NEXTGEN
Harm Reduction

Harm Reduction Practices for New Psychoactive Substances

Analysis Report

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1. EXECUTIVE SUMMARY

This analysis report is part of the **NextGen Harm Reduction: Tackling the Challenge of Emerging Psychoactive Drugs (NEHRD)** project, an Erasmus+ initiative aimed at enhancing harm reduction capacities across Europe in response to the growing presence of New Psychoactive Substances (NPS).

The report is based on qualitative research conducted across eight European countries - four consortium members (Portugal, Romania, Serbia, North Macedonia) and four countries with benchmark harm reduction services (Spain, Slovenia, UK, Switzerland). It combines a **desk review** of policy, epidemiological, and service-level data with **focus groups and interviews** involving frontline professionals in harm reduction, healthcare, and outreach.

1.1. Key findings

- **NPS use remains unevenly documented**, with significant data gaps and low visibility in many countries. While prevalence appears limited, their presence as adulterants and their association with high-risk use patterns is rising.
- **Legal and policy barriers** continue to hinder harm reduction service development in several countries. Criminalization of drug use and possession remains a structural obstacle.
- **Drug checking services**, despite being recognized as a key harm reduction tool for NPS, are only available in a subset of countries. In others, they are legally restricted or absent.
- **Health professionals are often unprepared** to deal with NPS-related harms due to a lack of specific training, clinical guidelines, or updated toxicological data.
- **Innovative harm reduction practices**, particularly those integrating drug checking, online information services, and peer-led outreach, have shown strong results in countries like Switzerland, Spain, and the UK.

1.2. Next steps

This report will inform the development of:

- An **online training platform** for professionals.
- **Community-based online support services** for people who use NPS.
- **Policy advocacy efforts** across partner countries and EU forums.

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By fostering cross-border collaboration and knowledge exchange, NEHRD aims to build a more responsive, inclusive, and effective harm reduction ecosystem across Europe.

2. INTRODUCTION

The **NextGen Harm Reduction: Tackling the Challenge of Emerging Psychoactive Drugs (NEHRD)** project is an **Erasmus+ funded initiative** aimed at enhancing harm reduction capacities among professionals and organizations in Europe. The project focuses on **innovative responses to new psychoactive substances (NPS)** through knowledge exchange, capacity building, and the development of online support services.

NEHRD is implemented between **2024 and 2026** by a consortium of NGOs from four countries:

- ARAS - Romanian Association Against AIDS (Bucharest, Romania)
- NEVLADINA ORGANIZACIJA RE GENERACIJA (Belgrade, Serbia)
- Healthy Options Project Skopje (Skopje, North Macedonia)
- GAT - Grupo de Ativistas em Tratamentos (Lisbon, Portugal)

2.1. Objectives

The **research component of NEHRD**, which forms the basis of this report, aims to:

- **Explore harm reduction practices** among professionals working with people who use drugs (PWUD), with a particular focus on NPS.
- **Gather insights** from harm reduction experts in consortium countries and globally recognized leaders.
- **Identify practices, challenges, and gaps** in harm reduction approaches for NPS users.
- **Benchmark existing harm reduction strategies** in different legal frameworks across Europe.
- **Assess policy and regulatory frameworks** related to NPS and provide recommendations for improvement.

2.2. Scope of the report

This analysis report is designed for **harm reduction professionals and policymakers**. It provides information on:

The **burden of NPS use** among PWUD across different European countries, including **prevalence, types of substances, risks, and consequences**.

A **comparative analysis of harm reduction strategies** and guidance, focusing on **four consortium countries** (Portugal, Serbia, North Macedonia, Romania) and **four other countries** with benchmark harm reduction services (Spain, Slovenia, UK, Switzerland).

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An overview of **current harm reduction practices** employed by professionals working with NPS users.

The **challenges and gaps** in knowledge, training, and available resources.

An **examination of policy and legal frameworks** concerning NPS across different countries.

Recommendations to enhance harm reduction approaches for NPS users.

3. METHODOLOGY

This analysis is grounded in **qualitative research** conducted across **eight European countries**. Four of these - **Portugal, Romania, Serbia, and North Macedonia** - are part of the **NEHRD project consortium** and represent contexts where harm reduction responses to **new psychoactive substances (NPS)** are in development. The remaining four—**Spain, Slovenia, the United Kingdom, and Switzerland**—were selected as **benchmark countries** with more established harm reduction systems.

The research combined two complementary components: a **desk review** and a set of **focus groups and expert interviews**. The desk review involved a **thematic analysis** of national drug policies, legal and regulatory frameworks, epidemiological trends, and the availability of harm reduction services related to NPS in each of the eight countries. This provided a foundational understanding of the **structural and policy-level environments** in which harm reduction operates.

To enrich the analysis with practitioner perspectives, a series of **focus groups and expert interviews** were conducted with professionals working directly in harm reduction services. Each session lasted approximately **90 minutes** and included participants such as **medical doctors, social workers,** and **outreach workers**. The **inclusion criteria** required participants to be actively engaged in supporting people who use drugs (PWUD), including those who use NPS, to have **experience with harm reduction approaches**, and to participate **voluntarily and confidentially**.

Data collection was structured around two groupings. One focus group brought together participants from the four **project consortium countries** (Portugal, Romania, Serbia, North Macedonia), while the other included professionals from the four **benchmark countries** (Spain, Slovenia). Two expert interviews were conducted separately with professionals from Switzerland and the UK who were unable to join the scheduled sessions. Each session lasted approximately **90 minutes** and explored topics such as current harm reduction responses to NPS, service gaps, training needs, and opportunities for innovation.

All consortium partners were involved in the development of the research tools and contributed to the data collection process, which took place between **November and December 2024**. The data was analyzed thematically, with findings from the desk review and fieldwork **triangulated** to generate a comprehensive picture of the current state of NPS-related harm reduction in Europe.

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This approach enabled the identification of **key challenges**, **gaps in service provision**, and **good practices**, forming the basis for the recommendations outlined in the final section of the report.

4. RESULTS

4.1. Findings from the desk review

4.1.1. Definition and characteristics of NPS

The **2024 European Drug Report** [1] emphasizes that virtually any substance with psychoactive properties can potentially be used as a drug, highlighting the expanding scope of the drug landscape. New psychoactive substances (NPS), as defined by the **European Union Drugs Agency (EUDA)** [2], are narcotic or psychotropic drugs not controlled under UN conventions [3] [4], but potentially posing comparable public health risks to controlled substances. These substances are characterized by their synthetic, semi-synthetic, or natural origins, and are often designed to mimic the effects of controlled substances while evading regulations [5]. NPS present significant challenges due to their rapidly evolving chemical structures, which complicate detection and regulation efforts. They are frequently marketed as "legal highs," further complicating the regulatory landscape and public health response.

The **United Nations Office on Drugs and Crime (UNODC)** classifies NPS into six major categories [6]:

- **Stimulants** (e.g., cathinones, phenethylamines) – Affect dopamine, norepinephrine, and serotonin.
- **Synthetic Cannabinoids** – Bind to cannabinoid receptors, mimicking THC effects.
- **Sedative-Hypnotics** – CNS depressants similar to benzodiazepines.
- **Dissociatives** (e.g., ketamine) – Affect NMDA receptors, causing detachment effects.
- **Hallucinogens** (e.g., tryptamines, lysergamides) – Affect serotonin receptors, causing hallucinations.
- **Synthetic Opioids** (e.g., fentanyls) – Highly potent, causing respiratory depression and overdose risks.

A major challenge is the **lack of effective toxicological tests** for NPS detection. Laboratory techniques must continuously evolve to **keep pace with changing chemical compositions**.

4.1.2. NPS prevalence and trends

The prevalence and trends of NPS in Europe present a complex and evolving landscape. As of 2024, an estimated **83.4 million adults in the EU have used drugs in their lifetime** [7], with NPS use prevalence varying significantly across European countries. The NPS market

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continues to evolve rapidly, with over 950 substances being monitored by the EUDA. In 2023 alone, 26 new substances were first reported in Europe, while approximately 400 NPS were detected in seizures in 2022.

Key trends include the increasing significance of synthetic cathinones in Europe's stimulant market, growing concerns about new synthetic opioids (particularly nitazenes), and the continued emergence of synthetic cannabinoids. Notably, 6 out of 7 new synthetic opioids notified in 2023 were highly potent nitazenes, and 9 new cannabinoids were reported, bringing the total monitored to 254. These trends highlight the ongoing challenges for harm reduction efforts and the need for continued vigilance in monitoring and responding to the dynamic NPS landscape.

The prevalence of NPS use varies significantly across European countries, with limited comprehensive data available. Here's a **summary of the available information for the selected countries**.

The **ESPAD 2019 survey** [8] provides one of the most comprehensive assessments of **NPS lifetime use** among **16-year-old students** in selected European countries:

- North Macedonia – 1.0%
- Portugal – 0.9%
- Romania – 3.2%
- Serbia – 1.8%
- Slovenia – 4.3%
- Spain – 1.8%

Additional data from **the HBSC 2022 survey in Slovenia** indicates **2%** of **17-year-old school pupils** reported using NPS at least once.

