

179. Global manufacture of phenobarbital, which had fluctuated between 7.1 billion S-DDD and 9.7 billion S-DDD during the period 2004-2012, fell to a record low of 3.0 billion S-DDD in 2013. That decrease can be attributed mainly to a substantial decrease in the output of China, the world's leading manufacturer of phenobarbital. Furthermore, the lack of production and production data for 2013 for Hungary and India (two other major manufacturing countries) further exerted downward pressure on reported global supply. As one of the most widely traded psychotropic substances, phenobarbital is traded in an average of 140 countries every year. In 2013, China, Hungary, India and Switzerland (in descending order) together accounted for 89 per cent of total exports, and more than 120 countries reported imports. Major importers included the Russian Federation, Ukraine and the United States.

180. The manufacture of methylphenobarbital, compared with that of phenobarbital, has remained rather limited. During the 2004-2012 period, global manufacture of methylphenobarbital fluctuated considerably, ranging between 0.2 million S-DDD and 438 million S-DDD, mainly because of significant changes in the output reported by India, Switzerland and the United States. In 2013, no manufacture of the substance was reported, and the total volume of international trade remained stable (28.2 million S-DDD).

181. The manufacture and trade of clonazepam, a benzodiazepine that is used mainly as an anti-epileptic, has shown a similar upward pattern over the past 10 years. Global reported manufacture of clonazepam gradually increased from 1.3 billion S-DDD in 2004 to a new record of 3.4 billion S-DDD in 2012, but decreased thereafter to 2.2 billion S-DDD in 2013. That decrease was attributable mainly to the non-reporting of manufacture data for 2013 by India, traditionally a major manufacturer of the substance. While Switzerland was the world's leading manufacturer of clonazepam during the two decades leading up to 2010, Italy took the lead in 2011 and 2012. In 2013, Brazil became the largest manufacturer of the substance, followed by Italy and Switzerland. About 120 countries reported imports of clonazepam in 2013.

B. Availability of psychotropic substances

182. Conclusions based on the calculated consumption of psychotropic substances should be drawn with caution, as data on manufacture, industrial use, stocks and trade

reported by Governments may not be complete or may not cover all substances. High levels of consumption may, however, indicate overprescription and/or diversion into illicit channels. The system of control provided for in the 1971 Convention is based largely on the system devised for the control of narcotic drugs under the 1961 Convention. The control measures and obligations set out in the 1971 Convention represent the minimum control requirements that Governments must implement and maintain.

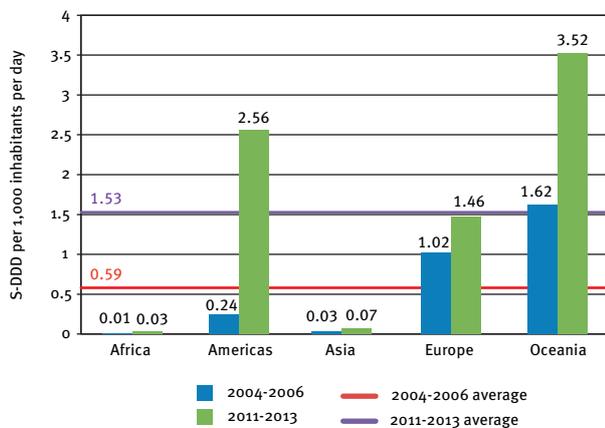
183. The degree of availability of psychotropic substances is approximated in the present report by using measures of calculated consumption of individual substances and groups of substances. The 1971 Convention does not foresee reporting on consumption of psychotropic substances to the Board. Therefore, based on statistics reported by Governments on manufacture, industrial use, stocks and international trade, the rates of consumption, measured in S-DDD per 1,000 inhabitants per day, are calculated by the Board every year. For the purposes of the present report, three-year averages were used, in order to account for the occasional non-submission of annual statistics and in view of the practice by some Governments of intermittent manufacture and importing of psychotropic substances when stocks cover domestic requirements for several years.

184. In addition, instances of elevated calculated use of psychotropic substances could relate to increasing manufacture for export, accompanied by a possible lack of reporting of exports and/or a non-reporting of stocks of manufacturers and/or elevated stocks kept by wholesalers.

185. Pursuant to Commission on Narcotic Drugs resolutions 53/4 and 54/6, on promoting adequate availability of internationally controlled narcotic drugs and psychotropic substances for medical and scientific purposes while preventing their diversion and abuse, Member States are strongly encouraged to provide the Board, on a voluntary basis, with data on the consumption of psychotropic substances, in the same manner as for narcotic drugs. Those data would be essential in enabling the Board to better analyse trends relating to the consumption of psychotropic substances and, ultimately, to promote the adequate availability of such substances for medical and scientific purposes while preventing their diversion and abuse.

186. Since the adoption of the above-mentioned resolutions, a growing number of Governments have started to submit data on the consumption of psychotropic substances to the Board. However, the total number of Governments supplying the requested information is still too low to be used in lieu of the consumption data as calculated by the Board.

Figure 49. Average consumption of opioid analgesics, by region, 2004-2006 and 2011-2013



Source: International Narcotics Control Board.

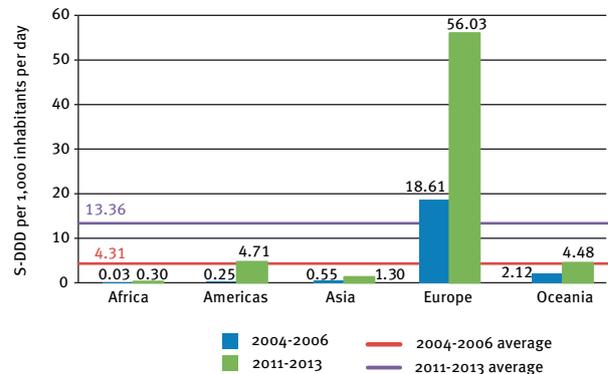
1. Availability of opioids controlled under the 1971 Convention

187. The number of countries and territories using one or more of the analgesics controlled under the 1971 Convention (buprenorphine, lefetamine⁵⁸ and pentazocine) has remained stable at about 100 since 2004. In contrast, the volume of consumption of these opioids increased in all regions of the world between 2004 and 2013 (see figure 49). During the 2004-2006 period, levels of consumption were highest in Europe and Oceania (the high levels of consumption in Oceania are the result of manufacture and calculated consumption in Australia). While consumption continued to increase markedly in Europe by the 2011-2013 period, it increased more than tenfold in the Americas, and almost sixfold in Africa, albeit from a low level.

188. The national per capita level of consumption of opioids controlled under the 1971 Convention during the 2004-2006 and 2011-2013 periods are shown in maps 5 and 6. As can be seen, the majority of countries and territories continue to have a level of consumption below 0.1 S-DDD per 1,000 inhabitants per day. However, there has been a marked increase in the highest level of consumption, of over 1 S-DDD per 1,000 inhabitants per day, in the past 10 years. While during the 2004-2006 period, only four countries had a per capita level of consumption greater than 1 S-DDD per 1,000 inhabitants per day, in the 2011-2013 period 16 countries had attained that level.

⁵⁸Lefetamine has not been manufactured and consumed since the 1990s (see para. 167).

Figure 50. Average consumption of buprenorphine, by region, 2004-2006 and 2011-2013



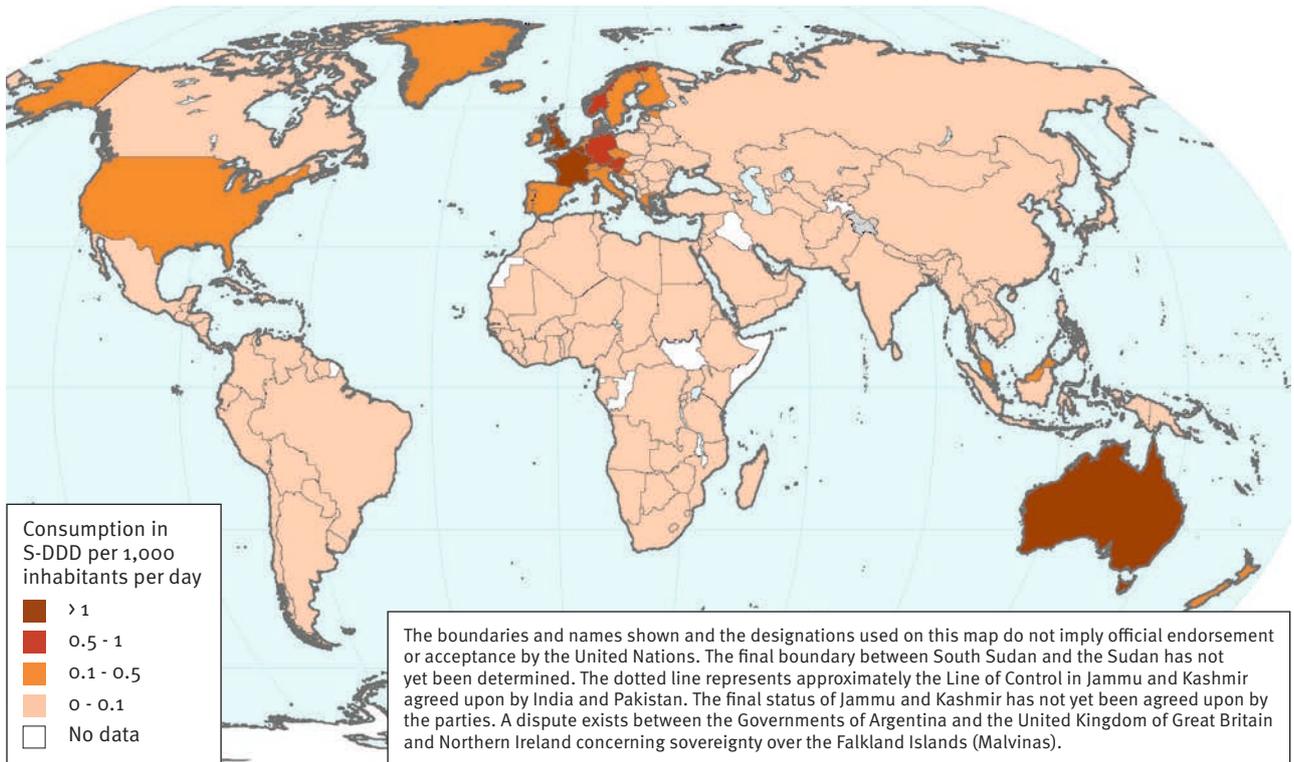
Source: International Narcotics Control Board.

189. The consumption of buprenorphine, which is listed in the Model List of Essential Medicines of WHO (complementary list), accounted on average for 97 per cent of global consumption of opioid analgesics controlled under the 1971 Convention during the 2009-2013 period. Consumption of pentazocine, which has properties and uses similar to those of morphine, accounted for the remainder.

190. Global calculated consumption of buprenorphine has steadily increased since 2000, from less than 1 ton (100 million S-DDD) to a new record of almost 10 tons (1.2 billion S-DDD) in 2013. During the 1990s, buprenorphine was used by no more than 20 countries worldwide, whereas in the 2011-2013 period, buprenorphine was used in about 90 countries and territories, in every region, or about 40 per cent of all countries and territories. That increase in the consumption of buprenorphine is mainly due to its increasing use in higher-dosage forms for the treatment of pain, and for detoxification and substitution treatment for opioid dependence. The countries with the highest levels of consumption for buprenorphine in the period 2011-2013 were Iceland, Belgium, Switzerland, the United Kingdom and the United States, in descending order (see figure 50 and maps 7 and 8).

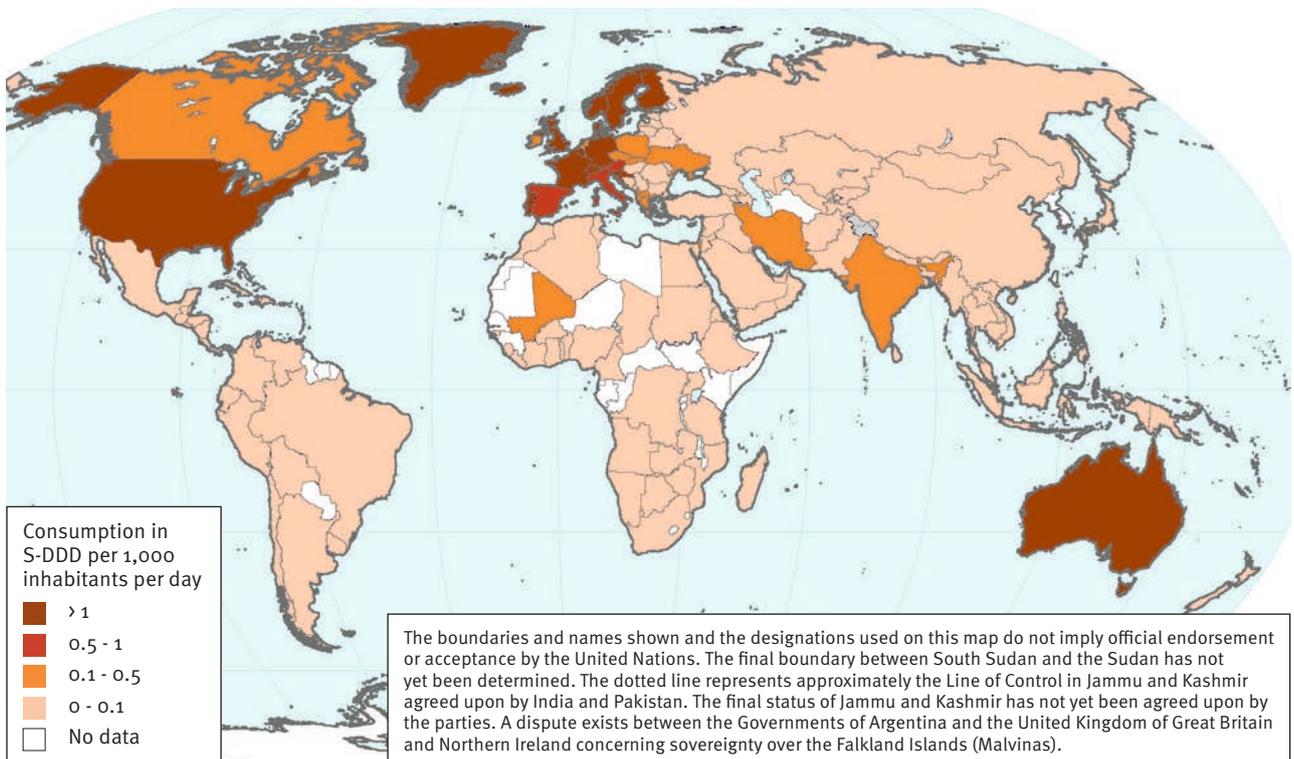
191. Global consumption of pentazocine has averaged about 5 tons per year during the past decade. The substance is used in approximately 50 countries. Its use, in contrast to that of buprenorphine, is not spreading to other countries. The same 50 countries have been using pentazocine since 2004, with India, Nigeria, Pakistan and the United States accounting for 87 per cent of the global total in the period 2011-2013.

