

Development assistance for health to specific health focus areas

Parsing out funding streams by health focus area highlights diseases and conditions around which the international community has coalesced. The Institute for Health Metrics and Evaluation (IHME) breaks down development assistance for health (DAH) by seven health focus areas: maternal, newborn, and child health (MNCH); non-communicable diseases (NCDs); HIV/AIDS; tuberculosis (TB); malaria; and health sector support. A special component of *Financing Global Health 2013* is the parsing of NCDs into a new health focus sub-area, tobacco control. Tobacco use is one of the leading risk factors worldwide. This chapter also pairs health focus area estimates with disease-specific disability-adjusted life years (DALYs) to further explore the relationship between burden of disease and international spending on health.

The DAH disbursed to each health focus area is examined from several perspectives in this chapter. First, the breakdown of health focus areas is discussed in order to provide an overview of trends in spending. Subsequently, each health focus area is examined, highlighting the channels prominent in each. Finally, the DAH of each health focus area is paired with the corresponding DALYs to explore the relationship between spending and burden at the country and regional levels, as well as over time.

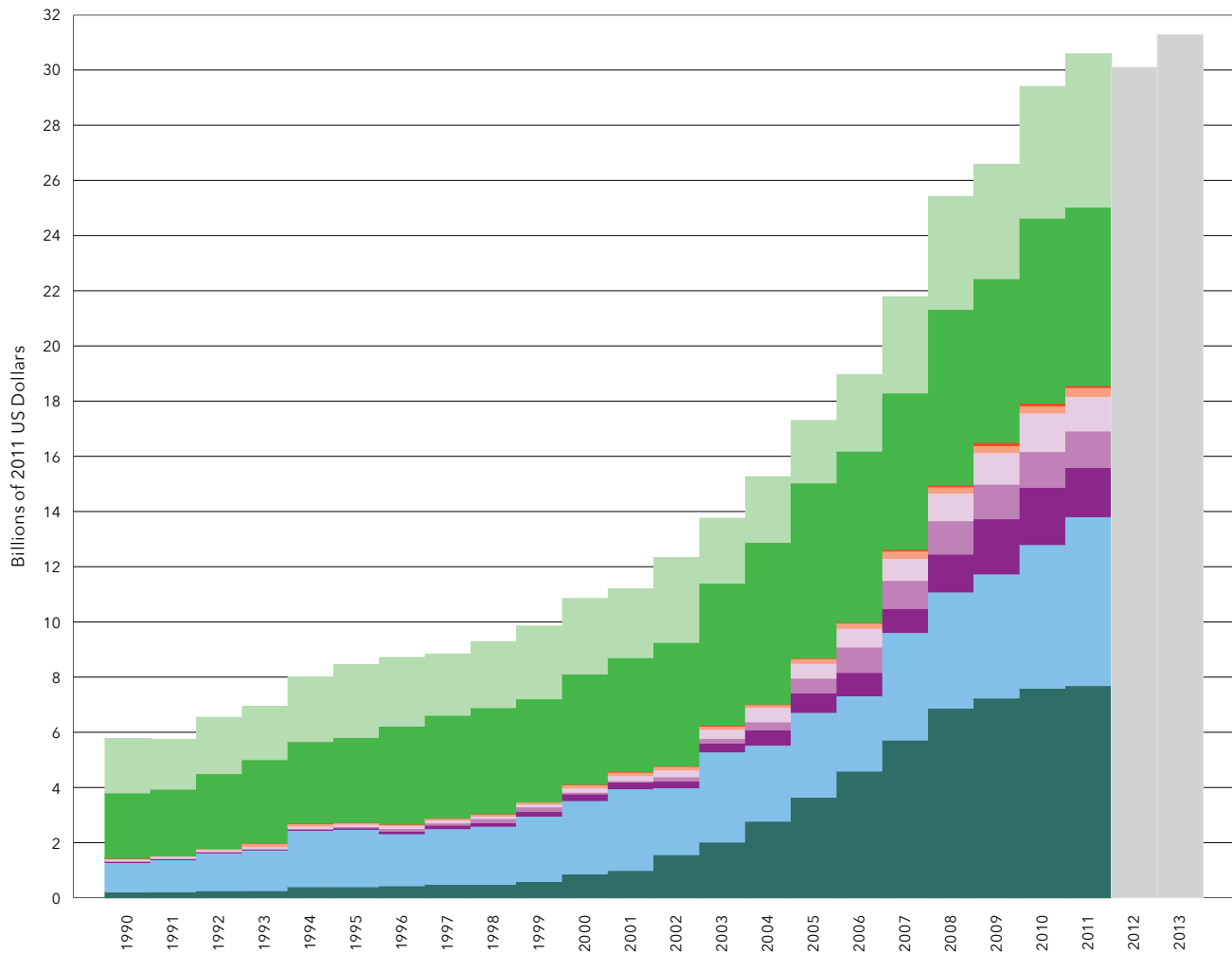
OVERVIEW OF HEALTH FOCUS AREA TRENDS

The overview of health focus area trends is depicted in Figure 12. Clearly, HIV/AIDS, malaria, and TB stand out as making up a major portion of global health support in 2011. However, investments in these areas did not increase as much as the DAH allocated to NCDs and MNCH in 2011. The composition of total DAH shifted slightly toward MNCH and NCDs and away from HIV/AIDS, TB, and malaria from 2010 to 2011. (Data limitations prevent DAH from being parsed across health focus areas for 2012 and 2013.)

This shift away from HIV/AIDS, TB, and malaria is significant. While these are dire health problems in low-income countries, the Global Burden of Diseases, Injuries, and Risk Factors Study 2010 illuminated the ongoing epidemiological shift toward NCDs. NCDs, such as ischemic heart disease, diabetes, cancer, and other illnesses, now contribute 49.8% of the disease burden in low- and middle-income countries. At \$377 million in expenditure and only 1.2% of total DAH, NCDs remain one of the smallest areas of funding. Although DAH for NCDs increased more than a number of other health focus areas, with growth of 4.6% from 2010 to 2011, development assistance partners still do not concentrate the bulk of their efforts on this issue. The levels of spending allocated to other health focus areas are vastly higher; DAH for HIV/AIDS, for example, was 20 times higher than assistance for NCDs in 2011.

FIGURE 12

DAH for HIV/AIDS; maternal, newborn, and child health; malaria; health sector support; tuberculosis; non-communicable diseases; and tobacco, 1990-2011



- Unallocable
- Other
- Tobacco
- Non-communicable diseases
- Tuberculosis
- Health sector support
- Malaria
- Maternal, newborn, and child health
- HIV/AIDS
- Preliminary estimates

Source: IHME DAH Database 2013

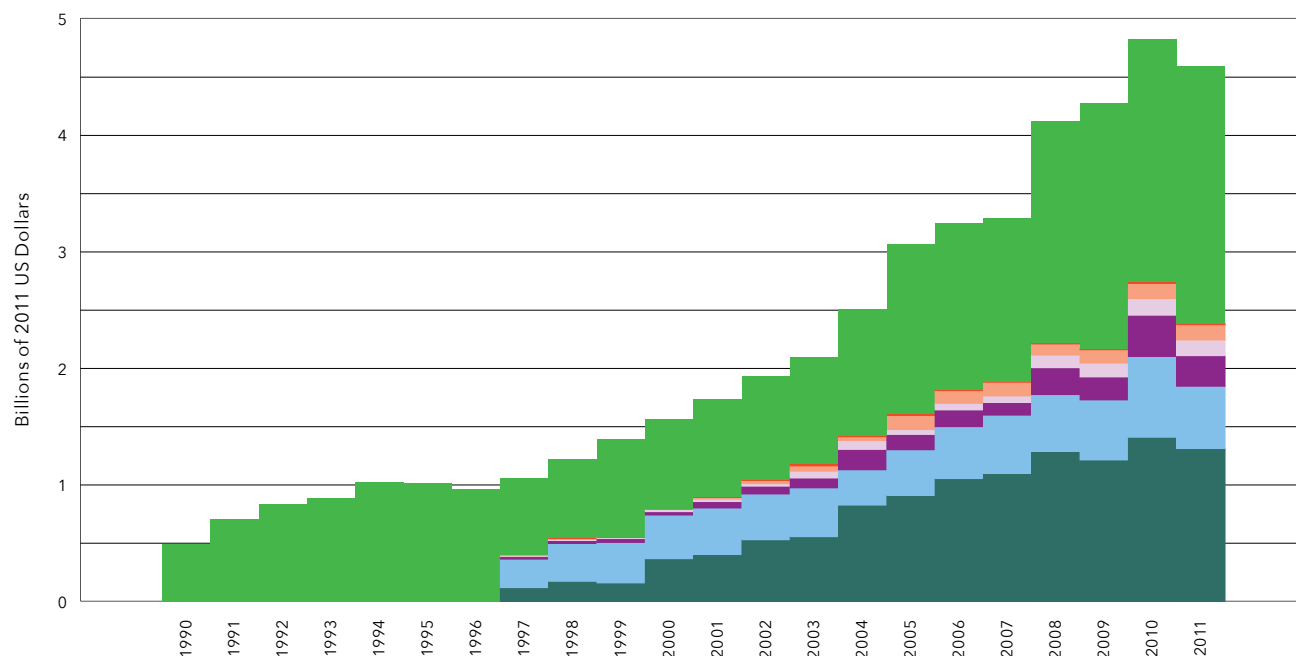
Notes: Health assistance for which we have no health focus area information is designated as “unallocable.” DAH for other health focus areas not yet tracked by IHME is coded as “other.” Due to data limitations, estimates are unavailable for DAH by health focus area for 2012 and 2013.

A subset of DAH for NCDs is allocated to tobacco control in this year’s report. Tobacco control is an essential input to improving population health in the developing world because of the major impact this risk factor has on health in these areas. Yet, as Figure 12 highlights, a very small portion of DAH is allocated to tobacco control. DAH for this health focus area amounted to \$68 million in 2011, which was 0.2% of total development assistance for health. A few key organizations are investing substantially in the rapidly expanding efforts to address tobacco control, but these efforts fall far short of spending on other health focus areas.

Another noteworthy finding revealed by Figure 12 is the rapidly and substantially expanding investment in MNCH. MNCH, the second-largest health focus area (20%), received a major boost from 2010 to 2011. In 2011, \$6.1 billion was spent on MNCH

FIGURE 13

NGO DAH by health focus area, 1990-2011



activities, a jump of 17.7% over 2010 levels. These efforts may be related to the push to achieve Millennium Development Goals 4 and 5, which aim to considerably reduce child mortality and improve maternal health by 2015. Furthermore, spear-headed by the Bill & Melinda Gates Foundation (BMGF), the UK Government, and other organizations, maternal and child health interventions are increasingly high on the agenda.

Among the major communicable diseases, only HIV/AIDS exhibited growth, albeit slight, in funding flows from 2010 to 2011, increasing 1.2% over 2010 levels. DAH for HIV/AIDS, which amounted to \$7.7 billion in 2011, also remained the largest health focus area, receiving 25.1% of total DAH in 2011. Malaria DAH, accounting for 5.8% of DAH in 2011, contracted 13.9% compared to 2010 levels and amounted to \$1.8 billion in 2011. TB DAH followed suit, decreasing 9.8% in 2011. Its share of DAH was just smaller than malaria DAH. With investments of \$1.3 billion, TB DAH was 4.1% of total DAH in 2011. The minor contraction in TB and malaria aid reflects the Global Fund to Fight AIDS, Tuberculosis and Malaria’s (GFATM) efforts to improve its funding mechanisms during this time. While it is too soon to estimate, increases in funding in the fight against HIV/AIDS, TB, and malaria are expected as renewed and improved Global Fund disbursements are implemented.

Finally, funding for health sector support, which includes DAH channeled directly to governments for improving health systems and population health, increased during this time. Health sector support grew by 1.6% from 2010 to 2011 to \$1.3 billion. The portion of DAH allocated to health sector support, while still higher than DAH for NCDs, was just 4.3% of total DAH in 2011.

This year, IHME made strides in reducing the “unallocable” portion of its DAH health focus area estimates. This contributed to reducing unallocable DAH by 20.1% and increased the “other” category, which includes spending on health focus areas

- Other
- Tobacco
- Non-communicable diseases
- Tuberculosis
- Health sector support
- Malaria
- Maternal, newborn, and child health
- HIV/AIDS

Source: IHME DAH Database 2013

outside of those listed, by 12.7%. Even so, because not all data sources fully disclose the types of programs implemented or investments made, 18.2% of DAH disbursed in 2011 cannot be tied to a specific health focus area.

To delve further into DAH trends, IHME also developed non-governmental organization (NGO)-specific estimates of health focus areas for *Financing Global Health 2013*, which are displayed in Figure 13. This reveals that NGOs' allocation of funds to health focus areas does not vary markedly from the distribution of DAH on the whole. At \$1.3 billion, a large portion of NGO funds is invested in HIV/AIDS. In 2011, 27.9% of NGO expenditure focused on HIV/AIDS, which is just slightly larger than the share of HIV/AIDS DAH overall (25.1%). NGO malaria expenditure was also in a similar range, at 5.6% for NGO spending, compared to 5.8% overall. Similar to its portion of overall DAH, MNCH received the second-largest share of NGO DAH. However, this health focus area received 11.3% of funds in 2011, a relatively smaller portion than MNCH DAH overall (20%). NGOs spent 2.9% on TB activities, which is also smaller than TB DAH on the whole (4.1%). Finally, with respect to NCDs, at 3%, the share of NGO spending on this health focus area is higher than the NCD share of total DAH, 1.2%.

MATERNAL, NEWBORN, AND CHILD HEALTH

The DAH disbursed to MNCH includes spending on vaccinations, antenatal, post-natal, and maternal care, and other expenditures vital to maintaining the health of children and mothers. The burden of disease associated with MNCH is highest in sub-Saharan Africa, where maladies such as diarrhea in children and complications associated with childbirth have a major impact on population health. South Asia, with its large, impoverished population, also suffers a high level of DALYs associated with these types of illnesses.