A **2021 survey among university students in Slovenia** found that **5.3% (17 out of 319)** reported NPS use. [9]

In the **United Kingdom**, **2.6% of young people aged 16-24** reported using NPS in the past year. [10]

The **European Web Survey on Drugs (2021)** [11] provides additional insights into **NPS** prevalence across multiple countries. Among **48,469 respondents** who reported using at least **one illicit drug in the past year 17%** reported **using NPS** in the last 12 months. In the **Western Balkans group** (Albania, Kosovo, Montenegro, North Macedonia, and Serbia), **17%** of respondents reported **NPS use in the past year**.

The **Romanian National Report on Drugs (2019)** highlights significant regional variations in NPS use. **In Bucharest**, the **lifetime prevalence of NPS use was 15.5%**. In contrast, the rest of Romania reported a much lower lifetime prevalence of 6.5%.[12]

These figures highlight the varying prevalence of NPS use across different countries and age groups, with notable differences between general population surveys and targeted studies among students or young adults.

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4.1.3. International Drug Control and the Legal Classification of NPS

NPS are progressively added to the lists of controlled substances at both national and international levels. The **legal classification of a substance**—such as its inclusion on lists of "high-risk" or "controlled" drugs—determines how individuals involved in its possession, trafficking, or related activities are treated under national law.

Substances not yet listed in the Schedules of the three United Nations international drug control conventions (1961, 1971, and 1988) **are considered NPS**, regardless of their legal status at national level. This international classification system, coordinated by the **United Nations Commission on Narcotic Drugs (CND)**, plays a key role in shaping national and regional drug policy responses.

The CND has the authority to add, remove, or transfer substances between the schedules of the UN conventions. Scheduling proposals can be initiated by States Parties, the World Health Organization (WHO)—under the **1961 and 1971 Conventions**—and the International Narcotics Control Board (INCB)—under the **1988 Convention**. The procedure requires a formal notification to the UN Secretary-General, accompanied by relevant documentation such as the substance's chemical formula, common names, and supporting evidence (e.g. statistical data, research findings, or clinical studies) [4].

UN member states are required to adopt national legislation that bans or regulates the production, possession, distribution, and use of controlled substances, classifies substances in national schedules or lists—usually aligned with the UN schedules—allows use for medical and scientific purposes, but prohibits recreational use, and establishes criminal penalties for unauthorized possession and trafficking.

Examples:

- In **Romania**, Law 143/2000 implements the UN conventions by categorizing drugs into "risk" and "high risk."
- In the **UK**, the Misuse of Drugs Act 1971 reflects the conventions using Classes A, B, and C.
- In **Spain**, the conventions are embedded in the Penal Code and public health regulations.

While the EU doesn't maintain a fixed schedule of banned drugs, it has a **rapid response system for NPS (new drugs)**. **Regulation (EU) 2017/2101** established a mechanism for early detection, scientific risk assessment, EU-wide control action. If a new drug is found to be dangerous, the European Commission can propose it be subjected to control measures. After the decision, national governments have 6 months to implement the controls.

Since 1997, over 25 substances have been brought under EU-wide control using this system. [13]

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4.1.4. Health risks and consequences

The rapidly evolving nature of NPS makes **risk assessment difficult**, increasing the likelihood of unforeseen health consequences. Identified risks include [14]:

- **Acute toxicity**, leading to emergency medical care.
- **Long-term health risks**, such as cardiovascular issues, neurological effects, and mental health disorders.
- **High overdose potential**, particularly with **synthetic opioids** like fentanyl analogs.

4.1.5. Drug policy framework in Europe

Drug policies in Europe are guided by a **public health-oriented approach**, integrating elements of harm reduction, prevention, treatment, and law enforcement. While each country has its own national policies, there is a **common European framework** that ensures coordination across Member States. [15]

The **EU Drugs Strategy 2021-2025** [16] and the **EU Action Plan on Drugs 2021-2025** [17] set the foundation for drug policies within the European Union. These documents emphasize:

- **Balanced approach**: Combining public health interventions with law enforcement.
- **Evidence-based responses**: Ensuring policies are grounded in scientific research.
- **Harm reduction and demand reduction**: Promoting treatment, rehabilitation, prevention and addressing drug related-harm.
- **Enhanced monitoring**: Strengthening data collection through institutions like the **EUDA**.
- **Cooperation mechanisms**: Facilitating collaboration between EU agencies, Member States, and international partners.

4.1.6. EU legal framework for NPS

The European Union has developed a specific system to **monitor, assess, and regulate NPS**:

- **Early Warning System (EWS)** [18]: Established in **1997**, coordinated by **EUDA** in close cooperation with the **Europol**, enabling rapid information exchange between **29 national early warning systems**.
- **Risk Assessment Mechanism**: Conducted by a **scientific committee**, evaluating health and social risks before implementing control measures.
- **EU-Wide Ban on High-Risk NPS**: If a substance is deemed a **public health threat**, the European Commission can propose restrictions across all Member States.

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4.1.7. National drug control Policies

Drug policies across Europe vary significantly, reflecting different legal, social, and political approaches to addressing drug use, possession, and facilitation. While some countries have **decriminalized drug use**, treating it as an administrative offense, others maintain **strict punitive measures**, including imprisonment. The distinction between **personal use and trafficking** is another key factor influencing national drug policies, with some countries implementing **harm reduction and diversion programs**, while others rely primarily on **criminalization**.

The **legal status of drug use** [19] differs across European countries. **Portugal** has decriminalized drug use since **2001**, treating it as an **administrative offense** rather than a crime under **Law 30/2000** [20]. Similarly, in **North Macedonia**, drug use in public spaces is considered an **administrative offense**, but possession remains regulated [21]. In contrast, **Romania criminalizes all drug use**, without specifying punishment under **Law 143/2000** [22], while **Serbia does not explicitly criminalize drug use per se**, but possession remains subject to penalties [23], **in Slovenia the use of drugs is not mentioned as an offence**, **in Spain consumption in public spaces is infraction** punishable by fine (€60 to €30,000), **in Switzerland is punishable by a fine,** but minor offences may be closed by a waiver of penalty.

Regarding **drug possession for personal use** [19], **Portugal does not criminalize possession**, regardless of quantity, under its 2023 legal update [24]. The **10-day supply threshold** is used to distinguish personal use from trafficking, but exceeding this amount **does not automatically lead to a criminal charge.** In **Spain**, possession is not classified as a criminal offense but is instead an **administrative violation** punishable by fines ranging from **€601 to €30,000** under the Organic Law 4/2015 on the Protection of Citizen Security. **Switzerland** [19], under its **Narcotics Act (Art. 19)**, does not consider the preparation of drugs for personal use a crime if the quantity is **negligible**. However, possession of a **non-negligible amount** can result in up to **three years in prison**.

Serbia, under the **Criminal Code (Article 246a, amended in 2024)** [25], criminalizes possession of narcotics, imposing fines or imprisonment of up to **three years** for small amounts. However, the law does not define **"small quantity"**, leaving interpretation to **judicial discretion**. Unlike other countries, **Serbia does not differentiate between drug types** in its penal policy. In **Romania**, drug possession—**regardless of quantity**—is a **criminal offense** punishable by imprisonment. **North Macedonia** also imposes fines for possession, with penalties ranging from **€3,000 to €5,000** for **unauthorized possession of psychotropic medicines**.

The penalties for **drug possession** range from **rehabilitation-oriented measures to severe imprisonment sentences** [19]. In **Portugal**, individuals found in possession of drugs are referred to **Commissions for the Dissuasion of Drug Addiction (CDT)**, which can apply sanctions such as **treatment referrals, fines, or community service**. In contrast, **Romania imposes prison sentences ranging from 6 months to 3 years** for possession.

Switzerland applies a model where possession exceeding a **negligible amount** is punishable by **up to three years in prison**. **Serbia** enforces **severe sentences for possession of large quantities** [25], ranging from **3 to 10 years in prison**, with exemptions for those who cooperate with authorities.

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North Macedonia imposes **administrative fines of €200–€500 for public drug use** [21].

The **United Kingdom follows a punitive approach**, where possession of **Class A drugs** can result in **up to 7 years in prison, an unlimited fine, or both**, under the Misuse of Drugs Act (1971) [26].

The facilitation of drug use—such as **providing a space for drug consumption or assisting others in using drugs**—is criminalized in multiple countries. In **Romania**, under **Law 143/2000 (Art. 5, Art. 10)**, **providing a place for drug consumption** or **inciting drug use** is a **criminal offense** [22], with penalties designed to **deter drug-related activities**. Similarly, in **Serbia**, under **Article 247 of the Criminal Code** [25], individuals who facilitate drug use may be sentenced to **6 months to 5 years in prison**. The penalty is **increased to 2–10 years** if the offense involves **minors, mentally ill individuals, or those in treatment programs**.

In **Slovenia**, under **Article 187 of the Criminal Code** [27], facilitating drug use or **providing opportunities for illicit substance consumption** is punishable by **6 months to 12 years in prison**, depending on the circumstances.

