

# Can Cocaine Production in Colombia be linked to Environmental Crime?:

A case study on the effect of European Union legislation on the trade

Work Package 4 "Case Studies"



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 320276.

#### **ACKNOWLEDGEMENT**

The research leading to these results has been carried out as part of the research project "European Union Action to Fight Environmental Crime" (www.efface.eu). EFFACE is a collaborative effort of 11 European universities and think tanks and is coordinated by the Ecologic Institute (www.ecologic.eu). The research leading to these results has received funding from the European Union FP7 under grant agreement No 320276.

#### **AUTHOR(S)**

Geraldo Santana Noguiera Junior, Institute for Environmental Security Shirleen Chin Sing Joo, Institute for Environmental Security

With thanks to:

Jana Kuriackova, Institute for Environmental Security

Manuscript completed in January, 2015

This document is available online at: www.efface.eu

This document should be cited as: G. Santana & S. Chin (2015). Can Cocaine Production in Colombia be linked to Environmental Crime?: A case study on the effect of European Union legislation on the trade. A study compiled as part of the EFFACE project. The Hague: Institute for Environmental Security.

#### **DISCLAIMER**

The text reflects only the authors' views and the EU or the Ecologic Institute are not liable for any use that may be made of the information contained therein. The views expressed in this publication are the sole responsibility of the author/s and do not necessarily reflect the views of the European Commission.

For permission to reproduce, please contact the Ecologic Institute at envcrime@ecologic.eu.

#### **ABSTRACT**

This case study highlights the interrelationship between cocaine production, a drug-related criminal activity and environmental pollution and degradation, activities that are considered to be environmental crimes in many parts of the world today. To a lesser extent, this case study also explores the links between cocaine trafficking and organised crime groups, such as the militias in Colombia. There, cocaine production is not just an ordinary illicit activity, it is also a means used by the militias to secure territory, power, finances and weaponry. The European Union represents the second largest market in the world for cocaine. It also exports 20% of the world's chemical precursors, with Germany as the largest European producer with 5.7% share of the global sales. Chemical precursors such as potassium permanganate, an essential ingredient in cocaine production, are highly monitored yet Colombia seized 80% of the global seizure of illicit potassium permanganate for the period of 2007-2012. Criminals have adopted various diversion methods to make up for their losses from tighter controls on chemical precursors trafficking. There is legislation in place that monitor the trade of chemical precursors within and outside the borders of the EU. In the pages to follow, the case study will seek to examine if the said legislation has been effective in preventing the illicit use of chemical precursors in cocaine production in Colombia and as a consequence help to prevent further environmental pollution and degradation.

# **Table of Contents**

Executi	ve summary	1
1 In	troduction	2
2 Li	terature Review	3
	ethodology	
	escription of the Case Study	
4.1	Coca production	7
4.2	Coca eradication as a measure to suppress cocaine production	9
4.3	Chemical precursors control as a measure to supress cocaine production	11
4.4	Efforts to monitor chemical precursors in the European Union and third countries	14
4.	4.1 Potassium permanganate	16
4.5	Diversion methods	17
4.6	Effectiveness of the EU control	18
5 Co	onclusions and Policy Implications	21
Refere	nces	22

# LIST OF ABBREVIATIONS

AUC United Self-Defence Forces of Colombia

CICAD Inter-American Drug Abuse Commission

DEA Drug Enforcement Agency

EFFACE European Union Action to Fight Environmental Crime

EFTA European Free Trade Agreement

ELN National Liberation Army

EMCDDA European Monitoring Centre for Drugs and Drug Addiction

EU European Union

FARC Revolutionary Armed Forces of Colombia

INCB International Narcotics Control Board

OAS Organisation of American States

ONDCP Office of National Drug Control Policy

PRELAC Prevention of the Diversion of Drug Precursors in the Latin America and Caribbean

Region

UNODC United Nations Office on Drugs and Crime

US United States

# **Executive summary**

The global war on drugs is not over. Cocaine production remains virtually limited to three countries in the world: Peru, Colombia and Bolivia. The drug business not only exacerbates the social and economic issues of a country, it also fuels widespread environmental destruction. Clandestine cocaine laboratories that are erected in the jungles of the Andes region have left in their wake, a catalogue of environmental pollution and degradation. Chemical precursors used in cocaine production are dumped in hundreds of thousands of tonnes into the environmental and millions of litres of toxic are dumped into waterways. Like a double-edged sword, eradication efforts such as the aerial spraying to eliminate illicit crops, also adds to the destruction of precious biodiversity in the Andes region. Plan Colombia is a case in point of a policy that has led to direct and indirect deforestation – the so-called balloon effect. In light of this, there is a need to "further" control and monitor the trade of chemical precursors in order to make the production of cocaine economically unviable.

In the first half of the case study, an overview of the cocaine production process and relevant statistics will be given to understand the problems associated with cocaine production. It will also include a highlight of the environmental destruction that lies in the wake of a nation-wide effort to eradicate illicit coca crops. In an effort to suppress the production and trafficking of illicit drugs, laws at all levels have been established to monitor the trade of chemical precursors. States Parties to the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances created a framework for international cooperation to secure the control of chemical precursors and made it necessary for Parties to introduce criminal offences under their domestic law for the illicit production and trafficking of drugs and its precursors. This has led to the establishment of a system to monitor international trade in chemical precursors and aims at preventing precursors from being diverted away from lawful commerce into illicit channels.

The second half of the case study elucidates on the monitoring of chemical precursors in the EU as well as the overall effectiveness of EU control of chemical precursors. Regulation (EC) No 273/2004 lays down rules for the monitoring of drug precursors within the EU whilst Regulation (EC) 111/2005 lays down rules for the monitoring of drug precursors between the EU and third countries. While reports have suggested that the Regulations have been effective, critiques have said that the EU still has room to improve where the seizure of certain chemical precursors are concerned. The European Commission has also identified some deficiencies concerning implementation of these Regulations at the national level. New diversion methods and tactics employed by criminals are paving way for new challenges in the fight against illicit drug production and trafficking. The EU has yet to further harmonise penalties for trafficking of chemical precursors. Considering its market position, the EU should deepen its cooperation with Colombia with respect to law enforcement and precursor chemicals monitoring. Also, it is crucial for the EU to look into ways to curb the diversion of chemical precursors, especially if countries like Germany, the Netherlands, Spain and the United Kingdom are being used as "transit" ports for shipments from emerging precursor producers from South and Southeast Asia.

# 1 Introduction

The production and trafficking of cocaine pose a set of complex and interlinked problems including, amongst others, negative impacts on public health and security, the destabilisation of society, and a huge environmental degradation impact in the drug producing countries.

The use of chemical precursors during the cocaine production process has led to serious pollution of waters and the soils in the rainforest areas such as the ones in Colombia. The origins of these chemical precursors have been found to come from within the European Union (EU). The growing of coca in plantations within the forest and the penetration of the plantations and cocaine production facilities further into the forest to escape eradication and law enforcement by the Colombian authorities, have also contributed to large-scale deforestation.<sup>1</sup>

According to the United Nations Office on Drugs and Crime (UNODC) 2012 World Drug Report, cocaine production is one of the biggest industries in Colombia. Its global cocaine retail value is estimated at US\$ 80-100 billion,<sup>2</sup> whilst the estimated value of the market in Europe, the second largest after the United States (US), stands at US\$ 34 billion, with a total of 4.1 million users in the EU and European Free Trade Agreement (EFTA) countries.<sup>3</sup>

As the EU is the second largest market for cocaine from Colombia, it was decided that this situation merits separate attention within the European Union Action to Fight Environmental Crime (EFFACE) project. EFFACE assesses the impacts of environmental crime and explores feasible policy options for combating it, with a focus on the legal instruments, judicial authorities and relevant institutions of the EU and its Member States.

This case study will look at the effectiveness of the international and EU legislation in place that monitors the use of chemical precursors. It will also explore how violations can or should be sanctioned and, preferably, prevented. Recommendations to improve the legal instruments and their implementation will be given at the end of this report.

Davalos, Liliana M. et al (2011). Forests and Drugs: Coca-Driven Deforestation in Tropical Hotspots. Environmental Science and Technology vol. 45, issue 4: 1219-1227.

World Drug Report 2012. United Nations Office on Drugs and Crime (UNODC). Available at http://www.unodc.org/documents/data-and-analysis/WDR2012/WDR\_2012\_web\_small.pdf.

World Drug Report 2010. UNODC. Available at http://www.unodc.org/documents/wdr/WDR\_2010/World\_Drug\_Report\_2010\_lo-res.pdf, p. 70. (Hereinafter "UNODC World Drug Report 2010").