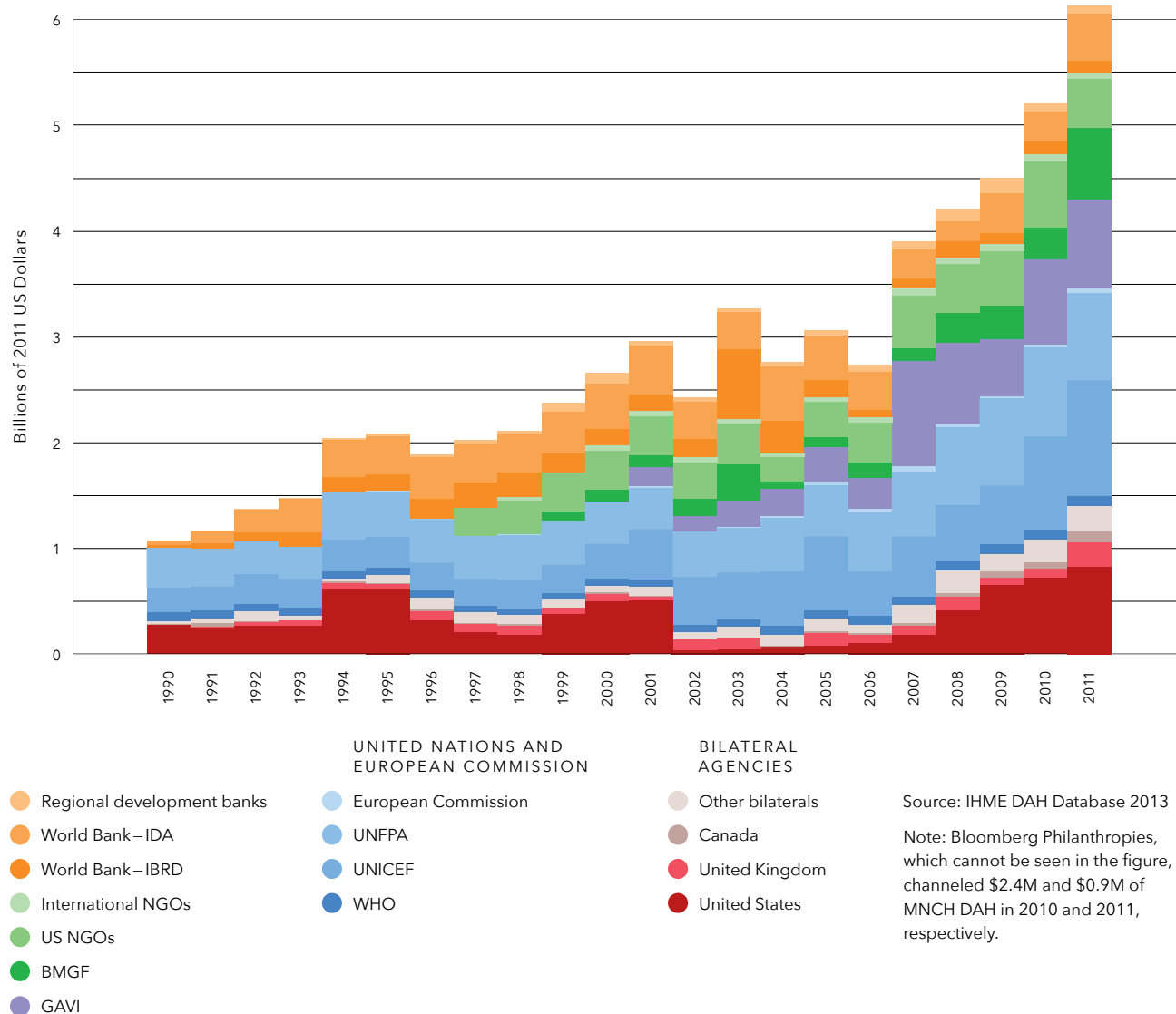
Across regions, major growth in spending on MNCH was key to bolstering the DAH total in 2011. Figure 14 depicts DAH for MNCH broken down by channel from 1990 to 2011. This shows that, unlike the mostly declining or stagnating major health focus areas, MNCH grew substantially from 2010 to 2011. Expenditure on this health focus area amounted to \$6.1 billion in 2011. Total DAH for MNCH grew absolutely by \$920 million over 2010 levels, a 17.7% increase. Despite its rapid growth, maternal, newborn, and child health spending per live birth remains just \$51.

Major spending by a number of channels drove the growth in DAH for MNCH. UK and BMGF contributions were the primary sources of the increase in this health focus area. In 2010, UK bilateral assistance to MNCH amounted to just \$88 million. By 2011, this had risen to \$238 million, an immense 171% rise. BMGF also augmented disbursements to MNCH activities to a total of \$674 million in 2011, an increase of 119% or \$366 million. US bilateral and GAVI Alliance (GAVI) spending also contributed to the increase, growing 13.6% and 4.6%, respectively in 2011. US bilateral assistance amounted to \$823 million in 2011, an increase of almost \$100 million over 2010. With a rise of just under \$40 million relative to 2010, GAVI's contribution was \$841 million in 2011. The World Health Organization's (WHO) contribution remained relatively steady in 2011, with expenditure of \$98 million, a 0.4% decrease over 2010 levels.

The 2011 growth in DAH for MNCH preceded a number of events in 2012 and 2013 that catalyzed additional funding for this health focus area. The London Summit on Family Planning, hosted jointly by BMGF and the UK Government, mobilized

FIGURE 14

DAH for maternal, newborn, and child health by channel of assistance, 1990–2011

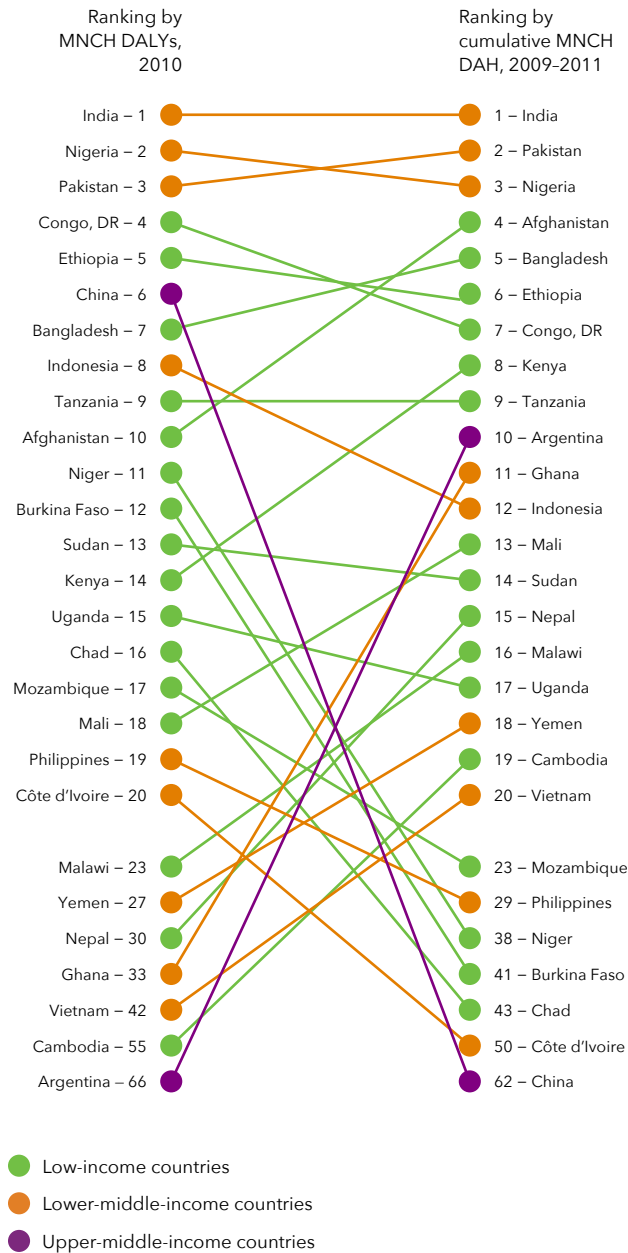


commitments of more than \$4.6 billion in 2012.³¹ At the 2013 Global Vaccine Summit, donors pledged \$4 billion, including reported contributions from the UK, Canada, Norway, the Abu Dhabi royal family, the Islamic Development Bank, and Germany.³² Also in 2013, the Research Council of Norway’s Global Health and Vaccination Research Program announced new funding for family planning and MNCH of approximately 244 million Norwegian kroner (\$40 million US dollars).³³ These commitments signal the potential for further growth in MNCH in coming years.

Figure 15 shows that population and income status play a role in both DALYS and DAH in this health focus area. The largest low- and middle-income countries, China, India, Indonesia, Nigeria, and Pakistan, figure predominately in the list of maternal, newborn, and child health DALYS. These countries also are ranked prominently in the MNCH funding rankings. A notable absence is Brazil, the fifth-largest country by population, which does not bear a large number of maternal, newborn, and child health DALYS or receive substantial funding for MNCH. Besides these populous

FIGURE 15

Top 20 countries by 2010 maternal, newborn, and child health burden of disease versus cumulative 2009–2011 maternal, newborn, and child health DAH



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

countries, low-income countries are also present in these rankings, highlighting the relationship between income and MNCH burden.

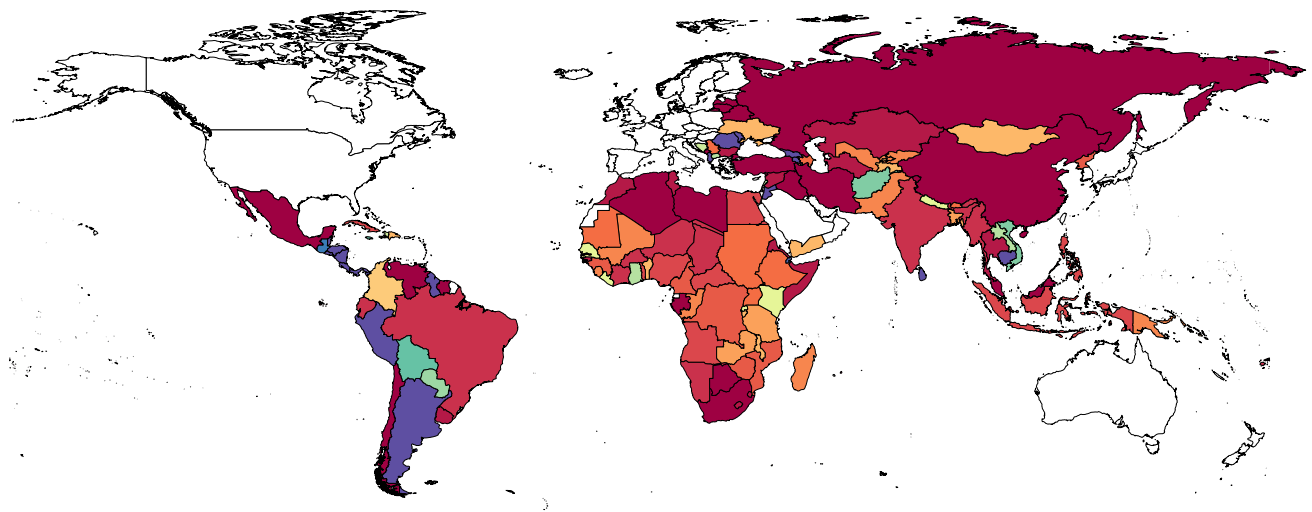
A number of countries are relatively well matched when comparing DAH for MNCH to maternal, newborn, and child health DALYs. India, Nigeria, and Pakistan all sit among the top three of both rankings. The maternal, newborn, and child health DALYs of the Democratic Republic of the Congo (DRC), Ethiopia, Bangladesh, and Tanzania are all ranked within four slots of their respective MNCH funding. Among the countries with the 10 highest DALYs, only China is outside of top DAH disbursements. It is also the only upper-middle-income country on the maternal, newborn, and child health DALYs list. Imbalances are more apparent in the 11th through 20th positions. One upper-middle income country, Argentina, makes an appearance as one of the largest recipients of DAH for MNCH, above a number of populous low- and lower-middle-income countries.

Examining the MNCH assistance per corresponding DALY, as displayed in Figure 16, reveals that a few countries receive substantially more than the vast majority of countries. Argentina, Peru, as well as a number of countries in Central America, the Middle East, and Eastern Europe, received more than \$75 per maternal, newborn, and child health DALY. Conversely, more than 35 countries received less than \$5 in DAH per maternal, newborn, and child health DALY. Thus, while DAH for this health focus area underwent expansion over 2010–2011, much MNCH burden remains unaddressed.

Trends over time, as shown in Figure 17, reveal that the Latin America and Caribbean region tops DAH per DALY for maternal, newborn, and child health when examined over the 2006–2010 period. Across this time-span, the region received more than \$60 per maternal, newborn, and child health DALY. Growth from the 1991–1995 period to the 2006–2010 period amounted to 314%. Major reductions in MNCH burden coupled with the investments of the Pan American Health Organization (PAHO) and others drove this major growth.³⁴ This sharp uptick in DAH per DALY for maternal, newborn, and child health in this region is unlike the pattern in any other region, where minor growth or stagnation is present over time. Notably, South Asia and sub-Saharan Africa received some of the lowest maternal, newborn, and child health DAH per DALY, at less than \$20 over the 2006–2010 period. This rate has not grown much over time for either region, driven more by increases in DALYs than lack of spending on MNCH.

FIGURE 16

Maternal, newborn, and child health DAH, 2009–2011, per related DALY, 2010



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Notes: 2010 DALY estimates are from the Global Burden of Disease Study 2010. Countries that were ineligible for DAH based on their World Bank income classification are shown in white. DAH received is shown in real 2011 US dollars.

