

The Single Convention on Narcotic Drugs- Implementation in Eight Countries: Argentina, Colombia, Nigeria, Panama, Serbia, Sierra Leone, Uganda, Vietnam

A MONOGRAPH PREPARED FOR:

International Pain Policy Fellowship Training

Madison, Wisconsin, USA

23-27 October 2006

University of Wisconsin Pain & Policy Studies Group

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I. ABOUT THE PAIN & POLICY STUDIES GROUP

The Pain & Policy Studies Group (PPSG) mission is to promote “balance” in international, national and state pain policies to ensure adequate availability of opioid analgesics for the relief of pain and suffering and their appropriate medical use for patient care while addressing diversion and abuse. The PPSG is part of the University of Wisconsin Paul P. Carbone Comprehensive Cancer Center within the School of Medicine and Public Health, and is designated the World Health Organization (WHO) Collaborating Center for Policy and Communications in Cancer Care. Much of the PPSG’s work, including its use of the WHO Guidelines, “Achieving Balance in National Opioids Control Policy,” is discussed later in this document, and is available on its website at www.painpolicy.wisc.edu. As a WHO Collaborating Center, the PPSG provides technical assistance to governments and NGO’s in Africa, Asia, Europe, Latin America, and has established a WHO Demonstration Project in Calicut, India.

The PPSG also supports a global communications program to improve access to information about pain relief, palliative care, and pain policy, and publishes a WHO newsletter *Cancer Pain Release* (<http://www.whocancerpain.wisc.edu>).

In the USA, the PPSG supports a program of policy research, education and communications. This program includes: regular evaluation and grading of federal and state pain policies; model policy development; technical assistance; research and education of medical regulators; tracking trends in use and abuse of opioid analgesics and prescription monitoring programs; and a website with extensive pain policy resources including a full text data base of federal and state pain policies (www.painpolicy.wisc.edu).

Citation:

Pain & Policy Studies Group. *The Single Convention on Narcotic Drugs - Implementation in Eight Countries: Argentina, Colombia, Nigeria, Panama, Serbia, Sierra Leone, Uganda, Vietnam* University of Wisconsin Pain & Policy Studies Group/WHO Collaborating Center for Policy and Communications in Cancer Care; Madison, Wisconsin, USA. 2006. (Monograph)

II. INTRODUCTION: INTERPRETING INFORMATION IN THIS DOCUMENT

A. Why are opioid consumption statistics important?

In 1986, the WHO concluded that most pain due to cancer could be relieved using a simple analgesic method and that every national government should institute a cancer pain relief programme.¹ The WHO analgesic method has also been endorsed for relief of pain due to HIV/AIDS.² The method depends on the availability of, and patient access to, medicines that can relieve severe pain, such as morphine and other opioids. Recognizing that opioids are controlled strictly as narcotic drugs because of a potential for abuse and drug dependence, WHO recommended that governments (a) evaluate their drug control policies and practices to ensure that patients receive the opioid medications that are necessary for pain relief, and (b) encourage health care workers to report to the appropriate authorities any instance in which oral opioids are not available for cancer patients.

Indeed, the fact that opioids are narcotic drugs regulated by governments is why those interested in pain relief and palliative care for HIV/AIDS and cancer must learn about the drug regulatory system and prepare to work with governments.

More recently, the World Health Assembly and the United Nations Economic and Social Council have become concerned about inadequate patient access to pain relief and have adopted resolutions aimed at improving the availability of essential opioid medications for pain relief, especially in low and middle income countries.^{3,4}

Consumption statistics for opioids are one indicator of the capability of a country to treat moderate to severe pain. Opioid consumption statistics can also be used to evaluate the outcomes of efforts to improve opioid availability. Morphine is frequently used as a principal indicator because morphine is the most widely available opioid analgesic for moderate to severe pain. Fentanyl and oxycodone are included in this publication because they are appropriate to treat moderate to severe pain, and they have become increasingly available globally over the last decade. Consumption trends for pethidine are also included in this monograph because, although pethidine is no longer recommended for chronic pain, it is still widely used. Other opioids such as tramadol and codeine are not included because they are not capable of relieving severe pain. Since pethidine is subject to the same legal controls as other strong opioids, any country that uses pethidine should be able to use morphine, fentanyl or oxycodone.

¹ World Health Organization. *Cancer pain relief*. Geneva, Switzerland: World Health Organization; 1986.

² World Health Organization HIV-AIDS. *Palliative Care*. Geneva, Switzerland: World Health Organization; 2004. <http://www.who.int/hiv/topics/palliative/care/en/>

³ World Health Assembly. Cancer Prevention and Control. WHA 58.22 Geneva, Switzerland: World Health Organization; 2005. http://www.who.int/gb/ebwha/pdf_files/WHA58-REC1/english/A58_2005_REC1-en.pdf

⁴ United Nations Economic and Social Council. Treatment of pain using opioid analgesics; Resolution 2005-25. Report on the forty-eighth session of the Commission on Narcotic Drugs E/2005/28; 19 March 2004 and 7-11 March 2005; issued 22 July 2005. <http://www.un.org/docs/ecosoc/documents/2005/resolutions/Resolution%202005-25.pdf>

B. Governments and the INCB are the source of opioid consumption statistics

The International Narcotics Control Board (INCB) is the international narcotic regulatory authority for the United Nations; it monitors national governments' implementation of the 1961 Single Convention on Narcotic Drugs. This treaty, to which most governments are party, governs the cultivation, movement and availability of narcotic drugs for medical purposes in the world. According to the Single Convention, narcotic drugs are indispensable for the treatment of pain and suffering, and governments should ensure their adequate availability for all medical and scientific purposes, while preventing diversion and addiction. Governments must annually provide INCB an estimate of the amounts of opioids that will be required to satisfy all medical and scientific needs. Although INCB "confirms" the estimate as the amount authorized to be used in the country, the estimate itself is determined and submitted by the government. The INCB does not reduce governments' estimates to less than is needed. In fact, if unanticipated needs arise during the year, the INCB can confirm a supplemental request by a country in one week.

Governments also report opioid consumption statistics to the INCB which compiles them into annual statistical reports.⁵ "Consumption" refers to the amounts distributed to the retail level in a country, i.e., to those institutions and programs that are licensed to dispense to patients. Consumption is reported by anhydrous weight of the active drug, not including the salt; for example, the amount reported for morphine does not include the weight of the salt (sulfate or chloride), just the morphine base. Some countries do not report consumption statistics. INCB does not publish reports of consumption less than 1 kilogram. However, the PPSG obtains these data from the INCB and makes them available because there are many countries where small amounts are important and because any amount of morphine consumed demonstrates that the government approved its use.

C. Competent national authorities

Each government that is party to the Single Convention designates an office that is responsible for carrying out required functions, including making estimates and reporting consumption statistics.⁶ Table 1 provides a list of the names and contact information for the National Competent Authority in the 8 Fellows' countries. These offices may be located in the Ministry of Health in the pharmaceutical department or in the national food or drug control agency. They are the principal national authority for ensuring that opioid analgesics are adequately available for medical and scientific purposes and for submitting the required documents to the INCB. These offices receive reports from the INCB, including technical reports that encourage all governments to examine national policies and administrative procedures for barriers and to consult with health professionals in making up realistic estimates. However, sometimes these offices do not have adequate personnel to administer these and other important responsibilities in the area of drug control and availability.

⁵ International Narcotics Control Board. *Narcotic Drugs: Estimated World Requirements for 2006 - Statistics for 2004*. New York, NY: United Nations; 2006. http://www.incb.org/incb/narcotic_drugs_2005.html

⁶ United Nations. *Competent national authorities under the international drug control treaties*, 2004. New York, NY: United Nations; 2005.

D. Status of adherence to conventions, receipt of statistics and estimates

Table 2 presents information that the INCB compiles annually in an effort to inform the public about whether national governments are adhering to their obligations under the Single Convention. Information is provided for the 8 Fellows' countries.

From these data, it can be seen that all 8 governments are parties to the Single Convention, 1961, and as amended in 1972. It appears that the governments of Sierra Leone and Vietnam did not submit estimated requirements for 2006.

III. OVERVIEW OF OPIOID CONSUMPTION: MORPHINE, FENTANYL, OXYCODONE, PETHIDINE

A. Global Consumption

Trend in kilograms

Graphs 1 - 2 provide the global consumption trends for morphine, fentanyl, oxycodone and pethidine for 1980 – 2004, which presents the 'big picture' of the consumption of opioid analgesics. Prior to 1986, the consumption of morphine throughout the world was low and stable. After 1986, the total global consumption of morphine began to increase as some national governments and health professionals adopted the WHO Analgesic Ladder and as new opioid products became available more widely. The consumption of pethidine exceeded that of morphine, but has slowly declined as other opioids have become more widely used. Recently, there are indications that consumption of morphine is being offset in some countries by the advent of other opioid analgesics such as fentanyl, hydromorphone, methadone and oxycodone. Although some countries use morphine mainly for cancer pain, morphine may be used for other pain, including acute, post-operative, AIDS, and for chronic non-cancer conditions. In addition, some countries may use opioids including morphine and methadone for substitution treatment of drug dependence.

2004, in milligrams per capita

Graphs 3 - 6 present global 2004 consumption statistics in milligrams per capita (dividing the total amount of drug "consumed," in kilograms, by the population of the country) for morphine, fentanyl, oxycodone and pethidine. This provides a population-based statistic that allows for comparisons between countries and in relation to the global mean. The consumption of opioids varies greatly from country to country. Selected countries that reported statistics are highlighted. The vast majority of morphine is consumed in industrialized countries which represent a small part of the world's population. The remaining countries of the world (a number of developed countries and all of the developing countries) consume comparatively little.

In a recent report, the INCB stated, "The low consumption of opioid analgesics for the treatment of moderate to severe pain, especially in developing countries, continues to be a matter of great concern to the Board. Global consumption of morphine increased significantly throughout the

1990s; in the past 20 years, it rose almost 10-fold, from 3 tons in 1984 to about 28 tons in 2003. However, the bulk of that increase occurred in some, but not all, developed countries, which represent a small part of the world's population. In 2003, six countries together accounted for 79 per cent of global consumption of morphine. Developing countries, which represent about 80 per cent of the world's population, accounted for only about 6 per cent of global consumption of morphine.” (p. 25)⁷

Tables 3 - 6 present the data that correspond to Graphs 3-6 for morphine, fentanyl, oxycodone and pethidine, respectively.

B. Regional Consumption

Graphs 7 - 30 present the WHO regional pictures of the consumption of morphine, fentanyl, oxycodone and pethidine in milligrams per capita for the AFRO, AMRO, EMRO, EURO, SEARO, and WPRO regions respectively.

C. National Consumption

Graphs 31 - 62 present morphine, fentanyl, oxycodone, and pethidine consumption trends for the 8 Fellows' countries: Argentina, Colombia, Nigeria, Panama, Serbia, Sierra Leone, Uganda, and Vietnam. These data are expressed in milligrams per capita. Years for which there is no data means no report was received.

⁷ International Narcotics Control Board. *Report of the International Narcotics Control Board for 2004*. New York, NY: United Nations; 2005. http://www.incb.org/pdf/e/ar/2004/incb_report_2004_full.pdf

TABLE 1. COMPETENT NATIONAL AUTHORITIES

ARGENTINA

Administración Nacional de Medicamentos
Alimentos y Tecnología Médica (ANIMAT/INAME)
Departamento de Psicotrópicas y Estupefacientes
Av. Caseros 2161
1264 Buenos Aires C.F.
Argentina

Phone: (54) 11-43400850 (int. 2571)
Fax: (54) 11-43400850 (int. 2575)
E-mail: aviglio@anmat.gov.ar

COLOMBIA

Fondo Nacional de Estupefacientes
Avenida Caracas No. 1-85 Sur
Bogotá
Colombia

Phone: (57) 1-3331088
Fax: (57) 1-12801263
E-mail: fondonalestupef@fne.gov.co
fondonalestupef@tutopia.gov.co

NIGERIA

Director-General
National Agency for Food and Drug
Administration and Control (NAFDAC)
Olusegun Obasanjo Way
Zone 7, Wuse
Abuja
Nigeria

Phone: (234) 9-524 09 94
E-mail: nafdac@lnkserve.com

PANAMA

Dirección de Farmacia y Drogas
Ministerio de Salud
Corregimiento de Ancón, Frente al Hospital Gorgas
Edificio #253, Apartado 2048, Zona 1
Panamá 1
Panamá

Phone: (507) 2642410, (507) 2622157
Fax: (507) 2622410

SERBIA

Ministry of Health, Republic of Serbia
Dept. of Narcotice Drugs and precursors
Omladinskih brigada 1
11070 Beograd
Serbia

Phone: (381) 11-3112381, (381) 11-3113179
Fax: (381) 11-311-75-50

SIERRA LEONE

Chairman
Pharmacy Board
Government Medical Stores
New England Ville
Freetown
Sierra Leone

Phone: (232) 240298, (232) 240489
Fax: (232) 242253

UGANDA

National Drug Authority
Plot 46-48
Lumumba Avenue
P.O. Box 23096
Kampala
Uganda

Phone: (256) 41-255665
Fax: (256) 41-255758
E-mail: ndaug@nda.or.ug

VIETNAM

Drug Administration
Ministry of Health
138A Giang Vo Road
Hanoi
Vietnam

Phone: (84) 4-8461525
Fax: (84) 4-8234758

**TABLE 2. STATUS OF ADHERENCE TO CONVENTION,
RECEIPT OF STATISTICS, AND ESTIMATES**

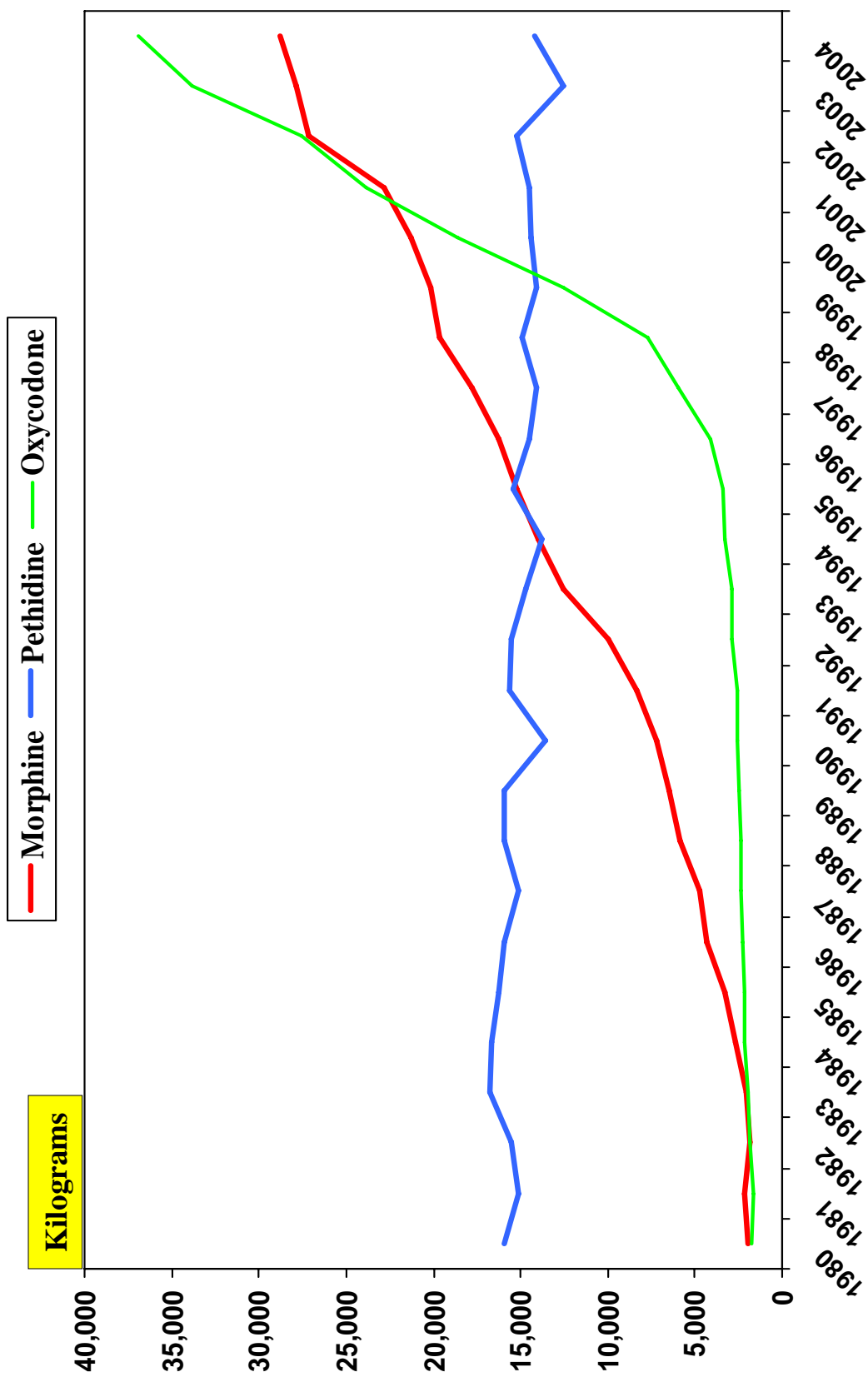
	Adherence		Consumption Statistics for 2004	Estimated requirements for 2006
	Single Convention 1961	As amended 1961/72		
Argentina	●	●	●	●
Colombia	●	●	●	●
Nigeria	●	●	●	●
Panama	●	●	●	●
Serbia & Montenegro	●	●	●	●
Sierra Leone	●	●	●	*
Uganda	●	●	●	●
Vietnam	●	●	●	*

● = report received

* = report not received

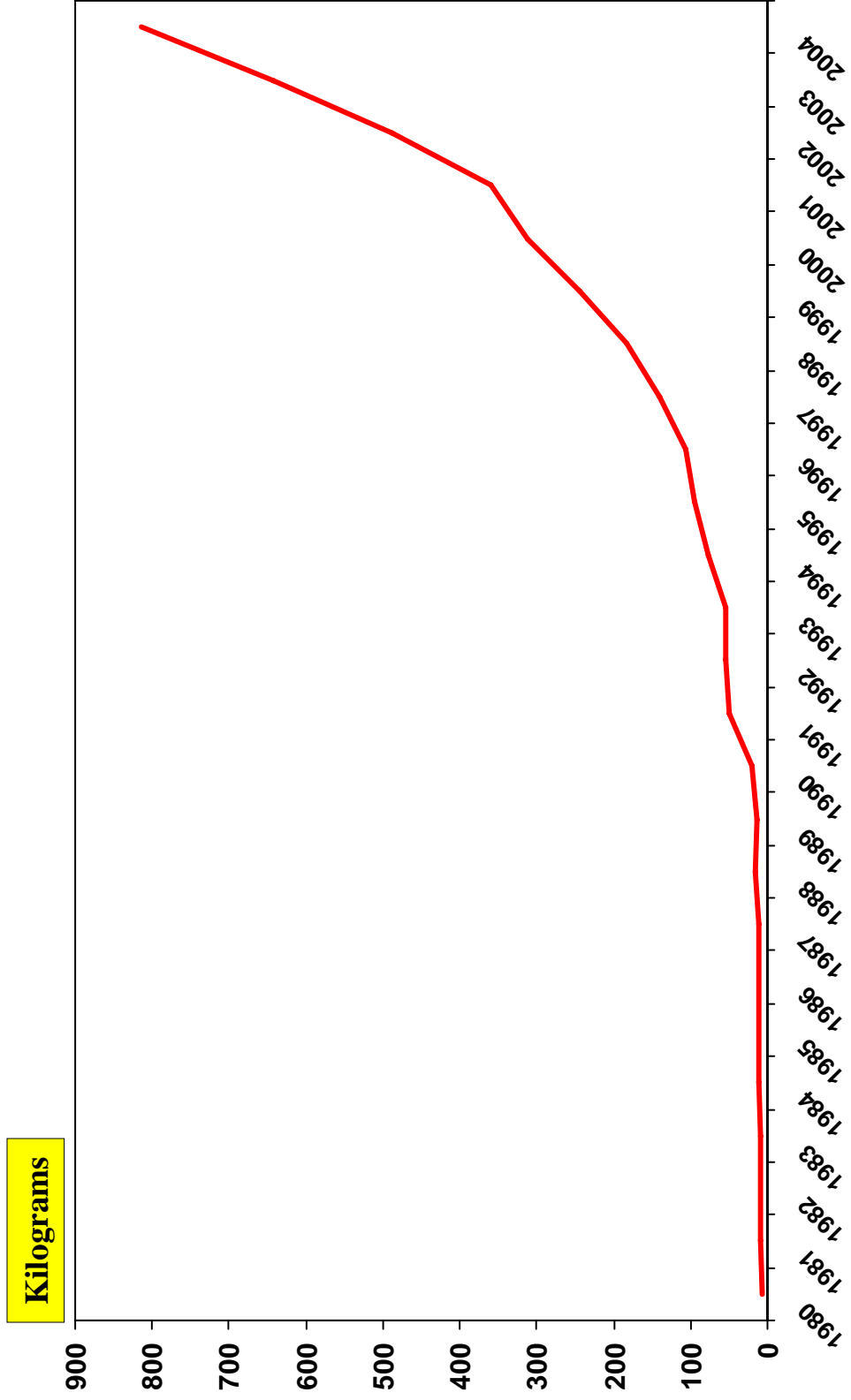
VI. Global Consumption Trends

**Graph 1. Global Consumption of Morphine, Pethidine and Oxycodone
1980-2004**



Source: International Narcotics Control Board
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

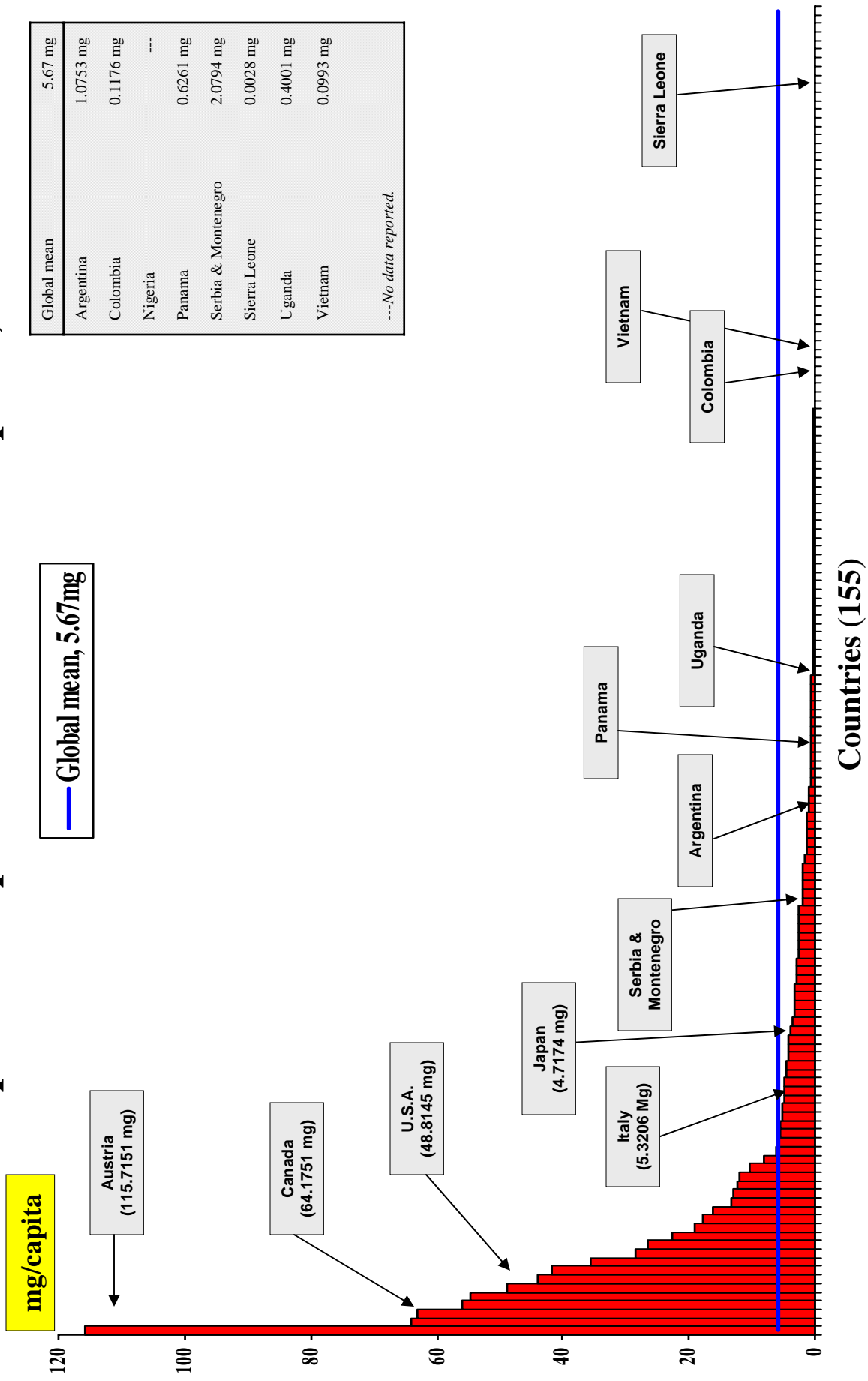
Graph 2. Global Consumption of Fentanyl 1980-2004



