

Expert Working Group on improving drug statistics and strengthening the Annual Report Questionnaire

Vienna, 29-31 January 2018

## Background paper I: Improving national drug statistics systems

### I. Introduction

The objectives of this paper are to provide a summary of existing challenges with regard to collecting drug statistics and to discuss activities to improve the quality and availability of data on drugs. Two priority areas for future work are addressed in order to respond comprehensively to the call made by Member States in several instances to enhance the statistical information on drugs through a series of integrated objectives and activities.

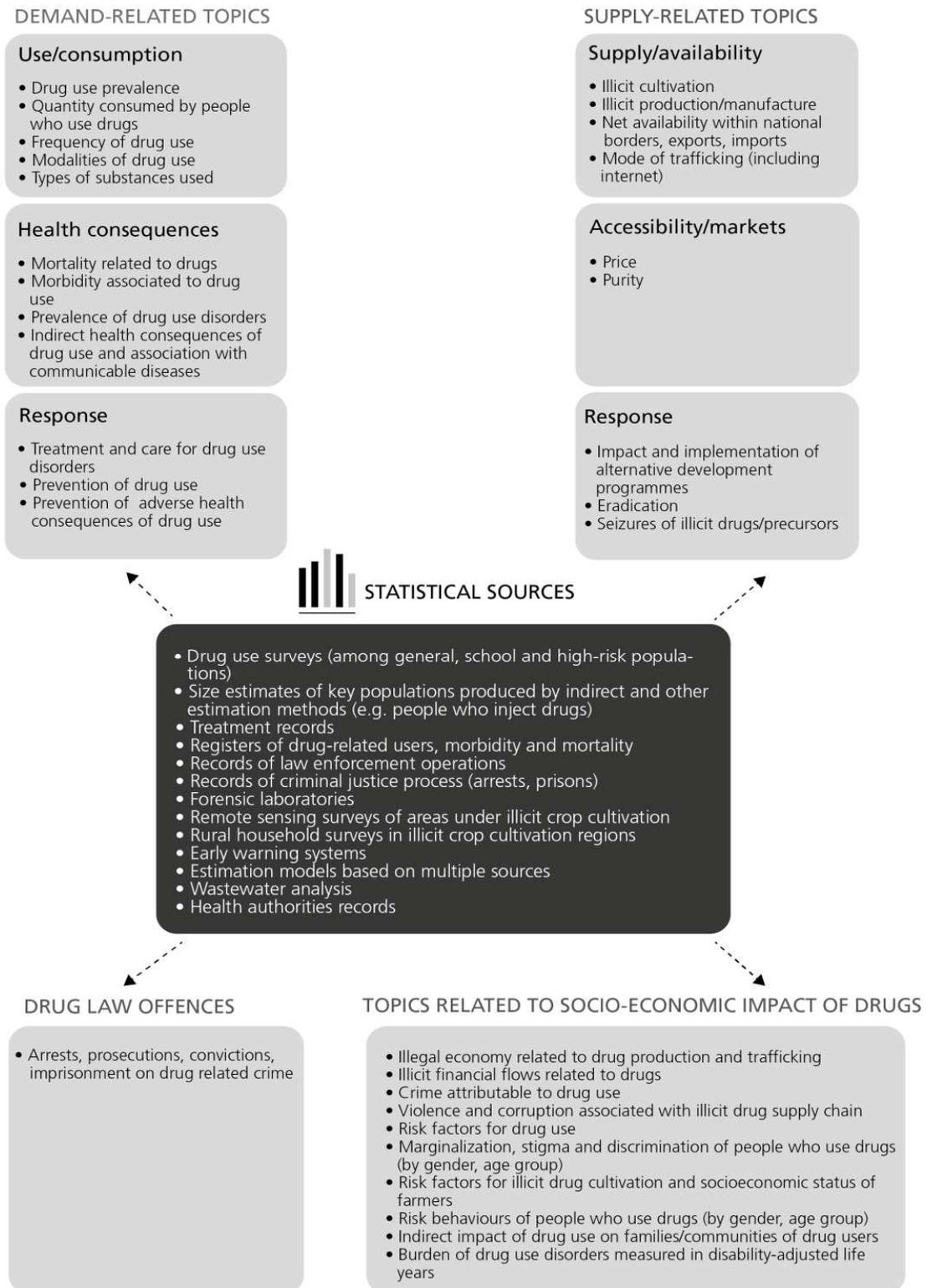
### II. Background

The international drug control conventions set forth a system for the control of certain psychoactive substances, referred to in this document as drugs. The world drug problem is typically characterized by two hallmarks: the illegal activities affecting drugs supply and the health aspects around drug use. Statistics on drugs traditionally refer to the two areas of supply and demand.

Whether a given substance qualifies under the designation “drug” or not is defined by the lists (“schedules”) accompanying the Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol and the Convention on Psychotropic Substances of 1971. The lists have been amended over time as laid out in the international drug control conventions. In addition, there is a wide range of other psychoactive substances which have emerged over time as substances which are consumed for their psychoactive effects. Such substances, referred to as “new psychoactive substances” (NPS), are also of interest because of the potential threat to public health; such substances may be subject to controls at national level before they are considered for possible inclusion in the schedules of the international conventions.

