Drug Supply Trends

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Trends in drug supply

• Measures
  • Seizures, eradication of plants, lab destructions, arrests

• Drugs
  • Cannabis, cocaine, heroin, methamphetamine

• Period
  • 2016 to 2019 (pre-COVID)

• Sources
  • CICAD quantitative data sheets
  • CICAD qualitative write ups
Overview

• Not all countries reported to CICAD
• **Cannabis** indicators show overall declines, with some notable exceptions
  • Seizures are greatest in South America
  • Arrests in Argentina have risen sharply
• **Cocaine** indicators show return to supply-reduction efforts, mostly eradication
  • Rise in arrests in Argentina
• **Heroin** indicators still largely concentrated in North America, mostly in the US
• **Methamphetamine** data were missing for several country observations, but dominated by data from North America
  • Lab seizures declined substantially from 2016 to 2019, though not all countries reported.
Reporting
Number of countries reporting to CICAD seizure data by drug and year

- Cannabis herb
- Cocaine
- Heroin
- Methamphetamine

Count

Year

Reporting  No. of Seizures  Weight
Number of countries reporting to CICAD arrest data by gender and year

- **Cannabis herb**
- **Cocaine**
- **Heroin/Opioids**
- **Methamphetamine/Amphetamine**

**Count**

**Year**

**Reporting**
- Total
- Male
- Female

Years: 2016, 2017, 2018, 2019
Number of countries reporting to CICAD eradication data by drug and year

**Cannabis**

- 2016: 10
- 2017: 10
- 2018: 10
- 2019: 10

**Coca**

- 2016: 4
- 2017: 4
- 2018: 4
- 2019: 4

**Poppy**

- 2016: 2
- 2017: 2
- 2018: 2
- 2019: 2

**Reporting**

- Hectares
- Plants
Number of countries reporting typical prices of drugs to CICAD by drug

- **Cannabis**
  - Count: 15

- **Cocaine HCl**
  - Count: 10

- **Heroin**
  - Retail: 1
  - Wholesale: 5

- **Methamphetamine**
  - Count: 10

- **Smokeable Cocaine**
  - Count: 5

- **Retail**
  - Count: 5

- **Wholesale**
  - Count: 15

**Level**

- Retail
- Wholesale
Cannabis
Eradication

• Eradication reported by 14 countries, 11 of which reported in area, 3 in plant count
• Eradication generally declined between 2016 and 2019
• Eradication totals were highest in North America (Paraguay did not report)
Counts of cannabis processing labs seized

- **Central America**
- **North America**
- **South America**

Count

- **2016**: Low
- **2017**: Moderate
- **2018**: High
- **2019**: High

Legend:
- Dark Red for Central America
- Green for North America
- Light Blue for South America
Seizures

- Seizures of fell for all of North America (mostly in the US)
- Consistent for Central America and the Caribbean
- Seizures in South America have surpassed North America since 2017
Distribution of weights

• Little temporal variation

• Seizure weights for cannabis were largest for the Caribbean, near 10kg.

• South America (at around 5kg), also reported much larger average seizure weights for some countries.

• Average cannabis seizures in Central America were the smallest, with seizures generally under 1kg.
Arrests

• Few members reported arrests
• South America stands out for the number but also the upward trend in cannabis-related arrests
• Arrests in Argentina quadrupled from nearly 26,000 to 99,000 between 2016 and 2019
Weight of seizures per arrest

- General consistency in measures of seizure weight per arrest
- Some reporting large hauls per arrest, suggesting trafficking
- Others report large hauls of 100kg per arrest
- Some were less than 1kg per arrest, suggest more retail-level focus
Cocaine
Eradication

• Four countries. Reported coca eradication
• Majority of eradication took place in Colombia, which grew substantially in series (from 18,000ha to 94,000ha)
• Guatemala reported coca eradication of 40ha
• Many labs destroyed in Colombia

Guatemala reported eradicating nearly 40ha combined in 2018 and 2019 and was excluded from the plot.
Seizures

• Total seizures rose from about 800 MT to nearly 1000 MT
• South America reported the greatest share (mostly Colombia)
• North American seizures (almost all from the United States) rose from just about 220 MT to just over 270 MT
Distribution of weights

