Measuring illicit financial flows from drug trafficking in South Asia - First pilot results from pilot in Maldives

Maldives Bureau of Statistics and Maldives Police Service

17 November 2022
Outline

1. Pilot activities background
2. Results from desk research – drug context
3. Methodology to calculate IFFs from drug trafficking activities
4. Data
5. First results
6. Limitations and points of discussion
1. Pilot activities background
Key national counterparts

National focal point
• Maldives Bureau of Statistics

Key stakeholders and data providers
• Maldives Police Service
• Maldives Customs Service
• Drug National Agency

Local support
• UNODC Maldives Office
Pilot estimation process

1. Desk research
2. Data availability assessment and mapping of data sources
3. National coordination mechanism
4. Interviews
5. Assessment of estimates feasibility
6. Identification of proxy for non-available data
7. Data collection
8. Production of estimates
9. Review of estimates
10. Refinement of estimates
11. Final report

Report on status of data availability and recommendations

Yes
No
2. Results from desk research – drug context
Maldives drug situation

There seems to be no evidence of major production of illicit drugs in the Maldives territory*. However, drug consumption and trafficking is present and takes place in different forms depending on different illicit drugs:

- **Opiates**
  Heroin is consumed among population in the Atolls and in the capital city of Maldives, Malé, with an annual prevalence of 1.34% among the general population according to the National Drug Use Survey (2011/2012). Heroin is reported to originate from Pakistan and Iran.

- **Cannabis**
  Cannabis type drugs is the first most used drug in the Maldives. It has been identified that all the cannabis that is used in the country is imported from neighboring countries such as Bangladesh, Iran and Afghanistan.

- **Cocaine**
  Based on LEA evidence, cocaine trafficking routes mainly involves Brazil as a country of departure. Maldives local market for cocaine is small, with domestic demand which may be generated by tourists and a small group of wealthy elites.

- **Ecstasy**
  Low prevalence in Maldives, but recent trends indicate an increasing consumption of these drugs among the local youth population. Ecstasy is imported from European countries (Germany, Belgium, the UK, the Netherlands).

- **Methamphetamine**
  Based on results of wastewater analysis (2015) and household survey (2012), the magnitude of consumption of methamphetamine seems negligible in the Maldives. However, little is known about recent trends in the consumption of methamphetamine. National experts report recent attempts to expand the methamphetamine domestic market with free shipments of crystal methamphetamine from South-west Asia into Maldives, in combination with heroin shipments.

* Alcohol and tobacco are not included in drugs trafficking
4. Baseline data
Data collection (1)

- Time frame:
  2019-2021 (heroin, cannabis);
  2020-2021 (cocaine, methamphetamine, ecstasy)

<table>
<thead>
<tr>
<th>Consumption</th>
<th>Seizures</th>
<th>Drug trafficking routes</th>
<th>Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method A - Formula</td>
<td>Nr of users * qty used (1) + (2)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicators</td>
<td>(1) Annual prevalence of drug use among the general population</td>
<td>Aggregated nationwide seizures</td>
<td>% distribution of seizures by country of origin</td>
</tr>
<tr>
<td></td>
<td>(2) Quantity per user per year, based on questions on frequency, quantity/month and expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data sources</td>
<td>General population survey 2011/2012 + Data collected via own survey (78 respondents)</td>
<td>Maldives Police Service</td>
<td>Maldives Police Service</td>
</tr>
<tr>
<td>Method B - Indicator</td>
<td>Total quantity of consumed in Male´</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Data sources</td>
<td>Wastewater analysis conducted in 2015</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Baseline data - seizures

Seizures of cannabis, heroin, cocaine, methamphetamine and ecstasy (wholesale purity level for heroin and cannabis and retail level for methamphetamine, ecstasy and cocaine)

Source: Maldives Police Service

Average purity used: cannabis (85%); heroin (60 %); cocaine (18%); ecstasy (48%), methamphetamine (65%)
Baseline data – estimating consumption/user

• Consumption data hardly collected by countries, as gathering such information is very challenging.
• Consumption information can be derived from:
  • User-level information based on surveys/interviews
  • Aggregated information based on wastewater analysis (see EMCDDA)

Maldives methodology: 2 methods

Method suggested: wastewater analysis data
1. Adjust the quantity consumed in one day in Male’ to Male’
   Annual population increase rate
2. Calculate the quantity consumed in one year in Male’
3. Extrapolate the quantity consumed in the Maldives from the quantity consumed in Male’