Map 5. Average national consumption of opioid analgesics, 2004-2006



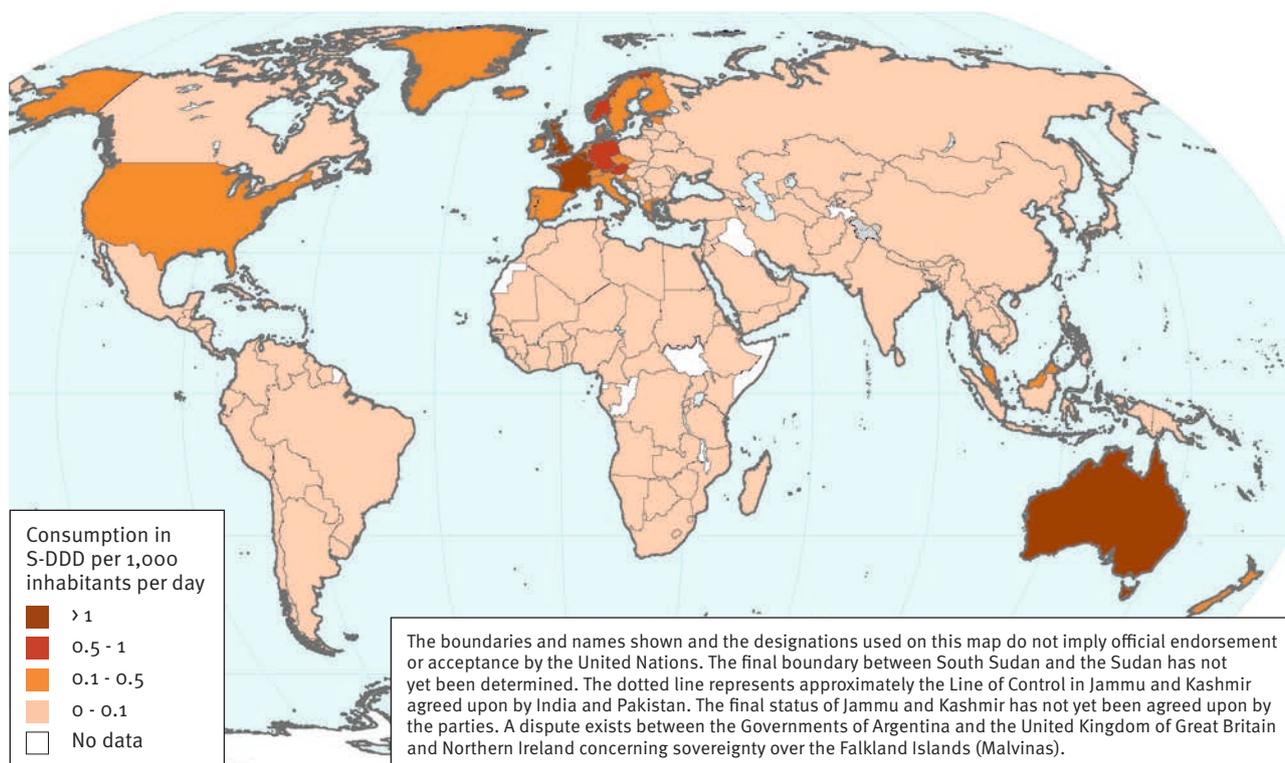
Source: International Narcotics Control Board.

Map 6. Average national consumption of opioid analgesics, 2011-2013



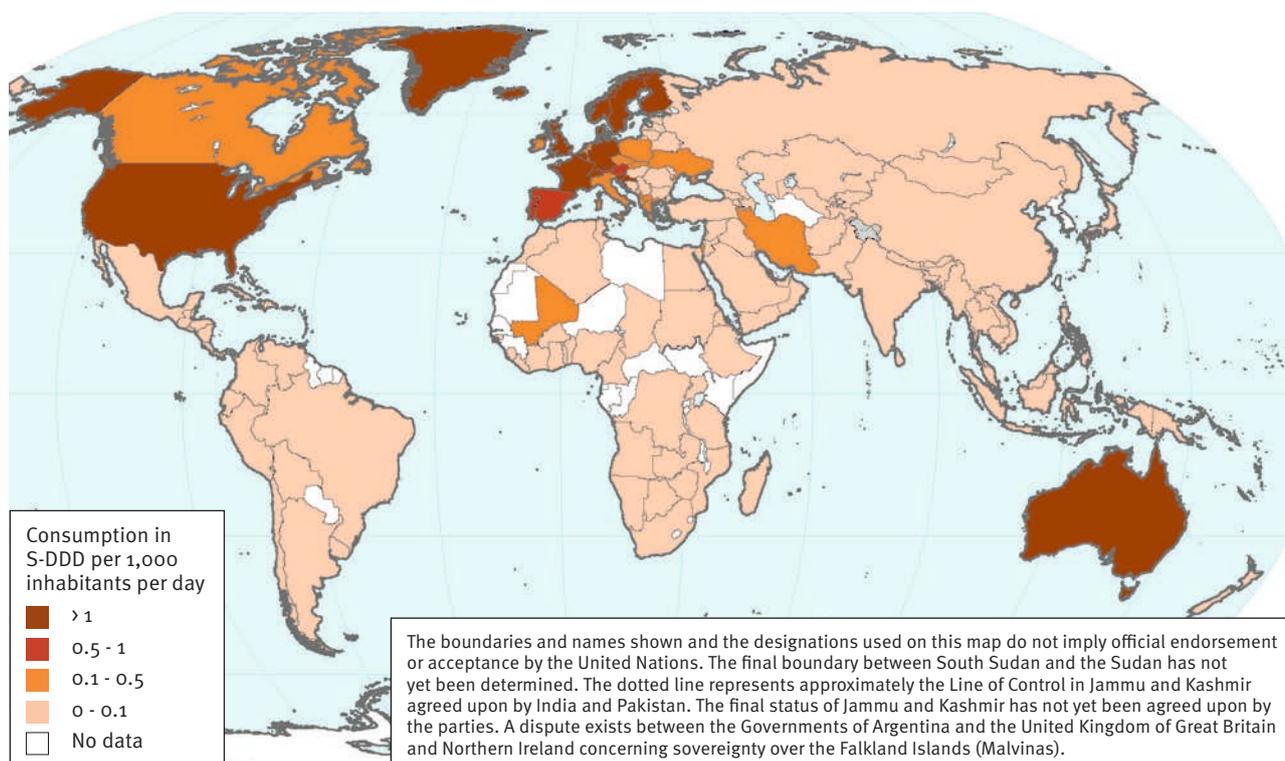
Source: International Narcotics Control Board.

Map 7. Average national consumption of buprenorphine, 2004-2006



Source: International Narcotics Control Board.

Map 8. Average national consumption of buprenorphine, 2011-2013



Source: International Narcotics Control Board.

2. Availability of central nervous system stimulants

192. As mentioned in paragraph 168 above, none of the central nervous system stimulants controlled under the 1971 Convention are included in the WHO Model List of Essential Medicines. This would largely explain the quasi-absence of these substances in the markets of low-income and developing countries.

193. Since the early 1990s, the highest per capita calculated consumption of amphetamines has traditionally been in the Americas. The United States remains the major consumer of these substances, mainly for the treatment of ADHD and narcolepsy. These high levels of consumption have increased steadily, and were seven times higher in the late 2000s than in the 1990s.

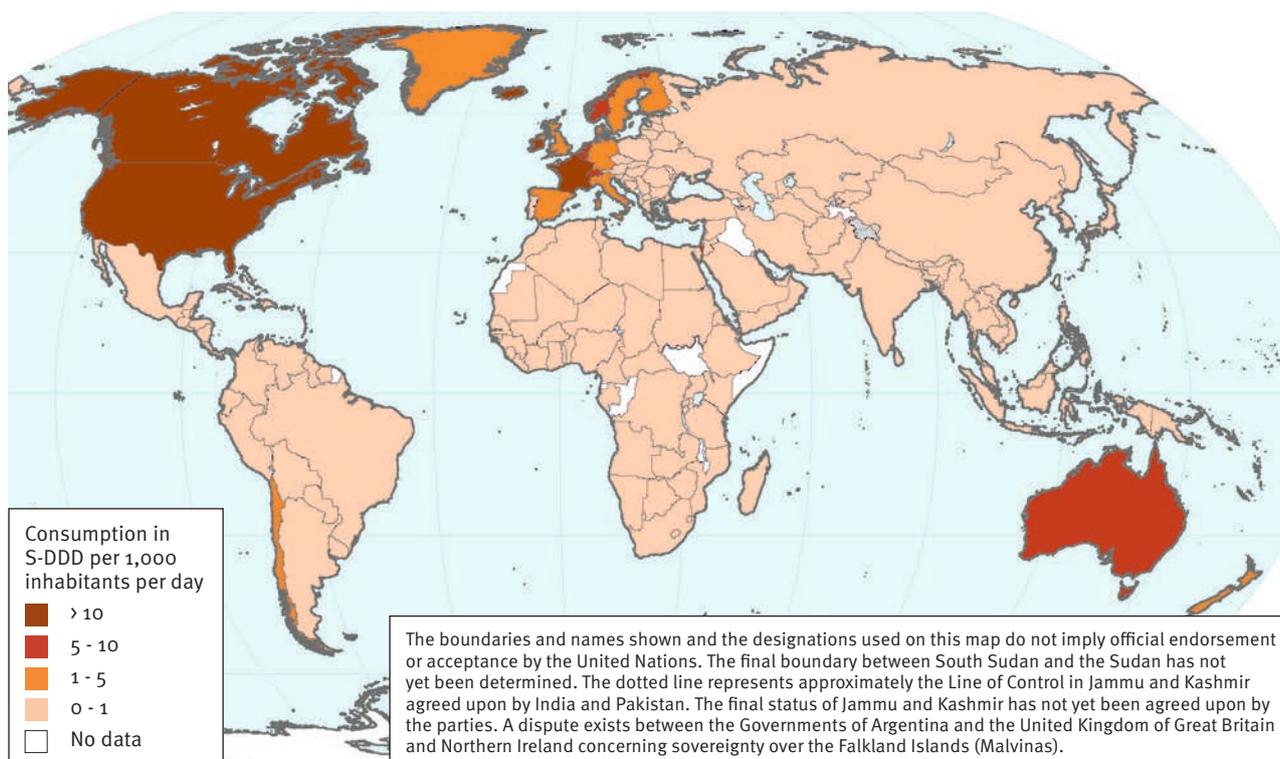
194. Use of this group of substances was extremely rare in Asia⁵⁹ and nearly non-existent in Africa. Consumption

rates increased in Oceania, from an average of 0.03 S-DDD per 1,000 inhabitants per day during the 1988-1990 period to 1.31 S-DDD in the 2011-2013 period, mainly due to steadily rising use of dexamfetamine in Australia.

195. In Europe, levels of consumption have been very irregular. Main consuming countries during the past decade included Germany, Hungary and Switzerland. Hungary was a significant consumer of these substances until 2002, when the level of consumption fell drastically.

196. Countries that were the main users of stimulants listed in Schedule II during the 2004-2006 period continued to have the highest levels of consumption during the 2011-2013 period. A marked increase was observed for some countries (mainly in Europe and the Americas), while the vast majority of countries and territories continued to have a level of consumption below 1 S-DDD per 1,000 inhabitants per day (see maps 9 and 10).

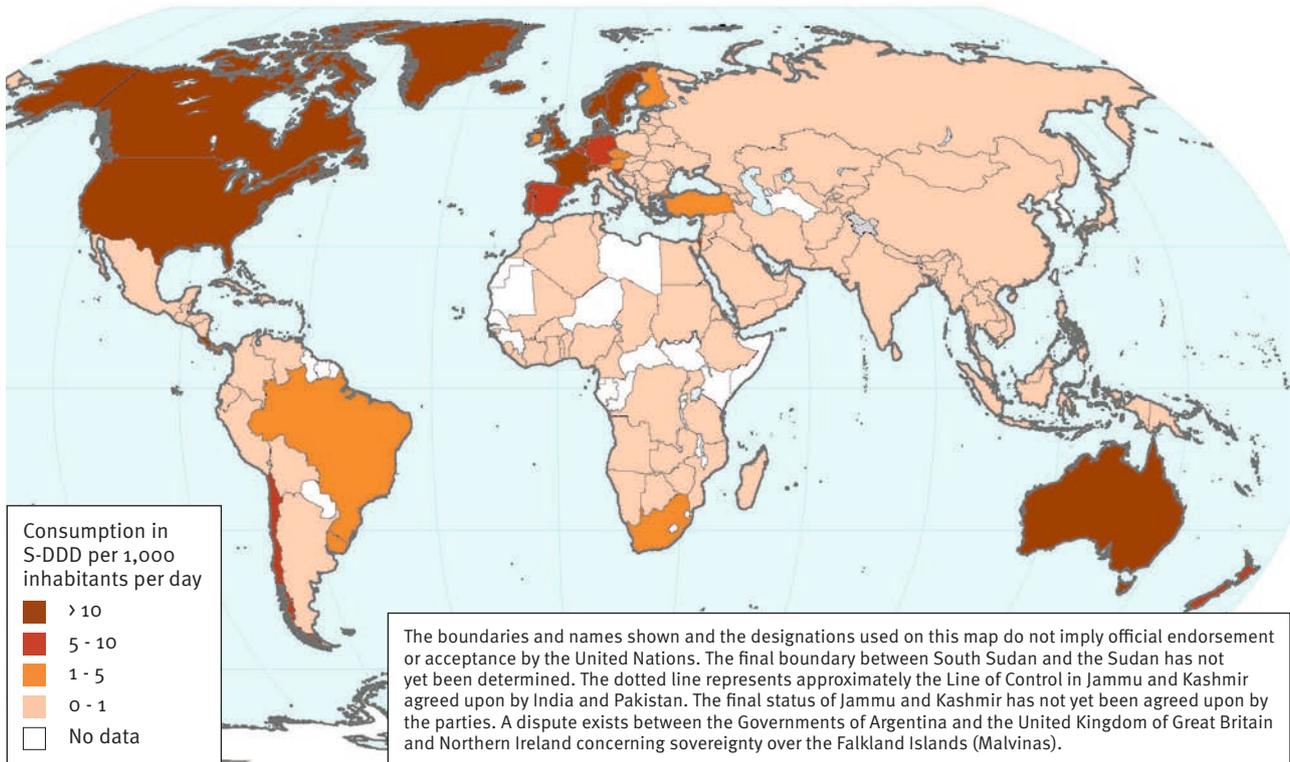
Map 9. Average national consumption of stimulants in Schedule II, 2004-2006



Source: International Narcotics Control Board.

⁵⁹Japan is the only country in the Asia-Pacific region that has had a noticeable rate of use of the substance.

Map 10. Average national consumption of stimulants in Schedule II, 2011-2013

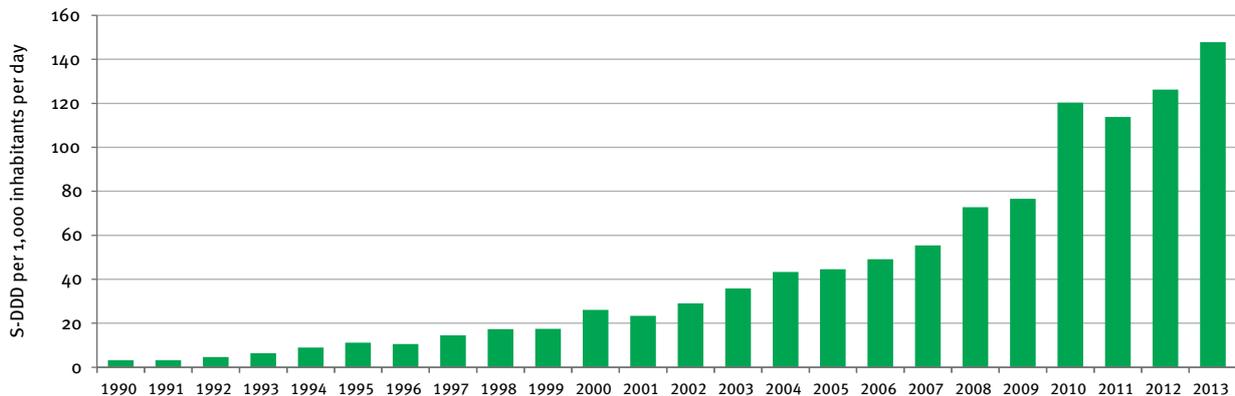


Source: International Narcotics Control Board.