- Some variation over time
- Seizure weights for cocaine were largest for Central America, around 25-30kg
- South America moved from about 2 to 10kg
- Weights for North America remained below 10kg each year
- Caribbean fluctuated most, ranging from just over 1.5kg to nearly 16kg throughout the series.
Arrests

• Few members reported arrests
• South America stands out for the number but also the upward trend in cocaine-related arrests
• Arrests in Argentina nearly tripled from nearly 11,000 to 28,000
Weight of seizures per arrest

- A lot more variation in kg per arrest, with little consistency
- Some countries saw substantial hauls per arrest, only to sharply decline
- Some countries report fairly steady seizures per arrest at 15kg/arrest
- Only two countries reported less than 1kg per arrest
Heroin
Heroin

• Heroin supply indicators were likely incomplete.
• Sparse reporting on seizure totals
• Seizure totals never surpassed 10 metric tons in years analyzed
• Most concentrated in North America (principally US)
• Reports on arrests very sparse
• Little data on lab destructions
Methamphetamine
Methamphetamine

• Data reported are very sparse
• Almost all seizures occurred in North America (principally US)
• US seizure totals were only reported for 2018 and 2019
• Mexico reports seizure totals in the double digits of metric tons throughout the series
• Lab seizures report sharp decline, though US did not report ATS labs in 2019
ATS Labs seized

- Declining number of labs overall, mostly in the US
- Counts fell in the US from nearly 5500 in 2016 to nearly 1600 in 2018
- Mexico reported a decline as well and other countries
- Guatemala and Argentina, reported single years of ATS lab seizures.
Price of drugs in markets
Price

• Estimated price of drugs sold in retail and wholesale show some logical and important variations; some do not
• Estimated “typical” price is unadjusted for purity and reported by law enforcement
• Not always confirmed through measured analysis, but “best guesses”
• Low counts of reported price measures may bias estimates
• Price is lowest for cannabis, highest for heroin.
Price per gram (purity not reported)

- Cannabis median price per gram at retail is $2.18 while wholesale is $0.51.
- For cocaine HCl, the median price per gram at retail is $13.16 and $8.88 at wholesale.
- For heroin, the median retail price per gram is $29.31 while wholesale price per gram is $6.29.
Conclusions
Variations in supply trends - Cannabis

• Cannabis measures are least susceptible to regional or temporal trends, perhaps due to drug’s availability and use nearly everywhere
• Declining seizures in North America and increasing seizures in South America may be affected by policy changes
• Argentina data is most striking
• Kilograms seized per arrest shows variation in trafficking patterns by country
Variations in supply trends – Other drugs

• Cocaine measures show increased supply reduction efforts in Colombia
• Heroin and methamphetamine data are sparsely reported
• Heroin seizures remain constant, and mostly concentrated in North America
• Declines in ATS labs, mostly due to declines in the US
Reporting is incomplete

• Not all countries report measures on seizures, arrests, lab detections, or price
• Data on price are “best estimates” from surveys
• Data are reported in aggregate
• Data do not contain estimates of purity
• Individual event level data can offer a lot more detail
Individual event data on seizures can improve analysis

• Can tell you measures on purity, location, weight, mixtures, etc.

• Some examples from individual event data
  • US – National Forensic Laboratory Information System
    • Data were obtained by FOIA and hosted publicly (Park et al., 2020)
  • Canada – Drug Analysis Services
    • Individual data can be requested, public reports each quarter

US National Forensic Laboratory Information System

- State/local seizure events
- Data show formulations by drug, over time

![Graphs showing number of seizure observations by drug and formulation](image)
Canada Drug Analysis Services

- Measures of purity can help show trends over time
- These can be correlated with other important measures
Distribution of purity of fentanyl seizures and overdose deaths in British Columbia

Purity analysis of seizure is only reported for the primary drug identified
Mean purity indicated as a red box
n=1139 seizure observations
BC Coroners Services stopped reporting fentanyl death counts for recent months
More can be gleaned from individual event data

• Reporting aggregate data can show rough trends
• Individual level data is more robust, but harder to collect and analyze.
• Improving collection can help inform supply side interventions and policies much more than aggregate measures
Thank you