12/13/2004

# Developing a Framework for Estimating Government Drug Policy Expenditures

Report for the European Monitoring Center on Drugs and Drug Abuse

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The authors gratefully acknowledge advice and assistance from Danilo Ballotta

**April, 2004**

**Version arrived at EMCDDA on 11 May 2004**

## Executive Summary

As European policy toward illicit drugs has become more explicit and data-driven, there has been some interest in the possibility of making cross national comparisons of drug control expenditures in order to inform national decisions. This project builds on an earlier EMCDDA study to assess the value and feasibility of such comparisons. It is based on a fresh conceptual analysis, the development of new estimates of total drug budgets for the Netherlands and Sweden, review of other budget studies and interviews with officials.

The study concludes that the precision of current expenditure estimates is very low. Some of the major components in each country can only be approximated and those approximations may change substantially as new data collection systems develop or research findings emerge. The result is that comparisons of expenditure estimates across countries lack credibility. However, it is possible to describe a process by which guidelines might be developed to increase the strength of comparisons.

To support drug policy decision-making, budget expenditures must be related to goals. The study presents a means of mapping programs to goals and provides an analytic base for the classification of expenditures into four categories: Prevention, Treatment, Harm Reduction and Enforcement. The basis for the classification should not be the agency making the expenditure or the aim of the program but its effect. For example the drug testing and supervision of probationers and parolees should be classified as treatment rather than enforcement since, though it does not involve provision of services, it aims to reduce use by those who are currently frequent users.

A critical conceptual issue for the exercise is to decide whether the budget estimates should include only those expenditures that aim explicitly to reduce drug use itself (described in some nations as “proactive”) or also those that aim at reducing the adverse consequences of drug use. This is particularly important in analysis of enforcement; should one include only criminal justice activities that target violations of drug laws or also include those that lead to the arrest and punishment of drug abusers for other related crimes? The latter may be comparably effective in reducing drug use, even if not targeted at that goal.

A major empirical problem is that expenditures on these different programs are rarely identified as such in government budgets but are imbedded in broader budget categories. Thus it is almost "hand work" to develop estimates in each country. Moreover, budget methods differ so greatly that it is difficult, if not impossible, to develop a single set of estimates that allow for systematic comparison in all the dimensions of interest to policy makers; over time, across countries and among sectors.

The approach here aims to maximize the cross-country comparability and may sacrifice some precision at the national level. The study illustrates the possibilities of making cross-national comparisons by developing new budget estimates for the Netherlands and Sweden, two nations with relatively well developed drug policy research communities.

Though there are many drug control expenditure items, a very small number account for most of the total; policing, incarceration and formal treatment dominate the total. Some are measured easily and consistently; others are not.

Incarceration costs, a major component, are measured relatively well and consistently across countries. It is known how many inmates are serving time for drug offenses, so that a reasonable approximation to expenditures is the total prison budget multiplied by this number divided by the total number of inmates. In some countries there may also be separate budgets for in-prison drug treatment.

The same cannot be said for the two other major components, policing and treatment. At present nations differ substantially in the sophistication of the data systems that can be used to generate expenditure estimates for policing and treatment. For example, in Sweden the police collect daily activity reports; this permits estimation of the share of time and hence of budget that is allocated to drug enforcement. Thus there is a systematic and transparent basis for relatively precise estimates of policing costs. On the other hand Sweden has no system wide data on the share of persons in treatment for substance abuse who have problems with illicit drugs, rather than alcohol, nor of the relative costs of treatment for the different patient groups (alcohol only, drugs only, alcohol and drugs). Expert judgment was used to estimate the composition of the population; costs per treatment episode were assumed equal across these groups. Expert judgment is frail and the assumption is convenient rather than convincing. Thus the

treatment expenditure estimate is a broad range, which could be narrowed (and/or shifted) by the development of explicit estimates of the composition of the treatment population and of the relative costs of treatment.

The pattern of data availability is different for the Netherlands. There was an estimate (one time) of the share of substance abuse treatment admissions that involved illicit drugs and another study showing the ratio of related health care costs for that population to costs for drug treatment. The principal source of uncertainty in the treatment expenditure estimates arose from the lack of data on the share of drug abusers among those with "mental disorders" who were receiving benefits under the Social Labor Participation Act. Policing costs have to be developed through successive approximations, since drug specific data are not collected. The enforcement expenditure estimates for the Netherlands have a broad range.

The estimates for the two nations are given in Table S1; except for prevention, all items are presented as ranges. The Netherlands spends substantially more per capita than does Sweden. Though they have very different and well articulated approaches to drug policy, in both the Netherlands and Sweden, enforcement related expenditures dominate the total. In both nations prevention expenditures are also quite modest. Harm reduction expenditures are substantial in the Netherlands and not a category recognized in the Swedish budget exercise. The higher fraction of Swedish expenditures going to treatment may reflect the inclusion of some programs that are classified as Harm Reduction in the Netherlands.

**Table S1: Drug Policy Budgets for the Netherlands and Sweden (Euros per capita)**

| Category | *Netherlands (% of baseline)* | *Sweden (% of baseline)* |
|---|---|---|
| Prevention | 3 (2) | 1 (1) |
| Treatment | 13-23 (13) | 15-25 (19) |
| Harm Reduction | 9-20 (9) | 3-4 (3) |
| Enforcement | 72-158 (76) | 30-120 (76) |
| **Total** | 96-203 | 50-150 |

Note: % of total refers to the total of the minimum estimates,

Review of drug budget estimates developed in the U.K. and, less detailed budgets from other member nations, suggest the same pattern of variation in the foundation of estimations and in the distribution across policy domains. Each opportunistically reflects the findings of studies specific to the country and of its budgetary data systems. For example, the U.K. estimates rely heavily on a recent longitudinal study of drug treatment clients for data about costs in different public programs. There were also important differences in categorization; for example, the U.K. estimate does not include harm reduction as a program category. Prevention expenditures are largely hidden, buried in school budgets.

Interviews with officials in seven EU member nations suggest a moderate level of interest in cross-national comparisons. Almost none report having ever looked at data from other countries and that may reflect the weaknesses and scarcity of existing estimates. Consequently it may be increased by the development of a credible methodology that makes such comparisons transparent. Though no such methodology is presently available, it is possible to outline its development.

The primary task is to develop international budgeting guidelines that can be implemented in a variety of national systems and that take account of emerging research findings about populations and costs. This has both conceptual and empirical components. For example, there needs to be agreement on the criteria for constitutes harm reduction as opposed to treatment services and on whether "drug-related" enforcement should be included along with targeted drug enforcement. In terms of data, all nations lack some of the major data needed for estimation of relevant fractions, as illustrated in the Dutch and Swedish estimates. Given the high cost of developing estimates in each country, guidelines will need to be worked out that allow for the importation of estimates from neighboring or similar countries that can be adjusted with expert opinion. This can be accomplished with a small, very targeted and opportunistic research program. The EMCDDA could contribute by

*1. Providing a set of categories for program types and identify the kinds of agencies that are likely to be associated with each category.*

*2. Developing a set of guidelines for estimating the principal elements within each category.*

*3. Assessing alternative methods for comparing expenditures across nations.*

## Introduction

Drug policy presents analytic and budgeting complications for decision makers because it includes many different government sectors (e.g., education, health, policing and border control) and several different outcomes (e.g. initiation rates, prevalence of dependence, AIDS risk behaviors, crime). The first creates problems for estimating expenditures aimed at reducing drug problems, the second for summarily characterizing how the problem is changing.

Ultimately policy makers wish to know how effective their expenditures are and whether they have chosen the optimal mix of program efforts. The first steps toward this are to (1) estimate the actual expenditures, which are scattered through the accounts of numerous agencies and, in federal systems, at different levels of government, and; (2) to categorize the expenditures in terms of an analytic framework that will match expenditures and their ultimate goals.

This project builds on an earlier EMCDDA study[1], in which Kopp and Fenoglio examined what was known about expenditures on drug problems in various EU nations between 1990 and 2000. The study found that expenditures on drug control per "problematic drug user" varied substantially across nations. For example, Germany was estimated to spend almost 15,000 Euros annually compared to only 4,000 for the U.K. Enforcement-related expenditures were substantially higher than health-related expenditures. However, the study emphasized the limited range and quality of data and cautioned about placing too much weight on these estimates.

This Report presents an early study primarily aimed at assessing how expenditure estimates can be used to compare drug policies across countries. It has three sections. The first presents the conceptual issues, focusing on the ways in which expenditure estimates might be used in policy discussions. Section II describes and analyses existing estimates from the U.K., Austria, Ireland and the U.S. Section III then presents results from application of the framework to new estimates of expenditures in the Netherlands and Sweden (detailed in two Appendices) and analyzes a recent study of expenditures in

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1 *Public Spending on Drugs in the European Union in the 1990s* http://www.emcdda.eu.int/multimedia/project_reports/policy_law/public_expenditure.pdf

the United Kingdom. Section IV draws conclusions and makes suggestions for next steps.

Interviews for this study were conducted (mostly by phone) with officials in seven member nations (Austria, Greece, Ireland, Netherlands, Portugal, Sweden and the United Kingdom); these interviews[2] aimed to learn how budget figures had been used in policy debates and whether there was an interest in being able to make cross-country budget comparisons. New estimates were prepared for expenditures in the Netherlands and Sweden. The reports filed through REITOX on demand reduction expenditures served as important source documents for analysis as well.

## I. Conceptual Issues

### The purpose of measurement

What is required of an estimate depends on the purposes to which it might be put. Table 1 is a preliminary effort to identify the various uses that could be made of drug expenditure measures and the requirements that each generates for the estimates.

**Table 1: Potential Uses of Expenditure Estimates**

| Comparison | Motivating Question | Requirements | Comments |
|---|---|---|---|
| Across sectors | Is too little going to a specific activity? | Cost effectiveness measures | New research on links to outcomes needed |
| Across time | How is level and composition of expenditures changing? | Stable budget data systems and research base | Permits nationally idiosyncratic systems |
| Across countries | Is the nation doing enough as compared to others? | Consistent classification across nations | May be expensive and lose some valuable detail at the national level |

The first of the three comparisons bears on the micro-decision making goal. It informs the selection of particular programs. However, the state of knowledge about effectiveness, let alone cost-effectiveness, is so slight that this is many years away, particularly for enforcement programs.[3] The second is the macro-national level goal that allows for non-expert scrutiny of how drug policy is changing, since an important part of

[2] Some interviews were conducted by Danilo Ballotta of the EMCDDA..

the public debate is often the composition of expenditures between demand reduction and supply reduction programs. The third serves EU purposes; large discrepancies among countries in their patterns of expenditures are not necessarily indicative of any nation failing but it does motivate an examination of whether the differences have a plausible explanation or whether one country can be informed by the experiences of others.

These purposes are not mutually exclusive; indeed the ideal system could be used for all of three purposes. However the Table identifies potential trade-offs. For example, each nation has some idiosyncracies in its public accounting systems. One nation may be able to separate out the components of spending in the health system in useful ways where another has a criminal justice system with great accounting transparency. Imposing cross-national uniformity may not only be expensive (requiring complex manipulation of existing data systems) but also deprives each nation of the opportunity to exploit its own data systems and limits the accuracy (or raises the cost) of comparisons over time.

Timeliness is another relevant dimension but, at least preliminarily, does not seem to affect the choice. Drug policy decisions are generally made on a multi-year basis, reflecting the perception that programs require a number of years for development and evaluation. There is as yet no call for the ability to inform policies on an annual basis; this allows considerable lags in the production of figures. However, in the early stages of a drug epidemic, when the drug problem is undergoing rapid transformation, there might be need for more frequent budget estimates.

*Analytic Framework*

The appropriate categorization of expenditures should come out of an analytically founded approach that relates programs to goals. That in turn starts with an explication of the elements of the drug problem.

Table 2 presents a list of 8 phenomena that constitute some of the major components of what troubles each nation under the rubric "the drug problem". The list

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3 On the state of research on drug policy, referring primarily to the U.S. see Manski, Pepper and Petrie (eds.) *Informing America's Drug Policy* (National Academy Press, 2001). Comments on this report (two from European scholars) appear in *Addiction* 97 (6) June 2002, pp.647-665.

could be expanded but each item of a larger list could be associated with one of the four categories of sources used here: initiation, dependence, distribution and production.

**Table 2. Elements of the Drug Problem**

| Domain | Source |
|---|---|
| Adolescents dropping out of school<br>Gateway to other behavioral problems | Initiation |
| High mortality and morbidity among users and their intimates<br>Crime by users | Dependence |
| Large criminal incomes<br>Violence in competition | Distribution |
| Distortion of source country societies<br>Strains on foreign policy | Production |

Some of the problems in the list are not as related to the consequences of drug use itself as to initiation of the young into drug use. It is the involvement of young people in the subculture surrounding illicit drugs or with the routine violation of law, and their possible progression to drug dependence that are the central concerns under that head.

Another set of problems is caused by the dependence or abuse of drugs--e.g. spread of AIDS, crimes committed to support expensive illicit drug use--albeit sometimes because of the conditions of use that society has created. Cocaine sells in illegal markets for about 20 times its legal price; that helps explain the high level of property crime associated with dependence on cocaine. Use of dirty needles by heroin addicts is partly a function of the prohibition on unauthorized possession of hypodermic needles

Other problem elements, such as killings of rival drug dealers, are not directly related to drug use but to the distribution of drugs. Even if drugs did not adversely affect behavior, the struggle for market and contract disputes in an illegal setting would generate violence. Finally, yet others--e.g. the distortion of social and political institutions in Afghanistan and Burma --are a function of the production of the drugs themselves.

If it were possible to eliminate illicit drug use altogether, all of these problems would either vanish or be much ameliorated. But because different elements of the

problems have different sources, they may not move in the same direction at the same time. For example, initiation may decline sharply even while dependence is worsening. Given that the time from first use to dependence is typically five to ten years, the decline in initiation will not have effects on dependence and abuse related problems for at least that long. Indeed, many countries, including the Netherlands and the United States have had just such an experience within recent decades; five years of low initiation may be accompanied by little sign of reduction in other drug related problems.

**Matching Programs and Problems**

The standard, though not universal, classification of programs dealing with drug problems is enforcement, treatment prevention and harm reduction. If we further divide enforcement into the categories of source country control (e.g. crop eradication and refinery destruction) and domestic enforcement (including interdiction of smuggled drugs), we can match program types and the dimensions of the drug problem schematized in Table 2. That matching is presented in Table 3.

**Table 3. Matching Programs and Problem Elements**

| **Program** | **Targets** |
|---|---|
| Prevention | -> Initiation |
| Treatment | -> Drug Abuse |
| Harm Reduction | -> Adverse consequences of use |
| Enforcement | -> Distribution |
| Source Country | - > Imports |

Programs are evaluated primarily in terms of the targets suggested by this mapping. Thus primary prevention programs are evaluated mostly in terms of their effect on initiation into drug use; successful prevention efforts will reduce the percentage of non-users or experimental users who become regular users. Reductions in drug related violence are neither expected nor measured because they will occur so far in the future. Similarly, treatment programs are evaluated in terms of reducing the prevalence of drug dependence and the severity of associated harms and not in terms of their effect on initiation. Harm reduction aims primarily at the adverse consequences of abuse or dependence. Enforcement has the broadest potential set of targets; it may, as discussed below, have effects on initiation and abuse as well as distribution.

Of course programs may affect more than their principal targets; the effects can be positive or negative. Effective treatment programs should reduce distribution-related problems by shrinking the total size of the illegal drug market, thus lowering criminal earnings and, at least in the long-run, violence On the other hand, increasingly effective treatment may actually worsen initiation problems by removing the most visible and striking negative role models of addicted drug users. That is not a reason for failing to provide funding for drug treatment; it merely points to the difficulty of doing only good[4].

This matching of program types against goals provides a framework for systematic comparative assessment of programs and policies. It also suggests how we might choose to classify expenditures, relating them to the classes of programs that are associated with specific goals. The British and U.S. budget analyses are increasingly driven by this kind of conceptual analysis.

**Defining Categories**

Problems remain. The usual categories of Prevention, Treatment, Harm Reduction and Enforcement, refer to intent rather than accomplishment; e.g., prevention is that set of programs which targets either new drug use or the transition from experimental to regular use, while enforcement is the effort to deter drug sellers and make it more difficult for buyers and sellers to connect. Such an approach is appropriate except that in general it is the agency rather than the program content that determines the category in which the expenditure is placed. Any expenditure by a police agency is enforcement, while any expenditure by the Education Department is prevention; in fact police sometimes undertake preventive activities while schools sometimes must engage in policing.

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[4] Other negative interactions, mostly involving enforcement, can be more serious. Consider for example the upstream effects of interdiction. If more stringent interdiction works primarily through raising the percentage of shipments intercepted, rather than by raising the labor costs of smuggling through increased incarceration of smugglers, then it may actually increase the export demand for the drug. That is because interdiction has two effects on export demand. By raising prices in Western Europe, it decreases the total amount consumed; but it also raises the quantity of exports needed to deliver a kilogram to Europe. The second effect turns out, under reasonable assumptions about the demand and supply curves of the cocaine industry, to be larger than the first. Thus interdiction may actually increase source country problems by raising the demand for exports of cocaine. The analytics of this proposition are provided in Reuter P.; Crawford, G. and J. Cave *Sealing the Borders: The Effect of Increased Military Participation in Drug Interdiction* Santa Monica, CA, RAND, 1988 Appendix A..

