Country Indicators for Foreign Policy

The Potential Expansion of Methamphetamine Production and Distribution in Canada

A BACKGROUND STUDY

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About the Project

In January 2004, Criminal Intelligence Service Canada (CISC) initiated Project SOOTHSAYER. The goal of the project was to develop a strategic early warning system (SEWS) for organized and serious crime in Canada. The project had three broad objectives: I) the development of a methodology suited to intelligence warning for law enforcement; II) the establishment of a reporting mechanism; and III) the development of dissemination and communications methods (i.e. a product line). SEWS focuses on emergent events and phenomena – be they local, national or international, demographic, economic or technological – that could potentially alter the organized and serious crime situation in Canada. CISC sought out the support of the Country Indicators for Foreign Policy (CIFP) at the Norman Paterson School of International Affairs, Carleton University, which had a demonstrated expertise in warning for state failure, risk assessment and early warning. A central element of this venture was the development of the project's scanning component, known as the SENTINEL *Watch List.* This report, commissioned by the CISC and produced by CIFP, is the essential background to one of the project's pilot SENTINEL on the state of the methamphetamine market in Canada and the role of organized crime within it.

About the Author

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I – INTRODUCTION

First synthesized in 1893 from ephedrine in Japan, a natural stimulant and organic substance found in the ephedra plant, methamphetamine is a powerfully addictive stimulant that dramatically affects the central nervous system.[1] Methamphetamine is also referred to as 'speed', 'meth', 'chalk', 'jib', 'teck' 'zip', 'spoosh', 'shi-shi', 'poor man's cocaine' and 'load of laundry'. In its more potent, crystallized, smokeable form (d-methamphetamine hydrochloride) it is also known as 'crystal meth', 'crystal', 'ice', 'crank', 'fire', 'glass', 'shards' and 'shabu'.[2] Methamphetamine is often confused with other stimulants such as ephedrine (its precursor), amphetamine (of which it is a derivative), caffeine, and illicit stimulants such as ecstasy.

Used for hundreds of years as medicine in China, methamphetamine (and the greater group of amphetamine type stimulants ATS) was introduced in the 1930s and originally intended for use in nasal decongestant and bronchial inhalers.[3] However, its stimulant properties found medical use in treating attention deficit hyperactivity disorder (ADHD), narcolepsy (a sleeping disorder), obesity (through weight control), and depression.[4]

These same stimulant properties warranted their use during the Second World War as they were distributed in large quantities to military personnel to ensure alertness, increase productivity, enhance fighting spirit and suppress appetite during the long and arduous wartime campaigns. Over 200 million tablets were supplied to American troops during the war period and an unknown quantity was supplied to the Japanese military in the same period. Subsequently, amphetamine use spread to other segments of society where energy, stamina, and performance were significant components of the lifestyle, for example: long distance truck drivers; students; and athletes.[5]

Recreational use of methamphetamine was first associated with American motorcycle gangs in 1950s and British 'mods and rockers' of the 1960s, who used the drug in a way that is remarkably similar to the use of these same drugs today by young people associated with the 'dance/rave culture'.[6]

Large stocks of amphetamine (and Methamphetamine) left over from licit production during the war period fed a number of 'epidemics' in Japan, the United States, and Sweden. In the US, methamphetamine remained easily obtainable without a prescription until 1951. In each case amphetamines were commonly available in both the licit and illicit markets, while use of the drug became associated with particular sections of the community

[1] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy* (Ministry of State for Mental Health and Addiction Services, 2004) p. 4. Copy available at website: http://www.heatlhservices.gov.bc.ca/mhd.

[2] Ibid; and Susan Pennell, Joe Ellett, Cynthia Rienick, and Jackie Grimes, *Meth Matters: Report on Methamphetamine Users in Five Western Cities* (Criminal Justice Research Division of the San Diego Association of Governments, 1999) p. ix; and National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998); and Jane Buxton, *Vancouver Drug Use Epidemiology* (Canadian Community Epidemiology Network on Drug Use, 2003), 44.

[3] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy,* p. 4; and, Drug Policy Information Clearinghouse, *Fact Sheet: Methamphetamine* (Office of National Drug Control Policy 2003) p. 1.

[4] Ibid.

[5] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use* (World Health Organization 1997), p. 12; and British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy,* p. 4.

[6] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use* (World Health Organization 1997), p. 12.

through medical, occupational or recreational use.[7]

Furthermore, its use spread from the 'avant garde', who popularized the drug, to the more marginalized sections of society. This phenomenon was essential in the creation of a subculture of hard core addicts and users who became the driving force behind the demand for methamphetamine in the drug market. The increase of demand led to the quick depletion of licit stocks leftover from wartime, and combined with the stricter regulation in licit production and limits to medical prescriptions, encouraged illicit manufacturing.

In the US, the illicit manufacture of methamphetamine was primarily associated with organized motorcycle gangs (OMG) like the 'Hell's Angels', and limited to the western regions of the country, principally the San Francisco Bay area from where illicit production began in the 1960s. The majority of the methamphetamine market, however, was still dominated by independent producers who usually focused on feeding personal and local consumption – colloquially known as 'mom & pop' operations.[8]

However, as early as 1996 indicators began emerging of increased methamphetamine manufacturing and trafficking in various locations throughout the US, which indicated that the methamphetamine drug market had spread well beyond its western origins. The shift was attributed to the decline in the cocaine trade and the greater interest in methamphetamine by Mexican organized crime groups familiar with the dynamics of drug markets.[9] Moreover, the importance of the Internet cannot be over-looked in making widely available and accessible information related to the ingredients, methods, and process through which methamphetamine could be produced.

The methamphetamine problem spread quickly between 1992 and 1997, arriving in Oregon and Washington by 1994. It is believed that the spread to the northern states along the Canadian border was due to the large amounts of pseudo-ephedrine (another precursor chemical for methamphetamine) being smuggled across the border from Canada into the US.[10]

The history of methamphetamine in Canada is much less clear, and not very well documented. Perhaps this is due to the lack of a large scale epidemic similar in proportion to that witnessed in the US. However, methamphetamine has long been an established presence in Western Canada, particularly British Columbia (BC). BC experienced high methamphetamine use in the 1960s, 1970s, and 1980s. Prevalence in use of methamphetamine has always been greater in BC and Alberta, and as of 2002 it has once again surfaced as a drug of concern.[11]

In November of 2004, stakeholders from across Western Canada met in Vancouver to develop a collaborative approach to address the issue of 'crystal meth' use and production. [12] The *Western Canadian Summit on Methamphetamine* is evidence of the growing concern that Canadians should be showing to this issue – particularly with the example of the effects of organized crime on the methamphetamine market in the US.

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[7] Ibid.
[8] Susan Pennell et al., *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. ix, 3; and Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use* p. 12.
[9] Susan Pennell et al., *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. ix, 4.
[10] Office of Drugs and Crime, *Global Illicit Drug Trends 2003* (New York: United Nations, 2003), p. 34.
[11] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy,* p. 5.
[12] *Western Canadian experts converge to deal with crystal meth crisis,* retrieved November 14, 2004: http://healthandfitness.sympatico.msn.ca/News/ContentPosting.aspx?contentid=c2b02332b35b47a593efe61f302ef84a&show=False&number=0&showbyline=False&subtitle=&abc=abc

II – EXECUTIVE SUMMARY

1) PREVALENCE

The use of methamphetamine in Canada is low relative to the abuse of other substances such as alcohol, tobacco, and cannabis. Overall, its use is still less than that of cocaine and heroin; however, its prevalence may be considered acute in certain regions, particularly in Western Canada. Provincially, methamphetamine abuse is higher in British Columbia and Alberta. There does seem to be evidence of a move eastwards as use has become more significant in Ontario and Quebec, and it has surfaced in rural communities in Saskatchewan and Manitoba as well.

2) DEMAND

Methamphetamine use is stable among the general population. Among the youth population its use is higher but has also remained stable. Very high rates of abuse occur in certain vulnerable societal subgroups (some of whose lifestyles are associated with a higher demand for illicit stimulants). These include, but are not limited to: children or family members associated with or in homes where methamphetamine use or production is taking place; youth and young adults between the ages of 14-29 including street youth; youth attending rave dance scenes; young women with perceptual weight problems; athletes and 'super achievers' (ambitious students); the homeless; some segments of the homosexual community including those attending sex clubs; sex trade workers; multiple-drug users; and those in rural communities where methamphetamine is being manufactured, making it inexpensive enough to become the illicit drug of choice. Trends indicate that rates of use amongst these populations are increasing and are fuelling greater demand for methamphetamine.

