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Review essay

# A critical reading of the World Drug Report 2000☆

Carla Rossi *

*Department of Mathematics, University of Rome 'Tor Vergata', Via Ricerca scientifica 1, 00133 Rome, Italy*

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**Abstract**

This essay provides a critical analysis of the United Nations Drug Control Programme's (UNDCP) World Drug Report (WDR, 2000), released on January 22nd 2001. Besides the content of WDR 2000 being far less rich than the content of the previous UNDCP World Drug Report in 1997, a critical analysis suggests that data taken from publications of the European Monitoring Centre for Drugs and Drugs Addiction (EMCDDA) and other international agencies has been misrepresented. Such distortions are considered from a methodological point of view, with the original data compared against those reported in WDR (2000). The implications of the biased interpretations for policy making are discussed.


*Keywords:* UNDCP; EMCDDA; Drugs; World drug problem; Pino Arlacchi

## Introduction

In 1999, the United Nations General Assembly requested that UNDCP (United Nations Drug Control Programme) continue publication of the World Drug Report to provide comprehensive and balanced information about the world drug problem. In order to adhere to this request, the World Drug Report (WDR, 2000) was issued in early 2001.

WDR (2000) states that the main reason for publishing the Report '...was the need to have a sober and neutral set of data and analysis about drugs in the world', asserting that 'Today, we are increasingly confident that we know what we say we know, and know what we need to know' (p. 19). In contrast to the first World Drug Report (1997), which provided both an extended description of the world's drug problem and of the theories about the sources of the problem, it appears that, in the case of the WDR (2000), UNDCP was not able to maintain an appropriate balance between advocacy and credibility. The contents and the tone of the Report suggest that the publication is not aimed at providing comprehensive and balanced information about the world drug problem, but rather at showing that massive investments are able to reduce drug problems and that UNDCP policy is a success. In order to achieve this, some possible interpretations of data are omitted while others are biased or forced, and the primary source data provided by a number of agencies are misrepresented. In summary, the Report can claim neither objectivity nor comprehensiveness.

## Method

This essay seeks to: compare the content of WDR (2000) with that of its predecessor World Drug Report (WDR, 1997); compare selected content of WDR (2000) against original source material (mainly from the European Monitoring Centre for Drugs and Drug Addiction and USA sources); and comment on the interpretations of the data provided by WDR (2000). The author is a representative of the EU Parliament on the Management Board of the European Monitoring Centre on Drugs and Drug Abuse (EMCDDA). This essay is based on a report sent by the author to the Members of the Committee on Citizen's Freedoms and

☆ This essay was written before Pino Arlacchi relinquished his duties as Executive Director of the UN Office for Drug Control and Crime Prevention (which includes UNDCP) on 31 December 2001. Antonio Costa took up the duties of Executive Director on 7 May 2002.

* Tel.: +39-06-725-94676; fax: +39-06-725-94699

*E-mail address:* rossi@axp.mat.uniroma2.it (C. Rossi).

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Rights, Justice and Home Affairs of the European Parliament (Rossi, 2001b) and takes into account the subsequent reactions and replies by UNDCP (UNDCP, 1st June 2001). In this essay *Tables* and *Figures* in italics refer to original tables and figures in WDR (2000) or other sources.

## Content

The WDR 2000 comprises three chapters, whereas the WDR 1997 had seven (see Table 1). Chapter 1 ('Recent Trends in Production, Trafficking and Consumption: an Overview'), is a summary of data from another publication, the UNDCP *Global Illicit Drug Trends 2000* (UN ODCCP, 2000). Further data from *Global Illicit Drugs Trends* are included in Annex 1. It is not possible to verify the information and the quality of the data provided from this source. Chapter 2 ('The Three Pillars of Demand Reduction: Epidemiology, Prevention, Treatment') is a collage of analyses of data drawn from various sources, many available on-line. Such analyses could be defined as merely careless if it were not for the evident distortion in data presentation (see below). Chapter 3 ('Alternative Development') describes a number of case studies of international interventions. It is not possible to verify the accuracy of the information provided, which consists mainly of qualitative considerations based on internal information.

A particular concern is the systematic exclusion of quantitative information on the 'black' market and on money laundering (Chapter 4 of WDR, 1997), on policies implemented at national and international level and on strategic programmes (Chapters 5 and 6 of WDR, 1997), and of quantitative information updating the Country profiles (Chapter 7 of WDR, 1997). WDR (2000) does not have a chapter on synthetic drugs although the General Assembly considered that global awareness of this problem is insufficient and should be given higher priority. A chapter on these drugs had been prepared by the research team for the 2000 edition but it was removed before publication (Office of Internal Oversight Services, 2001). There is also no section on the link between illicit drugs and organized crime. The Report appears to ignore both enforcement and corruption. No explanation in offered as to why the discussion on supply-side policies is restricted to alternative development, though expenditures for enforcement are much larger than for any other supply reduction measures. The only explanation may be tracked down in the vivid and dogmatic assertion: '...the fact is that most alternative development projects have been successful' (p. 152). This contrasts with the neutral, critical and analytic tone of discussion on the same topic in WDR (1997):

> ''UNDCP's experience of alternative development in the past suggests that their viability depends to a considerable extent on the Government's long term financial and political commitment to national integrated rural development and, in most cases, consistent enforcement of drug control legislation. Future alternative development projects will therefore need to involve active partnership with governments to a greater extent than in the past, making a move from the benefactor/recipient model that has been the basis for many previous programmes.'' (WDR, 1997: 224)

In contrast to the 1997 version, WDR (2000) begins with an extended 21 page advocacy essay by Professor Pino Arlacchi (the Executive Director of UNDCP at the time WDR, 2000 was published) highlighting that the '...track record of the organization is one that merits additional financial support'. It claims many major successes and that the prevailing pessimistic orthodoxy is incorrect. It stresses positive developments, arguing that drug problems are lessening and that this is due to government actions. WDR 2000 is not a valuable successor of WDR 1997.