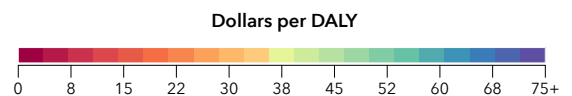
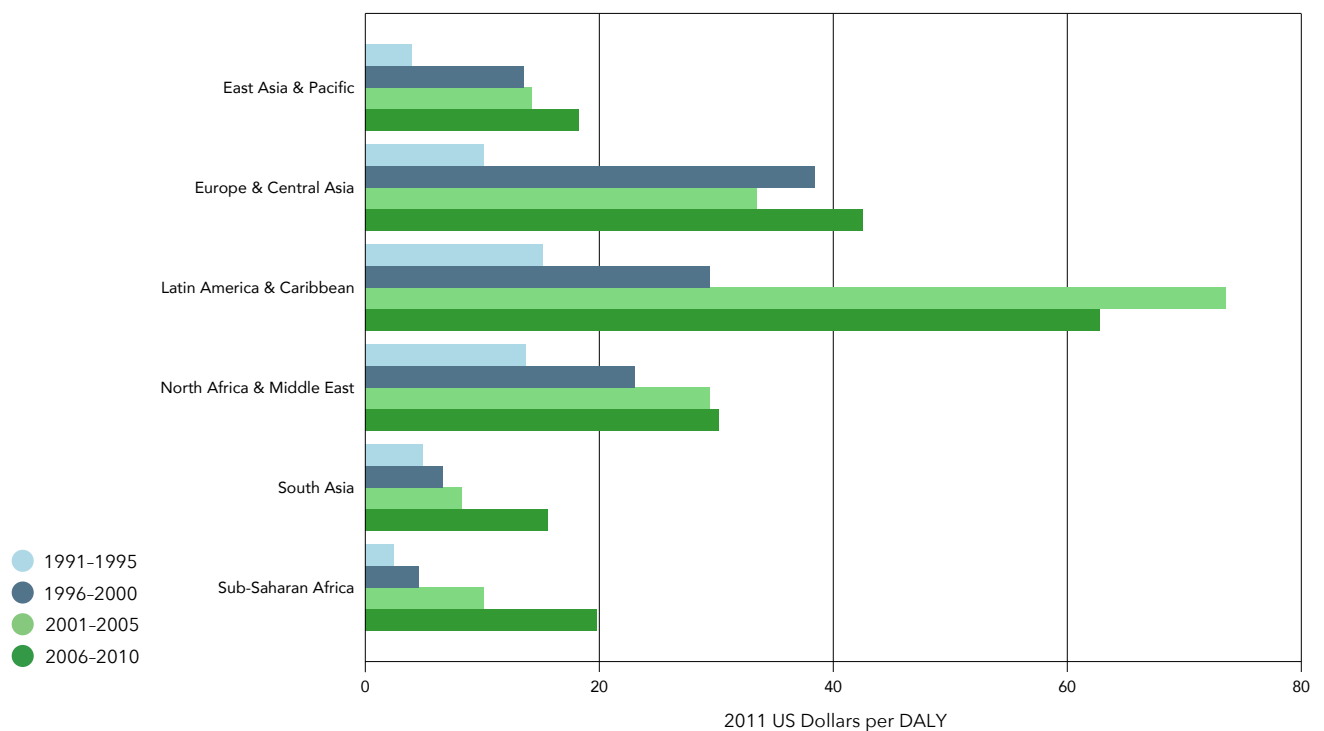


FIGURE 17

Maternal, newborn, and child health DAH over five-year periods per related DALY, by region, 1991–2010

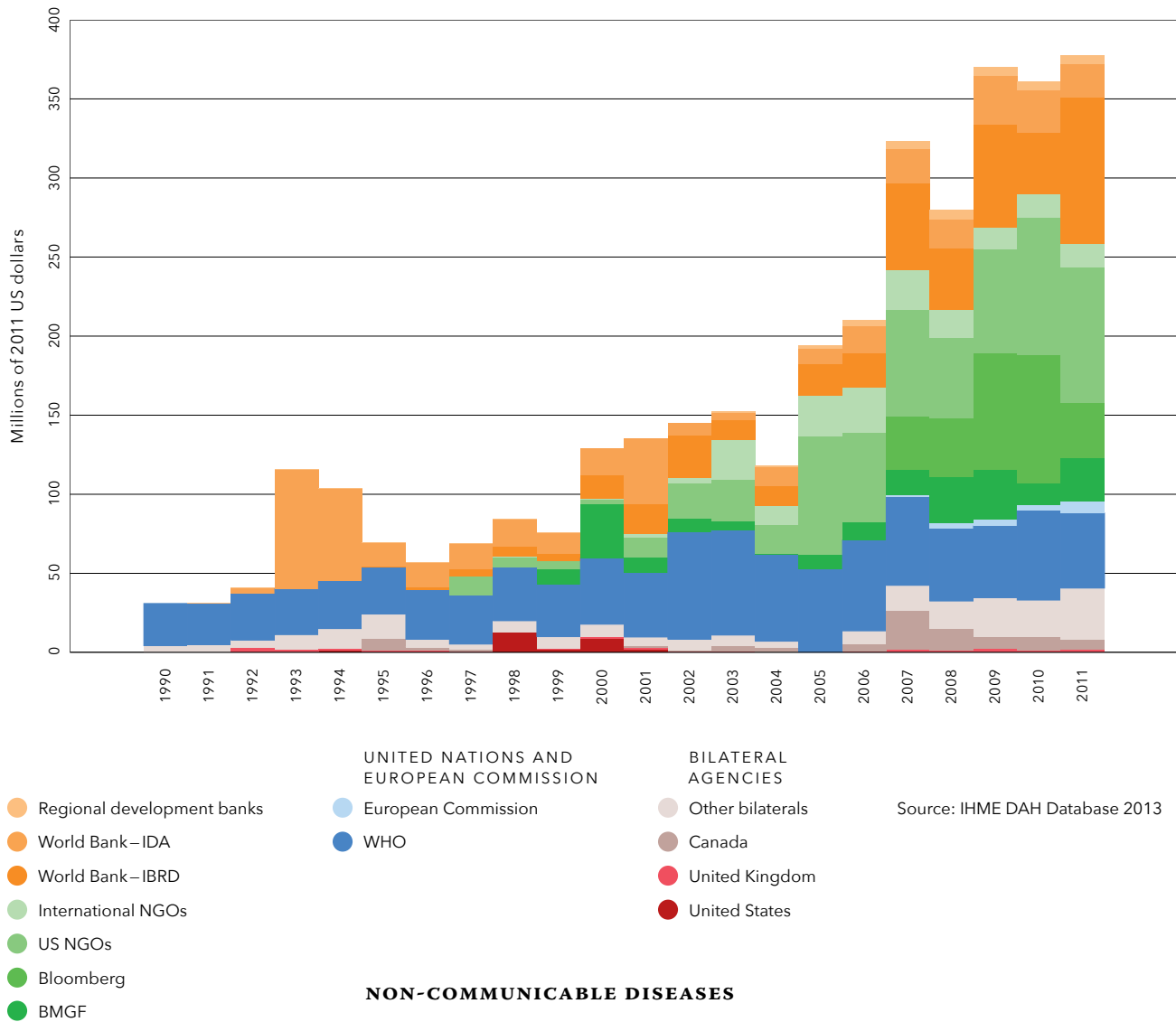


Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Note: The bars represent cumulative DAH over each five-year period.

FIGURE 18

DAH for non-communicable diseases by channel of assistance, 1990–2011



NON-COMMUNICABLE DISEASES

NCDs are on the rise in low- and middle-income countries. Diabetes, heart disease, cancers, and other illnesses increasingly affect population health in these areas. Some organizations are beginning to make NCDs a priority. In 2013, the WHO announced it would increase spending on NCDs by 20.5%.²⁹ The NCD Alliance, launched in 2009, has mobilized more than 2,000 organizations to put NCDs on the global health agenda.³⁵ These efforts augur well for future increases in NCD spending. However, across the developing world, internationally supported activities related to these health issues have not kept pace with growing need. Assistance for NCDs remains a small part of DAH overall.

In 2011, DAH for NCDs grew, although the increase remained small relative to DAH on the whole. As depicted in Figure 18, DAH for NCDs, inclusive of spending on tobacco control, amounted to over \$377 million in 2011, an increase of 4.6% over 2010. This made up 1.2% of total DAH in 2011.

A wide range of organizations provide DAH to prevent and treat NCDs. However, in 2011, overall funding for NCDs was sustained by a few key actors. Increases in

expenditure by the International Bank for Reconstruction and Development (IBRD) on this health focus area were vital to maintaining NCD spending. Since 2007, IBRD has been a major player in this field, but by 2011 its contributions had grown to 24.5% of total NCD spending. IBRD contributed \$93 million to NCDs in 2011, a \$54 million increase over 2010. Spending by international and US-based NGOs was effectively level over 2010–2011. Together, these organizations spent just over \$100 million on this health focus area in 2011, which was a slight, 1.2% decrease over 2010 expenditure on NCDs.

Select channels, however, experienced major contractions in NCD spending. Notably, the Bloomberg Philanthropies, which has historically been a major supporter of tobacco control (discussed below), reduced its spending considerably in 2011. Bloomberg provided \$35 million, 9.2% of total DAH for NCDs, in 2011. This was a major decrease over spending of \$81 million in 2010. The WHO's contributions to NCD assistance also decreased in 2011. Although the organization has been a consistent supporter of NCD efforts, in 2011 the WHO provided \$47 million, a drop of 16.8% over 2010 levels of DAH for NCDs.

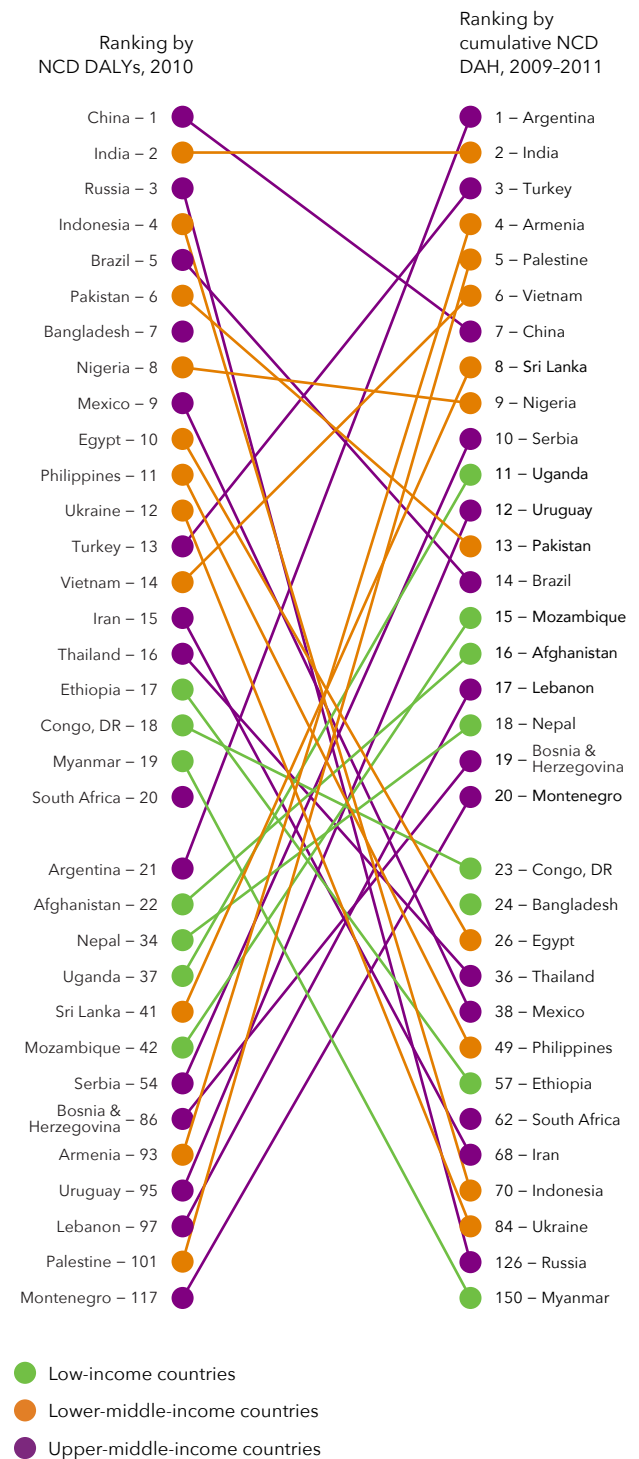
Figure 19 shows that disbursements for NCDs and the DALYs associated with this disease grouping are not well aligned. Of the top 20 recipients of cumulative DAH for NCDs, only seven are among the countries with the top 20 DALYs. Furthermore, income does not appear to play a role in DAH disbursements for this health focus area. Only four low-income countries are among the top 20 recipients of DAH for NCDs. Middle-income countries are widely present across both DALYs and cumulative DAH rankings. India and Nigeria stand apart as two countries that have well-matched DALYs and DAH. India is second on both the DALYs and DAH lists. Nigeria has the eighth-largest disease burden and receives the ninth-highest cumulative DAH.

Exploring DAH per DALY for NCDs, as shown in Figure 20, reveals the low level of investment in this area relative to disease burden. Although DAH per DALY for NCDs reaches more than \$1 in some countries, this remains much less than MNCH, HIV/AIDS, or malaria DAH per DALY. The countries receiving the highest DAH per DALY in this health focus area are diverse across regions and income groupings. Argentina, Bolivia, Costa Rica, Nicaragua, Mongolia, Mozambique, Turkey, Uganda, and a number of other countries received substantial amounts of DAH per DALY for NCDs.