3) SUPPLY

The manufacturing of methamphetamine has remained relatively stable, with some recent spikes in production. Data is mostly provided by seizures of methamphetamine-producing laboratories and finished methamphetamine product.

Methamphetamine is produced domestically in Canada in British Columbia, Alberta, Manitoba, Ontario, Quebec, and most recently Saskatchewan. Higher rates of production are witnessed in British Columbia and Alberta.

4) PRODUCTION

The production of methamphetamine in Canada is dominated by independent producers feeding local demand. However, there is significant involvement of organized crime groups at all levels of the methamphetamine market. In Canada it appears that organized motorcycle gangs [OMG] like the Hells Angels and Asian-based organized crime are the two largest identifiable groups involved in the methamphetamine market. However, the Canadian market remains competitive and dynamic, with numerous independent organized crime groups involved at all levels. Moreover, there appears to be signs of interrelatedness or even complementarity between differing drug markets (in Canada particularly between marijuana grow and methamphetamine production distribution operations).

5) COUNTERMEASURES

Precursor control remains the best supply reduction method available to combat the expansion of the methamphetamine market. Canada has enacted and implemented its Precursor Control Regulations recently, beginning in January of 2003. The success of these regulations is not yet apparent as insufficient time has passed in order to evaluate their effectiveness. However, some provisions contained within the regulations indicate the implementation of a process of voluntary reporting of suspicious transactions by the private sector. Moreover, the Precursor Control Regulations rely on the effective and consistent cooperation between both the private sector industry and retailers, along with relevant government agencies. This creates room for possible subversion and exploitation of any monitoring or enforcement process.

III – DEMAND, DEMAND TRENDS, CONSUMPTION, AND USAGE OF METHAMPHETAMINE

- Methamphetamine possesses greater functional utility then most traditional illicit substances.
- Frequency of consumption varies depending on location and individuals. British Columbia, Alberta and Ontario appear to have a higher prevalence rates, with higher levels of methamphetamine consumption associated with 'at risk groups'.
- Prevalence of methamphetamine use appears to be low and stable among the general population, but rising among vulnerable sub-groups.
- Through its association with 'designer drugs' and 'club drugs', methamphetamine has gained greater popularity. It is also a popular and cheaper substitute for cocaine.

1) Demand Dynamics

A complex of social, cultural and economic forces appears to drive demand for ATS substances like methamphetamine. ATS portray an image of modernism in their close association with the contemporary phenomenon of 'designer drugs', especially when compared with the traditional stimulants (i.e. caffeine and nicotine) frequently consumed in many societies and traditional illicit drugs (i.e. cocaine and heroin). [13] Unlike traditional narcotics, methamphetamine is most often manufactured in the country of consumption, thus eliminating the need for the elaborate trafficking and smuggling methods across international frontiers.[14]

Methamphetamine, like other ATS substances, also possesses a greater functional utility which allows it to more easily create niche markets for which other illicit drugs cannot provide for. [15] Methamphetamine is comparatively less expensive then traditional narcotics with the same stimulant effects (like cocaine). [16] Moreover, until recently the public health risk posed by methamphetamine was often completely overshadowed by the institutional fixation with plant-based drugs, which often leaves law enforcement, the medical establishment, and drug prevention networks with few usable tools to both identify and adequately deal with surfacing methamphetamine abuse.[17]

2) Consumption

Current prevalence estimates indicate that consumption of methamphetamine in Canada is limited to between 0.5% and 1% of the population 15 years of age and up.[18] Lifetime prevalence among youth and young adults between the ages of 12 and 25 is estimated at less than 5%.[19]

However, consumption varies depending on location and individuals. British Columbia, Alberta and Ontario appear to have a higher percentage of methamphetamine users. In B.C. it is estimated that lifetime use among school age children is 4%. [20] In Alberta,

[13] Expert Meeting on Amphetamine-type Stimulants Shanghai November 25-29, *Policy Options for Countermeasures* (Shanghai: United Nations Drug Control Programme, 1996), p. 4; and Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 113.
[14] United Nations Drug Control Programme, *Amphetamine-Type Stimulants: A Global Review* (Vienna: Commission on Narcotic Drugs, 1996), p. 44; and Office of Drugs and Crime, *World Drug Report 2004* (New York: United Nations, 2004), p. 159.
[15] Expert Meeting on Amphetamine-type Stimulants Shanghai November 25-29, *Policy Options for Countermeasures*, p. 5.
[16] Office of Drugs and Crime, *World Drug Report 2004,* p. 175.
[17] Expert Meeting on Amphetamine-type Stimulants Shanghai November 25-29, *Policy Options for Countermeasures*, p. 6.
[18] Office of Drugs and Crime, *World Drug Report 2004,* p. 177.
[19] Gary Roberts et al. and Canadian Centre on Substance Abuse, *Preventing Substance Use Problems Among Young People: A Compendium of Best Practices* (Ottawa: Office of Canada's Drug Strategy Health Canada, 2001), p. 8.
[20] Lisa May et al., *Healthy Youth Development: Highlights from the 2003 Student Health Survey*

students surveyed from grades 7 to 12 show a past year use of 5.3%.[21] An Ontario survey of students, ranging from grade 7 to 12, showed a lifetime use of 4.3% and a past year use of 3.3%. The same surveys show that use among males is typically greater than that among females and that use peaks at grades 10 and 11, then drops in grade 12. Prevalence increases again from the ages of 19 to 25.[22]

Other provincial student survey data from Newfoundland, Nova Scotia, Prince Edward Island and New Brunswick does not indicate methamphetamine prevalence directly, and it is assumed that it is lumped together in the category of 'other illicit substances'. The same is true for the limited data on the territories; Yukon, North West Territories, and Nunavut. This is in itself an indication that methamphetamine use has not yet become an observable problem within these regions.

These surveys do not however represent the prevalence in 'out-of-the-mainstream' youth, or prevalence among the adult population. Data reflecting use among the general population is difficult to collate and is usually estimated. However, the indication is that prevalence varies with location, and circumstance. BC and Alberta show the highest rates of methamphetamine abuse, followed by Ontario and Quebec (who show a greater use of ecstasy).

In BC the number of youth whom have used methamphetamine ranges from 1.4% and 3.3% (both in school and street youth) in the rural areas of the province, to 10% in Victoria and 70% in Vancouver (street youth).[23] In a survey of risk behaviours among injection multiple-drug users at four different sites (Regina, Sudbury, Toronto, and Victoria) of those surveyed in Victoria 32.7% said that they injected methamphetamine, and 18.7% said they had consumed it in another form.[24] These users were also more likely to have a higher rate of use.

The higher rates of use in BC have led to greater awareness of the problem and associated societal and health risks. Methamphetamine related deaths in the past three years (2002-2004) total 25, and 17 new cases of Leucoencephalopathy (toxic damage of white matter of the brain) have been identified since 2003, 8 of which have died (note: this toxic damage is also attributed to heavy abuse of heroin).[25]

Alberta, Ontario and Quebec do not yet have such alarming cases resulting from high levels of abuse. However, in Edmonton it is estimated that 5.3% of youth have consumed 'crystal meth' in the past twelve months (surpassing cocaine at 2.9%), and among street youth 'crystal meth' is second only to marijuana as the most commonly used drugs over the past three months with a prevalence of 8.1%.[26] In Calgary, the rave culture and 'club scene' are gaining popularity and it is anticipated that methamphetamine use is high with those associated with such subgroups, as well as those in the rural areas where the drug is manufactured.[27] In Toronto and Montreal (and to a lesser extent some areas of Northern Ontario) there is concern over the

(Vancouver: The McCreary Centre Society, 2004), p. 17; and British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 22.

[21] Alberta Alcohol and Drug Abuse Commission, *Adolescent Substance and Gambling Use May 2003* (Edmonton: Government of Alberta, 2003).

[22] Ontario Student Drug Use Survey, *Drug Use Among Ontario Students 1977-2003* (Toronto: Centre for Addiction and Mental Health, 2003), p. 4.

[23] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy,* p. 22.

[24] Health Canada, *I-Track: Enhanced Surveillance of Risk Behaviours Among Injecting Drug Users in Canada: Pilot Survey Report. February 2004* (Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Health Canada, 2004), p. 18-19.

[25] British Columbia Ministry of Health Services, Crystal Meth and Other Methamphetamines: An Integrated BC Strategy, p. 22; and Jane Buxton, *Vancouver Drug Use Epidemiology*, p. 44; and Colleen Anne Dell and Karen Garabedian, *Canadian Community Epidemiology Network on Drug Use 2002 National Report Drug Trends* (Ottawa: Canadian Centre on Substance Abuse, 2003), p. 89.

