

REPORT ON FEASIBLE WAYS TO MONITOR THE ACHIEVEMENT OF THE FINANCIAL-RELATED TARGETS OF THE 2016 POLITICAL DECLARATION

Additional documents for this item: none

Action required at this meeting – the Programme Coordinating Board is invited to:

See draft decision point in the paragraphs below:

55. *Take note* of the report and the existing HIV resource tracking frameworks, tools and methods to monitor annually the HIV resource availability for the response to AIDS;
56. *Renew* call to all countries to improve their systematic reporting and institutionalization of systematic data collection, analysis and use of the results, as well as routine reporting to UNAIDS through the Global AIDS Monitoring (GAM) annual cycles;
57. *Welcome* UNAIDS' role in resource tracking activities and the annual publication of resource availability estimates;
58. *Further acknowledge* the existing funding challenges for capacity building, provision of technical support and quality assurance for HIV resource tracking processes;
59. *Encourage* all countries to increase domestic spending on the HIV response and explore innovative ways to close the funding gap;
60. *Commend* high-income countries for their report on bilateral and multilateral disbursements and encourage them to contribute to closing the funding gap in low- and middle-income countries, and invite them to report their own domestic HIV expenditures.
61. *Request* UNAIDS to present to the 43rd Programme Coordinating Board meeting a report on the work of the Joint Programme to ensure the sustainability of HIV response results in the SDG era.

Cost implications for decisions: none

EXECUTIVE SUMMARY

UNAIDS has been mandated to conduct financial resource tracking since the first financing target for the global HIV response was adopted by the United Nations General Assembly in the 2001 United Nations Political Declaration on HIV/AIDS. This work is now also guided by the specific financing targets highlighted in the 2016 Political Declaration on Ending AIDS:

- Commit to increase and fully fund the HIV response from all sources, with overall financial investments in developing countries reaching at least US\$ 26 billion/year;
- Commit to ensure that financial resources for prevention are adequate and constitute no less than a quarter of global HIV spending on average;
- Ensure at least 6% of HIV resources are allocated for social enabling activities, including advocacy, community and political mobilization, community monitoring, public communication, and outreach programmes for rapid HIV tests and diagnosis, as well as for human rights programmes such as law and policy reform, and stigma and discrimination reduction.

Several frameworks and tools have been developed to monitor the HIV resources that are mobilized and spent in low- and middle-income countries. Each approach has comparative advantages and drawbacks.

For monitoring global financing flows, UNAIDS uses data collected through processes such as the OECD/DAC creditor reporting system and a collaboration with the Kaiser Family Foundation, which gathers data directly from the main donor countries.

For actual in-country expenditures, several approaches exist, though most are not HIV-specific. They include public expenditure reviews, budget analysis and the System of Health Accounts. The National AIDS Spending Assessment (NASA) was specifically developed to track HIV financing flows and expenditures.

When properly completed, the NASAs estimate expenditures for each of the five pillars of prevention (including investments for key populations), as well as for social enablers and for support to civil society organizations that provide services. These results are used as inputs for allocative and technical efficiency analyses. The NASA analyses can also estimate service-by-service funding gaps, identify opportunities to improve efficiencies in service or geographic areas, and describe current financing schemes to clarify the sustainability of financing arrangements for each core service delivery area.

Resource-tracking results are used to benefit country programmes, with global reporting a secondary objective. Countries may choose a methodology that reduces their reporting burden while providing granular results that are most useful for programme improvement. However, technical assistance funding is rarely available for building, upgrading and institutionalizing these information systems.

UNAIDS continues to promote annual country reporting through the Global AIDS Monitoring process. A main indicator (8.1) and eight sub-indicators are used to track domestic and international HIV expenditure by categories and funding sources. The data are collected through the NASAs and other internationally accepted methods. Although countries have committed to regular reporting, they have provided UNAIDS with limited information in recent years.

UNAIDS uses these data to produce estimates of annual HIV resource availability for low- and middle-income countries. When resource availability is compared to resource needs estimates, a crude funding gap is calculated.