Figure 21 also displays the trends in DAH per DALY associated with NCDs over time and by region. The

FIGURE 19

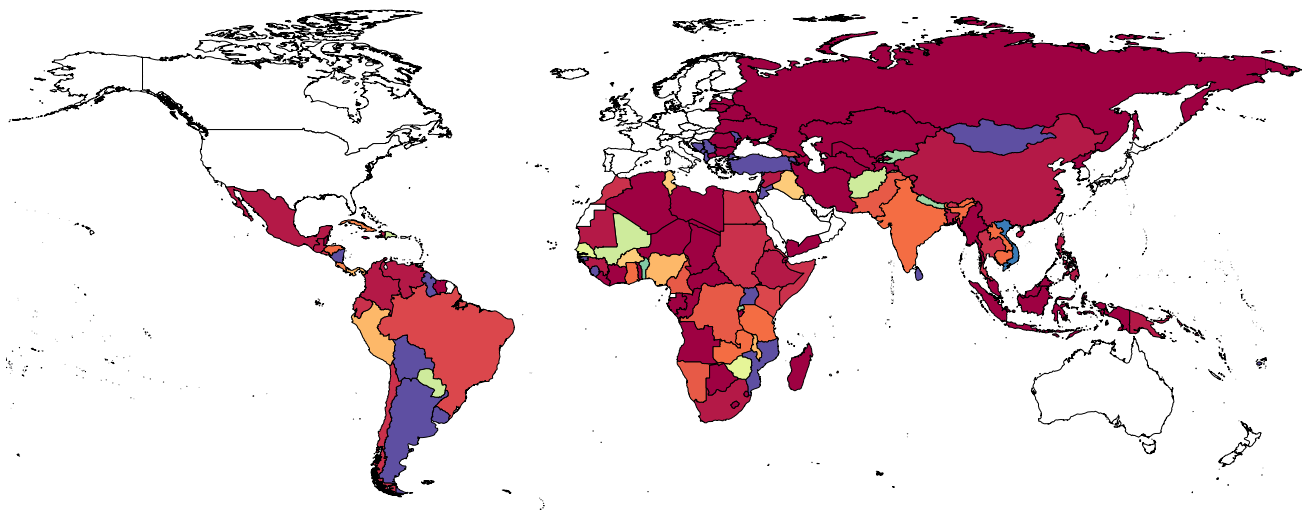
Top 20 countries by 2010 non-communicable burden of disease versus cumulative 2009–2011 non-communicable disease DAH



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

FIGURE 20

Non-communicable disease DAH, 2009–2011, per related DALY, 2010



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Notes: 2010 DALY estimates are from the Global Burden of Disease Study 2010. Countries that were ineligible for DAH based on their World Bank income classification are shown in white. DAH received is shown in real 2011 US dollars.

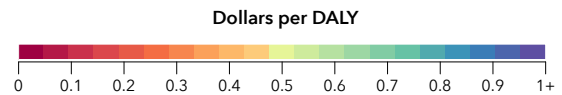
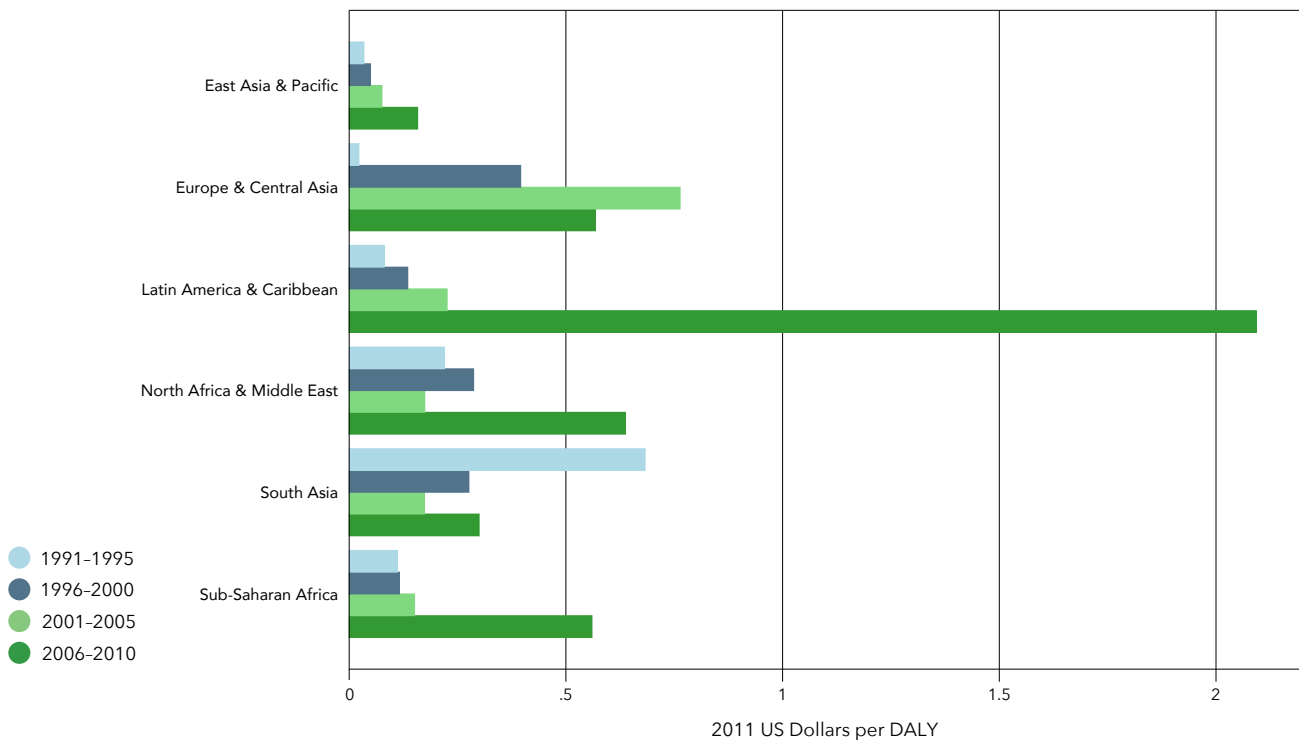


FIGURE 21

Non-communicable disease DAH over five-year periods per related DALY, by region, 1991–2010

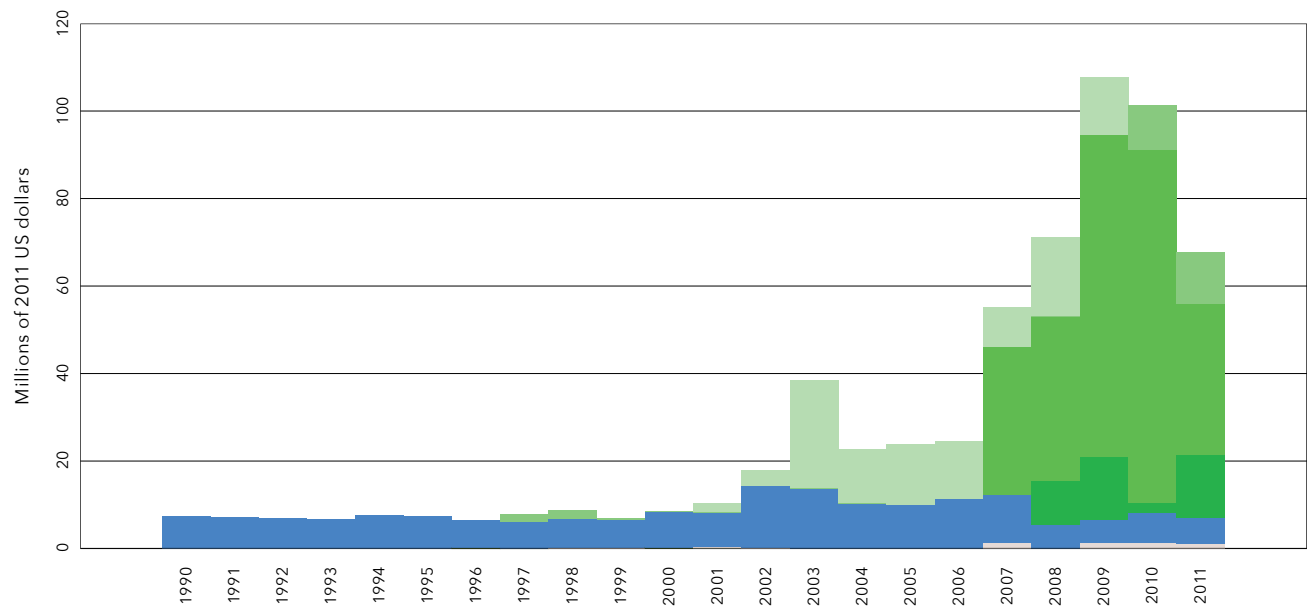


Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Note: The bars represent cumulative DAH over each five-year period.

FIGURE 22

DAH for tobacco control by channel of assistance, 1990-2011



Latin America and the Caribbean region received above and beyond the highest DAH per DALY for NCDs. Cumulative disbursements per DALY over 2006–2010 were drastically higher than the 2001–2005 period, mostly fueled by a push by PAHO. In 2006, PAHO launched a widespread initiative to combat NCDs, entitled the Regional Strategy and Plan of Action on Chronic Diseases. It also established the Collaborative Action for Risk Factor Prevention and Effective Management of NCD.³⁶ East Asia and Pacific, with a large population and rapidly growing economies, has consistently received some of the lowest DAH per DALY for NCDs. The region has not received more than 16 cents per DALY over the entire two-decade period highlighted.

- International NGOs
- US NGOs
- Bloomberg
- BMGF
- WHO
- Other bilaterals

Source: IHME DAH Database 2013

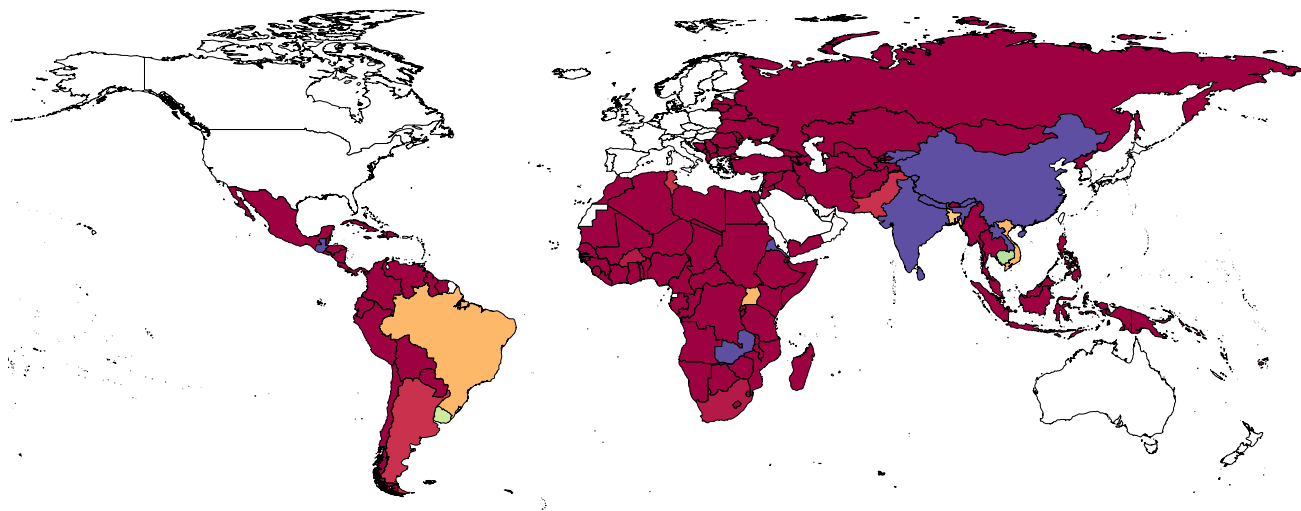
TOBACCO

To drill further into expenditure on NCDs, the DAH allocated to international efforts to control tobacco is featured in *Financing Global Health 2013*. Tobacco use is a highly preventable but growing risk factor and contributes to a substantial amount of burden in low- and middle-income countries, particularly among men. Although tobacco control receives widespread political support, the breadth of funding is still small.

Figure 22 displays the share of DAH for NCDs allocated to tobacco control, which amounted to 18% of total DAH for NCDs in 2011. In 2011, DAH for tobacco control amounted to just under \$68 million. As Figure 22 highlights, the Bloomberg Philanthropies commits by far the most on tobacco control among development assistance partners. Established in 2004, Bloomberg Philanthropies has contributed more than \$260 million to this area of global health since its inception. Its contributions appear to have peaked in 2010 at \$81 million, although in 2011, Bloomberg spending on tobacco control still amounted to \$35 million, 51.1% of total tobacco DAH. The foundation works across more than 40 developing countries, where investments

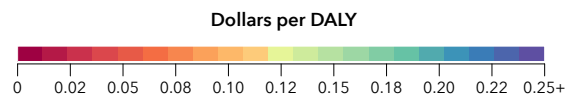
FIGURE 23

Tobacco DAH, 2009–2011, per related DALY, 2010



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Notes: 2010 DALY estimates are from the Global Burden of Disease Study 2010. Countries that were ineligible for DAH based on their World Bank income classification are shown in white. DAH received is shown in real 2011 US dollars.



range from supporting the passage of legislation to developing tobacco-use monitoring systems.³⁷

The WHO has also been a major player in the field of tobacco control, with consistent contributions to this area of global health since 1990. In 2011, WHO spending amounted to \$6 million or 8.7% of DAH for tobacco control. The WHO implements various programs to curb tobacco use in developing countries and also serves as the shepherd of the Framework Convention on Tobacco Control, organizing convention summits, supporting research and development, and pushing forward new accords, such as the 2012 Protocol to Eliminate Illicit Trade in Tobacco Products.³⁸

BOX 2

Tobacco use

January 2014 marks the 50th anniversary of the US Surgeon General's Report on Smoking and Health, one of the benchmark declarations on the negative health effects of smoking.³⁹ The World Health Organization's Framework Convention on Tobacco Control (FCTC) has also been in effect for 10 years. The FCTC was the first binding international agreement focused on a chronic, non-communicable disease. Notably, the FCTC is one of the most highly and rapidly signed and ratified conventions—only 10 UN member states have not signed this international treaty.

Despite these and other major pushes to curb smoking, recent research has found that the number of smokers worldwide continues to grow. There are 282 million smokers in China alone, with an estimated 739 million daily smokers across all low- and middle-income countries. Further investments in education and other public health measures could reduce daily smoking and prevent the illnesses associated with a risk factor that has diminished substantially in many countries.

In addition to the low level of funding disbursed, development assistance for tobacco control is very low relative to the DALYs associated with this risk factor. In 2010, 5.3% of all DALYs in low- and middle-income countries were attributable to tobacco use.⁴⁰ However, tobacco DAH per DALY at the country level remains the lowest among all of the health focus areas highlighted. At its highest, tobacco DAH per DALY is approximately 25 cents.

The range of DAH per DALY is portrayed in Figure 23. This map shows that investments are concentrated. The bulk of efforts are focused on a few places dispersed across income levels and regions. Notably, two middle-income countries, China and India, received some of the highest tobacco DAH per DALY, in addition to Zambia, Nepal, Eritrea, Guatemala, and a few other low-income countries.