[26] 2003 Canadian Community Epidemiology Network Site Updates (October 2003 Annual Meeting), p. 3.

[27] Ibid.

use of club drugs and associated 'designer drugs' among which methamphetamine is often found.[28]

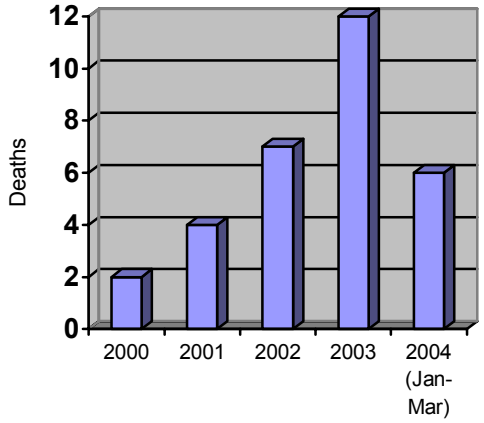
Moreover, higher levels of methamphetamine consumption in these locations are associated with what are identified as 'at risk groups.' Youth, and particularly street youth are two groups that can be discerned from the above information. However, analysis into the social context of the methamphetamine problem has yielded other identifiable subgroups. These include: children or family members associated with or in homes where methamphetamine use or production is taking place; youth and young adults between the ages of 14-29 including street youth; youth attending rave dance scenes; young women with perceptual weight problems; athletes and 'super achievers' (ambitious students); the homeless; some segments of the homosexual community including those attending sex clubs; sex trade workers; multiple-drug users; and those in rural communities where methamphetamine is being manufactured and where the availability of cheap methamphetamine makes it the illicit drug of choice.[29] The logic behind what places these societal subgroups at a higher risk of methamphetamine use will be addressed in a later section.

3) Demand Trends

Prevalence of methamphetamine use appears to be low and stable among the general population. Methamphetamine still ranks between fifth and seventh in Canada in terms preferred substance of abuse well behind alcohol, tobacco, and marijuana.[30] Among the general youth population methamphetamine use is for the most part stable with signs of decrease in Ontario (between 1999 and 2003) and BC (prevalence dropping from 5% to 4% in students grades 7 to 12 between 1998 and 2003).[31]

However, among the aforementioned societal subgroups, methamphetamine use is increasing, particularly in areas of Western Canada. In BC methamphetamine related deaths have increased every year since 2000 (*please refer to Figure 1*).[32] The 17 cases of Leucoencephalopathy since 2003 is an increase from 4 in 2002.[33] A specialized detoxification clinic in Victoria has seen its admission for 'crystal meth' increase from 17 to 117 over the past 4 years. Another report states that more then 70% of all admissions into detoxifications clinics in Victoria and Vancouver are for methamphetamine abuse with the average age of admission at 16.[34]

Figure 1. Methamphetamine related deaths in British Columbia: 2000-March 2004



Source: British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy 2004.*

[28] Ibid., pp. 6-7.
[29] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 16.
[30] Office of Drugs and Crime, *World Drug Report 2004,* p. 177.
[31] Ontario Student Drug Use Survey, *Drug Use Among Ontario Students 1977-2003*, p. 24; and Lisa May et al., *Healthy Youth Development: Highlights from the 2003 Student Health Survey*, p. 17.
[32] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 22.
[33] Colleen Anne Dell and Karen Garabedian, *Canadian Community Epidemiology Network on Drug Use 2002 National Report Drug Trends* (Ottawa: Canadian Centre on Substance Abuse, 2003), p. 89.
[34] Jane Buxton, *Vancouver Drug Use Epidemiology,* pp. 42-45.

In fact, in the majority of the cases stated above, the patients/victims are youth associated with one or more of the aforementioned subgroups at risk. Similarly, trends are surfacing in neighbouring Alberta among relevant subgroups. In Toronto there is concern over the significant increase in the hospital discharge data classification of dependent abuse of 'other', which is attributed to the increasing popularity of 'designer drugs' (in which methamphetamine is often found).[35]

Hence, while trends in methamphetamine use among the general population seem stable and low, the concern over the abuse of the drug among societal subgroups is increasing as trends indicate a higher and more frequent incidence of use. This pattern is historically consistent with the beginnings of most methamphetamine 'epidemics'. A strong subculture of prevalent users and addicts is necessary to encourage the expansion of the illicit manufacturing of methamphetamine and creation of new markets for the drug.[36]

4) Substitutes and Compliments to Methamphetamine

Methamphetamine is chemically similar to cocaine in the physiological response it induces in the human brain. Methamphetamine (like cocaine) acts on the brain's reward pathway, increasing the release of neurotransmitters dopamine, noradrenaline, and serotonin.[37] This yields an initial rush of pleasurable disposition that is followed by feelings of prolonged euphoria, increased levels of energy, self-confidence, wakefulness, libido, alertness and well-being. Due to the body's inability to quickly process the chemicals in methamphetamine the 'high' can last up to 12 hours, which contrasts to the shorter 'high' experienced from cocaine which the body is able to process much more quickly (up to 50% of the substance is removed from the body within the first hour).[38] The longer-lasting high, combined with the cheaper price of methamphetamine, make it a very popular substitute for cocaine (poor man's cocaine).

The versatility in methods of consumption also may remove the stigma that some may have to experimenting with cocaine or heroin. Unlike cocaine, which is snorted or smoked (if it is synthesized into 'crack cocaine'), methamphetamine can be smoked, snorted, injected, or orally ingested. This versatility makes methamphetamine accessible to multiple drug environments.[39] The ability to orally ingest methamphetamine has allowed it to 'piggy back' on the popularity of 'club drugs' and 'designer drugs' which often come in an ingestible pill form and have the same physiological effects as methamphetamine.

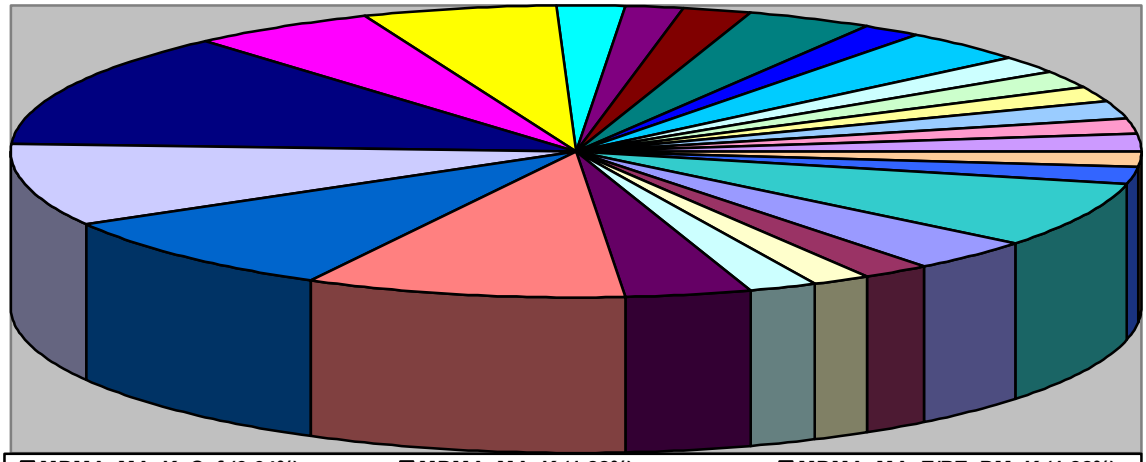
This has allowed methamphetamine to compliment the success of Ecstasy in some parts of Canada. A chemical analysis conducted by the Royal Canadian Mounted Police (RCMP) of drugs seized at rave dances between September 2001 and June 2002 showed that what most people thought they purchased as Ecstasy actually turned out to contain a variety of mixtures. Only 24% of tablets and 11% of capsules contained pure Ecstasy. The most common ingredient mixed in was methamphetamine (*please refer to Figure 2*).[40] A similar analysis was conducted again by the RCMP of 356 samples seized in seven 'raves' in Montreal between October 2002 and April 2004. The results were congruent with those of the earlier analysis; there is no relation between the

[35] 2003 Canadian Community Epidemiology Network Site Updates (October 2003 Annual Meeting), p. 7.
[36] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use* (World Health Organization 1997), p. 12; and Hiroshi Suwaki, *Methamphetamine Abuse in Japan* in Methamphetamine Abuse: Epidemiologic Issues and Implications eds. Marissa A. Miller and Nicholas J. Kozel (National Institute on Drug Abuse research monograph 115, 1991), pp. 82-86.
[37] Deidre Ah Shene, "Crystal Meth" in *Developments* 23:2 (Spring 2003).
[38] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23.
[39] National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998).
[40] Jane Buxton, *Vancouver Drug Use Epidemiology,* pp. 43, 55.

logo, the colour or shape of the pill and the active ingredients that is found in those substances.[41]

Hence, methamphetamine's close association with cocaine and club drugs ('designer drugs') may lead to future substitution and complimentary effects in the methamphetamine market. This may provide additional routes for expansion.