The difference between the annual resource needs in 2020 (US\$ 26 billion) and available resources in 2016 (US\$ 19 billion) was approximately US\$ 7 billion (in constant 2016 dollars). The funding gap varies significantly by region. Countries are encouraged to conduct periodic, in-depth HIV resource tracking, using the NASA for efficiency and gap analyses. Technical assistance and quality assurance needs to be strengthened for that purpose. The international expenditure tracking systems could serve countries more effectively once they are fully coordinated.

INTRODUCTION

1. The first global resource needs estimate was adopted in the United Nations (UN) General Assembly's 2001 Political Declaration on HIV/AIDS.¹ Since then the UNAIDS Secretariat has been tasked with issuing guidance and recommendations for HIV resource tracking. The aim is to monitor the mobilization of resources as agreed by UN Member States and to collect country data and annually report financial resource data to the UN Secretary-General and the public.
2. Existing resource-tracking frameworks, tools and exercises include health sector and HIV-specific approaches. Some of these tools monitor international global flows, while others focus on in-country expenditures. The existing approaches include budget and planning analyses, public expenditure reviews, official development assistance (ODA) reporting systems, ad hoc surveys to account for philanthropic and donor government disbursements, and expenditure analyses. A few social accounting approaches attempt to measure all the financing flows and expenditures for a sector. The System of Health Accounts focuses on the health system, while the National AIDS Spending Assessment (NASA) focuses on the multisectoral HIV response.
3. The NASA is the UNAIDS-recommended methodology for HIV response in-country expenditure tracking. NASAs describe the use of financial resources from their origin and management down to the level of utilization of services, classified by type (HIV spending categories) and beneficiaries. NASA results can be entered easily into the reporting templates used for Global AIDS Monitoring (GAM), the UNAIDS-coordinated system which countries use to report progress against targets agreed to by the UN General Assembly. Data from other methods or frameworks can also be used to populate the GAM funding matrix.
4. Beyond GAM, the UNAIDS Secretariat manages several work flows to monitor and estimate annual HIV resource availability from international and domestic sources and to validate or triangulate those estimates. Some of these approaches have been used for more than 12 years, while other innovative approaches are more recent.
5. Since 2001, the UNAIDS Secretariat has performed several global resource needs estimates. The initial 2001 estimate² was updated as the UNAIDS Investment Framework in 2011,³ before being updated again in 2014⁴ and 2016.^{5,6} Some resources are not included in these estimates. For example, public investments for vaccines, microbicides and other products, which are monitored by the Resource Tracking Working Group, are estimated separately and are excluded.
6. The 2016 global resource needs estimate update informed the UN Assembly negotiations at the High-Level Meeting on HIV/AIDS. The resulting Political Declaration on Ending AIDS expressed consensus that reaching 2020 Fast-Track targets would require:
 - mobilizing US\$ 13 billion for the fifth replenishment round of the Global Fund to fight AIDS, Tuberculosis and Malaria (Global Fund);
 - increasing and fully funding the HIV response from all sources, including through innovative financing, and reaching overall financial investments in low- and middle-income countries of at least US\$ 26.2 billion per year by 2020;
 - ensuring that financial resources for prevention are adequate and constitute no less than a quarter of HIV spending globally on average;
 - ensuring that at least 6% of all global HIV resources are allocated for social enabling activities, including advocacy, community and political mobilization, community monitoring, public communication, outreach programmes to increase access to rapid HIV tests and diagnosis, as well as for human rights programmes such as law and

