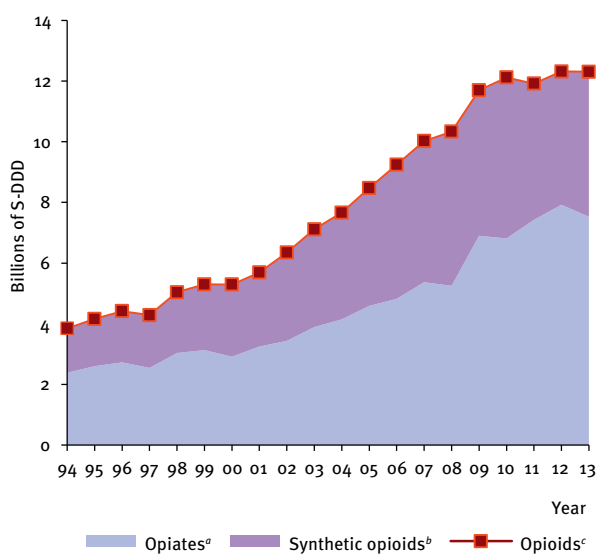


and opiate raw materials will also continue to rise. Figure 4 presents the global level of consumption of opiates and synthetic opioids, including buprenorphine and pentazocine, which are opioids controlled under the 1971 Convention, during the 20-year period from 1994 to 2013. To allow the aggregation of consumption data for substances having different potencies, the levels of consumption are expressed in billions of S-DDD.

Figure 4. Global consumption of opioids, 1994-2013



Source: International Narcotics Control Board.

^aIncluding buprenorphine, an opiate controlled under the 1971 Convention.

^bIncluding pentazocine, a synthetic opioid controlled under the 1971 Convention.

^cIncluding opiates and synthetic opioids.

61. Over the past 20 years, global consumption of opioids has more than tripled. The consumption of opiates as a percentage of total consumption of opioids fluctuated between 62 per cent in 1994 and 52 per cent in 2006, rising again to 61 per cent in 2013. As a result, the share of synthetic opioids, which are used for the same indications as opiates, increased from 38 per cent in 1994 to 48 per cent in 2008, but declined to 39 per cent in 2013. Between 2010 and 2013, the ratio of consumption of opiates to synthetic opioids stabilized at about 60 per cent for opiates and 40 per cent for synthetic opioids. Throughout the period, the supply of opiate raw materials from which opiates were obtained was sufficient to cover increasing demand. It is expected that the demand for opiates will increase again in the future, while their share of the total

consumption of opioids may decline, owing to expected growth in the consumption of synthetic opioids.

62. Overall, the available data indicate that the amount of opiate raw materials available for the manufacture of narcotic drugs for pain relief is more than sufficient to satisfy the current level of demand as estimated by Governments. In addition, both production and stocks continue to increase.

B. Availability of opioid analgesics

63. Opioid analgesics are essential medicines for palliation therapy.³⁴ They are prescribed mainly in relation to cancer, but palliation therapy is also needed for other health situations that require the management of pain (such as surgery and childbirth) and for chronic conditions such as cardiovascular diseases, chronic respiratory diseases, HIV/AIDS and diabetes.

64. Each year, around 5.5 million terminal cancer patients, 1 million end-stage HIV/AIDS patients and 800,000 patients with lethal injuries caused by accidents or violence, in addition to patients with chronic illnesses, patients recovering from surgery, women in labour and paediatric patients, are subjected to untreated or under-treated moderate to severe pain. All in all, WHO estimates that annually tens of millions of people are suffering without adequate treatment.³⁵

65. It is estimated that, out of the 20 million people in need of palliative care at the end of their lives, about 80 per cent live in low- or middle-income countries.³⁶ According to the Worldwide Palliative Care Alliance, every year at least 100 million people worldwide would benefit from palliative care; however, fewer than 8 per cent of people in need of palliative care have access to it. According to the Harvard Global Equity Initiative-Lancet Commission on Global Access to Pain Control and Palliative Care, “the absence of palliative care also undermines efforts to improve human well-being, and

³⁴World Health Organization, Model List of Essential Medicines, 19th list (April 2015, amended June 2015). Available from www.who.int/medicines/publications/essentialmedicines.

³⁵World Health Organization, *Ensuring Balance in National Policies on Controlled Substances: Guidance for Availability and Accessibility of Controlled Medicines* (Geneva, 2011).

³⁶Report by the secretariat of the World Health Organization on the strengthening of palliative care as a component of integrated treatment throughout the life course.

impoverishes a host of interventions intended to reduce human suffering and strengthen health systems³⁷.

66. In many countries, especially in less developed regions, the possibility of preventing, treating and curing cancer early is severely limited by a number of factors, including a lack of early detection and prevention policies, and the limits of the health system. In many situations, palliation may be the only option available for handling an increasing number of cases.

67. Other internationally controlled drugs, such as methadone and buprenorphine (an opioid analgesic which is controlled under the 1971 Convention and whose use in substitution therapy continues to increase), can be used in the management of pain but are mostly used in the treatment of drug dependence. However, their use is also limited in some countries despite a considerable prevalence of heroin abuse.

68. In spite of the common prevalence of the above-mentioned conditions in all regions, pain relief drugs are not available in sufficient quantities, are difficult to obtain because of unduly restrictive procedures, and are not prescribed, owing to a lack of training and capacity of health professionals or because of fear of addiction, which discourages health professionals from prescribing such medications.

69. Consequently, severe pain is often left untreated, although medical professionals have the capacity to relieve most such pain. Untreated pain diminishes the quality of life of patients, their families, their friends and their communities, and may lead to wider losses for society.³⁸

³⁷F. Knaul and others, "Closing the divide: the Harvard Global Equity Initiative-Lancet Commission on Global Access to Pain Control and Palliative Care", *The Lancet* (8 March 2015).

³⁸N.I. Cherny and others, "The Global Opioid Policy Initiative (GOPI) project to evaluate the availability and accessibility of opioids for the management of cancer pain in Africa, Asia, Latin America and the Caribbean, and the Middle East: introduction and methodology", *Annals of Oncology*, Vol. 24, Suppl. No. 11 (2013), pp. xi7-xi13.

1. Global patterns of consumption of opioid analgesics

(a) Inadequate access

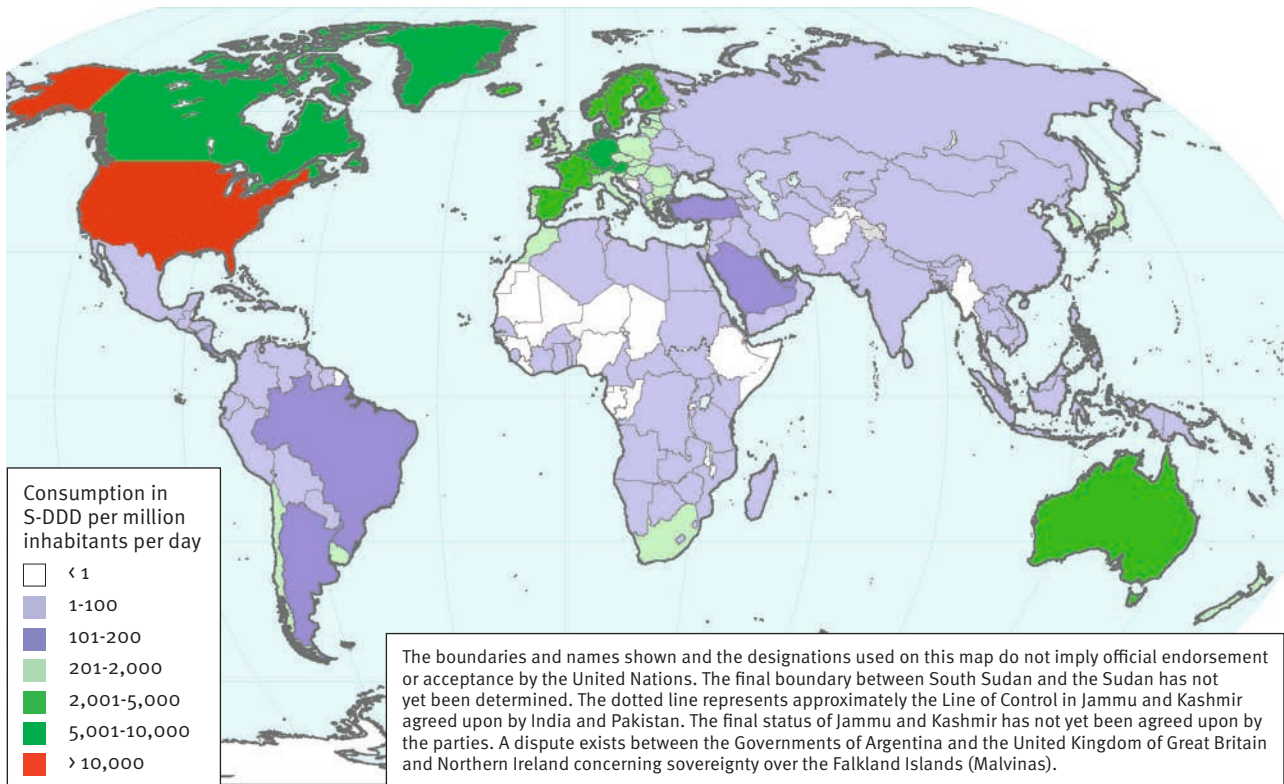
70. The data available to INCB indicate an increase in the level of reported consumption in S-DDD in the 2011-2013 period in comparison with the 2001-2003 period (see maps 1 and 2). In particular, there was visible progress with regard to availability in Latin America and in the Middle East. In Latin America, consumption of opioid analgesics could possibly be even higher than reported because methadone (which is not included in the global S-DDD calculation because of its prevalent use in opiate substitution treatment) is more frequently used for pain relief in this region than in other regions. Very little is used for drug dependence treatment, since the prevalence of heroin abuse is relatively low and therefore opiate substitution treatment services are not common.

71. There have been some small improvements in the Russian Federation and in some countries in Central Asia. However, the situation remains problematic in most of Africa and parts of Asia.