Alternative method: survey data, combining annual prevalence as extrapolated from a 2011/2012 survey with data from small-scale survey among drug users assessing individual consumption, frequency of drug use and expenditure
Baseline estimates – estimating drug consumption

Total Maldives consumption of drug depressants per year (in pure kg)
Based on wastewater analysis conducted in Male¹

<table>
<thead>
<tr>
<th>Year</th>
<th>Heroin</th>
<th>Cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>20.4</td>
<td>771.7</td>
</tr>
<tr>
<td>2020</td>
<td>21.3</td>
<td>805.7</td>
</tr>
<tr>
<td>2021</td>
<td>21.7</td>
<td>821.5</td>
</tr>
</tbody>
</table>

Total Maldives consumption of drug depressants per year (in pure kg)
Based on annual prevalence and user consumption survey

<table>
<thead>
<tr>
<th>Year</th>
<th>Heroin</th>
<th>Cannabis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1.8</td>
<td>99.8</td>
</tr>
<tr>
<td>2020</td>
<td>1.9</td>
<td>104.8</td>
</tr>
<tr>
<td>2021</td>
<td>1.9</td>
<td>106.9</td>
</tr>
</tbody>
</table>

Source: Maldives statistical yearbook; Luca Fallati et al., Use of legal and illegal substances in Malé (capital city of Maldives) assessed by wastewater analysis, 2020

Baseline estimates – estimating drug consumption

**Total Maldives consumption of drug stimulants per year** (in pure kg)

- **Based on wastewater analysis conducted in Male**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ecstasy</th>
<th>Methamphetamine</th>
<th>Cocaine</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1.33</td>
<td>0.55</td>
<td>0.11</td>
</tr>
<tr>
<td>2020</td>
<td>1.39</td>
<td>0.58</td>
<td>0.12</td>
</tr>
<tr>
<td>2021</td>
<td>1.41</td>
<td>0.59</td>
<td>0.12</td>
</tr>
</tbody>
</table>

**Source:** Maldives statistical yearbook; Luca Fallati et al., *Use of legal and illegal substances in Malé (Republic of Maldives) assessed by wastewater analysis*, 2020

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**Total Maldives consumption of drug stimulants per year** (in pure kg)

- **Based on annual prevalence and user consumption survey**

<table>
<thead>
<tr>
<th>Year</th>
<th>Ecstasy</th>
<th>Methamphetamine</th>
<th>Cocaine</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1.11</td>
<td>0.50</td>
<td>0.28</td>
</tr>
<tr>
<td>2020</td>
<td>1.16</td>
<td>0.52</td>
<td>0.29</td>
</tr>
<tr>
<td>2021</td>
<td>1.19</td>
<td>0.53</td>
<td>0.30</td>
</tr>
</tbody>
</table>

**Source:** Maldives statistical yearbook; Drug National Agency, UNODC, Maldives Drug Survey 2011-2012; UNODC, Drug demand survey
4. Step-by-step methodology
Methodology to estimate outward IFFs associated with drug trafficking in the Maldives

**Step 1:** Identify the percentage of seizures coming from each country of departure

**Step 2:** Identify the trade level at which each drug is imported (retail, wholesale)

**Step 3:** Estimate the import prices by combining Maldives and the countries of departure prices at the corresponding trade level

**Step 4:** Estimate Maldives imports, per drug

**Step 5:** Estimate outward IFFs based on the information of the previous steps
Drug seizures by country of departure

**Percentage of heroin seizures, by country of departure (2019-2021)**

- **Iran**: 5.51%
- **Pakistan**: 94.49%

**Percentage of methamphetamine seizures, by country of departure (2019-2021)**

- **Pakistan**: 96.35%
- **Bangladesh**: 0.07%
- **Germany**: 0.99%
- **UK**: 2.35%
- **Belgium**: 0.21%
- **Netherlands**: 0.03%

Note: a 2% threshold was set as the participation of those countries below this number was deemed to be not significant.