- policy reform, and for stigma and discrimination reduction; and
 - expanding community-led service delivery to cover at least 30% of all service delivery by 2030.⁷
7. The US\$ 26.2 billion resource needs estimate for 2020 assumes substantial efficiency gains, front-loading of resources and rapid scale-up before 2020. It also assumes the use of differentiated models of care, including community-based approaches for up to 30% of HIV treatment service delivery by 2030. The goal is to achieve 90% reduction in HIV incidence and HIV-related mortality by 2030 compared to 2010.
 8. Several intermediate programme targets for 2020 have also been adopted, including that 90% of all people living with HIV know their status, 90% of HIV-positive persons receive antiretroviral therapy and 90% of the people on HIV treatment achieve full viral suppression. Many prevention services would require 90% coverage, while ambitious targets have been set also for the provision of pre-exposure prophylaxis, opioid substitution therapy and cash transfers. In order to achieve these targets, it is estimated that, on average, about 25% of total HIV investments globally would need to go to prevention, and 6% would need to go towards social enablers.
 9. The financing targets in the 2016 Political Declaration on Ending AIDS have to be monitored.⁸ If the targets and efficiencies are not achieved, the Sustainable Development Goal of ending AIDS as a global public health threat by 2030 will be at risk.
 10. This document provides more detailed information on:
 - the background to the UNAIDS-Secretariat's mandate to monitor and report on the progress and gaps in achieving financing targets of the 2016 Political Declaration;
 - a summary of the resource-tracking frameworks, methods and approaches that are used to estimate, including:
 - financing flows and expenditures in low- and middle-income countries;
 - global, regional and country financing levels; and
 - aggregate and programme-specific trends needed to monitor progress at global, regional and country levels towards the targets adopted in the 2016 Political Declaration;
 - the GAM process, which includes the annual monitoring of in-country expenditures;
 - illustrative resource-tracking results for each of the major existing frameworks and their combined use; and
 - challenges to properly conduct HIV resource-tracking processes to monitor progress towards the targets in the 2016 Political Declaration.
 11. The technical annexes provide detailed information on the existing frameworks, tools and approaches to gather HIV resource-tracking data.

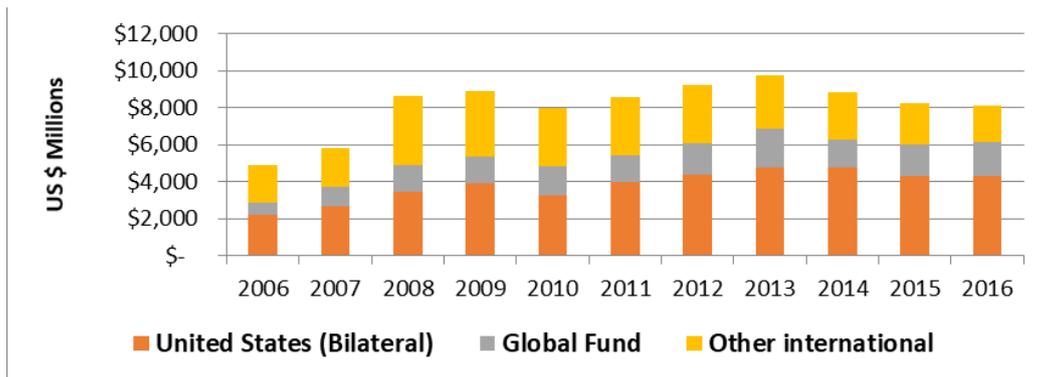
GLOBAL RESOURCE AVAILABILITY FOR LOW- AND MIDDLE-INCOME-COUNTRIES AND FUNDING GAPS

12. UNAIDS updates the estimates for HIV resource availability once a year on the basis of country reports that are entered in the GAM on-line reporting tool. UNAIDS validates the reports and then estimates the values for countries with missing or incomplete data at regional level.
13. In 2016, an estimated US\$ 19.1 billion was available for HIV in low- and middle-income countries, 57% of which came from domestic resources (public and private). International assistance for HIV amounted to US\$ 8.2 billion in 2016. This translates to a funding gap

of US\$ 7 billion (the difference between the resources available in 2016 and the estimated US\$ 26.2 billion needed by 2020).