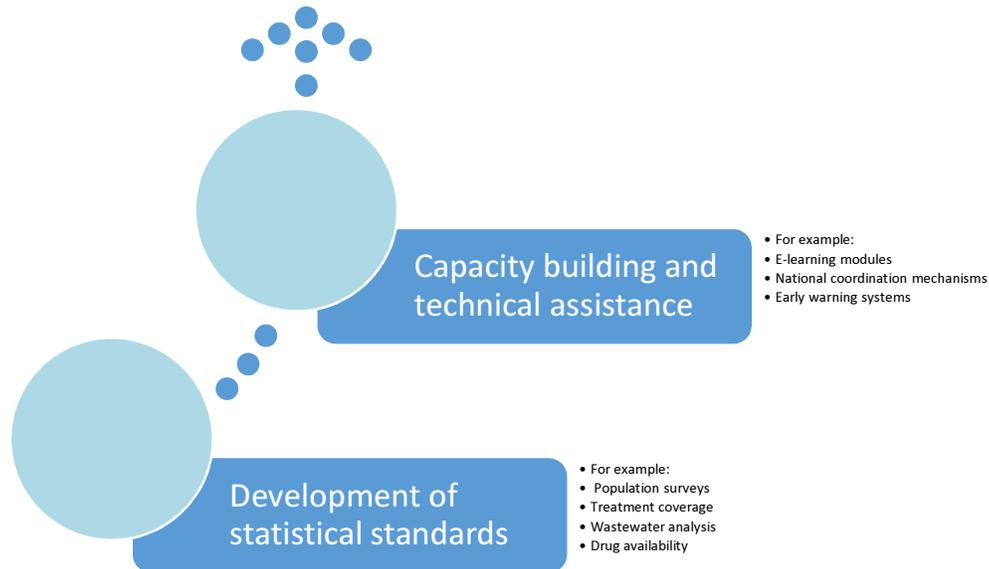
Describing the demand and supply of drugs requires a comprehensive and interlinked information system. The following describes the elements of such a system considering topics that can describe the drug problem. The figure is not an exhaustive list but rather aims to provide an overview of the possible elements.

Figure 1 Elements of a national drug statistics system



Actions are needed across several fronts to consolidate existing systems to monitor ever-changing patterns of consumption and production and to measure the effectiveness of programmes to address all relevant aspects of the world drug problem, including, as appropriate, as related to the 2030 Agenda for Sustainable Development. Enhancing methodological developments and capacity-building are two priority areas for future work.

*Figure 4 Areas to improve national drug statistics*



### III. Methodological challenges in drug statistics

#### General issues

The drug phenomenon is interwoven with a wide range of illicit activities; hence efforts to measure it are inevitably complicated by its clandestine nature. Drug indicators draw on both administrative data as well as statistical surveys, such as land surveys on illicit crop monitoring and household surveys on drug use.

Administrative data are typically obtained from two main areas: the criminal justice system and health services. Administrative records are a direct measure of the state response to the drug problem. Data generated from these records are influenced by a number of factors, including policy priorities, effectiveness of public intervention, public trust in national authorities and technical capacity and resources to produce statistics. These data do not measure the extent of the problem, but need to be triangulated and cross-referenced in order to inform trends. For example, the quantity of drugs seized generally captures only an unknown (and variable) proportion of the quantity of drugs trafficked. Similarly, registries of drug users, or administrative records of drug treatment episodes, generally reflect an unknown proportion of the population of drug users.

Many countries lack the capacity, as well as the financial resources, to produce good quality drug statistics. The paucity of official data, and the technical and specialized aspects of the production of epidemiological data, contribute to a scenario where data on specific drug

situations may only be provided by non-official sources, which have limitations on usability and sustainability.

As drug statistics need to be collated from multiple agencies, lack of national coordination can seriously affect the quality of national data. Another current limitation is that substances being consumed or seized are frequently not verified by laboratory testing and reported information often relies on perceptions of drug users and law enforcement officers. This issue is of particular concern for NPS, which constitute a very fluid market with substances rapidly entering and exiting the market.

### Challenges in measuring drug demand

Prevalence of drug use among the general population can be measured through drug use surveys, which have to overcome a number of challenges. Under-reporting is a serious concern since drug users can be reluctant to disclose their drug use habits, and although there are standard methodologies to measure drug use through household surveys, these can provide inaccurate results in settings where drug use is highly stigmatized, particularly among women. Moreover, they are not able to capture drug use outside the household among sub-populations which may be more affected, as for example in prison settings and among sex workers. Furthermore, the lack of uniformly applied standards poses issues of comparability among countries.