# 2 Literature Review

This case study builds upon existing literature and reports published by the UNODC, the International Narcotics Control Board (INCB), and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA).

In 2014, UNODC studied the use of precursors in the drug production process and the history of the international conventions that established the current monitoring system. Second only to Asia, Europe remains one of the largest exporters of precursor chemicals.<sup>4</sup> The Report concluded that seizures of potassium permanganate, fell by half in Colombia between 2007 and 2012 when compared with the period between 2002 and 2006 indicating a decline in cocaine production but identified the remaining challenges posed by its illegal production in the Andean region. The Report acknowledged the success of the precursor control system and linked reduction in diversion attempts to the reduction of coca cultivation. The Report also identified that criminals often use sophisticated means to divert precursors, exploiting the current status of the implementation of the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of (1988 Convention). By recognising weaknesses at the national level, the Report noted that organised criminal groups divert the chemicals in the manufacturing country, and smuggled them out as customs and port authorities of most countries are not as well-equipped to detect smuggled precursor chemicals as they are to detect smuggled drugs.

The 2013 INCB Precursor Report examined the current state of the chemical precursors monitoring, with particular reference to the 1988 Convention. It concluded that the diversion of potassium permanganate, an essential chemical oxidizer that is used in the illicit manufacture of coca paste (cocaine hydrochloride), has been significantly reduced, but requests for better regulation of the verification of end users, and better control at the national level. The report also recommends that the EU should share detailed information on seizure of chemicals with the Board, and adequately monitor the movement of relevant precursors within its borders.

The 2013 EU Drug Market Report observed that criminals are circumventing the monitoring system in place by resorting to manufacturing potassium permanganate illicitly in Colombia (or other coca producing regions) and diverting the chemical from licit shipments in neighbouring countries.

These analyses contextualise the findings of the role by the EU in the cocaine production chain, especially as a transhipment region for chemical precursors.

\_

Data collected between 2010 and 2012, shows that the largest proportion of licit exports of chemical precursors in Europe came from Belgium, Germany, the Netherlands and Spain. (World Drug Report 2014. United Nations Office on Drugs and Crime (UNODC). Available at https://www.unodc.org/documents/wdr2014/World\_Drug\_Report\_2014\_web.pdf. (Hereinafter "UNODC World Drug Report 2014")).

# 3 Methodology

There are two main sources of data for cocaine manufacturing: the UNODC and the United State Government's White House Office of National Drug Control Policy (ONDCP). In addition to these two sources, the data collected by the Colombian Government and the Organisation of American States (OAS) have been used here.

However, there seems to be some concerns with the UNODC and ONDCP's estimates. For instance, farmers intermingle coca crops with legal crops to avoid any detection by satellites of the illicit crops, thus complicating monitoring and eradication.<sup>5</sup> As to the estimate of potential cocaine production, UNODC and ONDCP did not properly take into account the technical improvements to achieve higher yields. Colombian authorities reported the use of genetically modified coca plants with a much higher quality and higher percentage of hydrochloride, and glyphosate herbicide resistant.<sup>6</sup> Additionally, UNODC's data failed to consider that it is common in Colombia to skip the second stage of cocaine processing, i.e. conversion of coca paste to cocaine base, choosing instead to go instantly from coca paste to processing cocaine hydrochloride. Consequently, UNODC's data on cocaine base production in Colombia may be askew.

The methodology adopted for this case study is qualitative descriptive to the extent that it uses statistics and series of data to strengthen findings of certain facts.

Mejia, D. and Posada, C.E. (2008). Cocaine Production and Trafficking: What Do We Know? Washington, D.C.: World Bank Policy Research Working Paper 4618. May 1, 2008, p. 22. (Hereinafter "Mejia and Posada 2008").

<sup>&</sup>lt;sup>6</sup> Ibid, p. 20.

# 4 Description of the Case Study

In the first half of the case study, an overview of the problem associated with cocaine production will be given, including a highlight of the environmental destruction that lies in the wake of a nation-wide effort to eradicate illicit coca crops. The second part elucidates on the monitoring of chemical precursors in the EU as well as the overall effectiveness of EU control of chemical precursors.

The international efforts to combat cocaine production are based on a long-standing set of multilateral commitments and forms of cooperation.<sup>7</sup> Targeting cocaine at the source consists of disrupting the coca cultivation, cocaine processing and trafficking.<sup>8</sup> The cultivation of coca, from which cocaine is derived, remains virtually limited to Bolivia, Colombia and Peru, as the Andean region provides the perfect climatic conditions for the plant's growth. Globally, the net area under coca bush cultivation as per 31 December 2012 totalled 133,700 ha, representing a decline of 14% in comparison to the previous year's estimates, and the lowest levels since the beginning of available estimates in 1990. The reduction in the worldwide coca bush cultivation was mainly driven by Colombia's eradication efforts, recording a 25% decrease from 63,762 ha in 2011 to 47,790 ha in 2012.<sup>9</sup> The most recent data on coca plantation in Colombia however shows a slight increase of 1% between the years 2012 and 2013,<sup>10</sup> with 48,000 ha in 23 of the 32 country's departments, while thirteen departments showed a reduction and seven showed an increase of the crop.<sup>11</sup>

Wyler, L.S. (2013). International Drug Control Policy: Background and U.S. Responses. Congressional Research Service (CRS) Report for Congress. 13 August 2013, p. 10.

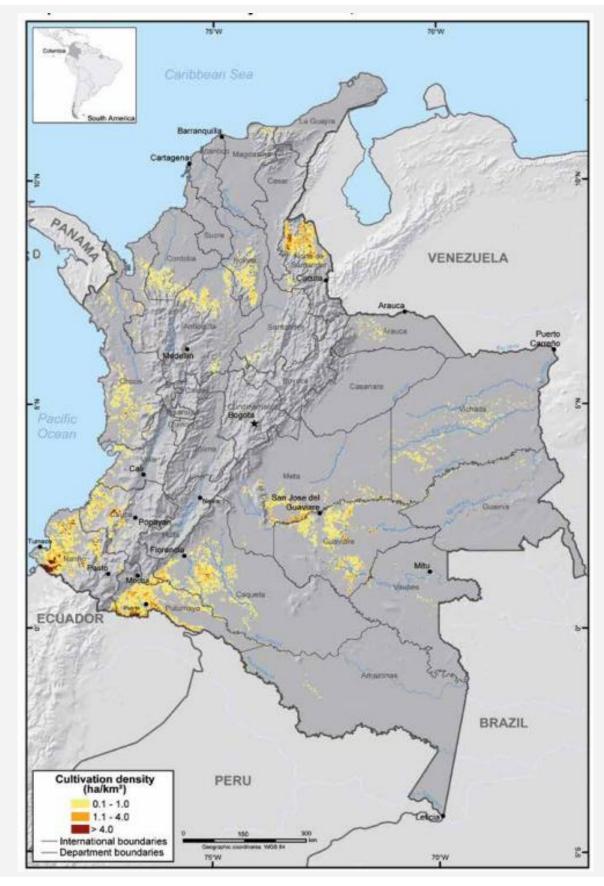
<sup>&</sup>lt;sup>8</sup> Coca in the Andes. Office of National Drug Control Policy (ONDCP). Available at http://www.whitehouse.gov/ondcp/targeting-cocaine-at-the-source.

Colombia: Coca Cultivation Survey 2013. UNODC and Government of Colombia. June 2014. Available at http://www.unodc.org/documents/crop-monitoring/Colombia/Colombia\_coca\_cultivation\_survey\_2013.pdf. (Hereinafter "UNODC Coca Cultivation Survey 2013").

<sup>10</sup> Ibid.

<sup>&</sup>lt;sup>11</sup> Ibid, p. 16: "76% of the increase was concentrated within Nariño (+2,444 ha), Norte de Santander (+ 1,829 ha) and Putumayo (+1,519 ha); on the other hand, 77% of the reduction in coca crops was concentrated within Choco (- 1,768 ha), Antioquia (- 1,734 ha), Bolivar (- 1,043 ha) and Cauca (-999 ha)".

Map 1: Coca cultivation density in Colombia, 2013



Source: UNODC Coca Cultivation Survey 2013, p. 18.

# 4.1 Coca production

The following is a diagram depicting the three stages generally found in cocaine production:

Figure 1: Coca processing

#### Coca leaves to coca paste

#### •Step 1

The coca leaves are put in an above-ground container or in a plastic lined pit. An alkaline material (sodium carbonate) and water are added to the leaves. Here the alkaline material enables the cocaine alkaloid present in the leaf to be extracted into kerosene.

#### • Step 2

A water immiscible solvent (kerosene) is added to water, solution, and leaves. The mixture is then agitated. Usually this is accomplished by having several people stomp on the leaves. The solvent acts to extract water insoluble cocaine alkaloids from the alkaline solution.