Figure 24 further illuminates the imbalance between tobacco DAH and DALYs, underpinned by trends related to region and income. With the exception of China, India, and Bangladesh, none of the countries with the highest tobacco DALYs received the highest DAH related to tobacco. Many of the countries with the highest tobacco DALYs are located in South and East Asia. Not a single sub-Saharan African country is included in the DALY rankings. Furthermore, few low-income countries are among those with top tobacco DALYs and DAH. As gross domestic product rises, smoking tends to increase as individuals have more disposable income to spend on cigarettes, chewing tobacco, and other tobacco products.⁴¹ Smoking rates tend to level off, however, as countries graduate to high-income status.

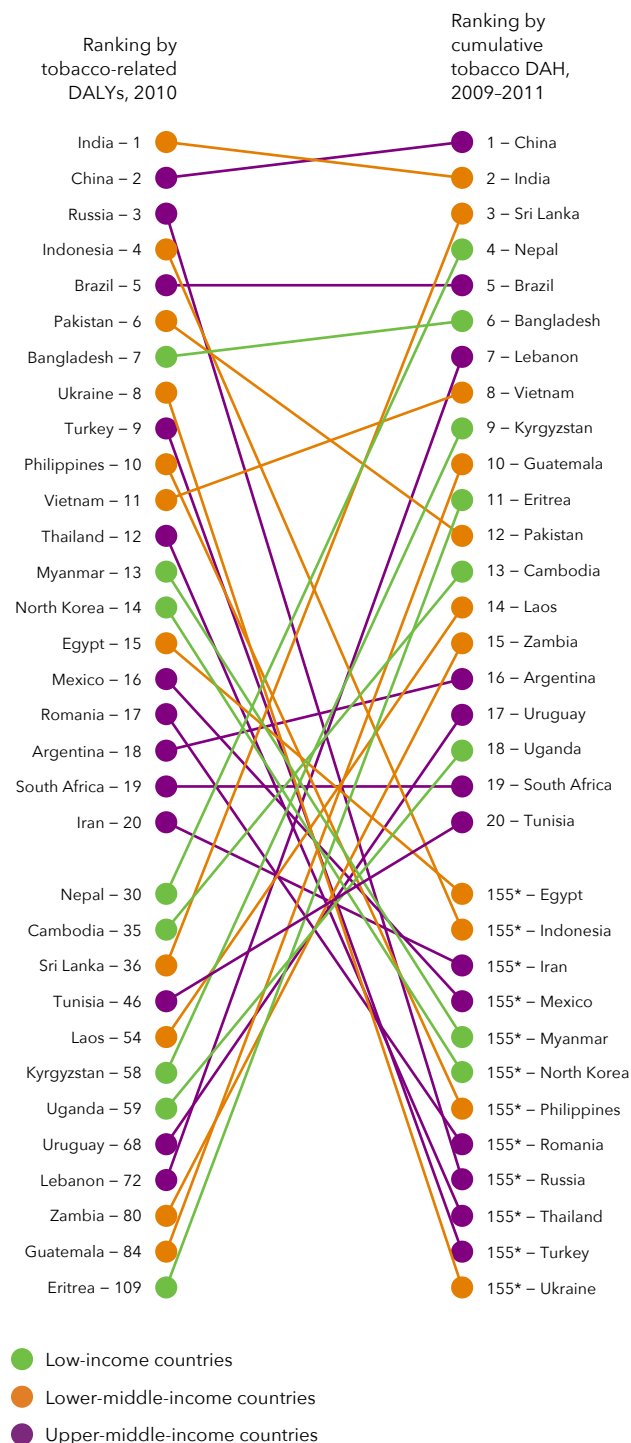
HIV/AIDS

HIV/AIDS was the fifth-leading cause of DALYs in 2010. The burden of HIV/AIDS is concentrated in sub-Saharan Africa; however, 20% of total burden is found in countries where the disease is not among the top 10 causes of DALYs. Recent estimates show that the epidemic peaked in 2005 and has been dropping worldwide since.⁴² DAH for HIV/AIDS contributed to these declines in burden by supporting HIV/AIDS services across the globe, including substantial backing for the purchase of antiretroviral drugs in low- and middle-income countries. The upholding of a substantial level of expenditure into 2011 is indicative of the wide international support associated with this major global health issue.

Among health focus areas, HIV/AIDS continued to receive the most substantial funding. In 2011, DAH for

FIGURE 24

Top 20 countries by 2010 tobacco burden of disease versus cumulative 2009–2011 tobacco DAH

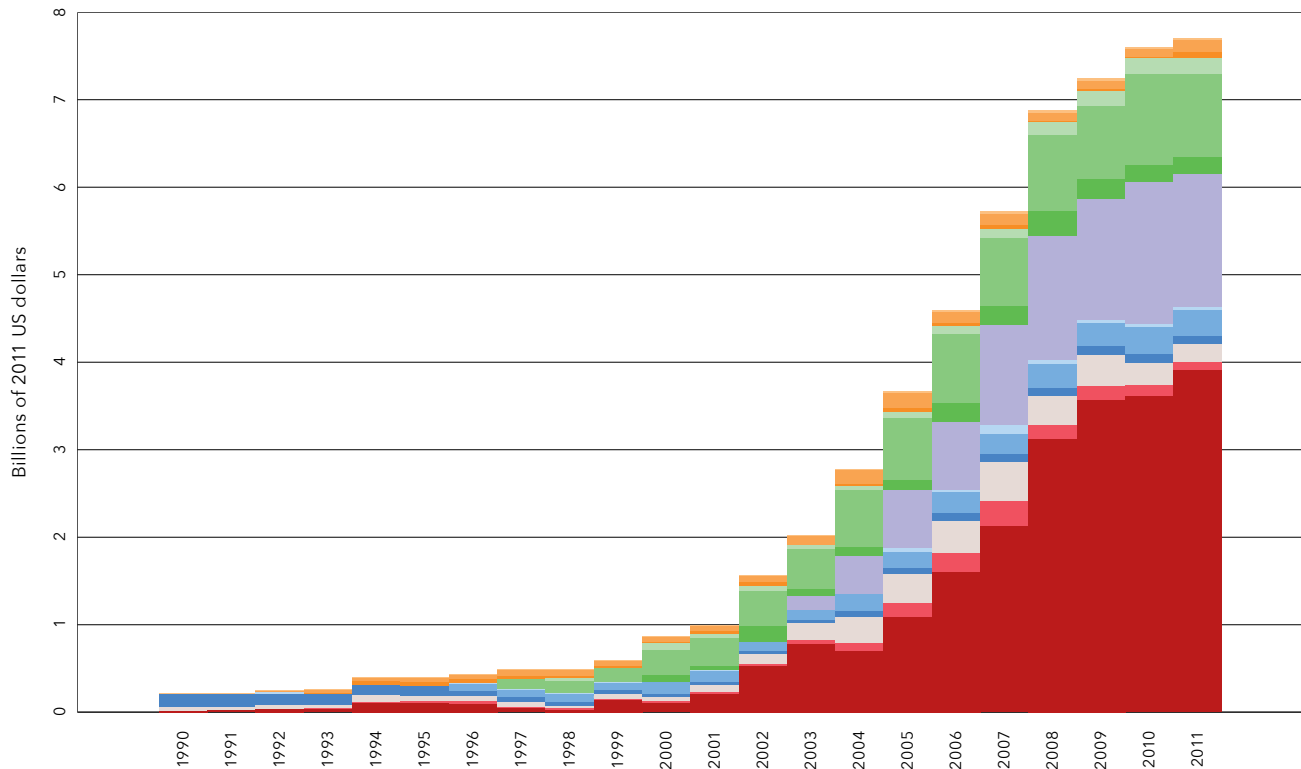


Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

*Countries that received \$0 DAH for tobacco from 2009–2011 are labeled as 155th rank, as they are tied for receiving the least amount of DAH targeted for tobacco control.

FIGURE 25

DAH for HIV/AIDS by channel of assistance, 1990–2011



- Regional development banks
- World Bank – IDA
- World Bank – IBRD
- International NGOs
- US NGOs
- BMGF
- GFATM
- UNITED NATIONS AND EUROPEAN COMMISSION
- European Commission
- UNAIDS
- WHO
- BILATERAL AGENCIES
- Other bilaterals
- United Kingdom
- United States

HIV/AIDS reached \$7.7 billion, 25.1% of total development assistance for health expenditure. Much like total DAH, HIV/AIDS spending growth from 2010 to 2011 was minor. DAH for this health focus area increased an estimated \$94 million over 2010 levels; as shown in Figure 25, the US government and GFATM were the largest contributors.

In 2011, US bilateral agencies boosted their support for HIV/AIDS with a substantial increase of \$301 million, contributing a total of \$3.9 billion to HIV/AIDS. The US’s commitment to this area of global health appears to be robust. GFATM support included in the US fiscal year 2014 budget request was the area of greatest growth in US global health aid.⁴³

Backing from GFATM, which is the second-biggest contributor to HIV/AIDS DAH, dropped slightly from 2010 to 2011. In 2011, Global Fund disbursements amounted to an estimated \$1.5 billion. As GFATM has revamped its funding and monitoring structure, the dip of 7.1% was not unexpected. However, HIV/AIDS funding may grow in future years, as the GFATM financing cycle re-gears. Furthermore, substantial commitments from OECD governments to GFATM were announced in 2012 and 2013.

Other HIV/AIDS channels stayed level or dropped in 2011. US-based NGOs spent an estimated \$940 million on HIV/AIDS, an 8.9% decrease. UK bilateral aid shrank slightly, to \$88 million. The Joint United Nations Programme on HIV/AIDS (UNAIDS), the main UN body dedicated to this health focus area, was also more or less stagnant, with a decrease of 2.1% and total spending reaching \$302 million in 2011.

Across channels of support, the international community appears to be fairly responsive to the HIV/AIDS burden, as 14 countries feature in the top 20 of both 2010

Source: IHME DAH Database 2013

DALYs and 2009–2011 cumulative DAH. As shown in Figure 26, economic profile does not seem to affect HIV DAH disbursement in the same manner it affects DAH disbursement for other health focus areas. Eleven of the top 20 DAH recipients are classified as low-income by the World Bank.

At more than \$300 per DALY in some countries, the DAH per DALY deployed for HIV/AIDS is highest among all health focus areas IHME tracks. The now-shrinking global HIV/AIDS epidemic continues to be concentrated in certain countries in sub-Saharan Africa. Figure 27 highlights Namibia and Botswana as among the countries that receive upward of \$300 per DALY. A number of other countries, including Mongolia, Papua New Guinea, Yemen, and Guyana, receive substantial HIV/AIDS DAH per DALY as well.

However, some of the countries with the highest HIV/AIDS burden receive low levels of DAH per DALY. Despite ample funding, disease burden surpasses even substantial DAH investments in some areas. South Africa, Tanzania, Nigeria, and Mozambique suffered from the top-five highest HIV/AIDS burdens. These countries also received among the highest HIV/AIDS DAH. Nonetheless, the high level of disease burden translates into DAH per DALY of less than \$40 in these countries, as shown in Figure 27.

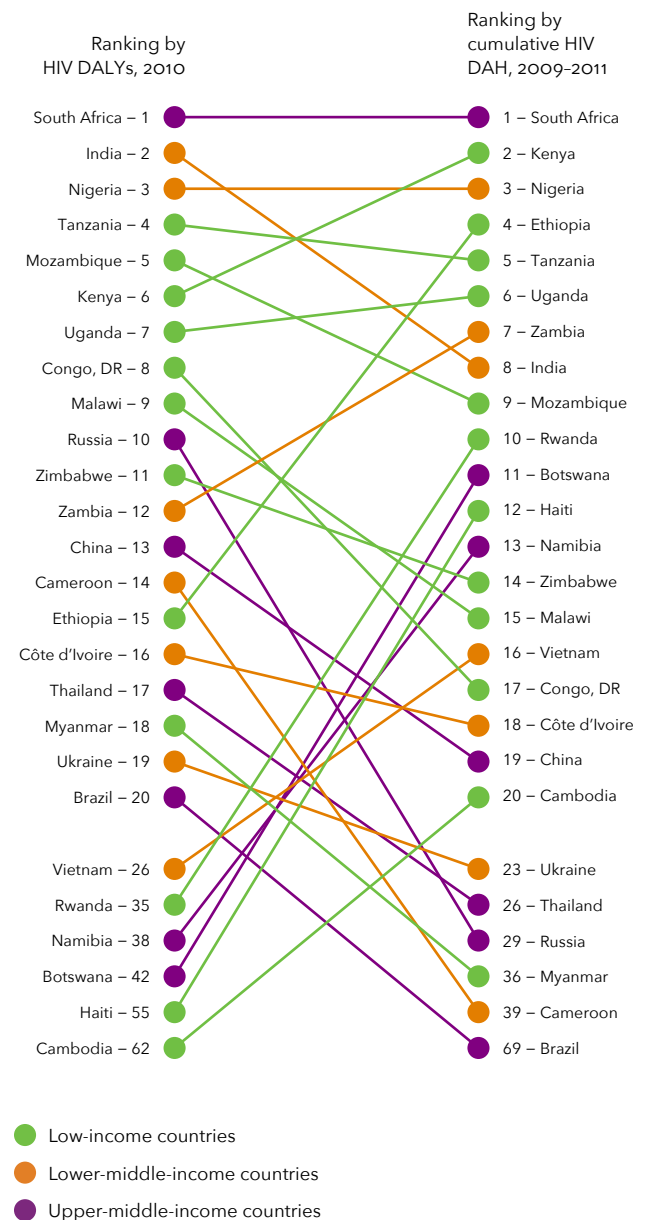
Furthermore, trends over time and across regions show that sub-Saharan Africa on the whole still receives some of the lowest DAH per DALY, at \$291 from 2006–2010. As depicted in Figure 28, this rate has expanded over time but still falls far behind the DAH per DALY values observed in North Africa and the Middle East and Latin America and the Caribbean, both of which exceeded \$400 cumulatively over 2006–2010. Although at much lower levels of spending, the Europe and Central Asia region and South Asia alone received DAH per DALY amounting to \$255 and \$138, respectively.