72. The United States, Canada, Australia and some countries in Western Europe have increased their levels of consumption to above 10,000 S-DDD per million inhabitants per day. In some of these countries, there has been a considerable increase in prescription drug abuse, which Governments have taken action to reduce without limiting access for people in need of pain relief medicines.

73. Overall, there has been encouraging progress towards ensuring availability and increasing access to opioid analgesics, but that goal is still a distant one for a considerable number of countries.

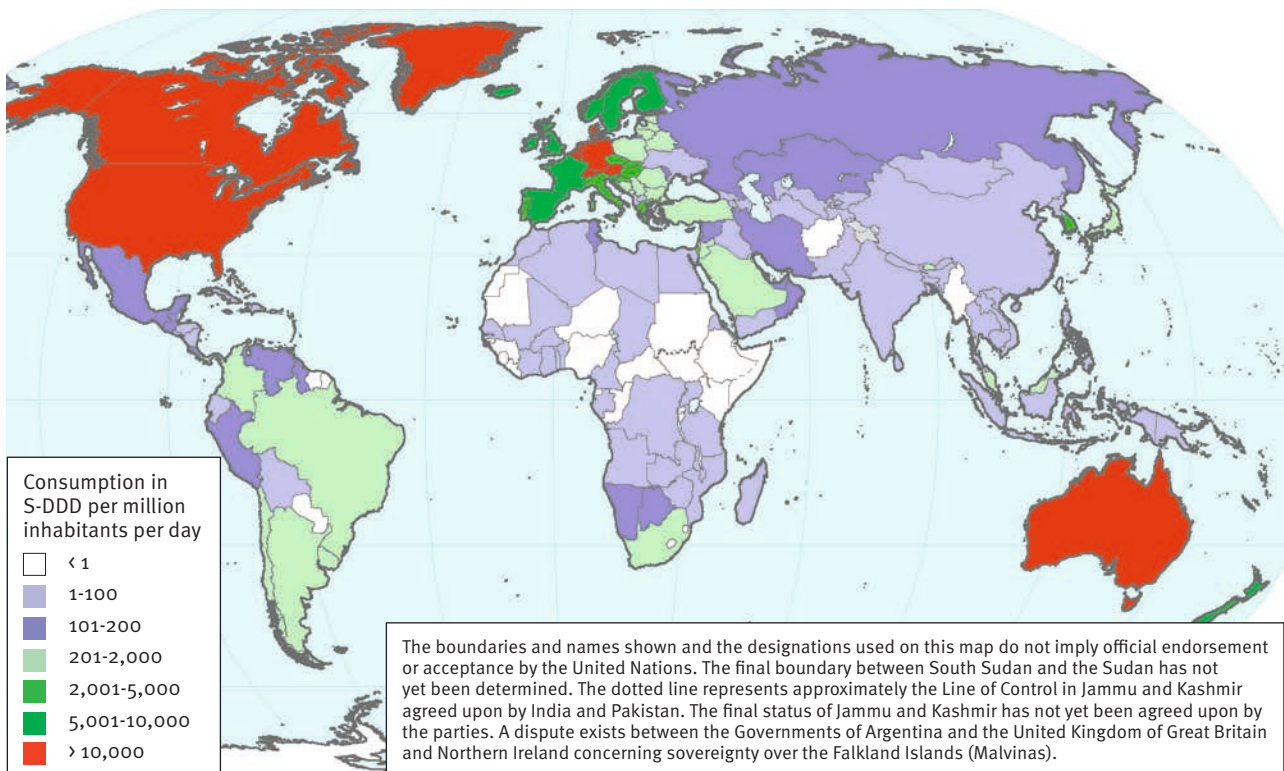
Map 1. Availability of opioids for pain management (2001-2003 average)



Source: International Narcotics Control Board.

Note: Opioids defined as codeine, dextropropoxyphene, dihydrocodeine, fentanyl, hydrocodone, hydromorphone, ketobemidone, morphine, oxycodone, pethidine, tilidine and trimeperidine.

Map 2. Availability of opioids for pain management (2011-2013 average)



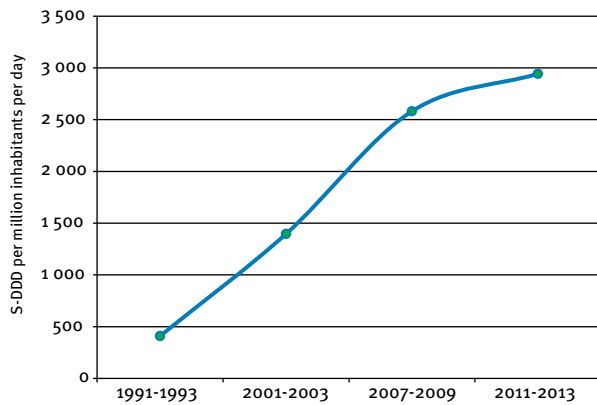
Source: International Narcotics Control Board.

Note: Opioids defined as codeine, dextropropoxyphene, dihydrocodeine, fentanyl, hydrocodone, hydromorphone, ketobemidone, morphine, oxycodone, pethidine, tilidine and trimeperidine.

(b) Evolution of the consumption of opioid analgesics over time

74. In the past two decades, global consumption of opioid analgesics expressed in S-DDD has increased considerably. The long-term trend shows an overall increase of 618 per cent between the 1991-1993 period and the 2011-2013 period (see figure 5). That trend was especially pronounced during the initial years: between 1991-1993 and 2001-2003, there was an increase of 240 per cent, compared with an increase of 84 per cent between 2001-2003 and 2007-2009. The growth rate declined further to 14 per cent during the period between 2007-2009 and 2011-2013. The increase in consumption is mainly the result of an increase in the consumption of fentanyl and, to a limited extent, the consumption of morphine. Global consumption of codeine and pethidine for the treatment of pain has decreased.

Figure 5. Global trend in the consumption of opioid analgesics, 1991-1993, 2001-2003, 2007-2009 and 2011-2013 averages



Source: International Narcotics Control Board.

75. The growth in consumption of opioid analgesics observed since 1991 has been uneven among regions. It has been driven mainly by North America, but also by Europe and Oceania, the three major consumer regions (see figures 6-17).

76. In Asia, the situation is mixed. Here, most countries saw an increase in their consumption during the past decade, although with varying trends at the subregional level. A moderate increase was observed in East, South-East and West Asia, while there was a decrease in South Asia, which continued to have the lowest level of consumption in the world. This decrease is probably attributable to a considerable decrease to the consumption of opioid analgesics in India as a consequence of legislative restrictions that had been introduced in the past. Those restrictions have recently been lifted, but it will take some time before the gap in consumption is closed.

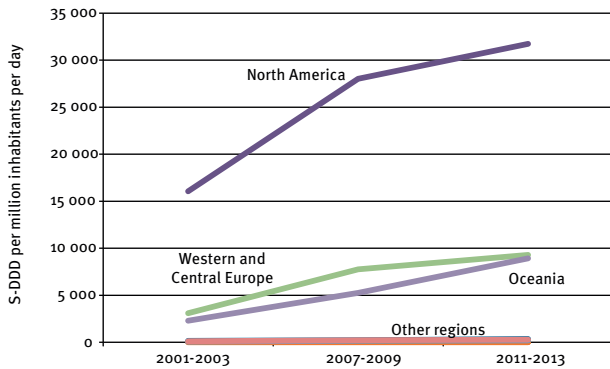
77. In Africa, the situation is problematic and consumption continues to be very low despite progress in a few countries. Patterns of consumption fluctuated considerably both in countries with higher levels of consumption and in countries with lower levels of consumption. This is probably due to a lack of capacity of competent national authorities to estimate correctly their national needs.

78. In Central America and the Caribbean, the overall trend shows increased consumption, but there were considerable variations among countries. Consumption in Central American and Caribbean countries was still below an adequate level. In South America, most countries had increased their consumption in 2011-2013, even though some of them had experienced drops in consumption in earlier periods. The data for these two subregions, but particularly for South America, have some limitations because, while methadone is used in some of the countries of the region as a pain relief medication and not in substitution treatment—heroin abuse in the region is not common—it is excluded from the S-DDD calculation at the global level.

79. In Europe, the overall trend showed an increase, with some stabilization for some countries.

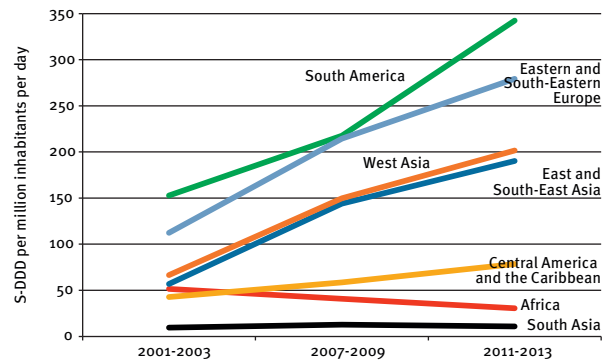
80. In Australia and New Zealand, consumption increased, which influenced the trend for the whole region.

Figure 6. Trends in consumption, by region, 2001-2013



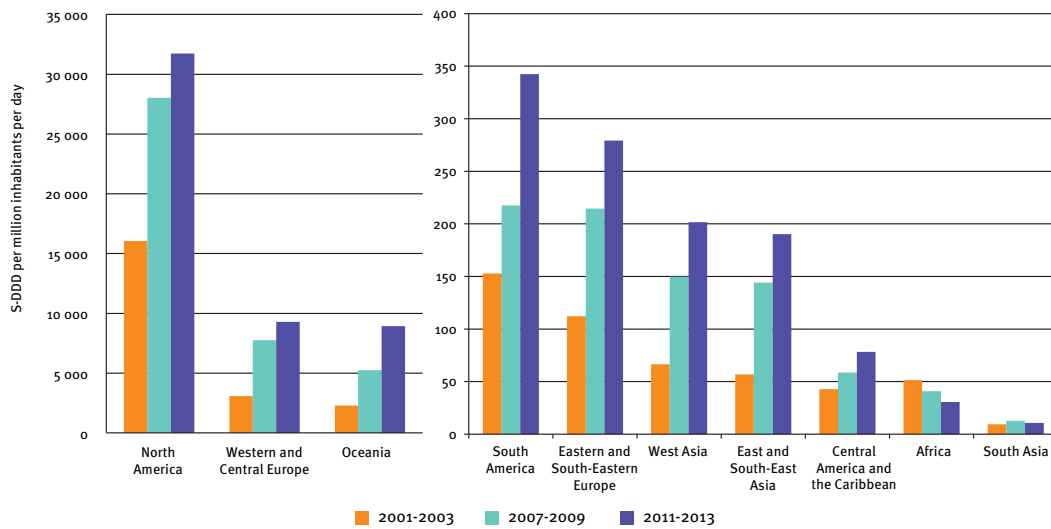
Source: International Narcotics Control Board.