#### • Step 3

Cocaine alkaloids and kerosene separate from water and leaves. The water and leaves are then drained off.

#### Step 4

Cocaine alkaloids are extracted from the kerosene into a dilute acid solution. Alkaline material (sodium carbonate) is added to the remaining solution which causes a precipitate to form. The acid and the water are drained off and the precipitate is filtered and dried to produce coca paste, a chunky, off-white to light brown, putty-like substance.

#### Coca paste to cocaine base

#### Step 1

The coca paste is added to sulfuric acid or hydrochloric acid and water. The paste is dissolved into the acid solution.

#### Step 2

Potassium permanganate is combined with water. This mixture is added to the coca paste and acid solution. Potassium permanganate is used in this step to extract other alkaloids and material that is undesired in the final product. In particular, potassium permanganate is used to break down the alkaloid ciscinnamoylcocaine found in large concentrations in Erythroxylum Novogranatense varieties. If the coca paste has a high concentration of this alkaloid and potassium permanganate is not used, then crystallisation of cocaine HCl will be very difficult.

#### Step 3

This mixture is allowed to stand for about six hours.

#### • Step 4

The solution is filtered and the precipitate is discarded. Ammonia water is added to the filtered solution and another precipitate is formed.

#### Step 5

The liquid is drained from the solution and the remaining precipitate is usually dried with heating lamps. The resulting powder is cocaine base.

#### Cocaine base to cocaine hydrochloride (HCI)

#### •Step 1

Acetone or ether is added to dissolve the cocaine base and the solution is filtered to remove undesired material.

#### • Step 2

Hydrochloric acid diluted in acetone or ether is added to the cocaine solution. The addition of the hydrochloric acid causes the cocaine to precipitate (crystallise) out of the solution as cocaine hydrochloride.

#### Step 3

The remaining acetone/ether solvent can be discarded or reused.

#### Step 4

Cocaine HCl is dried under heat lamps, laid out to dry with the aid of fans, or dried in microwave ovens.

Source: Coca Cultivation and Cocaine Processing: An Overview. Drug Enforcement Administration (DEA). Available at http://www.erowid.org/archive/rhodium/chemistry/coca2cocaine.html.

UNODC uses yields per hectare as well as technical coefficients for each of the main links in the cocaine production chain to estimate the potential manufacture of cocaine each year. <sup>12</sup> In Colombia, the potential base cocaine production, from coca paste and the direct coca leaf production, decreased from 412 tonnes in 2012 to 358 tonnes in 2013. <sup>13</sup> The estimated pure cocaine production (cocaine hydrochloride) during 2013

<sup>&</sup>lt;sup>12</sup> Mejia and Posada 2008, p. 12.

The potential production of cocaine base is estimated based on the variety within crop hectares, varying during the past two years mt - 500 mt in 2012 and 307 mt - 408 mt in 2013. For more, see: Coca Cultivation Survey 2013.

was equivalent to 249-331 tonnes, if an average level of 81% base cocaine to cocaine hydrochloride would be estimated;<sup>14</sup> this is the lowest level of potential production of cocaine in Colombia since 1996. Although the precise number of the estimated production differs slightly between the traditional and adjusted methodology, a downward trend can be observed – see chart below.<sup>15</sup>

500,000

400,000

355,348 376,629 305,281

263,820 281,774

231,695 241,338

196,796 208,218

100,000

2009 2010 2011 2012 2013

■ Adjusted methodology ■ Traditional methodology

Figure 2: Fresh coca leaf production in metric tonnes: traditional methodology vs adjusted methodology, 2009-2013

Source: UNODC Coca Cultivation Survey 2013, p. 121.

Coca cultivation takes place mostly in ecologically valuable forest areas, producing immediate and devastating consequences, such as deforestation of the rainforest, degradation of the soil, contamination of water and water systems, and others. In Colombia, cocaine producers discard more than 370,000 tonnes of chemicals into the environment annually with clandestine jungle laboratories send more than 20 million litres of toxins into waterways. As a result, affected waterways are almost entirely devoid of aquatic plant and animal life. It is useful to note that Colombia is also usually the primary location for the final conversion process to cocaine hydrochloride of coca paste and cocaine base from Peru and Bolivia. This is perhaps why large scale aerial coca eradication and extensive destruction of cocaine laboratories hidden in the jungle of Colombia are used. More on this in the section below.

<sup>16</sup> The Drug Problems in the Americas (2013). Organisation of American States (OAS), pp. 33-5. (Hereinafter "OAS Drug Problems in the Americas 2013").

<sup>&</sup>lt;sup>14</sup> For cocaine production estimates, data obtained during the productivity studies and elementary transformation processes are used (base cocaine leaf) along with data obtained from the US Government in relation to the secondary transformation processes (base cocaine hydrochloride at 1:1) and base purity (81%). Potential cocaine hydrochloride production is estimated based on the variety within the cultivated hectares which oscillated during the last two censuses between 262 tonnes – 405 tonnes in 2012 and 249 tonnes - 331 tonnes in 2013.

<sup>&</sup>lt;sup>15</sup> UNODC Coca Cultivation Survey 2013, p. 121.

<sup>&</sup>lt;sup>17</sup> Walters, J. (2002). Drug destroys environment too. 23 April 2002. Available at http://www.seattlepi.com/news/article/Drugs-destroy-environment-too-1085827.php.

# 4.2 Coca eradication as a measure to suppress cocaine production

In 1998, Colombian President Andres Pastrana made great effort to eradicate coca cultivation under Plan Colombia as a measure to stop fuelling the on-going conflict between the Government's army and the paramilitary group Revolutionary Armed Forces of Colombia (FARC).<sup>18</sup> Due to the cost of the plan, and the international nature of the cocaine industry, Plan Colombia targeted the international community with regard to its co-responsibility for international cocaine trafficking.<sup>19</sup> The US is one such country that has collaborated with Colombia. To date, the US has helped to re-establish the Colombian Government's control over much of its territory, combat drug trafficking and terrorists activities, and also funded socio-economic policies in order to reduce poverty. The US Congress provided more than US\$ 9 billion in assistance to carry out Plan Colombia and its follow-up strategies, for the period of 2000-2013.<sup>20</sup>

The EU, despite being a major force, decided not to cooperate with Plan Colombia because it perceives the drug problem as a health and social issue, rather than a criminal one.<sup>21</sup> In all fairness, negotiations between the US and Colombia were not open to international discussions, thus hindering any favourable view on the plan by Europeans and Latin American states.<sup>22</sup>

Under Plan Colombia, the Colombian military forces relied heavily on aerial spraying to eliminate illicit crops.<sup>23</sup> As opposed to manual eradication (pulling up of coca plant by hand), spraying is carried out using a mixture of glyphosate as an active ingredient, a coadjutant and water. The Colombian National Committee for the Verification of Spraying activities estimates a 91.2% effective death rate of plants per yield.<sup>24</sup> In 2013, the National Police of Colombia sprayed 53% less than the previous year, a total of 47,053 hectares of coca crops.

Scott, P.D. (2003). Drugs, Oil and War: The United States in Afghanistan, Colombia, and Indochina. Rowman & Littlefield Publishers. See also: World Drug Report 2010, p. 71.

Fukumi, S. (2008). Cocaine Trafficking in Latin America: EU and US Policy Responses. Ashgate Publishing Ltd., p. 180.

<sup>&</sup>lt;sup>20</sup> Sullivan, M. P. (2014). Latin America and the Caribbean: Key Issues for the 113th Congress. Congressional Research Service (CRS) Report for Congress. 29 August 2014, p. 28.

Miranda, J. European Parliament resolution on Plan Colombia and support for the peace process in Colombia: B5-0087/2001. European Parliament. Motion for a Resolution. 18 January 2001.

<sup>&</sup>lt;sup>22</sup> Ibid, p. 183.

<sup>&</sup>lt;sup>23</sup> Brandi, J. (2005). Examining the Impact of Illicit Crop Eradication on Education in Colombia. p. 53.

<sup>&</sup>lt;sup>24</sup> UNODC Coca Cultivation Survey 2013, p. 92.

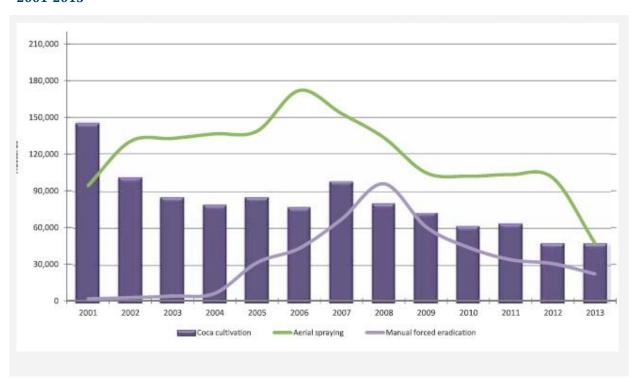


Figure 3: Comparison of coca crops within sprayed areas and areas using manual eradication, 2001-2013

Source: UNODC Coca Cultivation Survey 2013, p. 92.