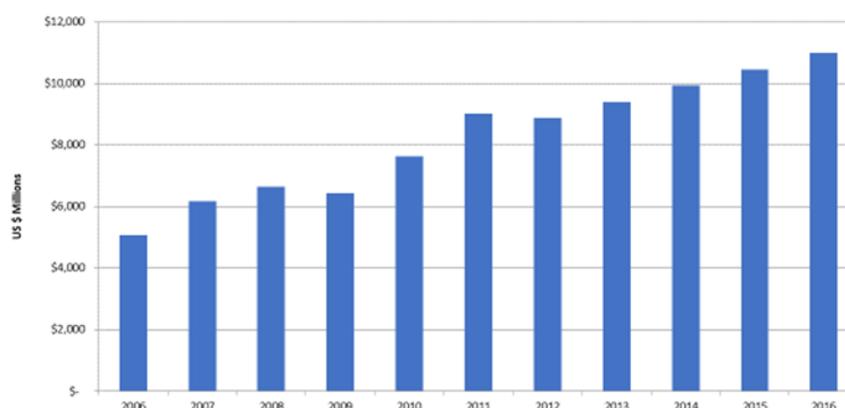
- The historical trend shows that resources almost doubled from US\$ 10 billion in 2006 to US\$ 19.1 billion in 2016, while the domestic share has increased from about 50% in 2006 to 57% in 2015 and 2016. However, international HIV resource availability for low- and middle-income countries decreased by 7% from the 2014 levels due to reduced disbursements in 2015 from the bilateral (government) and multilateral donors.

Figure 1. International HIV funding from international sources available for low- and middle-income countries, 2006–2016



- Low- and middle-income countries are currently leading the efforts to mobilize resources for the HIV response. However, there remains a persistent need for international financing in the countries with the lowest incomes per capita.

Figure 2. Domestic HIV expenditures from public and private sources for low- and middle-income countries in current US\$, 2006–2016



Comparison of current/past resource availability and future needs, globally and regionally

16. Of the 135 low- and middle-income countries for which recent data are available, 44 rely on international assistance for at least 75% of their national HIV responses.

Table 1. Summary characteristics by region on the trends for HIV resource availability and estimated funding gap to the 2020 resource needs