Table 1
Comparison between WDR 1997 and the WDR 2000

| | WDR 1997 | WDR 2000 |
|---|---|---|
| Number of pages | 332 | 172 |
| Length of introduction | 1 | 21 |
| Chapter titles | 1. Recent trends and development in cultivation, production, trafficking and consumption—an overview | 1. Recent trends in production, trafficking and consumption: an overview |
| | 2. Theories and interpretations of illicit drug use | 2. The three pillars of demand reduction: epidemiology, prevention, treatment |
| | 3. The health and social consequences of drug abuse | 3. Alternative development |
| | 4. The illicit drug industry: production, trafficking and distribution | |
| | 5. Drugs and public policy | |
| | 6. Strategic programmes | |
| | 7. Country profiles | |

I sent my written criticisms of the content of WDR (2000) to the Members of the Committee on Citizen's Freedoms and Rights, Justice and Home Affairs of the European Parliament (available at: http://www.mat.uniroma2.it/ ~ rossi/wdr_2000_english.htm). Part of the UNDCP response is reported below.

> "The draft of WDR 2000 presented to the Executive Director of UNDCP in mid 2000 had some 560 pages and thus considerably larger than WDR 1997 (332 pages). The Executive Director decided to reduce its size (to the present 172 pages) in order to make it more reader-friendly and policy relevant by reducing its coverage to three essential chapters... Given the fact that UNDCP is mandated to produce a World Drug Report every two years, it would make no sense to seek to provide a encyclopeadic coverage of the drug problem in every issue...
>
> ...the twenty one page introduction by the Executive Director was a personal statement of his vision, which is why it was signed by him; it contained two messages, both clearly spelled out in its first few lines: that we needed to remove the pessimism which characterized the discourse on drugs and that a 'balanced' investment in demand and supply reduction policies would pay off" (UNDCP, 1st June 2001).

## Distortions and omissions

The general tone of comments and interpretations in WDR (2000) seek to boost UNDCP's claim to resources rather than provide a neutral assessment of the drug problem world-wide. In the introduction, UNDCP is said to be improving data quality and analysis in the field, but in the report there is no evidence of this. As argued below, data analysis, presentation and interpretation are poor as well as subject to bias.

### *National prevalence estimates*

*Table 2* in WDR (2000) (p. 93) shows national prevalence estimates for problem drug users and cites as primary sources the EMCDDA Annual Report (2000b), the US ONDCP (Office of National Drug Control Policy) Annual Report 2000 and the UNDCP Annual Reports Questionnaire Data (ARQ). The section of data shown in WDR (2000) referenced to the EMCDDA are reproduced in Table 2.

WDR (2000) gives an incorrect definition for problem drug use for the EMCDDA. It states that 'Problem drug use' is defined by EMCDDA as: 'drug addiction, notably to opiates and stimulants, injecting drug use, or drug use associated with criminal behaviour'. In fact, the definition of 'problem drug use' given by EMCDDA in its Annual Report 2000 (p. 14) is: 'intravenous or long-duration/regular use of opiates, cocaine and/or amphetamines'.

Table 2
Prevalence estimates for problem drug use

| Country | Range of estimates | Mid-range estimate | Mean estimate |
|---|---|---|---|
| Finland | 0.5–4.2 | 2.4 | 1.9 |
| Sweden | 2.5–3.5 | 3.0 | 3.0 |
| Denmark | 2.9–4.0 | 3.4 | 3.6 |
| Norway | 3.2–4.6 | 3.9 | 3.9 |
| Germany | 1.4–3.0 | 2.2 | 2.2 |
| Austria | 2.9–3.4 | 3.2 | 3.2 |
| Ireland | 1.9–5.7 | 3.8 | 3.4 |
| France | 3.2–4.6 | 3.9 | 4.1 |
| Spain | 3.1–6.6 | 4.9 | 4.9 |
| Benelux | 2.3–7.7 | 5.0 | 2.8 |
| UK | 2.3–8.9 | 5.6 | 6.2 |
| Italy | 4.4–8.3 | 6.4 | 6.6 |

This table reproduces data for Western Europe presented in *Table 2* of WDR, 2000, p. 93 (*Estimates for 'problem drug users' per 1000 inhabitants, age 15–64 in the late 1990s in countries of Western Europe and North America*).

What is more serious, however, is the distortion of data. I was part of the research group that produced the estimates for the EMCDDA, and am extremely familiar with the methods used and the original country data. The first distortion is of a methodological nature. This relates to the calculation of the mean estimates shown in the final column of Table 2. These mean estimates are meaningless in that they have been obtained by putting together, in an incorrect manner, all the estimates for the same country obtained through different methods and from different sources.

The second distortion appears to bend the data in the direction desired. WDR (2000) combines data for Belgium, Netherlands and Luxembourg into one figure for Benelux. The relevant part of the original EMCDDA table for these countries is reproduced in Table 3 (the complete table is available at www.emcdda.org/infopoint/publications/annrep.shtml).