However, the use of herbicide glyphosate has defoliated not only coca but also contiguous and interspersed native forests and food crop parcels.<sup>25</sup> There is also a significant release of chemicals in the water supplies and aquatic ecosystems. Likewise, the decrease in biodiversity in the Andes is linked to the convergence of drug markets, decades of military conflict and the paucity of economic alternatives.<sup>26</sup> The eradication policy led not only to direct deforestation of the rainforest and other biomes, through indiscriminate fumigation efforts but also indirect deforestation; economic pressure on has forced farmers, who lost both their illicit and licit crop, to migrate deeper into the forests and to resort to even more extensive cultivation of coca in order to offset any damage caused by aerial spraying.<sup>27</sup> This phenomenon is often called the balloon-effect, where new areas of primary forest are deforested as the war on drugs pushes the frontier further into new territories. Approximately 42% of the land under coca cultivation in the period of 2001-2011 is on land that was "formerly covered by forests".<sup>28</sup> For instance, coca growers take advantage of the legal prohibition to spray with aerial herbicides in national parks in Colombia, to cultivate coca in these protected areas.<sup>29</sup>

\_

Messina, J.P. and Delamater, P.L. (2006). Defoliation and the war on drugs in Putumayo, Colombia. International Journal of Remote Sensing, p. 127.

<sup>&</sup>lt;sup>26</sup> Smith, C.L., Hooks, G. and Lengefeld, M. (2014). The War on Drugs in Colombia: The Environment, the Treadmill of Destruction and Risk-Transfer Militarism. American Sociological Association, vol. 20, no. 2, p. 13.

Moreno-Sanchez, R., Kraybill, D.S., Thompson, S.R. (2003). An Econometric Analysis of Coca Eradication Policy in Colombia. World Development vol. 31, no. 2, pp. 375–383.

<sup>&</sup>lt;sup>28</sup> Colombia: Coca cultivation survey 2011. UNODC. June 2012. Available at http://www.unodc.org/documents/cropmonitoring/Colombia/Colombia\_Coca\_cultivation\_survey\_2011.pdf.

<sup>&</sup>lt;sup>29</sup> Mejia and Posada 2008, p. 30.

The result of the above-mentioned situation causes serious environmental degradation in Colombia, especially as illicit crop farmers do not include measures to promote sustainability of the land, exacerbating the environmental impact.<sup>30</sup> Although the area planted with coca in 2013 was stable, 16,334 hectares of forests that existed in 2012 were felled for coca cultivation (1,027 hectares more than in 2012), of which 58% are considered as forests of high complexity, biodiversity and wealth. In the period 2001-2013 there were 275,588 hectares deforested due to direct coca cultivation.<sup>31</sup>

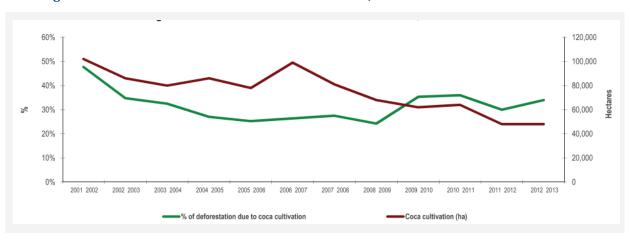


Figure 4: Rate of deforestation due to coca cultivation, 2001-2013

Source: UNODC Coca Cultivation Survey 2013, p. 24.

# 4.3 Chemical precursors control as a measure to supress cocaine production

The above background of serious environmental pollution and deforestation caused by both the production of cocaine and the aerial spraying serves to highlight the need for controlling and monitoring the trade of chemical precursors to further reduce or to make the production of the cocaine economically unviable.

On the international level, efforts to establish monitoring system on the trade of chemical precursors is embodied in the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988 Convention),<sup>32</sup> which established the framework for an international cooperation amongst States Parties to secure the control of chemical precursors.<sup>33</sup>

The number of States Parties to the 1988 Convention stands at 187 in 2013, including all EU Member States, the EU itself, as well as Colombia.<sup>34</sup> States Parties are obliged to "adopt such measures as may be necessary to establish as criminal offences under its domestic law" to combat all aspects of illicit

<sup>30</sup> Coca Cultivation in the Andean Region: A Survey of Bolivia, Colombia and Peru (2006). UNODC. June 2006, p. 44.

<sup>&</sup>lt;sup>31</sup> UNODC Coca Cultivation Survey 2013, p. 24.

<sup>32</sup> United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. UN Economic and Social Council (ECOSOC). 19 December 1988. (Hereinafter "1988 Convention").

<sup>&</sup>lt;sup>33</sup> Ibid, art. 2.

<sup>&</sup>lt;sup>34</sup> Report of the International Narcotics Control Board for 2013 (2014). INCB. Available at https://www.incb.org/documents/Publications/AnnualReports/AR2013/English/AR\_2013\_E.pdf.

production and trafficking of drugs and its precursors.<sup>35</sup> Article 12 requires States Parties to establish and maintain a system to monitor international trade in chemical precursors, listed in Table I and Table II.<sup>36</sup>

Table 1: Revised Tables including the amendments made by the Commission on Narcotic Drugs in force as of 23 November 1992

Table I	Table II
N-acetylanthranilic acid	Acetic anhydride
Ephedrine	Acetone
Ergometrine	Anthranilic acid
Ergotamine	Ethyl ether
Isosafrole	Hydrochloric acid
Lysergic acid	Methyl ethyl ketone
3,4-methylenedioxyphenyl-2-propanone	Phenylacetic acid
1-phenyl-2-propanone	Piperidine
Piperonal	Potassium permanganate
Pseudoephedrine	Sulphuric acid
Safrole	Toluene
The salts of the substances listed in this Table whenever the existence of such salts is possible	The salts of the substances listed in this Table whenever the existence of such salts is possible (the salts of hydrochloric acid and sulphuric acid are specifically excluded)

Source: United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. UN Economic and Social Council (ECOSOC). 19 December 1988, Annex.

The monitoring system aims to prevent precursors from being diverted away from lawful commerce into illicit channels. States Parties are required to seize any substance that is likely to be used for illicit manufacture of narcotic drugs. Additionally, one of the most important provisions set by the 1988 Convention is the pre-export notification system, enabling importing countries to know about the transactions in advance, and to control and to verify whether or not the chemicals will be used for illicit activities.<sup>37</sup>

The main challenge faced by authorities when monitoring and controlling the trade of chemical precursors is the legit use that these chemical have in wide range of activities, such as in the synthesis of plastics, pharmaceuticals, cosmetics, perfumes, detergents, or aromas. As pointed out as early as the 1990's by the

<sup>&</sup>lt;sup>35</sup> 1988 Convention, art. 3, §1.

<sup>&</sup>lt;sup>36</sup> Ibid, Annex Tables.

<sup>&</sup>lt;sup>37</sup> Ibid, art. 9(c).

Chemical Action Task Force,<sup>38</sup> the regulation of legitimate commerce of chemicals is one of most valuable tools in the battle against drug criminals.<sup>39</sup> In fact, traditional supply-control measures, such as alternative development or eradication, cannot be effective when applied alone or when dealing with synthetic drugs.<sup>40</sup>

This has become even more relevant over time, as a growing proportion of the illicit drugs found on the market nowadays are synthetic drugs for which traditional supply-control measures applied to plant-based substances, such as alternative development or eradication, cannot be used.

Article 12 of the 1988 Convention establishes the legal basis for chemical precursors control and monitoring at the international level, and defines precursors as "substances frequently used in the illicit manufacture of narcotic drugs or psychotropic substances". $^{41}$ 

The global expansion of the chemical industry in the last decades, especially to Asia which has become the largest manufacturer of chemicals, has posed many potential implications for an effective international control of chemical precursors. The previous geographical concentration of chemical production to North America and Europe, by a few large and vertically integrated companies, allowed a close cooperation between industry and government to control chemical precursors. The shift to Asia brought in new players, especially many small and medium-sized companies, making it harder to effectively control any illicit diversion of scheduled chemicals. The largest sales were reported by companies in China (27%), followed by the EU (20%), the US (15%) and Japan (6%). The single largest European producer was Germany (5.7% of global sales).<sup>42</sup>

The Organisation of American States (OAS) suggests that countries in the Americas could improve the pre-export notification system already in place, by responding within the deadline, as they failed in 22% of the cases. <sup>43</sup> In Colombia, the pre-export notification system was implemented by Decree 25 of July 2009. The Inter-American Drug Abuse Commission (CICAD), in its Fifth Evaluation Round, 2007-2009 assessed that Colombia made great improvements in this regard, but there is still room for improvement.