Sources: Maldives Customs and Police seizure data
Percentage of ecstasy seizures, by country of departure (2019-2021)

- Germany: 58.93%
- Belgium: 25.84%
- UK: 11.01%
- Netherlands: 4.22%

Percentage of cocaine seizures, by country of departure (2019-2021)

- Brazil: 91.48%
- Ethiopia: 6.38%
- Nigeria: 2.15%

Note: a 2% threshold was set as the participation of those countries below this number was deemed to be not significant.
Sources: Maldives Customs and Police seizure data
Cannabis seizures, by country of departure (2019-2021)

- Iran: 64.68%
- India: 17.91%
- Bangladesh: 17.41%

Note: a 2% threshold was set as the participation of those countries below this number was deemed to be not significant.
Sources: Maldives Customs and Police seizure data
Identifying the drug supply chain and trade level at Maldives import level

Cannabis
- Iran
- India
- Bangladesh
  - Wholesale level (herb, hashish)

Heroin
- Iran
- Pakistan
  - Wholesale level

Methamphetamine
- Pakistan
- Bangladesh
- Germany
  - Belgium
  - United Kingdom
  - Retail level (tablet)
  - Retail level (powder)

Ecstasy
- Germany
- Belgium
- United Kingdom
- Netherlands
  - Retail level (tablet, powder, sticker)

Cocaine
- Brazil
- Nigeria
  - Wholesale level
- Ethiopia
  - Retail level
  - Wholesale level

Maldives

Source: Individual Drug Seizures based on Customs and Maldives Police
Heroin wholesale prices

Heroin import vs domestic wholesale purity-adjusted prices (USD/kg)

Data sources: Maldives Police Service, UNODC Annual Report Questionnaire
Cannabis wholesale prices

Cannabis herb import vs domestic wholesale purity-adjusted prices (USD/kg)

- Import price (USD/kg)
- Wholesale domestic price (USD/kg)

Hashish oil import vs domestic wholesale purity-adjusted prices (USD/kg)

- Import price
- Wholesale domestic price

Data sources: Maldives Police Service, UNODC Annual Report Questionnaire
Ecstasy retail prices

Ecstasy purity-adjusted prices at the import retail vs domestic retail levels (USD/g)

- Import retail price
- Domestic retail price

Data sources: Maldives Police Service, UNODC Annual Report Questionnaire
Methamphetamine retail prices

Methamphetamine powder purity-adjusted prices at the import retail vs domestic retail levels (USD/g)

<table>
<thead>
<tr>
<th>Year</th>
<th>Import retail price</th>
<th>Domestic retail price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$200</td>
<td>$228</td>
</tr>
<tr>
<td>2021</td>
<td>$108</td>
<td>$46</td>
</tr>
</tbody>
</table>

Yaba purity-adjusted prices at the import retail vs domestic retail levels (USD/g)

<table>
<thead>
<tr>
<th>Year</th>
<th>Import retail price</th>
<th>Domestic retail price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>$42</td>
<td>$47</td>
</tr>
<tr>
<td>2021</td>
<td>$40</td>
<td>$46</td>
</tr>
</tbody>
</table>

Data sources: Maldives Police Service, UNODC Annual Report Questionnaire
Cocaine retail and wholesale prices

Cocaine purity-adjusted prices at the import retail vs domestic retail levels (USD/g)

- Import retail price: $803.2 in 2020, $988.4 in 2021
- Retail price: $1,481.5 in 2020, $1,851.9 in 2021

Cocaine purity-adjusted prices at the import vs domestic wholesale levels (USD/kg)

- Import price: $1,481.5 in 2020, $1,851.9 in 2021
- Domestic wholesale price: $350,000 in 2020, $280,000 in 2021

Data sources: Maldives Police Service, UNODC Annual Report Questionnaire
**Estimated inflows and imports of heroin in the Maldives**

**Inflows:** quantities flowing into the Maldives. It includes only seizures destined to the Maldives market*.

**Imports:** quantities that Maldives-based importers purchase from abroad

<table>
<thead>
<tr>
<th>Year</th>
<th>Best Consumption (pure) - kg</th>
<th>Seizures (pure) - kg</th>
<th>Average proportion of seizures destined to the Maldives</th>
<th>Seizures destined to Maldives (pure) - kg</th>
<th>Outflows (kg)</th>
<th>Inflows (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G = B + E + F</td>
</tr>
<tr>
<td>2019</td>
<td>20.37</td>
<td>132.91</td>
<td>86%</td>
<td>113.71</td>
<td>-</td>
<td>134.08</td>
</tr>
<tr>
<td>2020</td>
<td>21.27</td>
<td>202.44</td>
<td>86%</td>
<td>173.20</td>
<td>-</td>
<td>194.47</td>
</tr>
<tr>
<td>2021</td>
<td>21.69</td>
<td>274.20</td>
<td>86%</td>
<td>234.60</td>
<td>-</td>
<td>256.29</td>
</tr>
</tbody>
</table>