The estimate for Benelux given in WDR (2000) is not present in the original EMCDDA table: it is an ad hoc

Table 3
Prevalence estimates of problem drug use for Luxembourg, Belgium and the Netherlands

| Country | Overall range of estimates |
|---|---|
| Luxembourg | 6.7–7.7 |
| Belgium | 3.0 |
| Netherlands | 2.3–2.7 |

Data as provided in the original EMCDDA report (prevalence rates of problem drug use per 1000 inhabitants aged 15–64, 1996–1998).

calculation made by putting together the estimates for Belgium, The Netherlands and Luxembourg. If we look at the original EMCDDA data, the three countries actually have completely different profiles with regard to this problem. In Luxembourg, for example, the figures are more than double those for Belgium and three times higher than those for The Netherlands. Such an operation masks the Dutch data, which are much more positive than the others—and it can be surmised that this was done because the policy approach adopted in The Netherlands is not appreciated by UNDCP. The operation is not only seriously flawed from a methodological point of view; it also suggests that the source of the data, as presented in WDR (2000), is the EMCDDA, and there is no mention of any ad hoc synthesis of data made by UNDCP.

On p. 93 of the WDR (2000) we find the following comment:

> "Estimates for Western Europe indicate that 'problem drug use' affects on average $4\frac{1}{2}$ persons per 1000 inhabitants age 15–64 (mean estimate of 15 countries). Estimates range from an average 2–3 in Finland and Sweden and some other countries of continental Europe, including Germany and Austria, to level around 4 in France, 5 in Spain and 6–7 in the UK, Switzerland, Italy and Luxembourg."

This can be compared to the comment on the original table in the EMCDDA Annual Report (2000b) (pp. 14–15):

> "...Prevalence rates seem highest in Spain, Italy, Luxembourg and the UK... and lowest in Belgium, Germany, the Netherlands, Austria, Finland and Sweden... Intermediate rates are reported in Denmark, Spain, France, Ireland and Norway."

In WDR (2000) it is precisely Belgium and the Netherlands that have disappeared from the original EMCDDA list of countries with low prevalence rates, while the countries remaining on the list include Finland (which is much less important), and above all Sweden, which in the original table has a prevalence similar to that of Belgium and slightly higher than that of the Netherlands. What does remain is the explicit comment on Luxembourg, which is not consistent with the table in which the three countries (Belgium, Netherlands and Luxembourg) are presented together as Benelux. In this case, leaving the explicit reference to Luxembourg is like suggesting that the whole Benelux area behaves in the same way, which is false. These manipulations of the data were acknowledged in the official comment to my original report prepared by the EMCDDA:

> "Where data produced by the EMCDDA are involved, notably on the prevalence of problem drug use and on drug related deaths, there is cause for concern over the way in which those data have been presented and interpreted in the World Drug Report" (EMCDDA, 13th June 2001).

*Drug related deaths*

A further distortion concerns the graph presented as *Figure 11* in WDR (2000) (p. 99). Again the EMCDDA is the stated as the source. The figure is reproduced as Fig. 1 here. The comments made in WDR (2000) on the figure were as follows:

> "Data provided by the European Monitoring Centre for Drugs and Drug Addiction suggest that a stabilization—following a strong intensification of demand reduction efforts—was actually achieved in the countries of European Union in the 1990s. Following strong increases in the 1980s, the number of acute drug deaths stagnated in the European Union in the 1990s. If the trends of the 1980s had continued—which might have been the case without appropriate interventions—the number of acute drug-related death cases, less than 7000 a year in the late 1990s, could well have been three times higher in the late 1990s (See Figure 11)."

In fact, the curve for the extrapolation of death trends does not appear in any EMCDDA document. In addition, it is clearly an arbitrary interpretation, methodologically and substantially incorrect. The curve for observed drug-related deaths has also not been drawn

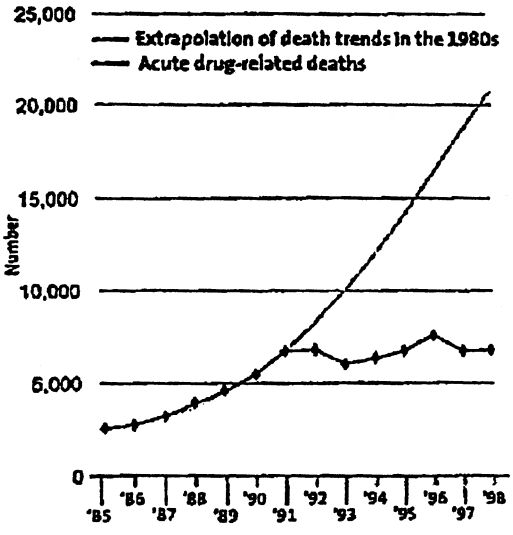



Fig. 1. Drug deaths in the European Union. Reproduced from WDR (2000), p. 99 (*Figure 11* in original).

from the EMCDDA source. The EMCDDA (2000b) Annual Report says this about drug related deaths:

> "In many countries, acute drug-related deaths increased markedly from the late 1980s to the mid-1990s. This rise has since stabilized in the EU as a whole, but divergent national trends can still be identified.
>
> - In Spain, France and to some extent Germany (although a recent increase was reported), Italy and Austria, acute drug-related deaths have stabilized or decreased. This may reflect levels of problem drug use, reduced injecting and/or increases in access to treatment, including substitution treatment.
> - Following few deaths in the early 1990s, Greece, Ireland and Portugal have since reported substantial increases. These may be related to rising heroin use, but also reflect improved recording practices."

Following significant numbers of drug-related deaths in the early 1990s, increases continue in Sweden, the UK and, to some extent, Denmark. The reasons for this tendency need further investigation (EMCDDA, 2000b: 18–19).

