)

	La Cannabinothèque (Vernier)	Cann-L (Lausanne)	SCRIPT (Bern, Biel, Lucerne)	Cannabis Research Zurich (Zurich)	Weedcare (Basel-Stadt)	ZüriCan (Zurich)	Grashaus (Basel-Landschaft)
Business model	Non-profit, aims at self-financing without profit.	Non-profit, self-financing through the sale of cannabis.	Non-profit, revenue covers costs; compensation for pharmacies without profit margin.	For-profit model. For-profit for specialist shops, a small margin possible for pharmacies.	Non-profit, revenue shared between study, pharmacies, and producer; compensation for pharmacies without profit margin.	Non-profit, except for social clubs (non-profit organizations limited to 150 members), which can generate revenue from ancillary activities, but not from study products. A small margin possible for pharmacies.	For-profit model.
Trial Funders	Public (cantonal addiction fund) and private funds.	Public funding. City of Lausanne and cantonal addiction fund.	Public funding. Participating cities, SNF, Tobacco Prevention Fund.	Private funds from the cannabis industry. Private donations.	Public funding. University Psychiatric Clinic, Psychiatric Services Aargau, Canton of Basel-Stadt.	Public funding. City of Zurich, Psychiatric University Hospital Zurich.	Private financing. Operator of retail outlets (Sanity Group Switzerland AG).

Findings from the pilot trials with cannabis

At this stage, the following observations can be made from a comparative perspective on (1) the impact of the pilot trials on socio-health dimensions, security, and public order, and (2) the governance of cannabis production and sales.

Socio-health dimensions, security, and public order

Socio-health dimensions

- Due to the short implementation period of the pilot trials to date, there is only limited evidence on the impact on socio-health aspects.
- No negative effects on health have been observed. Where findings are available, they point to positive developments.
- Initial evaluation shows that mental health (e.g., anxiety and depression symptoms) has improved in two pilot trials, Weedcare and Grashaus. According to the pilot trial managers, one possible reason for this is that the stress of procurement and the illegality of the situation have been eliminated. The study participants also rated the destigmatizing effect of purchasing cannabis at legal points of sale as beneficial to their well-being.
- After one, and also after two years of participation, participants in the pilot trial Weedcare showed a decrease in problematic consumption – especially among people who previously had problematic consumption.
- In general, the data continues to show that many consumers stick to their consumption habits. At the same time, various pilot trials have found that some of the study participants are moving toward lower-risk consumption. Where alternative products to cannabis products for smoking are proactively offered, study participants also purchase them (e.g., in the SCRIPT pilot study, which focuses on tobacco smoking prevention in its pharmacy model). This shows that demand can be influenced, at least in part, by supply.
- Products with high THC content continue to be purchased most frequently, and those with low THC content least frequently. Flowers and resins are the most popular among consumers, although sales of products such as vapes, vaporizers, and edibles (edible cannabis products such as neutral gummies) are increasing in various trials.
- The average monthly amount of THC purchased by study participants remained relatively stable during the first 12 months.

Safety and public order

- Similar to what has been reported in the first annual report, there have been no negative incidents in terms of public order and safety during the subsequent implementation.
- The pilot trials have been running smoothly so far, and efforts have continued to inform the neighborhood and the rest of the population when new sales outlets were opened (e.g., at opening events). Cooperation with the police has also been smooth in all cases. However, after the initial phase, the

need for cooperation decreased significantly. So far, there has been no feedback from the police regarding problems with pilot trial participants or trial products.

Illegal market

- Current findings show that even non-profit models without commercial incentive strategies and with a controlled, health-oriented strategy are successful in combating a measurable part of the illegal market (in the sense of shifting the source of supply away from the illegal market for a measurable amount of cannabis sold on the legal market).
- In various pilot trials, legal outlets are now the main source of cannabis products for the majority of study participants. In three non-profit models (La Cannabinothèque, Cann-L, and Weedcare), around half to two-thirds of participants obtain their cannabis exclusively or almost exclusively from the legal market. The Grashaus trial (for-profit specialist shops) also showed a decrease in purchases from the illegal market. On average, participants only bought cannabis illegally 10 days per month instead of 20 days.
- The main reasons for study participants (mainly daily users) continuing to purchase some of their products on the illegal market are lower prices (especially through volume discounts), personal relationships with their suppliers (trust), convenience (in some cases easier availability), and the availability of a wide range of products.
- On the other hand, the safety and reliability of the products sold through the pilot trials are reasons that encourage legal purchases.

Governance of cannabis production and sales

The following insights were gained from the pilot trials at the level of production and sales governance.