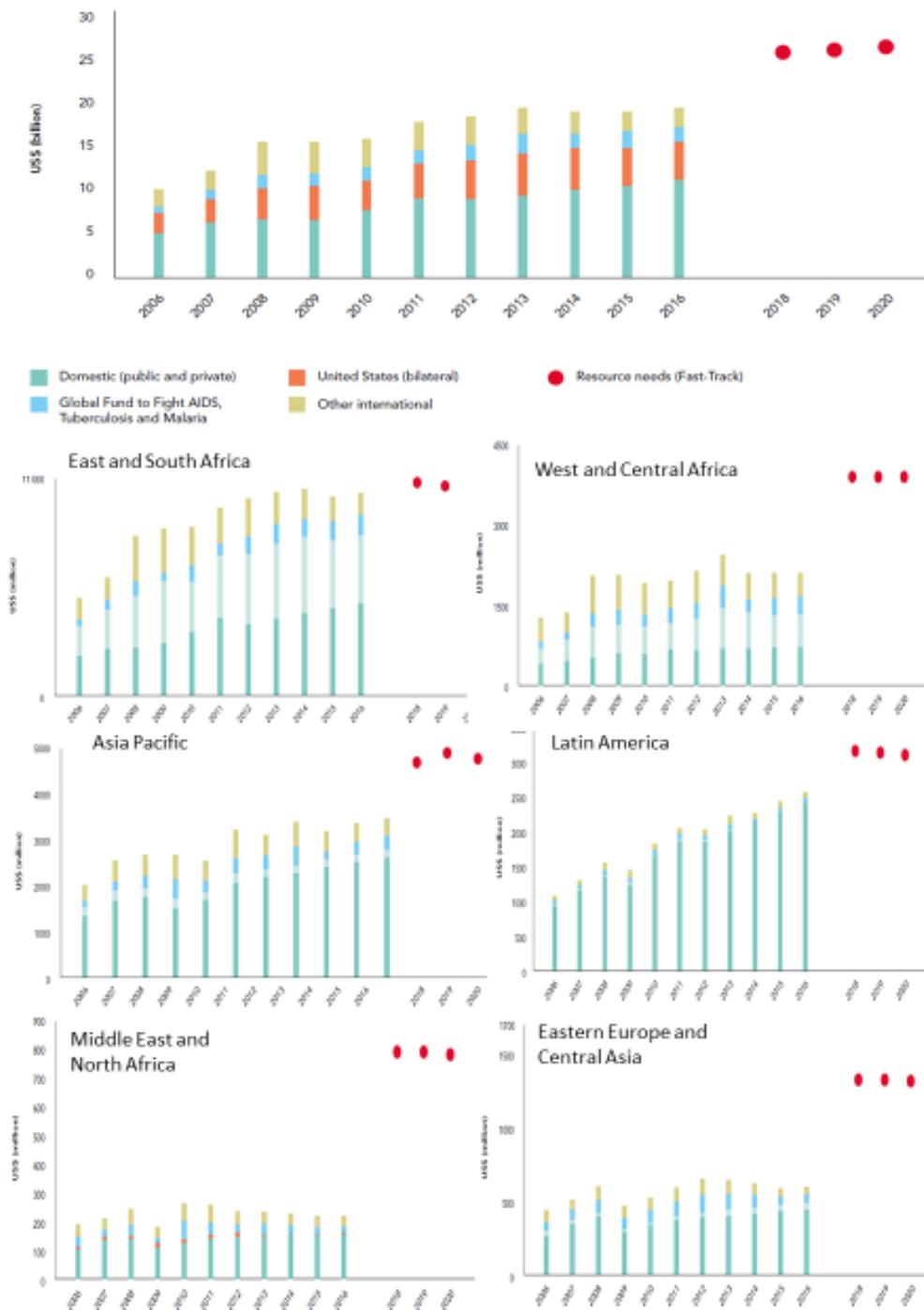
Indicator	Low- and middle-income countries	Eastern and southern Africa	Western and central Africa	Asia-Pacific	Latin America	Middle East and North Africa	Eastern Europe and central Asia **
2006–2016 total resources change	91%	110%	65%	72%	139%	14%	19%
2006–2016 international resources change	65%	95%	60%	26%	10%	-29%	-7%
2006–2016 domestic resources growth	116%	135%	77%	94%	157%	49%	64%
Percentage from domestic resources in 2016	57%	46%	35%	75%	94%	73%	75%
Funding gap (%) to reach Fast-Track resource needs by 2020 *	31%	4%	88%	37%	22%	245%	158%
Total HIV resource availability by 2016 (constant 2016 US\$)	\$ 19.1 billion	\$ 9.6 billion	\$ 2.1 billion	\$ 3.6 billion	\$ 2.6 billion	\$ 0.2 billion	\$ 0.6 billion

* Assuming front loading of resources, rapid scale up, reductions in the prices of commodities, and enhanced allocative and technical efficiencies to meet the 2020 Fast-Track targets.