Source: International Narcotics Control Board
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

VII. Global Consumption, 2004

Graph 3. Morphine Global Consumption, 2004



Source: International Narcotics Control Board; United Nations Demographic Yearbook
 By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The global mean is calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries

Table 3

Global Morphine Consumption, 2004: (mg/capita)

Note: Countries not listed did not report morphine consumption to the INCB for 2004

1	Austria	115.7151	53	Rep. of Korea	2.0304	105	Mexico	0.1957
2	Canada	64.1751	54	Tunisia	1.9579	106	Azerbaijan	0.1810
3	Denmark	63.0390	55	Ukraine	1.8003	107	Turkey	0.1785
4	Australia	55.9482	56	Latvia	1.7505	108	Dominica	0.1714
5	New Zealand	54.8074	57	Bahamas	1.3943	109	Ecuador	0.1615
6	United States of America	48.8145	58	Jamaica	1.3806	110	Grenada	0.1584
7	Iceland	43.9204	59	Malaysia	1.3013	111	Mauritius	0.1521
8	France	41.8355	60	Macao	1.2809	112	Turkmenistan	0.1443
9	Norway	35.4423	61	Singapore	1.2174	113	Swaziland	0.1437
10	Sweden	28.4913	62	Lebanon	1.1213	114	Kenya	0.1400
11	Switzerland	26.5509	63	Argentina	1.0753	115	Wallis & Futuna Islands	0.1333
12	Falkland Islands	22.6667	64	Republic of Moldova	0.8212	116	Syrian Arab Republic	0.1244
13	United Kingdom	19.1548	65	Bahrain	0.7344	117	Vanuatu	0.1238
14	Netherlands	17.8260	66	Oman	0.7175	118	Chad	0.1197
15	Germany	16.0119	67	United Arab Emirates	0.7053	119	Colombia	0.1176
16	Saint Helena	13.2000	68	Panama	0.6261	120	Morocco	0.1153
17	Ireland	12.8478	69	Greece	0.6068	121	Kyrgyzstan	0.1111
18	Gibraltar	12.2069	70	Zimbabwe	0.5718	122	Viet Nam	0.0993
19	Spain	11.8115	71	Belarus	0.5606	123	Anguilla	0.0833
20	Belgium	10.4698	72	Mongolia	0.5511	124	Nauru	0.0833
21	Portugal	7.9790	73	Thailand	0.5421	125	Uzbekistan	0.0713
22	Poland	6.1887	74	Paraguay	0.5353	126	Zambia	0.0704
23	Czech Republic	5.7657	75	Botswana	0.5200	127	Mali	0.0665
24	New Caledonia	5.6591	76	Brunei Darussalam	0.5200	128	Egypt	0.0588
25	Finland	5.4013	77	Jordan	0.4981	129	Algeria	0.0546
26	Italy	5.3206	78	Dominican republic	0.4752	130	Libyan Arab Jamahiriya	0.0527
27	Israel	5.0158	79	Kazakhstan	0.4727	131	Marshall Islands	0.0526
28	Bulgaria	4.9697	80	Micronesia (Fed. States of)	0.4500	132	Bolivia	0.0524
29	French Polynesia	4.9069	81	Saudi Arabia	0.4463	133	Bhutan	0.0461
30	Japan	4.7174	82	Bosnia & Herzegovina	0.4332	134	Guatemala	0.0333
31	South Africa	4.6682	83	Sri Lanka	0.4248	135	Myanmar	0.0327
32	Estonia	4.5458	84	Peru	0.4163	136	Cape Verde	0.0217
33	Form. Yug. Rep.of Macedonia	4.3582	85	Uganda	0.4001	137	Indonesia	0.0180
34	Slovenia	4.3210	86	Cook Islands	0.3889	138	Senegal	0.0157
35	Slovakia	4.3185	87	Tonga	0.3861	139	Rwanda	0.0136
36	Barbados	3.8044	88	Republic of Palau	0.3500	140	Nepal	0.0126
37	Hong Kong SAR	3.4817	89	Qatar	0.3380	141	Benin	0.0112
38	Uruguay	3.3350	90	Kuwait	0.3376	142	Yemen	0.0100
39	Malta	3.2581	91	Montserrat	0.3333	143	Cambodia	0.0098
40	Costa Rica	3.2375	92	Nicaragua	0.3280	144	Burundi	0.0080
41	Brazil	3.0848	93	Iran (Islamic Republic of)	0.3277	145	Cameroon	0.0076
42	Andorra	3.0000	94	United Republic of Tanzania	0.3250	146	Sao Tome & Principe	0.0065
43	Namibia	2.8653	95	China	0.3221	147	Central African Republic	0.0048
44	Georgia	2.7498	96	British Virgin Islands	0.3182	148	Côte d'Ivoire	0.0032
45	Cyprus	2.7115	97	Saint Vincent & the Grenadines	0.2963	149	Dem. Rep. of the Congo	0.0031
46	Seychelles	2.6627	98	Venezuela	0.2961	150	Sierra Leone	0.0028
47	Hungary	2.5857	99	Russian Federation	0.2807	151	Eritrea	0.0021
48	Lithuania	2.4867	100	Guinea-Bissau	0.2368	152	Burkina Faso	0.0016
49	Chile	2.4758	101	El Salvador	0.2303	153	Pakistan	0.0013
50	Romania	2.4616	102	Turks & Caicos Islands	0.2273	154	Guinea	0.0011
51	Serbia & Montenegro	2.0794	103	Suriname	0.2183	155	Mozambique	0.0006
52	Netherlands Antilles	2.0447	104	Philippines	0.2182			

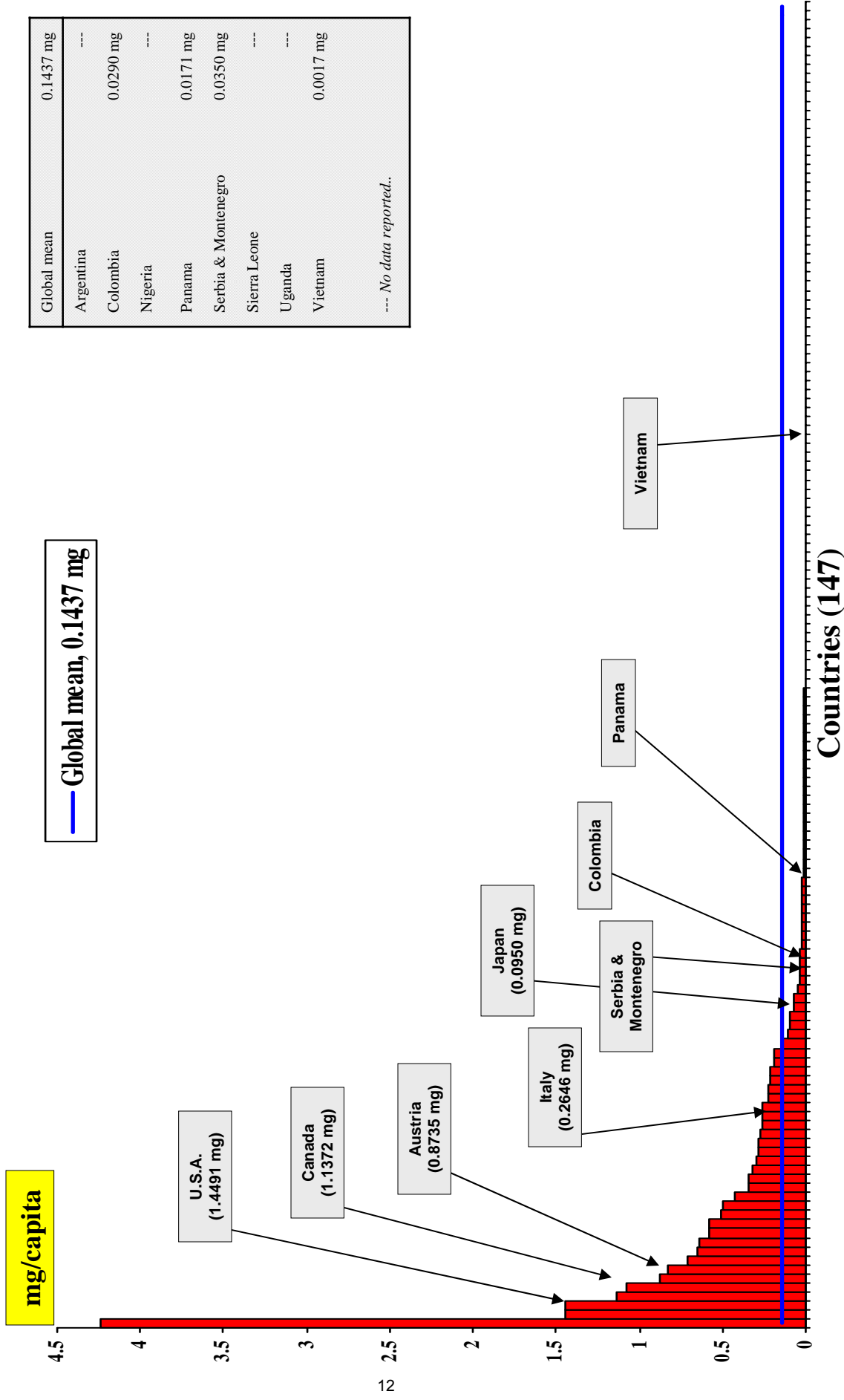


Pain & Policy Studies Group

WHO Collaborating Center for Policy and Communications in
Cancer Care

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Graph 4. Fentanyl Global Consumption, 2004



The global mean is calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries

Table 4

Global Fentanyl Consumption, 2004: (mg/capita)

Note: Countries not listed did not report fentanyl consumption to the INCB for 2004

1	Belgium	4.2362	50	Slovakia	0.0188	99	St Vincent & the Grenadines	0.0018
2	United States of America	1.4491	51	Panama	0.0171	100	Viet Nam	0.0017
3	Germany	1.4461	52	Singapore	0.0167	101	Turks and Caicos Islands	0.0017
4	Canada	1.1372	53	Tunisia	0.0133	102	Seychelles	0.0016
5	Denmark	1.0825	54	Republic of Korea	0.0126	103	Vanuatu	0.0014
6	Austria	0.8735	55	Uruguay	0.0123	104	Cape Verde	0.0014
7	Finland	0.8282	56	Bahrain	0.0115	105	Bolivia	0.0010
8	Netherlands	0.7102	57	Venezuela	0.0106	106	Dominican Republic	0.0009
9	Norway	0.6484	58	South Africa	0.0105	107	Kazakhstan	0.0007
10	Spain	0.6345	59	Hong Kong SAR	0.0102	108	Guatemala	0.0007
11	Iceland	0.5765	60	Malta	0.0100	109	Turkmenistan	0.0007
12	Sweden	0.5764	61	United Arab Emirates	0.0099	110	Gabon	0.0007
13	Switzerland	0.5043	62	Ukraine	0.0095	111	Bosnia and Herzegovina	0.0006
14	France	0.4999	63	Jordan	0.0091	112	Azerbaijan	0.0006
15	Ireland	0.4247	64	Malaysia	0.0089	113	Lao Peop. Dem. Rep.	0.0006
16	Falkland Islands	0.3387	65	Ecuador	0.0082	114	Swaziland	0.0005
17	Slovenia	0.3385	66	Grenada	0.0079	115	Anguilla	0.0005
18	United Kingdom	0.3253	67	Mexico	0.0071	116	Tonga	0.0004
19	Gibraltar	0.3014	68	Republic of Moldova	0.0068	117	Sri Lanka	0.0004
20	Hungary	0.2882	69	Costa Rica	0.0067	118	Dominica	0.0004
21	Israel	0.2800	70	Russian Federation	0.0065	119	Marshall Islands	0.0004
22	French Polynesia	0.2729	71	Albania	0.0064	120	India	0.0004
23	Italy	0.2646	72	Kuwait	0.0059	121	Micronesia (Fed. States of)	0.0004
24	Croatia	0.2618	73	Saint Helena	0.0058	122	Nauru	0.0003
25	Wallis & Fortuna Islands	0.2572	74	El Salvador	0.0057	123	Zambia	0.0003
26	Australia	0.2296	75	Nicaragua	0.0055	124	Uzbekistan	0.0003
27	Czech Republic	0.2234	76	Libyan Arab Jamahiriya	0.0055	125	Burkina Faso	0.0003
28	Portugal	0.2125	77	Oman	0.0055	126	Zimbabwe	0.0003
29	Greece	0.2111	78	Algeria	0.0051	127	Cambodia	0.0003
30	Andorra	0.1951	79	Romania	0.0049	128	Benin	0.0002
31	Poland	0.1938	80	Form. Yug. Rep. of Macedonia	0.0048	129	Côte d'Ivoire	0.0002
32	New Caledonia	0.1431	81	Peru	0.0046	130	Jamaica	0.0002
33	Latvia	0.1042	82	Thailand	0.0044	131	Bhutan	0.0002
34	Estonia	0.0978	83	Brunei Darussalam	0.0042	132	Philippines	0.0002
35	Japan	0.0950	84	China	0.0041	133	Indonesia	0.0002
36	Lithuania	0.0766	85	Belarus	0.0039	134	Botswana	0.0001
37	Cyprus	0.0706	86	Georgia	0.0038	135	Tajikistan	0.0001
38	Netherlands Antilles	0.0523	87	Bahamas	0.0038	136	Burundi	0.0001
39	Bulgaria	0.0356	88	Egypt	0.0037	137	Mali	0.000057
40	Serbia and Montenegro	0.0350	89	Mongolia	0.0036	138	Kenya	0.00003
41	New Zealand	0.0320	90	Morocco	0.0036	139	Ghana	0.00003
42	Saudi Arabia	0.0319	91	Iran (Islamic Republic of)	0.0031	140	Mozambique	0.00003
43	Turkey	0.0290	92	Syrian Arab Republic	0.0028	141	Dem. Rep. of the Congo	0.00002
44	Colombia	0.0290	93	Macao	0.0024	142	Rwanda	0.00002
45	Lebanon	0.0289	94	Mauritius	0.0024	143	Togo	0.00001
46	Brazil	0.0226	95	Namibia	0.0023	144	Guinea	0.000005
47	Qatar	0.0216	96	Kyrgyzstan	0.0022	145	Central African Republic	0.000005
48	Sao Tome & Principe	0.0204	97	British Virgin Islands	0.0020	146	Nepal	0.000001
49	Chile	0.0193	98	Suriname	0.0019	147	Yemen	

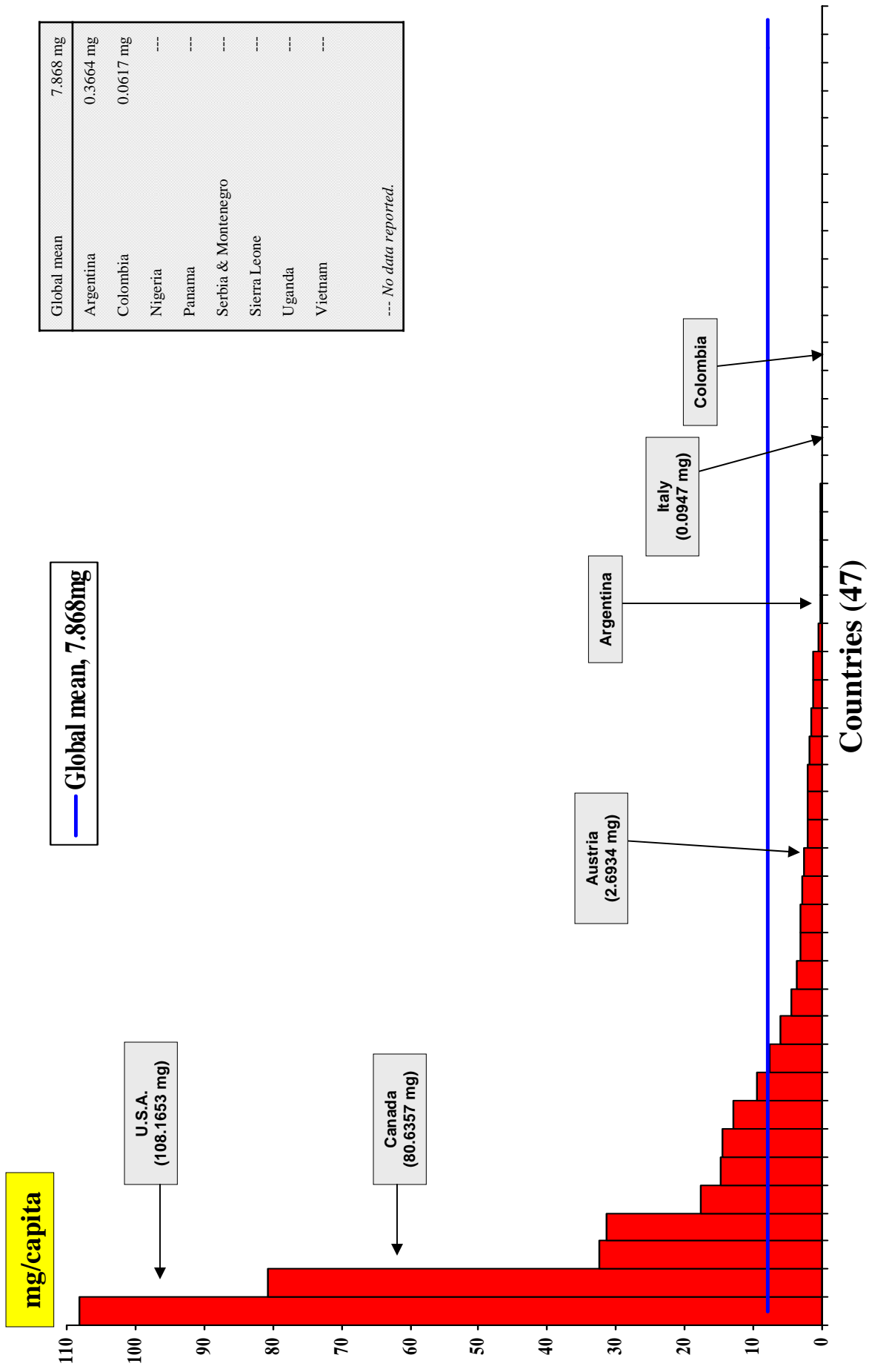


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Graph 5. Oxycodone Global Consumption, 2004



The global mean is calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries

Table 5

Global Oxycodone Consumption, 2004: (mg/capita)

Note: Countries not listed did not report oxycodone consumption to the INCB for 2004

1	United States of America	108.1653		25	Spain	0.4699
2	Canada	80.6357		26	Argentina	0.3664
3	Denmark	32.3911		27	Republic of Korea	0.2629
4	Australia	31.5110		28	El Salvador	0.2611
5	Finland	17.6731		29	Venezuela	0.2193
6	Norway	14.7882		30	Bolivia	0.1978
7	Sweden	14.4772		31	Netherlands Antilles	0.0950
8	Germany	12.8480		32	Italy	0.0947
9	Israel	9.3809		33	Saudi Arabia	0.0899
10	Ireland	7.6041		34	Peru	0.0698
11	United Kingdom	6.0979		35	Colombia	0.0617
12	Netherlands	4.3855		36	Philippines	0.0576
13	Switzerland	3.6312		37	Brazil	0.0493
14	Slovakia	3.1790		38	New Zealand	0.0294
15	Bahamas	3.1262		39	Chile	0.0254
16	Iceland	2.8028		40	Mexico	0.0216
17	Austria	2.6934		41	Hungary	0.0213
18	Turks and Caicos Islands	2.0909		42	Dominican Republic	0.0201
19	Estonia	2.0554		43	Belgium	0.0170
20	Republic of Palau	2.0000		44	Bulgaria	0.0066
21	Slovenia	1.7506		45	United Arab Emirates	0.0062
22	France	1.5071		46	Latvia	0.0026
23	Czech Republic	1.3273		47	Ecuador	0.0002
24	Gibraltar	1.2414				

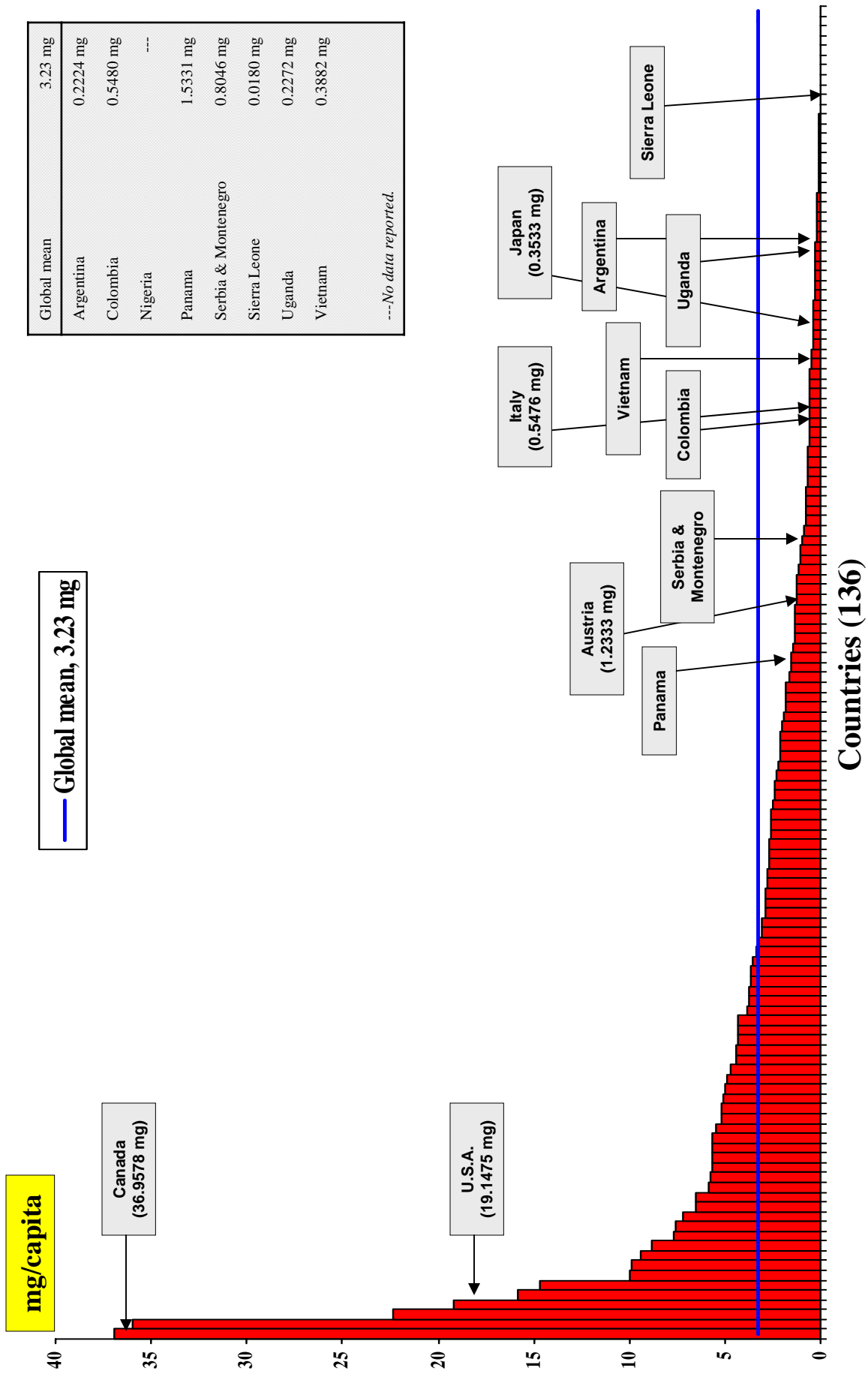


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Graph 6. Pethidine Global Consumption, 2004



The global mean is calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries

Table 6

Global Pethidine Consumption, 2004: (mg/capita)**Note: Countries not listed did not report pethidine consumption to the INCB for 2004**