197. Methylphenidate is used for the treatment of various mental and behavioural disorders, in particular of ADHD (primarily in children) and narcolepsy, a sleeping disorder. Use of methylphenidate started to increase noticeably at the beginning of the 1990s (see figure 51). In 1994, for example, global use amounted to more than

five times the level of consumption of the early 1980s. This development was mainly due to increasing consumption in the United States, although increasing levels of consumption were also observed in several other countries and parts of the world.

Figure 51. Global consumption of methylphenidate per 1,000 inhabitants per day, 1990-2013



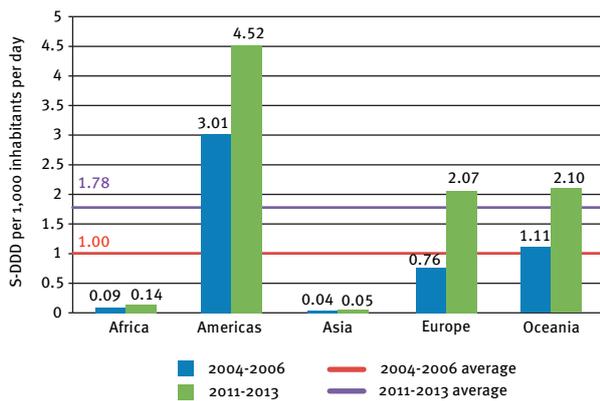
Source: International Narcotics Control Board.

198. While the United States continues to account for more than 80 per cent of the calculated global consumption of methylphenidate, the use of that substance for the treatment of ADHD has also sharply risen in many other countries, in particular those in Oceania and Europe (see figure 52). The prescription levels in most of those

countries are still low compared with those in the United States, however. Growth of global consumption of methylphenidate has continued unabated. In 2013, a new record of 2.4 billion S-DDD was attained, with fewer than 20 countries accounting for almost 85 per cent of the total. The countries reporting a significant increase in the

consumption of methylphenidate included Iceland, which has had the highest per capita consumption of the substance in the world for the past several years, as well as Australia, Canada, Germany, Israel, Norway, Spain, Sweden and the United Kingdom. At the same time, the Board is also concerned about the underprescription, and resulting low use, of methylphenidate in other countries.

Figure 52. Consumption of methylphenidate, all regions, 2004-2006 and 2011-2013

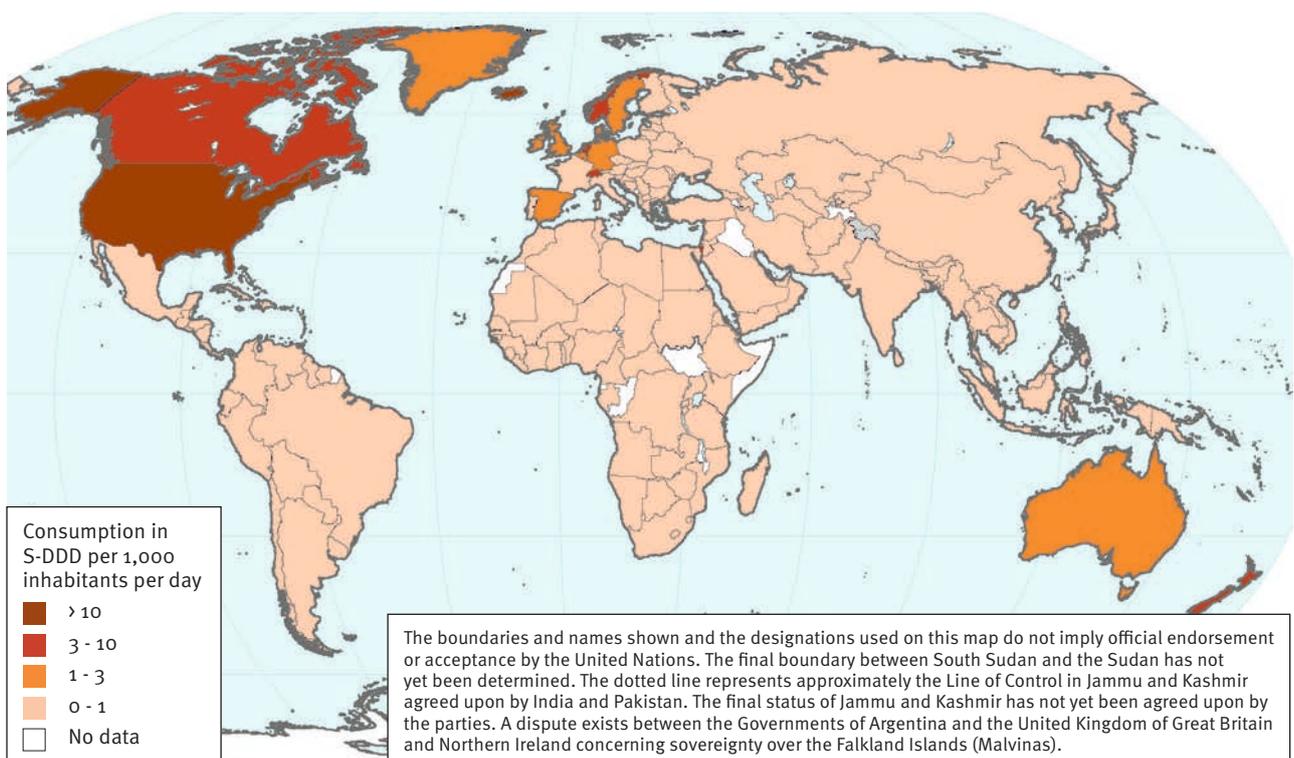


Source: International Narcotics Control Board.

199. National per capita levels of consumption for methylphenidate during the 2004-2006 and 2011-2013 periods, approximated by measures of average annual calculated consumption (in S-DDD per 1,000 inhabitants per day), are shown in maps 11 and 12. As can be seen, the majority of countries and territories continued to have a level of consumption below 1 S-DDD per 1,000 inhabitants per day, while a handful of countries remained the main users of the substance, with a marked increase noted in some countries in the Americas, Europe and Oceania in the 2011-2013 period. While during the 2004-2006 period only five countries had a per capita consumption greater than 5 S-DDD per 1,000 inhabitants per day, by the 2011-2013 period 17 countries had reached that high consumption threshold, including nine countries where consumption was greater than 10 S-DDD per 1,000 inhabitants per day.

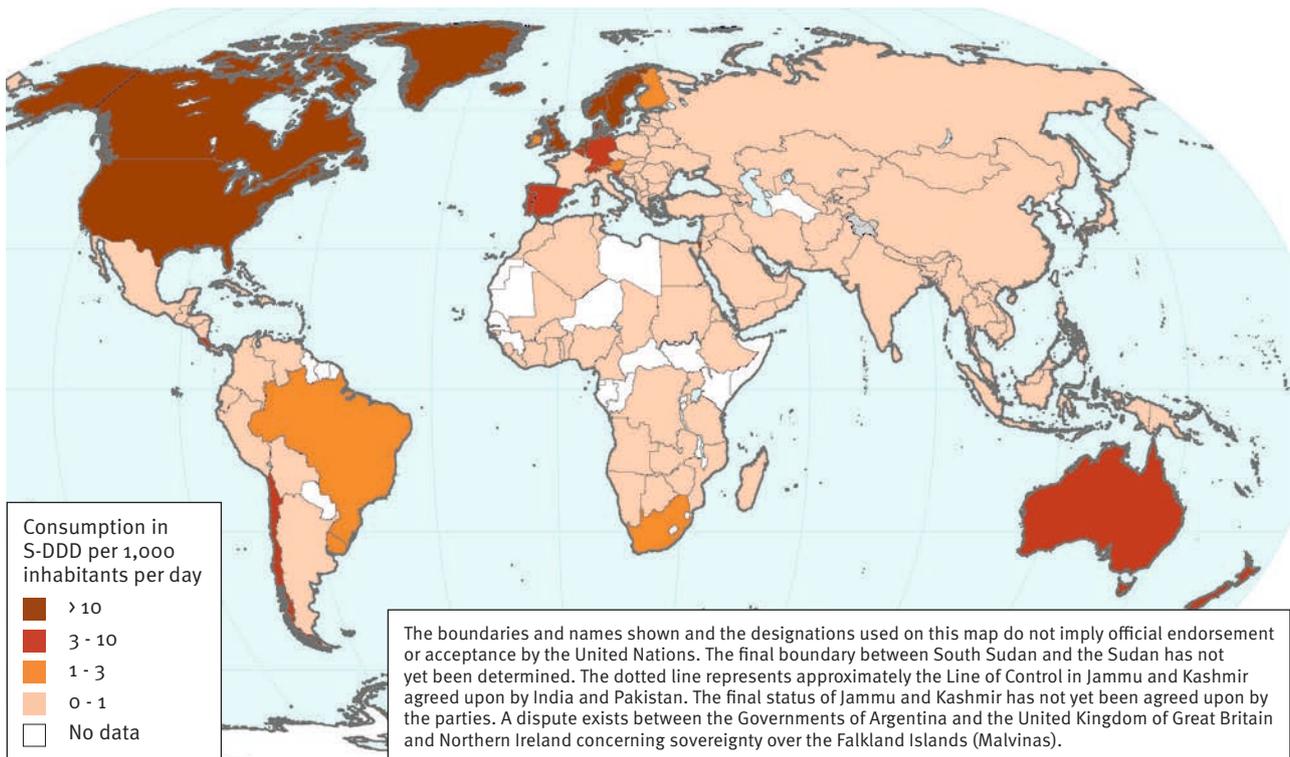
200. The Board has regularly voiced its concern about the possible overdiagnosis of ADHD and the overprescribing of methylphenidate. In 2009, the Board also advised against promotional campaigns for the substance, including advertisements directed at potential consumers. More recently, in its annual report for 2014, the Board considered the use of methylphenidate as a special topic.

Map 11. Average national consumption of methylphenidate, 2004-2006



Source: International Narcotics Control Board.

Map 12. Average national consumption of methylphenidate, 2011-2013



Source: International Narcotics Control Board.

201. Stimulants included in Schedule IV of the 1971 Convention are used as anorectics and, to a lesser extent, for the treatment of ADHD. Their global use has increased steadily since the end of the 1980s. This increase was partly due to high consumption in some Latin American countries (Argentina, Brazil and Chile), in the United States and in some Asian countries and territories (Republic of Korea, Singapore and Hong Kong, China).

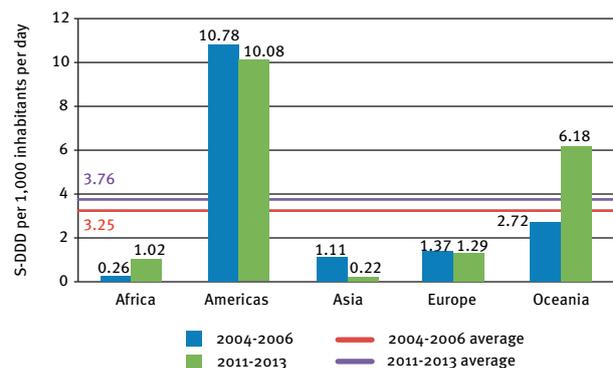
202. Since the early 1990s, the highest per capita consumption of stimulants in Schedule IV has always been in the Americas. The decline in the use of phentermine after a peak observed in 1996 in the United States and the adoption of measures against inappropriate use of certain stimulants in some countries of Latin America, such as Brazil, led to some decrease in consumption. However, the levels of consumption in that region remained high in comparison to other regions, except for some countries in Asia.

203. Among the stimulants included in Schedule IV of the 1971 Convention, phentermine has always been the substance comprising the main share of manufacture and consumption, fluctuating between one quarter and two thirds. In 2013, its share of global consumption reached nearly 86 per cent. Reports of misuse of anorectics have been received from several countries in all regions of the world. In recent years, there has been an observed increase in levels of consumption in Africa and Oceania, owing

to increased calculated consumption in South Africa and Australia (see figure 53).

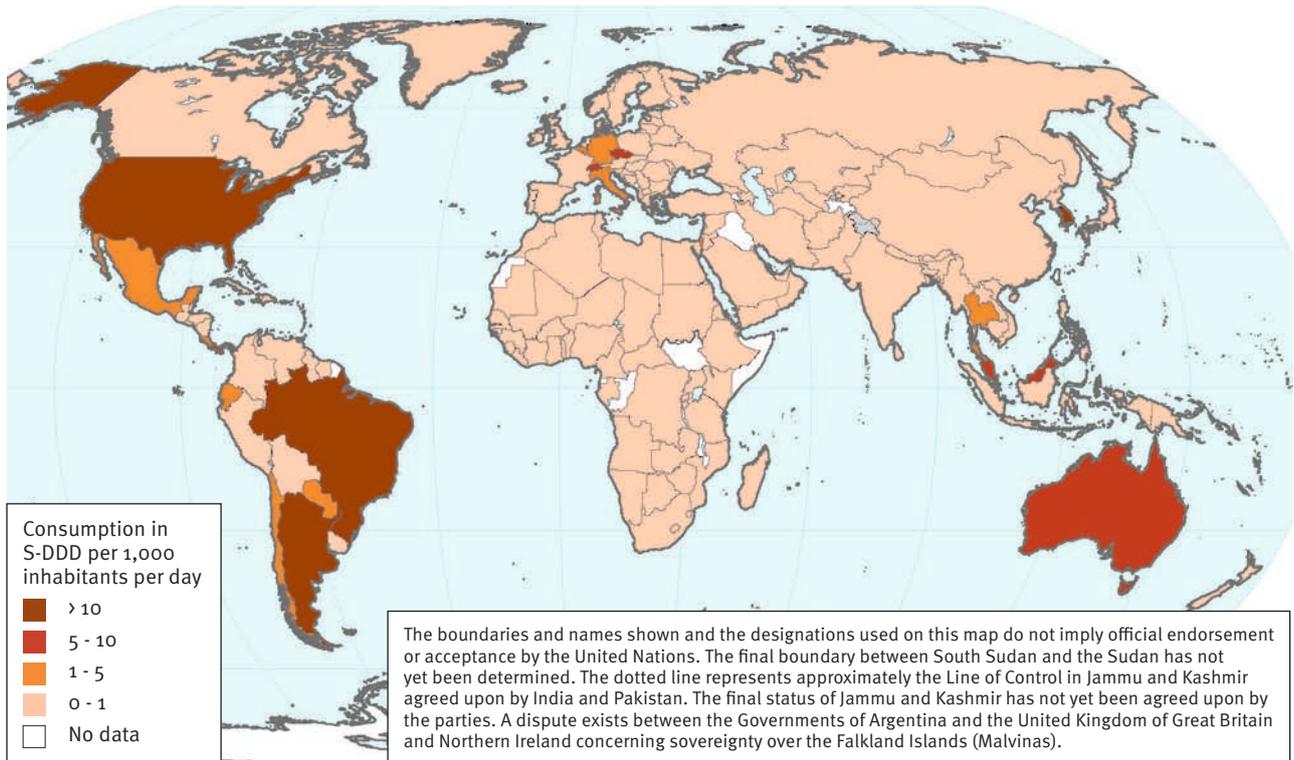
204. Severe restrictions on the use of anorectics and stricter policies regarding their medical use were introduced in a number of countries and were successful in curbing their inappropriate use, thus preventing irrational use and abuse. The changes in consumption of stimulants in Schedule IV by country, approximated by measures of average annual calculated consumption (in S-DDD per 1,000 inhabitants per day) between 2004-2006 and 2011-2013, are presented in maps 13 and 14.