4.1.8. National regulatory approaches to NPS

NPS pose a **unique regulatory challenge** due to their **rapid emergence**, evolving chemical structures, and ability to evade existing drug laws. While some countries have developed **specific laws targeting NPS**, others incorporate them into broader narcotics control frameworks.

All selected countries include **NPS in their national drug schedules**, updating their lists regularly to **classify new substances**. However, enforcement approaches vary. In the **United Kingdom**, the **Psychoactive Substances Act (2016)** [26] enables the government to **temporarily ban new substances for one year** under a **temporary banning order**, while further classification is assessed.

In **Portugal**, NPS were **not considered illegal until 2012**, after which multiple substances and their derivatives were progressively **added to the controlled substances list**. Spain adopts a **chemical group-based scheduling system** [28], allowing for the regulation of **entire families of substances** rather than individual compounds. This approach **aims to speed up the regulatory process** and **improve enforcement**.

NPS trafficking is treated similarly to other controlled substances, with **criminal penalties varying across countries**:

UK: Trafficking of NPS can result in maximum **life imprisonment, unlimited fines, or both** [26].

Romania: Trafficking of high-risk drugs carries **3-10 years in prison**, with **5-15 years for high-risk substances [29]**.

Portugal: Sentences range from **4-12 years** for substances in **Lists 1-3**, with lesser penalties for **lower-risk substances**. Aggravating factors, such as trafficking near schools or involving minors, increase penalties by **one-quarter** [19].

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Serbia: Drug trafficking penalties range from **3-12 years**, increasing to **5-15 years** if committed by an organized group [23].

Slovenia: Under **Article 186 of the Criminal Code**, drug trafficking is punishable by **6 months to 15 years in prison**, with additional **confiscation of vehicles used for drug transport**. [19].

Spain: Drug supply penalties depend on **health risks and aggravating circumstances**. The supply of **high-risk substances** is punishable by **3-6 years in prison**, while other drugs result in **1-3 years** (Spain Criminal Code, Art. 368-370). [19].

North Macedonia: Drug trafficking penalties range from **3-10 years**, with **6 months to 3 years for small quantities** [30].

Switzerland: NPS trafficking is subject to **1-20 years in prison**, depending on aggravating factors, such as **organized crime involvement or distribution near educational institutions**. [19].

4.1.9. Impact of the legal framework on harm reduction policies

The emergence of **NPS**, marketed as "bath salts" or "soil fertilizers," has presented significant challenges for **harm reduction services** across Europe. Many individuals mistakenly believed these substances to be **less toxic**, leading to increased consumption. Harm reduction programs and healthcare services had to **adapt rapidly** to mitigate harms by providing **accurate information, preventive interventions, and direct harm reduction strategies**.

Despite these efforts, **legal and regulatory barriers continue to limit harm reduction responses**, particularly in countries where **drug checking services** remain legally ambiguous or outright restricted. In some regions, **needle and syringe programs (NSP) and drug consumption rooms (DCR)** have expanded to **mobile and integrated formats**, offering additional services such as food, showers, and shelter for vulnerable populations. However, access to these programs remains **uneven across Europe**, with gaps in **coverage, quality, and legal support**.

North Macedonia

Harm reduction is a **recognized pillar** in the **National Drug Strategy (2021–2025)** and **National AIDS Strategy (2023–2030)** [31]. National programs include sterile injection equipment exchange, condom distribution, safe sex education, and outreach to hidden populations. However, the **legal framework does not explicitly support or prohibit drug checking services or drug consumption rooms**, leading to **uncertainties in implementation** [32].

Slovenia

Slovenia has **general guidelines** on **managing drug-related phenomena**, including **the Resolution on the National Programme on Illicit Drugs (2023–2030)** [33], which seeks to **expand harm reduction programs** and diversify available interventions.

Spain

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Harm reduction is **integrated into Spain's national drug policy**, with established **needle exchange programs, opioid substitution treatment (OST), and DCRs**. These programs are supported by the **National Strategy on Addictions (2017–2024)** [34], which prioritizes a **comprehensive harm reduction approach, prevention, and evidence-based treatment interventions**.

Spain also operates an **Early Warning System (SEAT)** under the **Government Delegation for the National Plan on Drugs**, which detects and analyzes **emerging substances, poisoning cases, and drug-related deaths**. **Energy Control**, a leading NGO, provides **substance analysis services**, actively monitoring **NPS trends** and identifying **adulteration risks**.[35]

Spain has developed specialized guidelines to address the phenomenon of chemsex and its associated risks. The **"Technical Document Approach to the Phenomenon of Chemsex"** [36] and **"An Approach to the Mental Health of Chemsex Users – A Training Resource for Mental Health Professionals"** [37] (Ministry of Health, 2020) provide a framework for multidisciplinary interventions. These guidelines emphasize the integration of harm reduction and health services across multiple sectors, including sexual health clinics, addiction treatment programs, primary care, infectious disease services, and community centers. The documents offer recommendations on tailored interventions, risk assessment strategies, and training for professionals working with men who have sex with men (MSM) engaging in drug use within sexual contexts.

Switzerland

Harm reduction is a **core component** of Switzerland's **national addiction policy**, codified in **Article 26 of the Narcotics Addiction Ordinance** [38], [39]. The Swiss model focuses on:

- **Immediate risk reduction** (e.g., access to naloxone, supervised use facilities).
- **Minimizing social harms** (e.g., reducing homelessness among people who use drugs).
- **Ensuring equitable healthcare access** through **cost-benefit analysis** and service adaptation.

Swiss cantons are legally required to implement harm reduction programs [40], including **drug checking, DCRs and integrated social care services**. Novel approaches such as **controlled cocaine distribution and supervised long-term accommodations** have been piloted in some regions.

Portugal

The **Technical Guidelines for Harm Reduction Intervention** [41] outline harm reduction responses, emphasizing the dissemination of accurate information, referrals to specialized services, and awareness of emerging substances. The **Trendspotter Methodology report on NPS** [42] identifies **key areas for intervention**, such as:

- Add drug-checking to harm-reduction programmes.
- Improve NPS training and resources for professionals and vulnerable groups.
- Ensure ongoing care and research into long-term health impacts on NSP users.

Portugal's **Epidemiological Framework** [43] highlights **concern over the adulteration of traditional illicit substances with NPS**, reinforcing the importance of **drug checking as a**

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harm reduction strategy. The **National Plan for the Reduction of Addictive Behaviors and Dependencies (2030, ICAD)** [44] further emphasizes the need to **expand harm reduction interventions** tailored to **new drug trends**.

Serbia

Serbia currently **lacks official national guidelines on harm reduction for NPS** [22]. The most recent **National Strategy on Prevention of Drug Abuse (2014–2021)** shaped public policy, but **no updated action plans have been implemented** since. Harm reduction services remain **limited**, with no **legal basis for drug checking or supervised consumption spaces**.

United Kingdom

The UK has **comprehensive harm reduction and treatment guidelines for NPS [45]**, with multiple resources available for professionals and the public [46]. The **NPS Resource Pack for Educators and Practitioners** provides up-to-date, accessible information on NPS risks, while **online platforms such as "Talk to Frank" [47]** offer confidential drug information services.

New **treatment pathways** have been established, including:

- Brief intervention and referral services in **sexual health clinics** and youth centers.
- **Late-night drop-in services** for people engaging in high-risk drug use.
- **A person-centered approach**, focusing on **individual symptoms rather than specific substances**.

The **Neptune NPS Guidance** offers clinical recommendations on managing **NPS-related harms** across various settings, including **drug treatment services, emergency departments, general practice, and sexual health clinics**.

Romania

The **National Drug Strategy 2022-2026** [48] incorporates harm reduction within its demand reduction framework. Specific objectives include:

- **Improving access for injecting drug users** to prevention, counseling, treatment, testing, and vaccination services for HIV, HBV, HCV, TB, and other associated diseases.
- **Preventing overdoses and deaths** related to drug use.
- **Strengthening partnerships with civil society** to enhance service provision.

Despite these policy commitments, Romania faces significant challenges in harm reduction implementation. While **drug checking and DCRs are not explicitly prohibited**, their absence from legislative frameworks creates legal ambiguities that hinder their establishment. The country primarily relies on civil society organizations, such as **ARAS**, to provide needle and syringe programs, opioid substitution therapy, and outreach services for people who use drugs.

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4.1.10. Overview of harm reduction services for NPS

Harm reduction approaches for **NPS [**49**]** largely mirror those used for other psychoactive substances. According to international best practices, **health and social responses to new substances are often adaptations of existing programs designed for more established drugs**. However, the **availability, accessibility, and adaptability of harm reduction services** play a crucial role in their effectiveness.

Harm reduction encompasses a **broad range of interventions** aimed at reducing the **health, social, and economic harms** associated with drug use. These services support **immediate health and social needs** and contribute to **HIV/AIDS and viral hepatitis prevention, overdose reduction, and behavioral risk minimization**. Beyond **OST and NSP**, harm reduction strategies also include **drug checking, online support services, DCRs, and outreach programs.**

4.1.11. Drug checking services

Drug checking [50] is a **public health intervention designed to analyze the composition of illicit substances** and provide harm reduction information to users. It serves as a crucial tool for mitigating risks associated with the use of NPS and other illicit drugs by informing users.