Note: in this table, consumption was estimated based on the wastewater analysis survey in Malé

*Note: The percentage of seizures destined only to Maldives was estimated by considering seizures involving Maldivian traffickers and excluding the sea conveyance in big shipments.*
## Estimated inflows and imports of cannabis in the Maldives

**Inflows**: quantities flowing into the Maldives. It includes only seizures destined to the Maldives market*.

**Imports**: quantities that Maldives-based importers purchase from abroad.

<table>
<thead>
<tr>
<th>Year</th>
<th>Best Consumption (pure) – kg</th>
<th>Seizures (pure) – kg</th>
<th>Average proportion of seizures destined to the Maldives</th>
<th>Seizures destined to the Maldives (pure) – kg</th>
<th>Outflows (kg)</th>
<th>Inflows (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>771.75</td>
<td>124.56</td>
<td>61%</td>
<td>76.52</td>
<td>-</td>
<td>848.27</td>
</tr>
<tr>
<td>2020</td>
<td>805.69</td>
<td>8.76</td>
<td>61%</td>
<td>5.38</td>
<td>-</td>
<td>811.07</td>
</tr>
<tr>
<td>2021</td>
<td>821.50</td>
<td>5.95</td>
<td>61%</td>
<td>3.65</td>
<td>-</td>
<td>825.15</td>
</tr>
</tbody>
</table>

Note: in this table, consumption was estimated based on the wastewater analysis survey in Malé

*Note: The percentage of seizures destined only to Maldives was estimated by considering seizures involving Maldivian traffickers and excluding the sea conveyance in big shipments.
Estimated inflows and imports of *ecstasy* in the Maldives

**Inflows:** quantities flowing into the Maldives. It includes only seizures destined to the Maldives market*.

**Imports:** quantities that Maldives-based importers purchase from abroad

<table>
<thead>
<tr>
<th>Year</th>
<th>Best Consumption (pure) - kg</th>
<th>Seizures (pure) - kg</th>
<th>Average proportion of seizures destined to the Maldives</th>
<th>Seizures destined to Maldives (pure) - kg</th>
<th>Outflows (kg)</th>
<th>Inflows (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>1.33</td>
<td>0.83</td>
<td>99%</td>
<td>0.82</td>
<td>-</td>
<td>2.14</td>
</tr>
<tr>
<td>2020</td>
<td>1.39</td>
<td>0.15</td>
<td>99%</td>
<td>0.15</td>
<td>-</td>
<td>1.53</td>
</tr>
<tr>
<td>2021</td>
<td>1.41</td>
<td>1.20</td>
<td>99%</td>
<td>1.18</td>
<td>-</td>
<td>2.59</td>
</tr>
</tbody>
</table>

Note: in this table, consumption was estimated based on the wastewater analysis survey in Malé

*Note: The percentage of seizures destined only to Maldives was estimated by considering seizures involving Maldivian traffickers and excluding the sea conveyance in big shipments.
## Estimated inflows and imports of methamphetamine in the Maldives

**Inflows:** quantities flowing into the Maldives. It includes only seizures destined to the Maldives market*.

**Imports:** quantities that Maldives-based importers purchase from abroad

<table>
<thead>
<tr>
<th>Year</th>
<th>Best Consumption (pure) - kg</th>
<th>Seizures (pure) - kg</th>
<th>Average proportion of seizures destined to the Maldives</th>
<th>Seizures destined to Maldives (pure) - kg</th>
<th>Outflows (kg)</th>
<th>Inflows (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.55</td>
<td>0.58</td>
<td>39%</td>
<td>0.23</td>
<td>-</td>
<td>0.78</td>
</tr>
<tr>
<td>2020</td>
<td>0.58</td>
<td>33.01</td>
<td>39%</td>
<td>12.98</td>
<td>-</td>
<td>13.55</td>
</tr>
<tr>
<td>2021</td>
<td>0.59</td>
<td>0.33</td>
<td>39%</td>
<td>0.13</td>
<td>-</td>
<td>0.72</td>
</tr>
</tbody>
</table>

Note: in this table, consumption was estimated based on the wastewater analysis survey in Malé