There are also challenges in distinguishing between direct and indirect impact of drug use on the health of people who use drugs, and measuring them accordingly. For example, while death resulting from a drug overdose can clearly and directly be ascribed to drug use, it is much more challenging to determine, in the broader picture of an HIV epidemic, the extent to which HIV transmission, or AIDS-related mortality, can be attributed to injecting drug use. The international classification of diseases (ICD-10) provides a global methodological framework but its application is difficult and, as a result, drug-related deaths are often underestimated.

The quantities consumed by each drug user, is another important aspect of drug analysis which requires better data to assess the size of drug markets. Generating this information is complicated by numerous, highly variable factors, such as individual tolerance, average quantity per dose, frequency of use, the purity of drugs purchased by the consumer, and the mode of administration.

The non-medical use of prescription drugs, notably prescription opioids, introduces an additional layer of complexity in measuring and analysing drug use, as there may be an interplay between consumption of drugs sourced from purely illicit channels and non-medical consumption of products intended for medical use.

Treatment of drug use disorders is an important element of the response to the drug problem, but a common concept of treatment itself is lacking and related national information systems are generally weak, especially in developing countries. This affects the production of the indicator identified to globally monitor Sustainable Development Goal target 3.5 “coverage of treatment interventions (pharmacological, psychosocial and rehabilitation and after care services) for substance use disorders”. Adequate reporting for this indicator requires not only estimates of people who were provided with treatment interventions but also estimates of the number of people in need of treatment, a concept that still lacks a standard definition.

### Challenges in measuring supply of drugs

Drug supply is nowadays extremely varied and evolving fast. The transnational dimension of drugs trafficking is pivotal and a good understanding of drug supply can be achieved only by collating national information at regional and global level (see section of challenges at regional/international level).

Efforts to estimate drug production need to contend with the clandestine nature of this activity. Fairly well-developed methodologies exist to monitor illicit crop cultivation through surveys relying extensively on remote sensing imagery in combination with overflights/field visits. But the conversion of cultivated areas to quantities of drugs produced is challenging due to complicating factors, such as the dynamic nature of land use and yield variation.

In the case of cannabis cultivation, which has increasingly come to occur indoor, techniques based on imagery and overflights/field visits are clearly insufficient. Some governments have adopted techniques to detect indoor cultivation, but these do not yet have a global outreach.

Quantifying the manufacture of synthetic drugs is even harder than for plant-based drugs. There is no well-established methodology for estimating the manufacture of synthetic drugs, since this is widely dispersed and is often confined in small laboratories which, for some drugs, are relatively easy to establish and hard to detect through systematic data collection. Seizures of chemical precursors used in the synthesis of drugs can provide insights into the quantities and locations of manufacture, but the proliferation of alternative methods of synthesis and the employment of alternative chemicals (not under international control) renders the quantitative interpretation of such indicators highly challenging.

Drug seizures, prices and purities are the main indicators that can help to understand if drug availability in a given market is expanding or shrinking. Compiling national seizures data requires strong coordination across national agencies, such as customs and police forces, and across sub-national jurisdictions.

As in legal markets, drug price is one of the most valuable indicators of its availability – especially in the presence of an inelastic demand – but there are a number of challenges in obtaining accurate and internationally comparable data. The difficulties are in collecting data on illegal and un-transparent transactions and dealing with drug products whose purity cannot be easily accounted for. Many national forensic laboratories still lack the capacity to routinely report drug purity.

Aside from substances under international control – referred to as “drugs”- there are numerous “new psychoactive substances” (NPS) which are not under international control and have recently emerged as a threat to public health. Early warning systems (EWS) monitor trends in the composition, production, distribution and patterns of use of these psychoactive substances, and assess if new developments and events could pose risks to the health and safety of individuals and society. But, EWS are still not well established at country level.

Alternative development is one form of drug supply reduction which aims to prevent and eliminate the illicit cultivation of crops through specifically designed rural development measures, recognizing the particular sociocultural needs and characteristics of the target communities and groups. The implementation of AD interventions and their monitoring require data on the risk factors related to illicit crop cultivation including aspects of socio-economic well-being, environment, rule of law and governance. However, rural communities affected by

illicit drug cultivation often lack systematic data collection which fit their needs. This is an area which needs a consolidated framework including standardized indicators and conceptual and analytical framework for their interpretation.

#### Challenges in measuring the socio-economic impact of the drug problem

The impact of the drug phenomenon on society and on the individual extends to a broad spectrum of socioeconomic and development issues which go beyond the health consequences of drug use. These issues may include loss of productivity and employment and consequences for individuals indirectly exposed to drug use, such as spouses and family members of drug users. The availability of statistics linking socio-economic status with drug use are rare. National statistics on socio-economic status rarely consider drug use status, while socio-economic aspects such as employment status and income levels are sometimes neglected in drug use surveys. Overall, these aspects are not systematically monitored and there is a need for more systematic data linking socio-economic status and drug use also considering the indirect impact on non-drug users, such as the monitoring of drug driving.

Although there is a well-recognized connection between the drug phenomenon and crime, there is a lack of recognized standards in the measurement of drug-related crime beyond drug-law offences, that is, in attributing (the correct proportion of) crime, including acquisitive crime, corruption and extortion, money laundering and violent crime, to drug-related causes.