Figure 7. Trends in consumption for selected subregions, 2001-2013



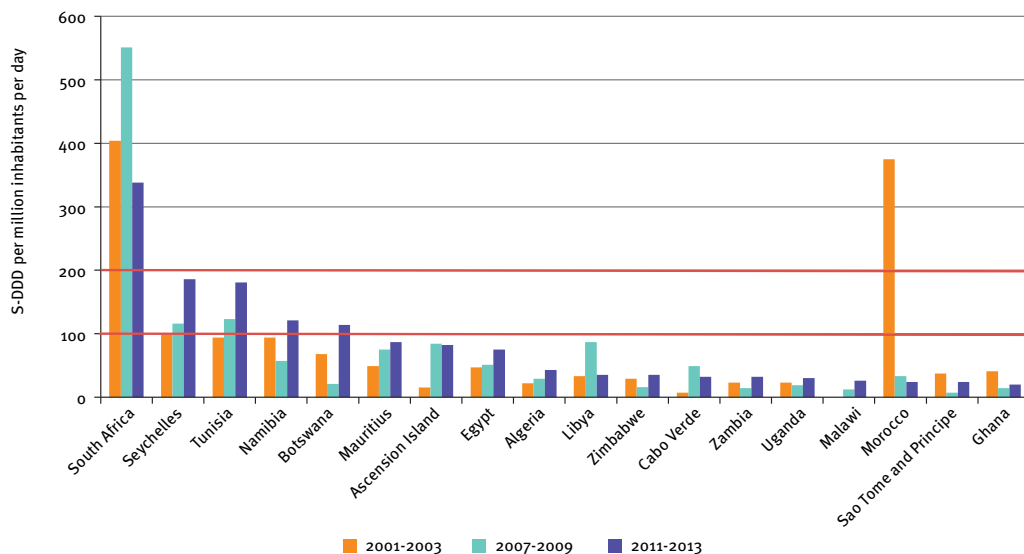
Source: International Narcotics Control Board.

Figure 8. Average consumption of opioid analgesics, all regions, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

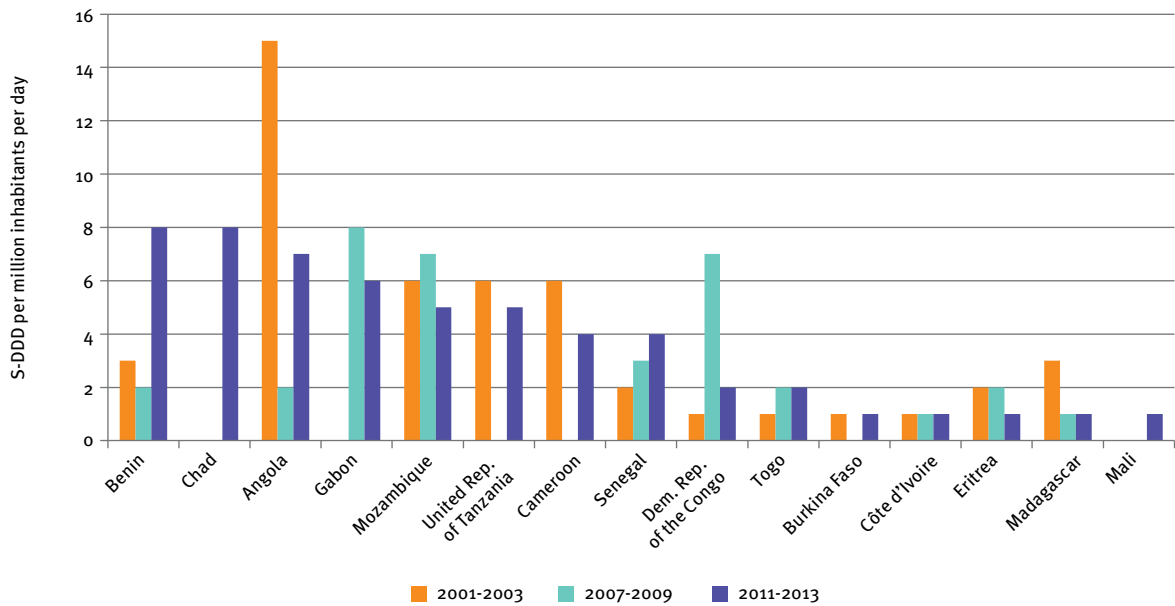
Figure 9. Average consumption of opioid analgesics in African countries and territories with higher levels of consumption, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

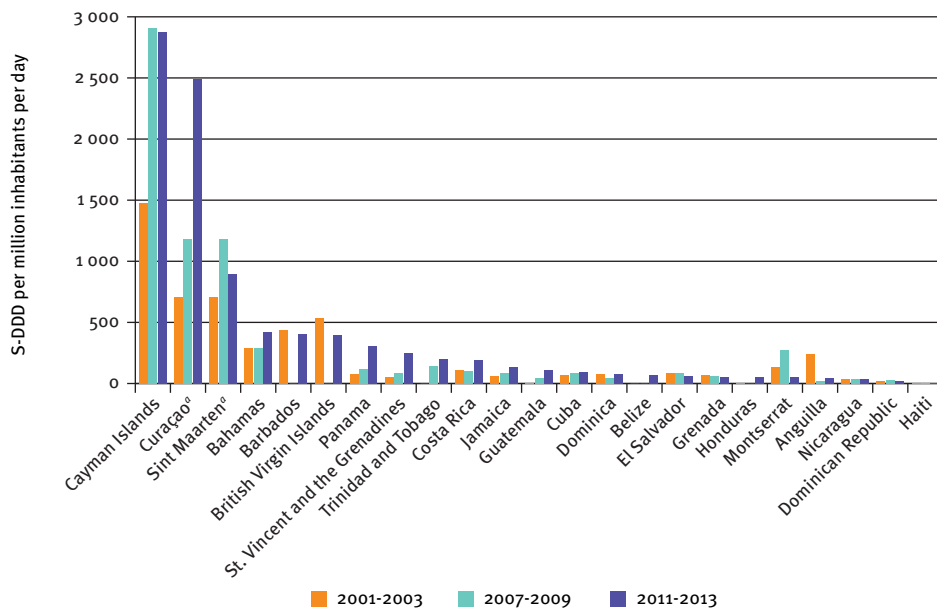
Note: Red lines: levels less than 200 S-DDD are considered inadequate; levels less than 100 S-DDD are considered very inadequate. For further information on inadequate and very inadequate levels of consumption as identified by the Board, see paragraph 46, above.

Figure 10. Average consumption of opioid analgesics in African countries with lower levels of consumption, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

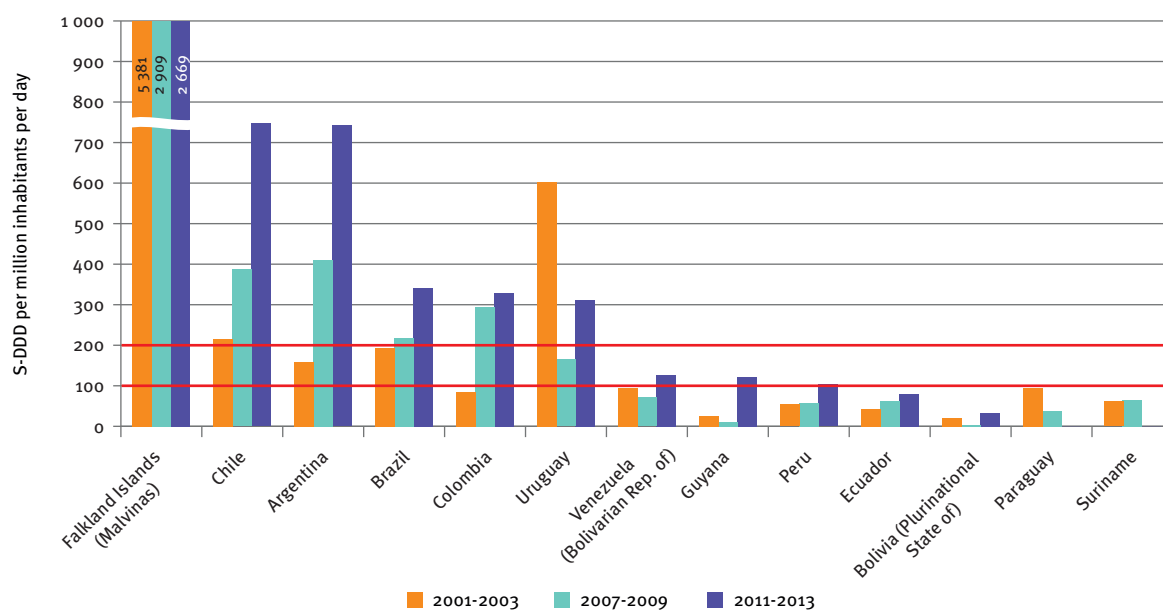
Figure 11. Average consumption of opioid analgesics in Central America and the Caribbean, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

^aThe Netherlands Antilles was dissolved on 10 October 2010, resulting in two new constituent entities, Curaçao and Sint Maarten.