** The Russian Federation is not included in this analysis.

17. At the end of 2016, an estimated US\$ 9 billion was available for HIV responses in eastern and southern Africa. Amounting to 46% of total resources in the region, domestic investments for HIV reached their highest levels to date in 2016. The current level of resources in the region is about 5% below the estimated annual resources needs for 2020. The region will require further rapid scale up of service provision, front-loading of resources and substantial reallocation of existing funds, leading to increased allocative and technical efficiencies, as well as greater programme effectiveness. Additional funding is therefore needed to achieve the 2020 and 2030 targets.
18. Resources available for HIV reached approximately US\$ 2.1 billion in western and central Africa in 2016. From 2006 to 2016 there was a moderate increase in both international (60%) and domestic resources (77%), measured in constant 2016 US dollars. Resource availability would need to increase by 88% to reach the 2020 Fast-Track targets. Domestic resources accounted for 35% of HIV resources available in 2016.
19. In Asia and the Pacific, an estimated US\$ 3.6 billion was available for HIV responses in 2016. The share of domestic resources has increased from 67% to 75% in the past decade. Donor prioritization towards countries with high disease burdens has led to a reduction of international resources for HIV programmes in this region, with external funding for HIV estimated to have declined by 25% in the past five years. Among the 17 countries that reported data in recent years, 5 countries depended on donors for more than 80% of their HIV resources. HIV resources currently available in the region are around 40% below the estimated annual resource needs for 2020.
20. Countries in the Middle East and North Africa funded about 73% of their HIV responses domestically in 2016. Considering that donor resources have decreased by 30% in the past decade, there is an ongoing need for countries to fund their own responses in this region. Overall, the resources available for HIV still fall short of the estimated needs for achieving the 2020 Fast-Track targets. Countries such as Djibouti and Somalia rely on donor resources for more than 90% of their HIV responses. Significant additional resources are needed rapidly to reduce the funding gap and achieve the 2020 Fast-Track targets in the region.
21. Total resources for the HIV response in Latin America increased by 139% between 2006 and 2016, from around US\$ 1 billion to US\$ 2.6 billion (in constant 2016 US dollars). An additional 22% increase is needed to reach the funding levels that will enable achievement of the Fast-Track Targets for 2020. If resources are front-loaded and used effectively, resource needs would peak at US\$ 3.2 billion and then steadily decrease.

Figure 3. HIV resource availability by source during 2006–2016 and projected resource needs by 2020 in low- and middle-income countries, overall and by selected regions (constant US\$)