Figure 2. Analysis of drugs seized at Raves by the RCMP: September 2001-June 2002



A Amphetamine
Caf Caffeine
COD Codeine
DM Dextromethorphan
E/PE Ephedrine/pseudoephedrine
K Ketamine
MA Methamphetamine
MDA 3,4-Dmethylenedioxyamphetamine
MDMA Ecstasy;3,4Ð methylenedioxyamphetamine

Source: *Vancouver Drug Use Epidemiology 2003*

[41] Peter Rakobowchuk, *RCMP, Health Canada warn content, dosage of illegal designer drugs unsafe* in Canadian Press Wednesday, November 17, 2004. Retrieved on November 17, 2004: http://www.canada.com.

IV – SUPPLY, PRODUCTION, TRAFFICKING, AND MARKET MANIPULATION DYNAMICS

- Unlike cocaine, methamphetamine is generally manufactured in the country of consumption, eliminating the need for elaborate trafficking and smuggling networks.
- Economic incentives, simplicity of synthesis, greater flexibility, and location of production drive methamphetamine supply.
- There is a secular upward trend in the supply of methamphetamine with production and consumption gradually expanding eastwards; little evidence of production in the Maritime Provinces, however.
- High profits and easy return on capital investment reduce what were once prohibitive financial barriers to entering the drug market.
- British Columbia and Alberta account for the majority of methamphetamine production in Canada. The majority of methamphetamine is manufactured by independent producers, with significantly increasing involvement of OCGs, particularly the 'Hell's Angels' OMG and Asian based OCGs.
- Smuggling and trafficking networks uncovered through joint US-Canadian law enforcement efforts may indicate high degree of inter-connectivity between methamphetamine markets and relevant OCGs in the US and Canada.
- Market monopolization would require control of precursor chemicals; at this stage this remains highly unlikely.

1) Supply Dynamics

The factors that drive supply of methamphetamine are similar to those of other ATS substances. These include economic incentives, simplicity of synthesis, greater flexibility, and location of production.

There are a number of economic incentives associated with the production of methamphetamine, but the main supply push factor is the perception of high profits. Profitability of methamphetamine will be discussed in a future section, however at this point it is important to point out that the profit margin at the manufacturing level is quite high as the precursors, chemicals, and equipment are easily accessible, widely available, and relatively cheap.

Furthermore, manufacturing of methamphetamine takes place in the country of consumption; thus the manufacturer does not need to incur costs of trafficking and smuggling the product across international boundaries. The low cost and high profit factor is a defining characteristic of the global expansion of ATS manufacturing and provides a good explanation of why illicit ATS manufacture and trafficking have grown so rapidly in the 1990s, and why methamphetamine production may present strong incentives for drug entrepreneurs and OCGs seeking higher profits from the drug trade.[42]

The simplicity of the synthesis process that renders methamphetamine (requiring only a few steps) also explains why a large number of drug entrepreneurs choose to enter the ATS market. Methamphetamine production does not require a great level of sophistication. [43] Most methamphetamine operations in Canada and the US are thus 'mom & pop' operations (independent producers) using relatively primitive 'kitchen laboratories'. Simplicity of method also invites experimentation and makes clandestine manufacturing easier.[44] Though OCGs may prefer more sophisticated facilities in order to realize economies of scale for their operations, the simplicity in production remains a constant.

[42] Expert Meeting on Amphetamine-type Stimulants Shanghai November 25-29, *Policy Options for Countermeasures*, p. 5; and Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, pp. 9, 47.
[43] United Nations Drug Control Programme, *Amphetamine-Type Stimulants: A Global Review*, p. 44
[44] Expert Meeting on Amphetamine-type Stimulants Shanghai November 25-29, *Policy Options for Countermeasures*, p. 5.

The level of simplicity in the synthesis process also yields a greater level of flexibility in the manufacture of methamphetamine in comparison to traditional plant-based narcotics. While cocaine and heroin are derived from one source, even small quantities of methamphetamine can be profitably manufactured by using a number of appropriate chemicals and techniques. [45] Moreover, flexibility also applies to the movement of operations. Because of the low level of sophistication associated with the manufacturing of methamphetamine the operations can be hastily dismantled or abandoned, only to be reassembled or initiated elsewhere. The section on Environmental Factors elaborates on this point further.

Finally, location of production is an additional factor that drives supply. Unlike plant-based drugs such as heroin and cocaine, methamphetamine manufacturing generally takes place in the country of consumption. Manufacturers tend to locate themselves close to the area of distribution, reducing transportation costs and increasing profits. This also allows manufacturers to respond to shifts in the market through rapid relocation to a new area. Freed of the need for trafficking and smuggling networks, methamphetamine operations can run more efficiently and with fewer personnel than comparable cocaine or heroin networks.[46]

All these factors ensure that the methamphetamine market remains competitive, profitable and dynamic, and acts to reduce the risks involved in methamphetamine production. Most of all, as we shall explore shortly, it also encourages the involvement of OCGs.

2) Production

The manufacturing of methamphetamine in Canada is dominated by independent producers who manufacture methamphetamine for personal and local consumption.[47] These producers generally operate small, unsophisticated 'kitchen laboratories' either from their residences or from a number of locations (refer to Environmental Factors for further information). These 'mom & pop' operations are the most common form of clandestine laboratories and account for the majority of lab seizures in Canada and the US.

In addition, there is significant evidence that OCGs are involved in the production (and distribution) of methamphetamine in Canada, even though it only accounts for a fraction of the methamphetamine supply.[48] The major OCG involvement is from organized motorcycle gangs (OMG) operating primarily in Western Canada. Other OCGs involved include Asian based OCGs (particularly Vietnamese drug rings) and various independent OCGs with no defining characteristic besides their involvement in the clandestine production and dissemination of methamphetamine.[49] Independent OCGs and the 'Hell's Angels' OMG are also involved in precursor chemical diversion networks.[50]

Moreover, surveys of laboratory seizures indicate that the majority of methamphetamine production takes place in Western Canada, with BC and Alberta accounting for the great majority of seizures of methamphetamine-producing laboratories over the last six years (117 of 148). [51] According to the principles of methamphetamine markets in other part of the globe, the closer one gets to a site of manufacturing the greater the availability of methamphetamine and thus, the lower the

[45] United Nations Drug Control Programme, *Amphetamine-Type Stimulants: A Global Review*, p. 44; and Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 47.
[46] United Nations Drug Control Programme, *Amphetamine-Type Stimulants: A Global Review*, p. 44.

[47] Interview with RCMP, Tuesday October 5, 2004.
[48] Ibid.
[49] Ibid.; and RCMP and DEA, *Chemical Diversion and Synthetic Drug Manufacture* (September 2001), p. 9.
[50] Ibid.
[51] Interview with RCMP, Tuesday October 5, 2004.

price.[52] Again, this suggests that production in Western Canada is greater than in other regions, as methamphetamine price index confirms that on average a gram of methamphetamine is cheaper in BC (mainly in the greater Vancouver area) than in other parts of Canada, particularly as one moves East. The price differences are more pronounced when one searches for quantities in excess of one ounce.[53]

3) Trafficking and Smuggling

In the summer and fall of 2004 a series of large smuggling and trafficking networks were uncovered and dismantled that linked OCG groups in Canada and the US. For the most part these networks were involved in the diversion of precursor chemicals (primarily pseudo-ephedrine) from Canada to the US, a practice that became more prevalent in the mid-1990s, prompting the introduction of Canada's Precursor Control Regulations in response. [54] Police also uncovered networks exporting finished methamphetamine, ephedrine and marijuana to the US, and importing cocaine to Canada. [55] Given that, until the mid 1990's, the methamphetamine market was entirely domestic in nature, the recent seizures may also indicate a higher degree of interconnectivity between the American and Canadian methamphetamine markets, and consequently between OCGs in the US and Canada. More research is required before this theory can be confirmed, however.