1	Canada	36.9578	46	Singapore	2.8373	91	Guatemala	0.6525
2	Barbados	35.9336	47	Seychelles	2.7831	92	Bhutan	0.5852
3	Montserrat	22.3333	48	Tonga	2.7426	93	El Salvador	0.5845
4	United States of America	19.1475	49	Hong Kong SAR	2.7123	94	Bangladesh	0.5679
5	Bahamas	15.8580	50	Lebanon	2.6794	95	Sweden	0.5635
6	Denmark	14.7015	51	Slovakia	2.6704	96	Colombia	0.5480
7	Switzerland	9.9508	52	Greece	2.6352	97	Italy	0.5476
8	Republic of Palau	9.8500	53	China	2.5775	98	Costa Rica	0.5378
9	Australia	9.4328	54	Brunei Darussalam	2.5457	99	United Republic of Tanzania	0.5342
10	Cook Islands	8.7778	55	Republic of Korea	2.5415	100	Venezuela	0.5174
11	Bahrain	7.7068	56	Germany	2.4337	101	France	0.4655
12	Czech Republic	7.5444	57	Bulgaria	2.4145	102	Tunisia	0.4278
13	Gibraltar	7.1724	58	Uruguay	2.2842	103	Croatia	0.4115
14	British Virgin Islands	6.5000	59	Micronesia (Fed. States of)	2.1583	104	Viet Nam	0.3882
15	New Zealand	6.4976	60	Turkey	2.1430	105	Paraguay	0.3569
16	Cyprus	5.8585	61	Saudi Arabia	2.1031	106	Japan	0.3533
17	Jamaica	5.7141	62	Lithuania	2.0646	107	Cape Verde	0.3124
18	Turks and Caicos Islands	5.6818	63	Netherlands	2.0321	108	Yemen	0.2867
19	Dominica	5.6714	64	Kenya	1.9181	109	Nepal	0.2687
20	Botswana	5.6611	65	Iran (Islamic Republic of)	1.8502	110	Benin	0.2638
21	Mauritius	5.6190	66	United Kingdom	1.8232	111	Togo	0.2561
22	Malta	5.5138	67	Sri Lanka	1.7802	112	Vanuatu	0.2475
23	Norway	5.1544	68	Thailand	1.6470	113	Lao Peop. Dem. Rep.	0.2316
24	Grenada	5.1485	69	Swaziland	1.5624	114	Uganda	0.2272
25	Jordan	5.0572	70	Panama	1.5331	115	Argentina	0.2224
26	Ghana	4.9930	71	United Arab Emirates	1.4672	116	Bolivia	0.1891
27	Brazil	4.8826	72	Syrian Arab Republic	1.3836	117	Indonesia	0.1829
28	Netherlands Antilles	4.7263	73	Macao	1.3708	118	India	0.1270
29	Kuwait	4.4602	74	Nauru	1.3333	119	Dominican Republic	0.1248
30	Qatar	4.3811	75	Saint Vincent & the Grenadines	1.3333	120	Algeria	0.1108
31	Falkland Islands	4.3333	76	Iceland	1.2422	121	Philippines	0.1100
32	Poland	4.3259	77	Austria	1.2333	122	Latvia	0.0972
33	Malaysia	4.2841	78	Portugal	1.2276	123	Eritrea	0.0886
34	Namibia	3.8311	79	Andorra	1.1857	124	Chad	0.0721
35	Israel	3.7794	80	Hungary	1.0703	125	Burundi	0.0566
36	South Africa	3.7694	81	Slovenia	1.0336	126	Rwanda	0.0441
37	Saint Helena	3.6000	82	Finland	0.9858	127	Sao Tome and Principe	0.0392
38	Romania	3.5988	83	Zambia	0.8656	128	Ethiopia	0.0214
39	Ireland	3.5208	84	Serbia and Montenegro	0.8046	129	Myanmar	0.0190
40	Belgium	3.3875	85	Marshall Islands	0.7895	130	Sierra Leone	0.0180
41	Zimbabwe	3.2248	86	Albania	0.7547	131	Cambodia	0.0136
42	Spain	3.1166	87	Peru	0.7258	132	Dem. Rep. of the Congo	0.0130
43	Estonia	3.1041	88	Chile	0.7009	133	Gabon	0.0057
44	Libyan Arab Jamahiriya	2.9176	89	Oman	0.6974	134	Mozambique	0.0024
45	Anguilla	2.9167	90	Suriname	0.6570	135	Côte d'Ivoire	0.0017
						136	Guinea	0.0016



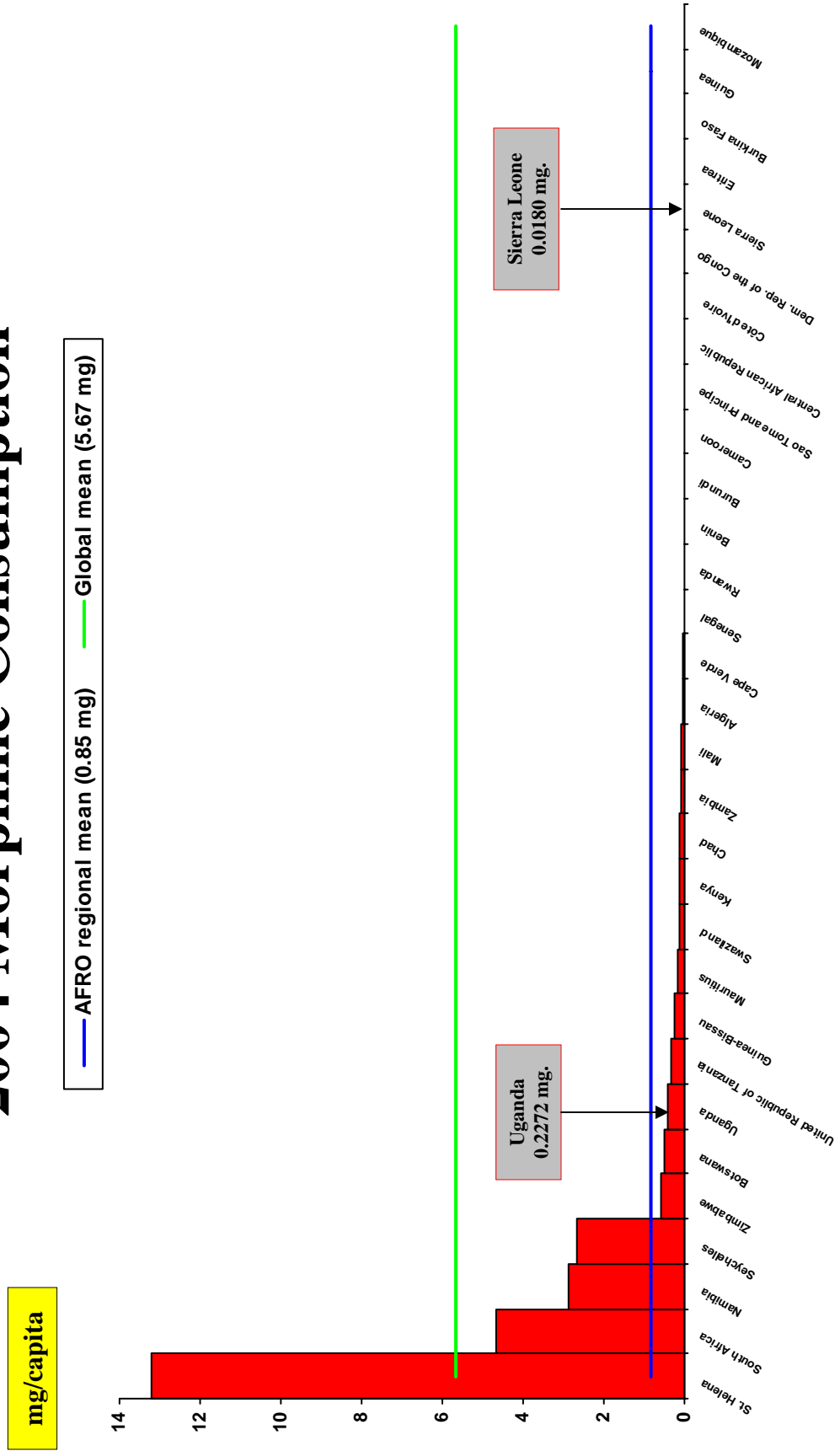
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VIII. Regional Consumption, 2004

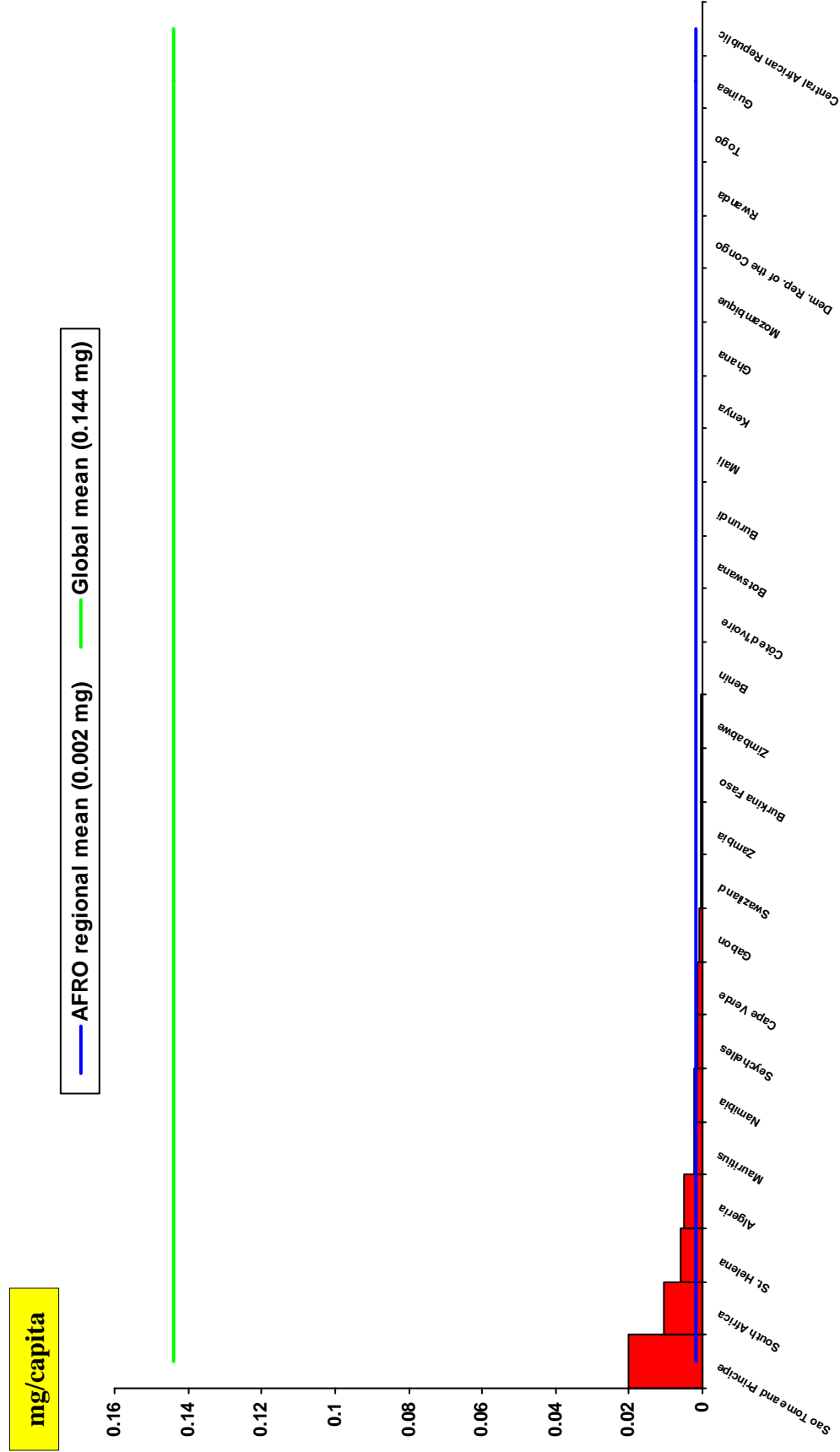
Graph 7. AFRO Regional 2004 Morphine Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
 By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 8. AFRO Regional 2004 Fentanyl Consumption

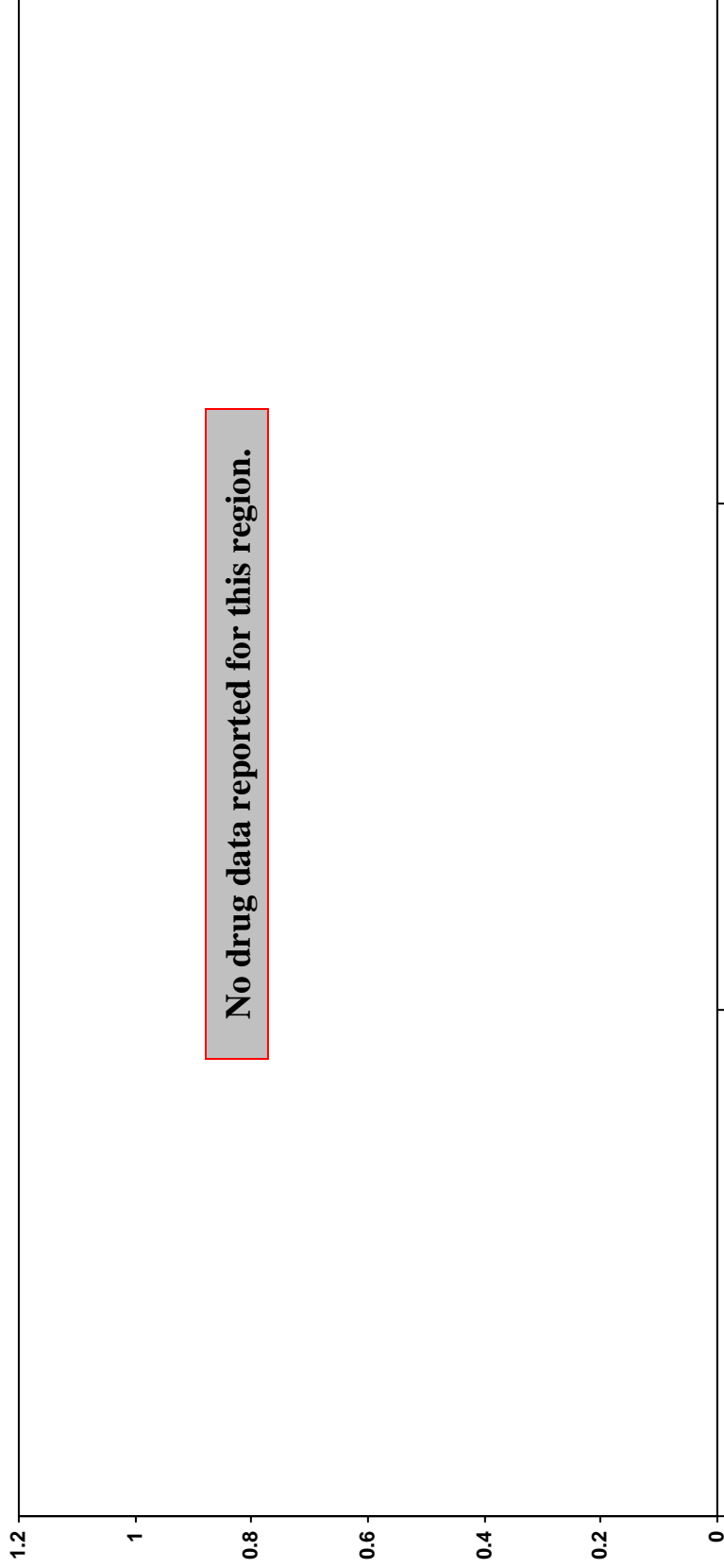


Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

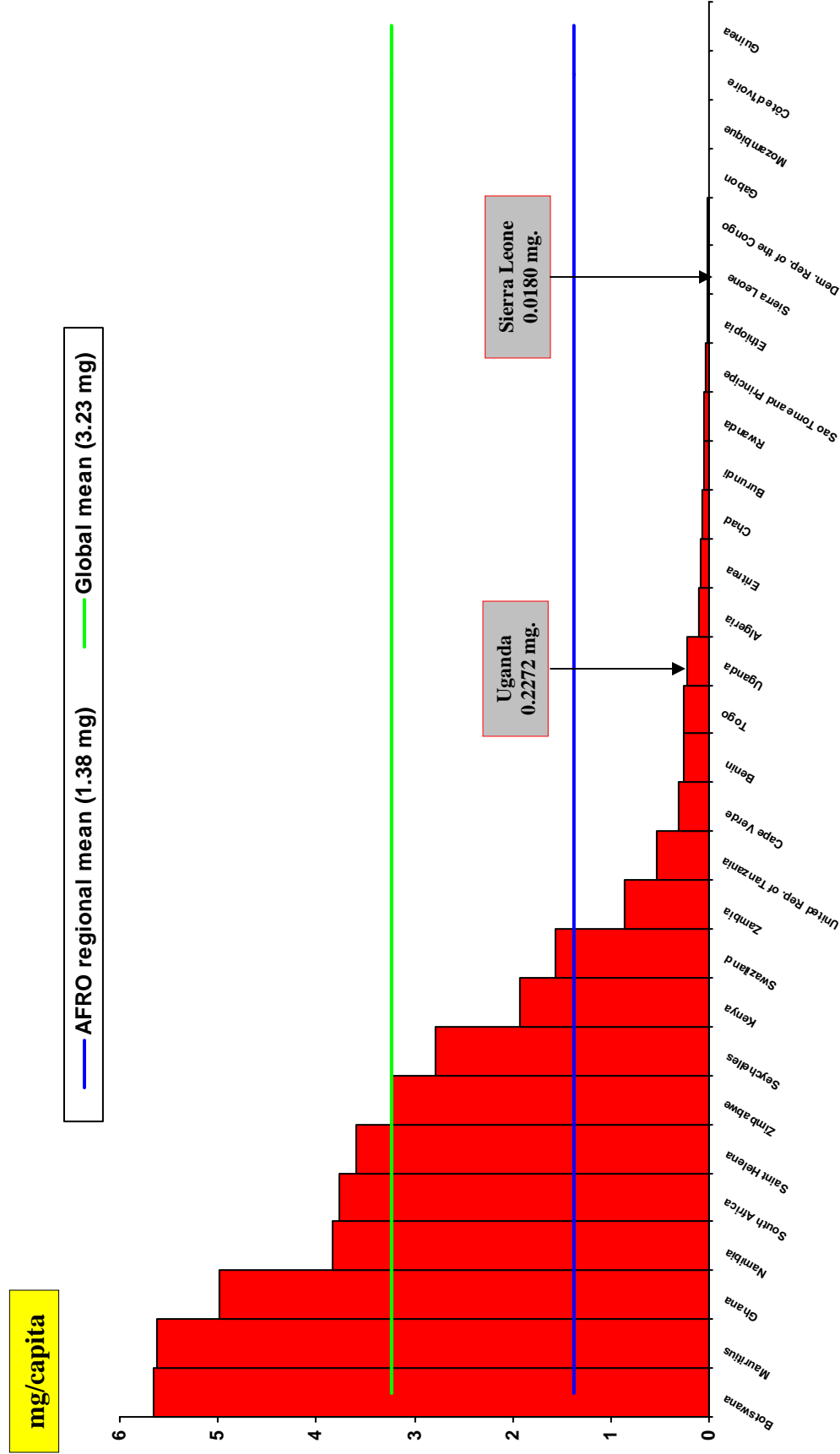
The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 9. AFRO Regional 2004 Oxycodone Consumption

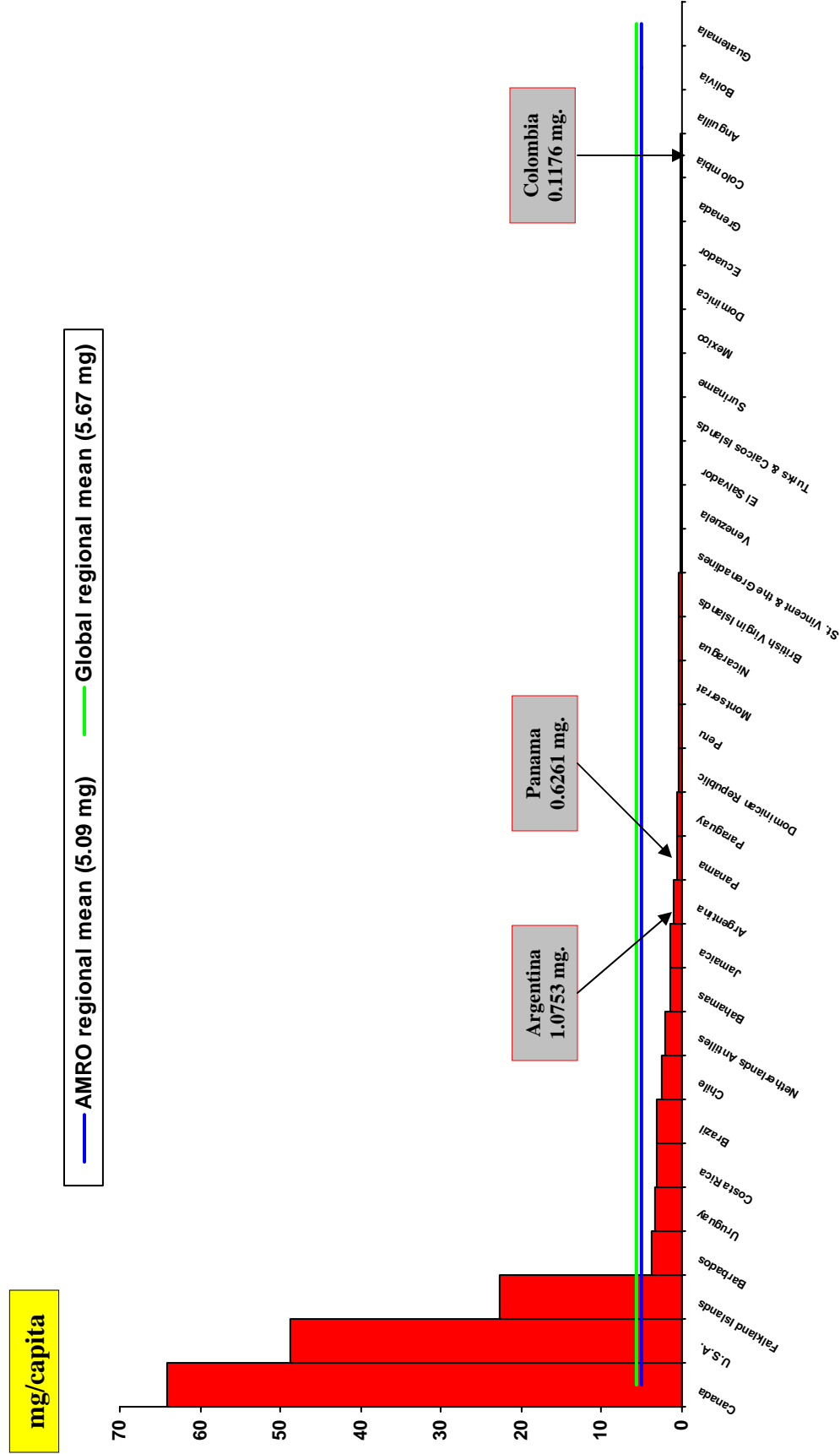
mg/capita



Graph 10. AFRO Regional 2004 Pethidine Consumption



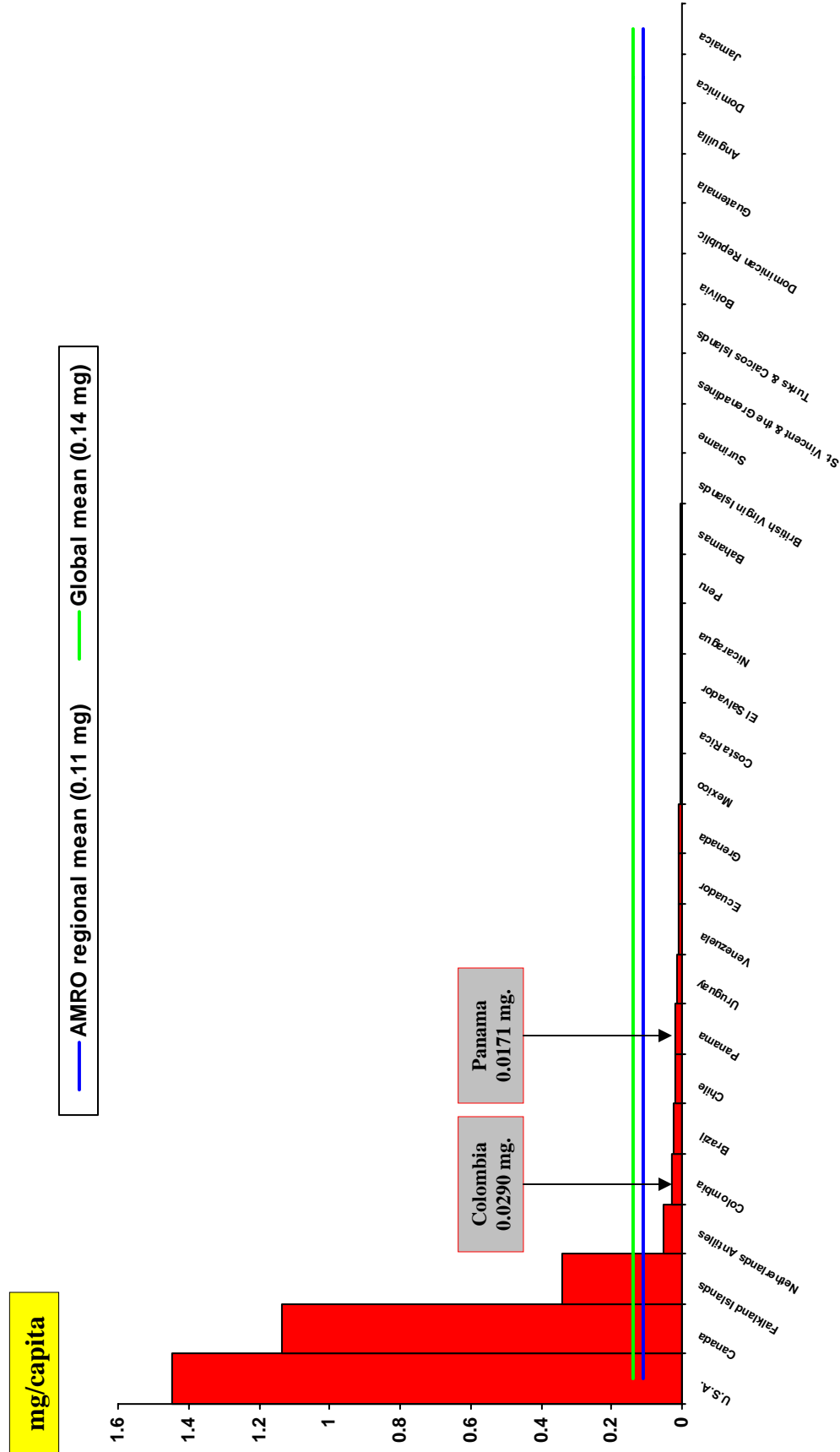
Graph 11. AMRO Regional 2004 Morphine Consumption