Recruitment

In most pilot trials, recruitment is still ongoing, and additional participants are being accepted. In some studies (Grashaus, Cannabis Research), this is taking longer than expected and various strategies are being used to increase the number of participants, such as poster campaigns and targeted communication via social media.

Sales interaction, prevention, and study doctors

- Prevention messages can be communicated in a more targeted manner if there is a certain relationship between consumers and sales staff. This requires sufficient time on the part of the sales staff, which has been identified as a critical issue in some pharmacies.
- The prevention services offered in the pilot trials are diverse and include workshops (on topics such as safer use, smoking cessation, planned parenthood, or are designed specifically for young consumers), discussion evenings, and thematic campaigns.
- The maximum monthly sales volume does not pose a problem for participants in the pilot trials, although some participants consider the maximum purchase quantities per sale to be too low for logistical reasons.
- In the Cannabis Research and Grashaus pilot trials (for-profit specialist shops), topics such as terpenes (substances that determine the taste or aroma of the plant) and entourage effects (the interaction of various ingredients in cannabis that reinforce or influence each other's effects) are addressed during sales conversations, although it should be noted that there is a lack of reliable scientific evidence on these phenomena.
- There continue to be different approaches to assigning consumers (e.g., those with problematic consumption behavior) to the study medical teams. While many pilot studies require a mandatory consultation in certain cases, Cannabis Research and Grashaus rely on the personal responsibility of the study participants.

Sales staff

- Most pilot trials offer refresher training, training for new staff, and a (formal or informal) system for debriefing specific situations.
- Particularly pharmacies sometimes experience comparatively high staff turnover, which necessitates retraining.

Products

- Many consumers continue to appreciate the assured quality of the study products, i.e., they know what they are consuming and that the product is "clean" (the cannabis does not contain any additives, for example).
- In general, they are satisfied with the products, although there are still isolated quality issues, for example with seeds in products.
- In various trials, participants report that the THC content offered in vapes (maximum 20%) is too low.
- An interviewed representative of a for-profit model pointed out that in a future commercial model, products with low THC content should be sold at a slightly higher price than today. Otherwise, they could disappear from the market due to their low economic attractiveness. In contrast, it is important for non-profit models to control prices according to health criteria and without considering their profitability (e.g., ensuring a range of low-cost products with low THC content).
- In many pilot trials, it was decided to expand the product range after the initial implementation phase. This was because consumers repeatedly pointed out that they wanted a certain amount of variety and choice. The long processing times for the associated applications to the FOPH were mentioned as a challenge with this expansion of product range in various pilot trials.
- The primary goal of the non-profit models is to encourage participants to consume more products with low THC content or reduced-risk products in order to protect individual and public health. In the for-profit trials, there is a greater willingness to respond to participant demand, with a focus on displacing the illegal market.

Advertising/merchandising/communication

- The for-profit pilot trials continue to have a more colorful and active presence on social media (e.g., Instagram). The other pilot trials are often not active on these channels at all. However, in response to the first annual report, the Cannabis Research pilot trial has adjusted the communication on its two websites to avoid content that could be attractive to young people.
- One pilot project is investigating the use of social marketing — not to increase sales, but as a tool to promote public health by steering purchasing behavior toward lower-risk consumption patterns.

Production

- After a challenging start, cooperation with producers is now going well in all pilot trials.
- The production requirements, specifically the restriction to organic products and outdoor cultivation, continue to cause certain problems (external pollination, etc.).
- Future regulation should consider the interplay between production profitability and legal requirements for cannabis products.
- It is considered more difficult to produce products with a balanced THC-CBD ratio than products with a high THC content.

Financial aspects

- It has been shown that even non-profit models can achieve economic viability despite low turnover. Cann-L (a non-profit specialized shop), for example, was able to generate financial surpluses this year, which have already been invested in public prevention work.
- The two for-profit pilot trials have not yet been able to turn a profit.

Future regulation

The interviewees from Switzerland made the following comments on future regulation:

- Some interviewees believe it is important that, at least initially, there are strict rules for products such as vapes (due to their THC content) and edibles (because they are attractive to young people). In some pilot trials, however, there is also a desire to recognize the contribution of these products to tobacco smoking prevention and to regulate them based on existing evidence (e.g., sale of a limited range of edibles that are not too cheap and are sold without marketing).
- The requirements for producers with regard to vapes and edibles would have to be clearly defined in the regulations and focus not only on their composition but also on their toxicological effects.
- Any regulatory framework should be as uniform as possible throughout Switzerland to avoid excessive regional differences. Limiting the number of points of sale is desirable (among other things, so that

individual points of sale can be financially viable, but also to curb excessive competition, which stimulates consumption).