The problems that arise from this can be illustrated by the relatively well developed U.S. efforts to estimate federal drug control expenditures by function and agency[5]. For example, the Education Department claimed in Fiscal Year 1998 to have spent $90 million on drug treatment. The money was for vocational rehabilitation for "individuals whose drug-related disabling conditions result in an impediment to education or employment." There were no special programs for drug users; the figure simply represented an estimate of the share of all clients of this program whose admission was drug-related. This is very clearly an expansive definition of treatment, since it focuses on consequences of use. By that rationale, all social service expenditures on those who are harmed by their own drug abuse could be categorized as drug treatment. The U.S. does not include harm reduction as a category; perhaps all this palliative care should be classified as harm reduction but that makes the concept so broad as to risk depriving it of meaning and to require more than any expenditure estimation system can deliver.

Border control illustrates a different aspect of the problem, namely the "imbedded" nature of so many expenditures. A small fraction of border patrol activities are specifically aimed towards drug control (e.g. the salaries of investigative agents who follow controlled deliveries); much is generic and results in seizures of people and goods, only some of which are drug related. The U.S. Border Patrol assigns 15% of its total expenditures to drug enforcement each year, without conducting annual assessments. Nor is it clear how one develops a sounder estimate or alternative heuristic. Indeed, this may explain the recent decision by ONDCP to change its budgeting system to one that includes only those items that are policy decisions rather than imbedded or passive (costs of imprisonment of drug dealers)

A further complication is that programs are usually classified as drug control if that is their primary goal. However, many other social programs have important consequences for drug problems. Better schools, more effective infectious disease surveillance systems or improvements in policing, though with much broader objectives,

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[5] By far the most sophisticated study is Murphy et al. *Improving Anti- Drug Budgeting* RAND, Santa Monica, 2000. State and local government expenditures on drug control have only been estimated once, for 1990 and 1991; even that Census Bureau data collection turned out to produce only a partial estimate. See Reuter "Setting Priorities: Principles for Drug Policy" *Chicago Legal Forum* 1994; pp.145-173.

may be just as important to reduction in drug problems as are those labeled as "drug control". Whether they should be included may depend on the share of all benefits that relate to drug problems and/or the proximity of those benefits to the program. There are three possible criteria for inclusion: (1) reductions in drug problems constitute a large share of all program benefits; (2) the program has substantial drug problem reduction consequences, even if these constitute a small share of the total program benefits (e.g. border patrol) and (3) the drug reduction benefits are very proximate, (e.g., enforcement against property crimes that are commonly committed by drug users).

Whether the focus should be on intent or effect depends on the use to which the system is to be put. There are legitimate political reasons for seeking estimates of expenditures that have as their primary goal the reduction of drug problems. This has a transparency that legitimates the numbers as a measure of governmental effort. They are most naturally the numbers that can be held to accountability for drug problems.

For other policy purposes though it may be more useful to use an "effects" categorization. Harm can be reduced by drug treatment or by more general psychiatric programs, some of whose clients happen to be drug abusers. If the non-targeted treatment programs are picking up an increased share of the dependent population, perhaps because of improved access to community health centers, then the demand for drug treatment will decline. Similarly, tough enforcement against street crimes will have much of the same effect on drug demand as enforcement that targets the drug offenses of dependent and impoverished drug users.

The other reason for including non-targeted programs in the budget is that they have an influence on the effectiveness of targeted programs. The demand for drug treatment is partly a function of the availability of psychiatric services more generally, since so many drug abusers have psychiatric, as well as other health, co-morbidities. It will also be a function of the frequency with which drug abusers are locked up for offenses other than drug crimes.

Another conceptual distinction that is of growing practical importance is between "proactive" and "reactive" programs. The U.K. has pioneered consistent use of this distinction. "Proactive expenditures is that which is aimed at tackling the causes of the drug problem (e.g. prevention and treatment) whilst reactive spend[ing] (e.g. police

enforcement criminal justice system costs related to crimes committed by drug addicts) is that which results from the drug problem but does little, if anything, to address the underlying causes."[6] It should not be assumed that reactive expenditures are wasted; causes are hard to address and consequences may be immediate and serious. For example, it is difficult to persuade some problematic drug users to enter treatment; arresting or incarcerating them for their drug-related crimes may be the only way to reduce the adverse consequences of their drug use

*Targeted Programs*

We offer here basic definitions of the program types, using effect rather that intent.

Prevention programs reduce initiation or the probability of progress from initiation to regular drug use. They may accomplish this either by persuasion (school programs, mass media campaigns) or by reducing the accessibility of drugs for novice users.

Treatment programs reduce drug use by persons who are experienced users, by direct individual involvement. In addition to medical and counseling services, the category includes programs such as "coerced abstinence", in which users are given strong negative incentives for discontinuing their use, at least for an extended period.[7] Some regular users subject to this coercion will be able to desist even without entering a formal treatment program.

Enforcement programs are of two types. Programs aimed at traffickers and producers attempts to shift out the supply curve for drugs. Other things being equal, they should raise the price of drugs.

Other enforcement programs, aimed at users and retailers, have the effect of raising transaction costs (time, convenience, risk) associated with buying drugs; for example through conspicuous patrol with a preventive orientation, as was done at the Frankfurt train station in the 1990s. Those shift the demand curve for drugs downward.

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6 *National Anti-Drugs Strategy: Monitoring ProActive Spend Against Targets* Home Office, London. 2002,

7 Kleiman in L. Mead (ed.) *The New Paternalism* (Brookings, 1997)

Inasmuch as it shifts the curve for novices, it constitutes a form of prevention; where experienced users are affected, it is a closer to treatment in its effect.

This may appear overly subtle but if price is used as an indicator for performance measurement of enforcement efforts, then the separation becomes necessary, since the second class of program should reduce prices.

Harm reduction programs ameliorate the adverse consequences of drug use rather than reducing drug use itself. They can again be divided into two categories. One can be called harm prevention; it aims at reducing the risk of harms occurring conditional on drug use (e.g. syringe exchange, low threshold methadone aimed at lower needle sharing). The other can be called harm amelioration; it aims to reduce the adverse consequences of specific harms after they have occurred (e.g. treatment to extend the time between becoming HIV positive and converting to AIDS, or psychiatric treatment for co-morbidities).

The separation again has a practical purpose. Harm prevention programs should be assessed by the extent to which they reduce the number of persons who suffer these adverse consequences. Harm amelioration programs on the other hand should be judged in terms of their success in alleviating the bad consequences of persons who are already harmed in specific ways. The injury prevention literature uses a similar classification, referring to primary and secondary prevention[8].

*Non-targeted Programs*

This four part classification can also be used for non-targeted programs; the label will describe the nature of the drug-related benefits that flow from the program. In principle, as with targeted programs, programs may generate benefits in more than one area. Table 4 offers a preliminary listing of major programs by category.

8 Bonnie *Injury Prevention* (National Academy Press, 2000)

**Table 4**
**Preliminary Categorization of Expenditures by Policy Domain and Goals**

| | *Targeted Policy* | *Broad Policy* |
|---|---|---|
| ***Prevention*** | School drug prevention programs<br>Mass media campaigns<br>Reducing access for youth through policing | School discipline<br>General delinquency prevention<br>Improved public housing |
| ***Treatment*** | Methadone Maintenance<br>Counseling, therapeutic communities etc..<br>Coerced abstinence through probation/parole supervision | Psychiatric services |
| ***Enforcement***<br>(1) Supply reduction<br>(2) Demand reduction | (1) Traffickers/Dealers<br>Arrest<br>Corrections<br>(2) Buyers<br>Arrest | General criminal enforcement |
| ***Harm Reduction***<br>(1) Preventing harms occurring<br>(2) Ameliorating bad consequences | (1) NEP, low threshold methadone, responsible use messages<br>(2) health care for infected addicts | (1) Income support for addicts?<br>(2) general healthcare |

## Capturing Expenditures

Even after deciding on the conceptual basis of an expenditure classification, there remain serious problems in matching actual budget figures with those categories. There is little value to a sophisticated classification if it cannot generate expenditure measures on a routine basis. The goal of this project is to provide member governments a means for developing regular series (perhaps biannual) without requiring additional and expensive audits of programs to determine their drug control effects. This may necessitate the development of new guidelines for agencies that permit them to estimate drug control expenditures in a more consistent and explicit fashion; perhaps these generate rough heuristics that can be left unchanged for some years before being tested again.

To illustrate, consider a heuristic that might be developed for estimating the costs of drug enforcement by police departments. Given that patrol activities have multiple

goals, it is difficult to find a firm conceptual foundation for calculating the share that should be allocated to drug control. However one figure available in many agencies is the number of arrests for drug offenses, perhaps divided into possession and trafficking. Total arrests may be used as a proxy output measure for police departments. Arrests are, however, heterogeneous with respect to cost; arrests for minor offenses are lower cost than those for more serious offenses. A rough estimate of the relative costs of these two classes of arrests may be developed and then used to weight possession and distribution arrests, so as to determine the share of all policing costs that should be assigned to drug offenses. This is simply offered as an example of the types of approaches that may be developed.

A complication here is that enforcement affects drug problems not just through arrests for drug offenses but also through arrests of drug-involved offenders. A dependent heroin user can be motivated to accept treatment by an arrest for burglary as much as by an arrest for drug possession. A few nations are developing monitoring systems that allow estimation of the share of criminal offenders that are drug users[9]. That might also be a component of drug enforcement and used then in the estimation of costs.

## II. Prior Estimates of National Drug Budgets

Budgeting methods differ among nations, reflecting differences in history and governmental structure, inter alia. There are also inter-sectoral differences within countries. Any estimation process has to be sensitive to these variations. The estimates will be built out of agency budgets since they do not fit into the national income and product accounts framework. These differences are illustrated in the following sections.

*U.S. Budget Estimation*

We begin with a brief discussion of U.S. efforts at drug budget estimation since they are by far the earliest. The United States developed systematic drug budgets as early as 1973[10]. By the time that the Office of National Drug Control Policy (ONDCP) began operation in 1989, the methodology was well established. Indeed, the division of the

9 The U.K. has NEW ADAM (Arrestee Drug Abuse Monitoring) which collects data on a sample of arrestees in a small number of jurisdictions. See for example *Drugs and Crime: The second developmental stage of the New-ADAM programme* Home Office Researsch Study 205, 2000

budget between demand side programs (prevention and treatment) and supply side programs (domestic and international enforcement) provided a major battle ground for public debate in that period and was made part of the legislation authorizing ONDCP. Federal agencies were given guidelines to produce defensible estimates of how much they were spending under different program categories to reduce U.S. drug problems. The budget document accompanying the release of the annual *National Drug Control Strategy* came to exceed in length the Strategy itself. Until 2002, the effort was to be as comprehensive as possible, with little concern about the conceptual distinctions between drug-targeted and drug-related expenditures. However it is important to note that no effort is made to estimate expenditures by state and local governments; one study conducted for 1991 estimated that such expenditures totaled almost as much as those of the federal government.

In 2003 ONDCP developed a new budget concept which led to much lower estimates of total expenditures "Rather than being based on estimates derived after decisions were made, as was the case in previous years, with few exceptions this budget reflects actual dollars identified in the congressional presentations of drug control agencies that accompany the annual submission of the President's budget. Additionally, the budget reflects only those expenditures aimed at reducing drug use rather than, as in the past, those associated with the consequences of drug use. (The latter are reported periodically in *The Economic Costs of Drug Abuse in the United States*.)"[11] The re-estimated figure for 2002 fell from $18.8 billion to $11.5 billion.

This decline reflected the decision to exclude some major items; the largest was the incarceration of federal drug prisoners. In the new framework this is regarded as essentially passive, a consequence of drug use. Dealers and smugglers are locked up because others are drug users and the incarceration does not strike at the drug use itself. But other kinds of federal enforcement, mostly aimed at higher level dealers, is indirect as well. In fact incarceration at the federal level, which accounted for $2.4 billion expenditures in FY 2003, serves as a major drug control expenditure; arrest without incarceration will be much less of a deterrent and has no incapacitative effect. The

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10 See *The Facts about Drug Use and Drug Abuse*

11 Office of National Drug Control Policy *National Drug Control Strategy 2003*

expenditure is not one easily controlled by policy makers, as discussed below. While recognizing the justification for the new budget figures for a policy agency, the old ones appear to do better at capturing the costs of drug control. The change not only reduces total expenditures; it substantially lowers the share accounted for by enforcement programs, from about 65 percent to 55 percent[12].

*British expenditure analysis*

The U.K. government has sponsored three related but distinct budget documents.

(a) *Strategic Budget* In September 2001 the U.K. government published a description of its current drug strategy, a relatively detailed and systematic analysis, including a break down of its expenditures for particular categories of drug control[13]. This document illustrates the problems with existing approaches and the prospects for an alternative. The focus here is on three issues; integration of targeted and "related" expenditures, the distinction between agency and program labels and devolution of budgets to lower level governments

The principal budget breakdown of targeted drug expenditures is that contained in Table 5. The targeted funds are divided on the basis of goals, which facilitates performance measurement. The four enumerated objectives are to (1) reduce the proportion of under 25's reporting use of Class A drugs (2) the levels of repeat offending among drug misusing offenders (3) increase drug treatment enrolment by drug misusers and (4) reduce the availability of Class A drugs. In each case the target was a 25% change by 2005. The first is clearly a prevention target, given that treatment rarely leads to abstinence and most of those treated are over 25. The last is an enforcement target; the other two involve both treatment and enforcement. For example, drug treatment enrolment can be increased by tougher enforcement, either through making conditions of use (price, other costs) higher or by bringing users under the supervision of the criminal justice system; it can also be increased by providing more or better quality places. Harm reduction does not seem to play a role in any of these objectives, though treatment

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12 See Walsh "Fuzzy Math: Why the White House Drug Policy Budget Does Not Add Up *Drug Polilcy Analysis Bulletin* (forthcoming)

13 Home Office Memorandum submitted to the House of Commons inquiry :"How Effective is our Drug Policy" available at http://www.drugs.gov.uk/NationalStrategy/KeyCurrentDocuments. All citations are to paragraph numbers.

enrolment, inasmuch as it accepts continuation of some drug use, results in the amelioration of its harms..

**Table 5**
**2000 Spending Review—resources directly allocated for tackling drug misuse (by main aim of tackling drugs to build a better Britain)***
**(£ million)**

| | ***2000-2001*** | ***2001-2002*** | ***2002-2003*** | ***2003-2004*** |
|---|---|---|---|---|
| Drug Treatment** | 234 | *328* | *377* | *401* |
| Protecting Young People | 63 | 90 | 97 | 120 |
| Safeguarding Communities | 45 | 79 | 81 | 95 |
| Reducing Availability*** | 353 | 373 | 376 | 380 |
| **Total** | 695 | *870* | *931* | *996* |

* Excludes expenditures by devolved departments
**Comprises mainstream spending by Department of Health, local authorities and the pooled National Treatment Agency budget. Excludes additional Prison Service treatment spend, brigaded under Communities
*** U.K. spend for 2001-2002 to 2003-2004 includes the 90 million approved for combating organized crime.

Figures on incremental expenditures "for related programs" are presented in the following Table 6. It is difficult to add these to provide an integrated measure of the total expenditures by category since they use a different categorizations from the targeted moneys. They are categorized by agency type or funding flow, reflecting the fact they are not generated by the same deliberative strategic process.

**Table 6**
**2000 Spending Review-new resources for related programmes***
(£ million)

| | ***2001-2002*** | ***2002-2003*** | ***2003-2004*** |
|---|---|---|---|
| Criminal Justice System | 1420 | 2290 | 2720 |
| Neighborhood Renewal Fund | 200 | 300 | 400 |
| Children's Fund | 100 | 150 | 200 |
| Connexions | 77 | 177 | *n.a.* |

**Notes Omitted*

The following are three illustrations of the problem of creating a strategic budget.

*(1) Youth Programmes* "The Department of Education and Skills has allocated 14.5 million (2001-02) …for drug, alcohol and tobacco education" (2.10) "All schools are required to teach drug, alcohol and tobacco education as part of the National

Curriculum" (2.11). No figure is offered as to how much the schools spend on these programs within the National Curriculum; indeed, it is extraordinarily difficult to develop such estimates.[14] Schools may respond to Department of Education and Skills pressure by increasing the share of class time going to prevention programs, but it will not be possible to track these figures budgetarily because there is no class-time budget allocation process.

The same issue is raised by reference to a program entitled *Positive Futures* which "aims to use sport to reduce anti-social behavior, crime and drug misuse among 10-16 year olds within selected neighborhoods." (2.19) Should one include all expenditures on sports programs in high risk communities? What makes this program different from other sports programs: that the targeted group is defined by its risk of becoming involved with drugs? Labels may matter bureaucratically but may be irrelevant programmatically.

