



News release

from the EU drugs agency in Lisbon

INTERACTIVE WASTEWATER ANALYSIS TOOL ZOOMS IN ON CITY DRUG USE

Latest data reveal drug-taking habits in over 50 European cities

(13.12.2016, LISBON) The latest findings from the largest European project in the emerging science of wastewater analysis are presented today by the Europe-wide **SCORE** group, in association with the **EU drugs agency (EMCDDA)**⁽¹⁾. The project analysed wastewater in over 50 European cities in 18 European countries in March 2016 to explore the drug-taking behaviours of their inhabitants.

From **London to Nicosia** and from **Oslo to Lisbon**, the study analysed daily wastewater samples in the catchment areas of wastewater treatment plants (WWTPs) over a one-week period. Wastewater from approximately 25 million people was analysed for traces of four illicit drugs: amphetamine, cocaine, MDMA (ecstasy) and methamphetamine.

Wastewater based epidemiology is a rapidly developing scientific discipline with the potential for monitoring near-real-time, population-level trends in illicit drug use ⁽²⁾. By sampling a known source of wastewater, such as a sewage influent to a wastewater treatment plant, scientists can now estimate the quantity of drugs used in a community by measuring the levels of illicit drugs and their metabolites excreted in urine (see motion graphic for method)⁽³⁾.

The **SCORE** group has been conducting annual wastewater monitoring campaigns since 2011. This is the first time, however, that data are published within only a few months of the campaign, underlining the potential of this method for the timely monitoring of trends in illicit drug use at population level.

The results are released today through an innovative interactive map and chart-based tool allowing the user to look at geographical and temporal patterns and zoom in on results per city ⁽⁴⁾. The findings offer a valuable snapshot of the drug flow through the cities involved, revealing marked regional variations in drug use patterns:

- Methamphetamine use, generally low and traditionally concentrated in the Czech Republic and Slovakia, now appears to be present also in the east of Germany and northern Europe, particularly in cities in Finland.
- Traces of cocaine in wastewater indicate that cocaine use is highest in western and southern European cities, particularly in cities in Belgium, the Netherlands, Spain and the UK. The analysis points to very low to negligible cocaine use in the majority of eastern European cities.
- For MDMA, the 2016 wastewater data confirmed the trend established in 2015. In most cities, wastewater MDMA loads were higher in 2016 than in 2011, with sharp increases seen in some cities, which may be related to the increased purity of MDMA or increased availability and use of the drug.
- The loads of amphetamine detected in wastewater varied considerably across the study locations, with the highest levels reported in cities in the north of Europe. Amphetamine was found at much lower levels in cities in the south of Europe.

When weekly patterns of drug use were examined, cocaine and MDMA (ecstasy) levels rose sharply at weekends in most cities, while methamphetamine use appeared to be more evenly distributed throughout the week.

In this project, **SCORE** uses a standard protocol and a common quality-control exercise in all locations, making it possible to directly compare illicit drug loads in Europe over a one-week period over six consecutive years.

The **EMCDDA** adopts a multi-indicator approach to drug monitoring on the principle that no single measure can provide a full picture of the drug situation. It views wastewater analysis as a valuable additional tool in its epidemiological toolkit and one which can provide timely information on a wide spectrum of substances.

Commenting today, **EMCDDA Director Alexis Goosdeel** said: 'Wastewater-based epidemiology has demonstrated its potential to become a useful complement to established drug monitoring tools. Its ability to deliver timely data on drug use patterns is particularly relevant against the backdrop of an ever-shifting drugs problem. By detecting changes in drug use patterns, both geographically and over time, it can help health and treatment services respond better to emerging trends and changing treatment needs. We are delighted that the SCORE group has been able to release data for the first time in the same year as the data-collection exercise'.

In 2017, in the margins of the Lisbon Addictions 2017 conference (www.lisbonaddictions.eu/lisbon-addictions-2017), the EMCDDA will be co-hosting 'Testing the waters 2017', the third international conference on wastewater analysis. Updates at www.emcdda.europa.eu/activities/wastewater-analysis

Notes

(1) The Sewage analysis CORE group (SCORE) <http://score-cost.eu/>

(2) For more on wastewater analysis see www.emcdda.europa.eu/activities/wastewater-analysis and www.emcdda.europa.eu/publications/insights/assessing-drugs-in-wastewater

(3) A wastewater motion graphic is available at <https://youtu.be/SbdiuEL2r4k>

(4) The interactive tool is available at www.emcdda.europa.eu/topics/pods/waste-water-analysis#panel2

With this tool, the user can view the data on a map or using a specially-developed charting tool. The charting tool allows the user to select the 'city' of choice and the 'target drug' and also to compare sites or explore daily and yearly trends.