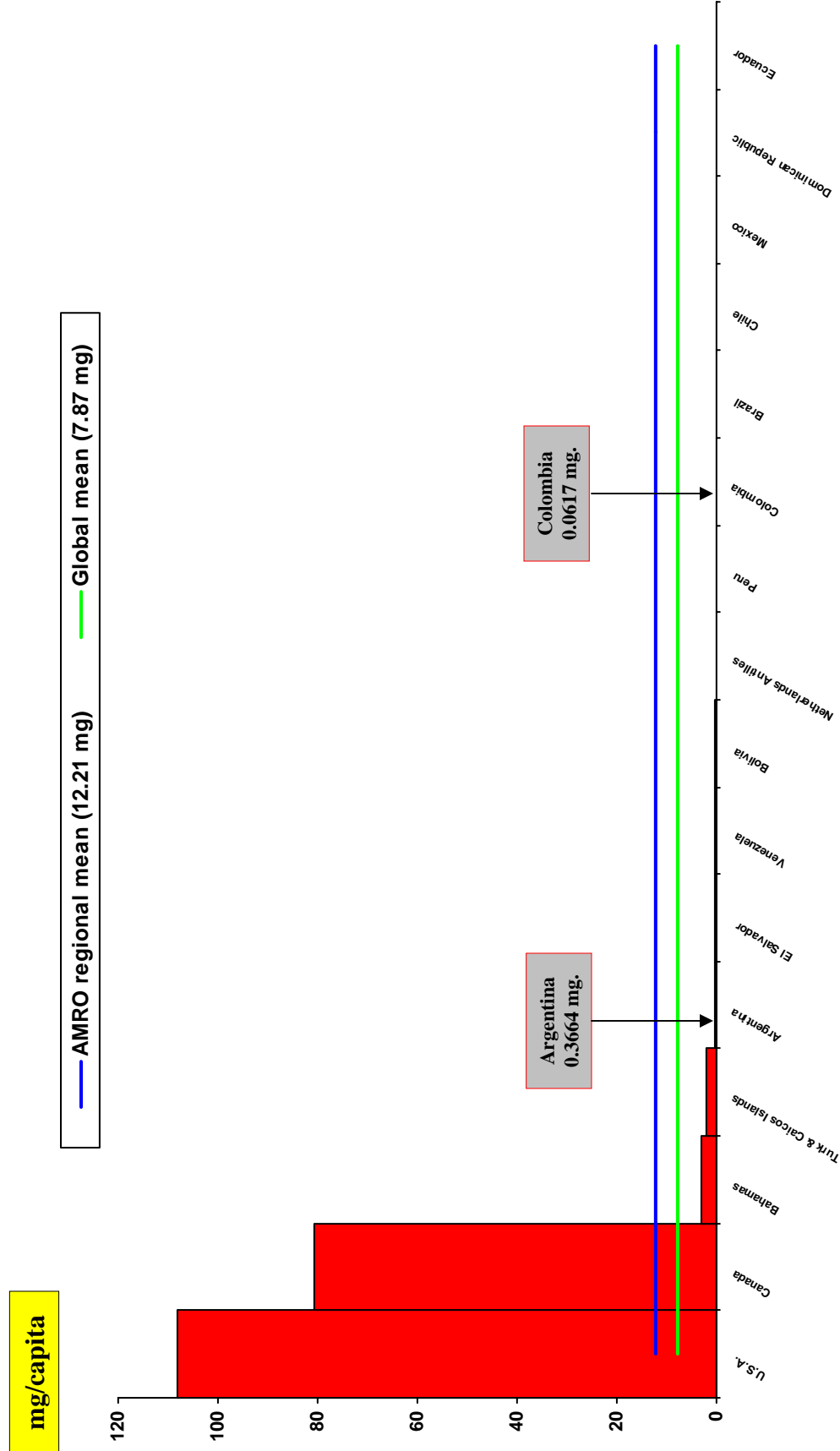
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 12. AMRO Regional 2004 Fentanyl Consumption



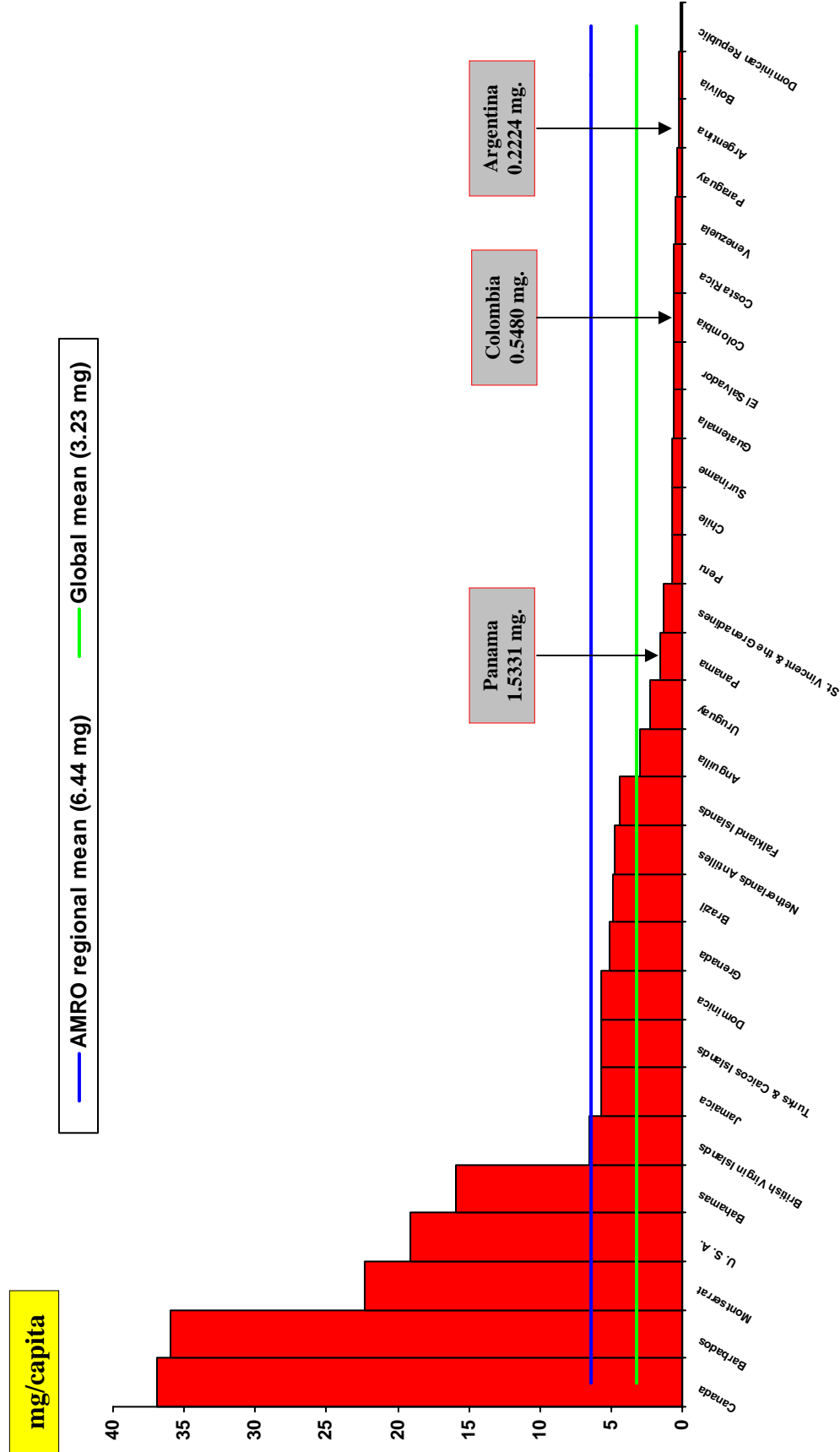
Graph 13. AMRO Regional 2004 Oxycodone Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

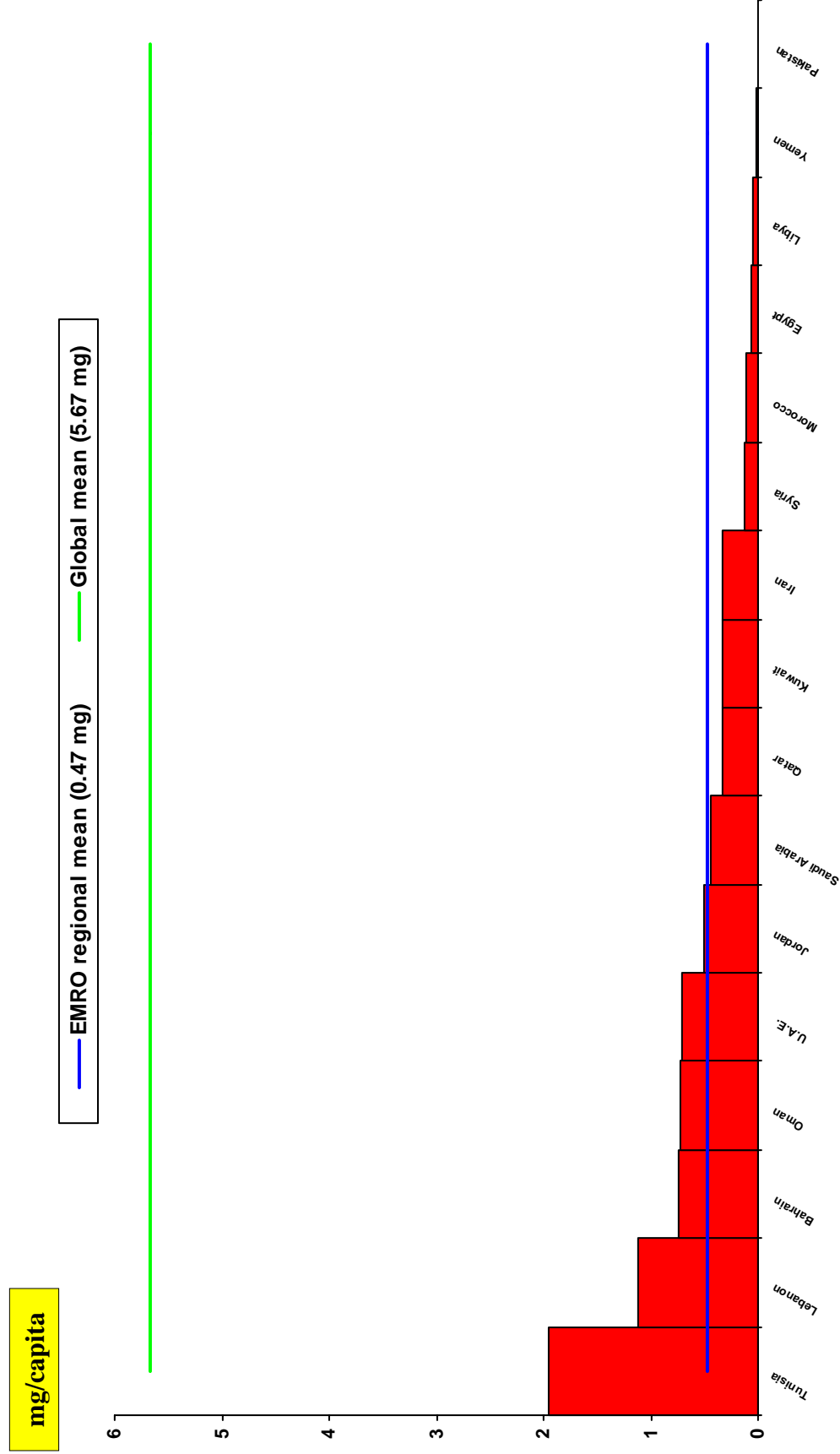
Graph 14. AMRO Regional 2004 Pethidine Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
 By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

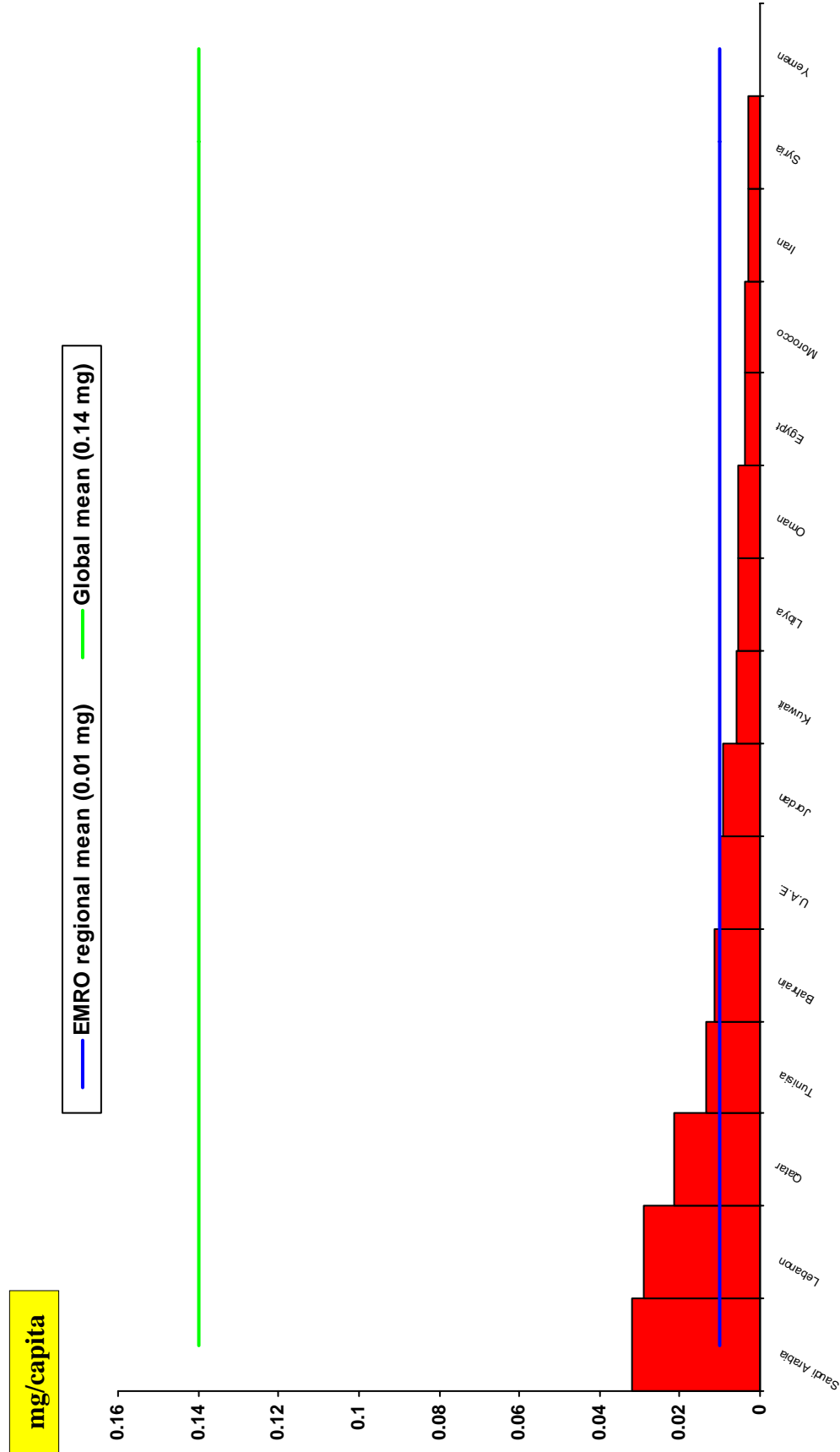
Graph 15. EMRO Regional 2004 Morphine Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

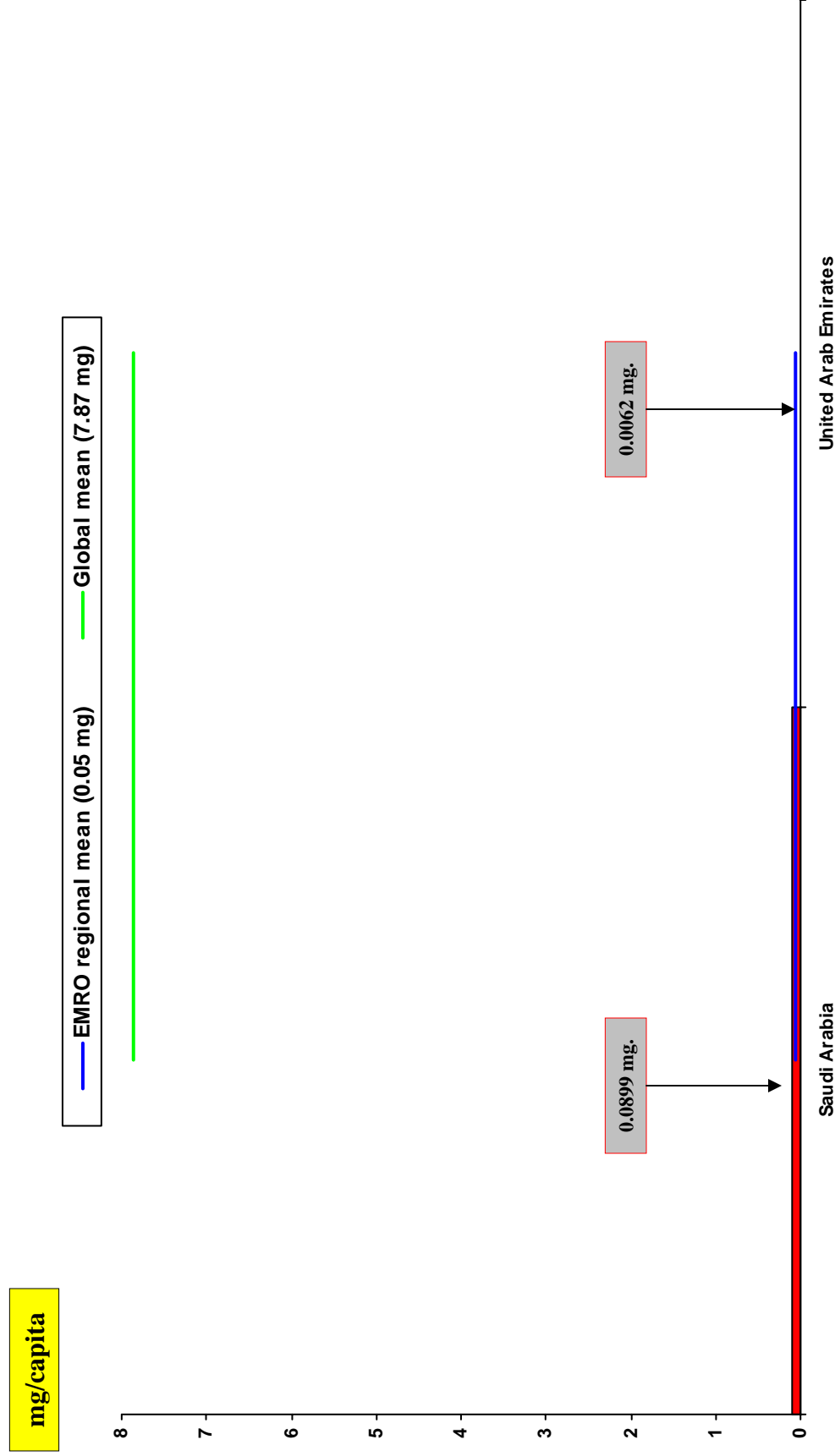
Graph 16. EMRO Regional 2004 Fentanyl Consumption



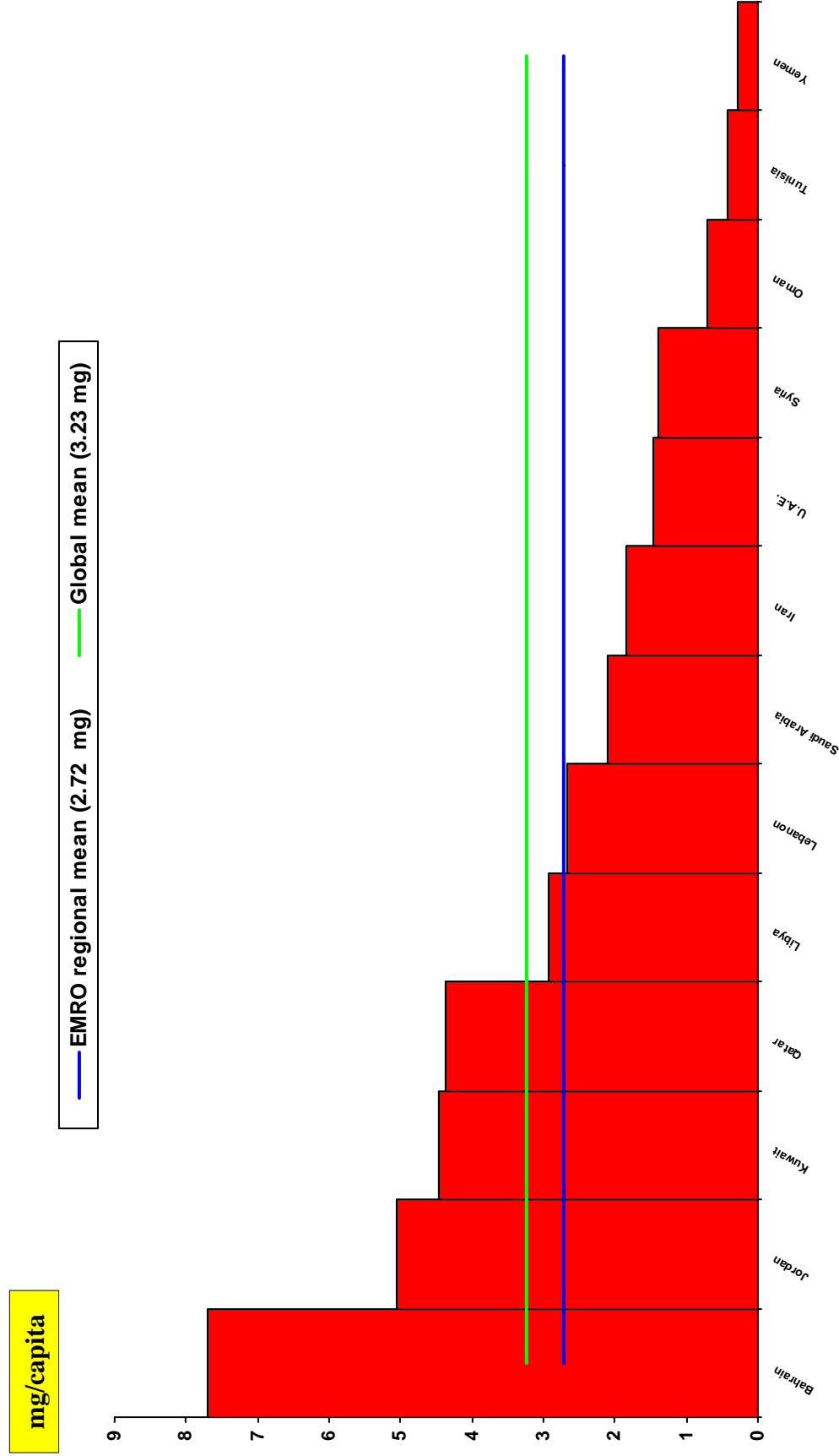
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