*(2) Decentralization* An additional problem is that the U.K. has devolved increasing resources and responsibilities to three lower level government agencies; the Northern Ireland, Scottish and Welsh administrations. The expenditures of these offices are not reflected in the budget figures above, though in some cases (notably policing) England and Wales remain one budgetary unit. The significance of that omission can only be weakly inferred from a knowledge of the size of the lower level budgets and the nature of the activities that they fund.

Moreover there are programs which devolve categorical discretion to still lower levels of government. For example consider *Communities Against Drugs* "220 million [pounds sterling] over three years is to be distributed though Crime and Disorder Reduction Partnerships, working with local police, Drug Action Teams to be spent on targeted, locally determined measures to disrupt drugs markets, tackle drug-related crime; and strengthen the ability of communities to deal with the drug problems in their midst." (paragraph 3.7) The subsequent text emphasizes the flexibility to be given to the grantees; in addition to conventional policing, the money might be used for support of community, parents' and residents' groups. Though in theory it is possible to require

[14] For a clear statement of these problems, in the context of U.S. prevention efforts, see Caulkins et al. *An Ounce of Prevention, A Pound of Uncertainty* RAND, Santa Monica, CA, 1999

grantees to report back how they spent their moneys, using a standardized categorization, that may well require more sophistication than can reasonably be expected from the small organizations that often receive these moneys. Thus classifying these expenditures as enforcement requires some judgment.

*Omissions* Independently of the budget figures in the Tables, the Report refers to a Home Office estimate[15] that £1.2 billion is being spent by the criminal justice system for the enforcement of drug laws. This does not include expenditures associated with drug-related crimes, either property or violent. Yet a principal mode of access to the treatment system is arresting users for non-drug crimes.

This specific analysis was motivated by an interest in linking programs and targets (or investments and outcomes). However inconsistencies in categorization among targeted and non-targeted expenditures (perhaps reflecting differences in accounting transparency), current and incremental expenditures and the omission of expenditures of lower levels of government limit the ability to make the desired links. The task ahead is to show that more analytic and effects oriented classification could improve matters.

(b) *Cost of Drugs* The University of York produced in 2002 estimates of governmental expenditures on "Class A Drugs" for England and Wales which further supplement the British analyses[16]. These were produced not for budgeting purposes but as a component of an estimate of the total costs of drug use, including those borne by individuals. The estimates are relatively sophisticated but use a very different methodology than those developed in the Strategy document

For most of the costs associated with problematic drug users, who account for over 95 percent of total costs[17] (both governmental and social), the source of the estimates was a longitudinal study of drug users in treatment (National Treatment

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15 Brand, S. and J. Price (2000) *The Economic and Social Costs of Crime* Home Office Research Study 217 London, Home Office Research, Development and Statistics Directorate.

16 Godfey, C.; Eaton, G.; , McDougall , C.; and Culyer, A., 2002 *The Economic and social costs of Class A drug use in England and Wales, 2000* London, Home Office Research, Development and Statistics Directorate

17 Certain costs (e.g. work-related) associated with youth and regular adult use could not be estimated.

Outcome Research Study.[18] Thus for example, the police costs were estimated as the number of arrests per user (contingent on treatment status) multiplied by a cost per arrest, produced in another study[19]. Similar calculations were done for medical services, drug treatment costs, imprisonment etc. An important item in the total was arrests for acquisitive crime by problematic drug users; these total 560 million pounds, compared to 480 million pounds for arrests for drug offenses.

The estimates did not include all "proactive" expenditures. Notable among the excluded programs were prevention in schools and customs inspection. This is the consequence of an analytic frame which associated costs with specific categories of drug users. Prevention and inspection costs are generic and cannot be identified with any particular pattern of drug use.

(c) *Scoping Expenditures* A more budget oriented U.K. exercise (unpublished) focuses on proactive costs alone; these were identified as programs specifically labeled for reducing drug problems. Thus, for example, routine policing that resulted in drug trafficking arrests does not appear to have been included. Similarly of prison costs associated with housing drug offenders, only those for treatment were included[20]. The government is moving to a system in which it can monitor proactive expenditures on at least an annual basis.

These exercises have very different goals, all of them legitimate. The Strategic estimate serves a policy, as opposed to budget purpose. It identifies for the public and the legislature the proposals of the government to tackle a social problem. The York study is a cost-to-society estimate with the government as just one payer; of itself it has no policy focus. The third estimate is much narrower and is aimed at allowing for better monitoring and assessment of expenditures; if, for example, prison treatment expenditures rise, is there an event (e.g. increased influx of new drug-involved offenders as the result of a police crack-down on drug markets) that might account for it.

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18 See for example Gossop, M; Marsden, J. and Stewart, D. *NTORS at one year: The National Treatment Outcome Research Study: Changes in substance use, health and criminal behaviors at one year after intake*. London, Department of Health (n.d.)

19 Brand, S. and J. Price (2000) *The Economic and Social Costs of Crime* Home Office Research Study 217 London, Home Office Research, Development and Statistics Directorate.

In the long run these may all be complementary. The ultimate goal is to make allocations that reflect cost-effectiveness, including social costs as well as government expenditures. The broader exercise helps provide estimates of the benefits side; how much have the costs of drug related problems declined and how have individual programs contributed to that? However, each one taxes the budget and expenditure data system in a different way.

*Other Countries*

Both in Austria and Ireland, relatively small nations (populations of 8 million and 4 million respectively), efforts have been made recently to generate comprehensive expenditure estimates using budget rather than cost data[21]. In both countries observers believe that the treatment and health estimates are much more soundly based than those from the criminal justice system, perhaps because in the former more services are provided on an individualized basis, so that it is easier to track expenditures that are specifically related to illicit drugs. In both countries the initial estimates show enforcement to account for two thirds of the total expenditures.

The Austrian demand reduction expenditure estimates were generated by summing over many agencies[22], reflecting the complex structure of government responsibilities in the country. Expenditure figures had to be obtained from federal, provincial and municipal governments and also by health insurance funds and specialized centers. The estimates were developed with sample surveys; response rates were sometimes quite modest[23].

Estimates were developed both for 1999 and 2001; the two estimates showed a plausible increase over that time (ca. 10%). However there were inconsistencies in some components over time (e.g. provincial expenditures rose by 60 percent), suggesting that methods are still being refined in ways that weaken the ability compare over years.

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20 Note that the treatment costs are for any inmate who has a drug abuse problem, regardless of whether he is incarcerated for a drug offense or some other offense.

21 Bruckner and Zederbauer, 2000.

22 Details here are for the most recent estimate of demand reduction expenditures, on file with the EMCDDA.

23 For example, a survey of 189 communities produced 50 usable surveys. Further, in 1999 only four out of nine provinces supplied expenditure data; in 2001 an additional three provided expenditure figures.

However respondents to the exercise expressed a willingness to find ways to allow for routine capture of relevant information.

In 2000 the Irish National Drug Strategy Unit published a drug budget estimate[24]; total expenditures were 182 million euros, of which two third was assigned to law enforcement. The budget estimate was generated to support the preparation of a Strategy, intended to run from 2001 through 2008. The law enforcement side used a broad heuristic, roughly the number of arrests that were "drug related", multiplied by the number of hours they required, times the cost of an hour of police personnel time. The health system used a much narrower measure, specifically money labeled for treating problematic drug users. One official noted that there was great difficulty in producing a consistent, well-founded estimate. With so many related explanatory footnotes the figures were of little value and the explanations in the current Strategy have been ignored.

In neither Austria nor Ireland has there so far been an effort to make cross-country comparisons, perhaps reflecting the early stage of development of these estimates. Indeed, it appears that neither nation was aware of the existence of other national estimates.

The principal value of the estimates made to date apparently has been to inform debates about the relative importance of demand and supply reduction expenditures. The finding that supply reduction accounts for two thirds of the total has provided support for treatment advocates, who believe that the balance should be much more favorable to demand reduction, More precision has not been needed for these purposes. The aggregate number seems not to have been given much prominence beyond "drugs cost the government a lot of money".

It was unclear from the interviews with officials just how valuable budget estimates would be. There is little faith in many countries that enforcement agencies can produce estimates with a systematic basis. There is an interest, perhaps in smaller countries with less sophisticated budget systems, in learning from the experiences of other nations. At least one official in a larger country expressed a concern that cross-

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[24] Department of Tourism, Sport and Recreation *National Drugs Strategy 2001-2008: Building on Experience*. Dublin, 2000

national data, unless it were scientifically strong, could complicate decision making by providing ammunition to all sides in the budgetary debates.

## III. New Estimates for Netherlands and Sweden

To directly assess the feasibility of cross-country comparisons new estimates were developed for the Netherlands (Henk Rigter) and Sweden (Mats Ramstedt) using the conceptual scheme that was described in Section I. Though the two nations are often contrasted in terms of the substance of their approaches to drug control, they are both sophisticated governmentally, with strong applied drugs policy research communities closely connected to government agencies. The following pages summarize the methods and findings, focusing on what was learned about estimation issues. The full studies are contained in Appendix A (Netherlands) and Appendix B (Sweden) respectively.

Each study began by identifying types of programs that are relevant to reducing drug use or drug related harms and then listing the major agencies responsible for such programs. For each major program, the study sought not simply to provide an estimate of expenditures but to describe the method by which that estimate was developed and the principal sources of uncertainty.

### Netherlands

The national and municipal governments account for most drug policy expenditures; provincial governments play a small role. As befits a nation that has been very articulate about the many dimensions of drug problems, there exists a large number and variety of programs aimed at reducing drug problems. Most of them are quite small; the roughly 45 involving less than 10 million Euros in total accounted less than 15 percent of the estimated baseline aggregate of 2,186 million Euros. Consequently they will not be discussed here separately, though each is identified in Appendix A. Table 7 presents the baseline estimates, together with confidence intervals based on uncertainties in the major programs only.

**Table 7. Estimated Drug Policy Expenditures, Netherlands, 2003 (million Euros)**

| *Category* | Baseline | Low | High | Baseline Per capita (Euros) |
|---|---|---|---|---|
| Prevention | 42 (2%) | 37 | 44 | 3 |
| Treatment | 278 (13%) | 200 | 364 | 18 |
| Harm Reduction | 220 (9%) | 138 | 318 | 14 |
| Enforcement | 1646 (76%) | 1166 | 2540 | 102 |
| **Total** | 2186 | 1521 | 3266 | 137 |

The following focuses on estimation of the programs with the largest expenditures:

*Treatment* Thirteen distinct funded programs were identified as treatment services, totaling 278 million Euros. Of these, three programs accounted for over 70 percent of the total; Addiction Centers (74 million), Special treatment programs in penitentiaries (56 million) and programs aimed at helping former addicts obtain and keep legitimate employment (69 million).

(a) The *Addiction Centers* estimate was based on a study that found 53 percent of patients had an illegal drug as the primary drug of abuse. However about 15% of the remaining patients, mostly presenting with primary dependence on alcohol, were also frequent users of drugs, generating a possible additional 5 percent whose problems might be substantially attributed to drugs.

(b) *Special treatment programs in penitentiaries*. Some prisoners receive treatment for drug abuse while incarcerated. The treatment service component only accounted for some of the cost of the stay. In the base line calculation it was set at 100 percent but might only be one third of the total.

(c) *Employment programs* Data were available on the share of the caseload receiving labor market assistance that was classified as having a psychiatric problem. The baseline assumed that 10 percent of those were former drug addicts but the research literature could justify a figure twice as high.

*Harm Reduction* Two of the ten programs accounted for 85 percent of the 220 million euros

(a) *Funds from Public Health Ministry to municipalities (116 million).* This has two components. One is for addiction care; the baseline again assumed that 53 percent should be allocated to illegal drugs. The second component is for "social inclusion" programs; the share targeted at drug use and users was based on the share of addiction centers in collaborative public health projects.

(b) *Social cohesion and public safety (73 million)* This reflected an independent estimate of the share of funds intended to "protect the community again nuisance caused by drug users and drug dealers". This could also have been classified as enforcement and the basis for the estimate of the share of the 3.5 billion Euro program going drug control is not clear.

*Enforcement* Three items out of nineteen account for 80 percent of the 1,646 million Euros spent on enforcement: Policing (430 million), Courts (311 million), and Detention and alternative sanctions (546 million).

The principal driver of the first two items is the share of cases in detention courts that constitute violations of the Opium Act[25] (13%) or that are drug-related (17%). The first is accurately measured. The second percentage is estimated from two studies, using self-report data, done in 1993 and 1995. It is assumed that each type of case costs the same in terms of policing and of court resources (prosecutors and judges). This is once again a convenient assumption which could be quite incorrect; arrests are quite heterogeneous in terms of the costs they impose on each component of the criminal justice system. Moreover the share of all offenses (not violations of the Opium Act) that are drug-related may have fallen substantially since the mid-1990s (when the 17% estimate was developed) as the population of addicts in the Netherlands has declined and aged.

The corrections ("Detention and alternative sanctions") costs are based on the share of all convictions that involve Opium Act violations (27%) plus the 17% for drug-related detentions used above.. The fact that the fraction of incarcerations associated

[25] This is the basic drug control legislation of the Netherlands and covers non-opiates as well as opiates.

with the Opium Act is so much higher than the number brought to court suggests that the court costs associated with drug offenses may be greater than for other offenses on average. Similarly, drug offenders who are arrested for non-drug offenses are likely to have longer average criminal histories than other offenders and thus to receive longer sentences.

The enforcement total is so large that some items which would be prominent in other categories are unimportant here. For example, it is estimated that 59 million Euros was spent by the Royal Marine for interdiction in the Netherlands Antilles and Aruba; this would be a major program if it were in any other category. The figure is very questionable . It is based on the official Ministry claim that 80 percent of the Royal Marine budget in these stations, goes to drugs; this is very much higher than the proportion reflected in reports of flight hours and fleet days devoted to drug interdiction. *Prevention* Ignoring items with less than 100,000 Euros, there are 15 prevention expenditures listed. Three account for 60 percent of the 41.5 million total; none are school-based programs. Even large percentage errors in these estimates will make a modest difference to the total drug control budget or to its composition.

**Sweden**

Table 8 presents the budget estimates for Sweden. The task of making these estimates is complicated by the fact that Sweden devolves a great deal of expenditure responsibility to the 284 municipal governments. In particular they are responsible for the funding, as well as provision, of the principal treatment programs.

**Table 8: Estimated Drug Policy Expenditures, Sweden, 2002 (million Euros)**

| *Category* | Baseline | Low Estimate | High Estimate | Baseline Per capita (Euros) |
|---|---|---|---|---|
| Prevention | 8 (1%) | 8 | 8 | 1 |
| Treatment | 175 (19%) | 130 | 220 | 20 |
| Harm Reduction | 28.5 (3%) | 24 | 33 | 3 |
| Enforcement | 714 (76%) | 273 | 1110 | 80 |
| **Total** | 925.5 | 435 | 1371 | 104 |

*Enforcement* The two major enforcement items are police and prison/probation. The low end police cost figure (138million Euros) has a precise origin, since the police have an administrative data system that tracks the allocation of time to offense type, ex-post.[26] The police estimate that 6 percent of their time goes to enforcement of drug laws. However, data from various research studies suggest that, as elsewhere, drug offenses account for a small share of the recorded criminality of drug abusers; in one study only one out of six recorded offenses of heavy drug abusers were for violations of drug statutes. Thus 6 percent might is substantial underestimate of the enforcement costs of reducing the adverse consequences of drug abuse. The higher estimates come from alternative estimates of the total arrests generated by drug use; the high end estimate attributes all of drug user criminality to their drug use, which should be regarded as a ceiling figure.

The prisons show about 24 percent of their clients as convicted of drug offenses, i.e. drug arrests are much more likely than arrests for other offenses to lead to incarceration. Moreover by other measures about one half of the prison population are classified as drug abusers. Thus the baseline prison cost estimate might be doubled.

*Treatment* Statistics Sweden presents overall substance abuse treatment expenditures for all 284 municipalities for 2001. However, these expenditures (reported by each municipality) cover also treatment for alcohol abusers and are restricted to abusers aged 21-64 years.

It is necessary to obtain a reliable estimate of the fraction of cases that involve drug abuse. Two independent sources were used

1. Findings of a national survey to 567 treatment centres (not only the Social service) conducted by the National Board of Health and Welfare in 2001. The study shows that, on average, 19 % were treated for drugs only and 32% for both alcohol and drugs.
2. According to large ongoing treatment study in Stockholm, 33% of those attending treatment in the Social service came because of drug abuse only and an additional 7% has both alcohol and drugs.

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[26] That is, the assignment is based on what offenses were detected not on what was targeted in advance.

If one assigns fifty percent of the dual cases to drugs, then the two studies give roughly the same proportion, about 35 percent. However the differences in the base prevalence of "drugs only" are so large as to raise questions about whether the equivalence of the "drug all" rates should be given much weight. We used that for the purpose of establishing a baseline estimate but this is clearly a source of potential instability in revised estimates.