<sup>&</sup>lt;sup>38</sup> The Chemical Action Task Force was established by the seven major industrialized nations to review the methods used by manufacturers of illicit drugs to obtain the chemicals they need and to recommend international means of regulating those chemicals.

<sup>&</sup>lt;sup>39</sup> Status Report for the 1992 Economic Summit. Chemical Action Task Force. June 1992, p. 11.

<sup>&</sup>lt;sup>40</sup> UNODC World Drug Report 2014, p. 55.

<sup>&</sup>lt;sup>41</sup> 1988 Convention, art. 12.

Chemicals Industry Profile: Facts and Figures (2011). The European Chemical Industry Council (CEFIC). Available at http://www.cefic.org/Documents/FactsAndFigures/2012/Facts-and-Figures-2012-The-Brochure.pdf.

<sup>&</sup>lt;sup>43</sup> OAS Drug Problems in the Americas 2013, p. 38.

Table 2: Pre-export notifications regarding controlled chemical substances received by Colombia, 2006-2009

	2006	2007	2008	2009
Number of pre-export notifications received	264	290	160	342
Number of replies sent	258	289	158	254
Number of replies sent on time (maximum 15 days)	154	75	125	235

Source: UNODC Coca Cultivation Survey 2013, p. 24.

# 4.4 Efforts to monitor chemical precursors in the European Union and third countries

The international monitoring system established by the 1988 Convention requires States Parties to take appropriate measures to prevent diversion of the listed substances towards the illicit manufacture of narcotic drugs or psychotropic substances. The legal framework in place in the EU is established by Regulation (EC) No 273/2004 (laying down harmonised rules for monitoring the intra-community trade on drug precursors)<sup>44</sup> and Council Regulation (EC) No 111/2005 (laying down rules for the monitoring of trade in drug precursors between the EU and third countries).<sup>45</sup> The Regulations establish and maintain a system to monitor international trade in the scheduled substances in order to facilitate the identification of suspicious transactions, in close cooperation with other States Parties to the 1988 Convention as well as with companies that manufacture or trade the chemicals.

The existing legislation in the EU aims "to strike an appropriate balance between the desire to exploit all possible means to prevent drug precursors reaching illicit drug manufactures and the commercial needs of the chemical industry and other operators".<sup>46</sup> Abiding by the 1988 Convention, the EU includes the 23 chemicals listed therein in its legislation on chemical precursors, divided in three categories according to their possible use for drug production.

On the EU level, different requirements for the trade of the listed chemicals exist depending upon whether the trade is external or internal (within the common market). Regarding the external trade, Regulation No 111/2005, as amended by Commission Regulation (EC) No 297/2009,<sup>47</sup> defines procedures and documentation requirements for: licensing operators; monitoring international trade through pre-export and pre-import notifications; and demonstrating the licit purposes of transhipment operations. Control of precursors is implemented in all Member States by means of a common licensing system for EU and third

Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors (2004). OJ L 47/1.

<sup>&</sup>lt;sup>45</sup> Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors (2005). OJ L 202/7. (Hereinafter "Regulation No 111/2005").

<sup>46</sup> Regulation No 111/2005, preamble 3.

<sup>&</sup>lt;sup>47</sup> Commission Regulation (EC) No 297/2009 of 8 April 2009 amending Regulation (EC) No 1277/2005 laying down implementing rules for Regulation (EC) No 273/2004 of the European Parliament and of the Council on drug precursors and for Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. L/13.

country trading partners, with a special emphasis on customs procedures and controls. Requirements for identifying and tracking the traded precursors are proportional to their sensitivity,<sup>48</sup> and they are assigned to one of three categories (in line with the 1988 Convention).<sup>49</sup> According to the Council, "the control system in place raises important barriers to access to drug precursors by traffickers and reduce overall availability of drug precursors for illicit drug manufacture."<sup>50</sup>

The chemicals listed in Regulation No 111/2005 essentially mirror the content of Tables I and II of the 1988 Convention,<sup>51</sup> maintaining a consistent pattern on the monitoring of the trade on chemical precursors.

This control system is also meant to contribute to the fight against terrorism and organised crime. This is especially relevant regarding Colombia, where there is a link between illicit drug trafficking and financing of terrorist acts by left-wing militant groups such as FARC and the National Liberation Army (ELN) and even the right-wing paramilitary forces known as the United Self-Defence Forces of Colombia (AUC).<sup>52</sup> For instance, FARC is involved with different stages of cocaine production and trafficking, and many of its prominent members have been arrested and extradited to the US.<sup>53</sup> In 2009, two leaders of FARC pleaded guilty before the District of Columbia federal court to conspiring to import tonnes of cocaine into the United States.<sup>54</sup> The conspiracy include plans to increase cocaine trafficking routes overseas, to establish better ways to exchange cocaine paste and cocaine hydrochloride for weapons and to pay more to campesinos (peasant farmers) for cocaine paste. The AUC has been known for using the cocaine trade to finance its counter-insurgency campaigns;<sup>55</sup> it appears to be directly involved in processing and exporting cocaine from Colombia with impunity partly because of its close ties with the Colombian legal system.<sup>56</sup>

Colombian organised crime still plays a key role in the supply of cocaine for the European market,<sup>57</sup> often in arrangements with European organised crime. The latter have developed an efficient redistribution networks in North-West Europe.<sup>58</sup> Technological advancements, like the Internet, have opened and

<sup>52</sup> Terrorism Havens: Colombia (2005). Council on Foreign Relations (CFR). Available at http://www.cfr.org/colombia/terrorism-havens-colombia/p9358.

15

\_

<sup>&</sup>lt;sup>48</sup> The EU legislation uses the term sensitive to describe those chemical considered essential to the illicit drug production.

<sup>&</sup>lt;sup>49</sup> Culley, D.M. et al. Assessment of the implementation of the EU Drugs Strategy 2005-2012 and its Action Plans (2012), p. 90. (Hereinafter "Culley 2012").

<sup>&</sup>lt;sup>50</sup> Council conclusions on the functioning and implementation of EU drug precursors legislation. Council of the European Union. 25 May 2010.

<sup>&</sup>lt;sup>51</sup> 1988 Convention, Annex Tables.

EU Drug Markets Report: A Strategic Analysis (2013). European Monitoring Centre for Drugs and Drug Addiction and Europol, p. 121. (Hereinafter "EU Drug Markets Report 2013").

Leader of Colombian Narco-Terrorist Organisation Sentenced to More than 20 Years in Prison for Conspiring to Import Tonnes of Cocaine into the United States. United States Attorney Southern District of New York. 19 March 2010. Available at http://www.justice.gov/usao/nys/pressreleases/March10/mendietajorgeenriquesrodriguezsentencin gpr.pdf.

United Self-Defense Forces/Group of Colombia (AUC – Autodefensas Unidas de Colombia). Global Security. Available at http://www.globalsecurity.org/military/world/para/auc.htm.

<sup>&</sup>lt;sup>56</sup> Cabrera v Jiménez Naranjo (a/k/a Macaco): Justice for the Torture and Killing of Human Rights Defenders in Colombia (2010). The Centre for Justice and Accountability. Available at http://www.cja.org/section.php?id=403.

<sup>&</sup>lt;sup>57</sup> EU Drug Markets Report 2013, p. 47.

<sup>&</sup>lt;sup>58</sup> Ibid, p. 48.

liberalised the drug trade, making possible the growth of network at a low cost and further complicating jurisdiction issues.<sup>59</sup> Chemical innovation has also enabled cocaine being chemically incorporated in legitimate products for secondary extraction within the EU.<sup>60</sup> These are the challenges faced by European authorities when dealing with organised crime and drug trafficking: two intertwined problems.

## 4.4.1 Potassium permanganate

Potassium Permanganate is an essential chemical oxidizer that is used in the illicit manufacture of cocaine hydrochloride. It also has a number of uses in the licit industry, for instance in drinking water treatment. Potassium permanganate is one of the most commonly traded licit substances,<sup>61</sup> listed in Table I of the 1988 Convention<sup>62</sup> and scheduled in Category 2 by Commission Regulation (EC 1232/2002).<sup>63</sup>

Table 3: Global interception rate of potassium permanganate, 2007-2012

	Minimum	Maximum	Midpoint
Average annual global cocaine manufacture, 2007-2012 (tons)	835	1,097	966
Amount of potassium permanganate needed for the manufacture of 100 kg of cocaine	20	55	-
Average annual amount of potassium permanganate required for illicit cocaine production (tons)	167	603	385
Average annual seizures of potassium permanganate (tons)	65	65	65
Average annual amounts diverted (tons)	232	668	450
Average annual interception rate (per cent) <sup>a</sup>	10	28	15

Source: World Drug Report 2014, p. 80.