4) Supply Trends

The main indicators of supply trends are numbers of seizures of laboratories producing methamphetamine (and their location), and the amounts of methamphetamine seized by law enforcement agencies. They are the same indicators used by the United Nations Office on Drugs and Crime to produce their World Drug Report, who acknowledge that, in the absence of more accurate measures of supply, lab and methamphetamine seizures remain our best indicators.[56] While these are useful indicators of supply, they should not be taken as definitive and certain; some caveats are in order. There is no method to control for the effect that a shift in law enforcement focus toward curbing the supply of methamphetamine may have on the number of seizures registered. A certain increase in seizures may simply be the result of increased law enforcement attention to the problem, rather than increased production. Thus, unless one can ensure consistency in law enforcement efforts, seizures remain at best an imperfect proxy for levels of production.

Nonetheless, the numbers of laboratories seized producing methamphetamine show a significant increase in the last 2 years. In BC there were 10 lab seizures in both 2001 and 2002 (down from 13 in 1999 and 17 in 2000). However, in 2003 the number was back up to 16, and as of September 2004 there were 18 labs seized in BC. The same pattern is observed in Ontario where there were 2 lab seizures in the successive years of 2000, 2001 and 2002, but an increase to 8 lab seizures in 2003 and 3 as of September 2004 (*please refer to Figure 3*).[57]

Alberta does not follow the trend. It had 4 lab seizures in 2000 and 2 in 2001. In 2002 it led the country with the most lab seizures becoming the only province to ever surpass BC with 13 lab seizures to BC's 10 that year. This was followed by 8 lab seizures in 2003 and 6 as of September 2004. So while lab seizures in BC and Ontario decreased in 2002, Alberta saw the greatest number of lab seizures in its history in that same year. However, the subsequent years still saw higher numbers of lab seizures than the period before 2002 (*please refer to Figure 3*).[58]

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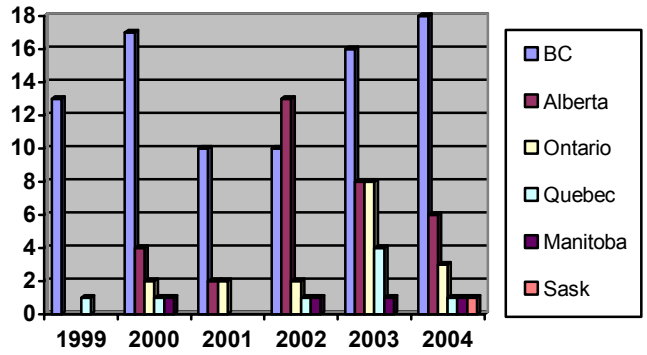
[52] Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 48.
[53] Interview with RCMP, Tuesday October 5, 2004.
[54] RCMP and DEA, *Chemical Diversion and Synthetic Drug Manufacture* (September 2001), pp. 2-6; and Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 89.
[55] Pablo Fernandez, *Vast drug network likely linked here* in Sun Media Thursday, October 21, 2004. Retrieved October 21, 2004: http://www.canoe.ca/NewsStand/EdmontonSun/News/2004/10/21/pf-678752.html.
[56] Office of Drugs and Crime, *World Drug Report 2004.*
[57] Numbers provided courtesy of the RCMP.
[58] Numbers provided courtesy of the RCMP.

Seizures in methamphetamine producing laboratories peaked with a high of 4 in Quebec in 2003, up from 1 in 2002. Prior to 2002 Quebec registered 1 lab seizure in both 1999 and 2000, and 0 in 2001. As of September 2004 Quebec has again only 1 lab seizure reported (*please refer to Figure 3*).[59]

In the rest of Canada, there were some remarkable and surprising discoveries of clandestine methamphetamine producing laboratories in new areas of the country. Manitoba reported 2 lab seizures in 2000. In the period from 2002 to September 2004 Manitoba reported 3 more (one in each year) lab seizures. Saskatchewan was added to the list of provinces reporting clandestine lab seizure this year with one as of September 2004 (*please refer to Figure 3*).[60]

Figure 3. Methamphetamine producing lab seizures by province: 1999-September 2004



Source: Royal Canadian Mounted Police 2004

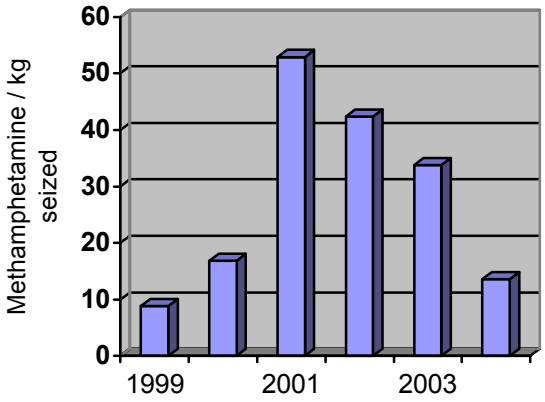
As of September 2004 a number of provinces were reporting the existence and seizure of clandestine laboratories producing methamphetamine, stretching from BC to Quebec. This confirms the repeated warning that there is a disconcerting trend witnessing the supply of methamphetamine gradually moving east. From Saskatchewan, the newest member in the group reporting lab seizures, the RCMP report evidence of 'crystal meth' in the rural areas and anticipate its appearance in Regina soon. In the rural areas of Manitoba the methamphetamine situation is similar, with methamphetamine use reported in those areas where clandestine laboratories are suspected to be located.[61]

In Eastern (Maritime) Canada there is no significant evidence that methamphetamine has made any inroads in to a drug market still heavily dominated by marijuana; the substance of greatest abuse is still alcohol. However, in 2002, there was a strong presence of rave/club drugs reported in St. John's, Newfoundland, significantly higher than in the three preceding years.[62] Recalling the ability of methamphetamine to compliment the success and thrive from the popularity of club drugs and 'designer drugs' it is plausible that the supply of methamphetamine has already reached the shores of Newfoundland. It is not impossible to envisage that Newfoundland (or another of the Maritime Provinces) may join the other six provinces already reporting seizures of laboratories producing methamphetamine.

The other indicator of supply trends is seizures of methamphetamine product. Canadian law enforcement agencies that contributed to the data collected by the RCMP reported the seizure of 52.9 kilograms (kg) of methamphetamine in 2001 with the additional seizure of 55,121 dosage units (usually but not exclusively to pill form). This was significant increase from the previous two years which combined reported seizures of 25.8 kg of methamphetamine and only 3,266 dosage units. Since 2001 the reported seizures have declined (42.4 kg in 2002 and 33.8 kg in 2003) and as of September 2004 only 13.6kg of seized methamphetamine product have been reported (*please refer to Figure 3)*.[63]

[59] Ibid.
[60] Ibid.
[61] 2003 Canadian Community Epidemiology Network Site Updates (October 2003 Annual Meeting), pp. 4-5.
[62] Ibid., p. 10.
[63] Numbers provided courtesy of the RCMP.

Figure 4. Methamphetamine seizures by kilogram as reported by Canadian Law Enforcement: 1999-September 2004

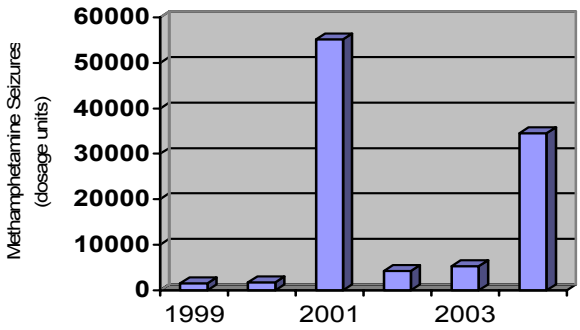


Source: Royal Canadian Mounted Police 2004

However, the picture is significantly different with regards to the seized dosage units. While only 9,497 dosage units were seized in 2002 and 2003 combined, as of September 2004 there have been 34,541 dosage units of methamphetamine reported seized.[64] This is a remarkable increase which may indicate a focus on supply of methamphetamine in dosage unit form. It is likely that this is a result from the surge in popularity in 'designer drugs' (club/rave drugs) and the benefit that methamphetamine has enjoyed from this popularity. This is consistent with the aforementioned trend in demand of certain societal subgroups and may reflect an attempt to compliment their preference in drug consumption method (ingestion in pill or capsule form).

[64] Ibid.

Figure 5. Methamphetamine seizures in dosage units as reported by Canadian Law Enforcement: 1999-September 2004



Source: Royal Canadian Mounted Police 2004

5) Profitability

The manufacturing of ATS substances like methamphetamine presents a highly profitable venture. As previously mentioned, the location of production plays a significant part in reducing the associated costs by removing the need to fund the smuggling and trafficking networks and expenses necessary to deliver the drug to the location of consumption. While there are still associated costs with the manufacturing and distribution of any illicit drugs (i.e. precursors, chemicals, materials, equipment, labour costs, rent, depreciation of equipment, bribery costs), they remain significantly lower for ATS substances then for traditional narcotics.