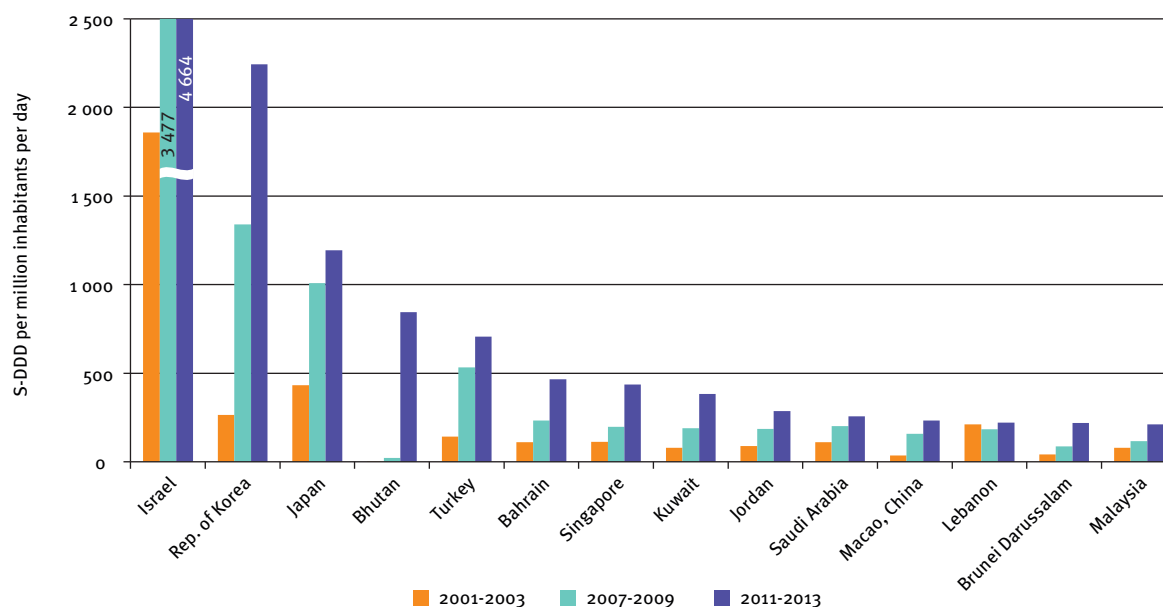
Figure 12. Average consumption of opioid analgesics in South America, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

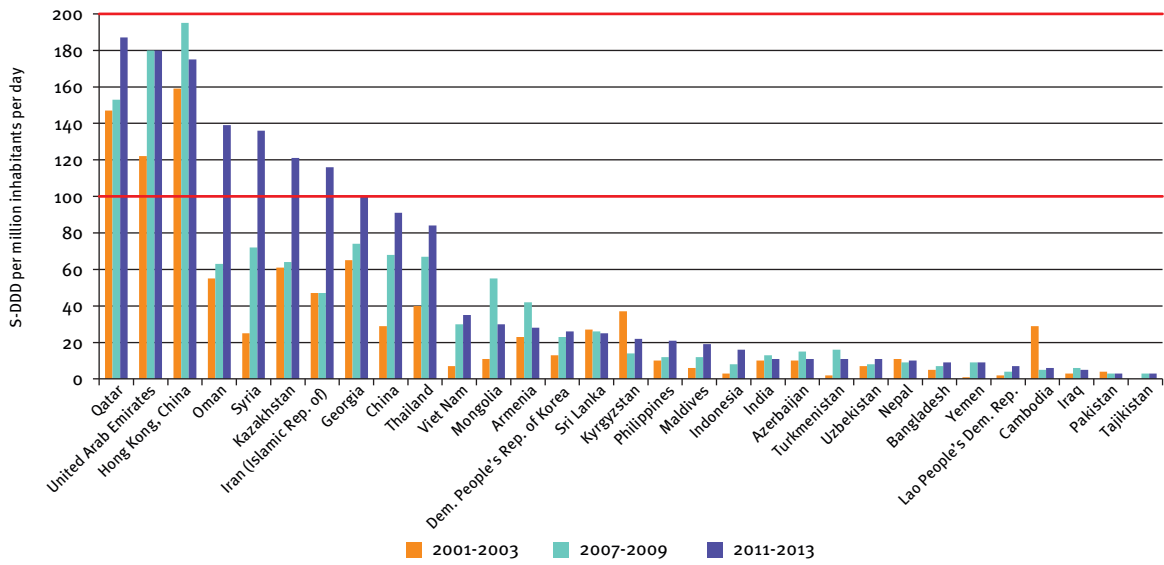
Note: Red lines: levels less than 200 S-DDD are considered inadequate; levels less than 100 S-DDD are considered very inadequate. For further information on inadequate and very inadequate levels of consumption as identified by the Board, see paragraph 46, above.

Figure 13. Average consumption of opioid analgesics in Asian countries and territories with higher levels of consumption, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

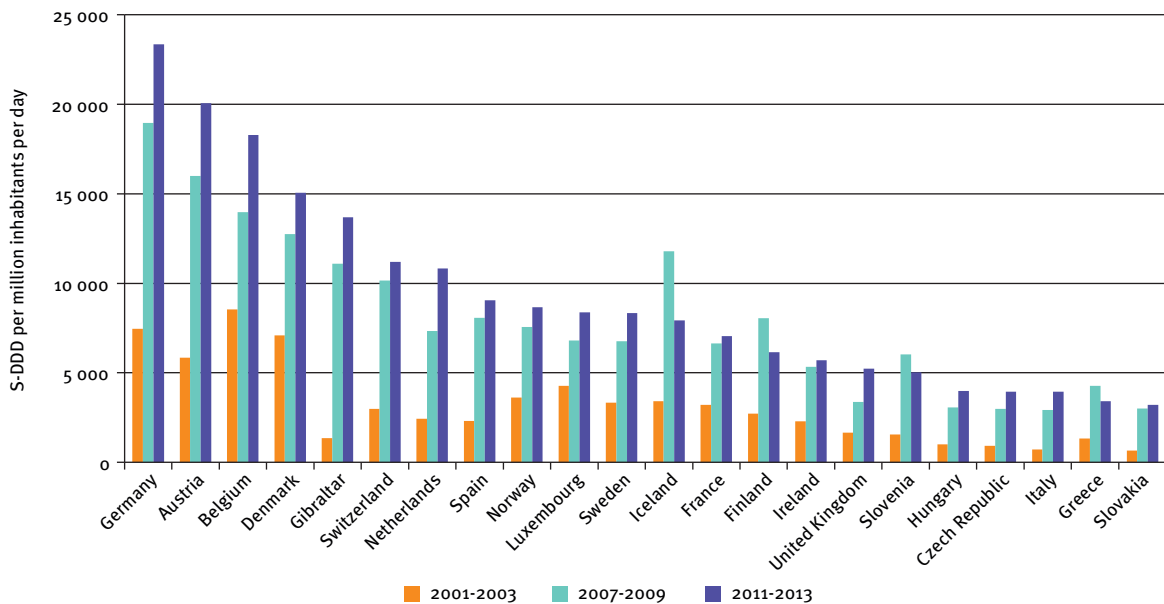
Figure 14. Average consumption of opioid analgesics in Asian countries and territories with lower levels of consumption, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

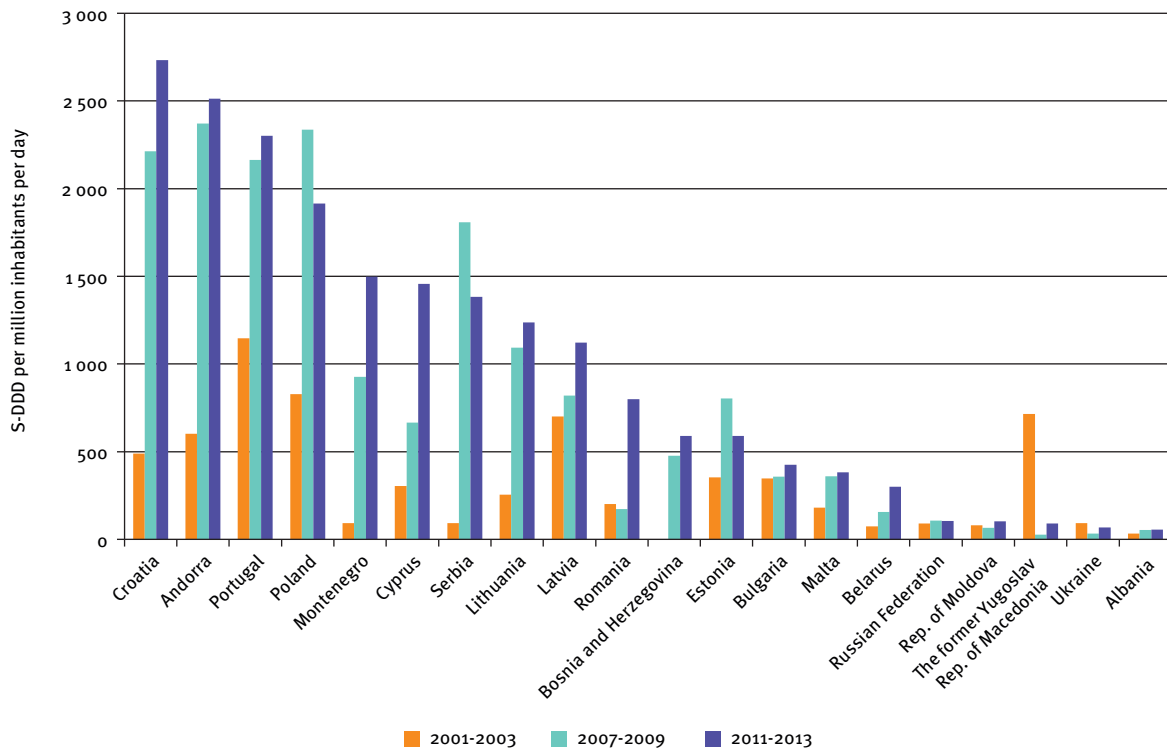
Note: Red lines: levels less than 200 S-DDD are considered inadequate; levels less than 100 S-DDD are considered very inadequate. For further information on inadequate and very inadequate levels of consumption as identified by the Board, see paragraph 46, above.