Authorities in Colombia have been making great efforts to combat diversion of potassium permanganate to the illicit manufacturing of cocaine. UNODC reports that Colombia seized 80% of the global seizure of illicit potassium permanganate for the period of 2007-2012.<sup>64</sup> The global average annual seizure of potassium permanganate totalled 65 tonnes during this period, representing only 0.3% of the global licit exports.<sup>65</sup> In 2012, the total seizure of potassium permanganate was 92.7 tonnes, twice the average reported since 2008. Colombian authorities seized 60% of the global share (56 tonnes).<sup>66</sup> According to estimates of cocaine manufacture, between 186 and 233 tons of potassium permanganate are used annually in cocaproducing countries to illicitly manufacture cocaine.<sup>67</sup> It is also noteworthy to consider that more than

<sup>&</sup>lt;sup>59</sup> Ibid, p. 129.

<sup>60</sup> Ibid, p. 136.

Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances 2013. International Narcotics Control Board (INCB). 4 March 2014, p. 20. (Hereinafter "INCB Precursors Report 2013").

<sup>62 1988</sup> Convention, Table I.

<sup>63</sup> Commission Regulation (EC) No 1232/2002 of 9 July 2002 replacing the Annex to Council Regulation (EEC) No 3677/90 laying down measures to be taken to discourage the diversion of certain substances to the illicit manufacture of narcotic drugs and psychotropic substances and amending Regulation (EEC) No 3769/92, OJ L 180.

<sup>&</sup>lt;sup>64</sup> UNODC World Drug Report 2014, p. 70.

<sup>65</sup> Ibid

<sup>66</sup> INCB Precursors Report 2013, p. 21.

<sup>67</sup> Ibid.

three quarters of all pre-export notifications for potassium permanganate in 2012 were issued by China, followed by the US and India. $^{68}$ 

Table 4: Diversion as a proportion of international trade in potassium permanganate, 2007-2012

	Minimum	Maximum	Mid-point
Average annual amounts of potassium permanganate diverted (tons)	232	668	450
Global average annual exports of potassium permanganate (tons)	22,186	22,186	22,186
Global average annual imports of potassium permanganate (tons)	17,233	17,233	17,233
Global average annual international trade (maximum export/import) (tons)	22,186	22,186	22,186
Diversion as a proportion of international trade (per cent)	1.0	3.0	2.0

Source: World Drug Report 2014, p. 81.

Another important issue faced by the authorities is the capacity of drug traffickers to illegally produce potassium permanganate, ammonia and hydrochloric acid. Investigations already report that traffickers have been widely recycling and reusing solvents, but the illicit production of the chemicals poses a serious challenge to Colombia. It is estimated that between 60 to 80% of the potassium permanganate used in Colombia is obtained through illicit manufacture using manganese dioxide as the starting material and is not diverted from the international trade channels.<sup>69</sup> In 2011, Colombian authorities dismantled seven illicit laboratories producing potassium permanganate, and another eight in 2012.<sup>70</sup> Moreover, sodium permanganate is a direct substitute chemical for potassium permanganate, and drug traffickers use it to produce an aesthetically pleasing end product very similar to the cocaine produced using potassium permanganate.<sup>71</sup> Also, sodium hypochlorite may be used to achieve higher rates of extraction and yields (UNODC, 2005b). The US Drug Enforcement Administration (DEA) proposes the addition of sodium permanganate as a List II chemical because of its direct substitutability for potassium permanganate (a List II chemical) in the illicit production of cocaine.<sup>72</sup>

#### 4.5 Diversion methods

Traffickers have several modus operandi to divert chemicals.<sup>73</sup> The Colombian chemical control faces a major problem regarding the issue of import permits, as the monitoring system is not capable of verifying the legitimate end-use for the chemicals prior to issuance.<sup>74</sup>

As chemical precursors are traded in vast quantities from multiple sources, criminals make use of loopholes in the monitoring system, increasingly transhipping or smuggling from third countries with

<sup>68</sup> Ibid.

<sup>&</sup>lt;sup>69</sup> Ibid, p. 22.

<sup>70</sup> Ibid.

Control of Sodium Permanganate as List II Chemical. U.S. Department of Justice: Drug Enforcement Administration. Available at http://www.gpo.gov/fdsys/pkg/FR-2006-10-17/pdf/E6-16990.pdf.

<sup>72</sup> Ibid.

These include resorting to the use of false identity, misuse of bona-fide names of well-known international companies, bribery or coercion of legal companies, theft of chemicals, falsification of documents, and disguise of labels.

<sup>&</sup>lt;sup>74</sup> International Narcotics Control Strategy Report: Volume I Drug and Chemical Control (2006). United States Department of State: Bureau for International Narcotics and Law Enforcement Affairs, pp. 83-4.

weaker control enforcement into drug producing countries with an increasingly effective chemical control.<sup>75</sup> As supply chains for chemicals can be very complex, the main role played by EU companies is as intermediary "traders". The trend seen by the authorities is the export of chemical precursors from Asia, via Europe to Central and South American countries, where the regulatory systems are insufficient to curb the chemicals diversion.

The problem for European authorities is therefore not necessarily related to the export of chemical precursors by European companies, but to its role as a transit region, especially since Germany, Netherlands, Spain and the United Kingdom have been associated with shipments from South and South-East Asia (mostly China) destined to Central America and Mexico.<sup>76</sup>

### 4.6 Effectiveness of the EU control

With respect to the effectiveness of the EU legislation on chemical precursors control, Regulation No 111/2005 provides for the requirement of registration and licensing of business involved, and sets up documentation and labelling requirements. Operators<sup>77</sup> are under the obligation to notify the competent authorities of any suspicious transaction. The system has been reported to be effective in respect to potassium permanganate control. Nonetheless, the EU was highly criticised internationally for not taking adequate control measures in regards to the powers conferred to customs and police authorities, to stop and seize medicinal products containing ephedrine or pseudoephedrine (two chemicals listed in Table I of the 1988 Convention, which are main precursors for the manufacture of methamphetamine).<sup>78</sup>

In 2010, the Commission adopted a report on the implementation and functioning of the EU legislation on chemical precursors.<sup>79</sup> While positive with respect to the effectiveness of the legislation - no major seizures of potassium permanganate – it did identify some deficiencies in the system, especially concerning implementation at the national level.

The 2010 Progress Report showed a lack of priority and differences between the legislations of individual Member States.<sup>80</sup> In 2011, seizures of potassium permanganate increased to 19 compared to 5 cases in

<sup>&</sup>lt;sup>75</sup> Ibid, p. 72.

<sup>&</sup>lt;sup>76</sup> Report of the International Narcotics Control Board for 2010 (2011). INCB. Available at http://www.incb.org/documents/Publications/AnnualReports/AR2010/AR 2010 English.pdf, p. 7.

<sup>&</sup>lt;sup>77</sup> Defined by the EU legislation as "any natural or legal person engaged in import, export of scheduled substances or intermediary activities relating thereto, including persons pursuing the activity of making customs declarations for clients on a self-employed basis, either as their principal occupation or as a secondary activity related to another occupation".

<sup>&</sup>lt;sup>78</sup> European Commission, (Commission Staff Working Document Impact, 27 September 2012) Proposal for a Regulation of the European Parliament and of the Council amending Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. European Commission. 27 September 2012. COM (2012) 521 final, p. 2.

<sup>79</sup> Report from the Commission to the Council and the European Parliament Pursuant to Article 16 of Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 and to Article 32 of Council Regulation (EC) No 111/2005 on the implementation and functioning of the Community legislation on monitoring and control of trade in drug precursors. European Commission. 7 January 2010. COM(2009) 709 final.

<sup>80</sup> Report from the Commission: 2010 progress review of the EU Drugs Action Plan (2009-2012). European Commission. 5 November 2010. COM(2010) 630 final, p. 5.