- **Drug checking services vary significantly across Europe**, with some countries integrating them into their harm reduction frameworks, while others face legal and operational barriers.
- **Countries with Established Drug Checking Services**: Switzerland, Spain, Slovenia, Portugal, and the United Kingdom have well-established drug checking services. These countries utilize various analytical techniques and integrate drug checking into broader harm reduction strategies, including outreach, counseling, and early warning systems.
- **Limited or Non-Existent Services**: In Romania, North Macedonia, and Serbia, drug checking is either legally restricted or practically unavailable due to punitive drug laws and the absence of a supportive policy framework.

Drug checking services employ multiple technologies to analyze substances:

- **Fourier Transform Infrared Spectroscopy (FTIR)**: A widely used, portable, and cost-effective method for detecting substances and identifying common adulterants.
- **Gas Chromatography-Mass Spectrometry (GC-MS)**: Provides detailed chemical composition analysis but requires advanced laboratory settings.
- **Thin Layer Chromatography (TLC)**: Used for on-site testing but offers limited precision.
- **Immunoassay Strips**: Quick testing method for detecting fentanyl and synthetic opioids, increasingly used in response to the rise of nitazenes and fentanyl analogs in the drug supply.

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While each method has **limitations**, a **combination of technologies** reduces the risk of **false positives and false negatives**. The **TEDI Guidelines (2021)** recommend employing trained professionals to ensure **accurate and responsible drug checking services**.

Successful models of drug checking services integrate various harm reduction approaches:

- **Drop-in Centers**: Facilities such as those in Portugal (Kosmicare) [51], Slovenia (DrogArt) [53], and the UK (The Loop) [52] combine drug checking with safer use education, counseling, and health services.
- **Mobile Services at Festivals and Nightlife Settings**: Switzerland's Rave it Safe [54] and Spain's Energy Control [55] operate on-site testing at festivals and clubs, providing real-time feedback and harm reduction advice.
- **Integrated in Drug Consumption Rooms**: In some countries, drug checking services are integrated into supervised consumption sites to reach marginalized populations who may not engage with traditional drug checking services.

4.1.12. Online information and counselling services

Online harm reduction services are a vital component of modern drug policy, providing **accessible, anonymous, and evidence-based information**. The integration of **drug alerts, digital counseling, and harm reduction education** strengthens public health efforts and engages individuals who may not otherwise seek help through traditional services.

As drug trends continue to evolve expanding real-time digital harm reduction tools will be essential to mitigating risks and improving health outcomes across Europe.

Online Information Services

Providing clear, concise, and scientifically reviewed online information about psychoactive substances is a fundamental harm reduction practice. Online platforms can offer **real-time alerts** on high-risk substances, detailing their composition, potency, and potential health risks. Alerts are primarily generated from drug checking services and early warning systems to inform the public, professionals, and policymakers.

Switzerland: Drug Information Center (DIZ) and Safer Party

The Drug Information Center (DIZ) [56] in Zurich provides explicit, evidence-based drug information for users, professionals, and the general public. Access is anonymous and unrestricted, ensuring broad reach. The Safer Party initiative also integrates drug checking services at drop-in centers and mobile testing at festivals and nightlife events.

Slovenia: DrogArt's Web-Based Information System

DrogArt [53] provides up-to-date, accessible information on psychoactive substances, drug interactions, and harm reduction practices through its digital platforms. These efforts are complemented by online counseling services for individuals seeking support.

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Spain: Energy Control Digital Drug Alerts

Energy Control offers real-time information on drug trends, risk reduction strategies, and chemsex-related harm reduction approaches through its website and social media channels.

Serbia: Re Generation's Online Harm Reduction Portal

Re Generation operates a digital harm reduction platform that offers information on substance risks, side effects, and harm reduction techniques. Online counseling via Zoom for safer substance use and safer sex practices.

Online Counseling and Psychological Support

Online counseling services provide accessible, confidential, and evidence-based harm reduction support, ensuring individuals receive **guidance on psychoactive substance use, risk mitigation, and safer consumption practices**.

Switzerland: DIZ Online Counseling Services [56]

DIZ provides an anonymous online request submission service, with specialist responses within three working days, and a live chat counseling is also available three days a week, offering direct interaction with harm reduction professionals.

Slovenia: DrogArt's Digital Counseling Program

Offers two levels of online support: one-time consultations for individuals, parents, and educators seeking harm reduction guidance, and structured counseling and therapy sessions, available weekly in-person or via Skype, based on motivational and cognitive-behavioral therapy models.

Spain: Chemsex-Specific Counseling by Energy Control

Provides WhatsApp and Telegram-based short counseling sessions tailored for chemsex users. Includes a disclaimer stating that these sessions are meant to complement, not replace, professional medical consultations.

Serbia: Re Generation's Digital Counseling Services

Offers online counseling via Zoom for individuals seeking personalized harm reduction support, behavioral risk assessments and harm reduction strategies, integrated approaches to substance use and sexual health.

Currently, online counseling services are not available in Romania and North Macedonia, highlighting a gap in digital harm reduction accessibility in these regions.

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4.1.13. Drug consumption rooms

DCRs [57] are legally sanctioned and professionally **supervised healthcare facilities** where PWUD can **consume pre-obtained substances** in safer and more hygienic conditions. These facilities aim to reduce health and social harms associated with public drug use and facilitate access to social, health, legal, and drug treatment services.

As of 2024, **DCRs operate in several European countries**, including Belgium, Denmark, France, Germany, Greece, Luxembourg, the Netherlands, Norway, Portugal, Spain, Switzerland, Scotland, and Ireland. The geographical distribution of DCRs is uneven, both at the international and regional levels. In 2022, there were over 100 DCRs operating globally. Despite their proven benefits, DCRs remain illegal in countries like North Macedonia, Romania, and Serbia, limiting harm reduction options in these regions.

DCRs have **historically been designed for injecting drug use**, with a focus on opioids, primarily **addressing marginalized communities** of drug users, including people experiencing homelessness and those with limited access to healthcare. These facilities provide sterile consumption equipment, emergency interventions for overdoses, and referrals to addiction treatment and social services.

The landscape of drug use is evolving with the increasing relevance of stimulant and NPS use, including the emergence of synthetic opioids. The potency and unpredictability of synthetic opioids such as fentanyl and nitazenes increase the risk of fatal overdoses, necessitating adapted harm reduction responses, including DCRs.

In that sense, there is growing recognition that DCRs could serve NPS users by providing:

- **Supervised environments for high-risk NPS users:** Given the unknown potency of many NPS, particularly synthetic opioids, controlled settings could prevent fatal overdoses.
- **Drug Checking Services Integration:** On-site chemical analysis of substances could provide real-time safety information for users.
- **Tailored Health Support:** Health professionals trained to handle risks associated with synthetic opioids and stimulants.
- **Safer Use Education:** Specialized counseling on NPS risks, dosage, and harm reduction practices.

DCRs remain a cornerstone of harm reduction strategies, reducing public health risks and facilitating access to essential health services. As synthetic opioids and NPS increasingly pose threats to drug users, DCRs may need to evolve to accommodate these emerging challenges.

4.1.14. Pharmacological interventions

Pharmacological interventions form an essential part of harm reduction strategies. In several countries, **medication-assisted treatment is recognized as a means of reducing the harms associated with illicit drug use**, including injection-related risks and unknown drug composition.

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Opioid Substitution Treatment (OST) [58]

OST is **a cornerstone of harm reduction**, replacing illicit opioids with medically supervised alternatives such as **methadone, buprenorphine, and suboxone**. The goal is not necessarily abstinence but stabilization, harm reduction, and improved quality of life. In some cases, synthetic opioids like nitazenes are also treated with buprenorphine or morphine for withdrawal management.

*Heroin-Assisted Treatment (H***HAT is a second-line intervention** for individuals who do not respond to traditional OST options. Countries such as Switzerland, Canada, Germany, the Netherlands, Denmark, and Luxembourg **provide injectable opioid treatment programs**. These programs have demonstrated effectiveness in reducing illicit opioid use, criminal activity, and infectious disease transmission while improving engagement with health services.

Stimulant-specific approaches

Currently, there are no globally approved medications for stimulant use, although some **psychostimulant medications** (such as modafinil, methylphenidate, and certain antidepressants) have shown promise in controlled trials. The lack of a standardized treatment complicates efforts to integrate stimulant-specific pharmacological approaches into harm reduction frameworks.

Naloxone Distribution Programs

Naloxone, a life-saving opioid antagonist, is distributed in harm reduction settings to counteract overdoses. However, legal and regulatory barriers restrict access in some countries. While naloxone is available in many harm reduction programs across Europe, in some regions (e.g., Serbia and Romania), it is not accessible outside medical facilities. The emergence of highly potent synthetic opioids, such as nitazenes, further underscores the need for expanded naloxone distribution and training.

4.1.15. Needle and Syringe Programs

NSPs remain a key component of harm reduction by reducing the transmission of bloodborne infections among people who inject drugs.