Figure 15. Average consumption of opioid analgesics in European countries and territories with higher levels of consumption, 2001-2003, 2007-2009 and 2011-2013



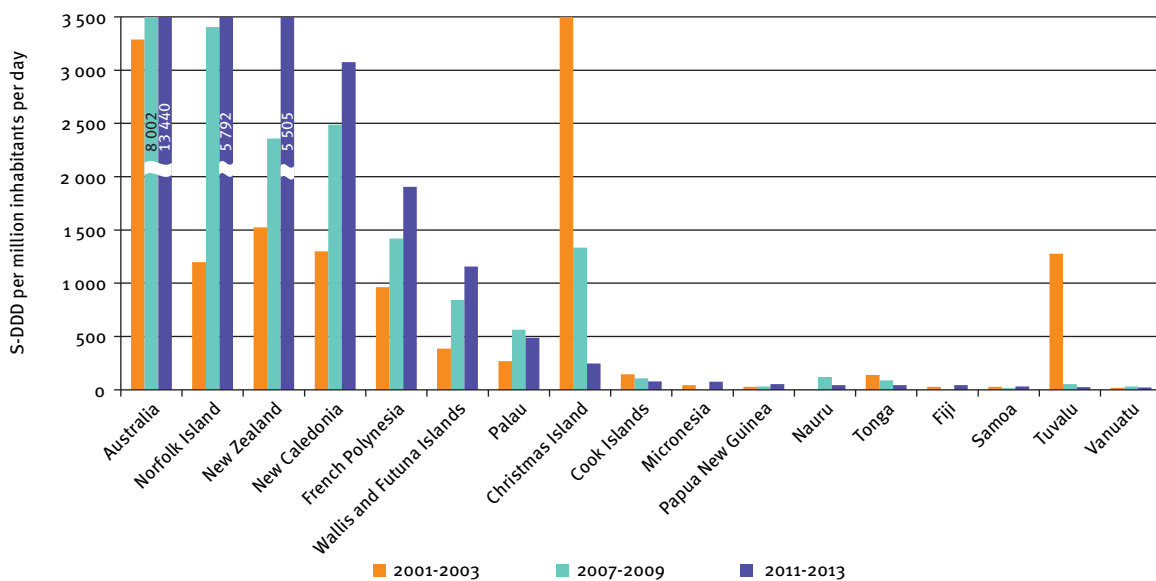
Source: International Narcotics Control Board.

Figure 16. Average consumption of opioid analgesics in European countries with lower levels of consumption, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

Figure 17. Average consumption of opioid analgesics in Oceania, 2001-2003, 2007-2009 and 2011-2013



Source: International Narcotics Control Board.

(c) Overconsumption and prescription drug abuse

81. While inadequate access to opioid analgesics in some regions is a matter of concern, it is important to also consider that in regions with high levels of consumption there are growing public health concerns regarding the abuse of prescription drugs, which in some countries has outpaced the abuse of illegal drugs.

82. Many factors are contributing to this development, but the main ones are the widespread availability of prescription drugs and the erroneous perception that they are less susceptible to abuse than illicit drugs. The non-prescription use of prescription drugs for self-medication has further exacerbated the problem.

83. A comparative analysis by UNODC³⁹ of the consumption of opioid analgesics and the prevalence of their

³⁹World Drug Report 2014, United Nations publication, Sales No. E.14.XI.7.

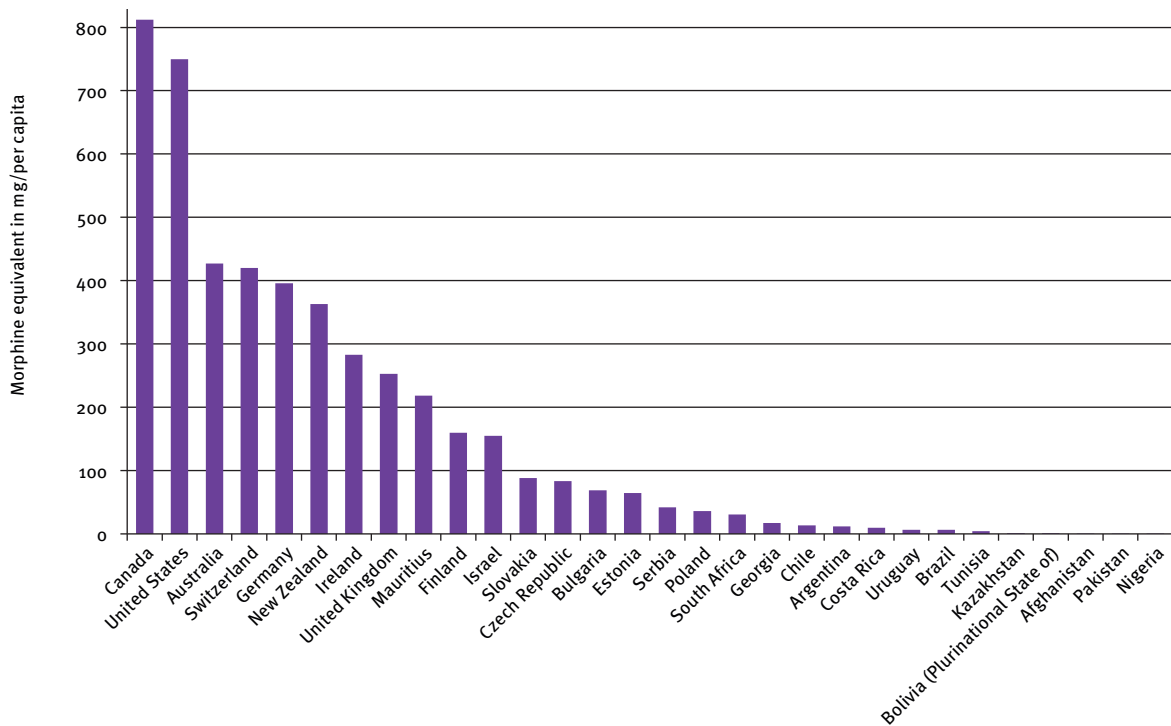
misuse shows a high prevalence of misuse of opioids in some countries. This is reported by high-income countries⁴⁰ such as Australia, Canada and the United States and by lower-middle-income countries such as Nigeria and Pakistan, which have the lowest per capita consumption of opioids for medical purposes (see figures 18-19).⁴¹ According to UNODC, that suggests that the misuse of prescription opioids does not necessarily follow from making opioids accessible or available for medical purposes.⁴²

⁴⁰Based on the World Bank classification of income levels and development.

⁴¹The annual prevalence of misuse of prescription opioids is as follows: Australia, 3.1 per cent; Canada, 1 per cent; Nigeria, 3.6 per cent; Pakistan, 1.5 per cent; and United States, 5.2 per cent.

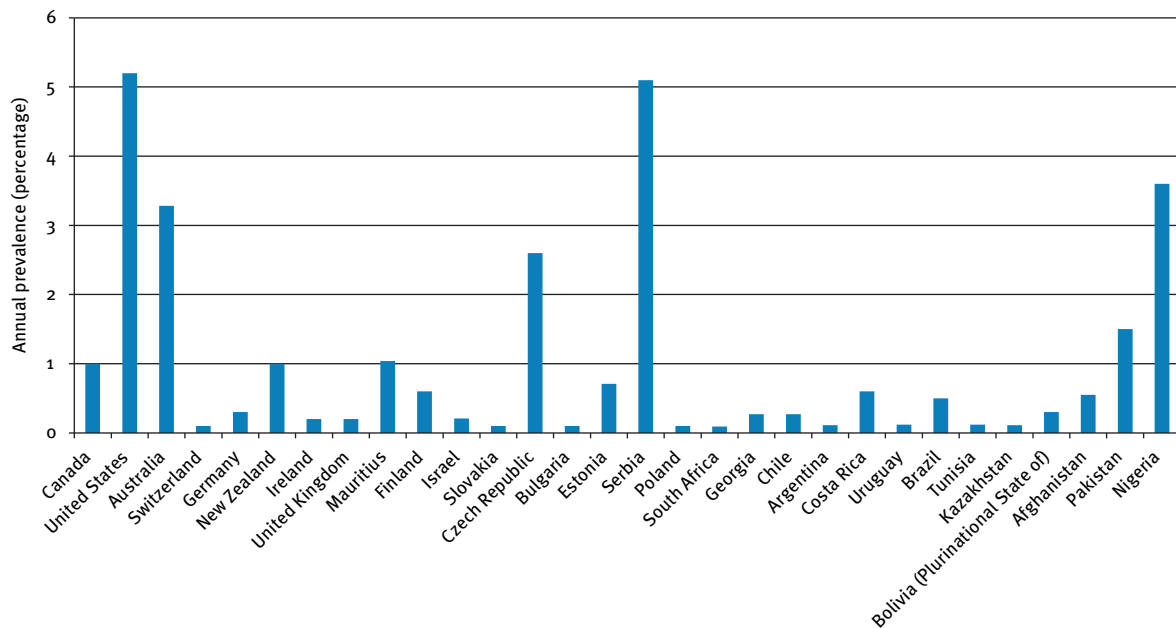
⁴²World Drug Report 2014.

Figure 18. Per capita consumption of opioid analgesics, 2011



Source: UNODC.

Figure 19. Prevalence of misuse of prescription opioids in the general population, 2013 or latest available data



Source: UNODC.

84. To address this problem, countries need to develop a comprehensive strategy aimed at tackling the root causes of the excessive supply of prescription drugs, including overprescribing by medical professionals, “doctor shopping” and inadequate controls on the issuing and filling of prescriptions. In addition, public health officials identified the presence in households of prescription drugs that are no longer needed or used for medical purposes as one of the main sources of prescription drugs diverted from licit channels for abuse. Surveys of the prevalence of abuse undertaken in several countries have revealed that a significant percentage of individuals abusing prescription drugs for the first time had obtained the drug from a friend or family member who had acquired them legally.