Prevention expenditure estimates were so low as to not merit discussion here. Expenditures on programs which were unambiguously harm reduction were truly negligible, only 2 million Kroner for needle exchange. However one might reasonably have classified programs such as employment services for drug abusers in this category.

**Comparing Netherlands and Sweden**

The goal of this exercise is not to evaluate the substantive content of drug policy in the two nations but to assess how firmly differences in the budget implementation of policy can be described with existing figures.

Taken at face value, the baseline estimates show that the Netherlands spends more per capita on drug control than does Sweden; the low end estimates differ substantially because the Swedish share of arrests specifically for drug offenses is so low. The more comprehensive estimates are closer to each other. In both nations prevention accounts for an almost trivial share of the total. Enforcement, mostly related to detention, accounts for the majority in both nations, three quarter of the baseline figures and even more of the high end estimates. The treatment figures, on a per capita basis, are surprisingly similar.

. Harm reduction is a more important component of Dutch expenditures and treatment less but some of the harm reduction/treatment differences between the two estimates may represent classification of programs rather than actual variation. For example, in the Netherlands some of the reintegration services for treatment clients are classified as harm reduction but may be included in the treatment category in Sweden.

Enforcement expenditure differences may also represent conceptual discrepancies. The estimates for the Netherlands include costs incurred for drug-related

crime, not merely drug offenses; the former account for about 25 percent[27] of the estimated drug enforcement total. Even subtracting that out, the Netherlands spends somewhat more on enforcement than Sweden. A Swedish police study reports that the share of crimes accounted for by drug abusers is substantially higher in Sweden than suggested by data in the Netherlands: 30-40% vs. 17%. That again may reflect definitional as well as actual differences, such as the higher prevalence of problematic drug use in Sweden[28]. Thus using the broader definition of drug enforcement for Sweden would again narrow the gap with the Netherlands, indeed perhaps even more than consistent use of the narrower definition.

Even so, the estimates still suggest that the Netherlands spends somewhat more on drug enforcement than does Sweden. Only some of the difference in the baseline estimates arises from the distinctive role of the Netherlands in interdiction in the Caribbean.

## IV. Conclusions and a Path Forward

Estimation of drugs policy budgets is complicated by conceptual disagreements and the absence of basic data for some of the critical elements. Progress requires agreement both on the conceptual issues, how expenditures can be classified, and on how data should be collected and used for estimation of basic quantities.

*What can be done with current data?* Comparing the Netherlands and Sweden, certain broad statements can be made with some confidence. Enforcement dominates the budget. Prevention expenditures are quite modest. The Netherlands spends more in all domains (on a per capita basis). Even weak and inconsistent data from a number of other nations may be good enough to test the generality of the first two propositions and to array nations into broad categories by expenditure categories..

*What are the weaknesses of the estimates?* Large items depend on estimates of parameters that are either dated or reflect surveys that are not entirely appropriate. New and better surveys might lead to major changes in the estimates, even if there are no

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27 For public prosecution and court services, 13% are assumed to be drug violations and 17% drug-related. For detention and alternative sanctions 27% are assumed to be drug violations and 17% drug related. This gives a total of 395 million Euro for "drug-related" offenders.

28 Data from the EMCDDA show a rate of about 2.6 for the Netherlands (1999) and about 4.5 for Sweden (2000. See http://annualreport.emcdda.eu.int/en/page087-en.html Statistical Table 5.

actual changes in expenditure. For example, a 2004 survey using a different diagnostic instrument and broader sampling might lead to an alteration in the estimated share of the population of clients in Swedish treatment clinics whose problems are primarily related to illicit substances; that would lower estimated treatment expenditures. Or a new Dutch survey might find that the average cost per treatment episode for an ever aging heroin addicted population has risen, thus raising the share of treatment expenditures that should be allocated to drugs rather than alcohol

The Netherlands and Sweden are among the leading EU nations in terms of the sophistication of their drug policy research. If the underpinnings of their estimates are fragile, this is even truer of the many nations which do not have surveys to provide estimates of, for example, the cost of treatment of drug abusers or of criminality of drug abusers.

**What needs to be done?**

The existing estimates are weak. They have broad ranges and can alter substantially as the result of methodological improvements Demand for improvements exists but is probably not strong. However there are forces that may generate a greater demand, namely those associated with the pressure for more accountability in government generally.

There is a practical program of research could strengthen drug budgeting. The EMCDDA is the obvious institution for doing so. Developing a methodology that allows for consistent estimation within the idiosyncracies of national budget and produces credible estimates might create a demand for these figures. Developing that methodology is a program of research, not a single study; it will take some time and a commitment from member nations.

The following are three steps that the EMCDDA might take:

*1. Provide a set of categories for program types and identify the kinds of agencies that are likely to be associated with each category.*

The broad categories used in this study (Prevention, Treatment, Enforcement and Harm Reduction) are not controversial, perhaps because their use has not been extensive. However there can be disagreement about what fits under each one and somewhat finer

categories may be helpful for some purposes. For example, within enforcement, distinguishing corrections from courts and policing, has policy value.

One lesson to draw from the detailed exercises that have been conducted so far (in the Netherlands, U.K. and U.S.A.) is that though many agencies can be identified as having drug-related programs, a small number probably account for the bulk of expenditures. For example, in the Netherlands, Rigter identified 14 agency types providing treatment; of these five accounted for over 90 percent. For harm reduction there were 11 distinct agency groups; two accounted for 85% of the total. In the U.S.. 54 federal agencies were recorded in 2002 as spending money on drug control; of these 28 accounted for a total of less than 5 percent of the total in 2002.

Improving estimates of a relatively small number of funding streams may be much more feasible than chasing down every small program that deserves, for example, the label treatment. It may also be relatively easy to reach consensus on what are the principal programs that need estimation. For example, policing (hard to estimate) and corrections (relatively easy) are likely to be very important. On the other hand, Emergency Room care is hard to estimate but predictably will be a small item in the total.

*2. Develop a set of guidelines for estimating the principal elements within each category.*

Many of the estimating problems are generic across nations. For example, for no nation are there published estimates of spending on drug prevention in schools. This spending is embedded in the larger instructional budget of schools. Each country faces essentially the same problem; estimating what share of instructional time is devoted to drug prevention and how that should be accounted for in budget terms. Though no doubt there are budget idiosyncracies for schools across nations, a great deal of progress can be made through a single study that develops a methodology for such estimates. The same might apply to estimating police and court expenditures; a project that examined in detail for a few police departments the relationship of various heuristics to a finer examination of resources going to drug enforcement and drug-related crime might provide guidance for all nations.

Considerable progress can be made through standardization of methods for calculation. The U.K. now appears to be the state-of-the art leader in the development of

comprehensive drug budget estimates. A central question will be whether it is possible to draw on the British experience, with its extensive reliance on a user survey as a source of estimates for reactive costs, to develop estimates consistently among member nations.

For treatment, it may also be possible to develop measures that can be used when specific estimates are not available for a specific country. For example, few nations have estimates of the relative costs of treating the average alcohol and drug abuse case; only generic substance abuse treatment costs are available. As the body of studies from the U.K. and other countries increases, a synthesis document could provide other nations with methods for estimating the drug specific costs until a country-specific estimate becomes available.

*3. Assess alternative methods for comparing expenditures across nations.* These numbers do not speak for themselves. While per capita comparisons are the most natural ones to make, it is not clear that they are the most compelling. For some purposes it would be more appropriate to use expenditures per problematic user. In particular, since the purpose of treatment is to help that specific population, any measure of adequacy or effectiveness would relate to that. However for other expenditure categories problematic users is a less compelling base. If enforcement is successful, then there will be few problematic users. Thus, it does not follow that a nation is being excessively punitive if it spends large sums on enforcement relative to the number of problematic users. More information would be needed to make such a judgment. For example a combination of low use, high enforcement expenditures and low prices for illicit drugs would suggest that the enforcement was excessive, that the low prevalence represented slight demand. These alternatives require systematic exploration.

While the focus of this study has been cross-national comparisons, the discussion has a more basic purpose, namely better national drug policy. If the EMCDDA is able to develop better guidelines for estimating drug budgets, that should help each member nation with its own decision making.

# APPENDIX A

# DRUG POLICY EXPENDITURES IN THE NETHERLANDS, 2003

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## Contents

**Summary**

This report identifies the items that should be considered when attempting to compute how much money is spent on drug policy in the Netherlands. It does not present a precise calculation; rather, the report is an exercise charting the pitfalls and opportunities for estimating drug policy expenditures.

I arrived at a total estimate of 2185 million Euro, with a lower limit of 1543 million and an upper limit of 3270 million. This broad range testifies to the uncertainty of many of the data that were collected. Where exact data were lacking – and this was quite common –I made approximations, representing expert judgment; some of these were rather crude.

To achieve more precise estimates, a much more detailed analysis would be needed. Even then, it would be hard to parcel out the drug component from more general budgets. Despite the importance attached by the Netherlands government to drug policy, in many accounts and budgets there is no clear specification of the money spent or to be spent on drug-related issues. There is room for improvement here, but this would require a heavy investment in data sources.

Four functions were distinguished:

- Prevention 42 million Euro
- Treatment 278 million Euro
- Harm reduction 220 million Euro
- Enforcement 1646 million Euro.

Although each of these estimates is approximate, it appears that Enforcement is the dominant expenditure.

# 1 Introduction

Methods

Drug policy in the Netherlands, with its 16 million inhabitants, is multifaceted. It involves a variety of parties and funding arrangements (Section 2). This complexity makes it difficult to calculate the amount of money spent on drug policy.

I started by examining the budget proposals for the year 2003 from each of the ministries of the national government. These extensive documents were submitted to Parliament in September 2002. Although drug policy is an important issue in the Netherlands, the key words index of these budget proposals rarely contain a referral to drugs. Expenditures on drug policy often are part of more general budgets.

I obtained additional information from white papers published by the ministries on drug-related topics. I also studied research papers and annual reports from organizations that carry out drug policy.

Where I failed to retrieve data from published sources, I asked civil servants and employees of a score of agencies to assist me in collecting the missing figures and to check my findings. Often, the available data were too general. For example, some budgets pertained to both drug and alcohol policy. In a number of enforcement statistics drug-related activities were hard to separate from the rest. And if a budget was allocated to drug policy only, it often was not clear which parts were spent on the four policy domains, namely Prevention, Treatment, Harm reduction, and Enforcement.

This being so, ways had to be found to parcel out the drug 'component'. I applied indicators and approximations, derived from a variety of sources, which are accounted for in this report. Some of the rules of thumb used are disputable. Incorrect assumptions may result in misleading figures especially where big budgets are concerned. Therefore, I varied the assumptions underlying the efforts to separate out the drug component from bigger budgets to see how this would affect the overall estimates.

Notes

The figures given in this report are appropriations, unless stated otherwise; they are denominated in Euros. The appropriations given are for 2003. Where those figures

were not available, I took prognoses for 2003 from policy documents[29], or earlier appropriations augmented with an annual rate of 5 percent, which is conservative.[1]

*Output financing* The national and local governments in the Netherlands are switching to systems of output financing, which are not yet fully in place. These systems allow agencies to exhaust the appropriations to the extent that real expenditures can be accounted for. Preliminary analyses indicate that the expenditure level for drug treatment is close to the appropriation level set by the national government, with under-utilization generally being less than 5 percent.[1] I do not know if such deviations are small for all drug-related budgets, but assume they are.[30] I did not correct for any gaps between appropriation and expenditure levels.

*Limited to governments* This report is limited to budgets that are spent or controlled by the national and local governments, including subsidies. I excluded payments by private sources, such as charity research funds.

*Personnel* Sometimes I had to estimate expenditures from the input of personnel in terms of full-time equivalents. I equated 1 full-time equivalent with 115.000 Euro per year. This average amount is composed of 55.000 Euro for salary, social benefits, health insurance and pension, augmented with 109 percent[31] overhead. Furthermore, I assumed that the average professional works 160 days a year on 'content' or the essence of his or

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29 The national government is planning budget cuts because of the state of the national economy. This may slightly affect the appropriations for 2003.

30 In some other cases, such as money spent by municipalities and the ministry of Justice, the expenditure level occasionally exceeds the appropriation level.[2, 3]

31 I selected two ministries for an in-depth analysis.[3, 4] The average salary of civil servants from the Ministry of Justice is about 45.000 Euro and for those from the Ministry of Defense 50.000 (civilians) to 56.000 Euro (military). These figures include the salaries of secretaries and other personnel with lower than average income. When I refer to 'personnel' in this report, I have in mind people with higher education and often an academic degree, justifying the (conservative) estimate of a mean annual income of 55.000 Euro. The 'overhead' for employees of the core Ministry of Defense (not the Army) is 127%, that of employees of the Ministry of Justice 88%. 'Overhead' is an ill-defined concept. In the case of Defense it includes matters like food, uniforms and flight training, in the case of Justice translators and legal assistance among many other things. Not counted as part of the overhead are the costs of secretarial and other administrative support. The annual tariff for a researcher from the Trimbos Institute is 113.000 Euro (in the career trajectory, 'researcher' is higher than 'junior researcher' but lower than 'senior researcher' and 'program head').[5] The salaries of the Trimbos Institute compare well with those of other research institutes.

her job, the remainder being spent on vacation, sick leave, general meetings, training, and other activities not directly related to 'content'.[5]

In Sections 3 through 6, I distinguish expenditures on Prevention, Treatment, Harm reduction and Enforcement, respectively. Some budgets are of a general nature, for instance for 'monitoring' or for personnel. I have allocated these amounts of money proportionally to the functions they support. One and the same budget may be categorized in policy documents under more than one heading. I have taken pains to avoid double counting, but may not have succeeded in all instances.

*Items not included* Excluded are investments in equipment, ships, planes, buildings and so on, unless they are buried in more general budgets. Neither are contributions listed to international bodies such as the European Union, the United Nations and the World Health Organization.

A number of expenditures could not be broken down to specify the drug policy component and thus are not included here either. Examples of topics are (1) homes offered by housing associations to 'vulnerable' persons – a much wider group than just (former) addicts, and (2) traffic control and traffic safety.

## 2 The major players in drug policy in the Netherlands

Drug policy in the Netherlands is the responsibility of the national government and the municipalities, with a negligible role for the states (provinces).

National government

Probably all thirteen ministries of the national government spend money, from taxes, on drug policy. The ministries with a major, traceable role are:

- The Ministry of Public Health, Welfare and Sport (VWS) - Public Health for short - is in charge of Prevention, Treatment and Harm reduction policies.
- The Ministry of Justice supervises the judicial sector, viz. public prosecution service, courts, houses of detention, prisons, alternative sanctions. It is mainly involved in Prevention and Enforcement activities. The ministry has an in-house research and documentation center, the WODC.
- The Ministry of The Interior and Kingdom Relations (BZK) - Interior, for short - is responsible for the police and for the municipalities. It contributes to Prevention, Harm reduction and Enforcement.
- The Ministry of Finance supervises Customs and the Fiscal Intelligence and Investigation Department (FIOD-ECD). This department contributes primarily to Enforcement.
- Foreign Affairs is involved in Enforcement, but this ministry also coordinates international consultation and information activities with regard to drug policy in the Netherlands.
- The Ministry of Defense contributes to drug policy especially through border control by the Royal Netherlands Military Constabulary at airports and by the marine, which patrols the waters around Aruba and the Dutch Antilles *inter alia*.
- The Ministry of Social Affairs and Employment is responsible for the implementation of the Social Labor Participation Act (WSW). This law promotes the labor participation of "persons who because of physical, cognitive or mental limitations are able to work regularly in adapted conditions only".[6] Part of the caseload are (former) drug addicts, although they are not registered as such.

- Together with the Ministry of Public Health, the Ministry of Education, Science and Culture (OC&W) finances the research funding agency ZonMw. The latter Department pays most of the time that teachers of elementary and high schools invest in drug education. It also pays many programs for the education and integration of ethnic minorities and the prevention of dropout from school, which is a major risk factor for the development of drug abuse and dependence.

Local government

The municipalities carry out decentralized national policy and, within permitted degrees of freedom, their own policy.

The municipalities are united in the Association of Netherlands Municipalities (VNG). The VNG advises and informs its members about drug issues, especially through its Support and Information Point Drugs and Safety (SIDV), which concentrates mainly on Harm reduction.

In big cities some civil servants may dedicate all of their time to drug topics. In smaller communities they carry out other tasks as well. The expenditures of municipalities mentioned in this report concern Prevention and Harm reduction.[32]

The municipalities have basically three sources of income:

- Municipal taxes
- A share from the Municipalities Fund distributed by the national government
- Special funds from the national government for drug policy, among other things. From this source drug-related projects and agencies are subsidized. Money may be added from other revenues.