- **Legal and Operational Landscape:** NSPs are available in North Macedonia, Romania, Serbia, Portugal, Slovenia, Spain, and the United Kingdom.
- **Challenges:** While these programs operate effectively in some countries, restrictions exist in others, particularly regarding outreach work, mobile units, and secondary distribution.

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4.1.16. Psychosocial interventions

In addition to medical support, **psychosocial interventions—including cognitive-behavioral therapy (CBT) and motivational interviewing**—can play a role in harm reduction. These interventions are often embedded within harm reduction services to help individuals manage their drug use and address underlying social and psychological needs.

4.1.17. Integrated services

Across Europe, **integrated service models combine harm reduction, welfare support and low-threshold engagement** to address the complex needs of people who use drugs.

- **One-stop-shop models:** Drop-in centres and low-threshold facilities provide a combination of health and social support services in one place.
- **Welfare and survival-oriented services:** Many centres offer meals or food vouchers, hydration points, resting and washing facilities, and access to emergency shelter and clothing.
- **Daily structure and social integration:** Day-programmes create a predictable routine—often including workshops, peer-led activities and supported work placements—to foster personal skills and social inclusion.

In **Switzerland**, Fondation Contact operates **multiple low-threshold "contact points"** offering syringe exchange, counselling, daily structure and meals (some prepared collaboratively in user workshops). Several Contact sites (e.g. Contact Bern) and Première Ligne Genève also include consumption rooms. These services aim not only to reduce harm but to support health, social reintegration and personal autonomy.

In **Bucharest** (Romania), Carusel delivers **integrated medical, social and welfare interventions** for people who use drugs, with a focus on wound care and primary health support for injectors of cathinones. ARAS (Asociația Română Anti-SIDA) complements this with NSP, OST and active navigation services—particularly linking clients to hepatitis C and tuberculosis care.

Such integrated models - combining harm reduction, social support and health care - are replicated in varying forms across all countries in this analysis, demonstrating their value in reducing overdose risk, improving well-being and promoting social inclusion.

4.1.18. Discussion

The implementation of **harm reduction strategies for NPS** across Europe varies significantly. **Countries like Switzerland, Spain, UK and Portugal** have well-established harm reduction frameworks, while **Serbia, Romania, and North Macedonia lack clear policies supporting harm reduction for NPS**.

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Key challenges include:

- **Legal restrictions** – Many countries do not explicitly permit drug checking services or DCRs.
- **Access disparities** – Services such as NSP, OST, and naloxone distribution are not uniformly available across Europe.
- **Training gaps** – Many healthcare professionals lack specialized knowledge on treating NPS-related risks and harms.
- **Inconsistent early warning systems** – While Spain and Switzerland have well-developed drug monitoring mechanisms, other countries struggle with real-time data collection.

Despite these challenges, harm reduction continues to evolve, with early warning systems, drug checking services, and other harm reduction approaches emerging as key interventions in response to NPS.

4.2. Findings from the expert consultation

This section brings together insights from both **focus groups** and **individual expert interviews**. The focus groups comprised **ten professionals** with backgrounds in harm reduction and experience working with people who use drugs (PWUD), including NPS users. Participants included **medical doctors, pharmacists, social and outreach workers**. The sessions were structured according to the **two categories defined by the research design**: one focus group gathered participants from the **four NEHRD consortium countries** (Portugal, Romania, Serbia, and North Macedonia), while the other included professionals from **two** of the **benchmark countries** (Spain and Slovenia). Due to scheduling constraints, **individual expert interviews** were conducted with professionals from **Switzerland and the UK**.

4.2.1. Understanding NPS in the Context of Harm Reduction Services

NPS are synthetic compounds designed to mimic the effects of existing drugs while possessing different chemical compositions. Due to limited scientific research, the risks associated with these substances are often difficult to predict.

According to consulted experts, **the definition of NPS presents several challenges**:

- **Regulatory Purposes:** "The definition needs to be strict in terms of the definition that is accepted [...] for the monitoring and surveillance at national and international level" (Spain). However, for other purposes, the definition becomes insufficient.
- **Legal Classification:** NPS may refer to substances classified under UN regulations, national legislation, or both. From this perspective, NPS are "mainly these substances that are not under [UN] legislation" (Spain).

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- **Novelty and Usage:** Among NPS, there are "real new drugs" as well as existing substances with new recreational uses. For example, ketamine "is still considered as one of these NPS because it's in list four, it's not in list one or two that are the most restrictive" (Spain).
- **User-Level Definition:** In harm reduction contexts, NPS may be defined as "a substance that I don't have enough information about, about the risk" (Switzerland). This operational definition helps communicate special risks to drug users.
- **Laboratory Creation:** NPS are often described as "substances made in laboratory to replace existing substances" (Slovenia).
- **Safety Misconceptions:** The legal status of some NPS can lead to dangerous assumptions, particularly among young people who may "understand that legal is safe and it's not danger[ous]" (Slovenia).

These varied perspectives highlight the complexity of defining NPS and underscore the need for clear communication about their potential risks, regardless of legal status.

4.2.2. Prevalence of NPS Use

Prevalence data remains scarce due to the limited availability of drug testing facilities and the absence of drug-checking services in many regions. This makes it difficult to obtain accurate and comprehensive figures. As one participant from **Serbia** noted, *"On prevalence of NPS, we can have some information from our clients when they're saying what they are using or ordering online. But we actually do not have real numbers."* Similarly, a professional from **North Macedonia** admitted, *"I don't know about prevalence."*

Participants generally assessed the prevalence of NPS use as a primary drug of choice to be low, particularly in countries where traditional drugs are more readily available. A respondent from **Spain** highlighted this, stating, *"Most people are not having these substances in their menu,"* except among *"people who are using Chemsex."* However, this estimation accounts only for NPS used as drugs of choice, excluding their presence as adulterants. A harm reduction worker from **Slovenia** observed, *"Some people are using NPS, not even knowing that they are using NPS."*

In **Switzerland**, experts pointed to a growing interest in NPS, particularly among individuals with a psychonaut mindset or curiosity-driven experimentation: *"NPS are not as prevalent as other substances due to the stable and affordable drug market; [but there is] increasing interest in NPS, particularly among those with a psychonaut or curious interest."* (Switzerland). Data from **Swiss drug-checking services** further confirmed that *"a lot of traditional drugs"* dominate the market, but *"sometimes these NPS appear, and I think a lot of times people don't know that they are consuming NPS."* (Switzerland). As a point of comparison, drug-checking programs in **Slovenia** reported that the presence of NPS as adulterants remains very low: *"Three or four tests out of thousands."* (Slovenia).

While exact numbers were not available, some estimates were provided. One participant from **Slovenia** suggested that *"maybe 5% or something like this among the nightlife users,"*

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but emphasized that this figure does *"not reflect the general population."* Another respondent from **Slovenia** highlighted particular subgroups with a higher prevalence of NPS use, stating that *"some subgroups of drug users are more likely to use NPS, like in prisons."* (Slovenia). Additionally, in marginalized communities, such as **unhoused or unemployed populations**, synthetic cathinones are reportedly used more frequently: *"Clients are unhoused people or unemployed people that are consuming synthetic cathinones on a daily basis, by smoking or by injecting it."*

4.2.3. Types of NPS Used

The types of NPS reported in each country varied, with some substances being more prevalent than others, depending on regional drug markets and availability.

In **North Macedonia**, synthetic cannabinoids and stimulants like synthetic cathinones are suspected to be present but remain unconfirmed due to limited testing. Additionally, *"pills that are coming from black markets, from across country borders"* were identified as an emerging concern.

In **Switzerland**, synthetic cathinones such as 2-MMC, 3-MMC, 2-CMC, and 3-CMC, along with synthetic cannabinoids, are more commonly detected. The rapid evolution of new substances poses a challenge for monitoring: *"With nearly every testing, you find a new one that we didn't know before."* (Switzerland).

In **Slovenia**, harm reduction professionals suspect the presence of potent synthetic opioids like fentanyl or nitazenes among clients, though verification through drug-checking remains a challenge.

In **Spain**, synthetic psychedelics such as LSD analogs (e.g., 1P-LSD) and substances like 25I-NBOMe are reportedly more prevalent at festivals and within the chemsex scene. Additionally, *"cannabis derivatives [...] are used by younger people,"* often in the form of edibles or gummies.

In **the UK**, nitrous oxide remains a commonly used NPS, with significant accessibility and affordability. A participant from the UK also highlighted the increasing prevalence of ketamine, noting: *"10 or it's 10 pounds a gram, often depending on who you get it from. So the fact that it's so cheap just drives a lot of use. And you have a lot of people who are doing a gram every day or multiple grams every day, mainly snorted."*

Ketamine use is on the rise across multiple countries, including **Switzerland, Portugal, Spain, Slovenia, and the UK**. One Swiss participant emphasized, *"Ketamine is skyrocketing in nightlife."* In **Slovenia**, its popularity at festivals was also noted: *"This year, at festivals, it was really ketamine."*

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4.2.4. Risks and Harms Associated with NPS

The harms associated with NPS use vary by substance type and method of administration. Participants highlighted key concerns related to synthetic cannabinoids, cathinones, psychedelics, ketamine, and injecting stimulants.