TUBERCULOSIS

HIV-positive individuals are more likely to develop TB, which is increasingly more difficult and costly to treat as multidrug-resistant and extensively drug-resistant strains emerge. The rise in prevalence of HIV/AIDS and TB is not uniform in magnitude and geographic scope, however. Furthermore, TB DAH has not kept pace with HIV/AIDS funding. Figure 29 shows that, following five years of rapid growth, international expenditure on TB declined from 2010 to 2011. TB DAH underwent a 9.8%

FIGURE 26

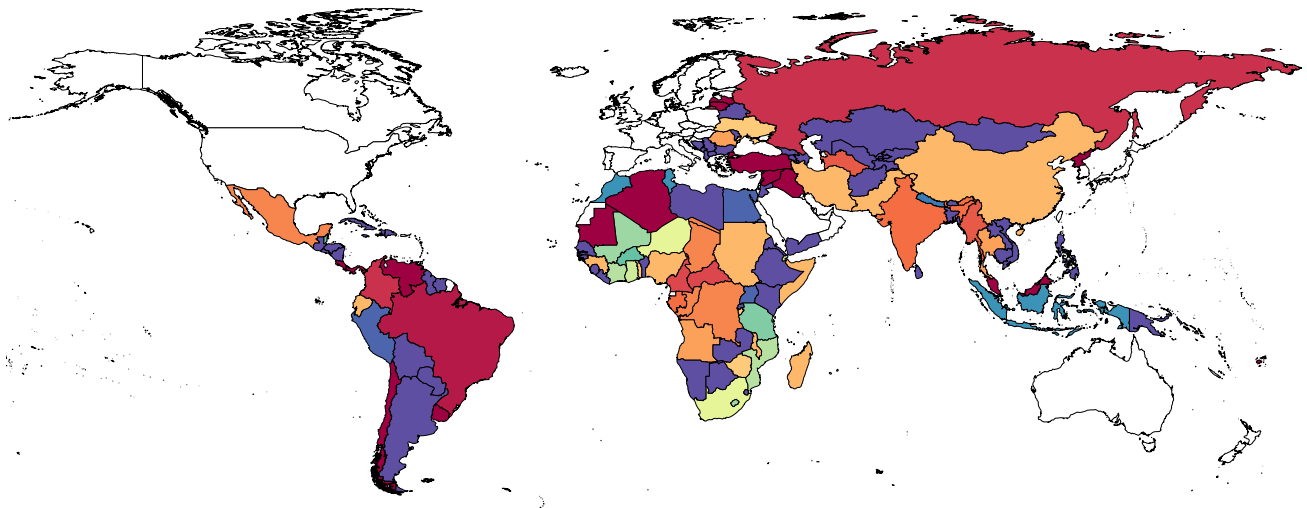
Top 20 countries by 2010 HIV/AIDS burden of disease versus cumulative 2009–2011 HIV/AIDS DAH



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

FIGURE 27

HIV/AIDS DAH, 2009-2011, per related DALY, 2010



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Notes: 2010 DALY estimates are from the Global Burden of Disease Study 2010.

Countries that were ineligible for DAH based on their World Bank income classification are shown in white. DAH received is shown in real 2011 US dollars.

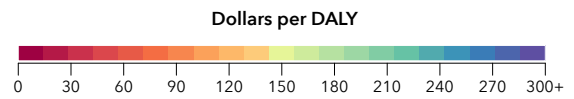
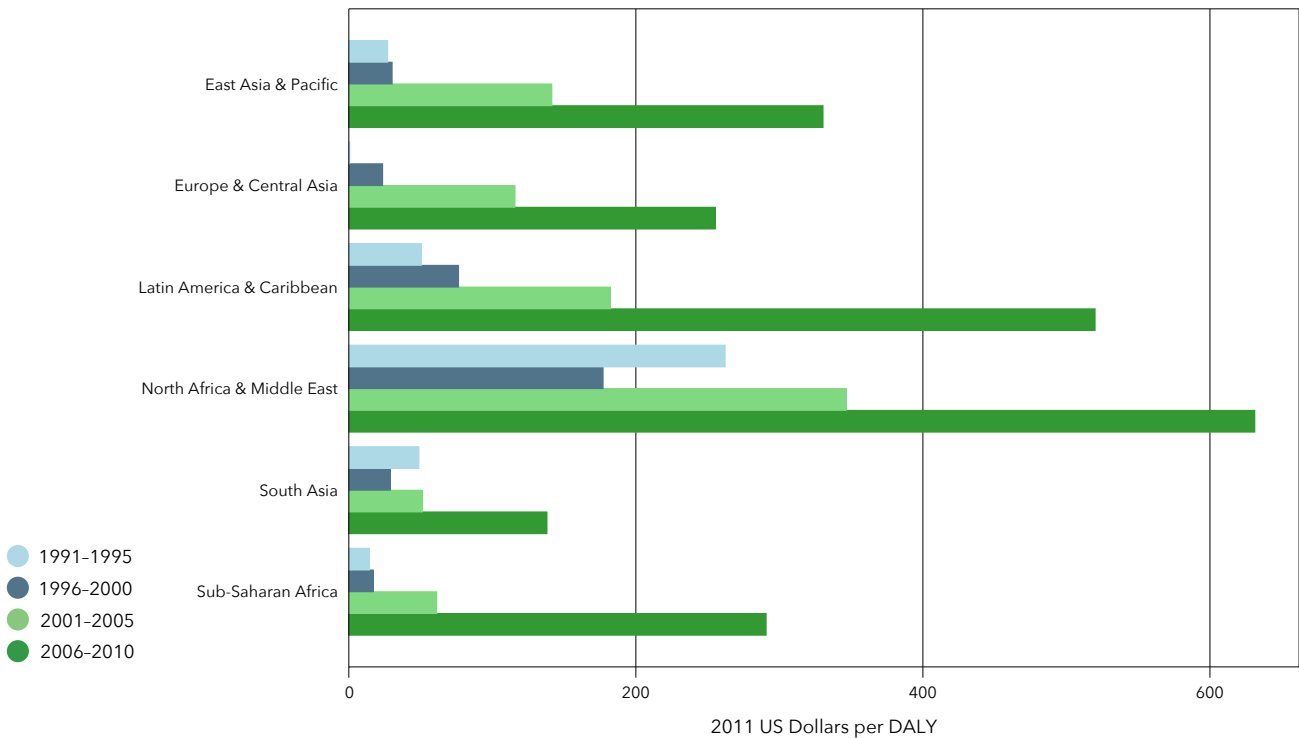


FIGURE 28

HIV/AIDS DAH over five-year periods per related DALY, by region, 1991-2010

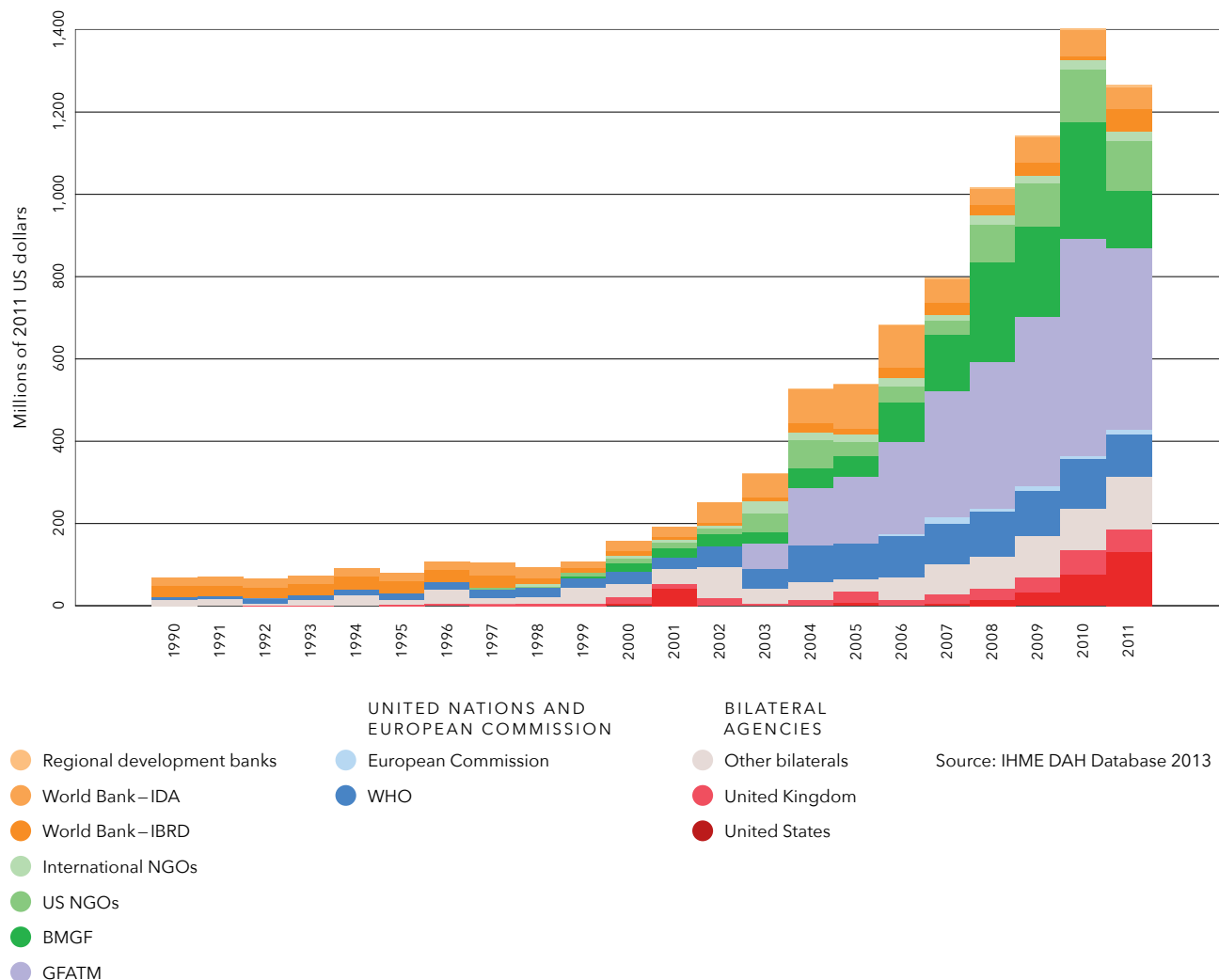


Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Note: The bars represent cumulative DAH over each five-year period.

FIGURE 29

DAH for tuberculosis by channel of assistance, 1990–2011



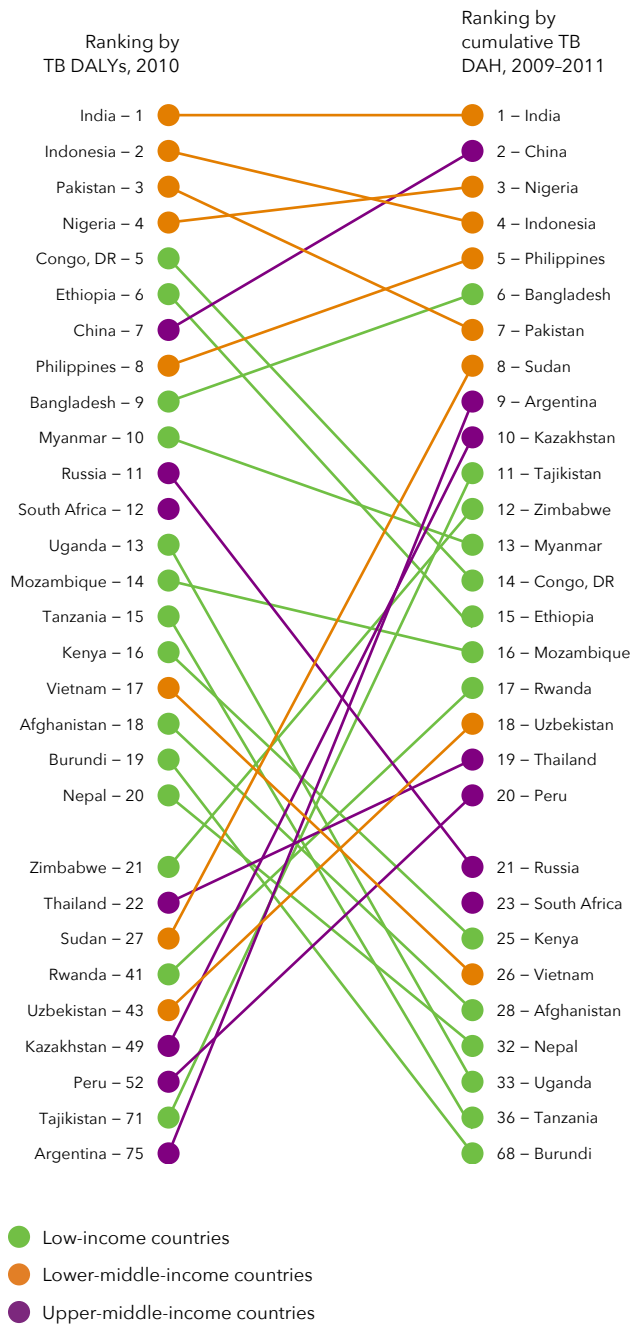
contraction in 2011, amounting to a drop of \$138 million relative to 2010. Total DAH for this health focus area came in at \$1.3 billion in 2011, putting spending far from the WHO’s target of approximately \$2 billion in TB financing annually over 2013–2015.⁴⁴

The drop is due to decreases in financing provided by core TB development assistance partners in 2011, as shown in Figure 29. As the major funder of the fight against TB, GFATM’s decrease in expenditure drove the overall reduction in TB DAH. Its TB DAH fell from a high of \$529 million in 2010 to \$440 million in 2011, a 16.8% decrease. Again, however, Global Fund investments are expected to rebound in 2012 and 2013. Another notable drop was observed in the funds provided by BMGF. In 2010, BMGF funds for TB were an estimated \$283 million. By 2011, \$140 million was provided by BMGF.

A sharp decrease in TB DAH was avoided mainly because of a major expansion in US bilateral assistance. US DAH for TB rose substantially over 2010 levels. In 2011, 69.5% growth in US bilateral assistance for tuberculosis resulted in \$131 million in DAH disbursed for this health focus area.