Addiction care and treatment centers

Most of these institutions - addiction centers for short - have multiple functions, i.e., Prevention, Treatment, Harm reduction. They target alcohol and drug use, abuse and dependence.According to the latest count the Netherlands has 32 addiction centers, with offices at 231 locations. Of these locations, 144 offer ambulatory (outpatient) help, 22 'semi-mural' assistance (day treatment, sheltered housing) and 65 inpatient treatment.[1] Most of the treatment expenditures of the addiction centers are financed through the Exceptional Medical Expenses Act (AWBZ), which is administered under supervision of the Ministry of Public Health.[7]

The prevention tasks of the centers are mainly paid by the municipalities, which pass on moneys from a set of special funds granted mainly by the Ministry of Public Health. The addiction centers also carry out probation tasks, with money from the Ministry of Justice (see below).

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32 Not included under this heading is a link with Enforcement. The mayors of bigger municipalities have command responsibility for the regional police authorities.

Most addiction centers are member of the umbrella organization GGZ Nederland (Netherlands Association for Mental Health Care). This association receives a temporary subsidy from the Ministry of Public Health for its program 'Achieving Results', which aims at improving addiction care.

Social inclusion services

These are generally small organizations or units of bigger agencies that offer sheltered housing, bed and breakfast, daytime activities and assistance in times of crisis. In other words, facilities for Harm reduction. Substantial parts of the clientele are the homeless, who may or may not be addicted to alcohol or drugs. Beyond the scope of this report are services for battered women and other women (and their children) who are in need of a time-out or a temporary home.

The umbrella organization for social inclusion services is Federatie Opvang.

Municipal Health Services

There are forty Municipal Health Services in the Netherlands. They are financed by the municipalities from money transferred by the Ministry of Public Health through the Collective Prevention Public Health Act. Another source of income is the above-mentioned set of special funds, which originate mainly from the Ministry of Public Health.

With respect to drug policy, the main tasks of the Municipal Health Services are Prevention and Harm reduction. The Service in Amsterdam and general physicians in that city also offer Treatment, in the form of methadone maintenance, which is delivered elsewhere by the addiction centers.

Additional (small) addiction care organizations

Apart from the addiction centers, the social inclusion services and the Municipal Health Services, a number of other local services offer Prevention and Harm reduction interventions, such as health education and exchange of used syringes and needles. The appropriations to these small organizations are buried in more general subsidies and local budgets for Prevention and Harm reduction and will not be specified in this report.

General health care

General physicians and medical specialists, general hospitals, and other health care professionals and institutions also provide treatment services, within the framework of the

National Health Service Act. In addition to the local Municipal Health Service, about half of the general physicians (family doctors) in Amsterdam prescribe methadone, while these practitioners are rarely involved in this kind of treatment in the rest of the country.

Trimbos Institute

The Trimbos Institute - Netherlands Institute of Mental Health and Addiction - is the national center of expertise for drugs and mental health. The division of expenditures between these two areas is about fifty-fifty. Half of the income of this institute comes from the Ministry of Public Health and the other half from a variety of domestic and international funding agencies. Virtually all the moneys listed below are from the ministry mentioned. The Trimbos Institute focuses on Prevention, Treatment and Harm reduction.

The National Drug Monitor

The National Drug Monitor (NDM) was established in 1999 on the initiative of the Ministers of Public Health and Justice. The NDM is an inter-institutional grouping with two main functions:

- Acting as a coordinating body for drug-related surveys and registers that are in progress or have been completed in the Netherlands
- Submitting report on facts and figures to the national government and to international and domestic organizations. The international bodies include the WHO, the United Nations, and the European Centre for Drugs and Drug Addiction (EMCDDA).

The NDM staff is located at the Trimbos Institute. Each year, the NDM - in its function of the Netherlands Focal Point - reports to the EMCDDA data on five key indicators:

- *Drug use in the general population.* Two studies are of interest here:
- NPO, the National Prevalence Survey, carried out by the University of Amsterdam among a nationally representative sample of people aged 12 years and older
- The National Representative School Survey, taken by the Trimbos Institute among pupils of secondary schools. Both surveys are run once every three to four years.
- *Problem use and dependence*. Data come from various sources. Mentioned here is the appropriation to the MAD - the Regions and Towns Monitor for Alcohol and Drugs. The MAD is carried out by the Trimbos Institute and the IVO research center in Rotterdam and Maastricht.
- *Treatment demand*, i.e., the burden placed on treatment and social services. The IVZ agency processes and reports most of the available data.

- The National Institute of Public Health and the Environment (RIVM) monitors *drug-related morbidity*, mainly hepatitis B and C and infections by HIV.
- *Drug-related mortality*. This is recorded by the agency CBS (Statistics Netherlands).

The monitors in question bear on Prevention, Treatment and Harm reduction. Except for the CBS register, which is of no interest here because of the low rate of drug-related mortality in the Netherlands, they are all paid, at least in part, by the Ministry of Public Health.

Penitentiary institutions

The major enforcement agencies have already been mentioned above, in relation to their supervising ministries. Besides Enforcement, the penitentiary institutions serve the function of Treatment. General treatment modalities for drug using detainees are:

- So-called standard schemes
- Special psychiatric prison units
- The Secure Psychiatric Observation and Treatment Unit (FOBA) in Amsterdam, where detainees going through a crisis are placed
- The Penitentiary Selection Center in Scheveningen
- Dedicated drug-free prison wings (VBAs)
- Ten Inpatient Motivation Centers, mainly intended for drug users who persistently cause nuisance, but who are not yet ready to accept regular treatment or other help
- One forensic drug treatment clinic
- Judicial Treatment of Addicts (SOV) units. The SOV Act has come into force in 2001. This mandatory (coercive) intervention is intended for drug-dependent male offenders with at least three convictions in the past five years and unsuccessful drug use cessation attempts.
- (Other) facilities for social resettlement.

Probation Foundation

This Foundation distributes money from the Ministry of Justice to three parties:[8]

- GGZ Nederland, for 'addiction probation', covering 20 percent of all probation[33] clients. GGZ Nederland passes on the money to fifteen addiction centers.
- The Salvation Army, which looks after 10 percent of all probation clients, viz. homeless people with a criminal record.
- The Dutch Probation Service, which takes care of all others.

The first one is relevant here. I classify probation as part of Treatment (counseling).

ZonMw

33 Probation = probation and parole supervision.

This is the national funding agency for health research and health care research. ZonMw distributes subsidies from the Ministries of Public Health and Education, which determine the topics on which the money should be spent. The most relevant program of this agency is 'Addiction', but other programs such as Prevention, Public Health, and Cultural diversity occasionally also subsidize drug research.

## 3 Prevention

School drug prevention programs

The program 'Healthy School and Substances' runs at over 75 percent of all high schools and at a limited number of elementary schools in the Netherlands.

- The general coordination rests with the Trimbos Institute.
- The Prevention departments of eighteen addiction centers and professionals from the Municipal Health Services act as intermediaries, instructing schools and teachers.
- The school education effort of the addiction centers equals 18 percent of the total drug policy capacity of all Prevention departments, which is 32,8 full-time equivalents.[34][9]
- The forty Municipal Health Services spend on average 200 hours a year on the 'Healthy School and Substances' and similar school drug prevention programs.[35]
- In 1999, 70 to 75 percent of all high schools took part in the 'Healthy School and Substances'. Presently, about 500.000 pupils follow at least three drug education classes each year.[10] With one teacher for every 25 students, this amounts to 60.000 teacher hours.[36]

  See Table 1.

*Table 1 School drug prevention programs*

| *Agency* | *Appropriation or estimated expenditures, 2003* |
|---|---|
| Trimbos Institute | 586.000 |
| Prevention departments of addiction centers | 3.772.000* |
| Municipal Health Services | 576.000* |
| Schools | 4.320.000* |

34 Surveyed by questionnaire. Estimate corrected for non-response.

35 Surveyed by telephone. 1 full-time equivalent = 115.000 Euro a year (see above). Assuming that the average prevention worker has 160 hours available for actual prevention activities, this equals 72 Euro per hour.

36 72 Euro per hour. See previous footnote.

| | |
|---|---|
| **Total** | **9.254.000** |

Sources: [5, 9] supplemented by enquiry by telephone
* Estimated expenditures

Mass media campaigns

In the Netherlands there are separate campaigns on alcohol and drugs. The Trimbos Institute carries out the drug-related activities. This is done in collaboration with the Prevention departments of the addiction centers, which allocate 2 percent of their capacity, equaling 4 full-time equivalents in total, to contributions to mass media campaigns.[9]

The campaigns not only comprise media advertisements, but also educational materials and preventive interventions in local and regional communities.

*Table 2 Mass media campaigns*

| *Agency* | *Appropriation or estimated expenditures, 2003* |
|---|---|
| Trimbos Institute | 1.041.000 |
| Prevention departments of addiction centers | 460.000* |
| **Total** | **1.501.000** |

Sources: [5, 9]
* Estimated expenditures

National Drug Monitor, monitor projects

Table 3 presents the appropriations granted by the Ministry of Public Health for 2003.

Table 3 Monitoring

| *Monitor* | *Appropriation, 2003* |
|---|---|
| National Drug Monitor | 458.000^ |
| School survey | 199.000# |
| MAD | 76.000# |
| HIV monitor+ | 29.000 |

| | |
|---|---|
| Mental health monitors[++] | 50.000 |
| **Total** | **812.000** |

Source: [5]

^ The total budget is 733.000 Euro. Seven out of nine sections in the Annual Report of the NDM are on drugs (the other two are on alcohol and tobacco). 7/9th Part of 733.000 = 570.000 Euro. About one-quarter of each section is on Treatment; the rest is attrributed to the function Prevention (75% of 570.000 = 428.000). Added is 30.000 Euro for the addiction section in the so-called Branch Report.[1]

# No allowance made for other substances in these surveys: alcohol and tobacco. Apart from the analyses, the surveys would cost almost as much without these additional topics. In 2003, there is an appropriation to the School Survey, but not to NPO (general population survey, last measurement round 2001).

\+ 11% of 260.000 Euro (11% of HIV cases are thought to be due to intravenous drug injection; see Section 5).

++ Addressing drug use (disorders) constitutes at most 5% (= 50.000 Euro) of this research effort.

Other

This category (Table 4) comprises:

*Personnel of the Ministry of Public Health* There are two components:

- The 2003 appropriation to the directorate of Mental Health, Addiction and Social Inclusion of this ministry is 2,9 million Euro.[13] From the distribution of subsidies granted by this directorate and from the annual white papers on drug policy, I infer that this capacity is about equally spent on Prevention, Treatment and Harm reduction, so one-third each.
- The Health Care Inspectorate manages the CAM, the Coordination Center for the Assessment and Monitoring of New Drugs. The predominant function of CAM is Prevention, as it signals drug developments that may endanger public health. The 2003 appropriation to CAM amounts to 80.000 Euro.

- *Trimbos Institute*

I refer here to prevention projects and programs paid by the national government other than the ones mentioned above. These include the National Support Center for Prevention (LSP) and the national telephone help-line annex helpdesk, which receives over 30 thousand calls a year. Also counted is the appropriation to the Drugs Information and Monitoring System (DIMS), which is a market monitor (Which synthetic drug

preparations are on the market?) but with clear-cut prevention connotations (red alert actions, health education).

The institute has budgets for general expenses such as management, the library and information and communication technologies, totaling 1.952.000 Euro. I attribute 37 percent of this amount to drug prevention.[37]

- *Prevention departments of the addiction centers* Drug prevention tasks other than the ones already listed take roughly 38 percent of the capacity of these departments.[9] These activities range from health education, courses and educational support to consultation and advice.
- *GGZ Nederland* I list here the prevention part of the subsidy granted by the Ministry of Public Health to GGZ Nederland, the umbrella organization of addiction centers, for its program 'Achieving Results'
- *ZonMw* The 'Addiction Program' of ZonMw has allocated 1.967.000 Euro to drug prevention projects in 2003. Other programs spend 900.000 Euro on this topic.[38]
- *Relevant prevention and education projects funded by ministries* I distinguish here the Ministry of Public Health and all other ministries, respectively. The Directorate of GVM of the Ministry of Public Health provided a list of subsidies. Where this list did not distinguish between functions, I allocated one-third of the budgets to Prevention, Treatment and Harm reduction each. I added 7,5 percent of the appropriation to the Bureaus of Youth Care, based on sparse data on the problems of the clientele of these agencies.[1] Also added is a fraction of the Action plan against ecstasy (Section 6).

From an analysis of all publicly funded prevention projects registered by the Foundation Youth Information Netherlands[11], I estimate the 'drug' share at 8,5 percent.[39] I assume that this percentage also applies to the sub-set of the (mostly) youth

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37 This figure stems from an analysis of all appropriations by the national government to the Trimbos Institute in 2003, 37% of which are meant for drug prevention.[5]

38 www.zonmw.nl (projectenpoort) and e-mail correspondence.

39 Using the key word 'addiction' and looking closer at projects with the key word 'school drop-out'. A word of caution is needed. The database in question is incomplete and it does not give consistent information on funding arrangements and the original source of funding.

oriented prevention and education projects funded by mainly the Ministries of the Interior, Justice, and Education.[40]

*Table 4 Other expenditures on prevention*

| *Agency, projects* | *Appropriation or estimated expenditures, 2003* |
|---|---|
| Personnel of the Ministry of Public Health | 1.047.000 |
| Trimbos Institute | 2.937.000 |
| Prevention departments of addiction centers | 6.095.000* |
| Prevention part of 'Achieving Results' | 220.000 |
| Prevention projects paid by the Ministry of Public Health** | 5.414.000 |
| Prevention projects paid by ZonMw | 2.867.000 |
| Prevention and education projects funded by other ministries | 11.386.000 |
| **Total** | **29.966.000** |

Source: [5, 9, 12, 13] supplemented by enquiry by telephone and e-mail
* Estimated expenditures
** Excluding appropriations to other entries in this Table.

Total expenditures on prevention
Table 5 sums up the totals of Tables 1 - 4.

*Table 5 Total expenditures on prevention*

| *Activity* | *Total amounts (Euro) from Tables 1 - 4* |
|---|---|

40 Applying the keywords from the previous footnote to an inventory by the Ministry of the Interior [12] I identified 11 out of 60 programs as being relevant. The budget for these eleven programs totaled 139.251.000 Euro, of which 8,5% is 11.836.000. Budget articles: BZK 4.2, BZK 2.4, BZK 9.3, Jus 3.4.6, Jus 3.1.10, VWS 3.1.5, Jus 3.4.1/3.4.5/5.1.6, OC&W 4.3, OC&W 3.1, OC&W 1.1, VWS 16.08.01. VWS = Directorate Youth, Ministry of Public Health. The inventory focused on programs that are of relevance to (also) ethnic minorities. The amounts of money that are recorded in the inventory sometimes come from bigger budgets with more general goals. For lack of detailed descriptions of other parts of these bigger budgets, I could not separate out any spending on drug-related issues. Thus, the figure in the table is likely to be an underestimation.

| | |
|---|---|
| School drug prevention programs | 9.254.000 |
| Mass media campaigns | 1.501.000 |
| Monitoring | 812.000 |
| Other | 29.966.000 |
| **Total** | **41.533.000** |

## 4 **Treatment**

Two types of treatment can be distinguished, one aimed at abstinence or at least reduction of drug use, the other at personal and social stabilization through counseling and rehabilitation. I list both types in one and the same table (Table 6).

- *Personnel of the Ministry of Public Health* See Section 3. Added is 1 full-time equivalent for the Health Care Inspectorate. Excluded is the appropriation to the Office for Medicinal Cannabis, which is housed at this ministry, as the medical use of cannabis should not be likened to the treatment of drug users.
- *Treatment demand registries* The key treatment demand register in the Netherlands is LADIS, managed by the organization IVZ (Organization Care Information Systems). Another register - LMCR - is restricted to methadone maintenance treatment and medically prescribed heroin. The LMCR is not limited to treatment demand. Its main focus is on quality of care by helping physicians wherever they work (also in the Municipal Health Services and in penitentiary institutions) to avoid medical errors, double prescriptions and 'leakage' of opiates to the black market.
- *Trimbos Institute*The budget of this institute for Treatment was calculated as described for Prevention in Section 2.
- *Addiction center* In 2000, the ambulatory treatment locations registered more than 53.000 clients, of whom 30.000 presented with a primary drug problem (53%).[8, 25] The remainder concerned a primary alcohol problem, gambling or addiction to legal medicines. I use the 53% figure here to parcel out the drug component of the treatment appropriation to the addiction centers.

- The 2003 AWBZ appropriation to addiction centers is 140,1 million Euro.[14] Virtually all of this money is intended for Treatment. 53 Percent of this amount is 74,3 million Euro.

- *General health care*

- According to a cost-of-illness study the total direct addiction treatment costs of addiction centers outweigh those of general health care by 3 to 1.[15] This study did not discriminate between alcohol and drugs. Alcohol is much more a problem in general practice, hospitals and nursing homes (Korsakow) than drugs are. I arbitrarily set

the share of drug problems in the general health care expenditures on 'addiction' at 10 percent.

- As noted, the treatment appropriation to the addiction centers adds up to 140,1 million Euro.

Based on the cost-of-illness study and the estimated drug component, general health care spends 10 percent of one-third of this amount on treating drug-related problems, i.e., 4,7 million Euro.