Synthetic Cannabinoids:

- Primarily linked to **mental health problems, anxiety, and paranoia**.

Synthetic Cathinones:

- Known for causing **overstimulation, intense cravings, and sleep deprivation**.
- In the **UK**, a participant described the impact of heavy cathinone use: *"Not eating and sleeping enough on a regular basis."*
- Cathinones are prominent in **chemsex contexts**, where their effects can be intensified due to prolonged use and polysubstance interactions.
- **Injecting cathinones** is linked to **severe injecting wounds and circulatory issues**, including **thrombosis, varicose ulcers, and venous insufficiency**, which are reportedly more serious than those caused by heroin injection (*Bucharest, Romania*).
- In **Portugal (Azores Islands)**, professionals observed an alarming rise in **HIV and TB cases among people injecting cathinones**: *"On these islands, for the past 10 years, the numbers are going up by the day."*

Ketamine:

- Associated with **temporary psychosis, seizures, cardiovascular issues, and breathing problems**.
- Can cause **urinary system damage and nasal issues**, as noted by a participant in the **UK**: *"Issues with your urinary system, issues with gallbladder, people that had gallbladders removed, problems with your nose as well."*
- Its increasing use in nightlife settings has raised concerns over **chronic health issues and dependency risks**.

Psychedelics (e.g., N-BOMe derivatives, 1P-LSD):

- The **main risks** are related to **dosing inaccuracies and toxicity due to their high potency**.
- In **Slovenia**, a participant linked psychedelics to **extended bad trips**: *"They don't know how it feels, they don't know how their body reacts."*
- In **Switzerland**, professionals observed severe **psychological effects**, stating: *"Bad trips, we see some psychological side effects."*

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- Psychedelic-related mental health distress is sometimes mismanaged in emergency settings due to inadequate healthcare provider training.

4.2.5. Challenges for Professionals

- **Lack of Drug-Checking Services:** Inadequate testing services prevent users from knowing what substances they are taking, leading to **complications in emergency treatment**.
- **Healthcare Provider Preparedness:** Without accurate information on NPS content, clinicians struggle to provide appropriate medical interventions, increasing the risk of **unintended harm** to users.
- **Limited Research and Guidance:** Many healthcare and harm reduction professionals lack access to up-to-date, evidence-based protocols for managing NPS-related harms, exacerbating treatment challenges.

4.2.6. Harm Reduction Strategies in Place

Participants emphasized that **harm reduction for NPS should follow the same principles as for established psychoactive substances**, with an increased focus on caution due to the unpredictability of NPS (e.g., dosage, duration, setting, and conditions of use). Awareness messaging also highlights the presence of NPS as adulterants in other substances.

Defining Harm Reduction

- *"Being supportive to somebody who had a difficult experience with substances."* (Serbia)
- *"That users feel comfortable to come, find a safe space to talk and stay, share what they're feeling and what is happening to them."* (Romania)
- *"Transparency and empowering individuals to make informed decisions."* (Switzerland)
- *"Reaching out, asking what they need, and giving what you can. For example, if they need to go to the hospital, try to call the ambulance."* (Romania)
- *"Most people who use drugs do not perceive themselves as having a drug problem, and services should not solely focus on getting people off drugs."* (UK)

Drug checking and education

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Drug checking and education emerged as the most commonly used strategies for reducing the risks and harms of NPS, where available. A participant from **Slovenia** highlighted this: *"This can be the main answer to the problem: check drugs and give proper information to users who are using them."* Additional strategies include promoting safer use practices, such as *"encouraging users to start slowly when trying unknown substances"* (**Switzerland**) and *"minding the dosage and setting, and planning their substance use"* (**Serbia**) to minimize risks and harms. However, when drug checking is not possible, professionals work with assumptions. In **Switzerland**, one participant explained, *"There is not a lot of information, there are a lot of NPS—just be careful."*

Drug checking was **not mentioned as a service available in North Macedonia, Romania, or Serbia**, significantly limiting harm reduction efforts in these countries. In contrast, **Portugal** includes **drug testing as part of DCRs**, such as those in Lisbon.

Harm reduction for ketamine users includes advice on preparation, with a **UK** participant noting, *"Crushing crystals fully or cooking them to hydrate and then evaporate the water off can help with many health problems associated with ketamine."*

Challenges in harm reduction messaging

Providing harm reduction information without it being perceived as promoting drug use remains a delicate issue. A participant from **Switzerland** questioned, *"How do you provide this information in a way that is not like promoting drug use?"* They noted that *"it's a very thin line between information and promotion."* Another **Swiss** professional added, *"There are people who don't understand why we don't say, 'You don't have to use drugs.' It's our luck that we really have this political support."*

Online Information and counseling

In some countries, **online platforms are a key tool for harm reduction messaging**. A participant from **Switzerland** shared, *"We have our websites where we provide information, an Instagram channel, and we release a yearly report on our drug-checking results."*

Festival harm reduction strategies

In **festival settings**, including illicit raves, harm reduction services vary but typically include **trip sitting** (**Serbia**), **safe resting spaces** for those experiencing exhaustion (*"Hours of not sleeping can be physically problematic"*), **safer sex promotion** (*"Engaging in risky sexual activity"*), and **welfare provisions** such as *"water, food, tea, coffee, and harm reduction advice at illicit events."* (**UK**)

Harm reduction at festivals follows general drug strategies but includes a stronger focus on **education on dosages** and **extended bad trip monitoring**—which may last up to 10 hours instead of the usual 6-8. A **Serbian** participant described how these services impact users: *"After a night in the trip-sitting tent with counselors, outreach workers, or peer educators, people have said, 'Thank you. You helped me realize that I didn't need as much as I initially wanted to do—I didn't need another line or another three lines that night.'"*

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Integrated and friendly community services

Community centers play an important role in ensuring harm reduction services are accessible and non-judgmental. A **Romanian** participant described their approach: *"We try to invite them to our community center to see a doctor. It's easier for them to go there and not be harshly judged."* Another added, *"Medical care, understanding why this is happening, and providing necessary materials for safe use."*

Naloxone and Overdose Management

Naloxone availability varies by country. In **North Macedonia**, it was available in public clinics but expired due to **lack of demand**, as users avoided these facilities. In **Romania and Serbia**, naloxone distribution services **are not available**.

Pharmacological Treatment as Harm Reduction

Some professionals consider pharmacological treatment as part of harm reduction. A participant from **Portugal** shared, *"The only harm reduction I'm doing is giving antipsychotics, for example, to our clients, to make sure that if they are going to consume, they do not get so destabilized that they will cause harm to themselves."*

4.2.7. Best Practices for NPS users

Online information and services

Several countries, including **Switzerland and the UK**, have developed well-established online platforms providing **continuously updated information** on emerging drugs, usage trends, effects, harms, and harm reduction strategies. Platforms such as the **TEDI drug-checking platform** were mentioned as valuable resources by two participants. These platforms not only provide accurate data but also serve as a bridge connecting users with **online counseling services** or **in-person harm reduction programs**.

A successful **online discussion forum** on mephedrone (2008-2015) was established in Slovenia by DrugArt. According to a participant, *"It had a lot of traffic and was a very effective harm reduction intervention since there were no other media, social networks, or sources of information at the time. Users actively discussed mephedrone and the emerging NPS, allowing us to gather real-time information and provide harm reduction advice."* However, the participant noted that *"nobody is using it anymore as everything moved to new platforms like Telegram and Instagram. In Slovenia, we now lack a channel with a large drug user population where we could replicate this kind of intervention, so we rely more on outreach work and drug checking."*

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Peer involvement

The **involvement of peers** in collecting information on NPS, their effects, harms, and harm reduction strategies has been an effective approach. A participant from **Slovenia** explained, *"We had a few volunteers who were drug users, and they helped us a lot with gathering information. They were trying new substances, reading forums, and compiling data for us."*

Information campaigns

In **Spain**, awareness campaigns have focused on **highlighting the real composition of psychoactive substances** sold under various brand names with misleading marketing. These campaigns have encouraged **users to test their drugs more frequently and take drug composition variability seriously**. As one participant noted, *"People are testing much more and are taking it more seriously that the composition is very variable, and as a result, the price has also reduced."* This strategy was particularly applied when substances like **2C-B (Nexus), a** synthetic psychedelic with stimulant and empathogenic properties sold as ketamine.

Drug Checking Services

Drug checking services operate in **the UK, Switzerland, Portugal, Slovenia and Spain**, either independently or integrated into broader harm reduction services. Despite its effectiveness, drug checking remains **an expensive service**. In Slovenia, drug checking was introduced with public funding as part of the **Early Warning System**, following the emergence of NPS in 2008. As a participant noted, *"NPS became a major issue in Europe, and significant funding was directed towards NPS monitoring and related interventions."* Another expert confirmed that *"drug checking in Slovenia is running quite well. I think it could serve as a good best-practice model because it's one of the activities that is well-structured and effective."*

Psychiatric Treatment as Harm Reduction

Some harm reduction initiatives explore **substituting illegal stimulants with legal prescription medicines**, such as **ADHD medication**. A participant from **Portugal (Azores)** noted that *"I translated this strategy for one of our clients recently, but I haven't had the chance to follow up with him yet. I think it's something promising for the future."*

International cooperation and innovative strategies in restrictive contexts

In countries with **restrictive regulatory frameworks**, NGOs have developed **creative harm reduction strategies**. A participant from **Serbia** shared an example: *"We advised people from our community attending a festival to come and get their drugs checked because this was a service we could offer in a specific setting. We also connect our users and clients with vendors who provide drug-testing kits."*

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Cross-border collaborations with NGOs from harm reduction-friendly countries, such as **Portugal and Poland**, also play a crucial role in **sharing harm reduction knowledge and practical education** to improve services in more restrictive environments.