Understanding the drug problem requires also knowledge on its economic impact in terms of the illegal economy generated by drug production and trafficking (and associated money laundering and illicit financial flows) as well as the costs borne by society as a result of the drug problem.

Estimating drug-related illicit financial flows contributes to assessing the consequences of the drug problem and to tackling it. But apart from anecdotal evidence and some initial academic research, a good understanding of the scale and patterns of illicit financial flows is still lacking and the methodology for measuring illicit financial flows is currently at its very early stages of development.

#### ***Box: Disaggregation and statistical refinements for drug-related data needs***

The drug problem has an unequal impact on different population groups and in order to be fully informative drug statistics need to be properly disaggregated. For example, data on people who use drugs should, ideally, be disaggregated by numerous variables, including age, gender, modality of use (smoking, snorting, inhaling, injecting), settings (household, prison, street), income, socioeconomic status, education level, migration status (refugee, migrant, victim of trafficking), and health variables such as HIV status and Hepatitis status.

Some of these disaggregations can be considered in drug use surveys, but some sub-populations of drug users are hard to reach in surveys and exhibit special characteristics and special needs, so that dedicated studies are needed; this includes female drug users, people who inject drugs and HIV-positive people who use drugs, drug users in prison, refugees, sex-workers and men who have sex with men.

## IV. Areas of activity to strength national drug statistics

In order to address the current methodological challenges in drug statistics and improve data quality at national level, the following section proposes a preliminary list of 12 outputs, each of which will require follow-up by relevant national experts in drug issues and national experts in statistics, with contributions from researchers and academics.

### A. Methodological developments to improve data quality at national level

Measuring drug demand touches upon several aspects, ranging from measuring the number of drug users to understanding their characteristics and consumption patterns. Some international standards exist on drug epidemiology, but they do not cover all aspects and some need to be updated to take stock of accumulated experience.

#### **Output 1: Methodological guidelines on conducting population surveys on drug use**

While general guidelines and data collection instruments on population-based surveys on drug use exist, they are based on direct questions which have proven ineffective in countries where drug use is highly stigmatized. New guidelines are needed to address issues that may result in under-reporting of drug use (such as fear of stigma and other social and cultural constraints) and other methodological aspects. The guidelines may cover:

- a) methods such as network scale-up to compensate for low disclosure of drug use;
- b) module or core questionnaire on drug use that can be added to existing surveys;
- d) addressing risk behaviours of drug users and risk factors for drug use
- e) non-medical use of prescription drugs
- g) modules to determine per capita consumption

#### **Output 2: Methodological tools to support national and international comparative analysis on drug use.**

In the area of drug abuse epidemiology, there is a need to update existing methodological guidance on generating data using techniques beyond population based surveys, including in particular the use of indirect methods to estimate the extent of problem drug use, methods to extrapolate drug use data from local studies to the national level, and the generation and collection of data on drug-related mortality and morbidity.

#### **Output 3: International guidelines on producing drug use metrics based on wastewater analysis**

In recent years, methodologies to analyse drugs metabolites in wastewater have greatly improved and estimates on trends and patterns of drug use can be produced in areas with sewerage systems in a relatively cost-effective way. Much research about this innovative approach has been conducted at national and regional level, and EMCDDA has produced the first manual on the subject, but more work needs to be done to have countries outside Europe to embrace this technique and consolidate the experience of all different regions into

international guidelines to further support the production of drug use metrics based on wastewater analysis that can complement those supplied by existing methods.

**Output 4: Guidelines for the production of data on SDG indicator 3.5.1**

Adequate reporting at the national, regional and international levels of SDG indicator 3.5.1 (see paragraph 27) requires a detailed operational definition and relevant, agreed estimation methods of the target population (people who are in need of treatment) and of persons who have received different treatment interventions. Methodological guidelines for this indicator will be jointly developed by UNODC and WHO, the two custodian agencies for this indicator.

**Output 5: Guidelines for the production of data on drug availability**

Data on drug seizures and price are widely used to understand drug supply but comprehensive international guidelines for their production are still lacking. Guidelines will be developed on how to produce price and seizure data, including information on how to record the origin of drugs, counting rules for seizure cases, clandestine laboratories and drug law offences. The guidelines will also address collection of microdata on individual drugs seizures.

**Output 6: Guidelines to produce data on drug cultivation/production and factors contributing to illicit crop cultivation**

Over the last 15 years, UNODC – jointly with national partners - has implemented several programmes to monitor drug cultivation and production. Such experience needs to be consolidated into international guidelines on methods to estimate drug cultivation/production and on methodologies/surveys to understand factors contributing to illicit crop cultivation.

**Output 7: Methodology to monitor impact of alternative development programmes.**

Monitoring the impact of alternative development interventions remains a challenge and is key to more effective and evidence-based policies and programmes. Building on existing research, a methodology for impact measurement of alternative development needs to be developed, which should integrate a number of statistical tools (remote sensing, geo-statistical analysis of land use, data on socio-economic dynamics, security and rule of law indicators).