- *The Ministry of Public Health and ZonMw*

Both agencies fund research and development projects on treatment. Of special note - and mentioned separately - is the continuation of the heroin prescription experiment, subsidized by the Ministry of Public Health.[13]

- *Methadone*

Pharmaceutical expenditures on methadone are budgeted by CVZ, the Health Care Insurance Board. Methadone is mainly used for maintenance treatment.[41]

- *Probation*

Mentioned is the appropriation of the Ministry of Justice to GGZ Nederland.[42]

- *Penitentiary institutions*

Prisons and other penitentiary institutions have modest treatment programs for addicts.[BR] The expenditures on these programs are dwarfed by the costs of enforcement, from which they cannot be separated fully. Some of the treatment programs are exclusively for addicts, some for all people with mental disorder. In two epidemiological studies 29 percent of the detainees classified for the diagnosis of drug dependence in the year before the survey. These persons account for about half of all detainees with one or more mental disorders.[43] An incomplete count of the number of slots in these programs in 2000 arrives at 842 places for drug addicts.[44][26] The average

41 The amount given in the table is the 2003 subsidy to all health care agencies except general practitioners (information provided by CVZ). I assume that the methadone medication given by general practitioners is covered in the item 'General health care'.

42 Information from GGZ Nederland.

43 See reference 26 for a review.

44 I assumed that drug dependent persons account for half of the capacity of the treatment slots for detainees with mental disorder in general. The 842 slots is an underestimation as it does

detention 'place' costs 190 Euro a day, or 66.900 per year.[3] 842 times 66.900 is just over 56 million Euro.

- *The Judicial Treatment of Addicts Act*

This Act - SOV in Dutch - attempts to achieve abstinence and rehabilitation by coercing inmates into a special detention program. SOV is implemented stepwise and its effectiveness in reducing relapse is evaluated.

- *The Social Labor Participation Act*

- In the parlance of this Act, the people accepted for adjusted labor are either physically, cognitively or (one-third) mentally 'handicapped'. Mental handicap is not specified.[45][21] Dual diagnosis (mental disorder plus addiction) is common among persons with chronic mental disorder, with estimates in the literature varying from 20 to 60 percent. 'Addiction' often extends to more than one substance, for instance alcohol and one or more drugs. The appropriation for implementation of the Act is 2061 million Euro. I conservatively set the '(drug) addiction' component at 10 percent of one-third (mental handicap) of this amount.

I decided against the possibility to classify the adjusted labor as Harm reduction instead of Treatment.[46]

- The Ministry of Social Affairs and Employment has more budgets that may benefit (former) drug addicts. I do not have the remotest notion of the share that is spent in favor of these people, so I disregard these budgets here.

*Table 6 Expenditures on treatment*

| *Agency, projects* | *Appropriation or estimated direct costs,* |
|---|---|

not include data on, for instance, the Penitentiary Selection Center, the Inpatient Motivation Centers, and the forensic drug treatment clinic. SOV is listed separately. The price of 192 Euro for a place (slot) per day does not differentiate between treatment and detention. On the other hand, the costs of more or less specialized treatment slots are bound to be higher than the average amount of 192 Euro.

45 'Mental handicap' = mental disorder. Mental retardation is part of the category of cognitive handicap.

46 I consider the program for adjusted labor as treatment rather than harm reduction. Its main function is not to keep people off the streets, but to help them to gain self-respect and to learn the skills that may enable them to find and keep and independent position on the labor market.

| | *2003* |
|---|---|
| Personnel of the Ministry of Public Health | 1.085.000 |
| Treatment demand registers | 670.000 |
| Trimbos Institute | 230.000 |
| Addiction centers | 74.300.000 |
| General health care | 4.700.000* |
| Treatment part of 'Achieving Results' | 159.000 |
| Treatment projects paid by the Ministry of Public Health** | 2.719.000 |
| Treatment projects paid by ZonMw | 6.967.000 |
| Continuation of the study into medically prescribed heroin | 6.600.000 |
| Pharmaceutical expenditures on methadone | 2.400.000 |
| Probation | 30.495.000 |
| Special treatment programs in penitentiary institutions | 56.330.000 |
| Implementation and evaluation of the Judicial Treatment of Addicts Act (SOV) | 22.250.000 |
| Helping (former) addicts to (re-)enter the labor market | 68.700.000 |
| **Total** | **277.605.000** |

Source: [5, 12, 13, 14] supplemented by enquiry by telephone and e-mail

* Estimated direct costs

** Excluding appropriations to other entries in this Table.

## 5. **Harm reduction**

- 'Harm reduction' is difficult to define. Most of the activities mentioned here also serve to some extent Prevention, Treatment or Enforcement purposes. Conversely, some of the items under the headings of Prevention and Treatment bear on Harm reduction too. I assume that the two types of overlap balance each other out.
- 'Harm reduction' comprises, among other things, (sheltered) housing, centers for day activities, exchange of syringes and needles, general health care for drug-related infectious diseases, and user rooms. Most needle and syringe exchange programs are run by Prevention departments of addiction centers and by Municipal Health Services.

- *General health care* I consider treatment of people with infectious diseases arising from drug use as Harm reduction. The cost-of-illness study cited above arrived at a figure of 20,6 million Euro direct treatment costs for HIV, AIDS and hepatitis in 1999, which is 23,8 million in 2003 using a 5 percent annual increase rate.[15]

Intravenously injecting drug users account for 11 percent of all cases of AIDS in the Netherlands, and thus supposedly for HIV as well.[8] If the same percentage applies to hepatitis (B and C) cases, general health care expenditures for drug-related infectious diseases amount to 11 percent of 23,8 million, which is 2,6 million Euro.

- *The Ministry of Public Health and ZonMw* Both agencies pay projects on Harm reduction. The ministry also funds national organizations for social inclusion facilities and the so-called Operation Heartbeat.[13] As in previous sections, the subsidy to 'Achieving Results' is mentioned separately.
- *Municipal Health Services* These agencies also work on Harm reduction. Most of the activities concerned are paid from the below mentioned special funds, urban policy, and other budgets of the municipalities. I refrain from making an estimate here to avoid double counting, with one exception, i.e., a subsidy from the Ministry of Public Health to implement a hepatitis B vaccination program for intravenously injecting drug users.
- *Personnel of the municipalities* The 43 so-called core municipalities have on average 0,5 full-time equivalent each for addiction (mainly drug) policy in a narrow sense.[16] The other hundreds of municipalities, which do not benefit from the special funds from the national government, may nevertheless carry out drug policy. I have no

clue as to the size of their efforts, but suppose that the total is at least as big as that of the 43 core municipalities together.

It impossible to say how the municipalities divide their capacity between Prevention and Harm reduction. Prevention is mostly farmed out to the addiction centers and the Municipal Health Services, while Harm reduction requires a bigger time investment by the civil servants themselves. I attribute this entire item to the function Harm reduction.

- The 43 core municipalities assign on average 0,5 full-time equivalent civil servants to social inclusion policy.[16] Of this 45 percent (9,7 full-time equivalents) should be attributed to drug policy (see below), as social inclusion agencies serve addicts in great numbers.

- Added are 2 full-time equivalents for staff working at the SGBO, the research and documentation center of the Association of Netherlands Municipalities (VNG), and as many equivalents for the VNG's Support and Information Point Drugs and Safety (SIDV).[47]

- *Funds from the Ministry of Public Health to the municipalities*

- The joint funds for 'addiction care and social inclusion' amount to 259,3 million Euro in 2003.[48][14]
- The municipalities use about 60 percent of these revenues (156 million Euro) for addiction care proper.[1, 16] This amount is not just for drug policy, but also for alcohol issues. Using the 53 percent proportion rule I estimate the 'drug' component at 83 million Euro. This money is intended for Prevention and Harm reduction. I calculated the drug prevention expenditures to be 13.456.000 Euro (Prevention departments of addiction centers, Tables 1, 2 and 4). This leaves about 70 million Euro for Harm reduction.
- Part of social inclusion policy (103,3 million Euro) targets drug use and drug users. Based on the share of addiction centers in collaborative public health projects[1], I estimate the 'addiction part' in the social inclusion expenditures from these funds at 45 percent, or 46 million Euro.

- *Urban policy*

  In the items above, it was the drug user who benefited from harm reduction. Another sort of harm reduction are measures to protect the community against nuisance caused by drug users and dealers. The urban municipalities and especially the twenty-five major cities receive special funds from ministries to reinforce social cohesion and public safety.[12] Part is used to reduce drug-related 'public nuisance'. I assign this entire item to Harm reduction.[49]

- *Other budgets available to municipalities*

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47 Sum total of all items under this heading = (43 x 0,5) + (43 x 0,5) + 9,7 + 4 times 115.000 = 6.521.000 Euro.

48 After deduction of about 27 million Euro for support facilities for women in distress.

49 The most recent estimate of the part spent on "core" drug policy is 160 million guilders, or 73 million Euro.[22] The overall 2003 appropriation to urban policy is 3.5 billion Euro.[12]

Additional money for local drug policy comes from the municipalities themselves, the provinces and health care insurance agencies. In 2001, this jointly amounted to 20,5 million Euro, corrected for non-response (53% for drugs = 10,9 million).[16] I assume no change for 2003.

Table 7 Expenditures on harm reduction

| *Agency, projects* | *Appropriation, estimated direct costs or expenditures 2003* |
|---|---|
| Personnel of the Ministry of Public Health | 970.000 |
| Trimbos Institute | 378.000 |
| General health care | 2.600.000* |
| Harm reduction part of 'Achieving Results' | 272.000 |
| Harm reduction projects paid by the Ministry of Public Health+ | 6.635.000 |
| Harm reduction projects paid by ZonMw | 1.967.000 |
| Municipal Health Services, hepatitis B vaccination | 1.200.000 |
| Personnel of the municipalities | 6.521.000* |
| Special funds from the Ministry of Public Health to municipalities, part spent on Harm reduction | 116.000.000 |
| Social cohesion and public safety funds from various ministries (urban policy) | 72.727.000* |
| Other budgets available to municipalities | 10.900.000* |
| **Total** | **220.170.000** |

Source: [5, 12, 13, 14, 16] supplemented by enquiry by telephone and e-mail.

* Estimated expenditures

\+ Excluding appropriations to other entries in this Table.

## 5 Enforcement

The majority of enforcement activities in the Netherlands target supply reduction. Possession of drugs for personal use may be sanctioned occasionally.
My estimates of drug-related expenditures on public prosecution, courts and detention are of necessity rather crude and partly based on old data. The Ministry of Justice is developing an elaborate costing model, which may yield better figures in the near future.
This section lists spending by independent entities such as the police force, the army, customs, and so on. Also included is a section on inter-ministerial programs, correcting for double counting.

Police
The police has a major role in drug policy (not just Enforcement, but also Prevention), but there is a conspicuous lack of data as to the investments in drug issues. I have to settle for crude estimates (Table 8).

- Extrapolating from the first half of 2003, 1710 police days are being spent on raids in neighborhoods and gypsy and other camps suspected of cannabis cultivation.[27] The personnel input from fire brigades, electricity plants and destruction companies is not known.
- In the period 1997 - 2001, the average share of Opium Act offenses in the total number of cases leading to detention verdicts in courts was 13 percent.[23] Assuming that this figure also applies to police work, the regional and national police effort in drug law enforcement can be estimated at 13 percent of 3297 million Euro.[50][12]

Table 8 Expenditures on enforcement by the Police

| *Activity* | *Appropriation or estimated expenditures 2003* |
|---|---|
| Raids | 1.231.000* |
| Other policing activities | 429.000.000 |
| **Total** | **430.231.000** |

Source: [12] and e-mail correspondence.
* Estimated expenditures

Army
The two Army branches that are most involved in drug policy are the Royal Netherlands Military Constabulary (military police) and the Royal Marine (Table 9).

- *Royal Marine*
  The figures given here only concern the stations at Aruba and the Dutch Antilles and thus may be an underestimation.

50 Excluding appropriations to other items in this section. The estimate is likely to be too low, as the police settles Opium Act offenses overly through a caution or a fine, rather than referring the case to the public prosecution office. This office also settles cases outside the court. In other words, the cases seen by the courts are a biased selection of all Opium Act offenses.

- The 2003 'operational' budget for this section of the Marine amounts to 70,5 million Euro.[51][4]
  The salaries of this section of the Marine sum up to 3,6 million Euro.
- Eighty percent of the capacity of this Royal Marine section should be devoted to drug policy.[24] The corresponding proportion of 74,1 million Euro is 59,3 million.

• *Royal Netherlands Military Constabulary*
  This service has a variety of tasks, of which only policing activities at civilian airports are considered here.

- The 2003 'operational' budget for these activities approximates 8,2 million Euro, which is 2,7 percent of the total Constabulary's 'operational' appropriation.[4] Of this amount an estimated 10 percent is spent on issues arising from drug policy.
- The salaries and other personnel expenditures for all of the Constabulary add up to over 304 million Euro.[4] Based on the just mentioned 2,7 percent share, the proportion for the policing work is (also) 8,2 million Euro, of which an estimated 10 percent relates to drug policy.

Table 9 Expenditures on enforcement by the Army

| *Army branch* | *Appropriation 2003* |
|---|---|
| Royal Marine, operational and personnel budgets | 59.280.000 |
| Royal Netherlands Military Constabulary, operational budget + ICT | 820.000 |
| Royal Netherlands Military Constabulary, personnel budgets | 820.000 |
| **Total** | **60.920.000** |

Source: [4].

Ministry of Finance

Two agencies are of relevance here.[17]

• *FIOD-ECD*
  The unit investigates fiscal offenses, money laundering and trespasses of the Drug Precursors Act. Its capacity for handling drug-related topics is at least 40 full-time equivalents, not counting the extension of capacity to be realized in the Action plan against ecstasy.

• *Customs*
  Customs officers control border traffic mostly at airports and harbors.

- The so-called Schiphol (drug) team counts 53 full-time equivalents, not including the extension of capacity for apprehending drug couriers (see below).
- For lack of data, I assume that other customs capacity for dealing with drug issues is twice that of the Schiphol team.

Table 10 Expenditures on enforcement by the Ministry of Finance

51 70.819.000 Euro, including 0,75 percent (361.000 Euro) of the Marine's 48 million Euro budget for information and communic ation technologies (ICT).[4]

| *Agency* | *Estimated expenditures 2003* |
|---|---|
| FIOD-ECD | 4.600.000 |
| Customs, Schiphol airport | 6.095.000 |
| Customs, other sites | 12.190.000 |
| **Total** | **22.885.000** |

Source: [17] and e-mail correspondence.

Ministry of Justice

There are four main categories of expenditures (Table 11):

- *Research and documentation institutes and projects*
  This item includes drug-related activities of the WODC and the NFI, and other research subsidies granted by the Ministry of Justice that have not been listed elsewhere in this report.
- *Public prosecution*

- The public prosecution service has established four investigation 'core teams' and additional sub-teams for drugs. One core unit specializes in synthetic drugs together with the USD, the second in Eastern Europe (read: heroin), the third in South America (read: cocaine) and the fourth in cannabis. The appropriation to the synthetic drugs core team is known (1.276.000 Euro). Supposedly, the other core teams each receive the same amount of funding. Data on the sub-teams are lacking, which means that the figure in the table underestimates the real expenditure level.
- Other costs of the public prosecution service concern the handling of arrested persons. The 2003 appropriation to this service amounts to about 400 million Euro.[52][3] As noted, the mean share of Opium Act offenses in the total number of cases leading to detention verdicts in courts can be estimated at 13 percent.[23] Assuming that this figure also applies to the case load of the public prosecution service[53], the corresponding expenditures may be set at 52 million Euro.
  In addition to Opium Act offenses, other drug-related crimes, such as theft and robbery, are at issue here. Based on old data (1993 and 1995), the share of drug addicts in the total number of court verdicts can be set at 17 percent, disregarding the small overlap with Opium Act offenses.[23] This proportion equals 68 million Euro.

- *Courts*
  The total 2003 appropriation to 'courts' is 1.037.408.000 Euro.[54][3] The drug-related share is the above mentioned 13 percent (Opium Act offenses) plus 17 percent (mostly property crime).
- *Detention*
  In 2003, the Ministry of Justice appropriated 1.339.624.000 Euro to detention facilities and alternative sanctions.[3] From this figure should be subtracted the 56.330.000 Euro allocated to treatment in penitentiary institutions (Table 6). Of all 'detention years', 27 percent is

52 After deduction of the expenditures on the investigation units.

53 Probably an underestimation.

54 This includes the costs of the High Court and of legal assistance to those who are not able to pay a solicitor from their own pocket.

accounted for by convicts who trespassed the Opium Act.[23] I assume that a further 17 percent (see above) should be attributed to detention and alternative sanctions for other drug-related crimes.

Table 11 Expenditures on enforcement by the Ministry of Justice

| *Items* | *Appropriation 2003* |
|---|---|
| Research and documentation | 3.100.000 |
| Investigation units of the public prosecution service | 5.104.000 |
| Other costs of the public prosecution service | 120.000.000 |
| Courts | 311.222.000 |
| Detention and alternative sanctions | 564.649.000 |
| **Total** | **1.004.075.000** |

Source: [18, 19, 20] supplemented by enquiry by telephone and e-mail.