- Some pilot trial managers indicated that it should also be financially attractive for sales outlets to take on this task to a limited extent, for example through a limited return on equity. Nevertheless, a profit-oriented market is currently rejected by the vast majority of pilot trial managers.
- For the sake of consistency, the regulation of recreational cannabis should be designed in such a way that it is in line with the regulation and current developments in the field of medical cannabis.
- Care must be taken to ensure that the health-oriented goals that have been set are not undermined in the medium and long term by political offensives or implementation deficits.
- Adequate preparation by the authorities that may be responsible at the cantonal level in the future appears to be crucial for a smooth transition to a new system.

Findings from the international context

The following section presents the key findings from the international literature and from the interviews with international experts that could be relevant for future regulation in Switzerland.

General findings on the pilot trials and future regulation

- The Swiss approach of testing different regulatory models in pilot trials is considered to be very innovative and promising. However, there are limitations regarding the representativeness of the sample (e.g., exclusion of minors, first-time users, people with severe mental health problems) and the specific characteristics of the pilot trial context (e.g., limited reach, comprehensive training of sales staff). Consequently, results of the pilot trials do not cover all aspects of a future reality.
- Conclusions about the impact of the pilot trials on participants must be interpreted with the caveat that the actual product range in the pilot trials is much more limited than in a fully commercialized market (including products with very high THC content, but also diverse and novel products).
- Regulation should be a step-by-step process, starting with strict rules, because once the market is opened too much, there is no going back.
- Expectations regarding the effects of regulation should not be excessive shortly after the transition to a new system. In fact, a slight increase in consumption is to be expected at the beginning (experimentation effect), and the medium-term effects will only become apparent after a few years or even after one to two decades.

Findings on the various points of sale and models

- A model combining different types of sales outlets is considered the most sensible way to meet the diverse needs of consumers.
- Regarding pharmacies as points of sale, there are concerns that this could convey a confusing message about the properties and finalities of cannabis for recreational use. In addition, strict regulations would be necessary to prevent overly commercial dynamics (e.g., pricing, product range).
- If social clubs are approved, they should be supported and required to actively pursue their goals and tasks in the area of community support and peer prevention. Excessive competition between social clubs should be prevented, although limiting the number of members carries the risk of exclusivity (e.g., exclusion of financially weaker consumers) and makes it difficult for social clubs to remain economically viable.
- Non-profit outlets are considered the most suitable for protecting public health, consumers, and young people, and for enforcing all necessary restrictions on the product and its presentation. This model was strongly recommended by all experts.
- For-profit models are strongly discouraged, as they inevitably lead to a decline in prices and attract new consumer groups. From the experts' point of view, commercialization of the market is fundamentally at odds with public health objectives.
- Proactive, prevention-oriented counseling is considered essential, and must be tailored to the individual consumer (e.g., adapted to individual needs and characteristics).
- From a public health perspective, a strict elimination or minimization of sales incentives is considered necessary in all models.
- From the same perspective, it is noted that points of sale should not be concentrated in urban areas, nightlife districts, and neighborhoods with a high proportion of people with low socioeconomic status.

- If online sales are permitted – which experts believe is virtually unavoidable – this must be subject to strict conditions. Ideally, this should be done via a government website with the same prevention requirements as for in-person sales at a point of sale. As far as possible, the same requirements should be imposed as for on-site retail. Pop-up windows for age verification have proven to be insufficient.

Findings on prevention campaigns and the restriction of advertising and marketing

- Targeted group-specific prevention campaigns should be launched before the introduction of new regulations.
- International experience shows that a strict advertising ban is essential. Consistent implementation and the provision of appropriate resources are also crucial, because the cannabis industry is able to find and exploit loopholes. Since increased exposure to advertising leads to higher consumption intentions and even more consumption – especially among young people – this aspect is central to achieving health policy goals.
- Social media in particular is increasingly being used as an advertising platform. On the one hand, it primarily reaches young people, but on the other hand, implementing advertising restrictions on social media poses a particular challenge.
- Packaging must be regulated in detail (e.g., plain packaging, mandatory warnings including pictograms, prohibition of brand elements) in order to be unattractive.