**Output 8: Guidelines to measure illicit financial flows deriving from the illicit drug trade**

In recent years, important methodological work has been undertaken by academics, international organizations such as EMCDDA and UNODC and also by a number of national statistical offices to estimate the magnitude of the illicit economy generated by drug markets in a given country or region. However, very little has been developed to estimate the flows of the illicit proceeds generated by drugs across countries. In order to measure such flows on a comparable and regular basis countries would benefit from a standard approach defining metrics able to estimate the value generated by drugs trafficking and its trade across countries.

## B. Capacity building

There are serious shortfalls in the capacity of many countries to generate and provide data on drug demand and supply and hence an urgent need for capacity building. Results of the technical analysis of the Annual Reports Questionnaire (ARQ), conducted in view of the Expert Group Meeting to review the contents and process of mandated data collections on drugs, demonstrated that there are still several gaps in data availability, limiting the comparability of drug statistics across countries. Lack of international comparability and data paucity in turn make the calculation of regional and international aggregates highly challenging both for supply and demand indicators.

On the demand side, for example, the primary indicator of drug use, namely annual prevalence, presents challenges not only because of the lack of availability of data, but also because of the heterogeneity of the methods used to generate such data, such as household surveys and indirect estimates. When asked to report on the frequency of national data collections, respondents to the ARQ feedback questionnaire from Member States reported that data collection using surveys or indirect estimation methods are conducted infrequently, with high proportions indicating that data on the prevalence of drug use is collected only every few years or irregularly (Figure 2). Even though data collection related to drug supply is reported to be conducted on a more regular basis, significant gaps remain with respect to the capacity of many countries to generate drug statistics on a regular basis.

*Figure 2 Frequency of national data collection/production/consolidation exercises related to drug demand (Respondents from Member States to the ARQ feedback questionnaire, 2017)*