Figure 53. Consumption of stimulants in Schedule IV, all regions, 2004-2006 and 2011-2013



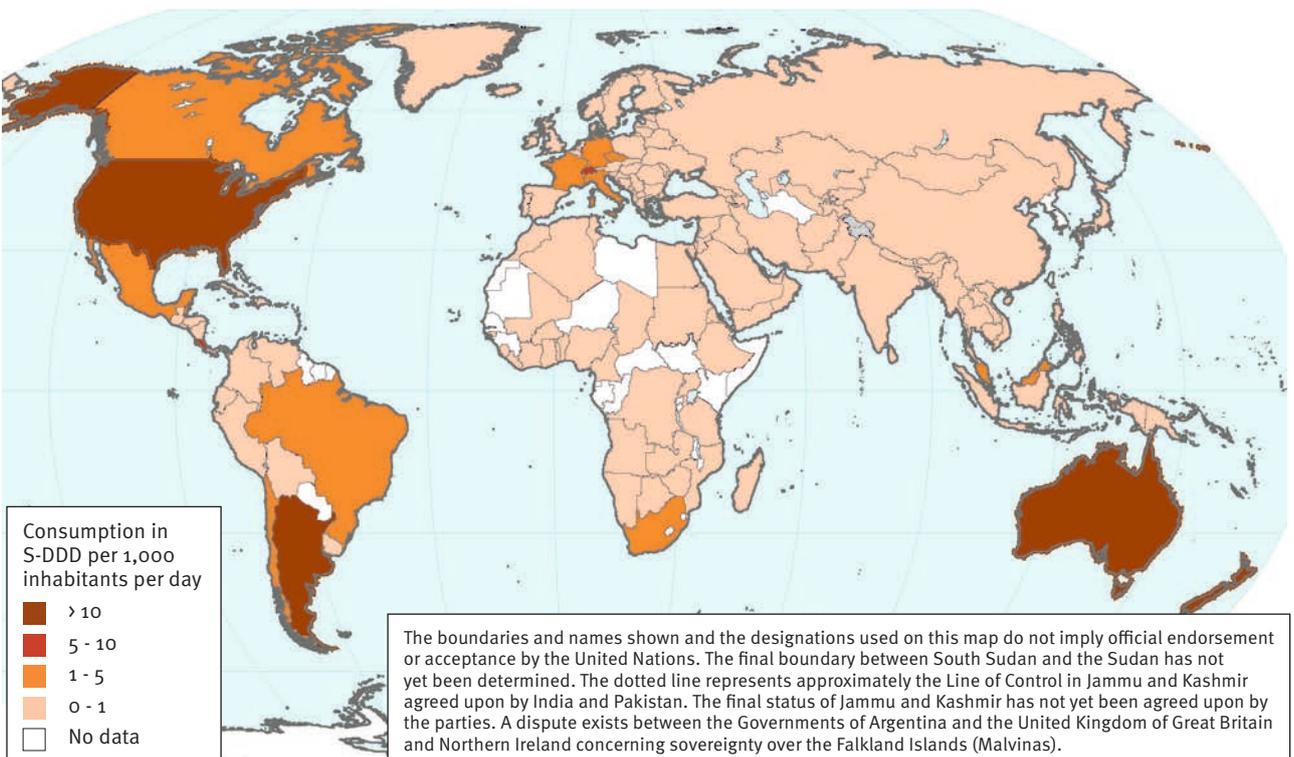
Source: International Narcotics Control Board.

Map 13. Average national consumption of stimulants in Schedule IV, 2004-2006



Source: International Narcotics Control Board.

Map 14. Average national consumption of stimulants in Schedule IV, 2011-2013



Source: International Narcotics Control Board.

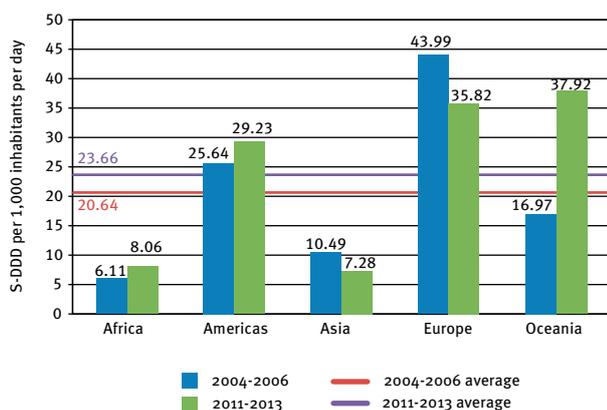
3. Availability of benzodiazepines

205. For the two groups of benzodiazepines, anxiolytics and sedative-hypnotics, the global calculated rate of average annual consumption showed distinct patterns during the 2004-2013 period. While the average annual rate of per capita consumption of benzodiazepine-type anxiolytics showed an upward trend, the global average annual calculated consumption rate of benzodiazepine-type sedative-hypnotics decreased. During that period, practically all countries and territories that reported to INCB manufactured or traded in benzodiazepines, and the reported statistics enabled the Board to calculate consumption rates for over 190 countries and territories. In 2013, alprazolam and diazepam remained the most used substances among anxiolytics (9.2 and 4.4 billion S-DDD, respectively), whereas lormetazepam and brotizolam were the most used sedative-hypnotics (1.4 and 1.3 billion S-DDD, respectively).

(a) Benzodiazepine-type anxiolytics

206. Globally, the average annual rate of per capita consumption of benzodiazepine-type anxiolytics increased somewhat during the 2004-2013 period, from 20.6 to 23.7 S-DDD per 1,000 inhabitants per day. As can be seen in figure 54, in the beginning of the period the rate of average annual consumption for this group of substances was highest in European countries and the Americas, reflecting the fact that benzodiazepines tend to be prescribed frequently for the large cohort of elderly people in those regions. Towards the end of that decade, the highest increases in the rate of average annual consumption were observed in Oceania (123 per cent) and Africa (32 per cent). The consumption rates in Africa and Asia remained below the global average.

Figure 54. Average annual consumption of benzodiazepine-type anxiolytics, 2004-2006 and 2011-2013



Source: International Narcotics Control Board.

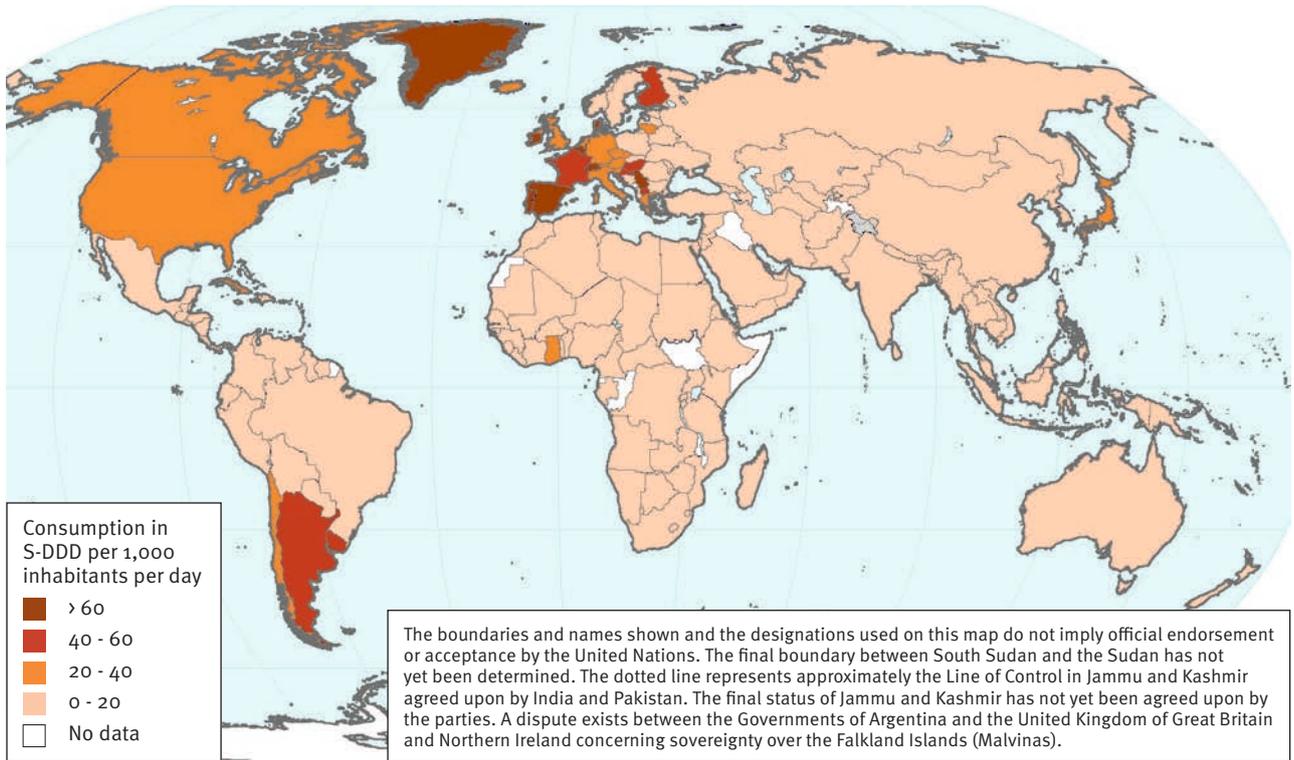
207. During the past decade, the average annual level of consumption in Europe decreased from 43.99 to 35.82 S-DDD per 1,000 inhabitants per day, although an increase in consumption was observed in 23 out of 41 countries in this region that submitted data, in particular in Finland, where there was a 517 per cent increase. The largest decrease in consumption was recorded for Denmark (84 per cent, from 77 to 13 S-DDD per 1,000 inhabitants per day) and Switzerland (73 per cent, from 266 to 72 S-DDD per 1,000 inhabitants per day). During 2011-2013, calculated consumption rates exceeded the regional average in 15 countries; in six countries, the levels were above the global average of 23.7 S-DDD per 1,000 inhabitants per day. The European countries with average levels of consumption below the global average were Iceland, the Czech Republic, the Netherlands, Latvia, Norway, Estonia, Germany, Sweden, Denmark, Poland, Albania, Greece, Romania, the United Kingdom, Bulgaria, the Republic of Moldova, the Russian Federation, Belarus, Ukraine and Cyprus, in descending order.

208. Consumption of this group of anxiolytics averaged 29.2 S-DDD per 1,000 inhabitants per day in the Americas during the 2011-2013 period. Only four countries had rates of consumption that were higher than the regional average: Uruguay (67.9 S-DDD), Argentina (60.1 S-DDD), Canada (55.8 S-DDD) and the United States (42.2 S-DDD). Furthermore, in the Americas significant disparities in levels of consumption of anxiolytics were observed among subregions, with North America having the highest per capita consumption rate during the 2011-2013 period, followed by South America and Central America and the Caribbean (see maps 15 and 16).

209. The regional average in Oceania (37.9 S-DDD per 1,000 inhabitants per day), although much higher than the global average (23.7 S-DDD per 1,000 inhabitants per day), was driven mainly by Australia, which was the only country in the region to have calculated consumption above the global average during 2011-2013. The rates of consumption showed an increase in all countries of the region, except for New Zealand, which saw a decrease of 8 per cent, from 5.1 to 4.6 S-DDD per 1,000 inhabitants per day.

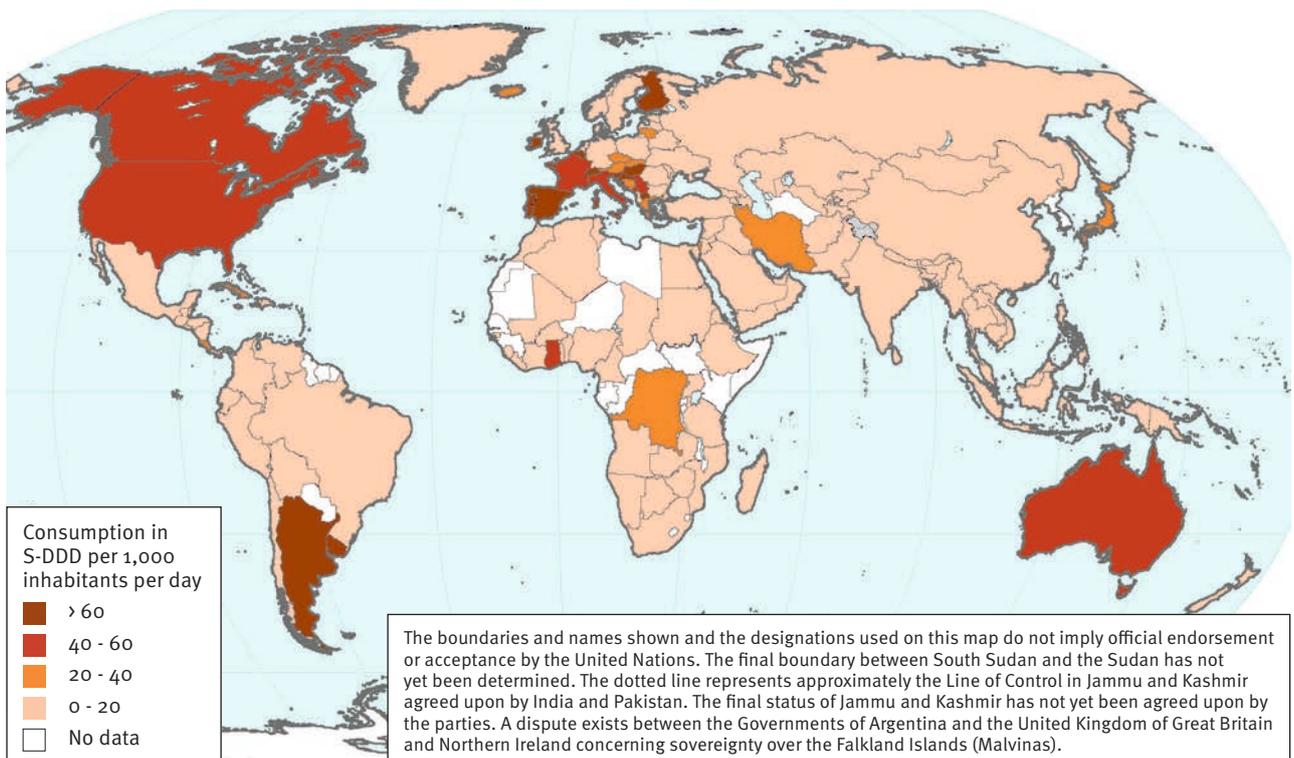
210. In Asia, all but 1 of the 48 countries that submitted data had rates of consumption below the global average. Israel (27.9 S-DDD per 1,000 inhabitants per day), Iran (Islamic Republic of) (22.3 S-DDD), Japan (21.1 S-DDD) and an additional three countries (Jordan, Lebanon and Thailand) had calculated rates of consumption above the regional average of 7.3 S-DDD per 1,000 inhabitants per day during the 2011-2013 period.