Findings on various product-related aspects

- Any quantity restrictions (e.g., per sale, per month) should be tested extensively to ensure that they do not hinder the transition to the legal market. They should be based on THC content rather than the total amount of cannabis.
- A careful balance must be struck between ensuring that the legal market is sufficiently attractive and preventing an increase in demand for cannabis products. It must be clear that supply can also control demand.
- According to most experts, the sale of products with (very) high THC content should be prevented.
- The dynamics of a strong price dumping spiral in concurrence with the illegal market must be avoided, as it would make cannabis products too attractive.
- Commercial models tend to lead to the introduction of a variety of products that are presented as new and fancy but are not justified from a public health perspective.
- A growing and ultimately (too) high number of producers in a profit-oriented system (on a larger scale than in the pilot trials) could lead to undesirable market dynamics with regard to the product range. If producers are to be allowed to make a profit, this would therefore have to be subject to strict requirements.
- The product range should be controlled through a careful design of the chain between production, marketing, and sales.
- To better control sales dynamics and align them with public health objectives, vertical integration (i.e., the same organizations being allowed to produce and sell cannabis) should be avoided.

Further key findings

- Any registration system for consumers (on-site and online retailers) should be in line with the country's political culture so as not to have a deterrent effect. The ability of consumers to be allowed to switch between different points of sale is considered important.
- Specific considerations should be made for socially disadvantaged groups during the legislative process (e.g., compensation for individuals who have suffered particularly from criminalization, access to the legal market for less privileged groups, and systematic expungement of previous criminal records for minor cannabis offenses).
- Strong lobbying efforts by the cannabis industry are to be expected during the policy formulation process.
- A participatory policy formulation process – e.g., at the local level – is considered central to defining policies that are appropriate for the target audience. Especially in Switzerland's political system, which is based on direct democracy and consensus building, the public, all political parties, and various interest groups must be strongly involved in the debate to strengthen their acceptance of the new regulation.

- The implementation of public policy is central to its effectiveness. The legislation can only be successful if the appropriate resources and political will are in place to enforce it and carry out all necessary controls (otherwise, illegal sales outlets may emerge, advertising may increase, etc.).
- Horizontal and vertical coordination mechanisms will be central to Switzerland's federal multi-level system to minimize regional differences and inconsistencies.
- Detailed monitoring for the early detection of trends in the field and the ability to respond to these developments at the regulatory level appear to be essential.
- The legal framework must allow for a response to the emergence of new substances or products. This means that legislation should provide for ongoing regulatory adjustments in order to respond appropriately to changes in this constantly evolving area.
- The compatibility of new regulations with international standards could be a challenge that should be addressed at an early stage.

Conclusions and outlook

The pilot trials in Switzerland provide numerous relevant insights into the regulated sale of cannabis in the country. These are particularly relevant to the current political processes. All pilot trials are still ongoing and have only conducted preliminary analyses of their effects. However, many interesting findings can be expected in the coming years. At this stage, it can already be said that the pilot trials are based on robust concepts, are being conducted with great care, and are already showing several results. These include i) a high level of acceptance, ii) progress towards sales staff trained in prevention and risk reduction issues, iii) certain possible positive effects on individual health and consumption behavior (preliminary data), iv) a high level of adhesion among participants to the legal market, and v) general satisfaction among participants.

Any regulation of cannabis must be consistent with the political, institutional, and economic culture of the country in question. Due to the multidimensional nature of cannabis policy, political decisions must be made on a wide range of issues, which have been summarized in the literature as the "14 Ps": "1) Production, 2) Profit motive, 3) Power to regulate, 4) Promotion, 5) Prevention and treatment, 6) Policing and enforcement, 7) Penalties, 8) Prior criminal records, 9) Product types, 10) Potency, 11) Purity, 12) Price, 13) Preferences for licenses, and 14) Permanency"⁵. These different dimensions are closely interlinked, and the design of regulation always involves certain trade-offs. The literature and international experts clearly advocate the following regulatory features: a strictly regulated, non-commercial system; the neutralization of incentives to sell more; a comprehensive advertising ban; neutral packaging; taxation of products based on THC content; close control over the product range; a strong focus on prevention; and a ban on vertical integration. With regard to price, permissible THC content, and the permitted product range, it is important to consider precise, appropriate limits. In terms of sales models, social clubs and non-commercial outlets are considered most appropriate if the focus is on protecting public health. Close links between sales and risk reduction institutions are also considered important.

In Switzerland, the regulatory process can draw on a strong tradition of innovative drug policy to develop a widely accepted model. The preliminary draft of the SSHC-N for the federal act on cannabis products (CanPG) provides for a health-oriented, strictly regulated model. This includes a ban on advertising, state control of the number of sales outlets, strict product quality requirements, non-profit sales, and health-focused counseling. During the legislative process, further aspects designed to effectively protect public health can be refined at the ordinance level.

⁵ Kilmer, B. (2019). How will cannabis legalization affect health, safety, and social equity outcomes? It largely depends on the 14 Ps. *The American Journal of Drug and Alcohol Abuse*, 45(6), 664–672. <https://doi.org/10.1080/00952990.2019.1611841>