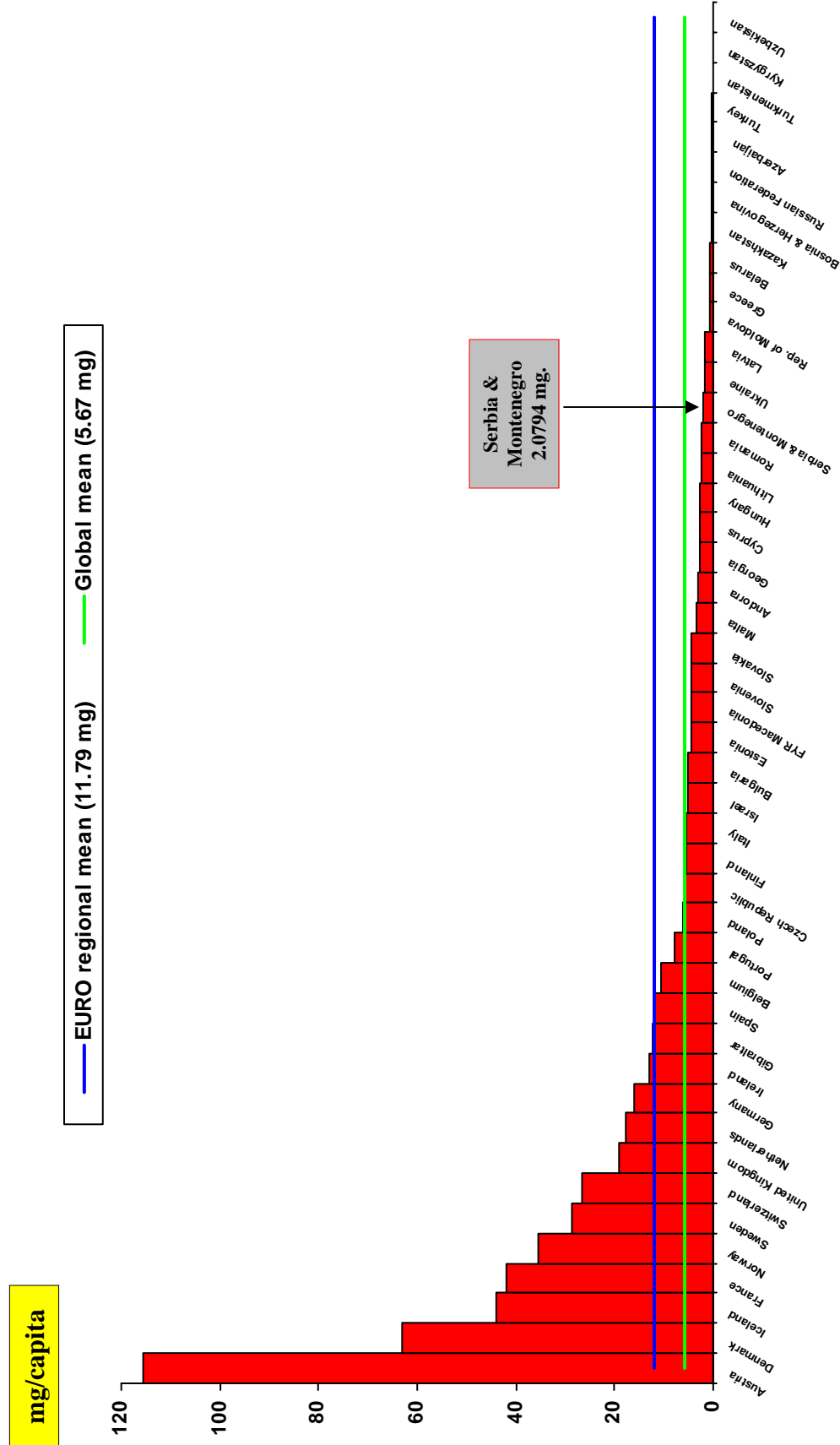
Graph 17. EMRO Regional 2004 Oxycodone Consumption



Graph 18. EMRO Regional 2004 Pethidine Consumption



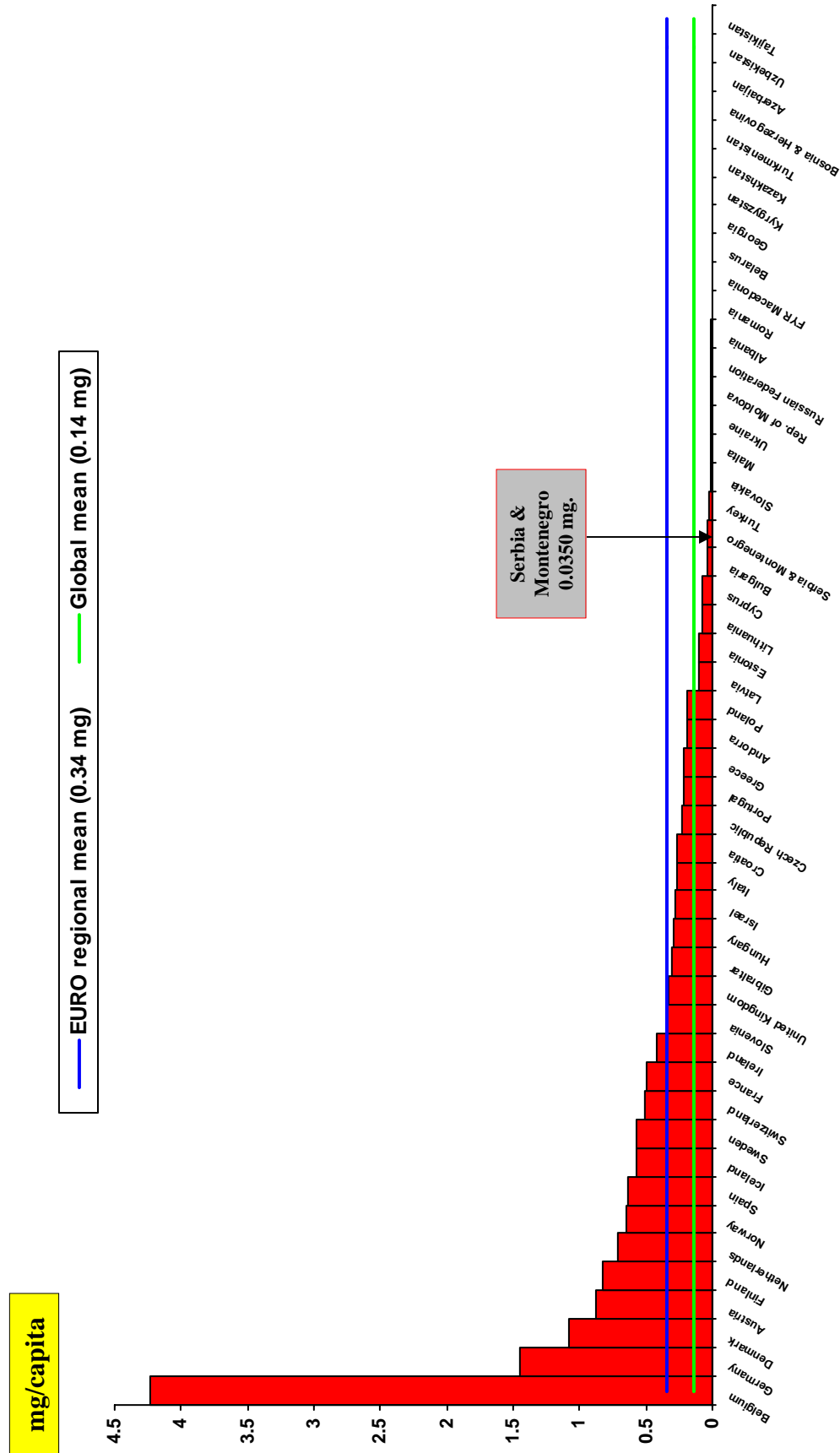
Graph 19. EURO Regional 2004 Morphine Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

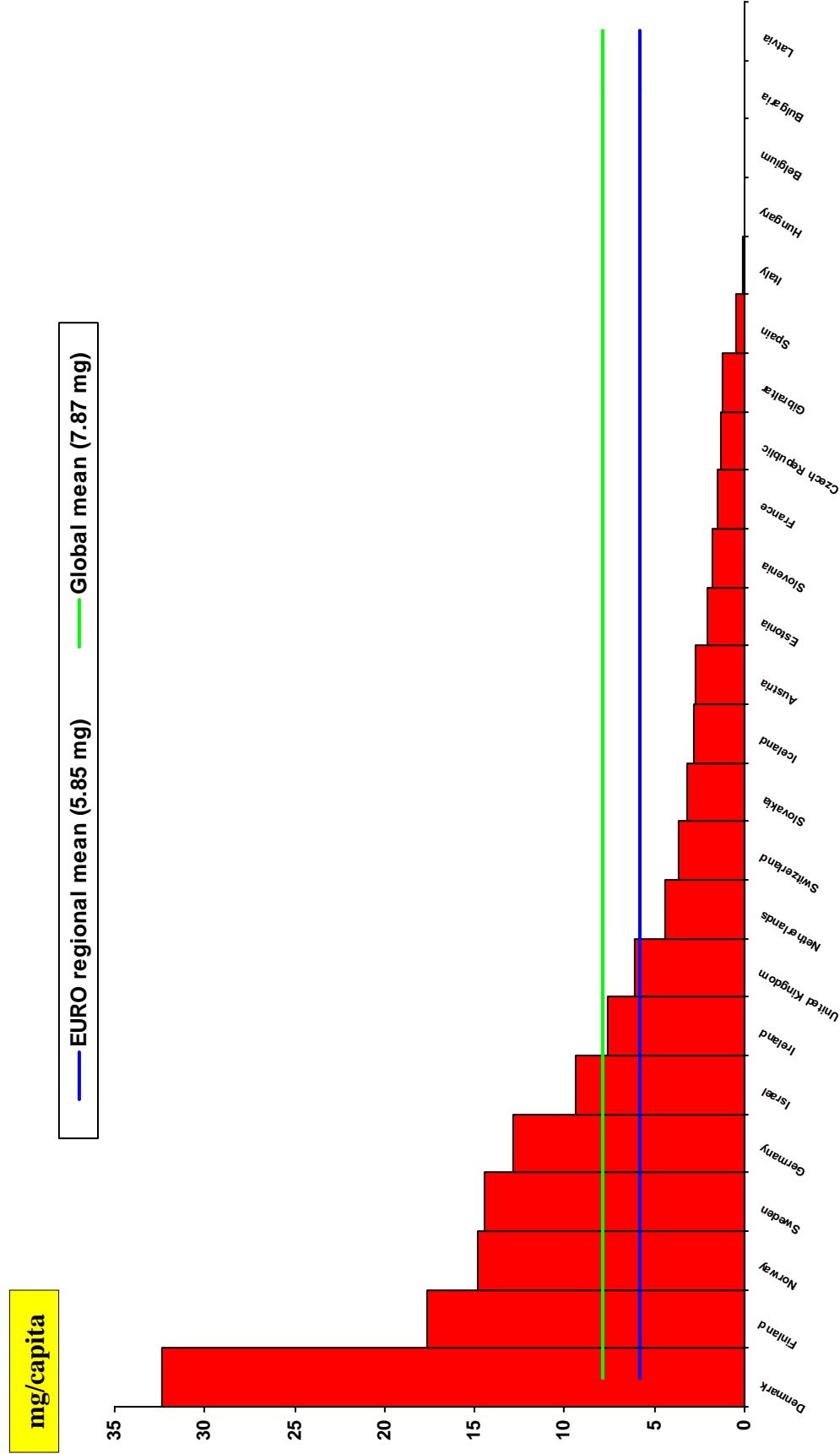
Graph 20. EURO Regional 2004 Fentanyl Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

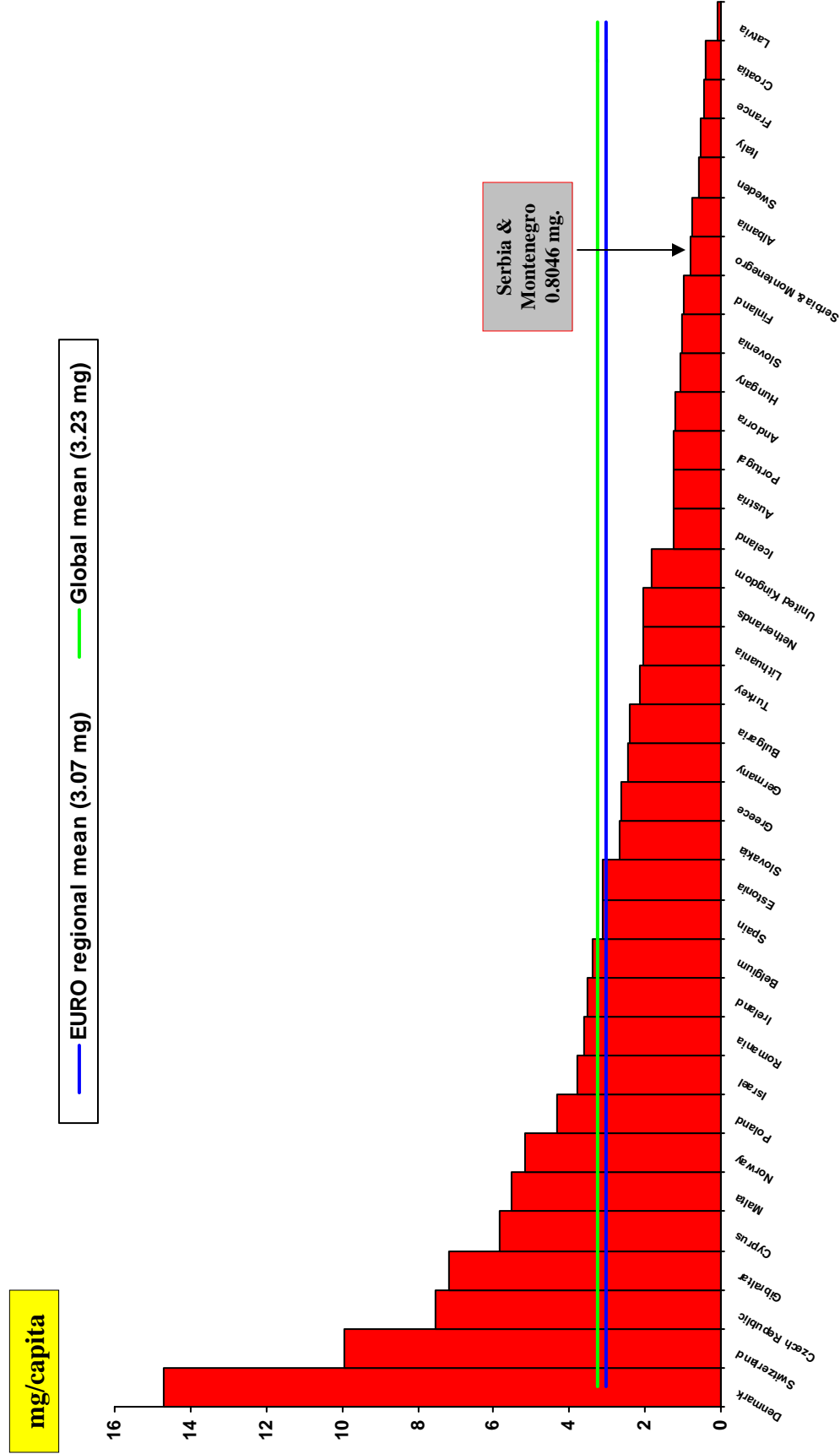
Graph 21. EURO Regional 2004 Oxycodone Consumption



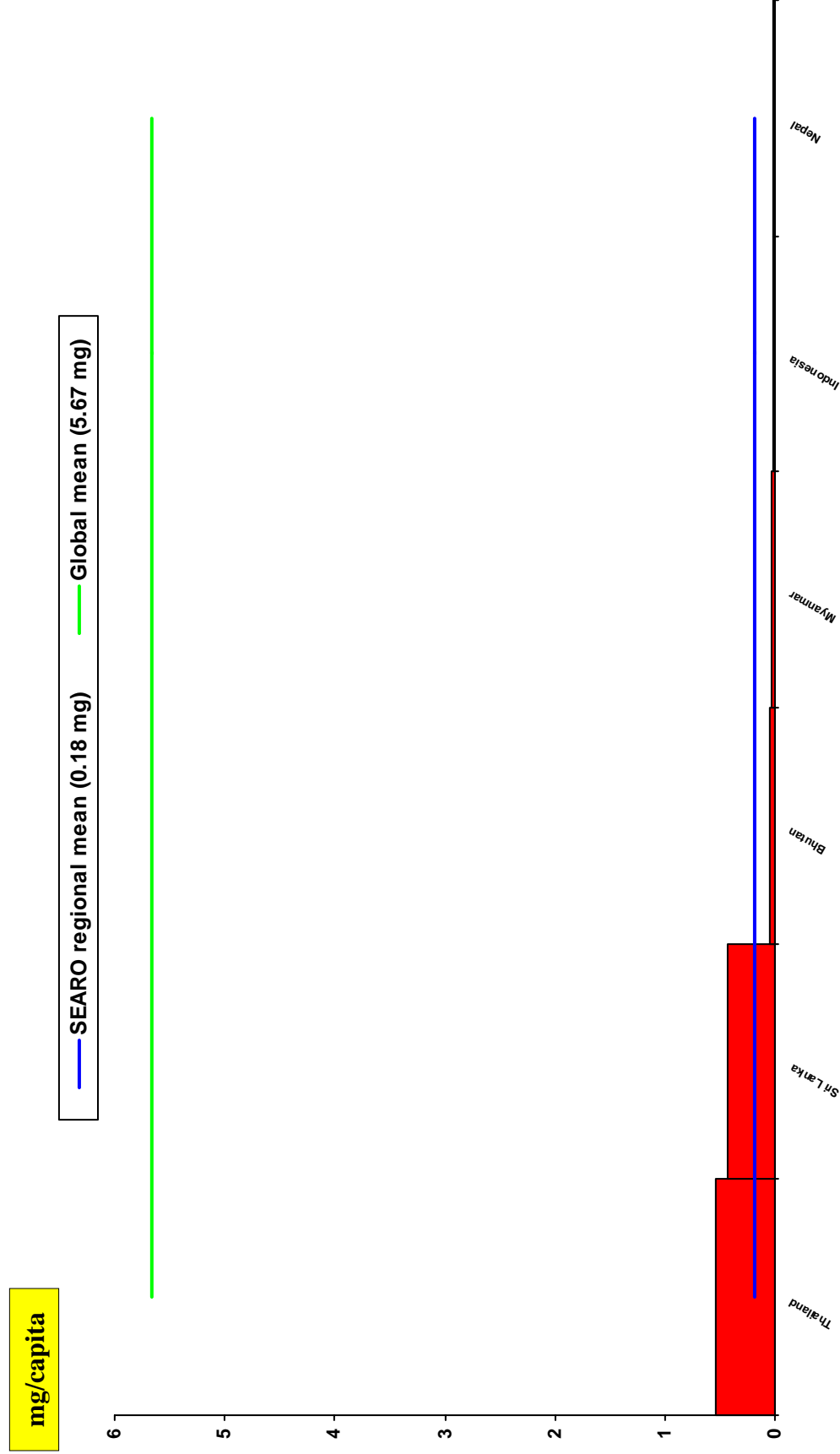
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 22. EURO Regional 2004 Pethidine Consumption



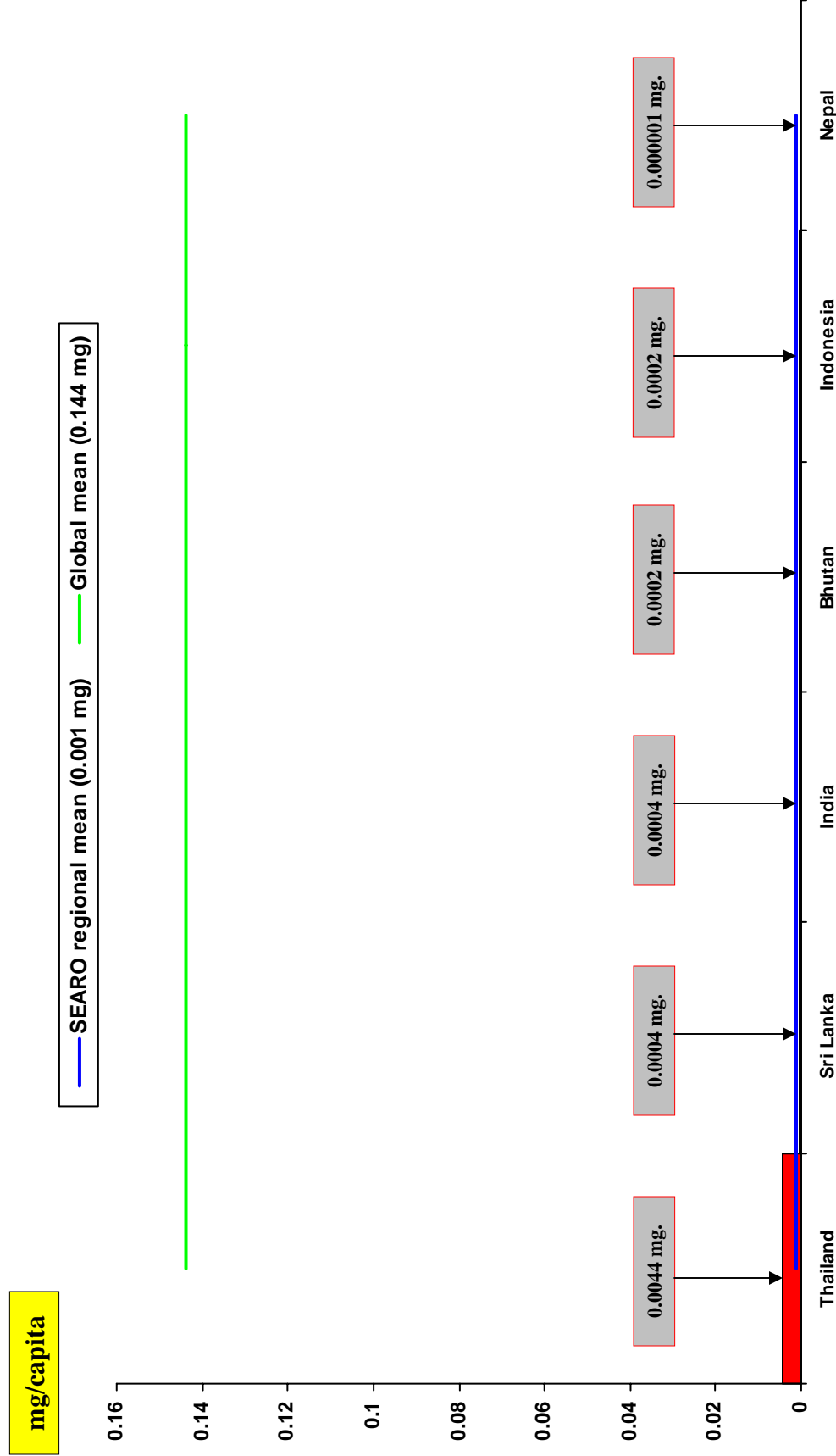
Graph 23. SEARO Regional 2004 Morphine Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 24. SEARO Regional 2004 Fentanyl Consumption