FIGURE 30

Top 20 countries by 2010 tuberculosis burden of disease versus cumulative 2009–2011 tuberculosis DAH



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Figure 30 shows that TB DAH as well as DALYs span income levels and regions. While the majority of countries with the highest TB DALYs are low- or lower-middle-income, China, Russia, and South Africa stand out as upper-middle-income countries on the list. On the financing side, multiple upper-middle-income countries receive substantial amounts of DAH for TB. China is ranked second, as it received the second-most absolute DAH focused on TB over 2009–2011. Four other upper-middle-income countries received enough TB DAH to be listed: Argentina, Kazakhstan, Thailand, and Peru.

Figure 31 presents DAH and DALYs together, encapsulating the relationship between burden and development assistance for TB. Efforts to reduce tuberculosis DALYs, as represented by TB DAH per DALY, take place in a wide range of countries. Notably, South America, Central and East Asia, and certain countries in Southern Africa receive levels of TB DAH per DALY of more than \$100. In other parts of sub-Saharan and North Africa, as well as in India, TB DAH disbursements are not as high.

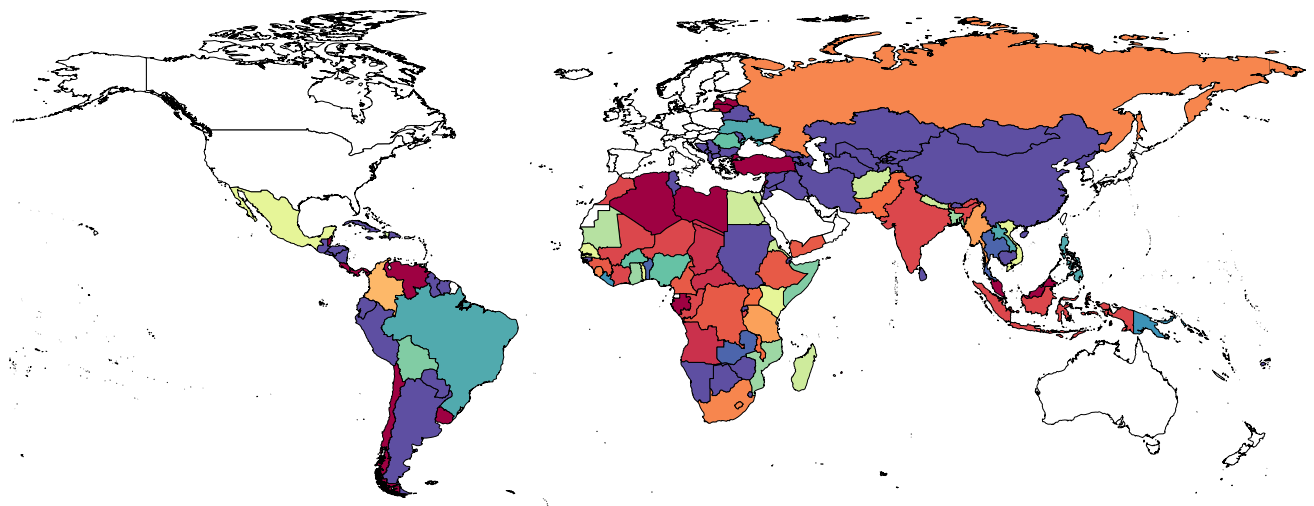
As shown in Figure 32, TB DAH per DALY has almost uniformly grown across regions and time. Levels have increased most substantially in Europe and Central Asia, due largely to the investments of neighboring countries. Latin America and the Caribbean also benefited greatly over the 2006–2010 period. Multidrug-resistant TB has been of concern in this region, and much of the funding has focused on combating this quickly evolving strain of the disease, although its growth in China, India, and Russia is also of note.⁴⁵ Sub-Saharan Africa and East Asia and the Pacific have historically received lower levels of TB DAH per DALY, although both received more than \$50 cumulatively from 2006–2010. The lower rates are tied to the high level of DALYs in these regions, which even when combined with substantial levels of DAH, convert into lower levels of DAH per respective DALY.

MALARIA

Malaria is another key focus of international efforts to combat infectious diseases. GFATM, BMGF, and the US have, in particular, expanded support for this global health focus area since 2000. Malaria is the fourth leading cause of DALYs in low- and middle-income countries but is most pronounced in sub-Saharan Africa, where *Plasmodium falciparum* affects millions of

FIGURE 31

Tuberculosis DAH, 2009-2011, per related DALY, 2010



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Notes: 2010 DALY estimates are from the Global Burden of Disease Study 2010. Countries that were ineligible for DAH based on their World Bank income classification are shown in white. DAH received is shown in real 2011 US dollars.

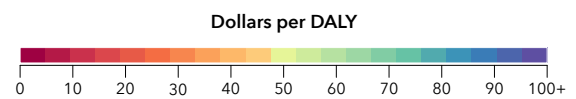
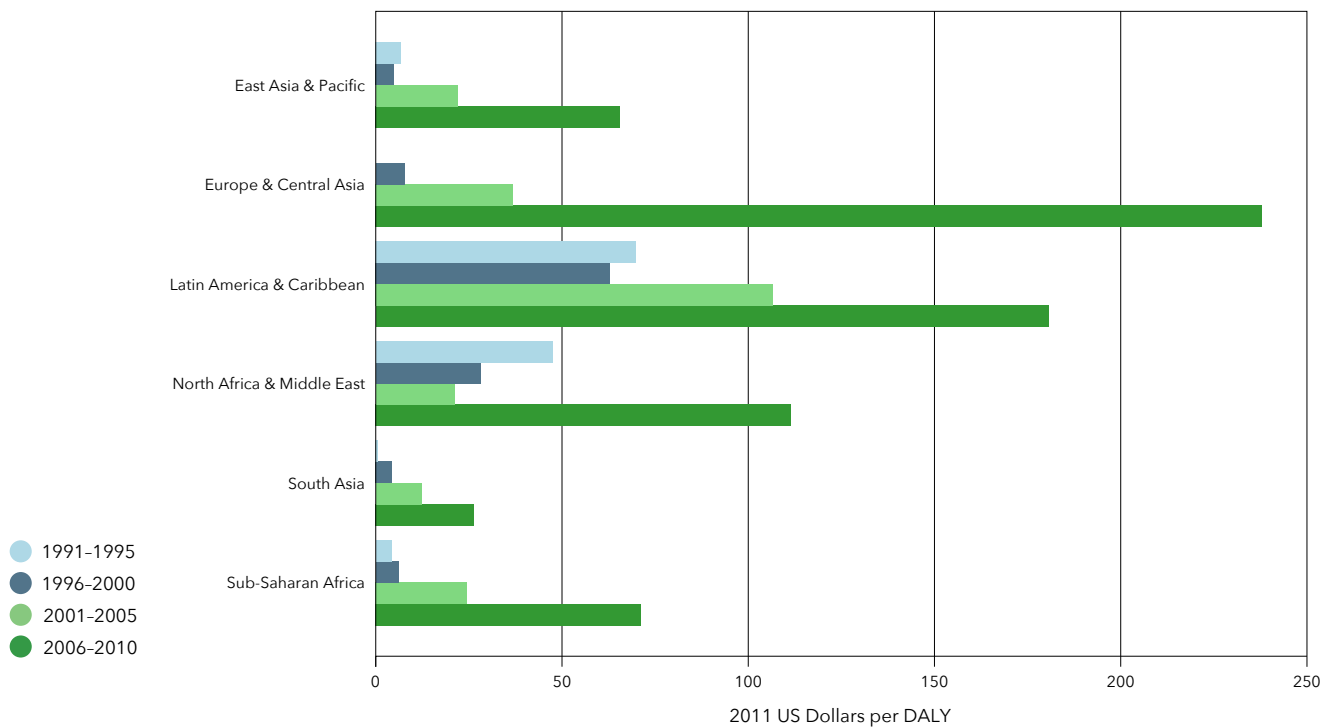


FIGURE 32

Tuberculosis DAH over five-year periods per related DALY, by region, 1991-2010

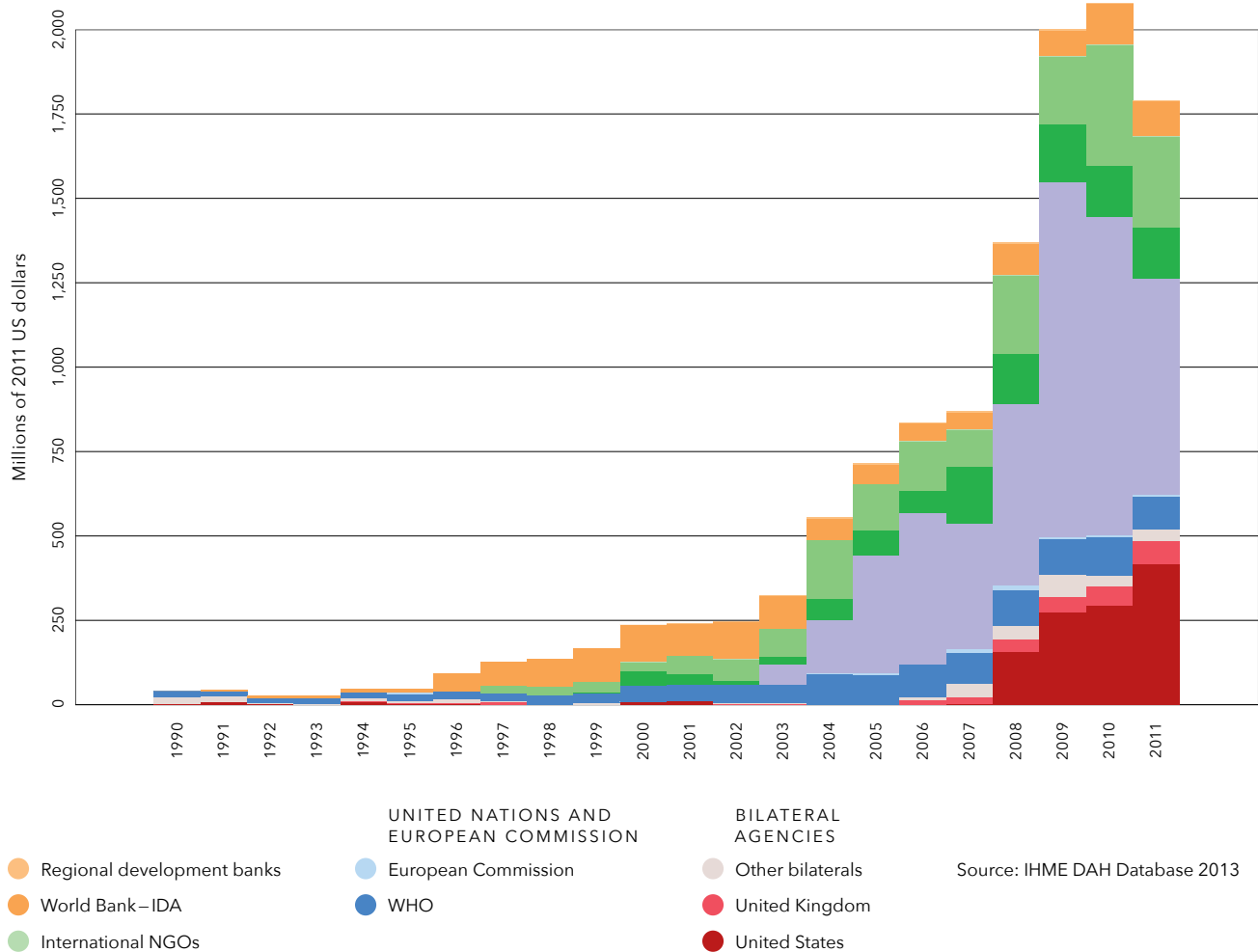


Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Note: The bars represent cumulative DAH over each five-year period.

FIGURE 33

DAH for malaria by channel of assistance, 1990-2011



Source: IHME DAH Database 2013

children and adults annually.^{46,47} Outside sub-Saharan Africa, where the disease burden is lower but still present, different strains of malaria, mostly *Plasmodium vivax*, are the leading causes of infection. Development assistance supports a number of activities designed to combat the disease, including the provision of artemisinin-based combination therapies, rapid-diagnostic testing, the distribution of insecticide-treated nets, and indoor residual spraying.

Much like the DAH disbursed for TB, the DAH allocated to malaria declined between 2010 and 2011. At its peak in 2010, malaria DAH was as high as \$2.1 billion. By 2011, malaria DAH had decreased 13.9% from that point, with a sum of \$1.8 billion disbursed in that year. Despite making up 5.8% of DAH, malaria DAH falls short of the \$5.1 billion target for annual financing established in the 2008 Global Malaria Action Plan.⁴⁸

As shown in Figure 33, this downward-sloping trend is driven predominately by reductions in disbursements by GFATM. Providing 35.8% of all international malaria funding, GFATM was by far the biggest channel of DAH in this health focus area in 2011. GFATM disbursed just \$641 million in malaria DAH in 2011, a decrease of 32.1% from 2010. Fortunately, GFATM’s contribution to malaria is expected to rise in

coming years as the organization deploys newly pledged funds across the three primary disease areas included in its mandate.

Among other channels, both decline and expansion were observed. Contributions from the US, the second-largest development assistance partner in this health focus area, grew \$123 million from 2010 to 2011. US malaria DAH amounted to an estimated \$416 million in 2011. This 41.8% rise was largely fueled by increased disbursements by the US President's Malaria Initiative. Next after the US, US-based NGOs provided \$267 million in funds to malaria activities. This was a contraction of \$90 million, or 25.1%, from 2010. Funding from internationally based NGOs also dropped. In 2011, \$3.4 billion was disbursed by these entities, a 16% reduction from 2010 levels. Simultaneously, the level of support provided by BMGF was more or less stable. In 2010, BMGF provided \$149 million, while in 2011 its contribution amounted to \$151 million, a 1.5% increase.