2010.81 However, only 0.79 kg were seized, while 17 cases (representing a total of 76,509 kilogrammes) were stopped shipments.82

The study on customs controls of chemical precursors in 2007 identified weaknesses relating to the detection of suspicious consignments for which false customs declarations are made.<sup>83</sup> In particular, the report revealed a lack of priority for the chemical precursors legislation by customs administrations, lack of awareness and expertise as well as insufficient resources (e.g. testing equipment). There appears to be further minor weaknesses related to the precursor legislation regarding the external trade. These include in particular the lack of flexibility for competent authorities as regards the period required to wait for the response to pre-export notifications, the lack of simplified authorisation procedures for repetitive consignments between well-known operators in the Community and in the EFTA countries, and the need to further streamline the authorising procedures with the electronic customs environment. Law enforcement agencies should share more timely information on operations, for instance on asset recovery, and Member States' contributions to some of EUROPOL's analysis work files on drugs are still unsatisfactory.<sup>84</sup>

An amendment to Regulation No 111/2005 by Regulation No 1259/2013<sup>85</sup> further tightened the requirement to grant a licence or registration, and gave broader powers to the competent authority of each Member States to revoke any license when the conditions are no longer met.<sup>86</sup> Furthermore, national competent authorities were granted power to stop and seize any non-scheduled substances into or out of the EU customs territory when there is sufficient evidence that those substances are intended for the illicit production of drugs. These substances should be considered for inclusion in the "EU Voluntary Monitoring List".

The penalty applied to the trafficking of chemical precursors in EU is quite harmonised within all 28 Member States. Council Framework Decision 2004/757/JHA<sup>87</sup> establishes a maximum of at least 1-3 years prison sentence for precursor trafficking, or 5-10 year prison sentence when committed in an organised crime framework to be used in or for drug production. The variety of sentences given across the EU has been described by the European Commission as "not completely satisfactory [...] thus [there has been] little progress in the alignment of national measures in the fight against drug trafficking".<sup>88</sup> However, a heavier sentence of 5-10 years for precursor trafficking committed within an organised crime framework may be hard to come by especially since the UNODC is reported to have state that "there was no suggestion of transnational organised crime involvement in precursor importation".<sup>89</sup> On a related note, during the Second International Symposium LAC-EU (Prevention of the Diversion of Drug Precursors in the Latin

83 Culley 2012, pp. 49-68.

<sup>&</sup>lt;sup>81</sup> Drug Precursors: EU Summary Report 2012 – Statistics from 2011. European Commission, p. 7.

<sup>82</sup> Ibid.

<sup>&</sup>lt;sup>84</sup> Commission Review of the EU Drugs Action Plan 2010, p. 6.

Regulation (EU) No 1259/2013 of the European Parliament and of the Council of 20 November 2013 amending Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. L 330/30.

<sup>86</sup> Ibid, art.1.

<sup>&</sup>lt;sup>87</sup> Council Framework Decision 2004/757/JHA of 25 October 2004laying down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking. L 335/8.

Precursors trafficking penalties. European Monitoring Centre for Drugs and Drug Addiction. Available at http://www.emcdda.europa.eu/html.cfm/index44396EN.html.

<sup>&</sup>lt;sup>89</sup> Mid-term review of the Cocaine Route Programme financed by the EU Instrument for Stability (Final Report). European Commission. June 2013, p. 36.

America and Caribbean Region (PRELAC) programme)<sup>90</sup> on Precursors in October 2014, emphasis was made on the need to make diversion crime a priority.<sup>91</sup> Currently, the diversion of chemical precursors is only dealt with using administrative penalties. This lack of criminal prosecution policy is demonstrated by the fact that there is no follow-up to the investigations of the crime of diversion by law enforcers or the judiciary.

The framework provided by the EU Drugs Strategy 2013–20 and its current (2013–16) and subsequent (2017–20) Action Plans is designed to complement the Member States' national strategies and to support joint actions. In the area of supply reduction, it has identified several challenges. These include the dynamic nature of illicit drugs markets, changes in trafficking routes, and the role of cross-border organised crime and new technologies in the trafficking of illicit drugs and new psychoactive substances. In addition, the strategy has noted the importance of preventing the diversion of chemical precursors and cutting agents from licit industry that can be used to manufacture illicit drugs. In an overarching sense, the strategy responds to these challenges through its objective to disrupt drug markets and limit the availability of illicit drugs.<sup>92</sup>

The INCB reports that traffickers are resorting to other means rather than diverting potassium permanganate from the licit trade. The use of alternative chemicals as a precursor; manufacturing potassium permanganate in the cocaine producing countries, especially from manganese dioxide and potassium manganite, diverting potassium permanganate from licit shipments in neighbouring Latin American countries — or manufacturing it in those countries — and smuggling it into Colombia; diverting or illicitly manufacturing potassium permanganate in countries not traditionally associated with cocaine production and whose authorities are less able (or less inclined) to control potassium permanganate shipments. Transhipment or smuggling from third countries into drug producing countries appears to be increasing, mainly in response to the increasing efforts of more countries to implement legislative and administrative controls to prevent diversion from legitimate commercial trade.

PRELAC is a programme funded by the EU and implemented by the UNODC. It aims to strengthen the capacities of national authorities to prevent the diversion of precursors in Latin America and the Caribbean.

PRELAC recommends strengthening measures to guarantee application of convictions for diversion of drug precursors. PRELAC. 29 October 2014. Available at http://www.prelac.org/SimposioPrecursores2014/prelac-recommends-strengthening-measures-to-guarantee-the-application-of-convictions-for-diversion-of-drugs-precursors/?lang=en.

<sup>92</sup> EU Drugs Strategy (2013–20). EU Council. C 402/1.

Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances 2011. International Narcotics Control Board (INCB). 28 February 2012, p. 22: Colombian illicit facilities typically convert manganese dioxide into potassium permanganate, which is then converted into potassium permanganate. Colombia seized 605 tonnes of potassium manganite in 2010.

<sup>&</sup>lt;sup>94</sup> Ibid, p. 21: the second largest national total of potassium permanganate seized in 2010 was reported by Kazakhstan (3.3 tonnes), while another Central Asian country, Uzbekistan, ranked third (630 kg). In 2009, multi-tonne shipments to Mozambique and Syria were stopped, and in 2007 attempted shipments to Côte d'Ivoire, Nigeria and Morocco were suspended.

# 5 Conclusions and Policy Implications

Criminals are able to resort to sophisticated ways to obtain chemical precursors, being increasingly resourceful, organised and adaptable in order to circumvent the current monitoring system. <sup>95</sup> It is required that any chemical precursors monitoring system be flexible enough to address the constant shift and adaptations by criminals in acquiring chemicals.

In the final analysis, chemical precursors monitoring can reduce the diversion to illicit drug production, although not wholly. Potassium permanganate can be diverted elsewhere and then exported to Colombia, or even be manufactured there. Currently, the dynamics of the cocaine production poses certain threats; the new trend is to manufacture the drug in places where law enforcement is weaker.

With regards to the efficacy of EU legislation for chemical precursors monitoring, reports have been positive. Despite this, it must be noted that such control will not be so effective as to stop the diversion, as that could lead to a disproportionate meddling with the licit trade. However, the fact remains that with an effective monitoring in place, any attempts to divert chemical precursors will be made more costly – an economic disincentive for criminals. Nonetheless, the observed illicit manufacture of potassium permanganate in Colombia can be regarded as proof of the effectiveness of the European and international monitoring system.

Below are a few recommendations that have potential EU policy implications:

Firstly, in order to curb cocaine production, the EU, by virtue of Regulation No 111/2005, must continue its cooperation with third countries such as Colombia (also Peru and Bolivia) with respect to law enforcement and precursor chemicals monitoring. However, as observed by this case study, any interdiction effort against any single source of production leads to what is called the balloon-effect; the illicit activities are replaced to elsewhere with weaker control. In this respect, cooperation should be engaged with all countries in the Andes region in a holistic and comprehensive approach. Of course, increased monitoring and control procedures within the region itself remains indispensable.

Secondly, the EU should help identify the links between trafficking of chemical precursors with organised crime. In doing so, a heavier penalty can be imposed (5-10 years prison sentence) on persons engaged in the illicit import and export of chemical precursors. Currently, diversion crime is not considered a priority for authorities in several countries in Latin America and the Caribbean. Authorities have only dealt with this by way of administrative penalties – a somewhat lower form of punishment. It is recommended that the EU helps to make this a criminal policy priority, at least initially within the Community.

Thirdly and lastly, despite positive outlooks on the effectiveness of EU legislation for chemical precursors monitoring the EU should strive to further align the disparities of its Member States in implementing Regulation No 111/2005. Elements such as penalties imposed, handling of pre-export notifications by competent authorities and customs control can be further tightened.

Many reports have been written on the EU's role in the war on drugs. Also reviews have been made by the European Commission on legislation relating to the war on drugs, to the extent that in 2012, there was an EC call for proposal to amend Regulation No 111/2005 because EU customs and police authorities have faltered in stopping and seizing medical products containing ephedrine or pseudoephedrine. While these help to identify gaps in legislation, implementation remains a problem amongst Member States. On a positive note, this case study has demonstrated that EU legislation for chemical precursors monitoring have been effective in curbing illicit trafficking within the EU and externally. The next challenge is to obscure any attempt of diversion and the re-export of chemical precursors to regions where coca is cultivated.