Map 15. Average national consumption of benzodiazepine anxiolytics, 2004-2006



Source: International Narcotics Control Board.

Map 16. Average national consumption of benzodiazepine anxiolytics, 2011-2013



Source: International Narcotics Control Board.

211. In Africa, the average annual rate of consumption of benzodiazepine-type anxiolytics increased from 6.1 S-DDD to 8.6 S-DDD per 1,000 inhabitants per day between the 2004-2006 and the 2011-2013 periods. The average calculated consumption rate increased in 19 African countries or territories, most notably in Saint Helena (by a factor of nearly seven, from 1.3 to 9 S-DDD per 1,000 inhabitants per day), and Namibia and the Democratic Republic of the Congo (both by a factor of more than 4.5, from 4.9 to 22.5 S-DDD). Ghana remained the country with the highest consumption rate in the region (and seventeenth highest in the world), with an increase of 146 per cent between the 2004-2006 and 2011-2013 periods, from 21.3 to 52.3 S-DDD. Next came the Democratic Republic of the Congo, with 22.5 S-DDD per 1,000 inhabitants per day, which remained slightly below the global average of 23.7 S-DDD. At the same time, there were more than 16 countries that consumed less than 1 S-DDD per 1,000 inhabitants per day during 2011-2013, and more than 10 countries recorded a decrease in the rate of consumption. The biggest decrease in the average annual rate of calculated consumption was recorded for Cabo Verde (from 6.5 to 0.7 S-DDD), Sierra Leone (from 0.6 to 0.1 S-DDD), Eritrea (from 0.1 to 0.02 S-DDD), the United Republic of Tanzania (from 2 to 0.7 S-DDD) and Botswana (from 1.4 to 0.7 S-DDD).

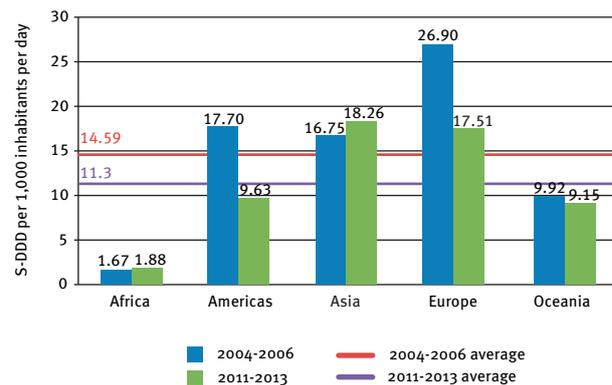
(b) Benzodiazepine-type sedative-hypnotics

212. The global average annual calculated consumption rate of benzodiazepine-type sedative-hypnotics, when measured in S-DDD per 1,000 inhabitants per day, decreased by more than 22 per cent between the 2004-2006 and 2011-2013 periods, from 14.6 S-DDD to 11.3 S-DDD per 1,000 inhabitants per day. Consumption was consistently highest in Europe, while decreases were observed in the Americas, Europe and Oceania, and increases in Africa and Asia (see figure 55).

213. In Europe, the average annual rate of calculated consumption decreased by 35 per cent between the 2004-2006 and 2011-2013 periods, from 26.9 S-DDD to 17.5 S-DDD per 1,000 inhabitants per day. A decrease in consumption rates was observed in 29 countries in this region, including Cyprus (from 20.5 S-DDD per 1,000 inhabitants per day to almost zero), the Republic of Moldova (from 0.15 to 0.003 S-DDD), the United Kingdom (from 47.3 to 4 S-DDD) and Switzerland (from 42.6 to 11.4 S-DDD), reflecting a possible change in the types of benzodiazepine that were prescribed in medical practice. An increase was observed in 12 countries, most notably in Andorra (365 per cent), Croatia (300 per cent)

and Slovakia (244 per cent). During the 2011-2013 period, five countries had rates of average annual consumption above the regional average of 17.5 S-DDD per 1,000 inhabitants per day and an additional six countries had rates of consumption above the global average of 11.3 S-DDD.

Figure 55. Average annual consumption of benzodiazepine-type sedative-hypnotics, 2004-2006 and 2011-2013



Source: International Narcotics Control Board.

214. The average annual consumption rate of benzodiazepine-type sedative-hypnotics in Oceania, also decreased between the 2004-2006 and 2011-2013 periods, from 9.9 S-DDD to 9.1 S-DDD per 1,000 inhabitants per day. Although their consumption rates decreased by 20 and 22 per cent, respectively, Australia and New Zealand remained the two countries in the region with the highest average calculated consumption rates. Micronesia (Federated States of), New Caledonia and Wallis and Futuna Islands showed increases in average annual consumption rates, albeit from low levels. Except for Australia, New Zealand, New Caledonia and French Polynesia, the rest of the countries and territories of this region had rates of average annual consumption for this group of substances below 0.1 S-DDD per 1,000 inhabitants per day.

215. In the Americas, the average annual rate of calculated consumption decreased by 45 per cent between the 2004-2006 period and the 2011-2013 period, from 17.7 S-DDD to 9.8 S-DDD per 1,000 inhabitants per day. However, there was a great disparity between subregions. As consumption rates increased in countries of North America and Central America and the Caribbean, they decreased in South America. Only three countries in the Americas had consumption rates above the regional average of 9.8 S-DDD per 1,000 inhabitants per day: Cuba (30.1 S-DDD), Uruguay (23.3 S-DDD) and Canada (14.6 S-DDD). The consumption rates of 33 countries and territories were below the global average, including

24 countries with rates below 1 S-DDD and 11 countries with rates below 0.1 S-DDD per 1,000 inhabitants per day.

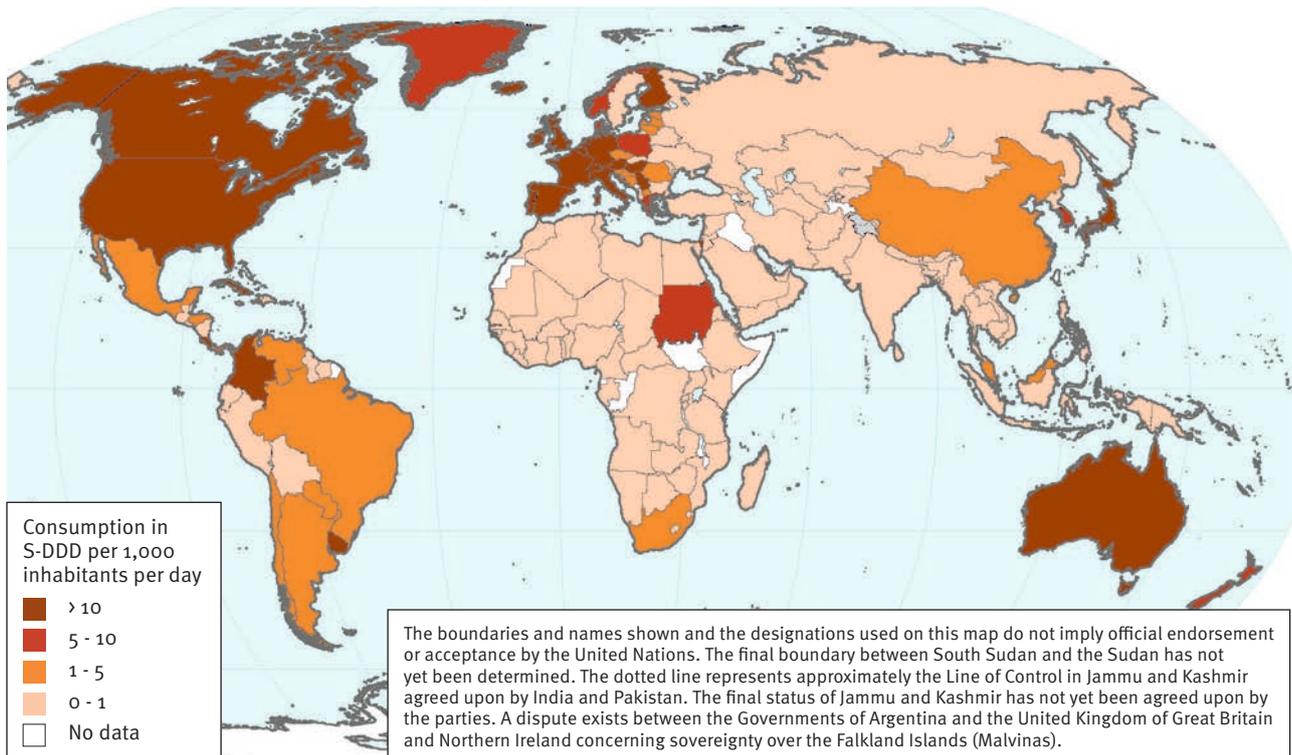
216. In Asia, the rate of consumption of benzodiazepine-type sedative-hypnotics increased, from an average annual rate of 16.8 S-DDD per 1,000 inhabitants per day during the 2004-2006 period to 18.3 S-DDD per 1,000 inhabitants per day during the 2011-2013 period. During the latter period, Japan (54.2 S-DDD), Israel (9.5 S-DDD), Macao, China (2.6 S-DDD), Hong Kong, China (1.3 S-DDD) and Bangladesh (1.2 S-DDD) were the only countries or territories with average annual rates of calculated consumption above 1 S-DDD per 1,000 inhabitants per day. The high rates in Japan and Israel have traditionally been attributed to their large cohorts of elderly people. During the 2011-2013 period, 37 countries in Asia had average annual consumption rates of

benzodiazepine-type sedative-hypnotics below 1 S-DDD per 1,000 inhabitants per day, including 22 countries with rates of consumption below 0.1 S-DDD.

217. In Africa, during the 2011-2013 period, only South Africa (2 S-DDD) had an average rate of annual calculated consumption above the regional average of 1.9 S-DDD per 1,000 inhabitants per day. That country was followed by Nigeria (1.1 S-DDD) and Namibia (0.6 S-DDD). Twenty-one countries had rates of consumption below 0.1 S-DDD, including 14 countries with rates below 0.01 S-DDD.

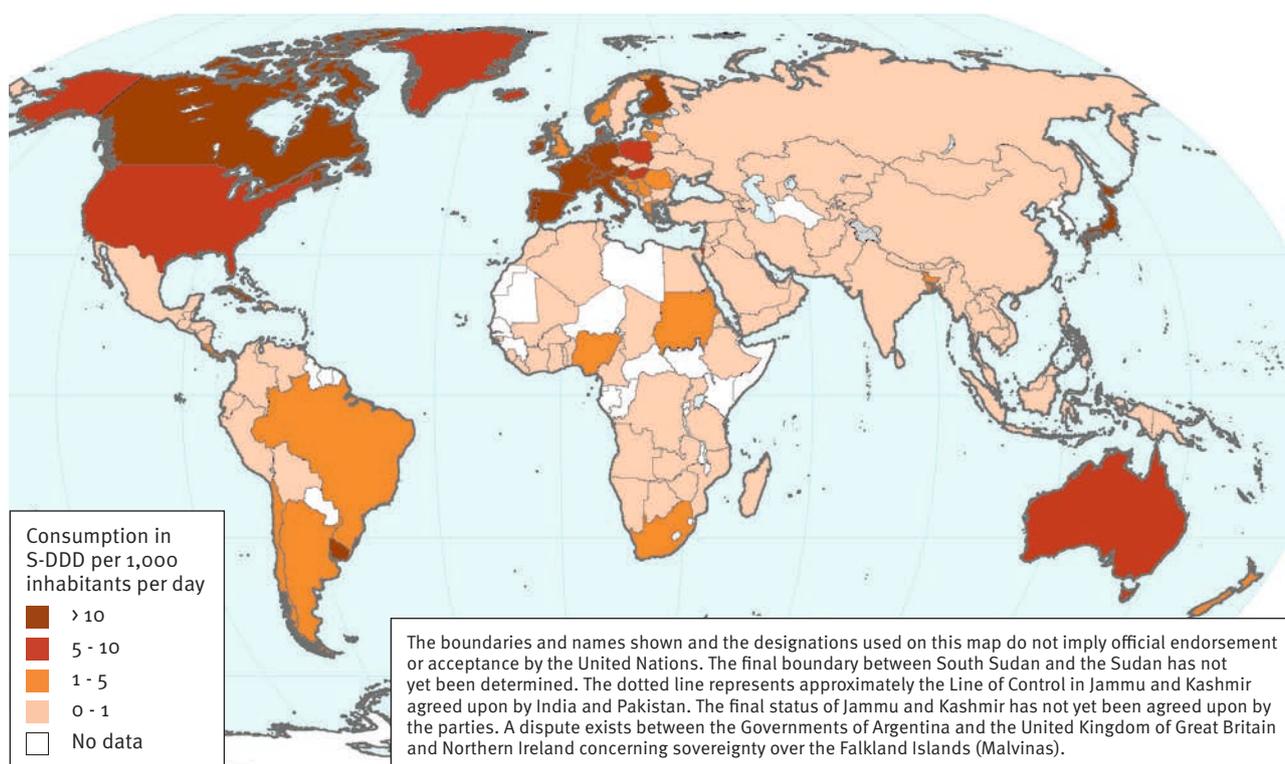
218. The changes in consumption of benzodiazepine-type sedative-hypnotics by country, approximated by measures of average annual calculated consumption (in S-DDD per 1,000 inhabitants per day) between 2004-2006 and 2011-2013 are presented in maps 17 and 18.

Map 17. Average national consumption of benzodiazepine sedative-hypnotics, 2004-2006



Source: International Narcotics Control Board.

Map 18. Average national consumption of benzodiazepine sedative-hypnotics, 2011-2013



Source: International Narcotics Control Board.

(c) Essential medicines containing benzodiazepines

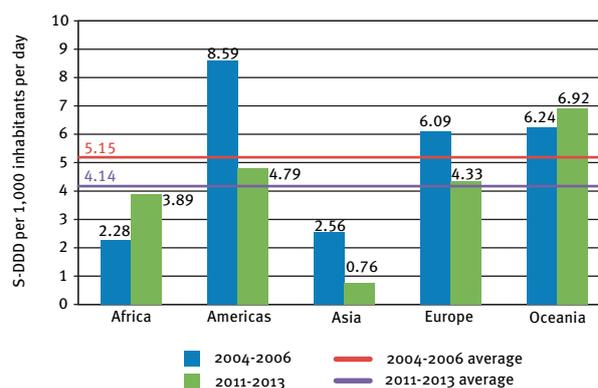
219. Three benzodiazepine substances are included in the WHO Model List of Essential Medicines: diazepam and lorazepam (anxiolytics) and midazolam (sedative-hypnotic).