The EMCDDA never relies only data aggregated at a supranational level because such aggregation leads to biased and inaccurate analysis. This is because different case definitions make such comparisons difficult between countries (as is indicated in the captions of the EMCDDA tables), and because the epidemic situation relative to the use of drugs in the various countries is very different. The extrapolations and the interpretations about the presumed efficacy of demand reduction efforts made by WDR (2000) are clearly arbitrary. (It may be no coincidence that in Sweden, where the policy is very close to the UNDCP direction, the trend of deaths in recent years is rising.) Extrapolation with an exponential curve in WDR (2000) has clearly been performed to support the interpretation that the report wishes to give: it is well known that that no actual trend can have an indefinitely rising exponential curve, since 'problem drug use' is a saturation epidemic phenomenon (Hunt & Chambers, 1976; Hughes & Rieche, 1995; Hser, Anglin, Grella, Longshore, & Prendergast, 1997; Rossi, 2001).

For the sake of completeness, both the original EMCDDA data (Table 4) and trends of drug-related deaths in various countries drawn from the table provided by the EMCDDA (Fig. 2), are reproduced below. The curves have been normalised by dividing each by the total number of deaths over the entire period observed in order to obtain comparable graphs without altering the qualitative trends.

In some countries the trend is oscillating but substantially constant over time (The Netherlands), with alternating upward and downward periods. In others, we see a typical saturation epidemic trend with an upward phase followed by a downward phase (France and Germany), while in Sweden, we see a substantially linear growth in recent years and in Ireland exponential followed by linear growth. Similar divergent trends can be seen in the other countries which are not included in Fig. 2, but whose data are reproduced in Table 4. Even if it is admissible, for the sake of simplicity, to speak about an observed European trend aggregating national data, any hypothesis about possible extrapolated trends with interpretations about the presumed efficacy of the European policy, whatever that may be, is arbitrary.

In summary, there are evident distortions of the EMCDDA data, an attempt to conceal this by suggesting that the EMCDDA itself is the source, and these are linked with arbitrary interpretations of the data. The reply from UNDCP to this criticism was as follows:

> "Another criticism of Prof Rossi relates to the extrapolation of death-trends in the 1980s. There is no statement in the WDR 2000 that drug deaths would move upwards indefinitely. This would indeed have been ridiculous. It is obvious that epidemics have a saturation level; however, the precise point that they reach this level is difficult to establish and requires a large number of assumptions. This would be well known to Prof Rossi, whose work on dynamic models to understand drug epidemics is in fact being published by UNDCP in our *Bulletin on Narcotics*."

The WDR made a *contingent statement,* merely stating that

> "*If the trends of the 1980s had continued—which might have been the case without appropriate interventions—the number of acute drug-related death cases, less than 7000 a year in the late 1990s, could well have been three times higher in the late 1990s'*. The figure (Figure 11 on p. 99 of WDR, 2000) with which Professor Rossi takes issue, was also explicit in noting that trend data of the 1980s was being *extrapolated*" (UNDCP, 1st June 2001).

## Additional distortions

Let us consider other distortions of data. Fig. 3 reproduces WDR (2000) *Figure 1* on p. 86 and *Figure 12* on p. 115.

Table 4
Drug-related deaths in some EU countries (source EMCDDA Annual Report, 2000b)

| Years | Austria | Denmark | Finland | France | Germany | Greece |
|---|---|---|---|---|---|---|
| 1985 | | 150 | | 172 | 324 | 10 |
| 1986 | | 109 | | 185 | 348 | 28 |
| 1987 | | 140 | | 228 | 442 | 56 |
| 1988 | | 135 | 11 | 236 | 670 | 62 |
| 1989 | 20 | 123 | 23 | 318 | 991 | 72 |
| 1990 | 36 | 115 | 41 | 350 | 1491 | 66 |
| 1991 | 70 | 188 | 34 | 411 | 2125 | 79 |
| 1992 | 121 | 208 | 27 | 499 | 2099 | 79 |
| 1993 | 130 | 210 | 26 | 454 | 1738 | 78 |
| 1994 | 140 | 271 | 35 | 564 | 1624 | 146 |
| 1995 | 160 | 274 | 51 | 465 | 1565 | 176 |
| 1996 | 179 | 266 | 45 | 393 | 1712 | 222 |
| 1997 | 132 | 275 | | 228 | 1501 | 232 |
| 1998 | 108 | 250 | | 143 | 1674 | 244 |
| Total | 1096 | | | | | |

| Years | Luxembourg | Netherlands | Belgium | Portugal | Spain | Sweden | UK |
|---|---|---|---|---|---|---|---|
| 1985 | 1 | 40 | 12 | | 143 | 150 | 1254 |
| 1986 | 3 | 42 | 20 | 18 | 163 | 138 | 1362 |
| 1987 | 5 | 23 | 17 | 22 | 234 | 141 | 1332 |
| 1988 | 4 | 33 | 37 | 33 | 337 | 125 | 1348 |
| 1989 | 8 | 30 | 49 | 52 | 455 | 113 | 1321 |
| 1990 | 9 | 43 | 96 | 82 | 455 | 143 | 1339 |
| 1991 | 16 | 49 | 90 | 121 | 579 | 147 | 1411 |
| 1992 | 17 | 43 | 75 | 156 | 556 | 175 | 1533 |
| 1993 | 14 | 38 | 80 | 115 | 442 | 181 | 1615 |
| 1994 | 29 | 50 | 46 | 143 | 388 | 205 | 1796 |
| 1995 | 20 | 33 | 48 | 198 | 394 | 194 | 1956 |
| 1996 | 16 | 63 | | 232 | 429 | 250 | 2150 |
| 1997 | 9 | 70 | | 235 | 360 | | 2144 |
| 1998 | 16 | 61 | | 337 | 310 | | |
| TOTAL | 167 | 618 | 570 | 1744 | 5245 | 1962 | 20 561 |