\_

<sup>95</sup> Ibid, p. 33.

# References

#### Official Documents

Council conclusions on the functioning and implementation of EU drug precursors legislation. Council of the European Union. 25 May 2010.

Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors (2005). OJ L 202/7.

Drug Precursors: EU Summary Report 2012 - Statistics from 2011. European Commission.

EU Drugs Strategy (2013-20). EU Council. C 402/1.

European Commission, (Commission Staff Working Document Impact, 27 September 2012) Proposal for a Regulation of the European Parliament and of the Council amending Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. European Commission. 27 September 2012. COM (2012) 521 final.

Mid-term review of the Cocaine Route Programme financed by the EU Instrument for Stability (Final Report). European Commission. June 2013.

Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 on drug precursors (2004). OJ L 47/1.

Regulation (EU) No 1259/2013 of the European Parliament and of the Council of 20 November 2013 amending Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. L 330/30.

Report from the Commission to the Council and the European Parliament Pursuant to Article 16 of Regulation (EC) No 273/2004 of the European Parliament and of the Council of 11 February 2004 and to Article 32 of Council Regulation (EC) No 111/2005 on the implementation and functioning of the Community legislation on monitoring and control of trade in drug precursors. European Commission. 7 January 2010. COM(2009) 709 final.

Report from the Commission: 2010 progress review of the EU Drugs Action Plan (2009-2012). European Commission. 5 November 2010. COM(2010) 630 final.

United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. UN Economic and Social Council (ECOSOC). 19 December 1988.

Commission Regulation (EC) No 1232/2002 of 9 July 2002 replacing the Annex to Council Regulation (EEC) No 3677/90 laying down measures to be taken to discourage the diversion of certain substances to the illicit manufacture of narcotic drugs and psychotropic substances and amending Regulation (EEC) No 3769/92, OJ L 180.

Council Framework Decision 2004/757/JHA of 25 October 2004laying down minimum provisions on the constituent elements of criminal acts and penalties in the field of illicit drug trafficking. L 335/8.

Commission Regulation (EC) No 297/2009 of 8 April 2009 amending Regulation (EC) No 1277/2005 laying down implementing rules for Regulation (EC) No 273/2004 of the European Parliament and of the Council

on drug precursors and for Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors. L/13.

#### **Books/Journals/Reports**

Brandi, J. (2005). Examining the Impact of Illicit Crop Eradication on Education in Colombia.

Coca Cultivation in the Andean Region: A Survey of Bolivia, Colombia and Peru (2006). UNODC. June 2006.

Coca in the Andes. Office of National Drug Control Policy (ONDCP). Available at http://www.whitehouse.gov/ondcp/targeting-cocaine-at-the-source.

Colombia: Coca cultivation survey 2011. UNODC. June 2012. Available at http://www.unodc.org/documents/cropmonitoring/Colombia/Colombia\_Coca\_cultivation\_survey\_2011.pdf.

Colombia: Coca cultivation survey 2013. UNODC and Government of Colombia. June 2014. Available at http://www.unodc.org/documents/cropmonitoring/Colombia/Colombia\_coca\_cultivation\_survey\_2013.pdf.

Control of Sodium Permanganate as List II Chemical. U.S. Department of Justice: Drug Enforcement Administration. Available at http://www.gpo.gov/fdsys/pkg/FR-2006-10-17/pdf/E6-16990.pdf.

Culley, D.M. et al. Assessment of the implementation of the EU Drugs Strategy 2005-2012 and its Action Plans (2012).

Davalos, Liliana M. et al (2011). Forests and Drugs: Coca-Driven Deforestation in Tropical Hotspots. Environmental Science and Technology vol. 45, issue 4: 1219-1227.

EU Drug Markets Report: A Strategic Analysis (2013). European Monitoring Centre for Drugs and Drug Addiction and Europol.

Fukumi, S. (2008). Cocaine Trafficking in Latin America: EU and US Policy Responses. Ashgate Publishing Ltd.

International Narcotics Control Strategy Report: Volume I Drug and Chemical Control (2006). United States Department of State: Bureau for International Narcotics and Law Enforcement Affairs.

Miranda, J. European Parliament resolution on Plan Colombia and support for the peace process in Colombia: B5-0087/2001. European Parliament. Motion for a Resolution. 18 January 2001.

Mejia, D. and Posada, C.E. (2008). Cocaine Production and Trafficking: What Do We Know? Washington, D.C.: World Bank Policy Research Working Paper 4618. May 1, 2008.

Messina, J.P. and Delamater, P.L. (2006). Defoliation and the war on drugs in Putumayo, Colombia. International Journal of Remote Sensing.

Moreno-Sanchez, R., Kraybill, D.S., Thompson, S.R. (2003). An Econometric Analysis of Coca Eradication Policy in Colombia. World Development vol. 31, no. 2, pp. 375–383.

Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances 2013. International Narcotics Control Board (INCB). 4 March 2014.

Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances 2011. International Narcotics Control Board (INCB). 28 February 2012.

Report of the International Narcotics Control Board for 2010 (2011). INCB. Available at https://www.incb.org/documents/Publications/AnnualReports/AR2013/English/AR\_2013\_E.pdf.

Scott, P.D. (2003). Drugs, Oil and War: The United States in Afghanistan, Colombia, and Indochina. Rowman & Littlefield Publishers. Smith, C.L., Hooks, G. and Lengefeld, M. (2014). The War on Drugs in Colombia: The Environment, the Treadmill of Destruction and Risk-Transfer Militarism. American Sociological Association, vol. 20, no. 2.

Status Report for the 1992 Economic Summit. Chemical Action Task Force. June 1992.

Sullivan, M. P. (2014). Latin America and the Caribbean: Key Issues for the 113th Congress. Congressional Research Service (CRS) Report for Congress. 29 August 2014.

The Drug Problems in the Americas (2013). Organisation of American States (OAS).

World Drug Report 2010. UNODC. Available at http://www.unodc.org/documents/wdr/WDR\_2010/World\_Drug\_Report\_2010\_lo-res.pdf.

World Drug Report 2012. United Nations Office on Drugs and Crime (UNODC). Available at http://www.unodc.org/documents/data-and-analysis/WDR2012/WDR\_2012\_web\_small.pdf.

World Drug Report 2014. United Nations Office on Drugs and Crime (UNODC). Available at https://www.unodc.org/documents/wdr2014/World\_Drug\_Report\_2014\_web.pdf.

Wyler, L.S. (2013). International Drug Control Policy: Background and U.S. Responses. Congressional Research Service (CRS) Report for Congress. 13 August 2013.

#### Websites

Cabrera v Jiménez Naranjo (a/k/a Macaco): Justice for the Torture and Killing of Human Rights Defenders in Colombia (2010). The Centre for Justice and Accountability. Available at  $\frac{1}{2}$  http://www.cja.org/section.php?id=403.

Chemicals Industry Profile: Facts and Figures (2011). The European Chemical Industry Council (CEFIC). Available at http://www.cefic.org/Documents/FactsAndFigures/2012/Facts-and-Figures-2012-The-Brochure.pdf.

Leader of Colombian Narco-Terrorist Organisation Sentenced to More than 20 Years in Prison for Conspiring to Import Tonnes of Cocaine into the United States. United States Attorney Southern District of New York. 19 March 2010. Available at http://www.justice.gov/usao/nys/pressreleases/March10/mendietajorgeenriquesrodriguezsentencingpr.pdf.

Precursors trafficking penalties. European Monitoring Centre for Drugs and Drug Addiction. Available at http://www.emcdda.europa.eu/html.cfm/index44396EN.html.

PRELAC recommends strengthening measures to guarantee application of convictions for diversion of drug precursors. PRELAC. 29 October 2014. Available at

http://www.prelac.org/SimposioPrecursores 2014/prelac-recommends-strengthening-measures-to-guarantee-the-application-of-convictions-for-diversion-of-drugs-precursors/?lang=en.

Terrorism Havens: Colombia (2005). Council on Foreign Relations (CFR). Available at http://www.cfr.org/colombia/terrorism-havens-colombia/p9358.

United Self-Defense Forces/Group of Colombia (AUC – Autodefensas Unidas de Colombia). Global Security. Available at http://www.globalsecurity.org/military/world/para/auc.htm.

Walters, J. (2002). Drug destroys environment too. 23 April 2002. Available at http://www.seattlepi.com/news/article/Drugs-destroy-environment-too-1085827.php.