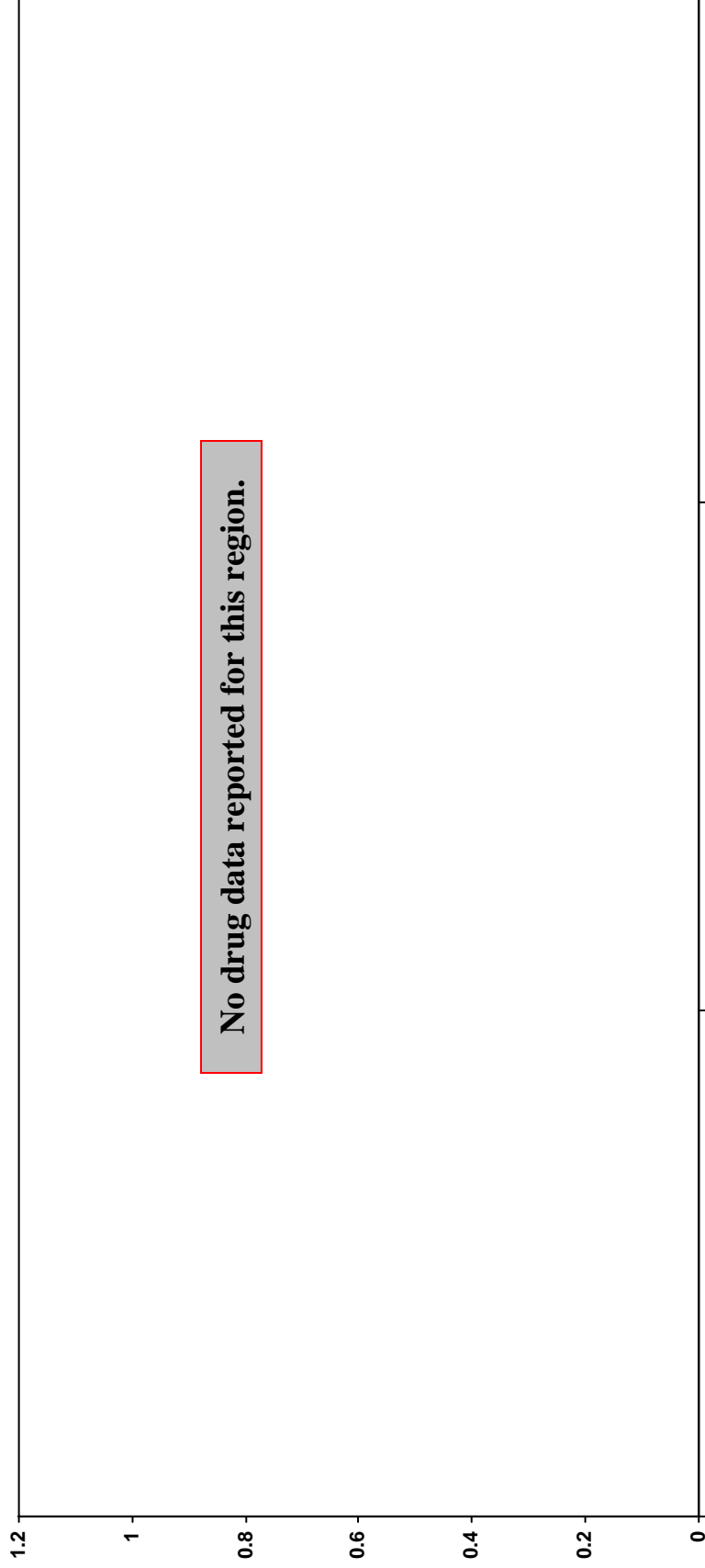


Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

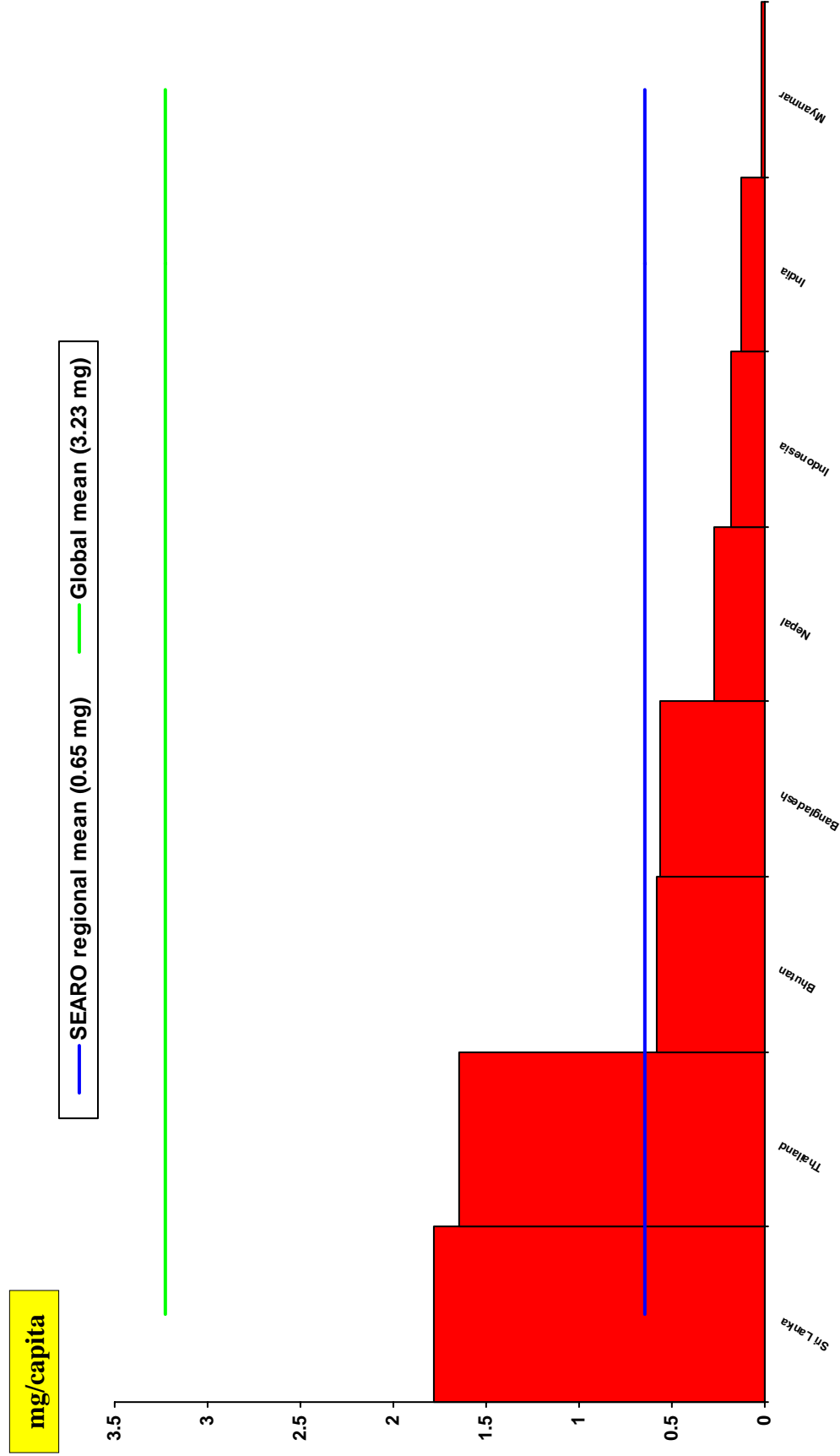
The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 25. SEARO Regional 2004 Oxycodone Consumption

mg/capita



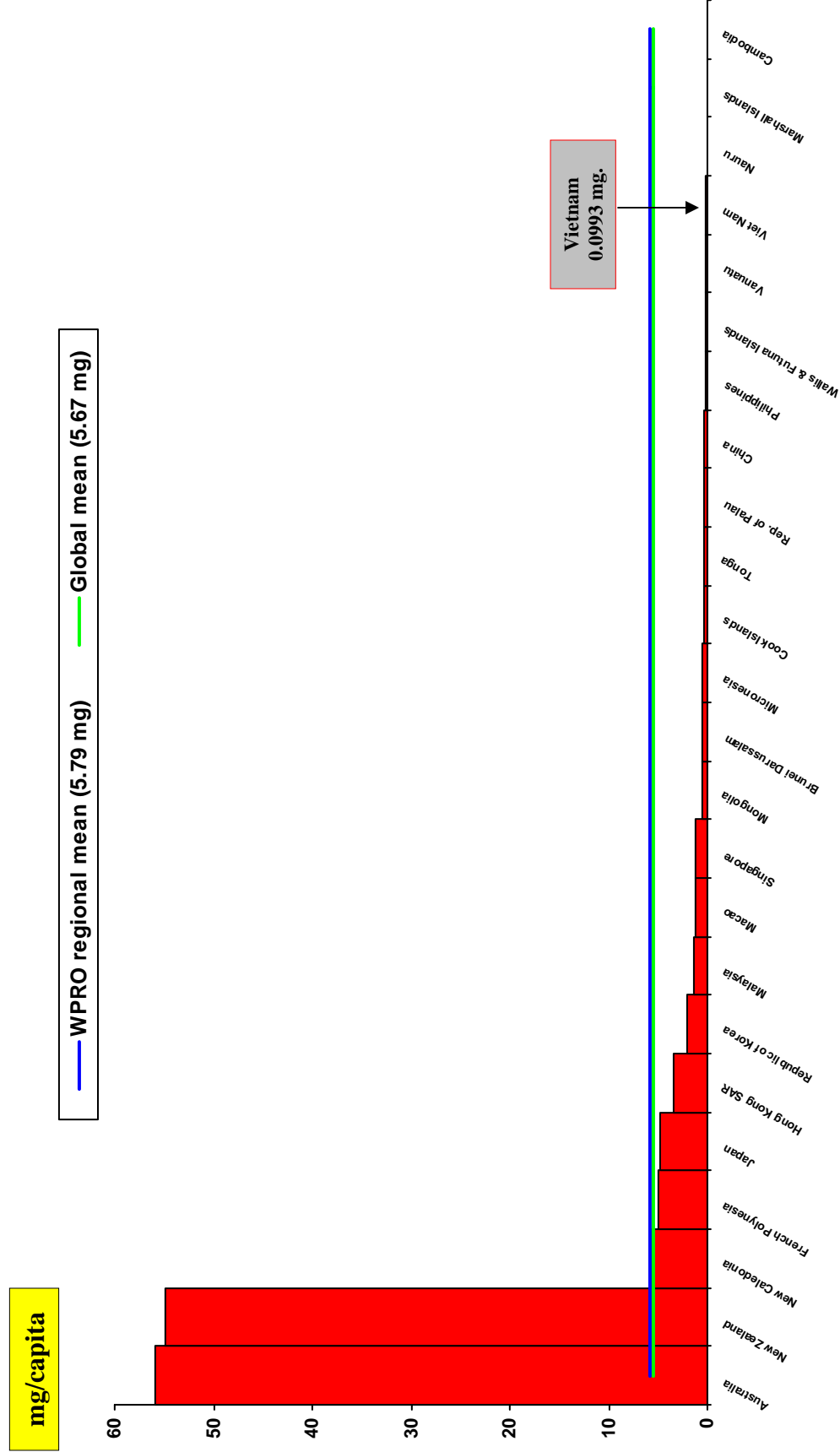
Graph 26. SEARO Regional 2004 Pethidine Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

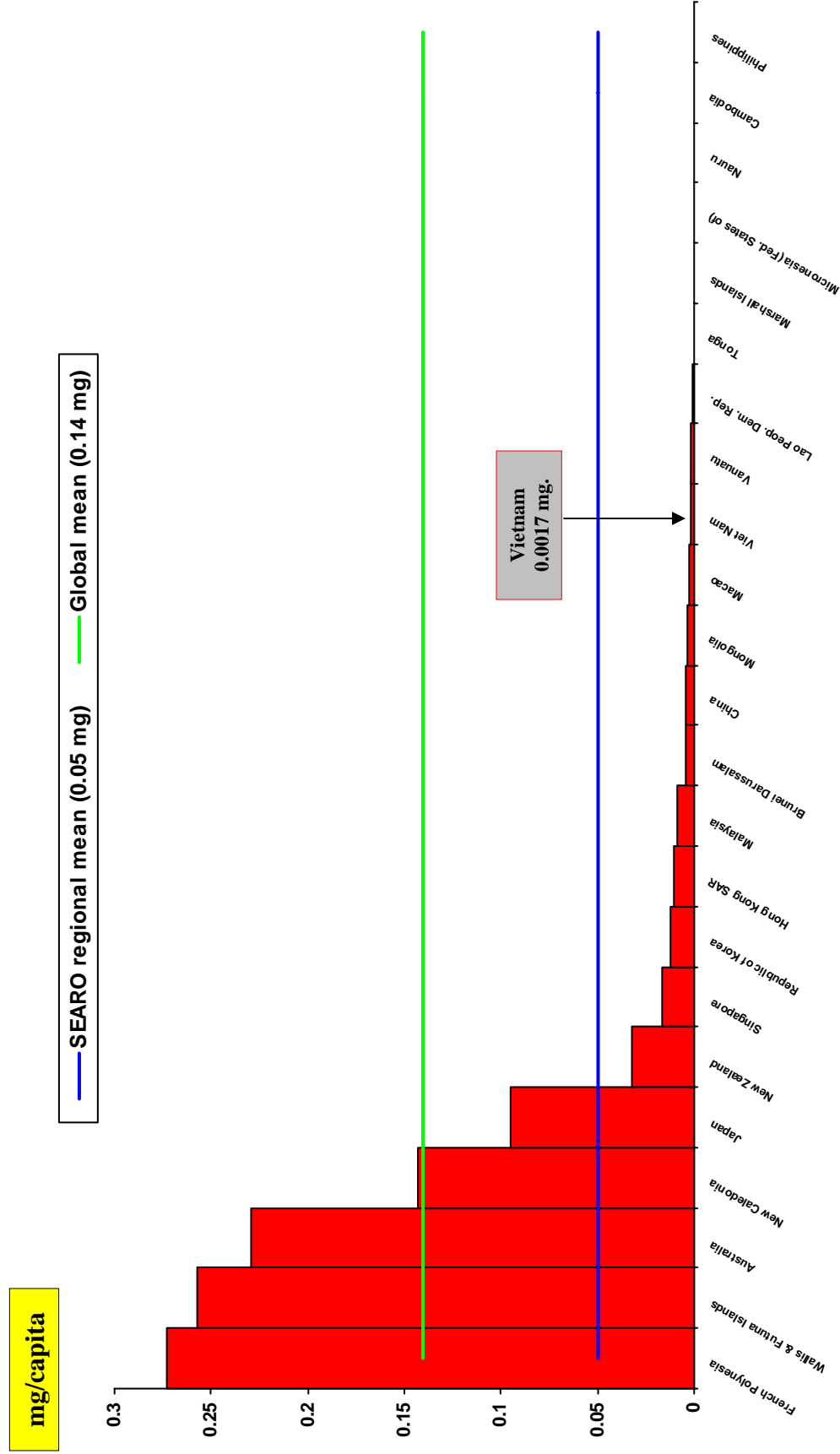
Graph 27. WPRO Regional 2004 Morphine Consumption



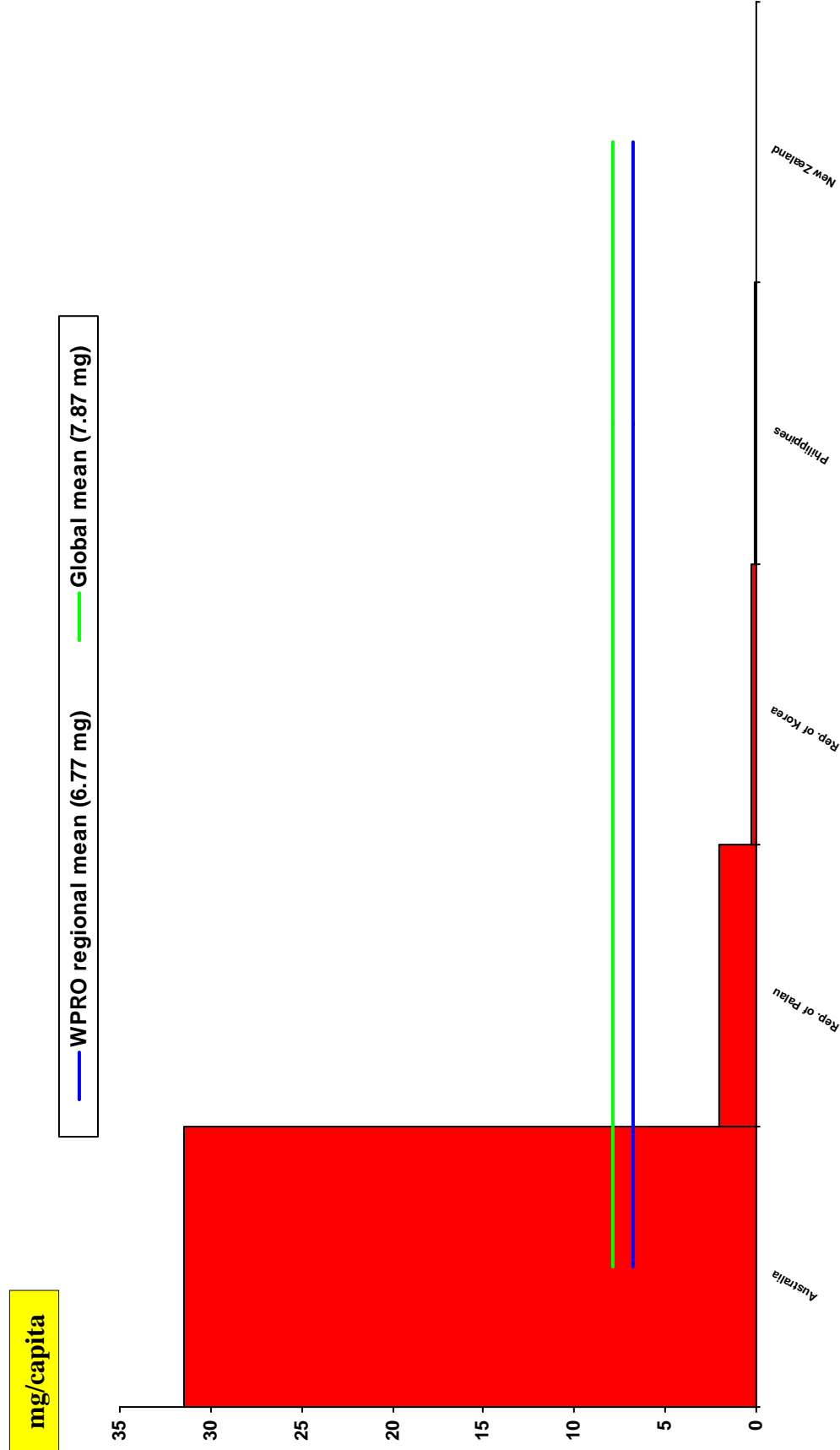
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 28. WPRO Regional 2004 Fentanyl Consumption



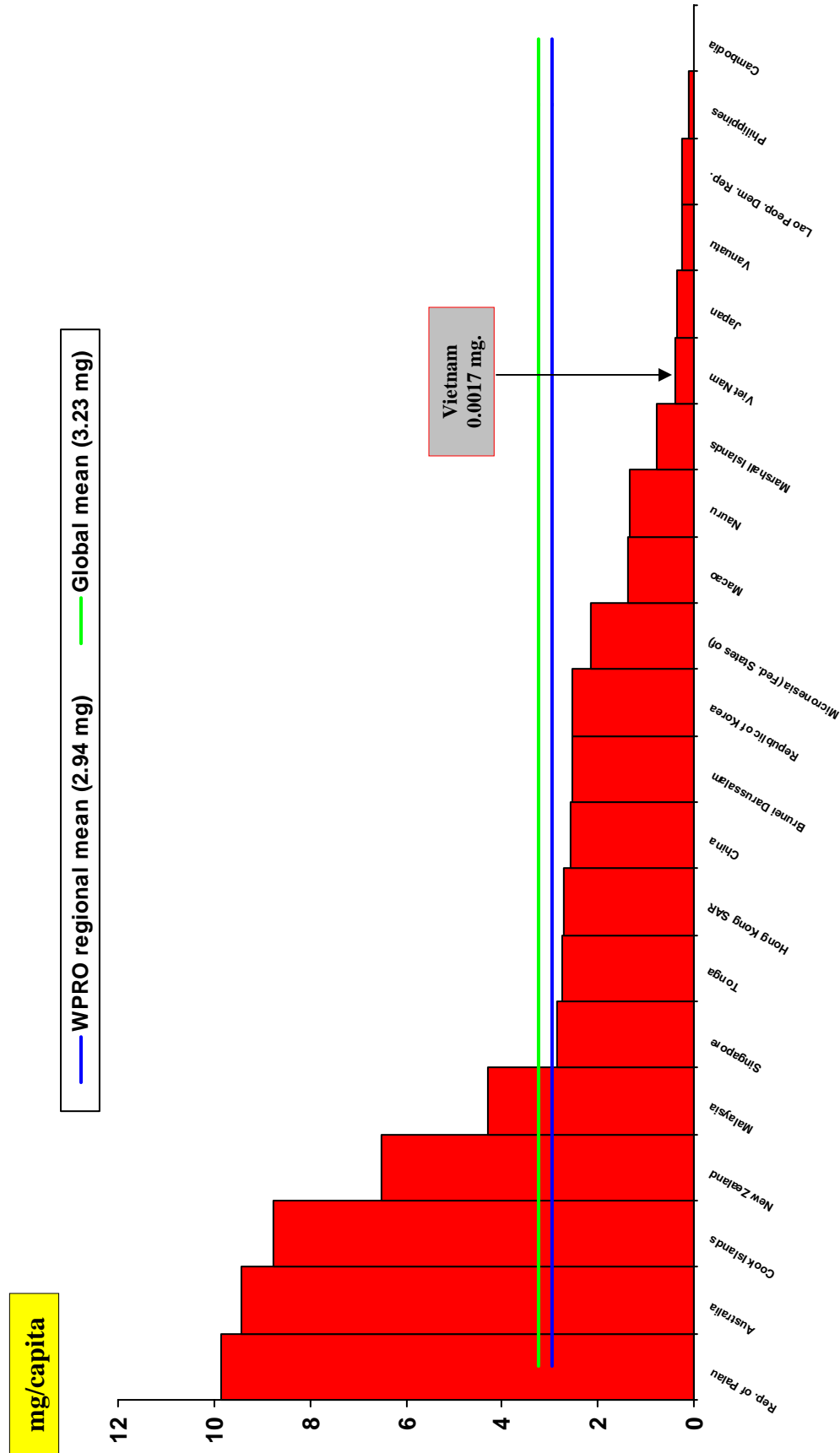
Graph 29. WPRO Regional 2004 Oxycodone Consumption



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

Graph 30. WPRO Regional 2004 Pethidine Consumption

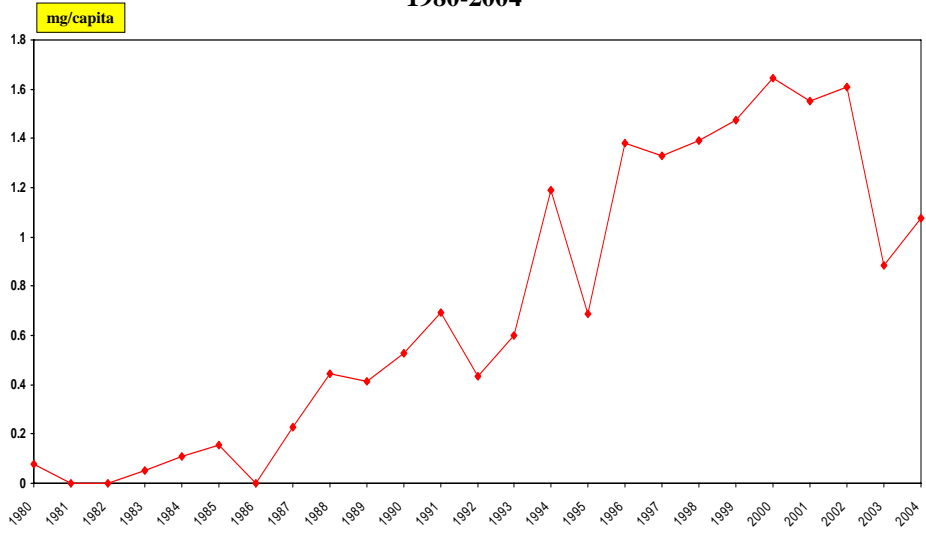


Source: International Narcotics Control Board; United Nations Demographic Yearbook
 By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The means are calculated by adding the individual mg/capita statistics for all countries and then dividing by the number of countries.