*Note: The percentage of seizures destined only to Maldives was estimated by considering seizures involving Maldivian traffickers and excluding the sea conveyance in big shipments.*
## Estimated inflows and imports of cocaine in the Maldives

**Inflows:** quantities flowing into the Maldives. It includes only seizures destined to the Maldives market*.

**Imports:** quantities that Maldives-based importers purchase from abroad

<table>
<thead>
<tr>
<th>Year</th>
<th>Best Consumption (pure) - g</th>
<th>Seizures (pure) - g</th>
<th>Average proportion of seizures destined to the Maldives</th>
<th>Seizures destined to Maldives (pure) - g</th>
<th>Outflows (g)</th>
<th>Inflows (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0.11</td>
<td>17.07</td>
<td></td>
<td>2.06</td>
<td>-</td>
<td>2.17</td>
</tr>
<tr>
<td>2020</td>
<td>0.12</td>
<td>2.25</td>
<td>0.00</td>
<td>0.27</td>
<td>-</td>
<td>0.39</td>
</tr>
<tr>
<td>2021</td>
<td>0.12</td>
<td>0.93</td>
<td>0.00</td>
<td>0.11</td>
<td>-</td>
<td>0.23</td>
</tr>
</tbody>
</table>

\[ G = B + E + F \]

Note: in this table, consumption was estimated based on the wastewater analysis survey in Malé

*Note: The percentage of seizures destined only to Maldives was estimated by considering seizures involving Maldivian traffickers and excluding the sea conveyance in big shipments.*
5. First results*

*Two methodologies were used: based on wastewater analysis and based on the annual prevalence and drug demand survey.
Estimated outward IFFs from heroin and cannabis trafficking

Estimated outward IFFs related to heroin trafficking (in million US dollars)

- **Estimate 1 (wastewater analysis)**
  - 2019: $5.81
  - 2020: $7.12
  - 2021: $7.96

- **Estimate 2 (annual prevalence and drug demand survey)**
  - 2019: $5.01
  - 2020: $6.41
  - 2021: $7.34

*Based on available prices in year 2020.

Estimated outward IFFs related to cannabis trafficking (in million US dollars)

- **Estimate 1 (wastewater analysis)**
  - 2019: $25.81
  - 2020: $174.14
  - 2021: $86.49

- **Estimate 2 (annual prevalence and drug demand survey)**
  - 2019: $5.37
  - 2020: $23.67
  - 2021: $11.59

*Based on available prices in year 2020.*
Estimated outward IFFs from ecstasy, cocaine and methamphetamine trafficking

*Based on available prices in year 2020.

*Results on methamphetamine have to be taken with caution due to limited information on the demand of this drug.
Total outward IFFs from drug trafficking
(in million USD and million MVR)

Total outward IFFs from drug trafficking,
in million USD (2020-2021)

Method based on wastewater analysis: $16.66
Method based on annual prevalence and drug survey: $8.47

Total outward IFFs from drug trafficking,
in million MVR (2020-2021)

Method based on wastewater analysis: MVR 249.96
Method based on annual prevalence and drug survey: MVR 127.08
Challenges for estimating IFFs related to drug trafficking

**Trafficking**
- **Trafficking flows**: hard to collect information at the regional level (e.g., Myanmar and India)

**Prices**
- **Incomplete time series** on some indicators e.g., wholesale prices/retail prices
- **Minimum and maximum** prices available were estimated for Maldives and for departure countries

**Consumption**
- Little information on the **quantity consumed per drug user per year** for certain drugs
- Data shall be derived from the general population, not only from treatment centers
Recommendations for possible (future) estimates refinements
Income generation IFFs from drug trafficking

Data inputs

- Adjust for tourist vs local consumption patterns
- Collect longer time series on prices
- Compare with drug trafficking flows from other countries
- Use new data from survey on quantity, frequency and expenditure of drug use, with a bigger sample of drug users
Lessons learned, best practices and further applications

- Adopting the international methodologies to national context
- Limited Data - Identified many data gaps
- Data is housed in many different institutions – not standardized and levels of record keeping complex
- Institutional Engagement across the Maldives Statistical System – Stronger partnership development
- Opportunity to create awareness on the indicator 16.4 – importance of policies to address IFFs
- Improved capacity within stakeholders on understanding the IFFs and how the IFF market works
6. Limitations and points of discussion
How Money Flows out of Maldives

Fund received from local dealers

Carrying physical cash without declaration

Use money exchangers and Money or value transfer services (MVTs)
Thank you!