Diazepam

220. The global average annual consumption rate of diazepam decreased by 20 per cent between the 2004-2006 and 2011-2013 periods, from 5.2 S-DDD to 4.1 S-DDD per 1,000 inhabitants per day (see figure 56). The biggest decreases in average consumption were observed in Asia (70 per cent) and the Americas (44 per cent). By contrast, Africa and Oceania were the regions where the average annual consumption rate increased (by 70 per cent and 11 per cent, respectively). Significant increases in Africa were mainly the result of increases in the calculated consumption for the Democratic Republic of the Congo and Ghana. Globally, during 2011-2013, out of 164 countries on record, the consumption rates of 37 countries were above the global average, with Ghana

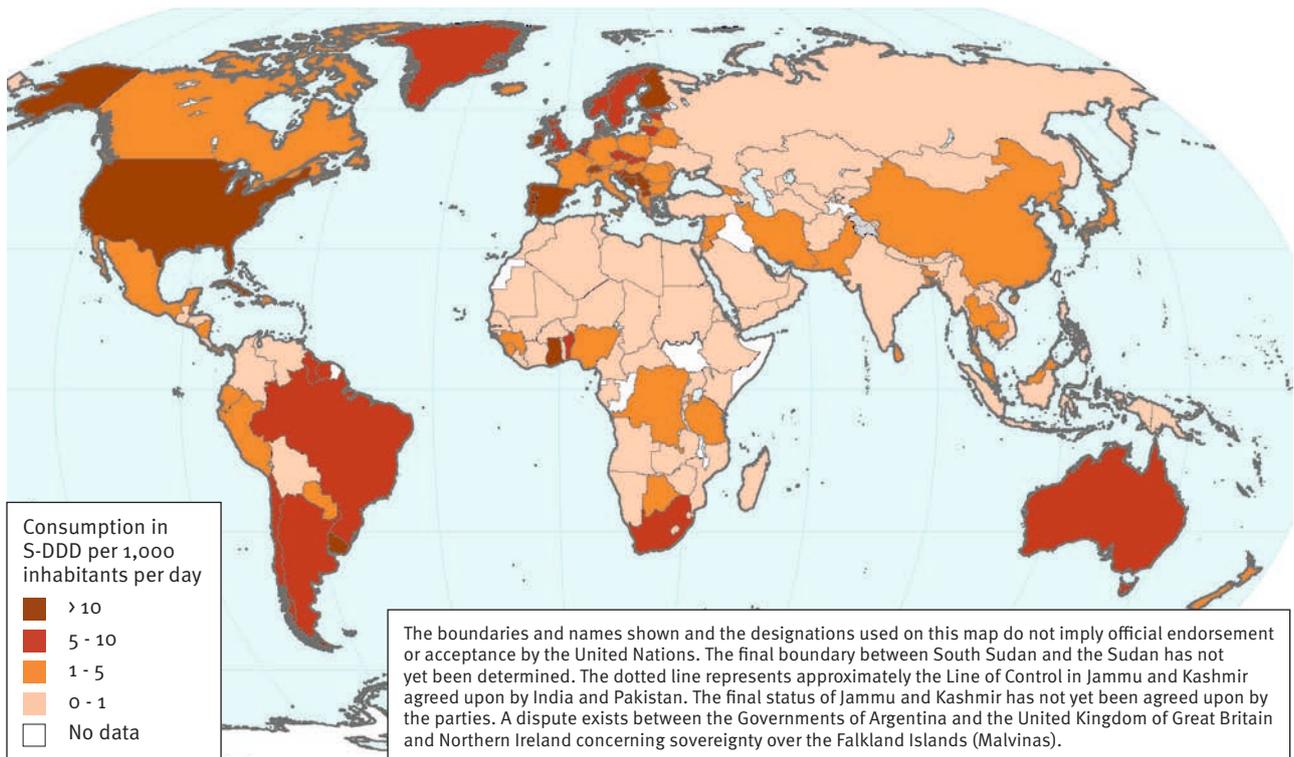
(50.5 S-DDD), the former Yugoslav Republic of Macedonia (26.1 S-DDD) and Croatia (25.9 S-DDD) having the highest rates. At the bottom end, about 90 countries had consumption rates below 1 S-DDD per 1,000 inhabitants per day, with 22 countries consuming at a rate below 0.1 S-DDD (see maps 19 and 20).

Figure 56. Average annual consumption of diazepam, 2004-2006 and 2011-2013



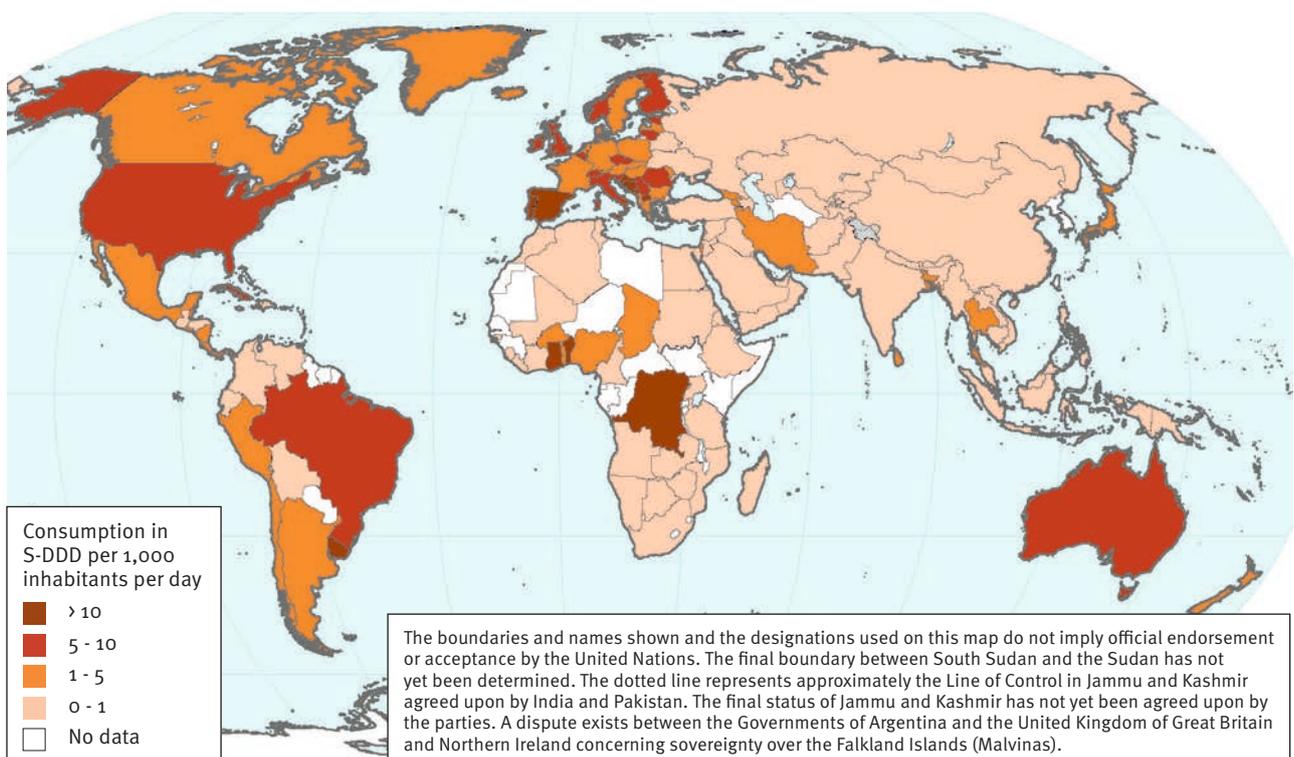
Source: International Narcotics Control Board.

Map 19. Average national consumption of diazepam, 2004-2006



Source: International Narcotics Control Board.

Map 20. Average national consumption of diazepam, 2011-2013



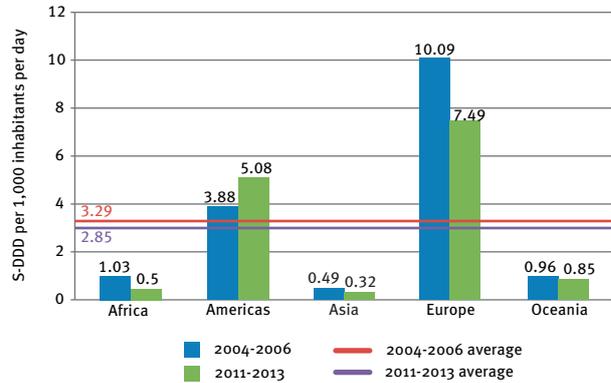
Source: International Narcotics Control Board.

Lorazepam

221. As presented in figure 57, the global average annual consumption rate of lorazepam also decreased between 2004-2006 and 2011-2013, from 3.3 S-DDD to 2.8 S-DDD per 1,000 inhabitants per day. However, this relatively small (13.4 per cent) decrease was the result of significant volatility in different regions. During that period, average annual consumption rates increased in the Americas by 31 per cent while decreasing in all other regions, with the highest declines observed in Africa (51.4 per cent), Asia (34.5 per cent), and Europe (25.8 per cent). Out of 134 countries that submitted statistics during the 2011-2013 period, 31 countries had average annual calculated consumption rates above the global average. The highest rates were observed in Europe, led by Ireland (85.9 S-DDD), Portugal (27.7 S-DDD) and Spain (27.2 S-DDD). Eighty-three countries had average annual consumption rates below 1 S-DDD per 1,000 inhabitants per day, including 44 countries with rates below 0.1 S-DDD, most notably Bhutan, Chad and Papua

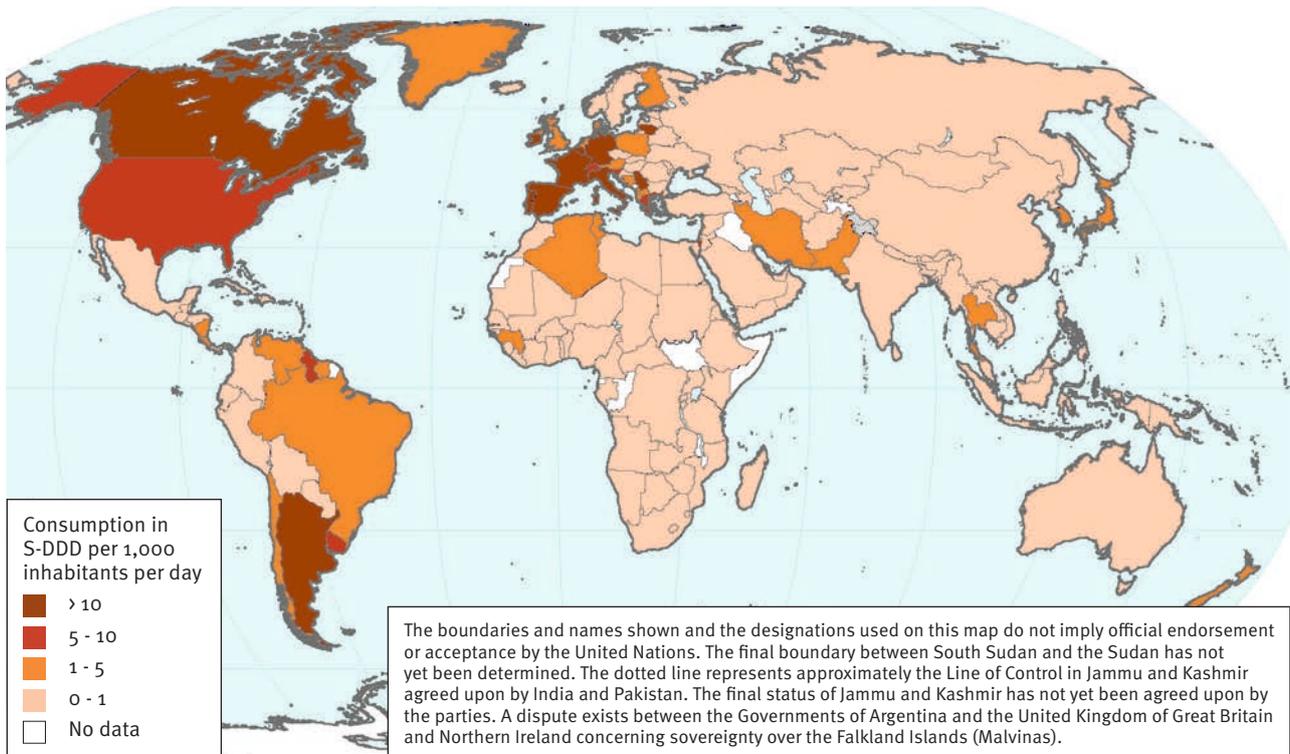
New Guinea, which had rates below 0.02 S-DDD. Changes in the consumption of lorazepam by country are presented in maps 21 and 22 below.

Figure 57. Average annual consumption of lorazepam, 2004-2006 and 2011-2013



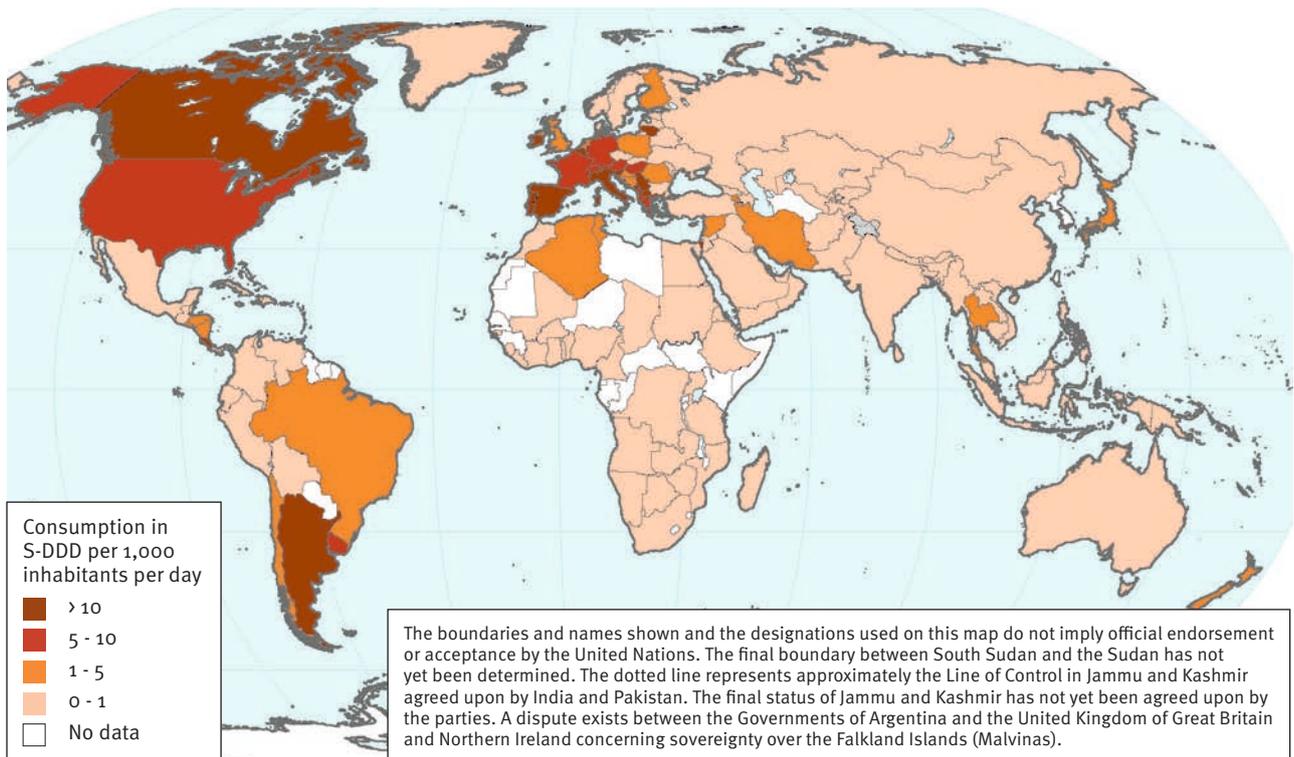
Source: International Narcotics Control Board.