4.2.8. Guidelines for Intervention with NPS Users

National guidelines for harm reduction interventions targeting NPS users are **limited, outdated, or in some cases, nonexistent**. A participant from **Serbia** confirmed this gap: *"We have none, and I'm not sure if we will come to the point where we have something anytime soon."* Even in **Switzerland**, where harm reduction services are well-established, the development of guidelines remains a challenge. A Swiss participant explained, *"It's hard to make these guidelines because they differ from substance to substance."*

Representatives from **Spain** also noted that the country lacks a comprehensive set of guidelines for managing NPS use, despite having **two guidelines specifically for chemsex**. In **Slovenia**, one NGO has developed its own internal guidelines, but they are becoming outdated. A Slovenian participant shared, *"Ours were made in 2010 when the NPS phenomenon started. I think they are a bit old now."*

The absence of national guidelines highlights a critical gap in structured harm reduction responses for NPS users, even in countries with otherwise strong harm reduction frameworks.

4.2.9. Key Challenges in NPS Harm Reduction

Limited data on NPS

Many countries **lack drug-checking services and well-developed early warning systems**, making it difficult for service providers to identify and respond to emerging NPS trends. In **Serbia**, one participant noted, *"Only the Military Hospital, which is the only hospital that receives people with intoxication from the ER, can actually track NPS. This data is published in the yearly reports."* In **North Macedonia**, NPS-related data primarily comes from the **Ministry of Health's focal point**, which compiles information from the **European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)** and other European partners. However, a **dedicated national laboratory or specific NPS testing service does not exist**. A **Serbian** participant further explained, *"Most of the available data is empirical, based on patient reports, as there is limited outreach or testing capacity through NGOs."* In **North Macedonia**, the **legal framework does not allow for clear testing of substances**, making it harder to track what is available on the illegal market.

Lack of guidelines and training for service personnel

In **Portugal**, a major challenge in NPS harm reduction is **the lack of standardized guidelines and specialized training for service personnel**. Without clear frameworks, frontline professionals struggle to provide evidence-based interventions for NPS users.

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Regulatory framework and its impact on interventions

Regulatory barriers contribute to the **proliferation of new substances**, particularly in **island regions**, where trafficking of traditional drugs is more difficult, and **legal loopholes make it easier to introduce and distribute unregulated substances**. In **Serbia, North Macedonia, and Romania**, where **any drug possession is criminalized**, harm reduction services such as **drug checking and supervised consumption rooms are not legally possible**. As a **Serbian** participant explained, *"Because possession of any amount of a substance is criminalized, harm reduction workers cannot do drug checking. Possessing a sample would be considered possession, meaning we could all be criminally charged. We tried to get an exemption by law, but this is a very politicized process. The police—not the Ministry of Health—have the final say, making this very hard to achieve."*

Regulatory frameworks also impact **naloxone distribution**. In **North Macedonia**, only **medical professionals are legally allowed to administer naloxone**, preventing take-home distribution. In **Serbia and Romania**, **naloxone is not available even in healthcare institutions**. One participant noted that **Romanian drug policy is becoming increasingly punitive**, further restricting harm reduction efforts.

Even in countries with progressive harm reduction policies, **law enforcement practices create additional barriers**. In the **UK**, harm reduction workers faced **obstruction from police**: *"There were issues with police enforcement, including accusations of organizing events and being prevented from providing essential services like water."*

Limited commitment and resource allocation from administrations

Despite legal harm reduction frameworks, **services remain underfunded and lack sufficient coverage**. A **Spanish** participant stressed, *"We need more financial resources to tackle this issue appropriately. We have the trust of our target group, we have drug-checking services installed, and we have the legal framework—but we need more money to expand and strengthen our reach."* A **Slovenian** expert added, *"Maybe politicians will provide more funding for drug checking because it is one of the key tools for dealing with the fentanyl crisis."*

In the **UK**, harm reduction experts emphasized the **need to upscale services**, particularly **drug treatment programs**, to **meet people where they are and encourage them to seek help when they are ready**.

Public perception, stigma, and the role of law enforcement and decision-makers

Barriers to harm reduction (for NPS and in general) often stem from **public misconceptions, stigma, and lack of awareness about harm reduction and drug addiction**. These factors **discourage politicians and authorities from creating legal frameworks and allocating resources to develop harm reduction services**. This issue was seen as **particularly significant in North Macedonia**. A **Swiss** expert acknowledged that, despite strong institutional support, public skepticism still exists: *"Not everybody understands what we're doing. Some people ask, 'Why do you test their drugs? Why do*

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you provide this information? You're helping people consume.' These barriers exist everywhere, not just for NPS."

In the **UK**, misunderstandings at the **law enforcement level** create additional obstacles: *"The lack of knowledge among frontline police officers about harm reduction was a significant barrier."*

On the other hand, **Switzerland** is an example of a country with **few institutional barriers**, as harm reduction is **firmly embedded in its political system**. One Swiss participant explained, *"We have a long tradition in harm reduction. It's part of our political structure, so I think we have fewer challenges or barriers than other countries."* Another expert highlighted the **substantial resources allocated to harm reduction in Switzerland**, adding, *"The drug-checking services in Switzerland are working extremely well because they receive strong financial support."*

Lack of innovative treatment programs

Harm reduction professionals highlighted **the need for stimulant substitution programs**, particularly for NPS and established stimulant users, **as existing treatments remain inadequate**. A participant from **Portugal (Azores)** noted, *"Stimulants generate severe addiction, with high levels of craving, but there are no substitution programs available for these substances."*

A **North Macedonian** expert mentioned that **pilot programs using methylphenidate** (a prescription stimulant for ADHD) are being tested in some countries, but no country has fully implemented **a stimulant substitution model**. So far, **stimulant addiction treatment relies on symptomatic approaches, with psychotherapy playing a central role**, though **relapse rates remain high**.

Recommended interventions: the ideal harm reduction for NPS

A comprehensive harm reduction approach for NPS should focus on **regulatory improvements, expanded harm reduction services, investment in research, peer involvement, outreach interventions, and enhanced professional training**. Participants highlighted key recommendations:

- **Improve the regulatory framework** to allow for **better control of substances (through decriminalization)** and to **facilitate the development of harm reduction services that are more accessible and tailored to user needs**. A **Slovenian** participant emphasized, *"Decriminalization would be the first step to go to this level."* In **Portugal**, one expert envisioned a system where users could access safer substances with known effects: *"I dream of a service that will do that."* In **Serbia**, the importance of **meaningfully involving people with lived experience in policymaking and service design** was stressed: *"Building policies and practices, meaningfully involving people with lived experience."*
- **Increase investment in research** for **treatment options**, particularly **substitution treatments for stimulant use**, possibly in collaboration with **universities and pharmaceutical companies**. A **Portuguese** participant noted the gap: *"There is no*

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substitution treatment for NPS, and it is far less studied than opioid treatment." A **Slovenian** expert highlighted the importance of financial support for research: *"Provide more money for some research. This lack of information is often one of the key issues that lead to riskier drug use."*

- **Expand drug checking services** to **increase accessibility**. A **Portuguese** participant acknowledged the need for wider coverage: *"We have drop-in centers and drug-checking interventions in Portugal, but it's not widespread, so not all people can access them."*
- **Develop online harm reduction interventions** to reach **younger users**, particularly those who are **not yet linked to any harm reduction platform**. (Portugal)
- **Enhance peer counseling** by **involving people with lived experience in service provision** across all harm reduction settings. A **Serbian** participant emphasized this approach: *"Peer and people with lived experience should be involved in service provision in all different settings."*
- **Strengthen outreach interventions** in **discotheques, nightclubs, and festivals** to engage NPS users directly. (North Macedonia)
- **Continuous education** for individuals who interact with NPS, including **youth, direct users, bar and club owners, club employees, healthcare professionals, social workers, law enforcement, and decision-makers**. A **North Macedonian** participant stressed the need for broader education: *"We need to educate not just professionals but also people in the nightlife scene, employers, and policymakers."*
- **Improve professional training and support**, ensuring that **harm reduction professionals are not only well-educated but also empathetic**. A **North Macedonian** participant reflected on this gap: *"We need to better train and support professionals—not just educate them but also make sure they are empathetic. That is probably what we are missing."*
- **Create one-stop centers** that are **multidisciplinary, community-based, and friendly**, offering **psychosocial support to users**. (North Macedonia)

4.2.10. Training and Resources

Existing training and learning approaches

Experts working in **harm reduction for NPS users** acquire knowledge through **formal studies**, **self-directed learning**, and **cross-border training opportunities**. They emphasized the importance of learning directly from **people who use NPS**, continuously updating knowledge, and **exchanging experiences with more advanced service providers in harm reduction**.