Joint programs of more than one ministry

I exclude here expenditures that are accounted for elsewhere in this section.

- *Drug couriers*
  In 2001, the national government decided on a special program to tackle the increasing smuggle of cocaine by airplane travelers from mainly the Caribbean area, most of whom swallow pellets of the drug.
- Measures include pre-flight controls in Aruba and the Dutch Antilles; increased policing at Schiphol airport; strengthened collaboration between the police, the Constabulary, and the public prosecution service; and the creation of special, temporary detention spaces.
- Expenditures amounted to 95,6 million Euro in 2002[18] and I assume no change for 2003.
- *Synthetic Drugs Unit (USD) and other ecstasy teams*
- This special unit was formed in 1997 to fight the production and trafficking of ecstasy, amphetamines and related drugs. The USD consists of representatives of many law enforcement bodies, viz. the police, the public prosecution service, FIOD-ECD, Customs and the Constabulary.[55][19]
- Elsewhere in the country, other 'ecstasy teams' are at work. The appropriation to these units is 5,8 million Euro.[12]
- *Ecstasy*
  The Ministry of Justice coordinates an action plan against ecstasy, which runs from 2002 through 2006.[20] The capacity of the police, the Netherlands Forensic Institute, the USD, FIOD-ECD, customs, the Constabulary, the public prosecution service and the courts will be expanded. Goals are to increase the rate of arrests and convictions of producers and traffickers of ecstasy and to sharpen border patrol and the control of precursors of ecstasy.

55 Excluded here are the expenditures of the public prosecution 'core team' working together with the USD (these are included in Table 11).

The annually available budget to pay these and other measures is 18,6 million Euro, of which 1,1 million is meant for Prevention and Harm reduction.[56]

- *Crime Investigation Collaboration Team (Recherchesamenwerkingsteam, RST)*
  The RST is a collaboration between the Netherlands, the Dutch Antilles and Aruba to fight organized crime, with an emphasis on drugs.[24]
- *A-team*
  The A-team – called after the international A16 freeway – is based on cooperation between Belgium, France, Luxembourg and the Netherlands. Police and fiscal investigation services are involved. The team looks for drug runners and tourists on the freeway and in the train.
- *Personnel of ministries*
  I refer here to expenditures on personnel of ministries[57] other than the core Ministry of Public Health. A number of the civil servants in question work together in national and international bodies for drug policy. In a telephone survey and literature search I identified 25 full-time equivalents in the Ministries of the Interior, Defense, Finance, Justice, and Foreign Affairs, but this is likely to be an underestimation.

Table 12 Expenditures on joint (inter-ministerial) enforcement programs

| *Program, item* | *Appropriation or estimated expenditures 2003* |
|---|---|
| Drug couriers with destination Schiphol airport | 95.600.000 |
| Synthetic Drugs Unit and ecstasy teams | 10.345.000 |
| Action plan against ecstasy | 17.500.000 |
| Crime Investigation Collaboration Team | 920.000* |
| A-team | 805.000* |

56 Included in Table 4 (prevention projects paid by the Ministry of Public Health) and in Table 6 (ZonMw).

57 'Core ministries', thus excluding agencies like FIOD-ECD, customs, Constabulary and so on. Included are diplomatic attachés who are specialized in drug policy, and relevant capacity of the Aruba and Dutch Antilles.[e.g., 24] governments.

| | |
|---|---|
| Personnel of the Ministries of the Interior, Defense, Finance, Justice, and Foreign Affairs | 2.875.000* |
| **Total** | **128.045.000** |

Source: [18, 19, 20] supplemented by enquiry by telephone and e-mail.

* Estimated expenditures

Total expenditures on enforcement

Table 13 sums up the totals of Tables 8 - 12.

Table 13 Total expenditures on enforcement

| *Agency* | *Total amounts (Euro) from Tables 8 - 12* |
|---|---|
| Police | 430.231.000 |
| Army | 60.920.000 |
| FIOD-ECD, Customs | 22.885.000 |
| Public prosecution, courts, detention and other sanctions | 1.004.075.000 |
| Inter-ministerial programs | 128.045.000 |
| **Total** | **1.646.156.000** |

## 6 Sensitivity analyses

Some of the assumptions that were made are questionable. This does not matter much for smaller budgets, as these do not contribute strongly to the overall expenditures on drug policy.
I examine here the assumptions underlying the estimates of budgets exceeding 10 million Euro and present crude lower and upper limits of the estimates. I exclude figures from these 'sensitivity analyses' that are sound, because they are based on formal appropriations or established expenditures.

- *Prevention and education projects funded by ministries other than Public Health (except Directorate Youth)*
- I computed the part of these activities that can be attributed to drug policy to be 11.386.000 Euro (Table 4).
- The link with drug policy is weakest for the projects funded by the Ministry of Education, which accounted for 58 percent of the sum. A major objective of these Education projects is to prevent dropout from school. If one assumes that any mention of drugs in the description of these projects is lip service and not proof of an explicit drug policy, the estimate should be lowered to 6.604.000 Euro.
- On the other hand, the projects I consulted mainly target youth from ethnic minorities.[12] I may have missed drug policy related expenditures for youth in general. In statistics on problem behavior and help seeking among adolescents, the share of youth from ethnic minorities is 20 to 40 percent.[1] Expenditures on special youth projects favor ethnic minorities over native Dutch, reflecting priorities set by the national government. It is therefore not realistic to set the upper limit of the estimate at, say, double the amount given in Table 4. I settle for an upgrading of 20 percent, resulting in an upper limit of the estimate of 13.663.000 Euro.
- *Addiction centers*
  Of all clients of the addiction centers, 53 percent report use of an illicit drug as their main problem. This is not to say that the other clients keep away from drugs. Of those presenting with a primary alcohol problem (41%), 2 percent had a 'secondary' problem with opiate use, 6 percent with cocaine and as many with cannabis.[25] For the upper limit estimate of drug-related treatment in addiction centers I set the percentage of treatment demanders at 58 (53 plus 5).
- *Special treatment programs in penitentiary institutions*
- I identified 842 treatment slots but noted that the count was incomplete. Suppose that the total number of slots is 1000, which still is a modest guess, than the upper limit estimate would be 1000 times 66.900 Euro.
- Not all of the stay of a detainee in a treatment program need to be allocated to the Treatment function. It is unlikely that actual treatment lasts more than eight hours a day, so sixteen hours may be attributed to Enforcement (a cost shift of two-thirds of 842 x 66.900 = 37.553.000 Euro).
- *The Social Labor Participation Act*
- I supposed that 10 percent of the Act's beneficiaries with a mental disorder are (former) addicts. According to the literature on dual diagnosis an estimate that is twice as high would not be improbable for an upper limit.
- On the other hand, one may assume that addicts are not easily accepted for the Social Labor Participation program because of a poor rehabilitation prognosis. To calculate a lower limit estimate I used data from Nemesis, a mental health survey among Dutch adults. Of all study participants with a mental disorder, 4 percent classified for the diagnosis of drug abuse or

dependence.[1] Four percent of one-third of the expenditures on the Social Labor Participation Act is 27.480.000 Euro. This is likely to be an underestimation as the Nemesis figures refer to both short-lived and chronic disorders. People with transient or mild mental disorder do not qualify for the Act's entry criterion of 'mental handicap'.

- *Special funds from the Ministry of Public Health to municipalities*

- I assumed that 45 percent of the approximate budget for social inclusion policy could be attributed to drug policy. To calculate a lower limit estimate I dropped this assumption.
- I further supposed that 53 percent of the 'addiction care' component of these special funds is for drugs and the remaining part for alcohol. However, this distinction may be unrealistic, as many of the addicts in question are avid consumers of both drugs and alcohol. To arrive at an upper limit of the estimate I considered 58 percent of the addiction care budget as relevant for drug policy (see above, addiction centers).

- *Urban policy*

The figure reported was taken from a white paper that did not give any specifics.[22] 'Urban policy' boils down to a collection of items from the budget proposals of a variety of ministries, which poses the risk of double counting. The grand budget total for urban policy is 3,9 billion Euro.[12] The estimate of 72,7 million Euro is a tiny 1,8 percent of this amount. For lack of data, I set the lower limit at half and the upper limit at twice the estimate.

- *Other budgets available to municipalities*

- Local drug policy is not only paid from funds from the national government, but also from contributions by the municipalities themselves, the provinces and health care insurance agencies. My estimate of the sum of these additional moneys (10.900.000 Euro, Table 7) was derived from the outcome of a questionnaire among the 43 core municipalities.
- Supposedly, other municipalities also fund drug policy from such additional resources. I assume that the total amount involved equals that for the core municipalities and deduct 5,5 million Euro for the costs of civil servants (see above). This leaves 5,4 million (10,9 minus 5,5) to increase the estimate to an upper limit of 16.300.000 Euro.

- *Police*

Of all figures in this report, those on the involvement of the police in drug policy are most insecure.

- I estimated the police investment in drug policy at a modest 430 million Euro, which is 13 percent of all police expenditures (3297 million Euro). Police activities range from day-to-day patrolling to sophisticated investigations into organized crime. Of these investigations about six out of ten have to do with drugs.[23] It is improbable that this share of 60 percent applies to the total drug policy efforts of the police as well. In order not to stretch the estimate to an utterly high value, I halved the percentage. Thirty percent of 3297 million is 989 million Euro.
- Imperfect police records suggest that about 6 percent of all suspects may be trespassers of the Opium Act.[23] Using this figure the lower limit estimate can be set at 198 million Euro.
- The enormous range between the upper and lower limits testifies to the uncertainty about the police share in drug policy.

- *Royal Marine (Aruba, Dutch Antilles)*

Eighty percent of this budget should be spent on drug policy. Published figures tell another story.

- The Marine carries out various tasks in the Caribbean area. Known is the percentage of 'flight hours' (9,4) and 'fleet days' (3,3) that is devoted to drug policy.[4] To arrive at a lower limit estimate, I assume that the mean of these two values (6,4%) can be used to compute the proportion of the total operational budget of the Marine in the Caribbean that can be attributed to drug policy.
- Of the total Marine personnel budget, 0,75 percent is allocated to the force stationed at Aruba and the Dutch Antilles.[4] I have used this percentage to estimate the corresponding

proportion of other personnel-related expenditures of the Marine, such as uniforms, food, education and training. Finally, I attributed 6,4 percent of the sum to drug policy.

- *Public prosecution and courts*
- I estimated the expenditures on Opium Act offenses at 13 percent of all offenses that led to a court verdict of unconditional detention. One may assume that Opium Act offenses consume more time of prosecutors and judges than other cases. In terms of 'detention years', Opium Act offenses account for 27 percent of the total. I use this figure to compute an upper limit of capacity of money spent by prosecutors and courts on handling cases of Opium Act breaches.
- I have no clue as to a reasonable lower limit estimate.
- *Detention and alternative sanctions*
- Here I do the reverse and suppose that the proportion accounted for by Opium Act trespasses is not 27 percent but 13 percent. This yields a lower limit estimate of close to 402 million Euro.
- For the upper limit estimate, I add 37.553.000 Euro from the item 'Special treatment programs in penitentiary institutions' (see above).

Table 14 Variations in estimates

| *Item* | *Lower limit* | *Estimate given* | *Upper limit* |
|---|---|---|---|
| Prevention and education projects funded by ministries other than Public Health (Table 4) | 6.604.000 | 11.386.000 | 13.663.000 |
| Addiction centers (Table 6) | 74.300.000 | 74.300.000 | 81.258.000 |
| Treatment programs in penitentiary institutions (Table 6) | 18.777.000 | 56.330.000 | 66.900.000 |
| The Social Labor Participation Act (Table 6) | 27.480.000 | 68.700.000 | 137.400.000 |
| Special funds from the Ministry of Public Health to municipalities (Table 7) | 70.000.000 | 116.000.000 | 136.500.000 |
| Urban policy (Table 7) | 36.364.000 | 72.727.000 | 145.454.000 |
| Other budgets available to municipalities (Table 7) | 10.900.000 | 10.900.000 | 16.300.000 |
| Police (Table 8) | 198.000.000 | 430.321.000 | 989.000.000 |
| Royal Marine, Aruba and Dutch Antilles (Table 9) | 4.886.000 | 61.740.000 | 61.740.000 |
| Public prosecution service (handling cases of arrested people; Table 11) | 120.000.000 | 120.000.000 | 176.000.000 |
| Courts (Table 11) | 311.222.000 | 311.222.000 | 555.896.000 |
| Detention and alternative sanctions (Table 11) | 401.887.000 | 589.435.000 | 626.988.000 |
| All other items | 262.403.000 | 262.403.000 | 262.403.000 |

| | | | |
|---|---|---|---|
| **Total** | **1.542.823.000** | **2.185.464.000** | **3.269.502.000** |

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## APPENDIX B

### Estimating drug policy expenditures in Sweden, 2002

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### Introduction

It is generally believed that Sweden takes a tough stance on drugs when compared to other Western European nations. For instance, the ultimate goal of Swedish drug policy i.e., those actions carried out by different government sectors, is to attain a drug free society. Harm reduction is explicitly rejected.

Although the official statements clearly suggest that substantial resources are invested in drug policy measures, particularly enforcement, there has been no estimate during the last decade of actual expenditures. This fact was recognized in a governmental report from 1999 written by the so-called drug commission (Narkotikastatistik [Drug statistics], SOU 1999:90). Though the drug commission acknowledges that many societal costs for drug abuse are impossible to estimate, they believe it would be important to get an idea of the direct drug policy expenditures of the main public authorities.

This paper attempts to provide such an estimate for Sweden in the year 2002. We are starting out from specific expenditures, i.e., expenditures directly related to actions targeted at some drug-related consequence (e.g. drug offences or hospitalisations with a drug abuse diagnosis) or its prevention. However, we will also present ranges around the estimates by also considering a broader definition of costs where expenditures not

specifically defined as drug-related but nevertheless connected to drug policy are taken into account (e.g. other criminality or morbidity among drug abusers).

The Swedish National Audit Bureau presented an assessment of the expenditures on drug policy for 1991 (Narkomanvården [Care of drug addicts], 1993). We offer a comparison for some of the estimates. The estimation in this earlier study was based on expenditures for "the major public agencies in the field" which were identified as social service, health and medical service, the labour market administration, the penal system, the police, the prosecutor, the judiciary system and the social welfare services. Overall, the same agencies will be analysed in the present study. The most notable difference is that expenditures for the work carried out by the Customs are included in the present work, but that we did not reach an estimate for expenditures within social welfare services.

I will be made clear that drug policy expenditures are not easily identified in Swedish official statistics and that there is a need to develop a more reliable and easily accessible drug budget in Sweden. It seems apparent, however, that enforcement (policing, courts and correction) accounts for the majority of drug policy expenditures in Sweden.

## Methods

The general approach has been to identify the various governmental agencies with some kind of drug policy measure and to request them to provide information on their actual spending on these activities for the year 2002 (hospitalisation data were only available for the year 2001).

The expenditures were converted into Euros, using an exchange rate for 2002 (1 SEK=0.11 Euro). It should be noted that the estimates must be regarded as approximations, as they mostly are built on various assumptions and will therefore as far as possible be presented as ranges representing the plausible band of those assumptions.

The extent to which this information is available in official statistics varies considerably across sectors. Table 1 lists the agencies, with a note on the extent to which drug policy expenditures are readily obtainable, whether other information is needed and available for a calculation, and what expenditures we did not succeed in estimating. A

general feature was that figures on actual spending were seldom easily accessible and that other independent information was needed for estimation of expenditures. It also appeared that expenditures were more easily accessible from the judicial system than from the treatment system, in particular outpatient treatment.

**Table 1 about here**

A frequent problem is that the statistics do not make a distinction between expenditures for alcohol and drugs. The Social Service sector is one example where only total treatment expenditures were available; there was no separation between alcohol and drugs. In some areas, such as the estimation of the share of labour market efforts aimed at drug abusers, we had to rely upon impressionistic views of experts. Finally, in some areas it was not possible to obtain any estimate at all, such as for drug cases in emergency rooms, and social insurance spending on people with drug abuse.

## RESULTS

### Treatment sector

#### Social service

Statistics Sweden presents only total expenditures for treatment of alcohol and drug abuse in the age group 21-64 years, which for 2002 amount to 431 million Euros. The first issue is then to estimate the fraction of expenditures that goes to drug abuse. Two independent sources are used here, showing roughly the same. First, according to a national survey to 567 treatment centres (not only the Social service) conducted by the National Board of Health and Welfare in 2001, 19 % of the clients were treated for drugs only and 32% for both alcohol and drugs. As a maximum we assumed that 50% of the mixed cases were drug-related, which resulted in a range between 19 and 35%. Further, according to a large treatment study in Stockholm (Eriksson, et al., 2003), 22% of those attending treatment in the Social service came because of drug abuse only and an additional 8% reported problems with both alcohol and drugs. With the same assumption of the mixed cases we

get a somewhat lower estimate of 26%, which, however, lies within the above estimated range. Secondly, we have to assess the implications of considering treatment expenditures of those younger than 21 years and those older than 64 years. According to the age distribution of those treated in institutional care with a drug diagnosis it turns out that around 10 per cent of treatment is spent on these age groups. A similar estimate of the magnitude of this age group is presented in a case findings study of drug abusers in Sweden (Olsson et al., 2001). Thus it was decided to adjust the estimate upwards with 10 per cent.