Map 21. Average national consumption of lorazepam, 2004-2006



Source: International Narcotics Control Board.

Map 22. Average national consumption of lorazepam, 2011-2013



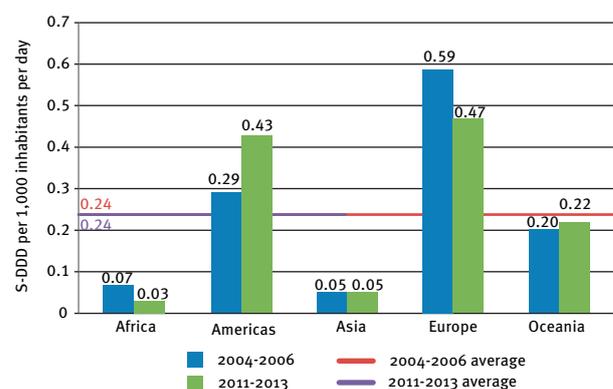
Source: International Narcotics Control Board.

Midazolam

222. The global average annual rate of calculated consumption of midazolam decreased by 0.4 per cent between the 2004-2006 period and the 2011-2013 period, from 0.238 S-DDD to 0.237 S-DDD per 1,000 inhabitants per day (see figure 58). Europe and the Americas have traditionally had the highest rates of consumption of midazolam. During the past decade, the most significant increases in average consumption rates were observed in the Americas (47.2 per cent). At the same time, consumption rates decreased in Africa (by 56 per cent), Europe (20 per cent) and Asia (10 per cent). During the 2011-2013 period, only eight countries and territories had average annual calculated consumption rates above 1 S-DDD per 1,000 inhabitants per day: Switzerland (5 S-DDD), Sint Maarten (2.7), Portugal (1.9), Curaçao (1.6), Uruguay (1.5), Hungary (1.4), Costa Rica (1.1) and the United Kingdom (1), while 37 countries and territories had consumption rates above the global average of 0.237 S-DDD. Among the countries and territories having consumption rates below the global average, 89 of them had rates below

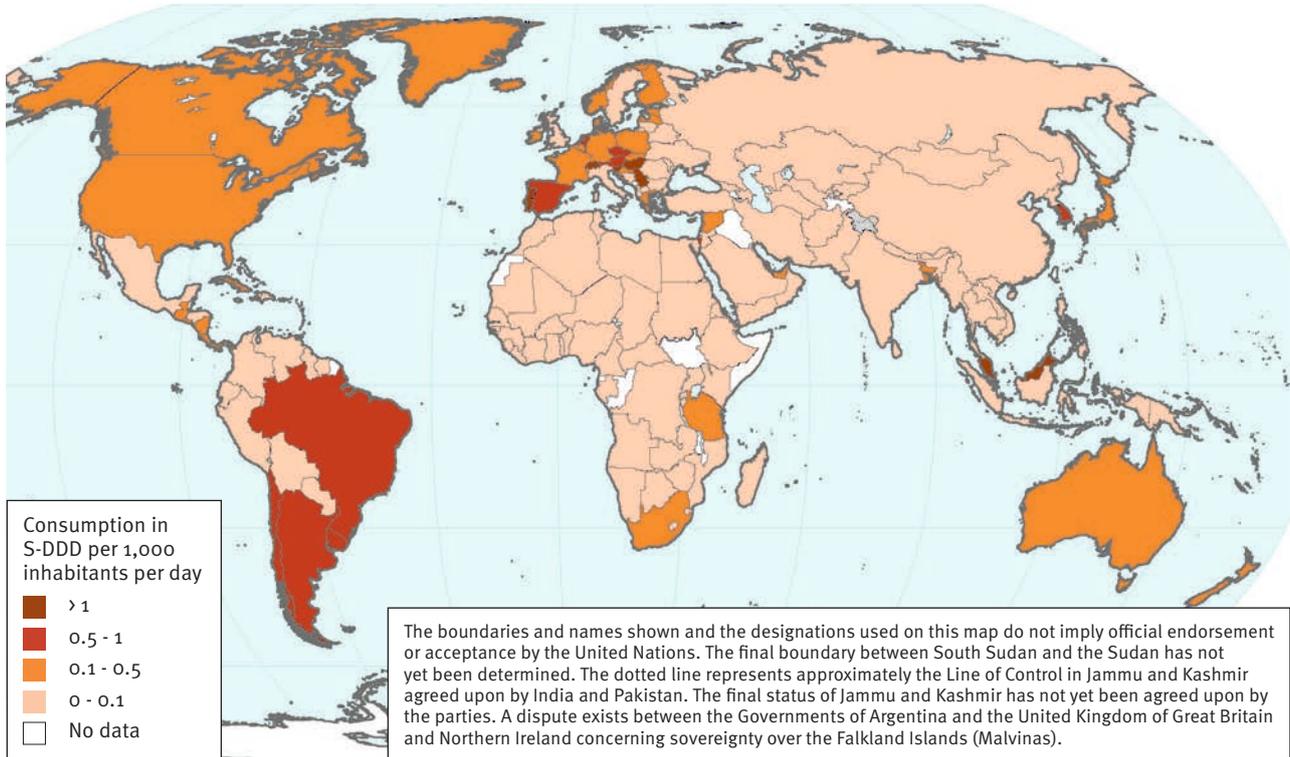
0.1 S-DDD, including 51 with rates below 0.01 S-DDD. The changes in consumption of midazolam by country between 2004-2006 and 2011-2013 are presented in maps 23 and 24.

Figure 58. Average annual consumption of midazolam, 2004-2006 and 2011-2013



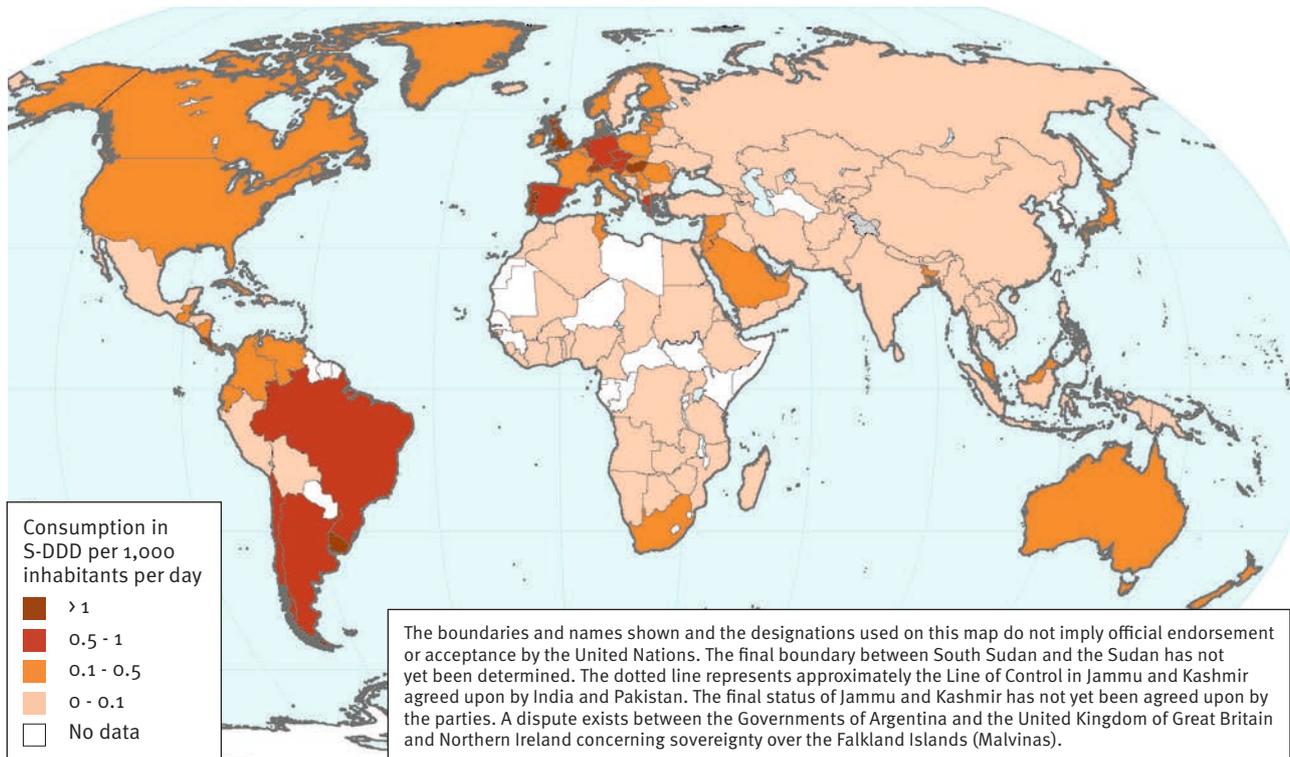
Source: International Narcotics Control Board.

Map 23. Average national consumption of midazolam, 2004-2006



Source: International Narcotics Control Board.

Map 24. Average national consumption of midazolam, 2011-2013



Source: International Narcotics Control Board.

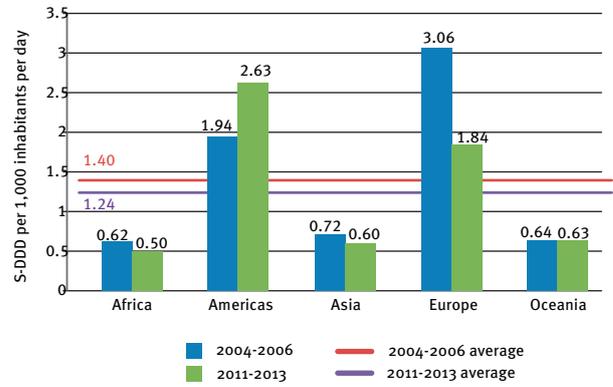
(d) Availability of anti-epileptics

223. Both barbiturate-type anti-epileptics (phenobarbital and methylphenobarbital) and benzodiazepine-type anti-epileptics (clonazepam) are included in Schedule IV of the 1971 Convention. In addition to being used for the treatment of epilepsy, these substances are also used to induce sleep. As one of the substances on the WHO Model List of Essential Medicines, phenobarbital accounted for almost all of global consumption of anti-epileptics during the 2004-2013 period.

224. During that time, the global consumption of anti-epileptics decreased in all regions except the Americas. In particular, the largest reductions were found in Europe (40 per cent), Africa (20 per cent) and Asia (16 per cent). At the same time, the rate of consumption of anti-epileptics in Oceania remained roughly the same, but that in the Americas has increased by 35 per cent (see

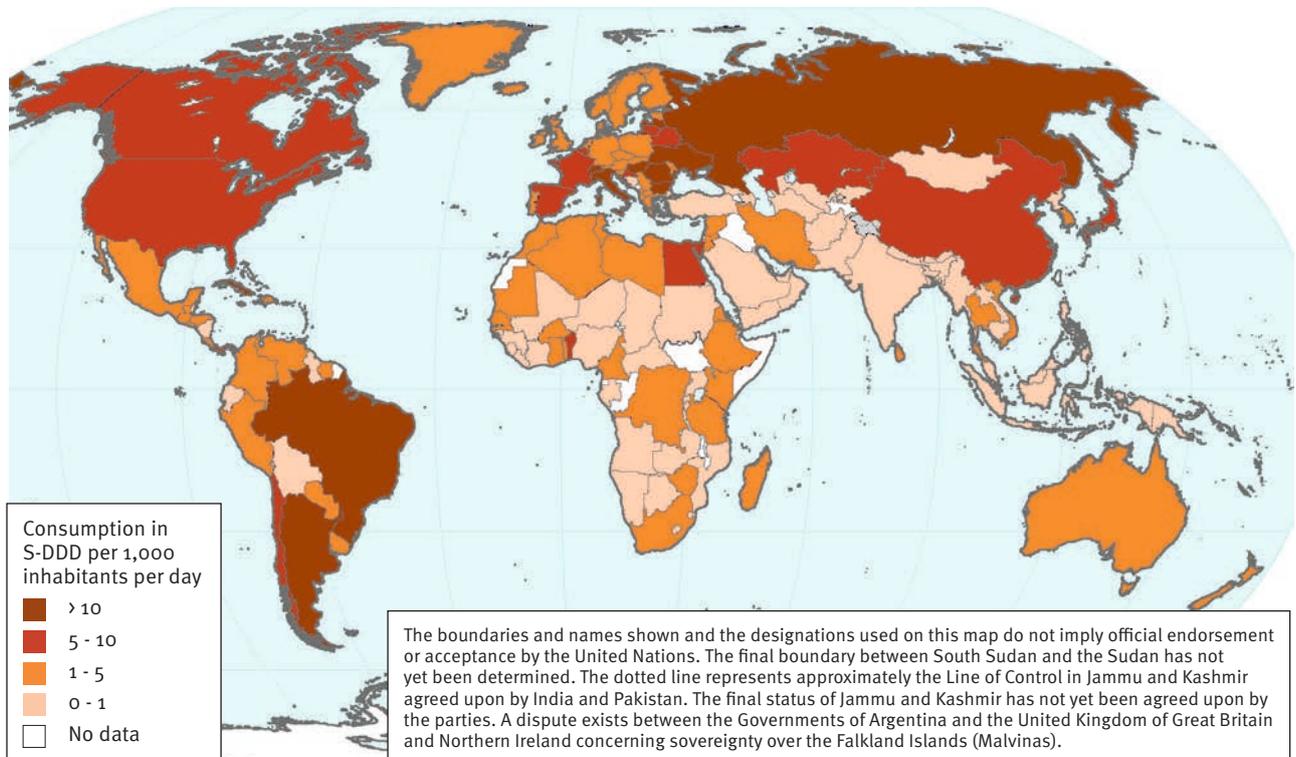
figure 59). The changes in consumption of anti-epileptics by country are presented in maps 25 and 26 below.