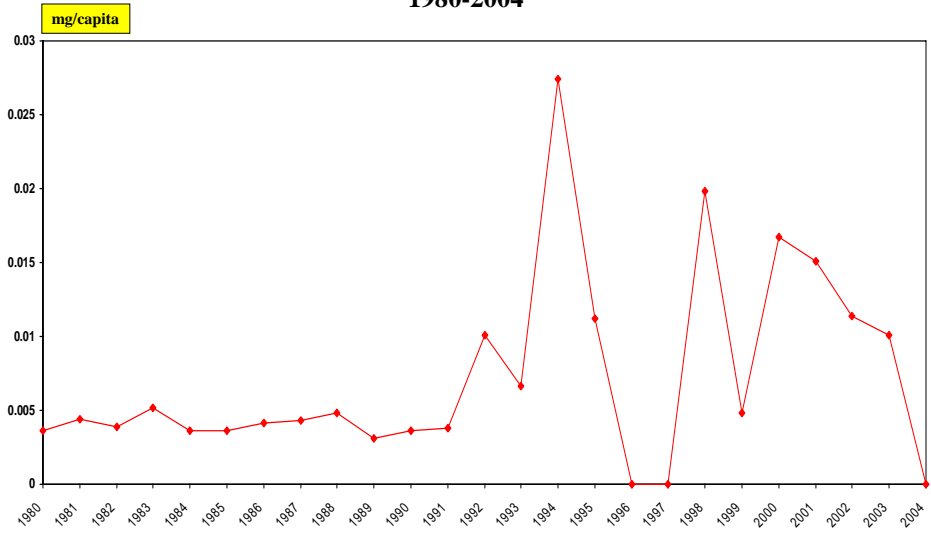
IX. National Consumption Trends, 1980-2004

**Graph 31. Argentina
Morphine Consumption
1980-2004**



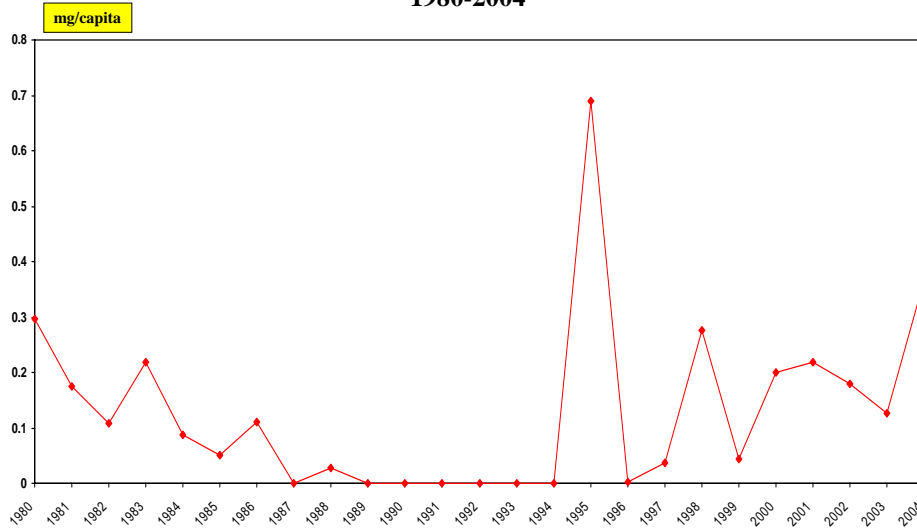
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 32. Argentina
Fentanyl Consumption
1980-2004**



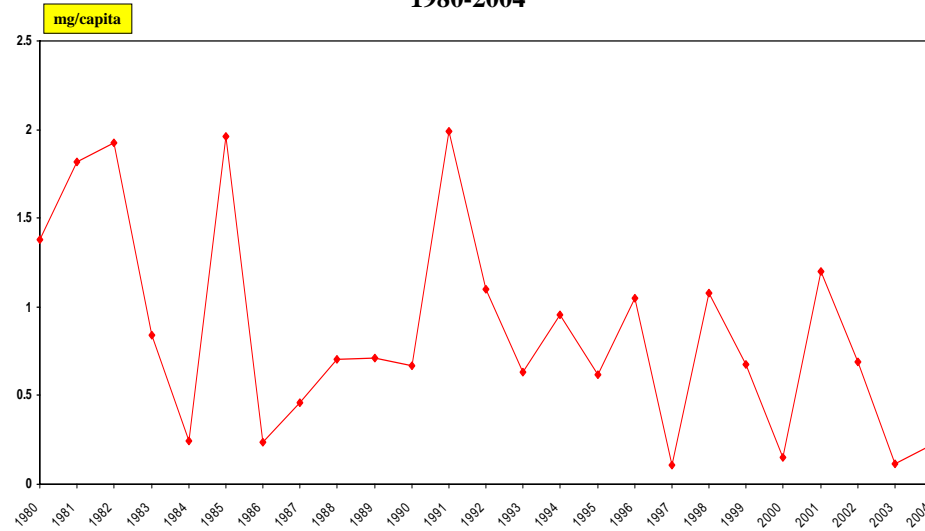
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 33. Argentina
Oxycodone Consumption
1980-2004**



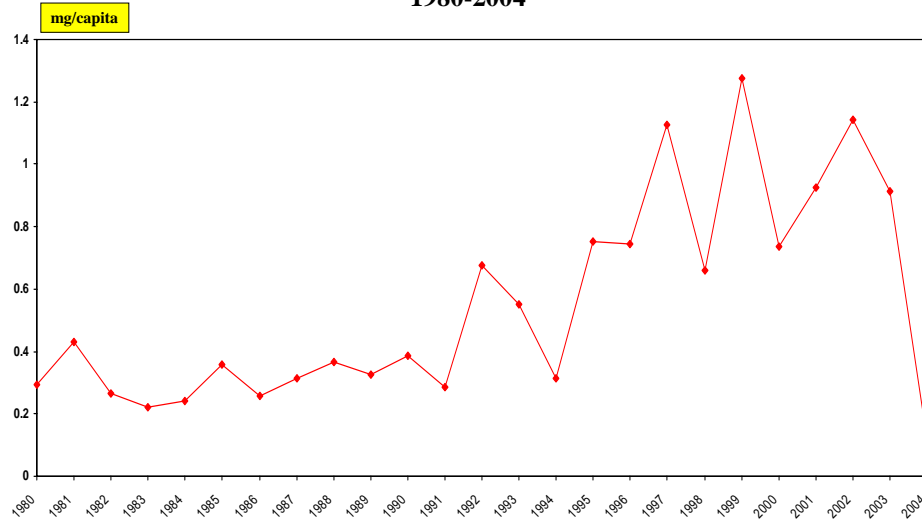
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 34. Argentina
Pethidine Consumption
1980-2004**



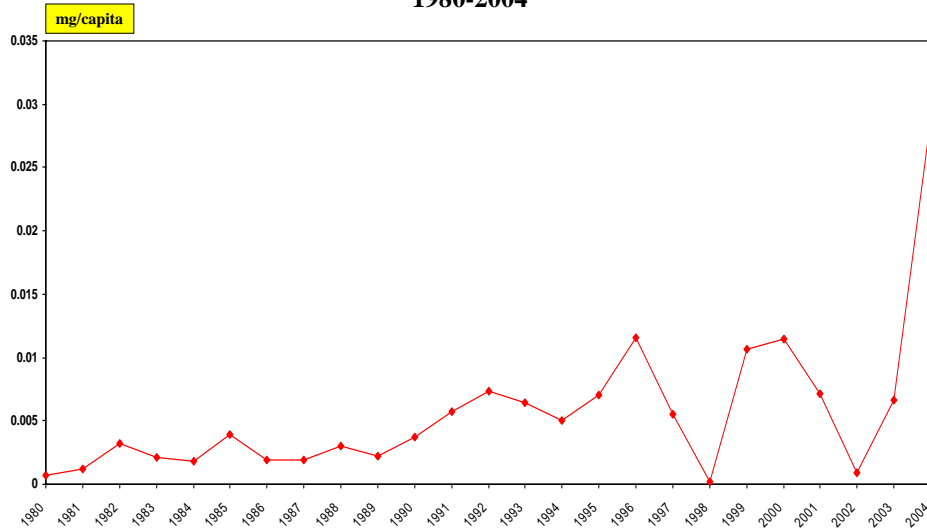
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 35. Colombia
Morphine Consumption
1980-2004**



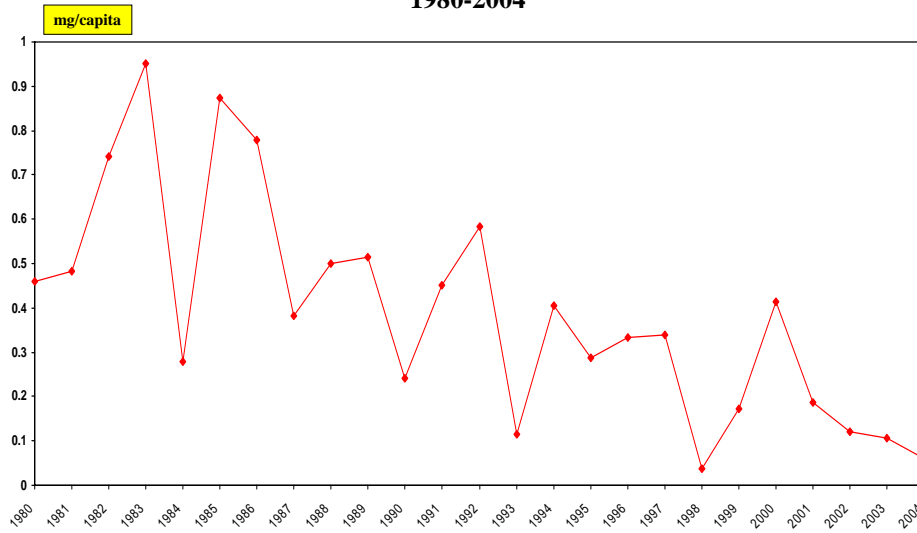
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 36. Colombia
Fentanyl Consumption
1980-2004**



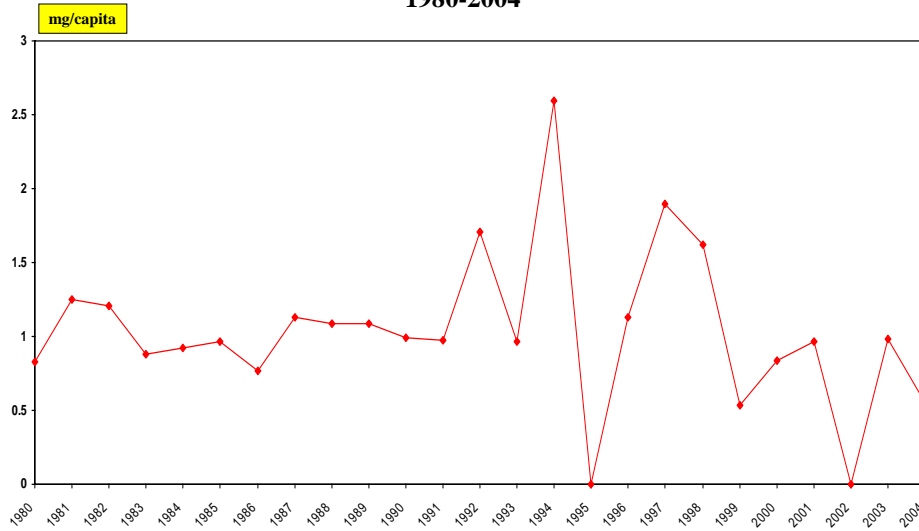
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 37. Colombia
Oxycodone Consumption
1980-2004**



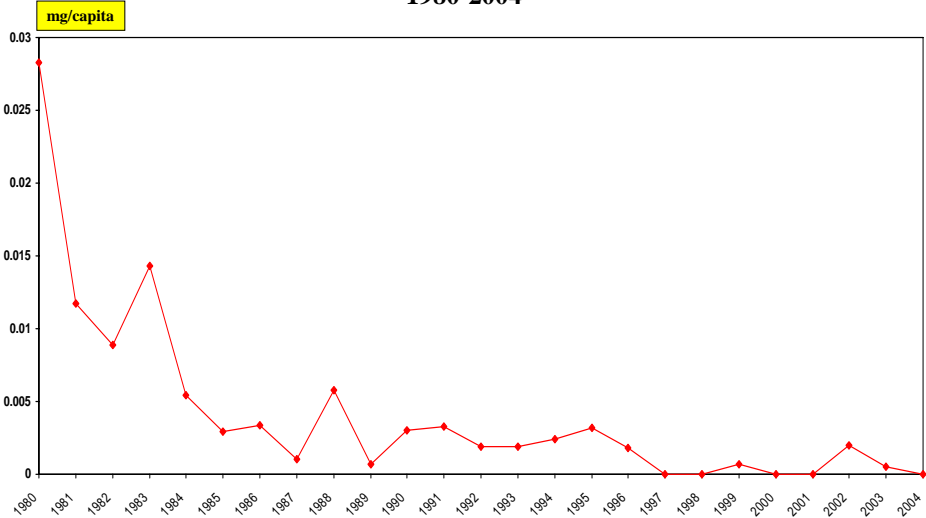
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 38. Colombia
Pethidine Consumption
1980-2004**



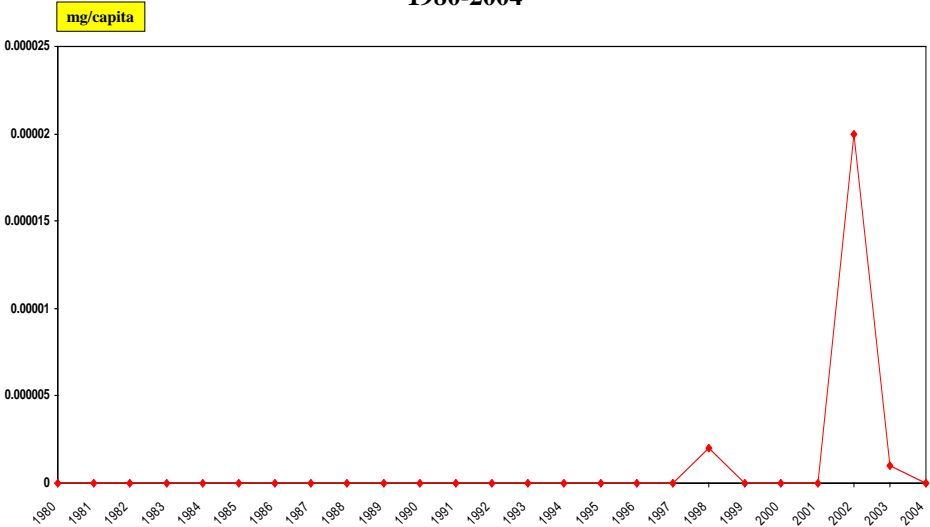
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 39. Nigeria
Morphine Consumption
1980-2004**



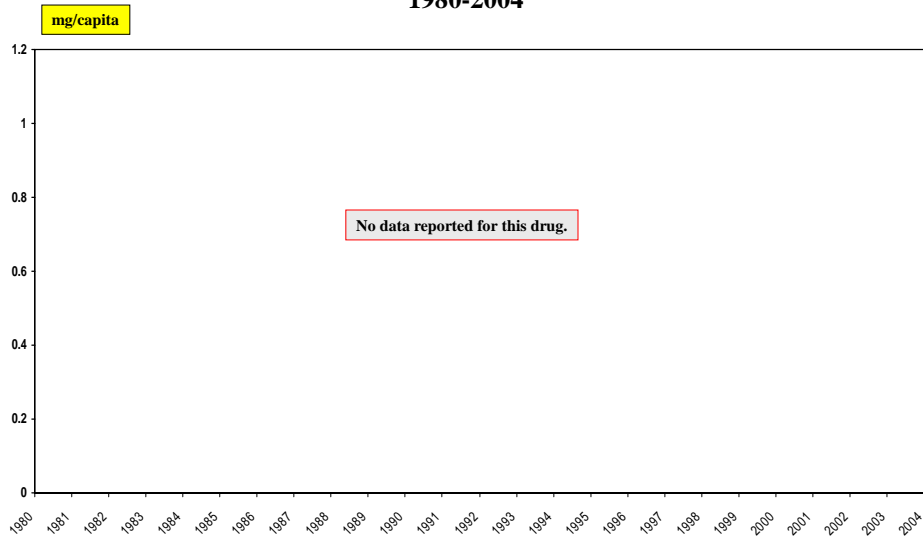
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 40. Nigeria
Fentanyl Consumption
1980-2004**



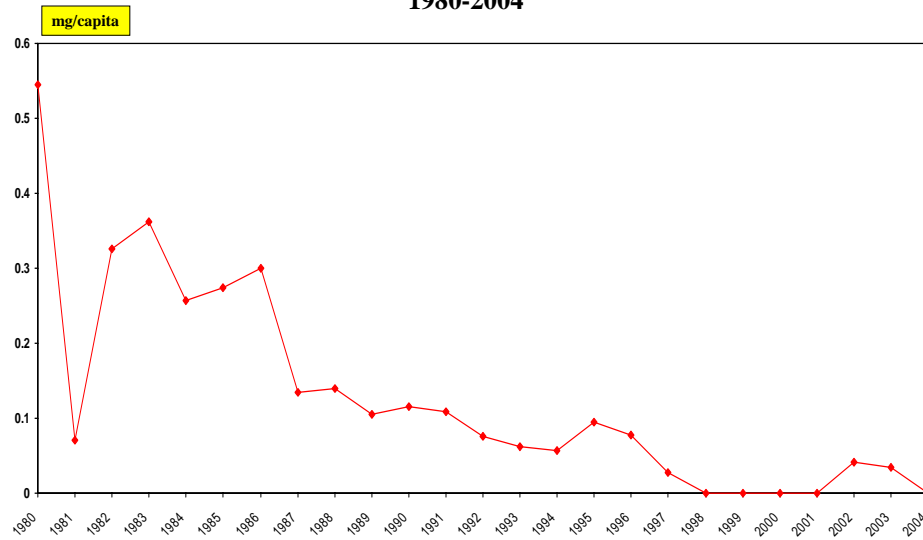
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 41. Nigeria
Oxycodone Consumption
1980-2004**



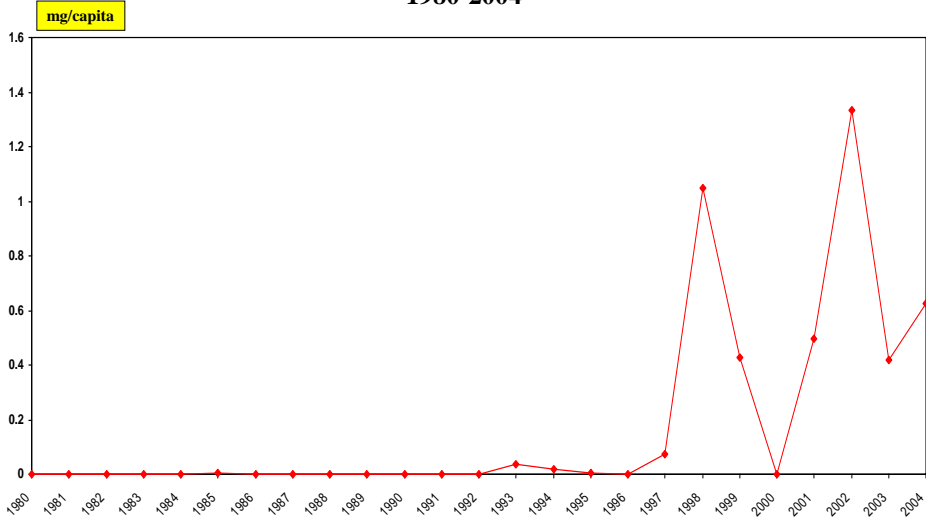
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 42. Nigeria
Pethidine Consumption
1980-2004**



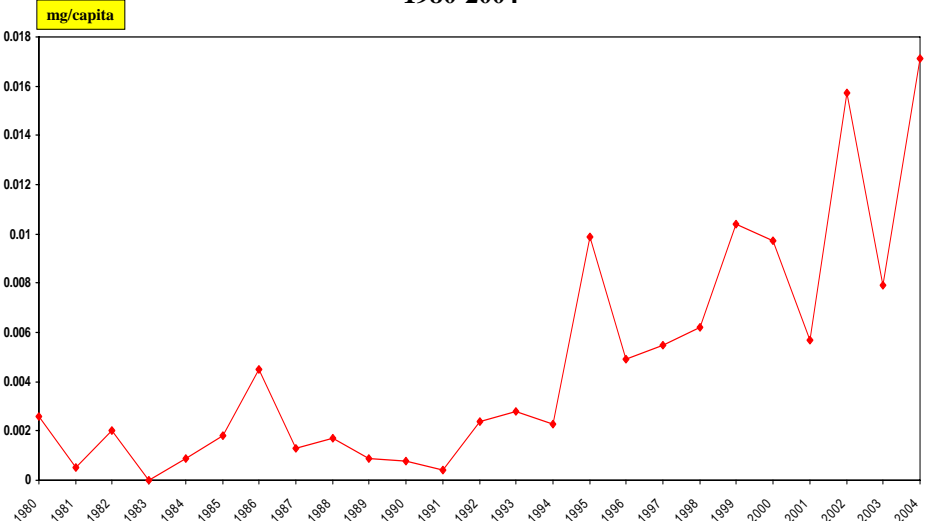
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 43. Panama
Morphine Consumption
1980-2004**



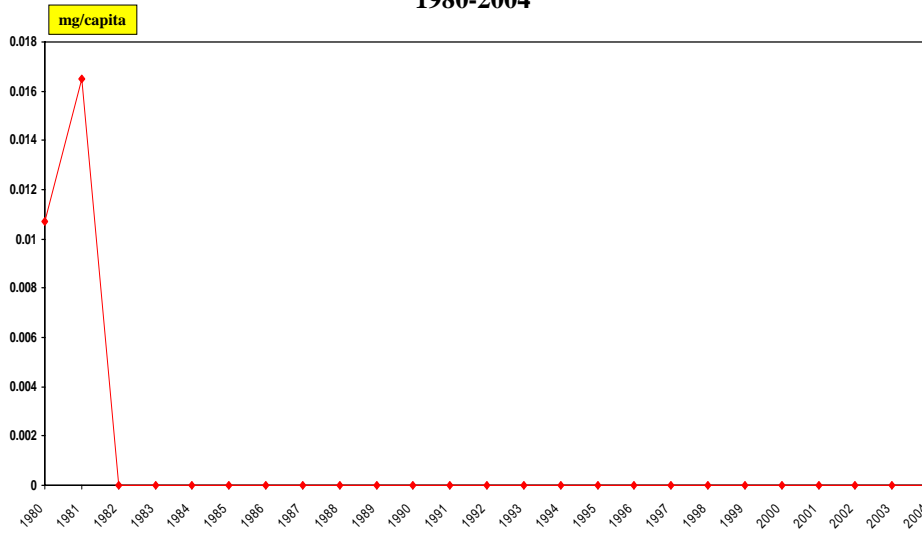
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 44. Panama
Fentanyl Consumption
1980-2004**



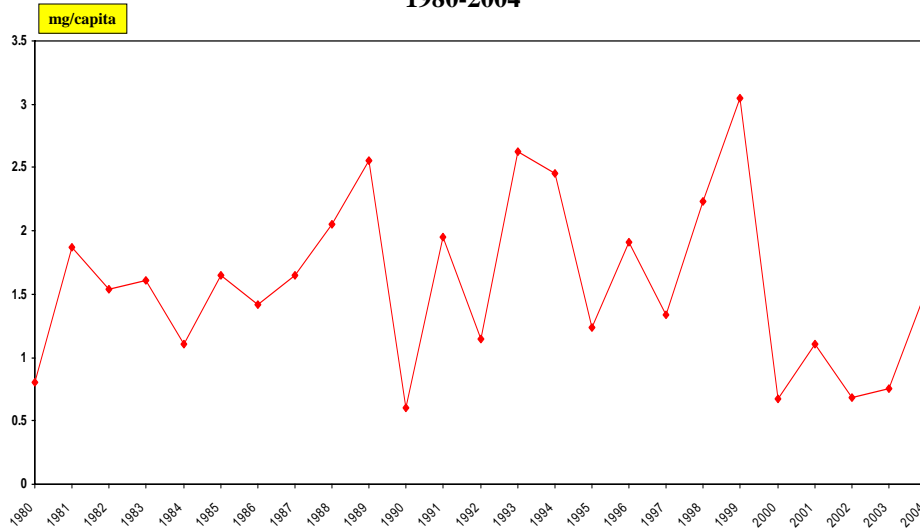
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 45. Panama
Oxycodone Consumption
1980-2004**



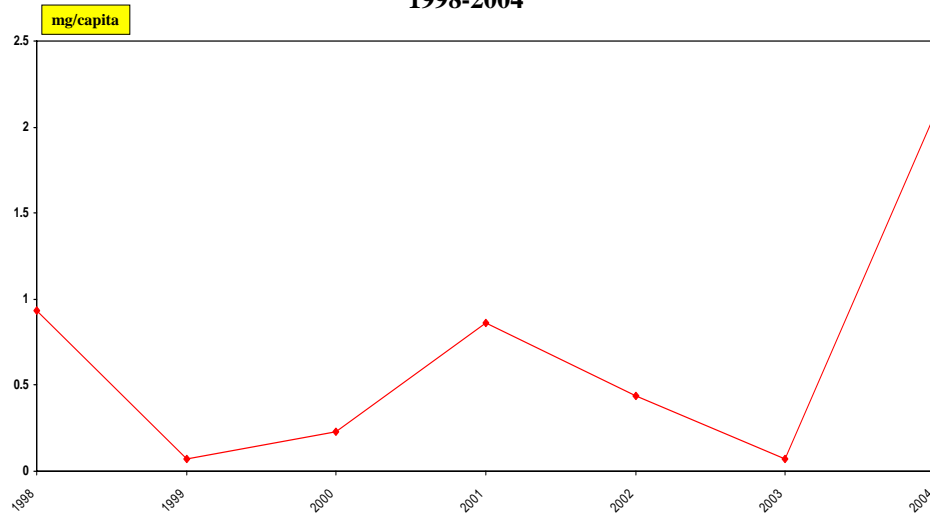
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 46. Panama
Pethidine Consumption
1980-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

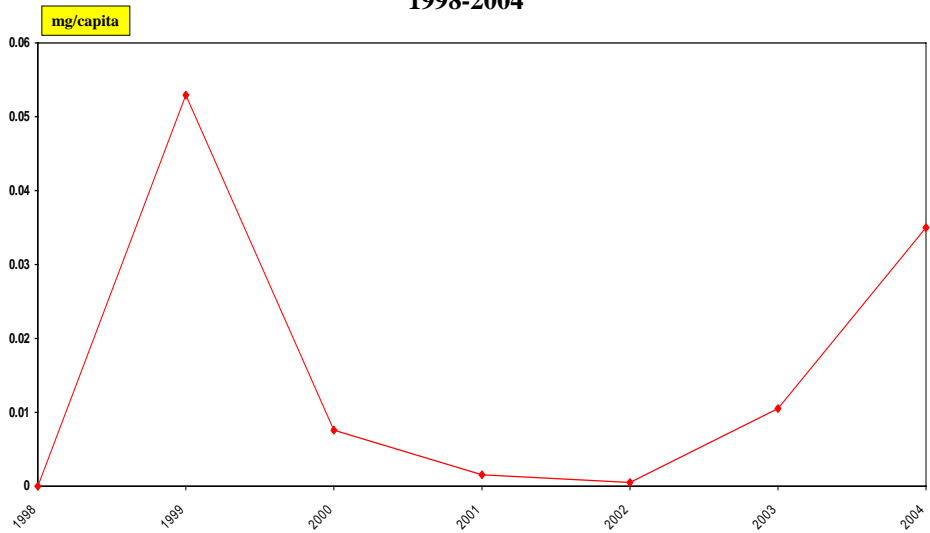
**Graph 47. Serbia and Montenegro
Morphine Consumption
1998-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The first consumption report submitted to the INCB for Serbia and Montenegro was 1998.