Previous economic studies on plant-based drugs have shown that between roughly half and two thirds of the final retail price represents the value added in the country of final consumption. In contrast, for ATS substances almost all of the total retail price amounts to value added in the country of final consumption. Hence, clandestine drug synthesis has enormous profit potential.[65]

In the case of methamphetamine, at the manufacturing level, the average profitability is estimated at 2,6%. At the distribution level the average profitability is estimated at

[65] United Nations Drug Control Programme, *Amphetamine-Type Stimulants: A Global Review*, p. 84.

485%. [66] Of course, the profits will vary depending on the availability of chemicals, the purity of the methamphetamine, the regions of the country where the drug is manufactured and sold, and the size and sophistication of the lab.[67]

On average, less then one kilogram of methamphetamine sold on the illicit market typically pays for the initial investment of setting-up a small-scale clandestine laboratory.[68] High profits and easy return on capital investment reduce what may often be prohibitive financial barriers to entering the drug market, and along with the other previously mentioned incentives, compensate for most perceived risks associated with methamphetamine production.

6) Potential for Market Monopolization

The greatest operating cost in a methamphetamine production operation remains ensuring a steady supply of chemicals and precursors. [69] Only by controlling the available supplies of these products would any one group be able to monopolize the market.

Monopoly remains highly unlikely at this point as precursors and chemicals remain available through diversion from licit sources. Furthermore, low level production, such as that practiced by most independent 'mom & pop' operations, does not require the large-scale diversions of precursors that some of the more elaborate and sophisticated operations operated by OCGs rely upon. Hence, independent manufacturers will still be attracted by the same incentives as OCGs to enter the methamphetamine market.

7) Methamphetamine Market and Organized Crime

The infiltration of Mexican criminal organizations and drug trafficking networks into the US methamphetamine market provides some insights into the Canadian situation. The take-over of manufacturing and distribution in major methamphetamine markets in the US by Mexican criminal organizations was facilitated by two factors.

First, their familiarity with the necessities of the manufacture and trade of other illicit drugs, and extensive involvement in highly organized and well established cartels provided Mexican criminal groups with readily disposable capital, sophisticated and elaborate trafficking networks, diverse and strategic affiliations, and proficient criminal knowledge. [70] This facilitated the appropriation of the methamphetamine trade into their operations.

Second, large Hispanic communities in the south western regions of the US and in the majority of the key metropolitan areas provided the necessary beachhead from which to begin clandestine operations and access consumption markets.

Despite concern over the presence of individuals with links to Mexican criminal organizations in Western Canada, there is no evidence that Hispanic crime groups have infiltrated the Canadian methamphetamine market.[71] Neither is the prospect of their penetration likely at this point due to the complete absence of the second factor.

However, there does exist the possibility that a similar phenomenon may occur in the Canadian methamphetamine market involving those OCGs involved in marijuana grow operations. These OCGs possess the level of organization, sophistication, capital, established networks and contacts, and criminal knowledge necessary to

[66] Ibid., pp. 84-85; and Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 50.
[67] Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 13.
[68] Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 50.
[69] Ibid.

[70] Susan Pennell et al., *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. 3.
[71] Interview with RCMP, Tuesday October 5, 2004.

successfully integrate the methamphetamine trade into their operations.

Evidence suggests that this phenomenon is already underway. Already some law enforcement members in BC have reported observing a growing trend which they have termed 'M&Ms'. This trend involves the simultaneous operation of a marijuana grow on one floor of a house, and the manufacturing of methamphetamine on another floor by a single OCG. BC law enforcement officials claim most of the grow operations are run by either the 'Hells Angels' or Vietnamese criminal organizations; these groups in turn trade the profit from such operations for harder drugs or guns.[72]

The emergence of large criminal organizations dominating ATS markets around the world is not a surprising phenomenon. They are driven by the same incentives that draw out individual entrepreneurs. Unlike individual producers however, larger groups are more flexible and are able to identify and exploit any lucrative business opportunities, as well as any flaws in law enforcement efforts. Their ability to effectively organize and structure manufacturing and distribution processes allows OCGs to produce more and better quality drugs at lower costs. Their willingness to cooperate and collaborate with other OCGs increases the scope and range of their operations. [73] OCG involvement in the methamphetamine market makes its expansion more likely and its impact on the Canadian public more severe.

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[72] Janis Cleugh, *PoCo wants another look at grow op regulations* in Tri-City News Saturday, November 20, 2004. Retrieved November 22, 2004: http://www.tricitynews.com/portals-code/list.cgi?paper=74&cat=23&id=332654&more=.

[73] Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 9.

V – SOCIETAL FACTORS

- There are a number of identifiable and vulnerable societal subgroups: street youth and the homeless; sex trade workers; teenage girls (for weight loss); ambitious students and professionals; 'ravers' and the youth party scene; certain segments of the gay community; and multiple drug users (particularly cocaine addicts).
- Societal subgroups display a number of patterns of methamphetamine use including instrumental, chronic, recreational, or multiple drug use.
- Instrumental use involves exploiting the stimulant or anorectic properties of the drug to achieve desired goals, and is globally the most common pattern of methamphetamine use.
- Instrumental use may lead to chronic use, which involves the habitual heavy use of methamphetamine as is often the case with socially marginalized populations.
- Multiple drug users are the group most frequently connected with chronic use, and such patterns of use often lead to higher risk of contracting HIV/AIDS and hepatitis B and C.
- Sub-cultural/ recreational use involves the exploiting of the drug's stimulant properties which provide euphoria and boundless energy, the capacity to increase sociability, allowing the user to more easily bond in their social network.

1) Who Uses Methamphetamine?

Historically, in the North American context, the portrait of a methamphetamine was usually white male, blue-collar workers who used it as a stimulant.[74] However, the portrait has evolved over time to include a number of groups with differing characteristics, to the point where to paint a single portrait is now impossible. Current trends indicate a broadening of usage most likely due to the wide appeal of the drug to groups that are drawn to it under different circumstances.

As aforementioned, there are a number of identifiable vulnerable societal subgroups. These subgroups include, but are not limited to: street youth and the homeless; sex trade workers; teenage girls (for weight loss); ambitious students and professionals; 'ravers' and the youth party scene; certain segments of the gay community; and multiple drug users (particularly cocaine addicts).

Among these subgroups it is possible to draw on particular patterns of methamphetamine use, which are essential in understanding why certain societal groups are labelled 'at risk'. These patterns include instrumental use, chronic use, and sub-cultural/recreational use. Such patterns, however, are not necessarily fixed or stable. Individuals may begin methamphetamine use for instrumental or recreational reasons and subsequently develop chronic symptoms.[75]

2) Instrumental Use

Historically and globally, this is the most common pattern of methamphetamine use. This involves exploiting the stimulant or anorectic properties of the drug to achieve desired goals. Methamphetamine, in it various forms and under its many names, may be consumed by long distance drivers, students, professional, and night workers to

[74] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23; and National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998).

[75] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use*, p. 7.

improve concentration and ward off fatigue and subsequently increase productivity.[76]

Methamphetamine's anorectic properties (appetite suppressing) may be exploited by young women with perceptual weight problems as a form of weight control.[77] For the homeless and runaway street youth methamphetamine resolves two of their essential problems; lack of food and lack of shelter. Its ability to suppress appetite and provide seemingly endless energy, and alertness make it particularly attractive to these marginalized societal groups, and may explain why they currently account for such high prevalence rates. Sex trade workers also find methamphetamine useful in suppressing the need for sleep.[78]

This pattern of use is often overlooked due to the stronger association of illicit drugs with particular subgroups or addicts. Moreover, some groups who engage in instrumental use believe the effects of the drug to be benign and thus this pattern of use often leads to a pattern of chronic use once the instrumental function is removed.[79]

3) Chronic Use

Groups that engage heavily in this pattern of use are often socially marginalized and, in many respects comparable to populations of chronic opiate users or crack cocaine smokers.[80] This pattern of use is usually associated with either injection or smoking of methamphetamine and is particularly common among 'crystal meth' users. Multiple drug users are the group most frequently connected with chronic use, substituting methamphetamine or 'crystal meth' for cocaine or crack (or vice versa) when there is a drop in availability of one.[81]

Sex trade workers, like many addicts, are drawn to methamphetamine because of its comparative low market cost. With a 'high' that sometimes lasts beyond twelve hours, it is reasonably possible to sustain a methamphetamine addiction with simply 10 dollars a day if the user is near the site of production.[82] Moreover, groups engaged in a pattern of chronic use where injection is a common form of consumption, are at a higher risk of contracting HIV, hepatitis B and C infections from the sharing of needles.[83]

4) Sub-cultural/ Recreational Use

Though similar to instrumental use, there are some significant differences. Consumption under this pattern of use often takes place in social/recreational environmental settings. These may include music, dance or private parties, 'raves', or discotheques/clubs. In these settings, the drug's stimulant properties which provide euphoria and boundless energy, and its capacity to increase sociability are exploited to allow the user to remain active for longer period of time as they bond with their social network by closely identifying with the sub-cultural group identity exemplified through the music, fashion and shared value systems.[84]

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[76] Ibid.; and British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23.
[77] National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998).
[78] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23.
[79] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use*, p. 8.
[80] Ibid.
[81] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23; and National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998).
[82] Office of Drugs and Crime, *Global Illicit Drug Trends 2003*, p. 48.
[83] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use*, p. 8; National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998).
[84] Division of Mental Health and Prevention of Substance Abuse, *Epidemiology and Social Context of Amphetamine-type Stimulant Use*, p. 9; and British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23.