In WDR (2000) their *Figure 1* is used to support the following statement about the impact of demand reduction investment on reducing the prevalence of drug use (p85/6):

> "The largest funds for systematic research into understanding the problem of drug abuse and for implementing prevention and treatment programmes, have been made available over the last decade in the USA. Spending on demand reduction (research, prevention and treatment) increased at the federal level from US$ 0.9 billion in 1985 to US$ 5.6 billion in 1999, equivalent to US$ 20 per inhabitant (a very high figure by international standards), or a third of all drug control spending in the country ... Parallel to increased spending, drug abuse (annual prevalence as well as current use of all drugs as revealed in the annual household survey) fell by some 40% and cocaine abuse fell by as much as 70% over the 1985–1998/99 period. Though changes in human behavior are usually the result of a multitude of factors, the above example indicates, nonetheless, that a massive increase in demand reduction efforts, based on in depth research of the problem, seems to play an important role in curbing drug abuse."

*Figure 12* of WDR (2000) is included to support this argument for the impact of media campaigns on reducing drug use:

> "Modern media campaigns, such as ONDCP's current five-year National Youth Anti-Drug Campaign (US$ 200 million), which started in 1997, use more sophisticated and targeted approaches, developed in close consultation with experts from various behavioural sciences, drug prevention, medicine as well as experts from teen marketing and advertising, and representatives from various professional, civic and community based organisations... The results achieved thus far are impressive. The strong upward trend in drug use among youths (in contrast to the U.S. population

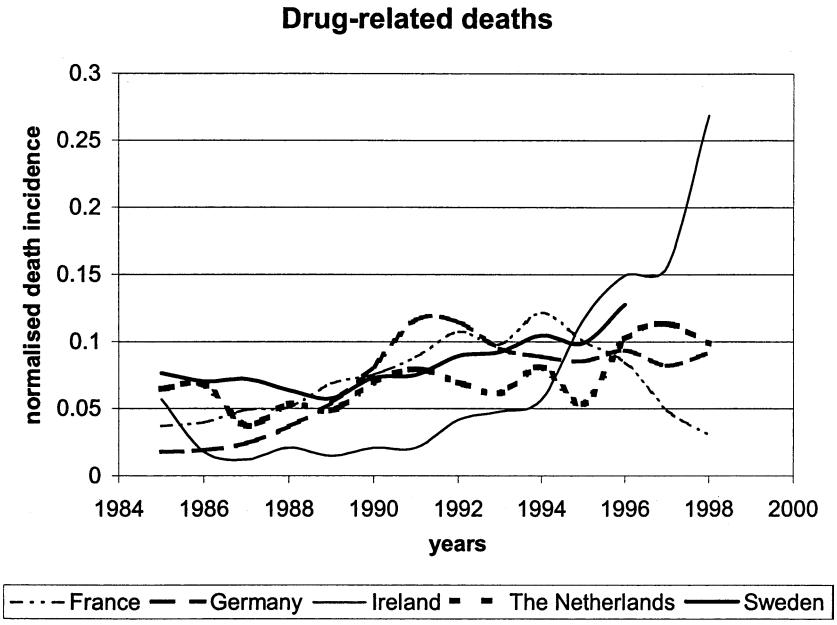



Fig. 2. Trend of drug-related deaths in various European countries.

as a whole), observed over the 1991–1996 period, was reversed, notably among the younger age groups. The Monitoring the future studies, which independently collect data on substance abuse among U.S. high school students, showed that annual prevalence of drug use among 8th graders (14 years-old) in the USA fell between 1996 and 1999 by 12%, and was in 1999 a third lower than could have been expected if the prior upward trend had continued (see *Figure 12*)."

My first comment is that WDR (2000) *Figure 1*, actually shows an upward trend in prevalence of drug abuse from 1992 despite the parallel growth in expenditure. The comment in the WDR (2000) omits this, hiding it behind the analysis of the long term trend. A more accurate analysis would divide the entire period into two sub-periods: the first, from 1981 to 1991, in which the growth in investments is accompanied by a reduction in prevalence, and the second, from 1991 onwards, in which the growth in investments is accompanied by a growth in prevalence. This suggests that the two trends (investments and prevalence) are actually largely independent and can only be interpreted by studying the phenomena in a much deeper manner.

We can now turn to the sources cited by WDR (2000) to verify the original data and the interpretation. Prevalence of drug use data in *Figure 1* come from the report on the National Household Survey for 1999 provided by the Substance Abuse and Mental Health Services Administration (SAMHSA, 1999). The SAMHSA web-site does not include the aggregate annual prevalence shown in *Figure 1* in WDR (2000), but this can be reconstructed from the data given in various tables containing information on use (prevalence) and on the first use (incidence) of the various substances in different segments of the population divided according to sex, age, and ethnic origin.