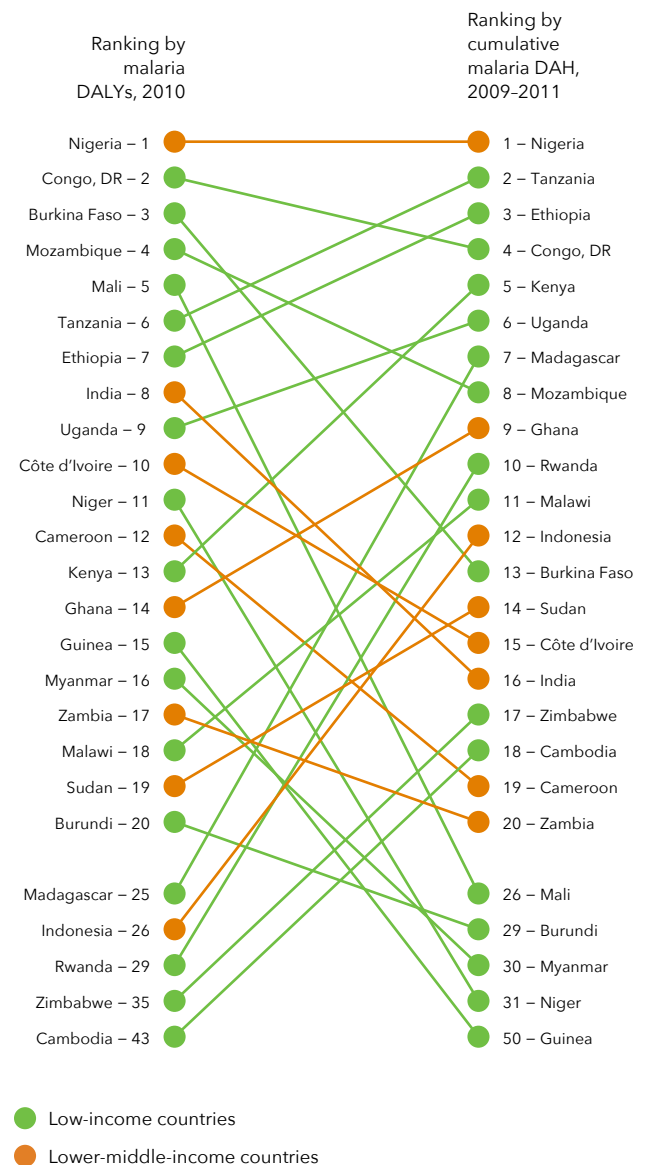
Figure 34 highlights how prominent sub-Saharan Africa is in both malaria burden and malaria control financing. It also shows how well income level and the presence of malaria correspond. Not a single upper-middle-income country is found in the rankings of cumulative DAH and DALYs associated with malaria. The most populous country in sub-Saharan Africa, Nigeria, tops both lists. Nigeria suffers from the highest malaria burden while also receiving the most malaria DAH. Following Nigeria, the next six countries are all low-income and all located in sub-Saharan Africa. Across the top 20 on both rankings, India is the only country not located in the region.

Pairing malaria DAH with malaria DALYs reveals the variation in disbursements across countries when controlling for disease burden. Figure 35 displays this range of DAH per DALY across countries with malaria. Malaria is prevalent in parts of Asia and South and Central America, but rates are highest in sub-Saharan Africa. The high number of DALYs attributed to malaria south of the Sahara drives the DAH per DALY metric downward; malaria DAH per DALY ranges around \$20 across sub-Saharan African countries. In South America and East Asia, however, each malaria DALY was associated with more than \$200 in DAH in many countries.

Sub-Saharan African DAH per DALY also stands out as low when looking across regions over time. As shown in Figure 36, sub-Saharan Africa received \$55 of DAH per DALY cumulatively over 2006–2010. Simultaneously, striking, massive investments in malaria control were

FIGURE 34

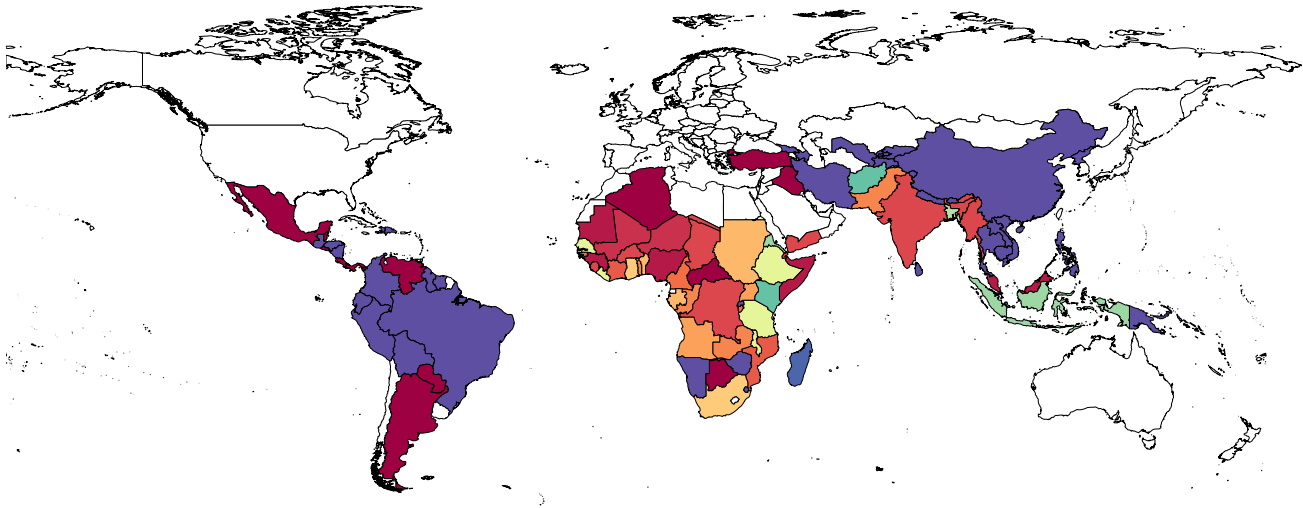
Top 20 countries by 2010 malaria burden of disease versus cumulative 2009–2011 malaria DAH



Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

FIGURE 35

Malaria DAH, 2009-2011, per related DALY, 2010



Sources: IHME DAH Database 2013, Global Burden of Disease Study 2010, and World Malaria Report 2012

Notes: 2010 DALY estimates are from the Global Burden of Disease Study 2010. Countries that were ineligible for DAH based on their World Bank income classification and countries not considered malaria-endemic by the World Malaria Report 2012 are shown in white. DAH received is shown in real 2011 US dollars.

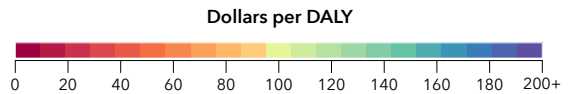
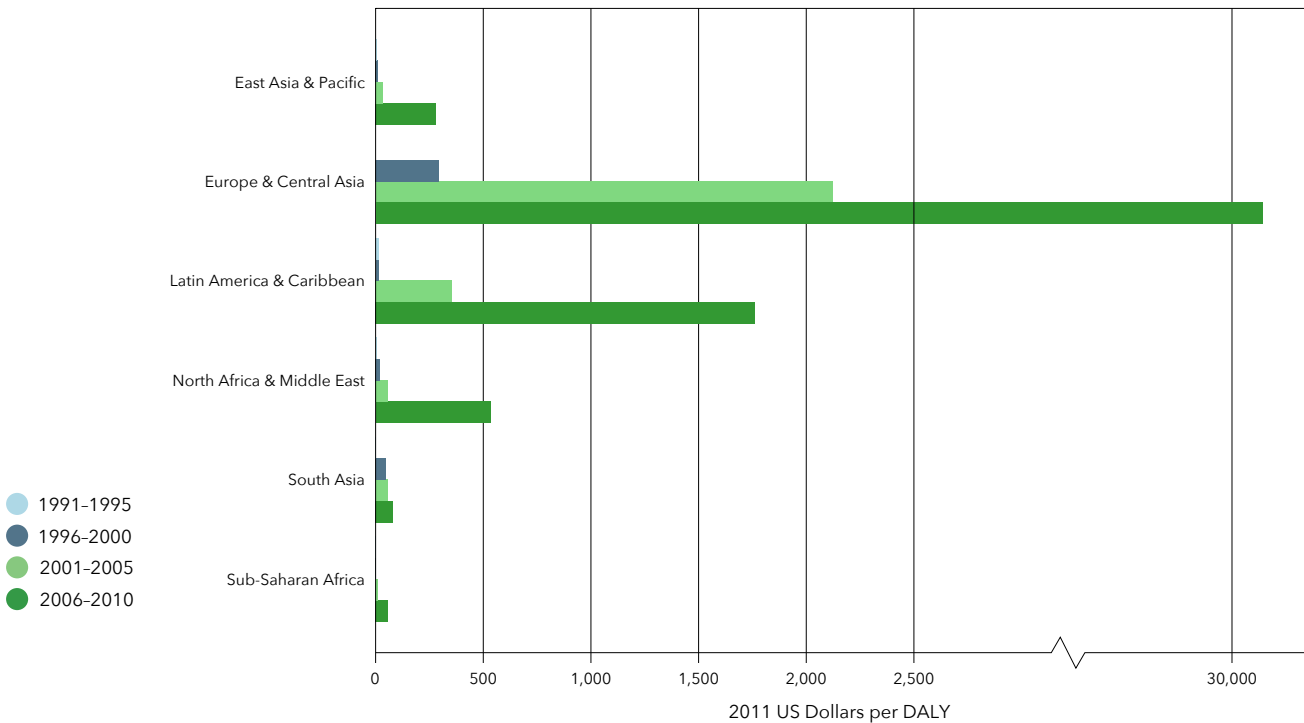


FIGURE 36

Malaria DAH over five-year periods per related DALY, by region, 1991-2010

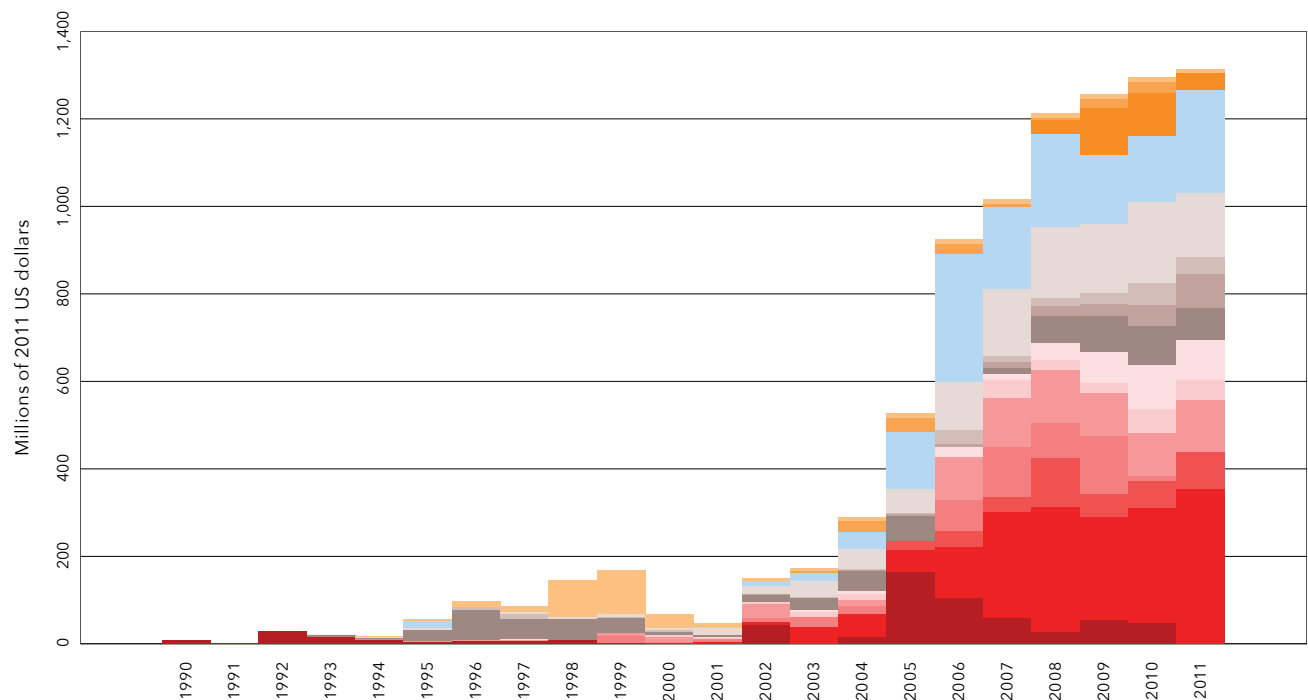


Sources: IHME DAH Database 2013 and Global Burden of Disease Study 2010

Note: The bars represent cumulative DAH over each five-year period.

FIGURE 37

DAH for health sector support by channel of assistance, 1990–2011



made in Europe and Central Asia over 2001–2005 and 2006–2010. Malaria emerged in this region in the mid-1990s.⁴⁹ In response, development assistance partners convened a major effort to keep malaria at bay in the region. Lastly, Latin America and the Caribbean also received more than most other regions. Over 2006–2010, \$1,762 of DAH per DALY was disbursed.

HEALTH SECTOR SUPPORT

IHME defines health sector support as the DAH provided to developing country governments to spend on general health priorities, such as building health facilities or training personnel. This health focus area has grown because certain bilateral partners emphasized sector-wide approaches (swaps) as more effective mechanisms of DAH disbursement. The Paris Declaration on Aid Effectiveness also emphasized swaps as in line with basic principles of effectiveness.⁵⁰

The most prominent backers of health sector support are shown in Figure 37. The UK and the European Commission (EC) shored up this area of development assistance for health by providing 26.9% and 18%, respectively, of the total in 2011. UK health sector support rose an estimated 34.7% in 2011, to \$354 million. The EC provided \$236 million, a 58.5% increase relative to 2010. The Netherlands also expanded its support substantially in 2011, increasing its contribution by 21%, up to \$120 million in 2011. Finally, DAH from Denmark also constituted a major portion of health sector support. Its contribution was 5.7% of total funding for this health focus area in 2011. Denmark’s funding for health sector support, however, decreased relative to 2010 levels: it provided \$75 million in 2011, a 15.5% decrease.

- Regional development banks
 - World Bank–IDA
 - World Bank–IBRD
 - European Commission
- BILATERAL AGENCIES**
- Other bilaterals
 - Australia
 - Canada
 - Denmark
 - Germany
 - Ireland
 - Netherlands
 - Norway
 - Spain
 - United Kingdom
 - United States

Source: IHME DAH Database 2013