Methamphetamine has other characteristics that have earned it a title as an aphrodisiac. It has the reputation for enhancing sexuality and sexual performance by increasing stamina and libido, and decreasing inhibitions. Hence, the drug is often associated with particular environments where sexual contact among gay men is promoted, such as sex clubs and other intimate venues.[85]

'Designer drugs' and club drugs such as Ecstasy are closely associated with such patterns of recreational use. Methamphetamine's manifestation in all three patterns is evidence of its versatility in providing for the necessities of various societal groups under differing circumstances; it is also and indication of methamphetamine's wide popularity and growing demand.

[85] British Columbia Ministry of Health Services, *Crystal Meth and Other Methamphetamines: An Integrated BC Strategy*, p. 23; and National Institute on Drug Abuse, *Community Drug Bulletin: Methamphetamine* (US Department of Health and Human Services, 1998).

VI – REGULATORY STRUCTURES AND PRECURSOR CONTROL

- Canada's drug strategy is coordinated by Health Canada in cooperation with numerous government agencies.
- Precursor diversion from the licit to the illicit market occurs in a number of fashions both in small and large scale, and is essential for methamphetamine production.
- Precursor Control Regulations (PCR) were enacted in 2002, and require close cooperation between private sector and law enforcement in order to be effective. It remains too early to draw any conclusions as to the effectiveness of the PCRs.

1) Canada's Drug Strategy

The coordinating authority for Canada's Drug Strategy is Health Canada, which is responsible for all facets of Canada's health policy. There are a number of federal departments and agencies that collaborate with Health Canada in implementing the country's Drug Strategy. These include the Department of the Solicitor General, Foreign Affairs Canada, International Trade Canada, Department of Justice, Canada Customs and Revenue Agency, Transport Canada, Privy Council Office, Royal Canadian Mounted Police, and Correctional Service of Canada.[86]

Substance abuse in Canada is addressed primarily as a health issue. Thus, the goals set out by the Canadian Drug Strategy reflect the focus on treatment and prevention. They are as follows: reduce the demand for drugs; reduce drug-related mortality and morbidity; improve effectiveness of and accessibility to substance abuse information and interventions; restrict supply of illicit drugs and reduce profitability of illicit drug trafficking; and reduce costs of substance abuse to Canadian society.[87]

Supply reduction strategies focus primarily on law enforcement efforts in combating organized crime. OCGs control most of the production, smuggling, and distribution of illegal drugs in Canada, and they exploit the high volume of trade and financial transactions between Canada and the United States to supply markets and launder drug proceeds.[88]

With the majority of prevention and treatment efforts structured to meet the needs of traditional substance abuse (alcohol, tobacco, cannabis, and opiates), and law enforcement focus on OCG activities (which are still limited in the Canadian methamphetamine market), the issue of methamphetamine production and consumption has been given limited attention in Ottawa.

2) Precursor Diversion

The two primary precursor chemicals essential to methamphetamine production are ephedrine and pseudo-ephedrine (PSE). These chemicals are licit substances found in a variety of pharmaceuticals, fragrances, flavoring agents, petroleum products, paints and dietary (weight loss) products.[89] They are widely available through pharmaceutical distributors, dietary supplement warehouses, in over the counter cold medicines and decongestants, and available to order over the internet.

These essential precursor chemicals can be diverted into the illicit drug market in a

[86] Health Canada, Canada's Drug Strategy Website: http://www.hc-sc.gc.ca/hecs-sesc/cds/partners/federal.htm.
[87] Health Canada, *Canada's Drug Strategy* (Ottawa: Minister of Public Works and Government Services Canada, 1998), p. 4. Available online at: http://www.hc-sc.gc.ca/hecs-sesc/cds/pdf/englishstrategy.pdf.
[88] Ibid., pp. 10-14.
[89] RCMP Federal and International Operations Drug Branch, *Coming into Force of the Precursor Control Regulations*, retrieved on October 28, 2004: http://www.rcmp.ca/fio/drugbrach_precursor_e.htm.

number of ways. Diversion methods include: stealing the chemicals from known accessible stocks; smuggling the chemicals across international borders; labeling chemicals fraudulently; bribing or coercing government officials, chemical manufacturers and distributors, or deliverers; creating complex transaction chains that make it difficult to track the chemicals; buying the chemicals from legitimate chemical suppliers who, for various reasons, sell indiscriminately; setting up front companies to disguise illicit chemical purchases as legitimate ones; buying chemicals through undocumented cash transactions; converting similar, unregulated chemicals into the desired, regulated chemicals; storing chemicals in warehouses long enough for police and regulators to give up trying to track them; and trading in amounts just below the thresholds that trigger reporting and recordkeeping requirements (a practice known to regulators as "smurfing").[90]

Chemical manufacturers, wholesale and retail distributors, freight handlers, agents, and brokers are all potential sources from which chemicals can be diverted. They can be diverted from factories, import and export points, transportation systems, and disposal and recycling plants. Lab cooks can derive some of the chemicals needed to produce methamphetamine from materials available for purchase without regulation at retail outlets, including cold and allergy medicines.[91]

Moreover, OCGs create elaborate networks through which precursors are diverted from Canada to the US. In the fall of 2004, two investigations involving a myriad if agencies working on both sides of the border (including the RCMP, Internal Revenue Service, DEA, FBI and local inter-agency methamphetamine task forces) uncovered large networks of precursor diversion.

'Operation Diversion' dismantled an ephedrine diversion network that began in Thunder Bay Ontario, funneled ephedrine to Winnipeg, Manitoba and Hanna, Alberta where it was repackaged and then shipped to criminal groups in Vancouver, Buffalo, New York, and Sacramento. The highly sophisticated set-up arranged for ephedrine to be imported from Germany and India to companies in Canada selling dietary and bodybuilding supplements. 'Operation Brain Drain' dismantled another large ephedrine trafficking network that operated between Western Canada and California. Some of those arrested have links to the 'Hell's Angels' and others to Middle Eastern crime groups.[92]

3) Precursor Control

Before the introduction of regulatory controls in Canada, drug traffickers were able to legitimately purchase chemical products from licensed distributors. Drug trafficking groups based out of the US exploited the absence of such regulations, crossing the border to purchase chemical precursors from Canadian suppliers. In addition to the licensed distributors of chemicals and precursors, drug traffickers looked to obtain the requisite chemicals from aroma therapy companies, pharmacies, grocery, convenience and home improvement stores and other such retailers where the chemicals are sold for legitimate use.[93]

Precursor Control Regulations (PCR) were enacted in 2002, and phased in beginning in January 2003. The first phase required a license for import, export, packaging and production of Class A precursors (ephedrine and PSE are Class A precursors, as are all

[90] Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, pp. 10-11; and RCMP and DEA, *Chemical Diversion and Synthetic Drug Manufacture*, pp. 2-8.
[91] Ibid.