Observations in the SAMHSA document contradict the interpretations offered by WDR (2000). Let us consider just two substances—heroin and cocaine. Let us take the 'incidence of new use' as an indicator for monitoring trends, which is widely accepted at international level (Hunt and Chambers, 1976; EMCDDA, 2000a; Ravà, Calvani, Heisterkamp, Wiessing, & Rossi, 2001). Chapter 2 of the 1999 report from SAMHSA provides these comments:

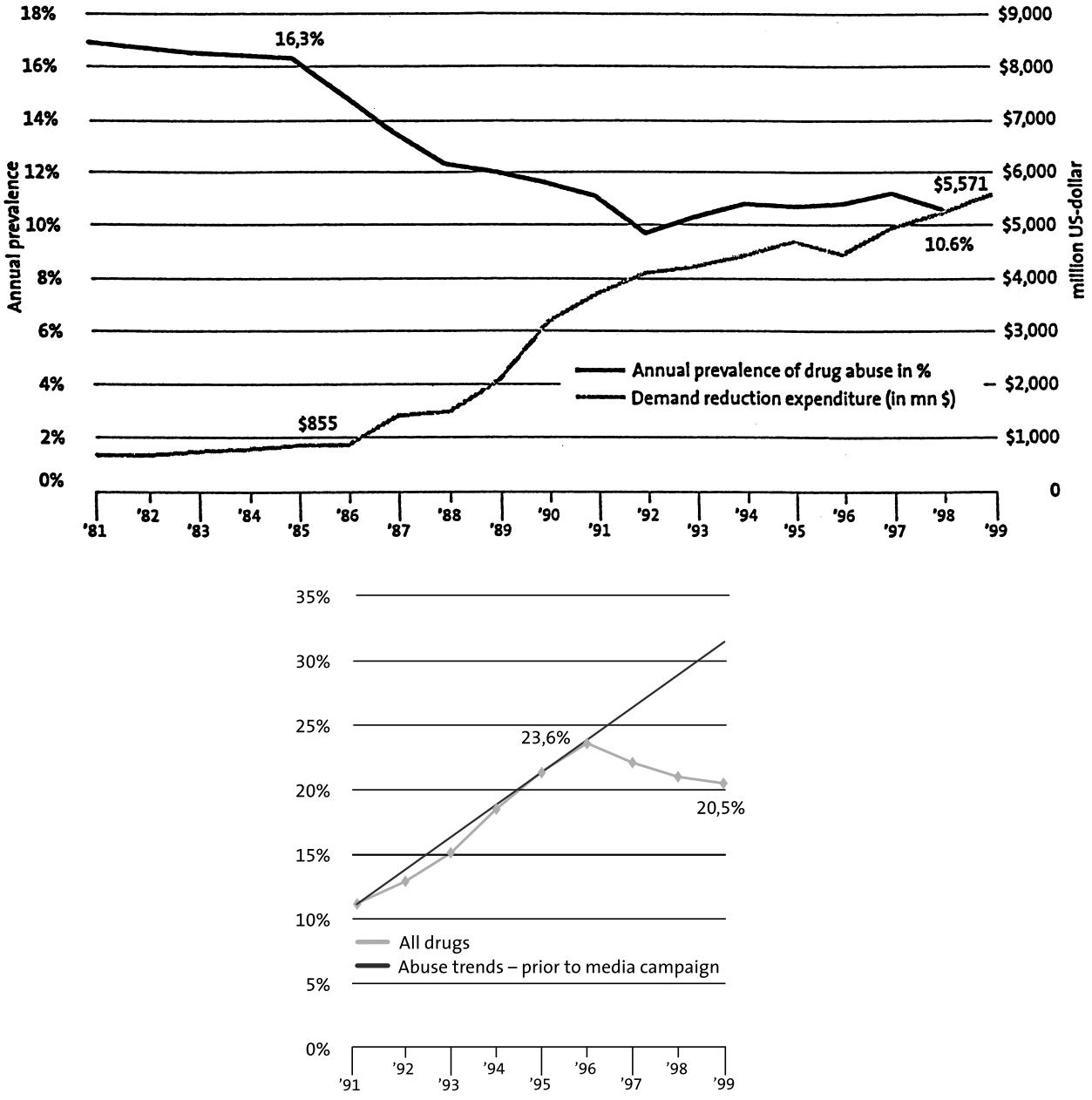
*Heroin*

"There was an estimated 149,000 new heroin users in 1998, not statistically different than the 189,000 new users in 1997 or the 132,000 new users in 1996. Estimates of heroin incidence are subject to wide variability and usually do not show any clear trend.

The rate of heroin initiation for the age group 12–17 increased from below 1.0 during the 1980s to nearly 2 during 1996 through 1998."

*Cocaine and crack cocaine*

"The annual number of new users of any form of cocaine rose between 1994 and 1998 from 514,000




Source: NIDA, *Monitoring the Future*, 1975-1999.

to 934,000. However, this was a lower level than

Fig. 3. Demand reduction expenditure and substance use. Reproduced from WDR (2000), pp. 86 and 115 (*Figures 1 and 12* in original).

Table 5
Trends in the prevalence of use of some drugs (source: World Drug Report 2000)

| % of countries reporting | Increasing use 1992 | Increasing use 1998 | Decreasing use 1992 | Decreasing use 1998 |
|---|---|---|---|---|
| Cannabis | 40 | 57 | 13 | 13 |
| ATS (amphetamine) | 25 | 49 | 13 | 14 |
| Heroin | 42 | 47 | 8 | 13 |
| Cocaine | 33 | 33 | 8 | 3 |
| Opium | 10 | 16 | 19 | 11 |