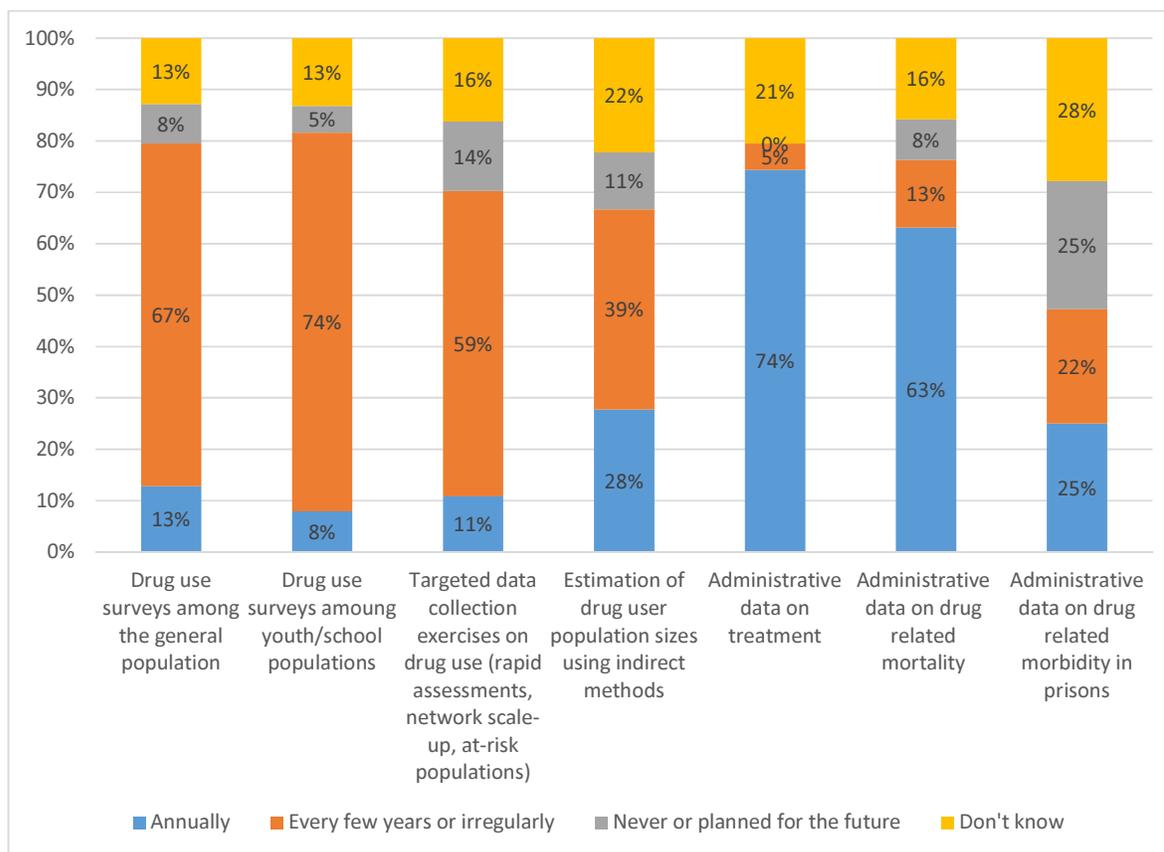
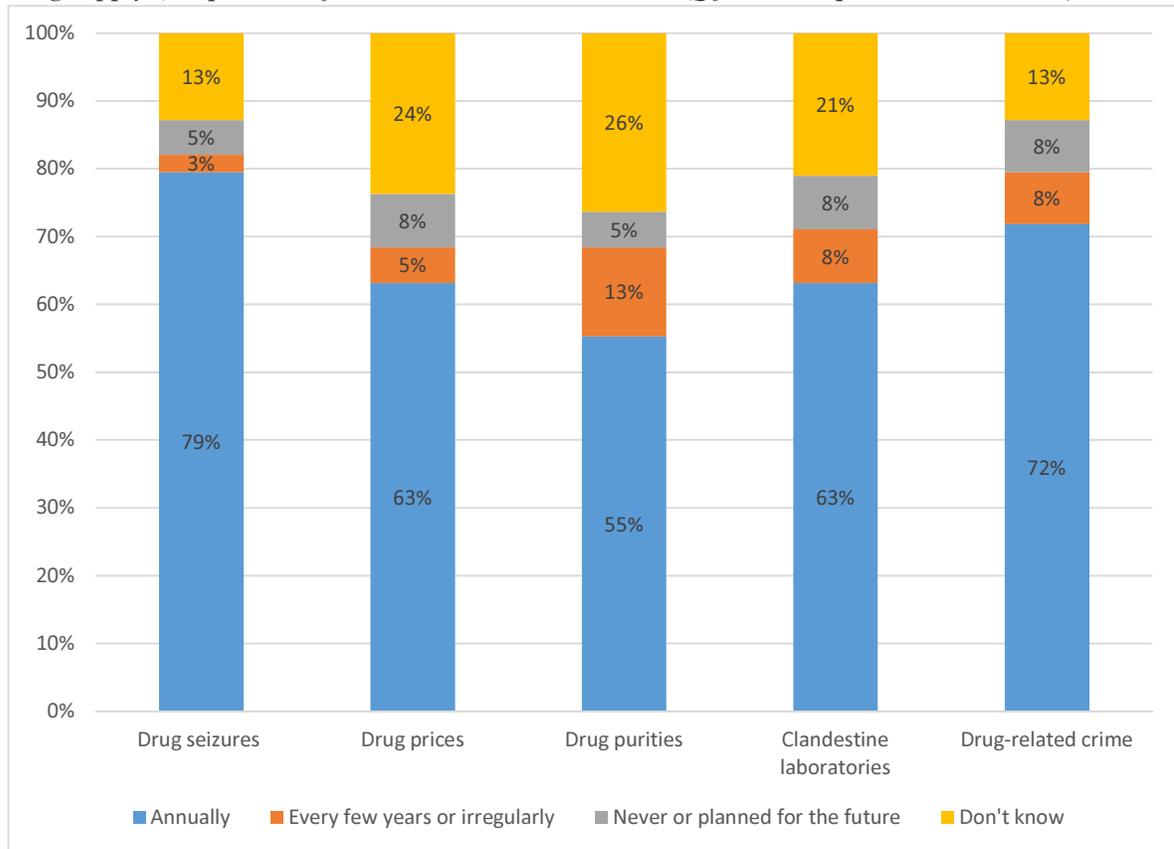
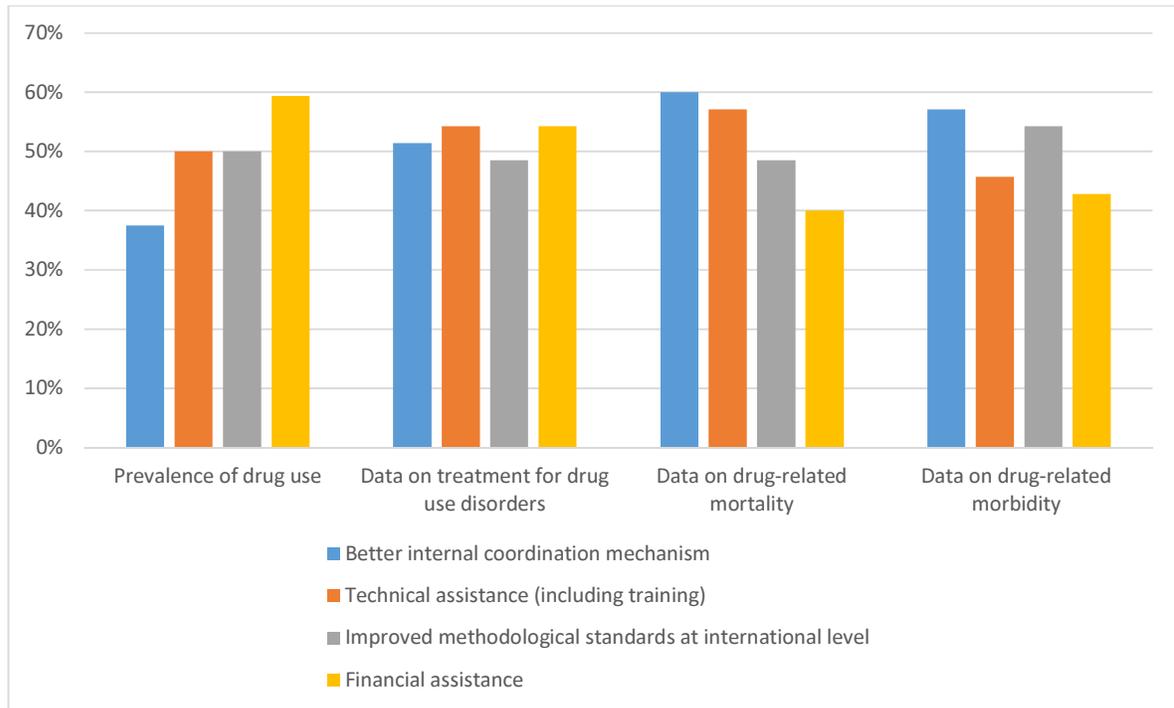