85. Among the measures increasingly being used to address this problem are mechanisms to ensure the safe return and disposal of medications possessing psychoactive properties, particularly those containing narcotic drugs or psychotropic substances, including through prescription drug take-back days. The setting up of such initiatives in many jurisdictions has yielded significant results at a relatively low cost.

86. The importance of these measures has been recognized by the international community, including by the

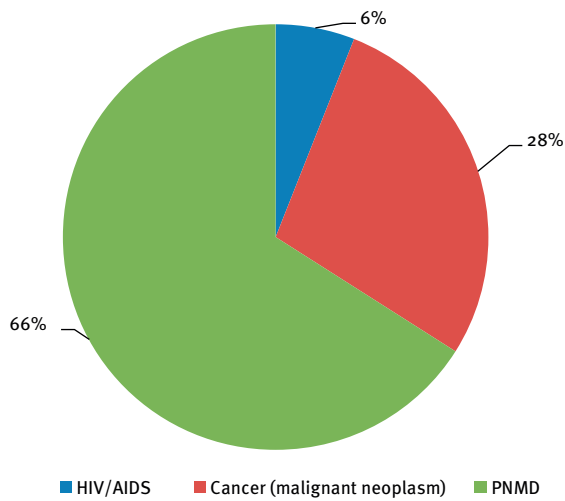
Commission on Narcotic Drugs. Accordingly, in March 2013 the Commission adopted resolution 56/8, on promoting initiatives for the safe, secure and appropriate return for disposal of prescription drugs, in particular those containing narcotic drugs and psychotropic substances under international control.

87. In that resolution, the Commission encouraged States to consider the adoption of a variety of courses of action to address prescription drug abuse, in cooperation with various stakeholders such as public health officials, pharmacists, pharmaceutical manufacturers and distributors, physicians, consumer protection associations and law enforcement agencies, in order to promote greater awareness of the risks associated with the non-medical use of prescription drugs, in particular those containing narcotic drugs or psychotropic substances.

(d) Consumption of opioid analgesics and the need for palliative care

88. The patterns of consumption of opioid analgesics expressed in S-DDD or in milligrams per capita tell only part of the story. In order to ascertain if the level of consumption is appropriate, it is important to measure it in relation to the prevalence of health conditions requiring

Figure 20. Deaths from diseases requiring palliative care at the end of life, by type of disease, 2011



Source: World Health Organization and Worldwide Palliative Care Alliance, *Global Atlas of Palliative Care at the End of Life* (Worldwide Palliative Care Alliance, 2014).

palliative care, which include not only cancer but also other conditions. Also, while consumption of opioid analgesics is concentrated in a few countries, the prevalence of conditions requiring their use is much more widespread.

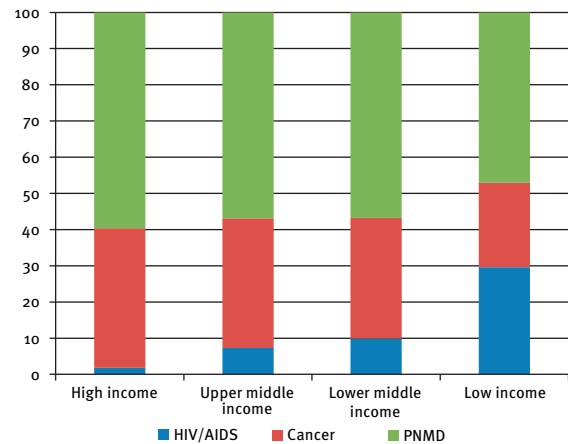
89. Information from the *Global Atlas of Palliative Care at the End of Life*,⁴³ prepared by WHO and the Worldwide Palliative Care Alliance, indicates that cancer is responsible for 28 per cent of adult deaths requiring palliative care. The majority (66 per cent) of deaths requiring such care are related to progressive non-malignant diseases (PNMD).⁴⁴ The remaining 6 per cent are due to AIDS (see figure 20).

90. In all but low-income countries, the share of adults in need of palliative care for cancer remains more or less constant at around 33-38 per cent; that share drops to around 23 per cent in low-income countries (see figure 21). Progressive non-malignant diseases continue to comprise the majority of cases in all regions. The need for AIDS palliative care comprises one third of palliative

⁴³World Health Organization and Worldwide Palliative Care Alliance, *Global Atlas of Palliative Care at the End of Life* (Worldwide Palliative Care Alliance, 2014).

⁴⁴Progressive non-malignant diseases among adults are considered to be Alzheimer's disease and other dementias, cardiovascular diseases (excluding sudden deaths), chronic obstructive pulmonary diseases, cirrhosis of the liver, *Diabetes mellitus*, multiple sclerosis, kidney diseases, Parkinson's disease, rheumatoid arthritis and tuberculosis (multidrug-resistant tuberculosis and extensively drug-resistant tuberculosis only).

Figure 21. Distribution of adults in need of palliative care at the end of life by income group and disease category, 2011



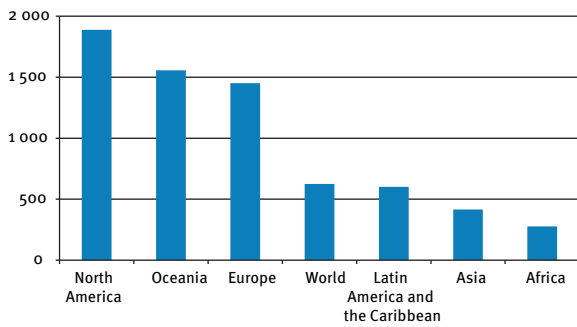
Source: World Health Organization and Worldwide Palliative Care Alliance, *Global Atlas of Palliative Care at the End of Life* (Worldwide Palliative Care Alliance, 2014).

care cases in low-income countries, but remains below 10 per cent in countries with higher income levels.

91. The latest data available from the International Agency for Research on Cancer, the specialized cancer research agency of WHO, show that the global burden of cancer has risen to 14.1 million new cases and 8.2 million cancer deaths in 2012, compared with 12.7 million new cases and 7.6 million deaths in 2008. Prevalence estimates for 2012 show that there were 32.6 million people alive and over the age of 15 years who had been diagnosed with cancer in the previous five years (see figure 22). According to projections based on estimates presented by the GLOBOCAN project for 2012, a substantial increase in new cancer cases to 19.3 million per year by 2025 is expected, owing to the expected increase and ageing of the global population.

92. More than half of all cancer cases (56.8 per cent) and cancer deaths (64.9 per cent) in 2012 occurred in less developed regions of the world. Those proportions will increase further by 2025. Cancer is often presented as a disease of wealthy or developed populations. In reality, over 70 per cent of cancer deaths occur in low- and middle-income countries. Without sustained action, the incidence of cancer is projected to increase further in low- and middle-income countries by 2030. Cancer is present throughout the world, but countries that lack the health infrastructure to cope with the increasing number of people suffering from the disease are particularly affected.

Figure 22. Prevalence of cancer diagnoses within the previous five years, per 100,000 population, 2012



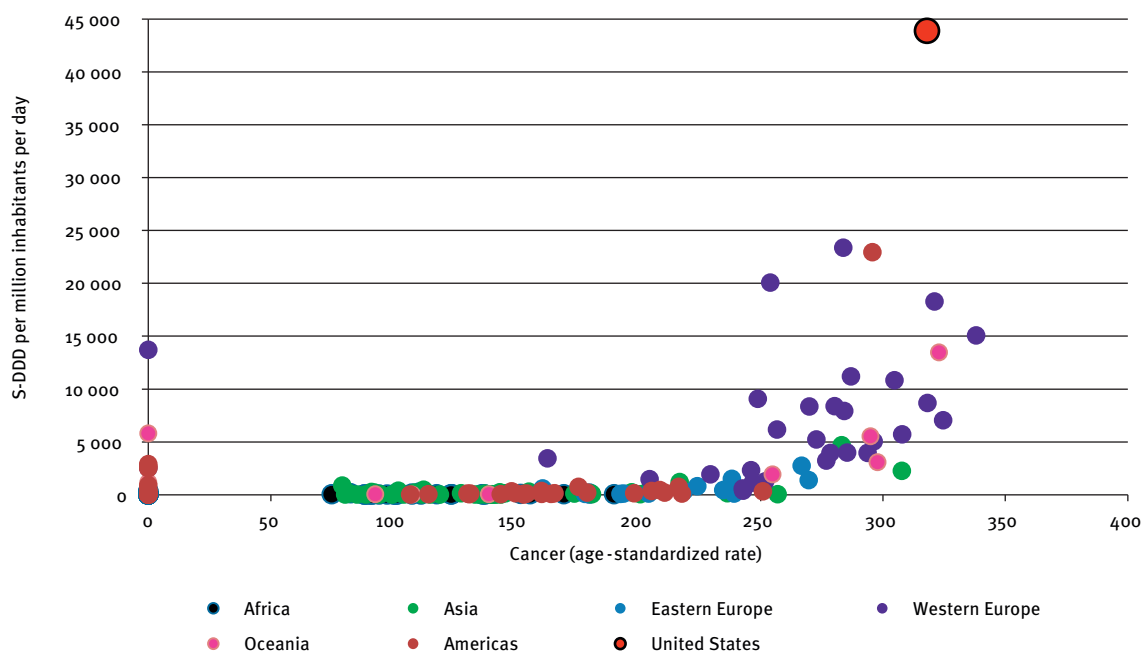
Source: GLOBOCAN database.

93. In low- and middle-income countries, where there is limited capacity with regard to prevention and early detection of cancer, the disease is mostly discovered when it is at an advanced stage. By then, there are not many treatment options and palliation is required. Opioid analgesics for cancer treatment are therefore indispensable in these countries.

94. Plotting the level of consumption of opioid analgesics against the cancer age-standardized rate⁴⁵ confirms the global imbalance in the consumption of such substances, with the United States, Canada, Australia, New Zealand and Western and Central European countries registering high levels of consumption, with a corresponding high cancer age-standardized rate. A global comparison is difficult owing to the fact that most countries are clustered together in the lower levels as a result of the high level of consumption in a few countries (see figure 23). If the patterns in each region are examined in detail, it is possible to gain a better idea of the global variations.