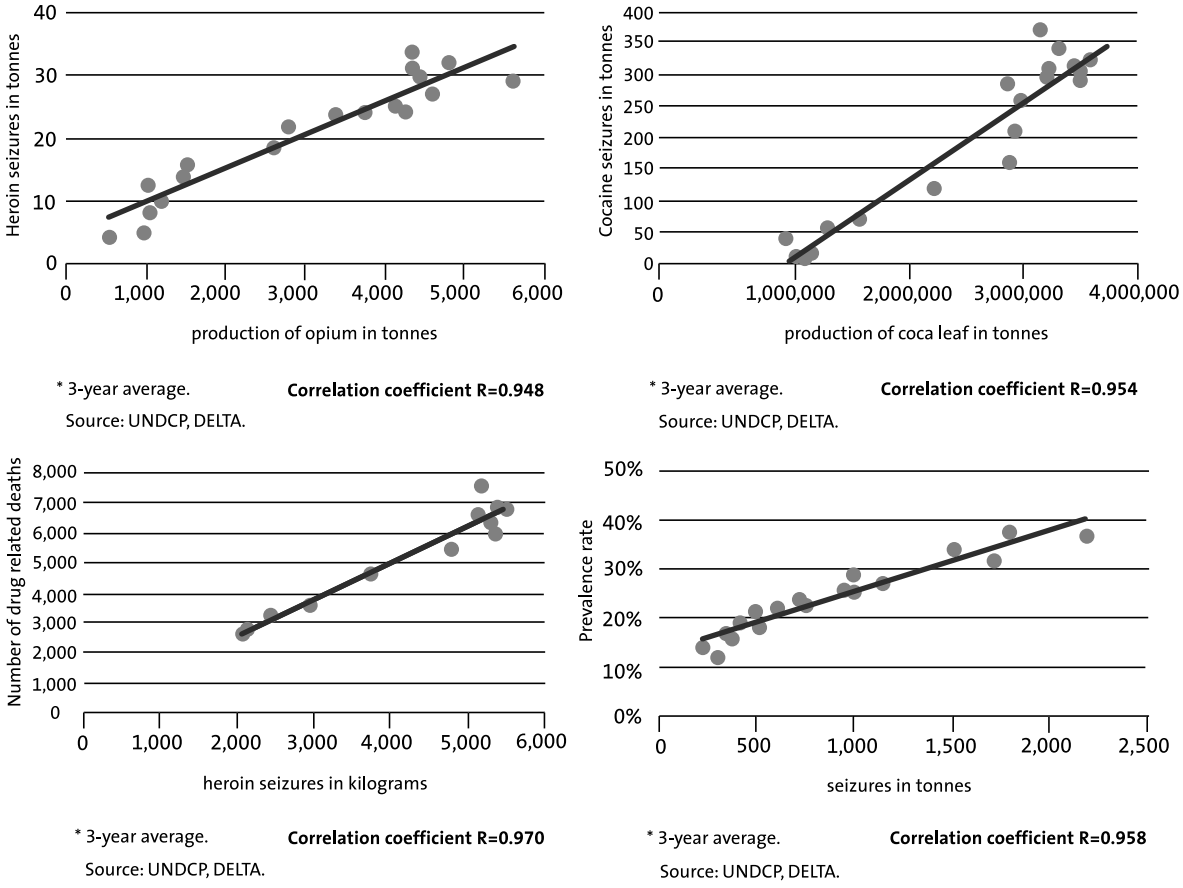



Fig. 4. Drug production and seizures. Reproduced from WDR (2000), p. 38 (*Figures 13–16* in original).

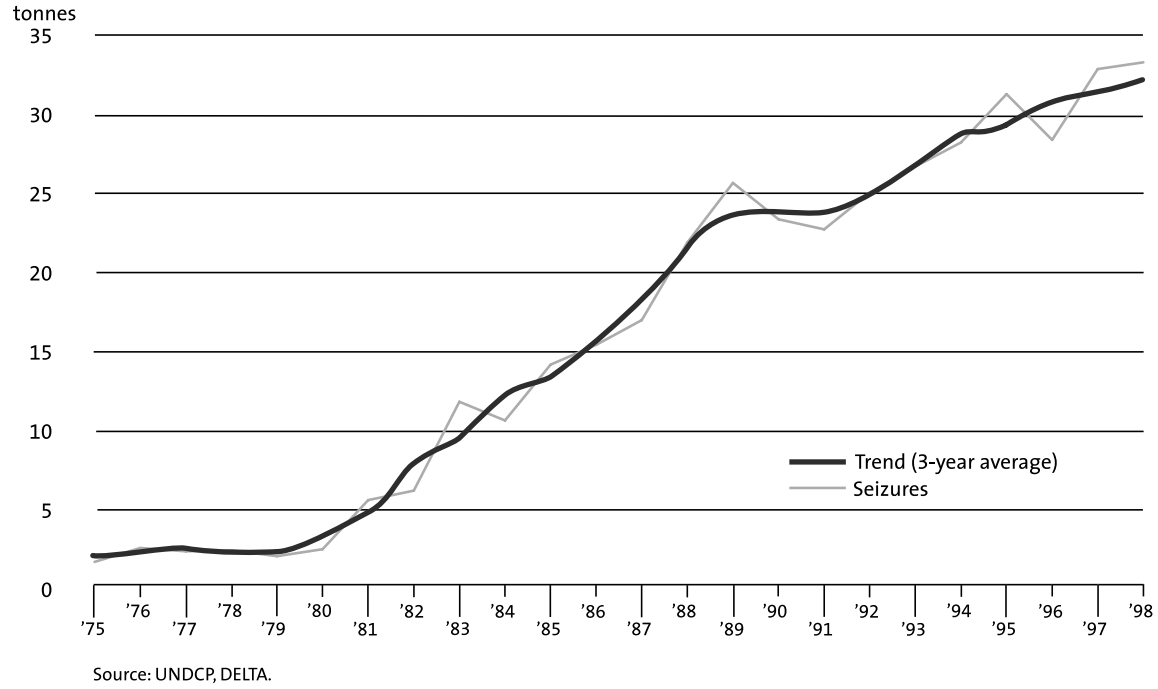



Fig. 5. Heroin seizures. Reproduced from WDR (2000), p. 39 (*Figure 17* in original).

during the early and mid-1980s. Recent initiation was at a lower level than it was at its peak in 1983, when the number of new initiates was estimated to be at 1.6 million.