Figure 59. Consumption of anti-epileptics, all regions, 2004-2006 and 2011-2013



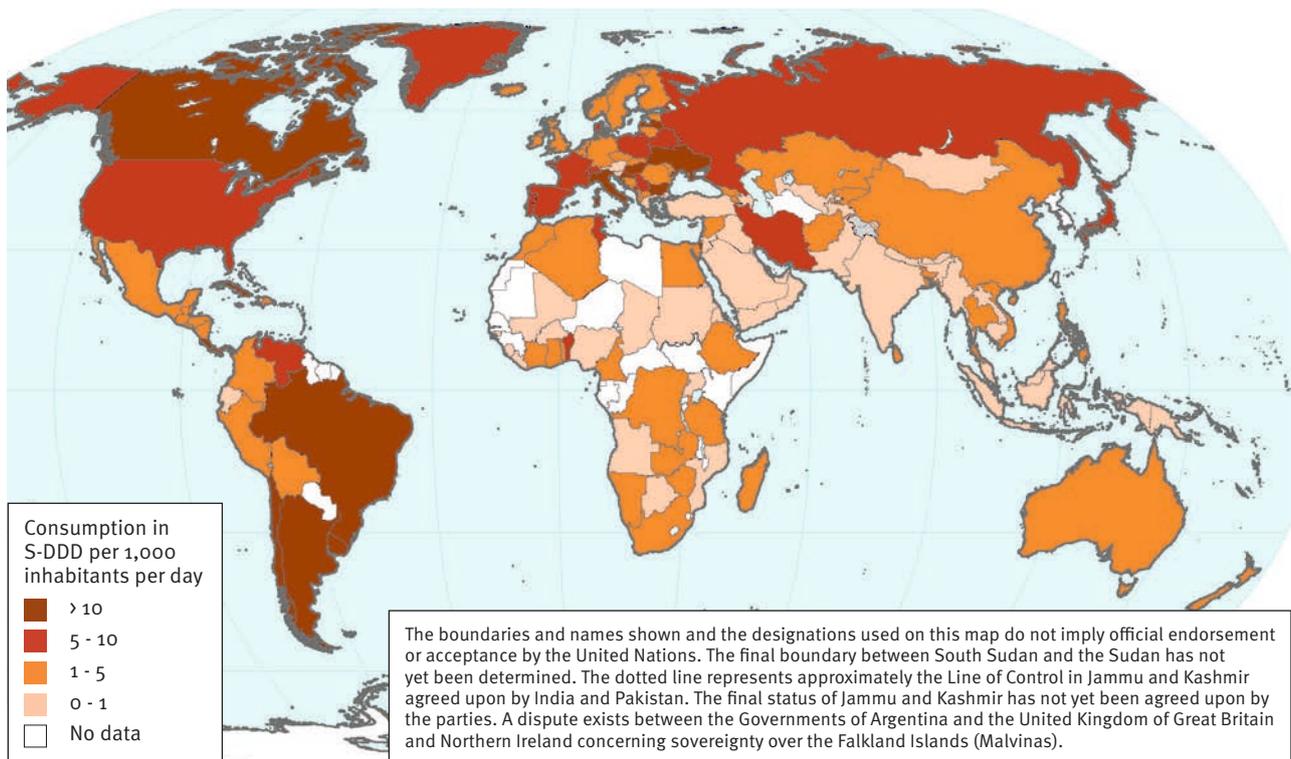
Source: International Narcotics Control Board.

Map 25. Average national consumption of anti-epileptics, 2004-2006



Source: International Narcotics Control Board.

Map 26. Average national consumption of anti-epileptics, 2011-2013

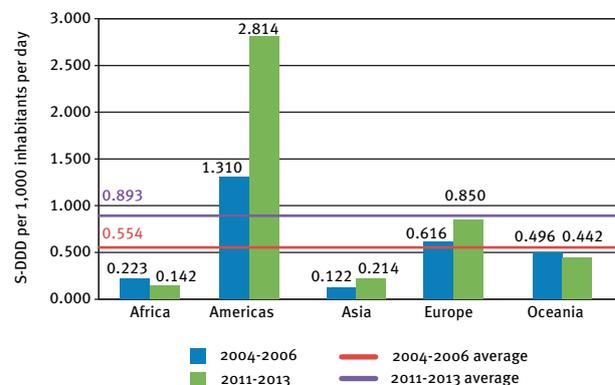


Source: International Narcotics Control Board.

(e) Benzodiazepine-type anti-epileptics (clonazepam)

225. The significant increases in consumption of anti-epileptics in the Americas were mainly driven by higher consumption of benzodiazepine-type anti-epileptics (clonazepam) in Brazil, Costa Rica, Nicaragua and Panama. Contrary to the overall trend in the consumption of anti-epileptics, consumption of benzodiazepine-type anti-epileptics (clonazepam) increased in most parts of the world during the 2004-2013 period (see figure 60). The rise was greatest in the Americas (115 per cent), Asia (75 per cent) and Europe (38 per cent). Meanwhile, the consumption of clonazepam in Africa and Oceania decreased moderately, by 36 per cent and 11 per cent, respectively. Regardless of the changes observed in different regions, the regional distribution of the consumption of clonazepam has stayed the same—with the highest levels of consumption found in the Americas, followed by Europe, Oceania, Asia and Africa.

Figure 60. Consumption of clonazepam, all regions, 2004-2006 and 2011-2013



Source: International Narcotics Control Board.

(f) Barbiturate-type anti-epileptics

226. Global consumption of barbiturate-type anti-epileptics (phenobarbital and methylphenobarbital) dropped

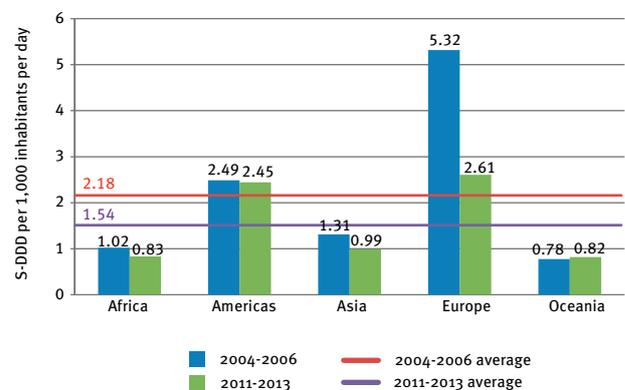
substantially during the 2004-2013 period. While the consumption of such substances fell by 95 per cent in Europe, it also declined in Asia and Africa, by 33 per cent and 20 per cent, respectively. The regional pattern of consumption of barbiturate-type anti-epileptics remained the same, with Europe and the Americas having the highest levels of consumption, followed by Asia, Africa and Oceania. As consumption of phenobarbital accounted for almost all of global consumption of barbiturate-type anti-epileptics, the consumption trend relating to this type of anti-epileptic has been very similar to that of phenobarbital.

Phenobarbital

227. Between 2004 and 2013, global consumption of phenobarbital, calculated in S-DDD per 1,000 inhabitants per day, declined by nearly 30 per cent,⁶⁰ with rather significant regional differences (see figure 61). While both Europe and the Americas had higher levels of consumption than the rest of the world, the consumption of phenobarbital in Europe fell by 51 per cent while that in the Americas only edged down by 2 per cent. Among all European countries, the largest reductions were in Lithuania, Hungary and Greece, in that order. Meanwhile, the consumption of phenobarbital in Asia and Africa also shrank, by 25 per cent

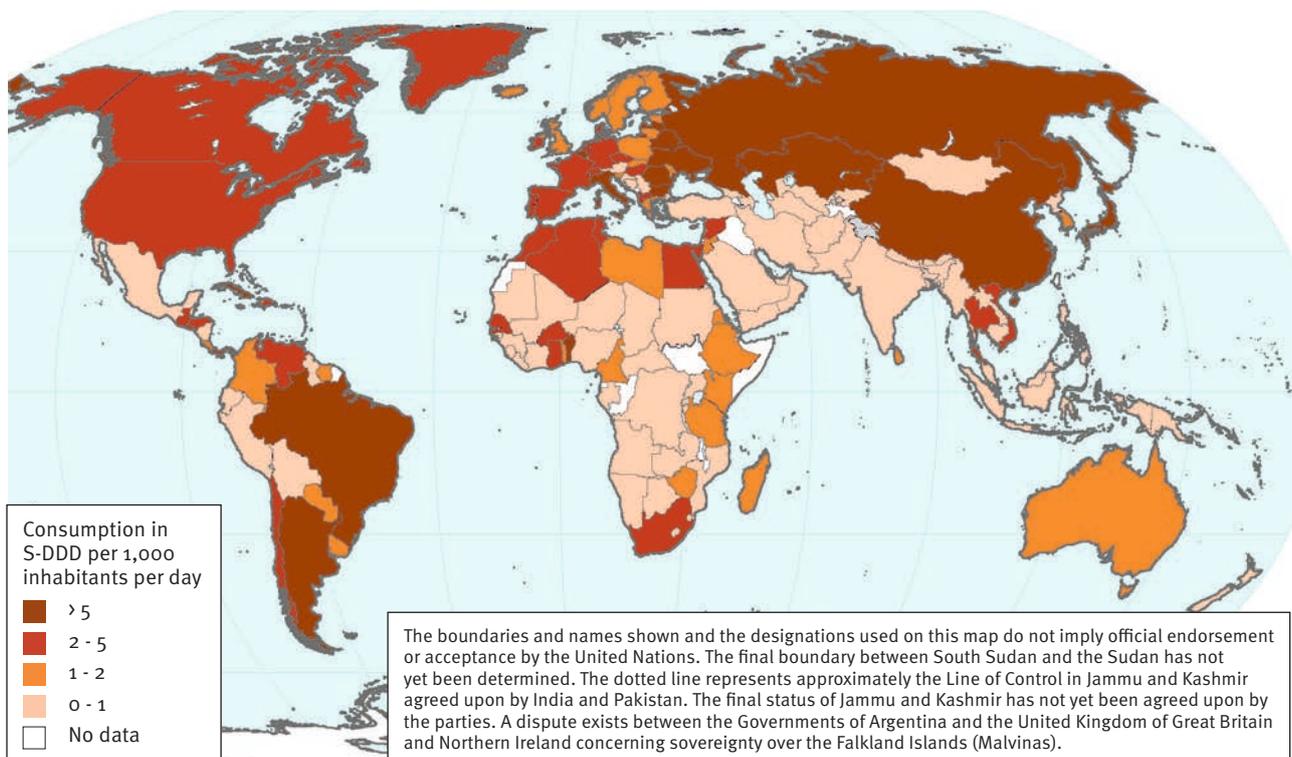
and 18 per cent respectively, while that in Oceania went up by 6 per cent. Despite these differences in trends, the regional distribution of the global consumption of phenobarbital remained the same throughout the 2004-2013 period, with Europe and the Americas being the two regions with the highest average levels of consumption, followed by Asia, Africa and Oceania. The changes in consumption of phenobarbital by country, approximated by measures of average annual calculated consumption (in S-DDD per 1,000 inhabitants per day) between 2004-2006 and 2011-2013, are presented in maps 27 and 28 below.

Figure 61. Consumption of phenobarbital, all regions, 2004-2006 and 2011-2013



Source: International Narcotics Control Board.

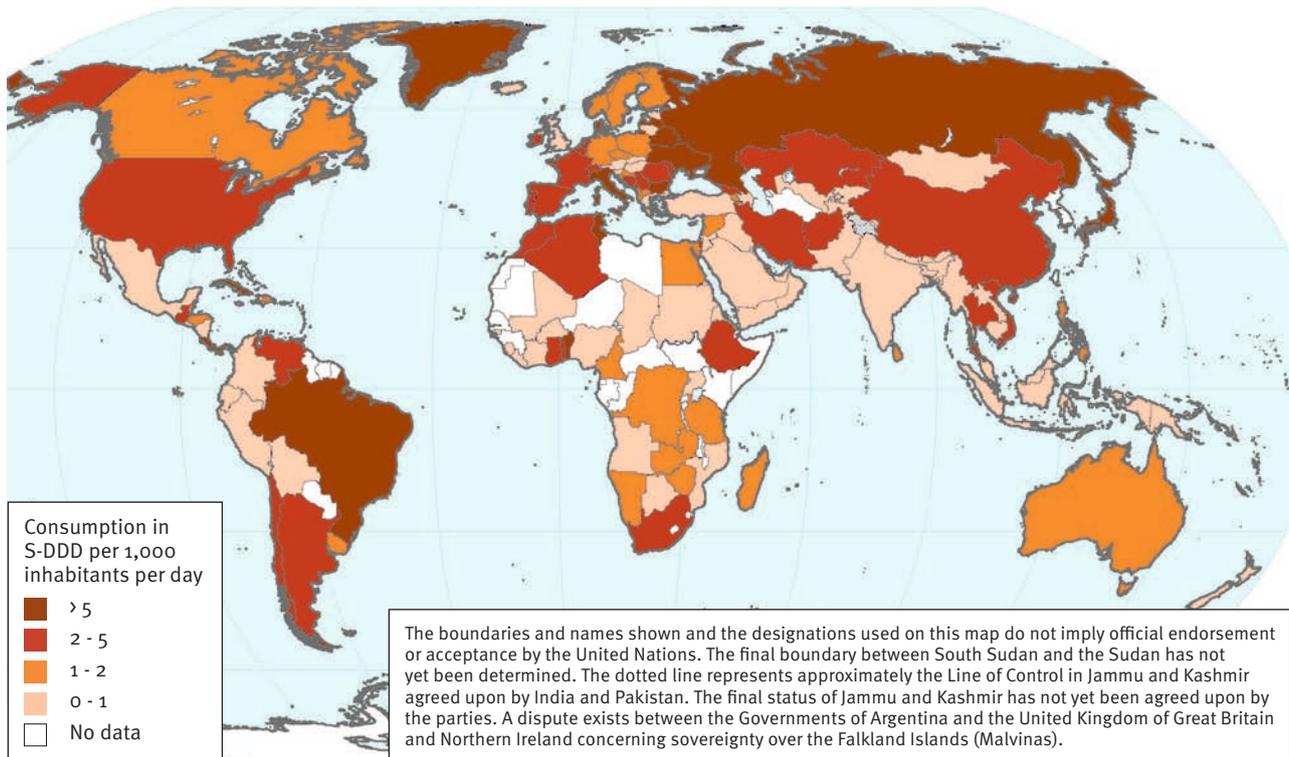
Map 27. Average national consumption of phenobarbital, 2004-2006



Source: International Narcotics Control Board.

⁶⁰The calculation is based on a comparison between the three-year averages of 2004-2006 and 2011-2013.

Map 28. Average national consumption of phenobarbital, 2011-2013



Source: International Narcotics Control Board.

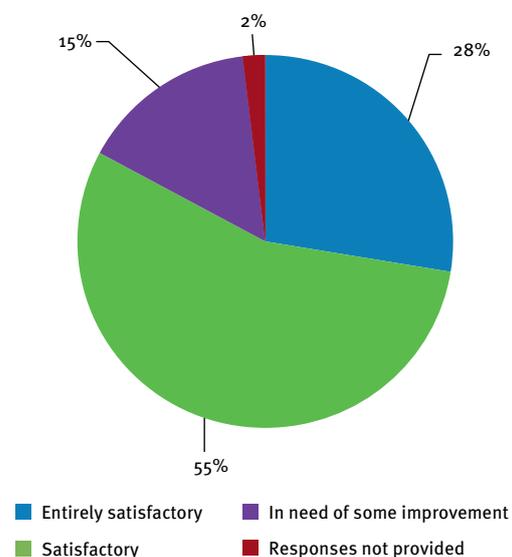
C. Impediments to the availability of psychotropic substances

228. The availability of psychotropic substances is influenced by various social and economic factors, including (a) the structure and capacity of health-care systems; (b) the degree of priority given by the authorities to the relief of pain and suffering; and (c) social attitudes towards health care and medical therapies, as well as related laws and regulations. In fact, the availability of controlled substances does not necessarily imply that they are accessible to all patients who need them. In reality, further criteria and conditions determine the accessibility of the drugs and have an impact on the relief of patients.

229. According to the second survey on the availability of controlled substances, carried out by the Board in 2014, to which 107 countries responded, the vast majority of Governments evaluated the situation in their countries as satisfactory. As shown in figure 62, more than three quarters of countries considered their situation to be satisfactory or entirely satisfactory (55 and 28 per cent, respectively), while others (15 per cent) indicated that the

availability of those substances in their countries was in need of some improvement. Nevertheless, the Board wishes to interpret this assessment with a certain amount of caution.

Figure 62. Availability of psychotropic substances, as evaluated by countries themselves, 2014



Source: International Narcotics Control Board survey 2014.