⁴⁵GLOBOCAN presents cancer data in an age-standardized rate, which is a summary measure of the rate that a population would have if it had a standard age structure. Standardization is necessary when comparing several populations that differ with respect to age because age has a powerful influence on the risk of cancer. The age-standardized rate is a weighted mean of the age-specific rates; the weights are taken from the population distribution of the standard population. The most frequently used standard population is the World Standard Population. The calculated incidence or mortality rate is then called age-standardized incidence or mortality rate (world), and is expressed per 100,000 people. The age-standardized rate is calculated using 10 age groups (0-14, 15-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74 and 75+). The result may be slightly different from that computed using the same data categorized using the traditional five-year age bands.

Figure 23. Relationship between cancer incidence, 2012, and consumption of narcotic drugs, 2011-2013



Source: GLOBOCAN database and International Narcotics Control Board.

95. In the North America region, there is a considerable gap between Mexico on the one hand, and the United States and Canada on the other hand (see figure 24).

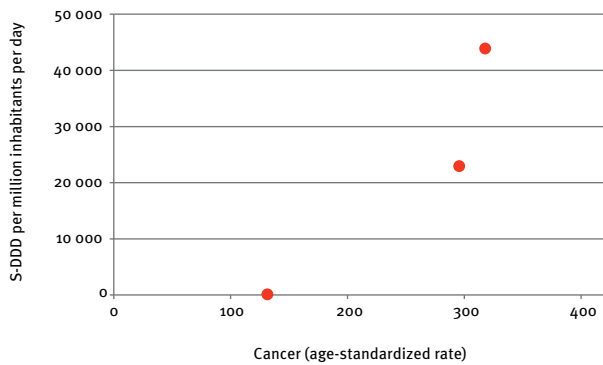
96. In Central and South America and the Caribbean, the distribution of the countries seems to indicate that South American countries have increased their consumption of opioid analgesics and that this is the result of an increasing rate of cancer (see figure 25). In Central America and the Caribbean, there are countries with relatively higher rates of cancer, but their consumption of narcotic drugs for palliative care is below the adequate level.

97. In Africa, there seems to be a concentration of countries with a cancer age-standardized rate of 100, with

a number of countries exceeding it while the consumption of opioid analgesics remains well below the level of 200 S-DDD per million inhabitants per day (see figure 26).

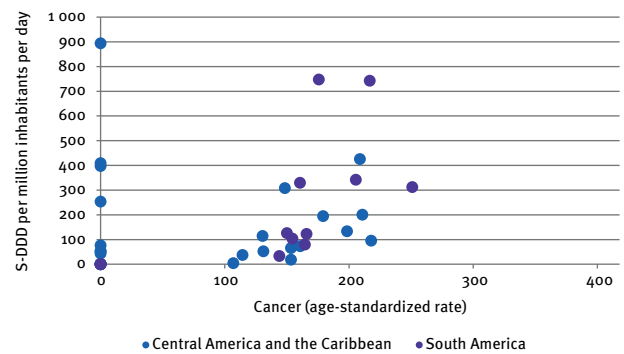
98. In Asia, the level of consumption in S-DDD per million inhabitants per day is higher, but this corresponds to higher cancer rates. In Western Europe, consumption is high and seems to match the level of cancer prevalence. In Eastern and South-Eastern Europe, cancer rates are similar to Western Europe but the level of consumption of pain relief drugs is considerably lower. Australia and New Zealand have very high levels of consumption, while other, smaller countries in Oceania have much lower levels (see figures 27-30).

Figure 24. Relationship between the cancer age-standardized rate, 2012, and consumption of narcotic drugs, 2011-2013, North America



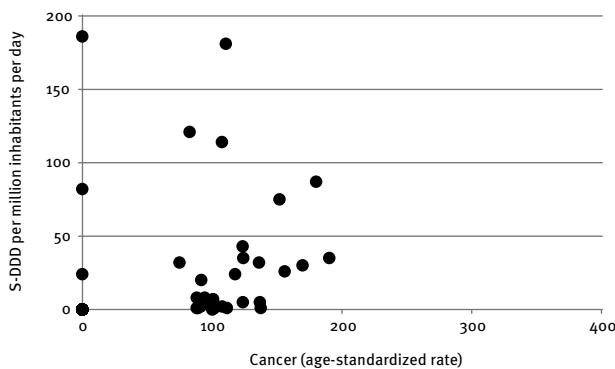
Source: GLOBOCAN database and International Narcotics Control Board.

Figure 25. Relationship between the cancer age-standardized rate, 2012, and consumption of narcotic drugs, 2011-2013, Central and South America and the Caribbean



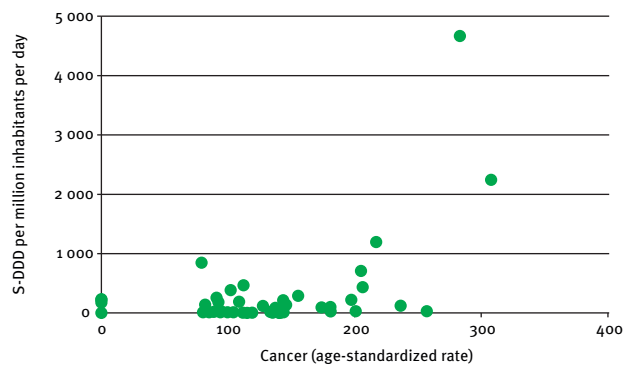
Source: GLOBOCAN database and International Narcotics Control Board.

Figure 26. Relationship between cancer incidence, 2012, and consumption of narcotic drugs, 2011-2013, Africa



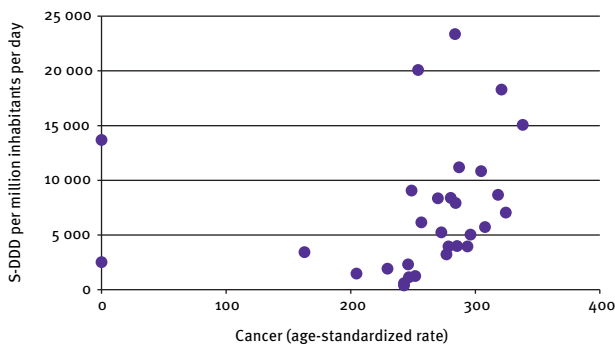
Source: GLOBOCAN database and International Narcotics Control Board.

Figure 27. Relationship between cancer incidence, 2012, and consumption of narcotic drugs, 2011-2013, Asia



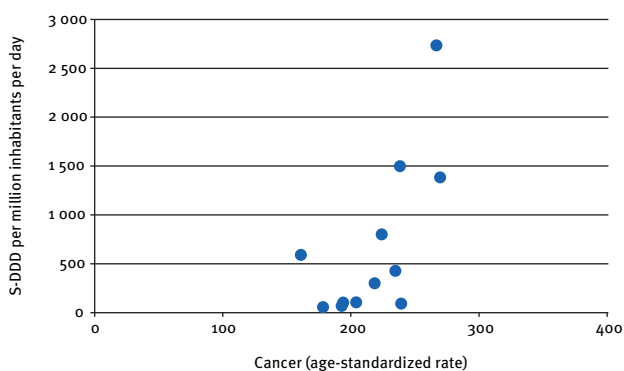
Source: GLOBOCAN database and International Narcotics Control Board.

Figure 28. Relationship between cancer incidence, 2012, and consumption of narcotic drugs, 2011-2013, Western Europe



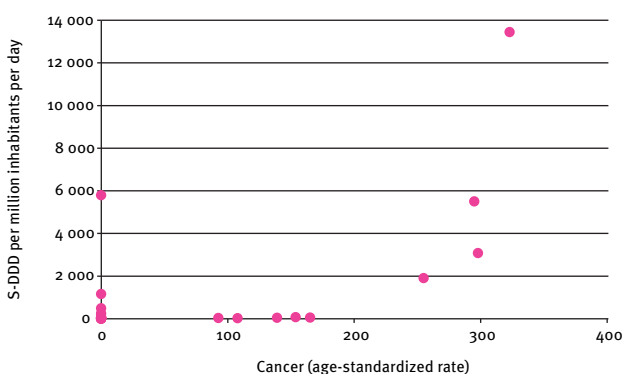
Source: GLOBOCAN database and International Narcotics Control Board.

Figure 29. Relationship between cancer incidence, 2012, and consumption of narcotic drugs, 2011-2013, Eastern and South-Eastern Europe



Source: GLOBOCAN database and International Narcotics Control Board.

Figure 30. Relationship between cancer incidence, 2012, and consumption of narcotic drugs, 2011-2013, Oceania



Source: GLOBOCAN database and International Narcotics Control Board.

99. Palliative care is also required for AIDS. A comparison among the various WHO regions in the *Global Atlas of Palliative Care at the End of Life* shows that the percentage of adults in need of palliative care in relation to AIDS is larger in low-income countries, particularly in Africa, than in countries in other income groups. Expanded access to antiretroviral therapy and a declining incidence of HIV infection have led to a steep fall globally in the number of adults and children dying from HIV-related causes. The drop in HIV-related mortality is especially evident in the regions with the greatest burden of HIV infection, including the African region, which was home to about three in four people who died from HIV-related causes in 2013. However, HIV and AIDS prevalence remains high in low-income countries, and the availability of antiretroviral therapy is still limited, despite efforts made in that regard by UNAIDS and the broader international community. The inadequate availability of opioid analgesics to manage AIDS-related pain is a major problem for an even larger percentage of the population in low-income countries.

100. When comparing the estimated number of AIDS deaths in 2013⁴⁶ with the level of consumption of opioid analgesics, expressed in S-DDD per million inhabitants per day, the countries with highest number of deaths and lowest levels of consumption were in sub-Saharan Africa and Asia (see table 1). Nigeria, with an estimated 210,000 AIDS deaths in 2013, reported no consumption of opioid analgesics to INCB. India had an estimated 130,000 AIDS deaths and just 11 S-DDD per million inhabitants per day. Mozambique, with only 5 S-DDD per million inhabitants per day, had an estimated number of deaths in 2013 of 82,000. The United Republic of Tanzania had the same level of S-DDD and 78,000 estimated deaths. Zimbabwe had 64,000 estimated deaths and only 35 S-DDD. Uganda had only 30 S-DDD and 63,000 estimated AIDS-related deaths. South Africa had 338 S-DDD, but the estimated number of AIDS-related deaths was 200,000.