Figure 3 Frequency of national data collection/production/consolidation exercises related to drug supply (Respondents from Member States to the ARQ feedback questionnaire, 2017)

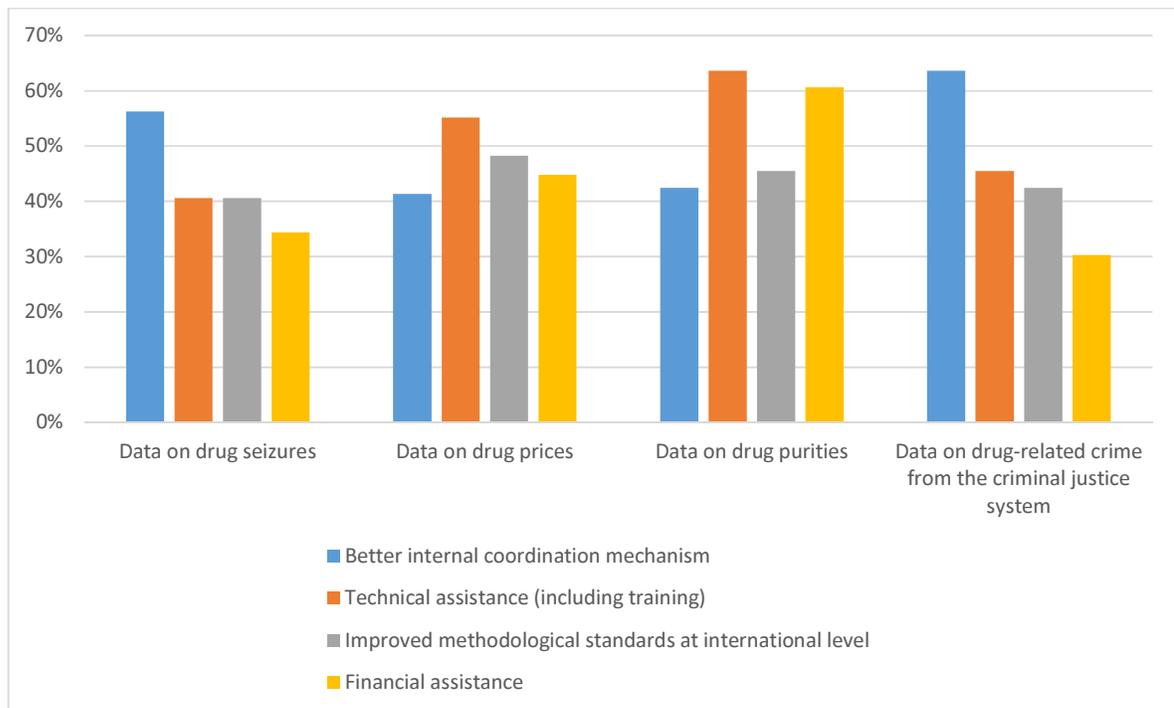


Accordingly, respondents from the ARQ feedback questionnaire were also asked to specify which kind of capacity-enhancing measures are needed to produce specific types of data related to drug demand and drug supply. Responses indicated that internal coordination mechanisms are needed to strengthen data on drug-related mortality and morbidity, while technical assistance is required for data on treatment for drug use disorders and on drug-related mortality (Figure 6). In contrast, Figure 7 indicates that for data related to drug supply, technical assistance is needed to produce data on drug purities and drug prices. Results demonstrated that financial assistance should be targeted at generating data on the prevalence of drug use on the demand side and on drug purities on the supply side. Interestingly, these two types of data collections were reported to be conducted most infrequently in comparison to other data collections (see Figures 2 and 3).

*Figure 5 Type of capacity-enhancing measure needed to produce data related to drug demand (Respondents from Member States to the ARQ feedback questionnaire, 2017)*



*Figure 6 Type of capacity-enhancing measure needed to produce data related to drug supply (Respondents from Member States to the ARQ feedback questionnaire, 2017)*



As such, a series of tools for capacity building can be developed that support countries in the production and dissemination of comparable drug statistics on a regular basis, for example in the form of training materials and targeted interventions.