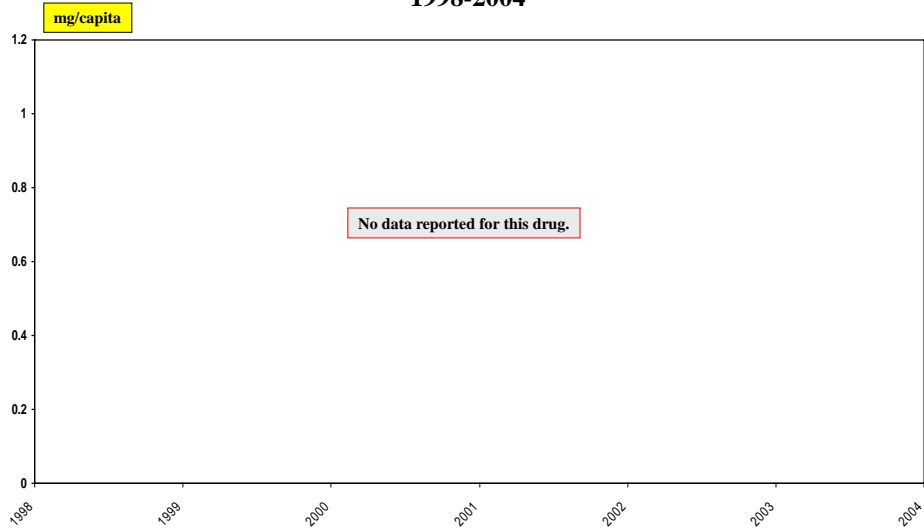
**Graph 48. Serbia and Montenegro
Fentanyl Consumption
1998-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The first consumption report submitted to the INCB for Serbia and Montenegro was 1998.

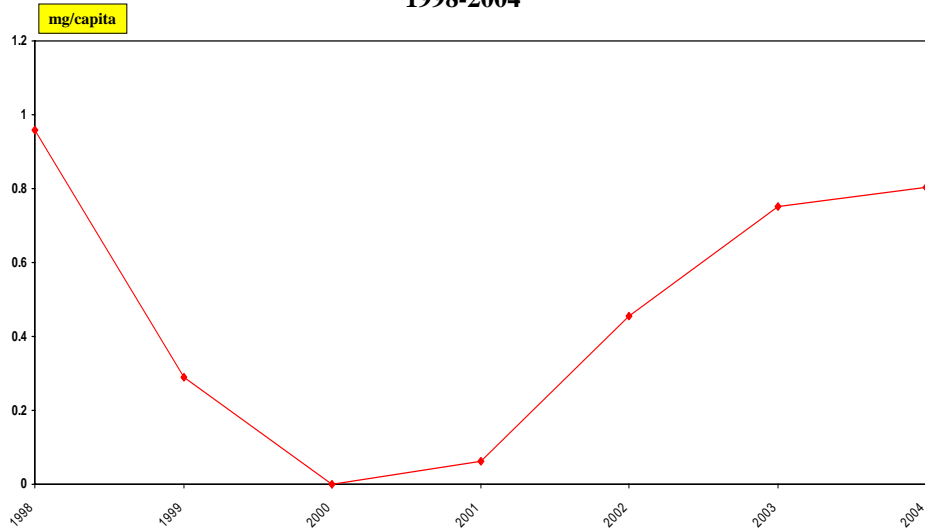
**Graph 49. Serbia and Montenegro
Oxycodone Consumption
1998-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

The first consumption report submitted to the INCB for Serbia and Montenegro was 1998.

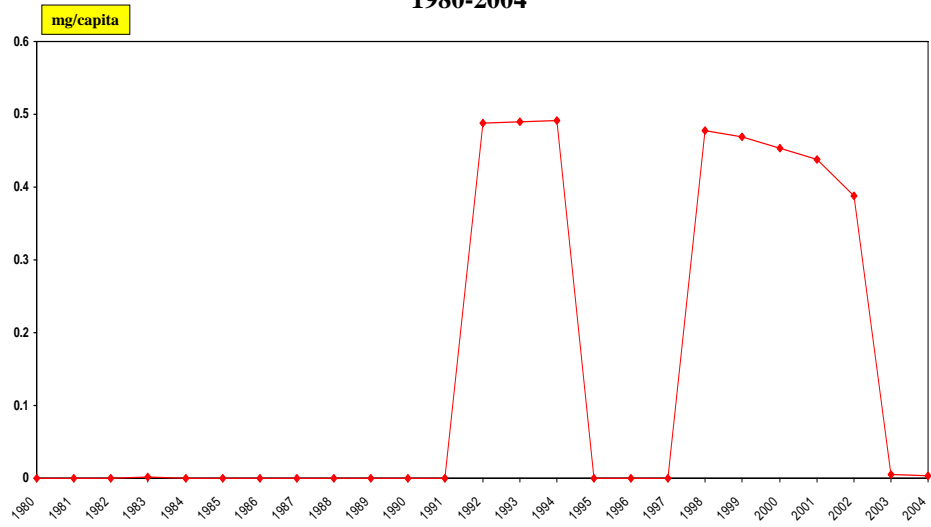
**Graph 50. Serbia and Montenegro
Pethidine Consumption
1998-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

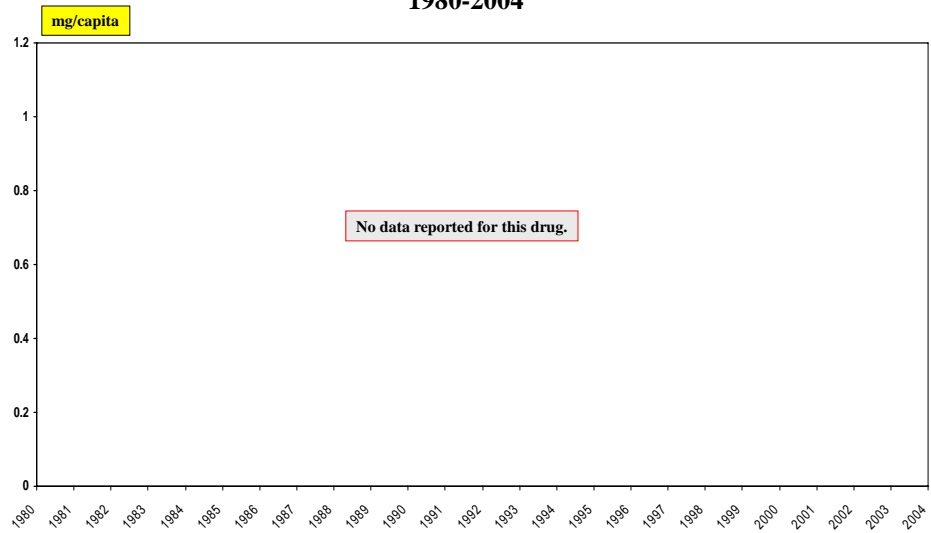
The first consumption report submitted to the INCB for Serbia and Montenegro was 1998.

**Graph 51. Sierra Leone
Morphine Consumption
1980-2004**



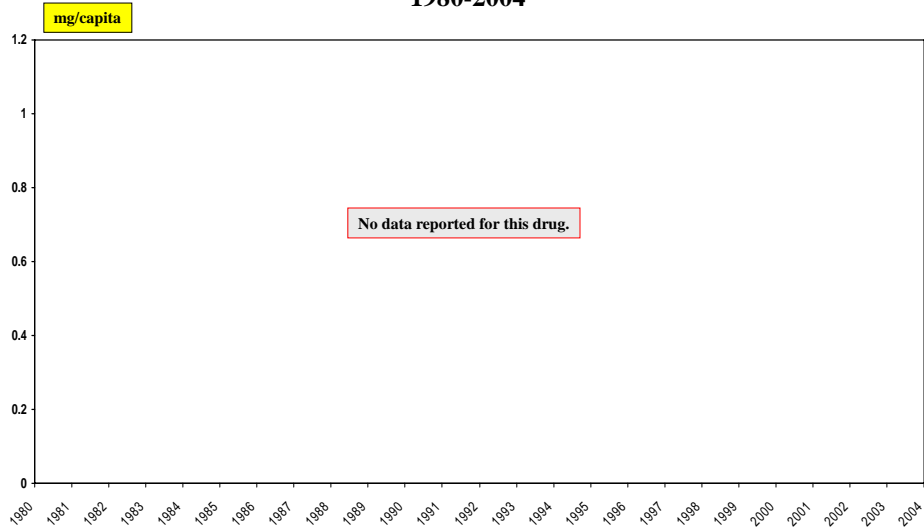
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 52. Sierra Leone
Fentanyl Consumption
1980-2004**



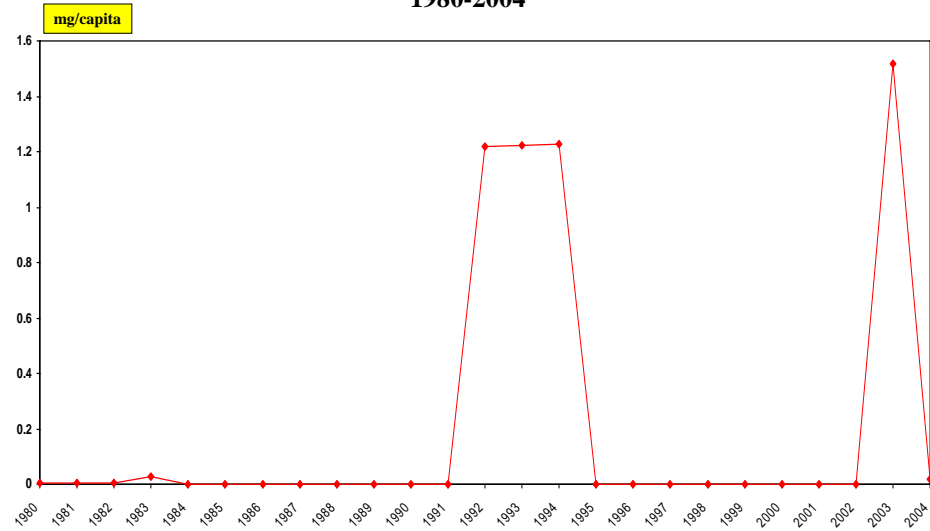
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 53. Sierra Leone
Oxycodone Consumption
1980-2004**



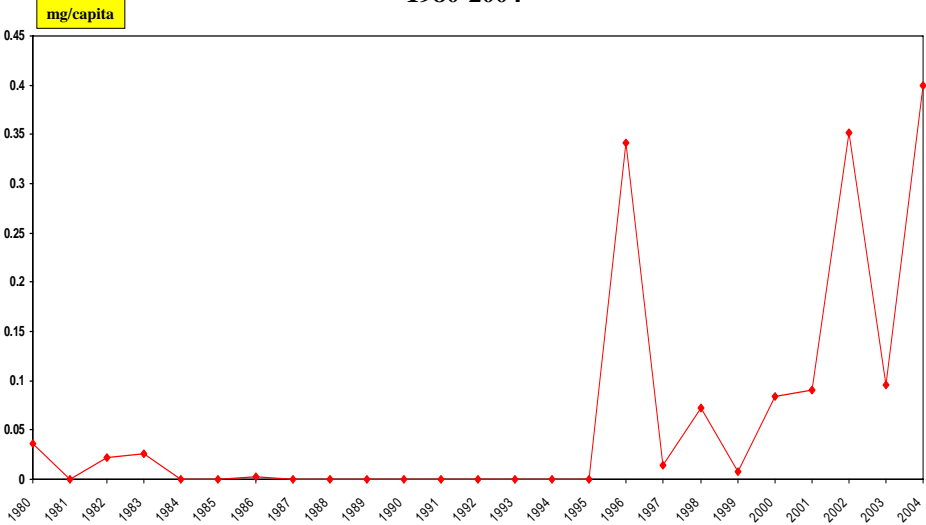
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 54. Sierra Leone
Pethidine Consumption
1980-2004**



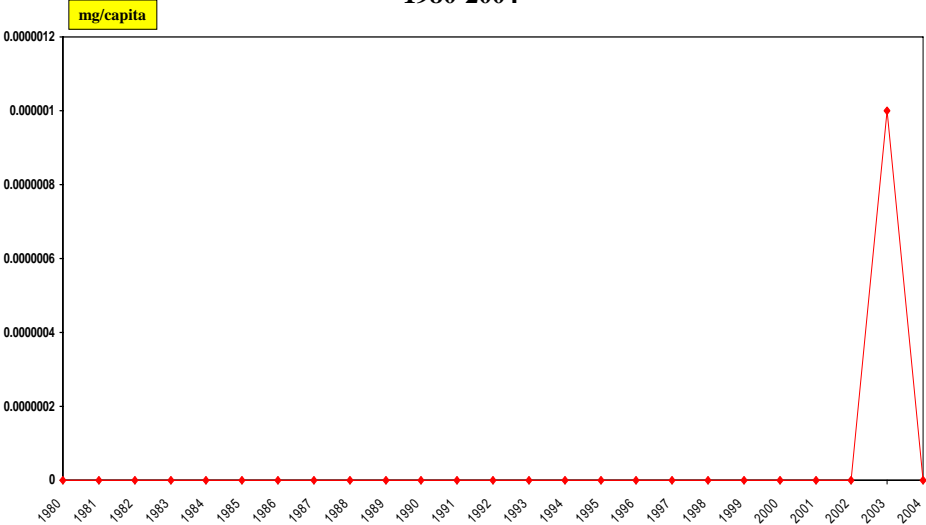
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 55. Uganda
Morphine Consumption
1980-2004**



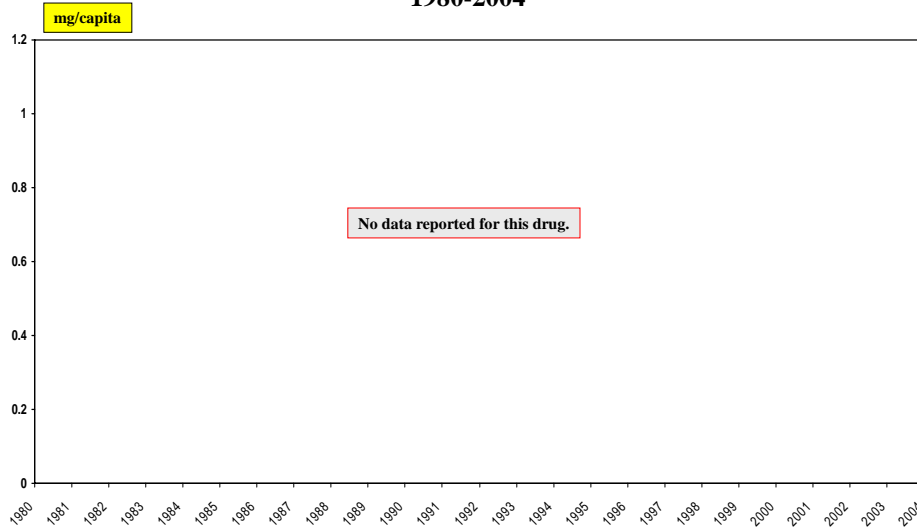
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 56. Uganda
Fentanyl Consumption
1980-2004**



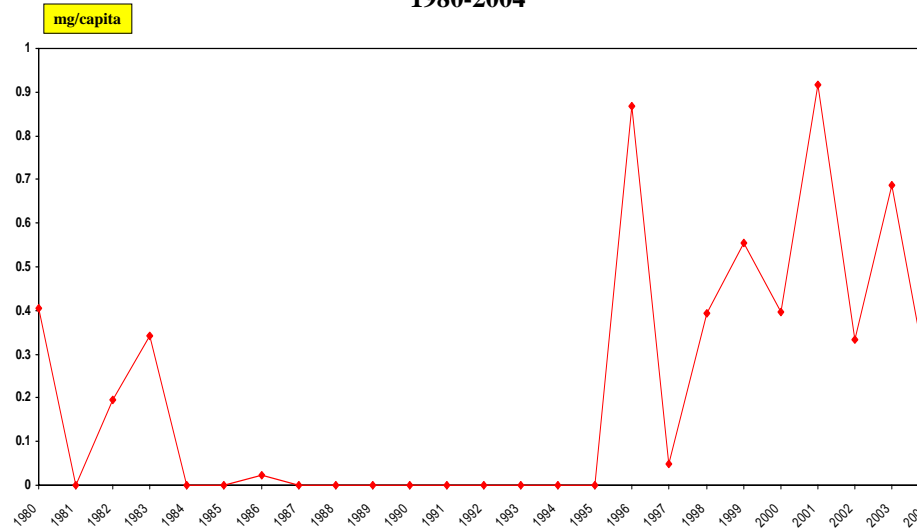
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 57. Uganda
Oxycodone Consumption
1980-2004**



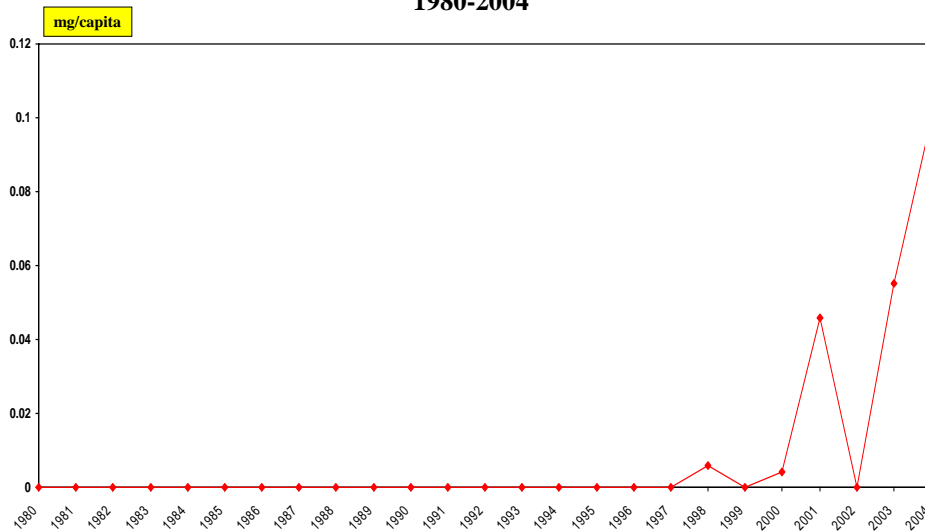
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 58. Uganda
Pethidine Consumption
1980-2004**



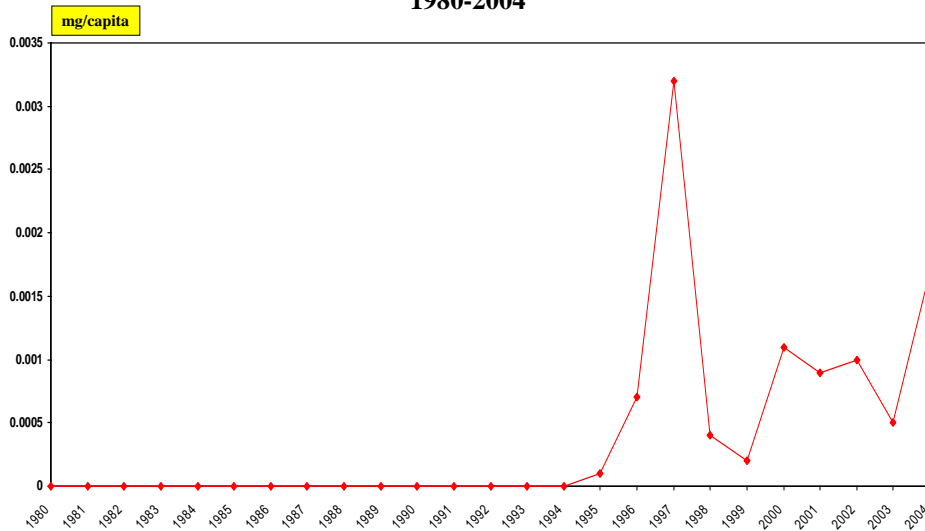
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 59. Vietnam
Morphine Consumption
1980-2004**



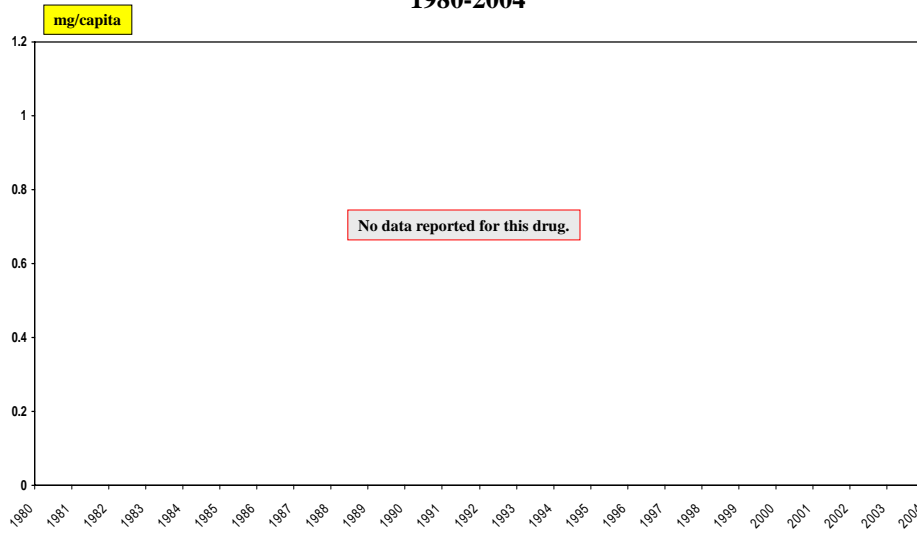
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 60. Vietnam
Fentanyl Consumption
1980-2004**



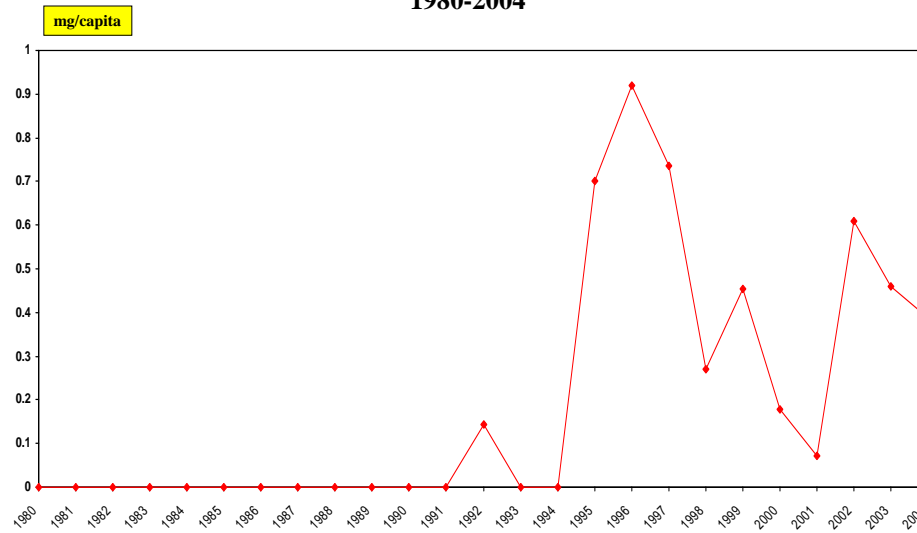
Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 61. Vietnam
Oxycodone Consumption
1980-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

**Graph 62. Vietnam
Pethidine Consumption
1980-2004**



Source: International Narcotics Control Board; United Nations Demographic Yearbook
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2006

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