Based on this information, we estimated drug policy expenditures for the social service to between 82 and 157 million Euro, the lower value based 19% of total costs and the higher on 35%. Considering the age groups not included in the present estimate we reach a range between 91 and 174 million Euros. Besides the obvious uncertainty already mentioned, it should be kept in mind that this estimation assumes that costs for measures directed towards drug abusers are the same as for other treatment activities.

**Health and medical service**

Sweden keeps a comprehensive register of all in-patient treatment in publicly financed hospitals. By using the number of discharges and average stay for cases with drug–related diagnoses, it is thus possible to estimate the extent of in patient treatment for drugs. In addition, the Federation of County Council presents data on the average cost per day within institutional care, which is 330 Euros.

An estimation of expenditures for institutional treatment of drug abusers was consequently made possible by combining this data. As a minimum estimate, we used cases where drug abuse is the main diagnoses, i.e., the main reason for the stay in institutional treatment (7821 discharges for 2001) and the maximum estimate included also cases where drug abuse was a contributory cause (11 943 discharges). Since the average stay was 6 days we arrive at range between 15 and 24 million Euro. As with the estimation for the Social service, it should be kept in mind that the cost represents the average cost for all visits, which might differ from drug-specific cases.

Data on expenditures within non-institutional treatment is more difficult to obtain for Sweden as a whole and the estimation had to rest upon regional figures weighted to the whole country.
One calculation started out from Stockholm county, where there were 230 000 visits in non-institutional treatment in 2002 at a cost of 132 Euros, i.e., all in all 30 million Euros (data obtained from staff at Stockholm county). If we assume the same regional distribution as for drug abuse in institutional care, where Stockholm County represents 39% of Sweden we arrive at a cost of 77 billion Euros. Drug abuse represents between about 18-41% of the visits in non-institutional care in 2001 (National board of Health and Welfare, 2001). Thus, assuming that Stockholm County is representative for the whole country, 14-30 million Euros were spent on treatment of drug abuse in non-institutional care during 2002.

A calculation based on data from another large Swedish region (Västra Götaland) showed a similar result. Of visits to open specialised psychiatric care with a drug abuse diagnosis in this region, it turned out that 2.1% of the cases involved a drug diagnosis. Assuming that this fraction is valid for whole Sweden where 1.3 billion Euros is spend on open specialised psychiatric care (Federation of County Council), we get an estimate of 27.4 million, which thus is within the range of the above calculation.

Furthermore, expenditures for methadone programmes in Stockholm and Uppsala were approximated at 8 million Euros and 0.2 million Euros were spent on needle exchange programmes in Malmö and Lund. Thus, roughly between 132 and 220 million Euros were spent on various kinds of treatment of drug abusers in 2001/2002.

**Table 2 about here**

**The criminal justice system**

**Police**

According to the Police annual report of 2002, the Police spent 18 million Euros on drug preventive work (mainly search) and 120 million on investigation/legal proceedings, i.e.,

all in all 138 million Euros. This represents 6% of the total allotment to the Police. These estimates are based on the time resources policemen have reported they spent on drug offences. This reporting is in turn based on a "result model" used by the police where their work is accounted in nine areas; violent crimes, economic crimes, drug crimes, traffic crimes, thefts and damage, other crimes, order and safety, other business for Police and internal activities. Of course, several areas often overlap in practise and imply difficulties in how to report the work. However, the main principle is to base the recording on the main purpose of the activity. For instance, if drugs are detected in a traffic control, the actual control is recorded in the traffic area whereas the investigation of the seizure will be recorded in the area of drug offences.

A broader definition of drug-related expenditures for the Police would consider the fact that drug abusers commit many other crimes related to their drug abuse, such as thefts (to purchase drugs) and traffic offences (as a consequence of intoxication). A recent study estimated that approximately 30-40 per cent of all recorded criminality is caused by drug abusers (the National Swedish Police Board, 2003). Moreover, a follow-up study of heavy drug abusers found that only 17% of the recorded criminality in this group consisted of drug crimes and that for instance thefts represented 42% (National Board of Health and Welfare, 2001). Another study of street drug users in Stockholm in 1980 found that crimes against drug legislation represented only 8 % of their total criminality (Kühlhorn 1986).
By assuming that 30% of all crimes are drug-related and that, accordingly approximately 30% of Police resources goes into this we reach a maximum estimate of 695 million Euros.

**Customs**

The current follow-up of the Customs activities doesn't allow an estimation of drug-related expenditures, without some assumptions being made. According to information obtained from staff at the Customs, the work of the customs was estimated to cost 30.8 million Euros, representing about 40 per cent of their total costs defined as border protection and crime investigations. This estimate is based on total expenditures for crime

prevention (analyses, border protection and crime investigation) and the fraction of all seizures being drugs (=42%). We did not succeed in obtaining any other data in order to produce a range around this estimate.

*Courts and Corrections*.

The prosecutor's annual report shows that 6.3 million Euros were spent on the work carried out by the prosecutor in drug offence cases, representing 7.7 % of their total budget. The estimate is based on time resources the prosecutors report they spend on drug crimes. However, if we try to consider prosecutions for other drug related crimes on the basis of the previous assumption that 30% of all crimes is committed by drug abusers, we get 30 million Euros, which becomes our maximum estimate.

Expenditures for drug cases in courts (district, court of appeal and supreme court) was estimated by combining the number of cases and the average cost by case. This data was obtained from an expert official within the judiciary system. It should be noted that the average cost by case is not recorded by type of crime and the average for all types of crimes is used as an indicator for drug crimes. Moreover, for the court of appeal and supreme court, only the total number of criminal cases are available and the fraction of drug cases were estimated from the situation at the District courts (9%). The expenditures for 2002 were thus estimated as follows*:*

**District court:**

- 5123 criminal cases x 1487 Euros (average cost) = 7.6 million Euros.
- 1165 compulsory treatment cases x 1738 Euros= 2 million Euros.

**Court of appeal:**

- Criminal cases: 719 cases x 3284=2.4 million Euros.
- Compulsory treatment: 187 cases x 3343 =0.6 million Euros.

**Supreme court:**

- Criminal cases: 1424 (9% assumed to be drug cases)=128 x 1990=127 000 Euros.
- Compulsory treatment: 10 x 1330= 13300 Euros.

We thus have a minimum estimate of 13 million Euros. Again, if we assume that drug abusers are responsible for 30% of all recorded criminality the estimate would be 85 million Euros since the total allotment to the courts for 2002 was 283 million Euros.

**Custody, Prison and probation**

*Service*

The Swedish Council for Crime prevention keeps official crime statistics, from where data on drug offences leading to prison or probation services are available. Moreover, expenditures for these activities are found in the annual report of the National Prisons and Probation Administration.

From these sources, we know that there were 1617 prison sentences for a drug offence as the main crime in 2002 for, on average, 513 days. In addition, 119 persons were sentenced for drug smuggling leading to prison with an average number of days in prison of 832. The average daily cost for being in prison is 185 Euro. Assuming an average release after 2/3 implies a total estimate of 115 million Euros during 2002 (1617 x 513 x 185 x (2/3) + (93 x 832 x 185 x (2/3). Further, the total cost for Swedish Custody is 124.3 million Euros for 2002. On the basis of the fact that drug offences represent about 25% all crimes within correctional treatment, we estimate the cost for drugs in Custodies to 31 million Euros.

In addition to this, there are costs associated with supervision during conditional release and probational sentences as a result of drug crimes. According to the National Prisons and Probation Administration, there were 1663 cases during 2002 to an average daily cost of 17 Euros. With an average stay of 180 days, this amounts to 5.1 million Euros. These sums add up to 151 million Euros and constitute our minimum estimate.

In producing a range for this sector, it is considered that around 50 % of the clients have drug problems. As a maximum, we then have a doubling to 300 million Euros. It is also worth mentioning that 14% of clients in prison had a drug offence as the main crime but that, in addition, 19.7 % had a drug offence as secondary offence, i.e., all in all 34% of the clients had committed at least one drug crime. The severity of the sentences for the latter group is not available in official statistics and it is possible that they are shorter than

main drug offences. Still, on the basis of this information, we would reach an estimate within the range of 150-300 million Euros.

**Table 3 about here**

General programmes

Drug abuse may also constitute one criterion for receiving general support, for instance in terms of labour market policy measures. However, drug-specific costs of this kind are not presented in official statistics. Still, by combining information obtained from an expert field worker in Stockholm, and statistics from an annual report of labour market board we could get a rough estimate of drug-related expenditures in terms of labour market measures during 2002.

In the area of labour market measures, drug abusers are mainly located in a category called "work disability for socio-medical reasons". The two main measures for this category are salary subsidies and public protected work. In 2002, 550 million Euros were spent on salary subsidies and 71 million on public protected work. For salary subsidies 4000 out of 55 0000 cases (7%) concerned disability for socio-medical reasons whereas for public protected work, it was 3700 out of 6205 cases (60%). The key question, then, is to estimate the fraction of persons with socio-medical handicaps that are drug abusers. In Stockholm there is a special job centre working with this group, and the "impressionistic" view of the staff was that drug abusers represent between 30 and 40 % of their clients. Thus the following formulas were applied for an estimate:
Minimum: (550 x 0.07 X 0.30.) + (71 x 0.60 x 0.3)=24.3 million Euros.
Maximum: (550 x 0.07 X 0.40.) + (71 x 0.60 x 0.4)= 32.6 million Euros.

The state did not finance any anti-drug prevention campaigns during this period. However around 8.2 million Euros were given to the municipalities for drug prevention in 2002; recipients included support to voluntary organisations. There are some changes

in the provision of drug information to students and there is currently no information on how much is spent on this.

**Table 4 about here**

Discussion

Drug policy expenditures are not easily identified in Swedish official statistics, and it turned out necessary to use information from other sources and to do several assumptions in order to assess expenditures for most agencies. The present estimates and ranges must therefore be interpreted with great caution and be regarded as very approximate.

We arrived hence at a very wide range between 500 and 1400 million Euros during 2002, or between 57–154 Euros per capita. It is unfortunately not possible to compare this estimate with what is spent on other social policy areas since no corresponding calculation has been carried out for alcohol or mental illness.

It is also difficult to evaluate the Swedish drug policy in terms of priorities due to the various methodological difficulties that are involved. However, according to the present estimation, as summarized in Table 5, two items each account for almost eighty percent of the total; police (including customs and courts) and corrections whereas treatment expenditures represent about one fifth. These rough statements apply to the baseline estimates. Prevention is very small, barely 1 percent, while the provision of services to drug abusers separate from treatment may add another 3 percent.

**Table 5 about here**

It is impossible to make an overall comparison with the 1991 estimate as a consequence of differences in methods of doing the calculations. Still, some data systems have been fairly stable, such as those within the institutional care and the judicial system. For instance, in 1991 the expenditures for institutional care with drug dependence

diagnoses (main and contributory) was estimated at 20.6 million, equivalent to 24.6 million in 2001. This is fairly similar to the 24 million in 2001.

It seems, however, that expenditures for some of the main agencies within the judicial system have increased quite substantially. For instance, if we express the expenditures mentioned in the 1991 annual reports in terms of their real value in 2002, we get the following; the Police increased from 35.6 million in 1991 to 80.5 million, the prosecutor increased from 2.9 to 6.3 million, the courts expenditures went up from 3.9 to 12.9 million and the penal system from 43.3 to 150 million Euros.

It should be noted that we have only focused on more or less direct costs for these agencies and that drugs certainly bring about other costs for society. A recent study that considered also indirect costs from loss of productivity, treatment and property damage due to drug abuse, arrived at a rough estimate of 3.3 billions Euros for 1998 (Johnson, 2002).

The present findings suggest that a lot of money is invested in this area in Sweden, but that more work is needed in Sweden for developing a drug budget that produce reliable estimates both across sectors and across time.

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**Table 1. Availability and quality of data on specific drug policy expenditures by sector**

| AREA/Sector | *Specific expenditures available on a regular basis* | *Other information needed/available for doing a calculation on expenditures* | ***Expenditures not covered/special study needed*** |
|---|---|---|---|
| TREATMENT | | | |
| Social service | No, but total treatment expenditures for adults (21-64) | Yes, estimation of fraction attributable to drug abuse + estimation of the representation of abusers below 21 years and above 64 years. | - |
| **Health sector** | | | |
| • In patient | No | Yes, discharges with drug diagnosis + average stay + average cost per day | - |
| • Out patient | No | - Regional estimates recalculated into national estimates<br>-methadone treatment<br>-needle exchange programmes | -Emergency rooms.<br>-Primary care |
| ENFORCEMENT | | | |
| Police | Yes | No | - |
| **Customs** | Yes, but no info on fraction spent on controlling drugs | Yes, estimate of drug cases on the basis of seizures. | - |
| Prosecutor | Yes | No | - |
| **Courts** | Yes | No | - |
| **Prison and probation Service** | No | Yes, number of persons in prison for drug offences, average stay and cost per day | - |
| GENERAL **PROGRAMMES** | | | |
| Prevention | No | Yes | -Information in schools |
| **Labour market** | No | Yes, but expert impression needed. | - |
| **Social insurance** | No | Yes, but not available | -All social insurance costs related to drug abuse |

Table 2. **Estimation of drug policy expenditures in the treatment sector**

| **Actor** | *Program* | *Definition of expenditure* | *Estimated range (million Euros)* | *Comment* |
|---|---|---|---|---|
| **Social service** | Treatment<br>- Institutional<br>- non-institutional<br>- family homes programs<br>- housing | Total treatment expenditures in social service X estimate of proportion linked to drug abuse | 91 – 174 | Estimate is based on assumption of drug-treatment |
| **Health and medical service** | Institutional treatment in hospitals and psychiatric clinics | Discharges from institutional care with a drug dependence diagnosis X average stay X cost for an average day | 15-24 | Some uncertainty about average daily cost |
| | Non-Institutional Treatment | Estimates for Stockholm county and Västra Götaland county weighted to whole Sweden | 14-30 | Estimate is uncertain and dependent on several assumptions |
| | Other open programmes<br>-methadone<br>-needle exchange | | <br>8<br>0.2 | |
| **Total** | | | **130-220** | |

**Table 3.** Estimation of drug policy expenditures in the criminal justice system

| **Actor** | *Program* | *Definition of expenditures* | *Estimated range (million Euros)* | *Comment* |
|---|---|---|---|---|
| **Police** | Investigation/ Legal proceedings of drug related crime | Expenditures for policemen working with cases leading to a drug offence (Min). 30% of all crimes related to drugs (Max). | 138-695 | 6%-30% of total budget. |
| Customs | Border protection, Crime investigation, analyses. | Total expenditures for crime prevention X estimated proportion being related to drugs | 31 | |
| Prosecutor | Handling drug crimes | Annual report (minimum). 30% of all cases related to drugs (max) | 6-27 | 7.7-30%% of total budget |
| **Courts** | Handling criminal cases, compulsory treatment | From expert judgement of the judiciary system. 30% of all cases related to drugs (max) | 13-85 | |
| **Prison and probation service** | Keeping drug abusers in prisons and custody + Keeping drug abusers in non-custodial treatment | Number of drug offenders X average length of penalty X cost per day (min). 50% of clients are drug abusers (max) | 151-300 | 23%-50% of total budget |
| **Total** | | | **339-1138** | |

Table 4. **Estimation of drug policy expenditures in some general programmes**

| **Actor** | *Program* | *Definition of expenditures* | *Estimate (million Euros)* | *Comment* |
|---|---|---|---|---|
| **Employment services** | Rehabilitation of drug abusers by labour market policy measures. | Salary subsidies and public protected work for people with disability for socio-medical reasons x estimate of this group being drug abusers | 24-33 | |
| County administrative board | Local drug preventive actions. Support to voluntary organisations | Total allotment to municipalities for alcohol and drug prevention X fraction going to drugs | 8 | Not including information in schools |

**Table 5. Estimated Drug Policy Expenditures, Sweden, 2002 (million Euros)**

| *Category* | Baseline | Low Estimate | High Estimate | Baseline Fraction of total expenditures (%) | Baseline Per capita (Euros) |
|---|---|---|---|---|---|
| Prevention | 8 | 8 | 8 | 0.8 | 0.9 |
| Treatment | 175 | 130 | 220 | 18.4 | 19.7 |
| Harm Reduction | 28.5 | 24 | 33 | 3.0 | 3.2 |
| Enforcement | 738.5 | 339 | 1138 | 77.7 | 83.0 |
| **Total** | 950 | 501 | 1371 | 100.0 | 106.7 |