The rates of initiation among different age groups have been increasing in recent years. In particular, the rate among youths age 12–17 increased from 5.1 in 1992 to 13.1 in 1996, remaining level since then. Historically, most initiation of cocaine use has taken place among young adults age 18–25. The rate for that age group fell from a high 30.5 in 1983 and 1984 to 9.1 in 1994. Initiation rates among this age group have increased to 20.8 in 1998.

The number of new crack cocaine users was 371,000 in 1998. While there has been little change in the overall number of new crack users per year since 1985, the age-specific rate of new use for age 12–17 years has increased from 1.4 in 1991 to 4.8 in 1997 and 3.6 in 1998."

*Figure 12* of WDR (2000) gives data for eighth graders (Fig. 3). To get a better idea of these figures and how they have been selected, we need to examine the updated results of the *Monitoring the Future* studies which can be found at: http://monitoringthefuture.org/data/data.html. On the page containing the final report of these studies for the year 2000 we find the original data used to obtain the figures presented in the WDR (2000). The original data also include figures for 10th and 12th graders (and not just eighth graders as shown in WDR, 2000), and these do not show any trend in declining prevalence of illicit drug use: in the original data the extrapolated hypothetical (linear or non-linear) trend shown in *Figure 12* of WDR (2000) does not appear, and there is no comment on any possible impact of specific primary prevention intervention. And as can be seen from the data in Table 5, synthetic drugs are increasingly spreading.

As a matter of fact, despite modern media campaigns, the annual prevalence for ecstasy is increasing following the general trend observed in most western countries; where the use of traditional 'natural' substances seems to be stabilizing, the use of synthetic drugs is fast increasing (ONDCEP, 2001). These comments are sufficient to show the weakness of the interpretation provided by the WDR (2000) suggesting a direct impact of the *National Youth Anti-Drug Campaign* on the annual prevalence of drug use among high-school students in the USA.

*Is the use of drugs decreasing or increasing at global level?*

Finally we will look at what evidence there is within WDR (2000) to support a rival hypothesis to the one presented by WDR, that in fact the use of drugs at a global level is increasing. We can find evidence within WDR (2000) which in fact suggests that drug use is increasing. The analysis will be restricted to heroin, both for the sake of simplicity, and because the major successes of Arlacchi's 'alternative development' policy are claimed to be obtained in the destruction of opium cultivation in Afghanistan. From an analysis of the information contained in *Box 1A* on pp. 36–38 of WDR (2000), *Figures 13–16* (reproduced here as Fig. 4), and in *Figure 17* on p. 39 of WDR (2000) (reproduced here as Fig. 5), it is possible to deduce the continuing growth in the market and in the use of drugs at global level.

WDR (2000) *Figures 13 and 14* show that the trend in seizures is directly proportional to the trend in production. In other words, the greater the amount of drugs produced, the greater the amount of drugs seized. The proportion seized is approximately constant with respect to production. In WDR (2000), *Figures 15 and 16* show that the amount of seizures is directly proportional to consumption, measured by indirect indicators (Wiessing, Hartnoll & Rossi, 2001) such as deaths for heroin and prevalence of use data among American 18-year-old for cannabis. These figures confirm what has already emerged from the two previous figures: that the more the market grows, the more seizures grow. The effectiveness of seizure action has not changed significantly, and remains rather low. *Box 1A* therefore provides the most comprehensive and neutral information contained in WDR (2000) on the global trend of the impact of current policies on the drugs market, and is not positive.

The four figures tell us nothing about the development over the years of the market and of consumption. However, the results obtained from the previous analyses allow us to state with reasonable certainty (given the correlation coefficients shown above, which are very close to one) that whenever the data show an increase in seizures, behind this increase there lies an identical increase in the market and in consumption.

Let us now consider Fig. 5, which reproduces WDR (2000) *Figure 17*. The trend of the curve is clearly upward, and we can consequently conclude that the heroin market and heroin consumption have been growing constantly at global level since the early 1980s. This does not mean that the trend shown is true of every country, only that the global mean is rising. While in some countries there may have been a reduction in heroin use, in other countries consumption has risen so that it not only compensates for the reductions but also produces an upward trend at global level. In other words, what we see is a phenomenon well

known to economists: when a market contracts due to saturation or maybe because of action taken at local level, it moves to open another market elsewhere which will more than make up for the losses sustained in the first market.

All this contradicts the claimed positive effects of current policies at global level. In fact WDR (2000) itself contains a summary of the results of the standard ARQ questionnaires used by countries to report to UNDCP, reproduced here as Table 5, which show a wide diffusion and expansion of drug use at global level for all substances in general, and above all for Amphetamine Type Stimulants (ATS). The number of countries reporting increasing use of ATS has more than doubled between 1992 and 1998.

If we look at the situation with regard to heroin, however, what we see is the saturation of old markets and the opening of new markets; there is an increase, both in countries that report a reduction in use (saturation) and countries that report an increase (new markets). Overall, however, there is a prevailing increase at global level.

## Conclusion

To bring this critical analysis of the World Drug Report (2000) to an end, we can conclude that the document cannot be considered of value in terms of providing an analysis of comprehensive information in a scientifically rigourous and neutral manner. The kinds of data manipulation noted here have been noted by others regarding how drug data are distorted to support particular drug policies (see for example, MacCoun, 2001). WDR (2000) is a work of low quality. It distorts the presentation of data, covering itself by attributing the data presented to agencies of international repute, thereby misrepresenting the data as a means of supporting pre-established theses that are, in fact, not corroborated by the epidemiological findings observed.

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