⁴⁶World Health Organization, Global Health Observatory.

Table 1. Estimated number of AIDS deaths, 2013, compared with the level of consumption of opioid analgesics, 2011-2013

Country	Estimated AIDS deaths in 2013	S-DDD per million inhabitants per day, 2011-2013
Nigeria	210 000	0
South Africa	200 000	338
India	130 000	11
Mozambique	82 000	5
United Republic of Tanzania	78 000	5
Zimbabwe	64 000	35
Uganda	63 000	30
Kenya	58 000	0
Malawi	48 000	26
Ethiopia	45 000	0
Cameroon	44 000	4
Democratic Republic of the Congo	30 000	2
Indonesia	29 000	16
Côte d'Ivoire	28 000	1
Zambia	27 000	32

Source: International Narcotics Control Board and WHO Global Health Observatory.

101. Even though the table above confirms that AIDS is a major health condition requiring palliation, the diseases classified as progressive non-malignant diseases are the major reasons for the demand for palliative care in all regions. However, reliable prevalence rates for these diseases are not available at the global level, making it impossible to compare them with levels of consumption of opioid analgesics.

(e) Consumption of opioid analgesics and the level of development of palliative care

102. An important aspect of the availability of opioid analgesics is the capacity of health systems to prescribe

and dispense such substances through appropriate palliative care services. In the *Global Atlas of Palliative Care at the End of Life*, WHO and the Worldwide Palliative Care Alliance classified countries in relation to the development of the level of palliative care services in six categories:

- Level 1: no known activity
- Level 2: capacity-building activity
- Level 3a: isolated provision
- Level 3b: generalized provision
- Level 4a: preliminary health system integration
- Level 4b: advanced health system integration

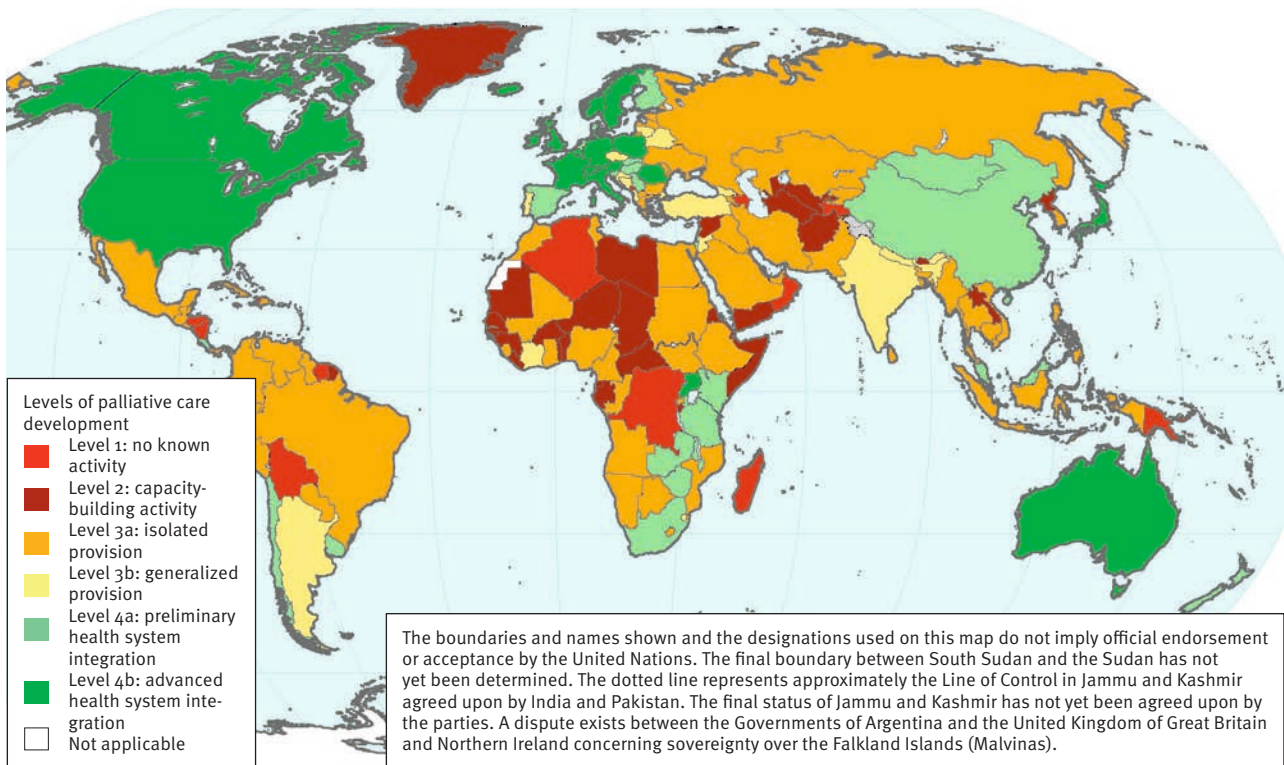
103. By looking at the map illustrating the different levels of palliative care services (see map 3) and comparing it with the map illustrating the levels of consumption of opioid analgesics expressed in S-DDD (see map 4), it is possible to see that, even though there is generally a positive direct correlation between high levels of consumption and high levels of development of palliative care services, there are some inconsistencies.

104. In East and Southern Africa, for example, there are a number of countries at level 4a (Kenya, Malawi, South Africa, United Republic of Tanzania, Zambia and Zimbabwe) or level 4b (Uganda), but in all of these countries (except South Africa) the reported consumption of opioid analgesics is fairly low.

105. In South America (with the exception of Chile and Uruguay, which are considered to be at level 4a, and Argentina, which is rated as level 3b), most countries are rated at level 3a (Brazil, Colombia, Ecuador, Guyana, Paraguay and Peru) or level 2 (Bolivia (Plurinational State of) and Suriname). Nevertheless, levels of consumption are relatively high in the region. The apparent inconsistency with the level of palliative care services may be an indication that consumption is high but concentrated in limited or privileged areas.

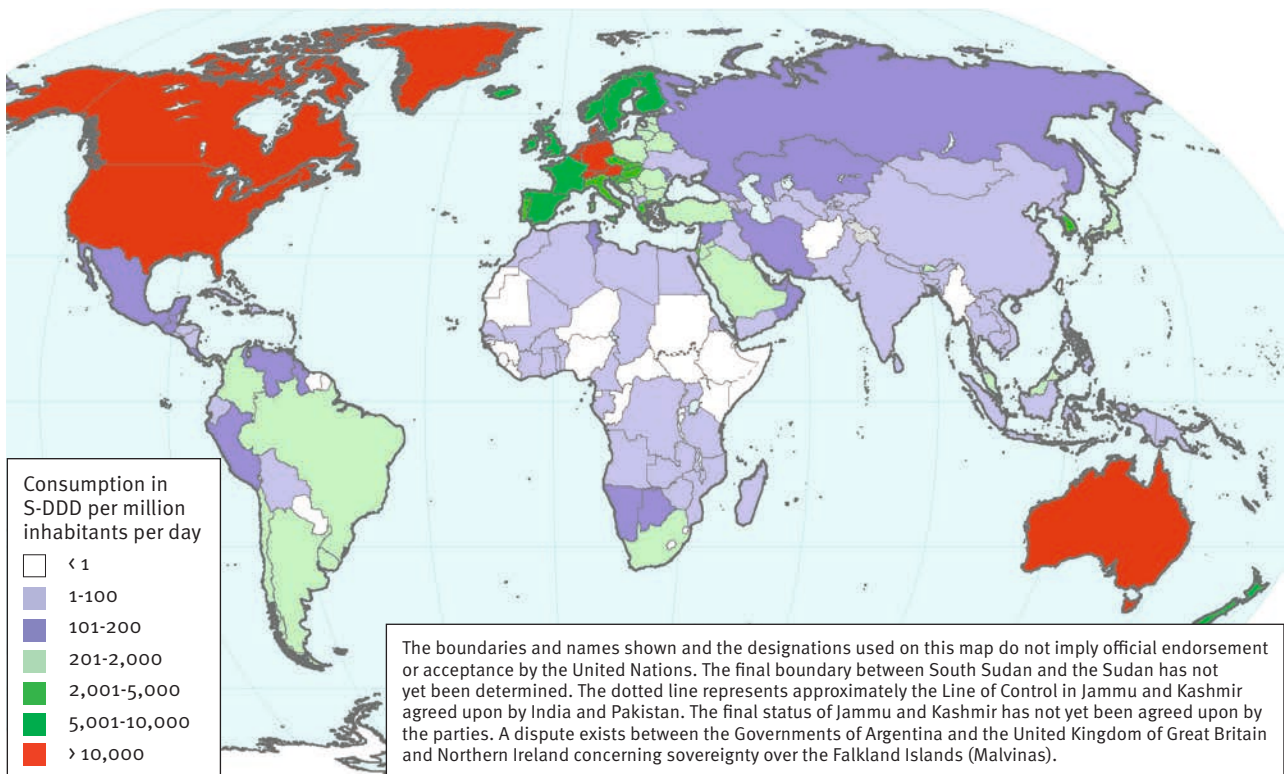
106. The development of palliative care services is important to ensure that, when opioid analgesics are made available, they can actually be efficiently and rationally prescribed.

Map 3. Global levels of palliative care, 2014



Source: World Health Organization and Worldwide Palliative Care Alliance, *Global Atlas of Palliative Care at the End of Life* (Worldwide Palliative Care Alliance, 2014).

Map 4. Consumption of opioids for pain management, 2011-2013



Source: International Narcotics Control Board.

Note: Opioids defined as codeine, dextropropoxyphene, dihydrocodeine, fentanyl, hydrocodone, hydromorphone, ketobemidone, morphine, oxycodone, pethidine, tilidine and tramperidine.