### **Output 1: E-learning training modules**

In order to improve the capacity of Member States to report drugs data at international level, an integrated set of computer-based training modules should be developed, targeting officials of the national agencies/institutions responsible for different areas of data production (supply, demand, socio-economic impact). Among the various modules, one would train responsible national officials on the compilation of responses to the ARQ.

### **Output 2: Targeted regional and national capacity-building training on producing, collecting and reporting drugs data**

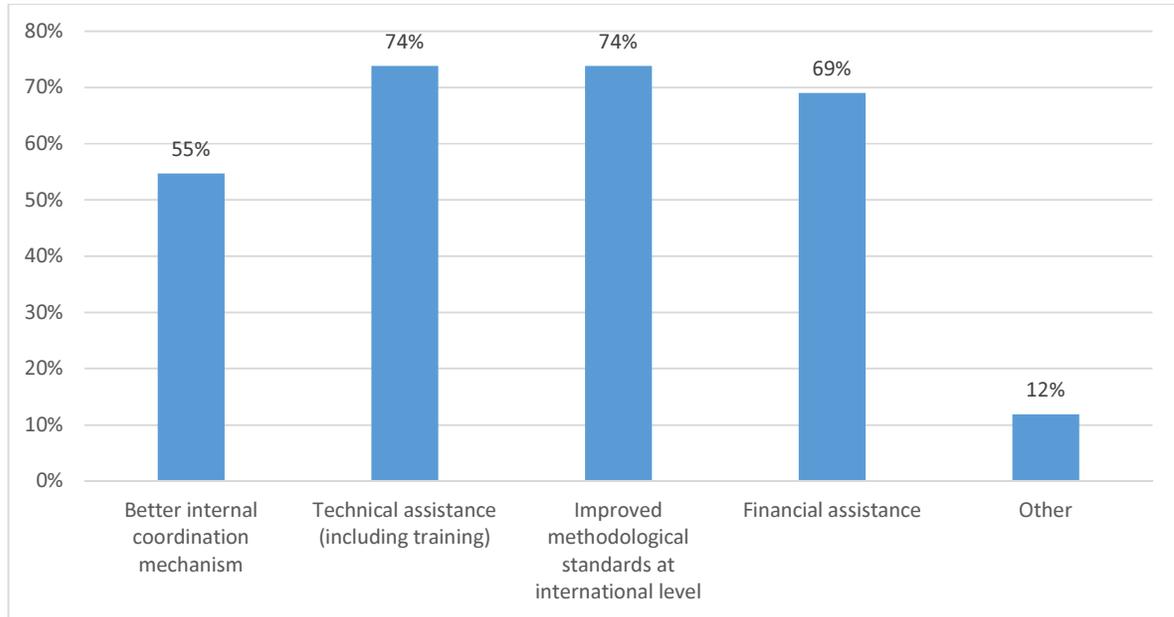
Although issues of data quality and paucity affect drug indicators generally, there are marked discrepancies among regions in the availability of data. Dedicated regional capacity building trainings should be conducted, targeting specific regions in collaboration with relevant regional organisations and focused on generating, collecting, analysing, and reporting data on indicators of drug use and supply. These workshops would primarily address national priority needs and also illustrate international reporting mechanisms such as the ARQ.

### **Output 3: Promotion of national coordination mechanisms on drugs data, including national drug observatories**

Through a partnership between UNODC, WHO and regional intergovernmental bodies such as (but not limited to) EMCDDA, CICAD/OAS, African Union and ECOWAS, the establishment of national drugs observatories, or other national coordination mechanisms, should be promoted. This will be supported by the development of international methodological guidelines to establish a national drug monitoring system responsible for organising and supervising the data collection and analysis of indicators across drug demand and drug supply. These guidelines, building on already existing ones at regional level, will provide a step-by-step guide on establishing national drug observatories, assessing the quality and comprehensiveness of existing data, building the capacity of relevant specific institutions to generate data, establishing the required reporting mechanisms and developing national drug situation reports.

The ARQ feedback questionnaire asked respondents from Member States to report on the specific type of capacity enhancing measures that would enable setting up a drug information/monitoring system in their country. Results indicated that technical assistance (including training), and improved methodological standards at international level are the types of assistance most needed, while nearly 70% of respondents indicated that financial assistance is required (Figure 5).

*Figure 7 Type of assistance or improvement needed to set up a drug information/monitoring system (Respondents from Member States to the ARQ feedback questionnaire, 2017)*



#### **Output 4: Promotion of early warning systems on NPS, at national and regional levels**

Early warning systems are a highly needed instrument to detect and monitor the spread of NPS, at various geographical levels. They link stakeholders from different sectors, such as health, law enforcement and forensics, and serve as a communication platform for the timely exchange of information related to the observed emergence of new psychoactive substances. The systems serve as tools to identify health risks and other threats posed by drugs early on and support decision-makers in taking appropriate measures to prepare for and/or counter emerging threats.