Training sources varied widely, from **formal academic paths** to **international workshops** organized by **EUDA, Pompidou Group, and Eurasian region networks**. A **Slovenian** expert explained, *"I read online from all available sources, including drug-checking data, and conduct my own research."* Another **Slovenian** participant added, *"By asking people who use drugs, I receive very good information."*

A **Spanish** expert highlighted the combination of academic and field experience: *"I have a master's in chemistry and am currently doing a PhD on the topic of NPS. But most of us learn about NPS from people who use them because it's such a novel topic."*

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A **North Macedonian** participant reflected on their exposure to international events: *"I have personally attended several trainings related to NPS and had the opportunity to be part of CND in Vienna and the Lisbon Addiction Conference."* Another expert from **North Macedonia** highlighted the importance of ongoing training: *"I have received several trainings from the Pompidou Group, the Council of Europe, and EMCDDA. The changes in the field are very quick, and you must always stay updated."*

The **practical dimension** of training was emphasized by a **Serbian** participant: *"Real cooperation on delivering services is the key. It gave me not just theoretical knowledge but also practical skills."*

Additional resources or training needed

Experts recommended a **hybrid training model**, combining **online platforms with reliable and updated information** about **psychoactive substances (toxicology, risks, harms, treatment)** with **study visits** to organizations with advanced harm reduction services. They also stressed the **importance of learning from people with lived experience** and ensuring **a multidisciplinary approach involving healthcare, social, and law enforcement professionals**.

A **Slovenian** expert expressed the need for a centralized knowledge hub: *"I would love to have a platform with all the information gathered in Europe regarding NPS. Right now, I have to combine so many different sources—forums, toxicology reports... I need references that are already verified, as that's often my biggest challenge at work."* Another **Slovenian** expert reinforced the role of NPS users in knowledge-building: *"It's very important to gather all the information from people who use NPS because they have the best knowledge of substances. We need to collect and assess this information properly, and a responsible system should manage this."*

A **North Macedonian** participant proposed an international initiative: *"We need an original project where multiple regional harm reduction organizations collaborate. The main activity would be study visits to organizations with established services, and the ultimate goal would be to train a team capable of developing these services in their own regions."*

The **need for continuous education and competency-building** was highlighted by a **North Macedonian** expert: *"We need competent staff, and we don't have it. No one can ever say they are fully educated in this field because things change so fast."* A **Serbian** expert emphasized the need for region-specific training: *"Especially in the Western Balkans, we need deeper engagement with trainers who are truly knowledgeable about what we can learn and how to apply it."*

Finally, **broadening training beyond harm reduction professionals** was strongly recommended. A **North Macedonian** expert stated: *"It's not just harm reduction professionals who need training—doctors, treatment facility staff, social workers, and all professionals interacting with people who use NPS must be trained."*

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4.2.11. Discussion

The focus group discussions underscored the **growing public health crisis associated with NPS**, driven by several interlinked factors:

The restrictive regulatory framework on psychoactive substance use

- **Accelerates the emergence of NPS** by creating legal loopholes that allow synthetic chemists to develop unregulated substances that evade current legislation.
- **Blocks the development of harm reduction services**, preventing interventions that could effectively minimize the risks and harms associated with NPS use.
- **Hinders adequate data collection**, limiting understanding of NPS prevalence, patterns of use, and associated risks, leading to **poorly informed policy responses**.

Stigma and misconceptions about drug use, addiction, and harm reduction

- Stigmatizing attitudes at the level of **the general public, decision-makers, and professional sectors (healthcare, social services, law enforcement)** contribute to **regulatory resistance**, with some countries even adopting more restrictive laws.
- These **misconceptions discourage people who use drugs from accessing health and social services**, reducing their ability to receive timely support and harm reduction interventions.
- **Public education campaigns** are urgently needed to **dispel myths, combat stigma, and provide accurate information about the real risks of NPS use**.

Multiple risks and vulnerable communities require specialized interventions

- Certain populations face **heightened risks**, including **chemsex users, young NPS users at festivals, incarcerated individuals, and people who inject NPS**.
- The **link between NPS use and outbreaks of HIV and tuberculosis** underscores the need for **urgent, tailored interventions** targeting the most affected communities.

Harm reduction gaps

- The **lack of drug-checking services** prevents users from verifying substance purity or composition, increasing the risk of **accidental overdoses and toxic interactions**.
- Other **harm reduction services**, including **supervised consumption rooms, take-home naloxone programs, and peer-led interventions**, remain underdeveloped or entirely absent in many parts of Europe.

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- These services must be **scaled up and integrated within broader harm reduction frameworks**, ensuring they are accessible across **both urban and rural regions**.

Insufficient resource allocation for services, data collection, and research

- Many harm reduction initiatives suffer from **chronic underfunding**, leading to **gaps in service provision, limited data collection, and a lack of investment in research on NPS-related harms and treatment options**.
- **Greater financial and institutional commitment is needed** at both national and European levels to ensure that harm reduction services are adequately resourced to address the evolving challenges posed by NPS.

5. CONCLUSIONS

The **synthesis of our desk review and expert consultations** reveals that Europe's harm reduction landscape is at a critical juncture. Traditional services—most notably those addressing opioid use and injection-related harms—provide a valuable foundation, yet they are insufficient for the rapidly evolving challenges posed by NPS. In many Western European settings, well-resourced drug checking, supervised consumption and mobile outreach models offer timely risk reduction and care services. However, these successes contrast sharply with **gaps** in Eastern Europe, where restrictive **legal frameworks, inconsistent early warning systems and chronic underfunding** hinder both service delivery and reliable data collection.

Expert voices highlighted how **stigma and punitive policies** continue to drive NPS markets underground and discourage service engagement, compounding public-health risks. The regulatory loopholes that enable synthetic chemists to innovate faster than legislation can respond underscore the need for nimble, intelligence-driven approaches. Likewise, training and informational deficits, from frontline health professionals to peer workers, limit the capacity of existing services to **adapt to novel chemistries and complex user profiles** (e.g., festival-goers, chemsex participants, street-involved populations).

Despite these obstacles, **emerging practices**, such drug checking, peer-led digital outreach and integrated services, demonstrate the potential of responsive, user-centred models. Crucially, these insights point toward the importance of uniting real-time surveillance, co-designed digital tools and scalable capacity-building to keep pace with an ever-shifting NPS market.

Taken together, these findings provide a **solid foundation for the report's next section**, where we outline targeted **recommendations to guide the development of a consortium-wide digital training platform and innovative harm-reduction services for NPS users**.

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6. RECOMMENDATIONS

6.1. Policy and Legal Framework

- **Decriminalize drug use and possession for personal use** to reduce barriers to accessing harm reduction services and promote public health approaches over punitive measures.
- **Develop or update national drug strategies** to explicitly include harm reduction measures tailored to NPS, including drug checking, overdose prevention, and outreach services.
- **Facilitate the legal establishment of harm reduction services**, including supervised consumption rooms, take home naloxone, and drug checking programs, especially in countries where these remain restricted.

6.2. Harm Reduction Service Development

- **Expand the availability and accessibility of drug checking services**, using both fixed-site and mobile models, to provide users with timely and accurate information on drug composition and risks.
- **Ensure the distribution of naloxone** is legal, accessible, and supported by training, particularly in the context of rising risks from synthetic opioids (e.g., nitazenes).
- **Develop harm reduction interventions that address stimulant and NPS use**, including targeted outreach, safer use education, and appropriate medical support.
- **Promote integrated, low-threshold services** that combine harm reduction, medical, and social support in one-stop locations accessible to marginalized populations.

6.3. Capacity Building and Professional Training

- **Implement regular training for harm reduction professionals** (including healthcare workers, social workers, peer workers, and outreach staff) on emerging NPS trends, risk communication, overdose response, and trauma-informed care.
- **Support knowledge sharing across countries**, particularly between countries with established services and those in earlier stages of harm reduction development.
- **Encourage interdisciplinary collaboration**, including between emergency care, mental health services, sexual health clinics, and harm reduction programs to manage complex NPS-related cases.

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6.4. Community Engagement and Peer Involvement

- **Involve people who use drugs in service design and delivery**, ensuring that harm reduction strategies are grounded in lived experience and respond to real needs.
- **Invest in peer-led education and outreach initiatives**, particularly in nightlife settings, chemsex contexts, and underserved rural or online spaces.
- **Ensure harm reduction messaging is culturally sensitive**, non-judgmental, and adapted to diverse populations, including youth, LGBTQI+ communities, and migrants.

6.5. Digital and Early Warning Systems

- **Enhance national early warning systems (EWS)** and ensure that frontline harm reduction actors are integrated into alert and response mechanisms.
- **Develop and promote digital platforms for harm reduction**, including online information hubs, counseling services, and real-time alerts about high-risk substances.
- **Improve data collection on NPS use** through anonymous online surveys, service-based monitoring, and community-based research.

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