[92] Cary Castagna, *City hub for drug* in Winnipeg Sun Friday, September 17, 2004. Retrieved October 1, 2004: http://www.canoe.ca/NewsStand?WinnipegSun/Nes/2004/09/17/pf-632279.html; and Christina Jewett, *Sting unravels meth network* in the Sacramento Bee September 24, 2004. Retrieved October 1, 2004: http://www.sacbee.com/content/news/crime/v-print/story/10854454p-11772169c.html; and Rick Conkin, *Drug bust surprises Hanna residents* in Hanna Herald September 28, 2004. Retrieved October 1, 2004: http://www.hannaherald.com/story.php?id=118027.
[93] RCMP and DEA, *Chemical Diversion and Synthetic Drug Manufacture*, p. i.

precursors used to make methamphetamine).[94] The PCRs are intended to satisfy Canada's international treaty commitments under the 1988 United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. They are also designed to satisfy requests by the US to curb diversion of PSE across the border, and to meet domestic regulatory requirements as well.[95]

The second stage of PCRs was introduced in July 2003, requiring license for distribution of Class A precursors. The final phase came online in January 2004, which introduced all the regulations dealing with Class B precursors (mostly solvents and reagents used in clandestine manufacturing processes).[96]

The PCRs are comprehensive and elaborate. Because most of the precursors and chemicals included in the regulations have legitimate use in common products (such as pharmaceuticals, fragrances, flavoring agents, petroleum products and paints), the PCRs have provisions for exemptions. However, the regulations cover the exemptions well, applying conditional status to some, and making other exemptions dependant on the ability of the applicant to demonstrate that the precursor or chemical cannot be readily extracted, and that the mixture or preparation itself cannot be used in the production of controlled substances.[97]

Furthermore, licensed dealers of Class A precursors are to file an annual report and make their transaction records available for two years upon written request for inspection. The reporting of thefts and losses to local law enforcement within 24 hours is also mandatory.[98] However, there is no mention of what takes place should a theft or loss go unreported.

More importantly, the PCRs call for mandatory recording of suspicious transactions, but provide no mandatory reporting scheme. The onus of responsibility is placed on the licensed distributors who are expected to volunteer information of suspicious transactions.[99] These voluntary provisions allow room for suspicious activity to be overlooked or go unmonitored (particularly if the licensed distributor is in some manner involved with the diversion of precursors and chemicals).

Moreover, the framework set out by the PCR requires a great level of cooperation between the private sector, the federal regulatory bodies, and law enforcement agencies. While not infeasible, this framework is going to require a consistent and concerted effort from all parties involved to ensure effectiveness and success of the PCR framework. In addition, there are no legal controls provided to law enforcement agencies enabling them to effectively investigate chemical diversion and clandestine laboratory activities in Canada.[100] This is serious obstacle to the supply reduction activities of Canada's law enforcement agencies. Ultimately, it remains too early to draw any conclusions as to the effectiveness of the PCRs.

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[94] RCMP Federal and International Operations Drug Branch, *Coming into Force of the Precursor Control Regulations*, retrieved on October 28, 2004: http://www.rcmp.ca/fio/drugbrach_precursor_e.htm.

[95] Ibid; and RCMP and DEA, *Chemical Diversion and Synthetic Drug Manufacture*, p. i.

[96] RCMP Federal and International Operations Drug Branch, *Coming into Force of the Precursor Control Regulations*, retrieved on October 28, 2004: http://www.rcmp.ca/fio/drugbrach_precursor_e.htm.

[97] Ibid.

[98] Ibid.

[99] RCMP Federal and International Operations Drug Branch, *Coming into Force of the Precursor Control Regulations*, retrieved on October 28, 2004: http://www.rcmp.ca/fio/drugbrach_precursor_e.htm.

[100] RCMP and DEA, *Chemical Diversion and Synthetic Drug Manufacture*, p. i.

VII – ENVIRONMENTAL FACTORS

- Methamphetamine production is not limited by any particular environmental condition, thus making its production flexible and easily transportable.
- Clandestine production of methamphetamine represents a danger to public safety and health, as well as to the environment.

1) Environmental Requirements

Methamphetamine is rendered through a process of synthesis. It is produced in a laboratory setting using a number of chemicals. However, because of the ease with which it can be synthesized through various methods, and the variety of chemical combinations that may be used, methamphetamine production is not limited by any particular environmental condition.

Unlike traditional plant-based drugs like cocaine and heroin, methamphetamine production takes place near to its intended market of distribution. Hence, rudimentary make-shift laboratories, availability of the necessary chemicals and equipment, and information as to the process of synthesis is all that is necessary to make production of methamphetamine possible. There is also no need for specialized laboratory equipment that is not readily available or improvised through a quick trip to one's local hardware supplier.[101]

Versatility is the term that best defines methamphetamine production. Clandestine laboratories have been found in sites as diverse as private residences, rental homes, motel rooms, dorm rooms, garages, campgrounds, moving vans, trunks of cars, storage facilities, horse trailers, houseboats, commercial establishments, and open fields.[102] These settings are where the more common 'mom & pop' operations of independent producers are found. The larger 'super labs' used by Mexican OCGs can also be found in abandoned warehouses and barn houses, as well as private residences and rental homes.[103]

Moreover, there are over 32 chemicals that can be used to make methamphetamine, of which one third is extremely hazardous; almost all are easily obtainable. A short list of them would include: ephedrine, pseudo-ephedrine, phenylpropanolamine, phenyl acetic acid, phenyl-2-propane, benzyl chloride, acetaldehyde, methylamine, mercuric chloride, lithium aluminum hydride, lead acetate, red phosphorous, iodine, hydrochloric gas/acid, hydriodic acid, anhydrous ammonia, acetic acid, hydrogen peroxide, sulphuric acid, Freon, ethyl ether, acetone, benzene, isopropanol, methanol, hexane, and chloroform.[104]

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[101] Drug Policy Information Clearinghouse, *Fact Sheet: Methamphetamine*, p. 4; and Susan Pennell et al., *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. 34; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs* (US Department of Justice, Office of Community Oriented Police Services, 2002), p. 6.

[102] Gary D. Irvine and Ling Chin, *The Environmental Impact and Adverse Health effects of Clandestine Manufacture of Methamphetamine* in Methamphetamine Abuse: Epidemiologic Issues and Implications eds. Marissa A. Miller and Nicholas J. Kozel (National Institute on Drug Abuse research monograph 115, 1991), p. 33; and Susan Pennell et al., *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. 4; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 5.

[103] Susan Pennell et al., *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. 4; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 5.

[104] Gary D. Irvine and Ling Chin, *The Environmental Impact and Adverse Health effects of Clandestine Manufacture of Methamphetamine*, p. 43; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 10.

There are also three main methods of synthesis, each with its own requisite chemicals and procedures, and each resulting in a different form of methamphetamine with differing levels of purity. These methods are; the phenyl-2-propane method (or P2P), the red-phosphorous method (or red P), and the lithium/sodium reduction method (or Nazi dope).[105]

2) Environmental Impacts

For each pound of manufactured methamphetamine synthesized through one of the above methods, five to seven pounds of toxic waste is produced, as well as the release of poisonous toxic gas.[106] Because of the mobile nature of these facilities, the toxic waste and contaminated equipment is regularly dumped down household drains, sewers, streams and rivers, buried in fields and yards, or simply discarded on rural roads.[107] Toxic poisonous gas is vented into residential neighbourhoods, or sometimes sealed within the laboratory settings to prevent law enforcement agents from being alerted. Lack of proper ventilation allows the chemicals to permeate into walls, drapes, carpets, and furniture, and may lead operators to suffer fatal consequences from overexposure.[108]

The suboptimal conditions within which most methamphetamine producers (often inexperienced in proper laboratory procedures and accurate chemical measurement) operate create a highly dangerous environment where the potential for chemical spills, fire, explosion, and environmental contamination could have significant impact on public health. These sites present a serious danger to community and local residents, and first response units who are often the first people at the scene. Cleanup of clandestine labs and their resulting contamination of surface water, ground water, wells, and top soil are highly dangerous and expensive.[109]

More research is needed in order to better understand the long-term environmental effects of the toxic dumping and contamination that is the result of methamphetamine production. Furthermore, a better understanding such effects could yield valuable measurement and monitoring tools with which to identify areas where methamphetamine is being, or has been produced. A set of environmental indicators would go a long way in assisting law enforcement curb the creation and expansion of clandestine laboratories into their jurisdictions.

[105] Gary D. Irvine and Ling Chin, *The Environmental Impact and Adverse Health effects of Clandestine Manufacture of Methamphetamine*, p. 34-36; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 12; and *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, p. 3-4.

[106] Drug Policy Information Clearinghouse, *Fact Sheet: Methamphetamine*, p. 4; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 4.

[107] Ibid.; and Gary D. Irvine and Ling Chin, *The Environmental Impact and Adverse Health effects of Clandestine Manufacture of Methamphetamine*, p. 37.

[108] Gary D. Irvine and Ling Chin, *The Environmental Impact and Adverse Health effects of Clandestine Manufacture of Methamphetamine*, p. 38.

[109] Ibid,; and Drug Policy Information Clearinghouse, *Fact Sheet: Methamphetamine*, p. 4; and Michael S. Scott, *Problem-Oriented Guides for Police Series Guide No. 16: Clandestine Drug Labs*, p. 4.

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