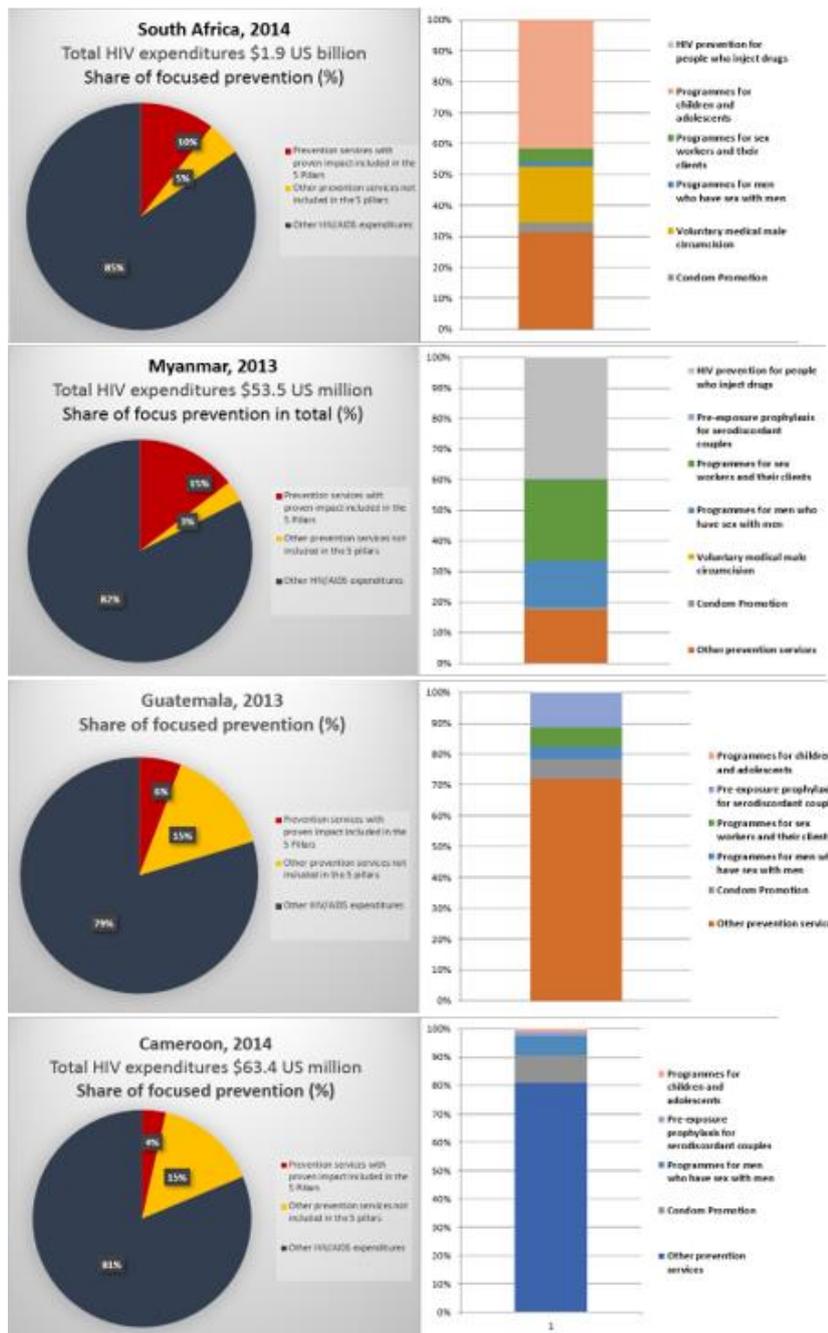


Reporting on prevention expenditures and on social enablers: status of country reporting and examples

22. Country reports call for detailed disaggregation of total spending. Some countries, however, only report total spending with minor additional details and limited descriptions of spending components.

23. For example, of the 72 countries that reported expenditures in the 2018 GAM reporting cycle (see Annex 2 for details), only 42 reported their expenditures on HIV prevention specifically. Of those 42 countries, only 37 (51% of countries reporting on indicator 8.1) reported detailed expenditures for least for one of the five prevention pillars.
24. Some countries have conducted HIV resource tracking, including expenditures for total prevention, for one or more components of the five prevention pillars. Figure 4 shows the resources used for prevention as part of the total HIV expenditures (from all sources) in selected countries, as well as specific allocations for HIV prevention.

Figure 4. Reported HIV expenditures for prevention and for the five pillars of prevention separately in selected countries, 2013–2014



25. In 2018, 42 (57%) of 72 reporting countries stated their expenditures on social enabling activities, with spending ranging from 1% to 32% of their total HIV spending. This included expenditures on gender programmes, programmes for children and adolescents (excluding cash transfers, which were classified as one of the prevention pillars), social protection, community mobilization, policy dialogues, key human rights programmes and HIV-specific institutional development.
26. Preliminary data for HIV spending on social enablers, drawn from country reports submitted in the 2018 GAM cycle, are shown in Figure 5 (in rounded percentage points) for each reporting year.

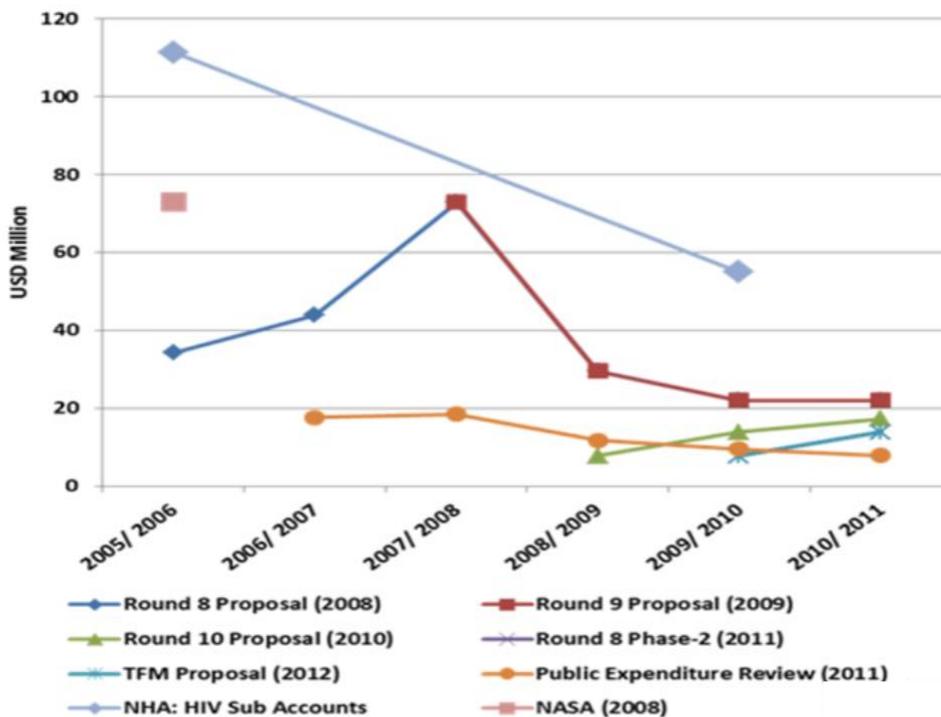
Figure 5. Spending on social enablers as a percentage of total HIV expenditures, 2012–2017, in selected countries



Differences in estimates when using different resource-tracking methods.

27. The differences in “boundaries” or “scope” determine what each tool includes for tracking purposes. Some analyses limit resource tracking to budgets or planning data, while other social accounting frameworks attempt to identify all expenditures, whether standalone or integrated into service delivery. The System of Health Accounts, on the other hand, limits tracking to the health sector.
28. Figure 6 shows the varying HIV spending estimates in an illustrative country, depending on which framework is used to track domestic public expenditure. Major differences arise when comparing planning figures (such as those included in proposals submitted to the Global Fund for AIDS, Tuberculosis and Malaria, or Global Fund) with those derived from public expenditure reviews, the System of Health Accounts or NASAs. These differences have diminished over time, though the country example shows the kinds of discrepancies that can arise.

Figure 6: Reported Government HIV spending estimates for the same country using different estimation frameworks



29. The differing levels of detail that available when using different methods and systems are evident in Table 2. It shows an actual country example of the kinds of detail that can be achieved when using the System of Health Accounts-2011 classification of domestic public expenditures compared with the more granular disaggregation that can be achieved with the NASAs.

Table 2. Example of differences in expenditure detail when using the System of Health Accounts-2011 framework and the NASA, 2014/2015

SHA programme codes	SHA programme description	NASA programme codes	NASA programme description	Amounts, US \$
HC.1.3.1	General outpatient curative care US \$ 5,789,787	ASC 1.17.02	Antiretroviral prophylaxis for HIV-positive pregnant women and neonates	\$ 444,782
		ASC 2.10.3.1.98	Adult antiretroviral therapy not broken down by line of treatment	\$ 2,952,325
		ASC 2.10.3.2.98	Paediatric antiretroviral therapy not broken down by line of treatment	\$ 252,692
		ASC 2.10.7	Psychological treatment and support services	\$ 2,139,988
HC.1.3.nec	Unspecified outpatient curative care (not elsewhere classified)	ASC 2.1.04	Nutritional support associated with antiretroviral therapy	\$ 18,871
		ASC 2.1.05	Specific HIV-related laboratory monitoring	\$ 509,188
		ASC 2.1.98	Outpatient care services not broken down by intervention	\$ 798,809
HC.6.3	Early disease detection programmes	ASC 1.03	Voluntary counselling and testing (VCT)	\$ 2,712,689
		ASC 1.17.01	Pregnant women counselling and testing in PMTCT programmes	\$ 105,732
		ASC 1.19	Blood safety	\$ 162,214
		ASC 2.1.01	Provider-initiated testing and counselling (PITC)	\$ 1,082,740
HC.6.5.nec	Unspecified epidemiological surveillance and risk and disease control programmes (not elsewhere classified)	ASC 1.07	Prevention of HIV transmission aimed at people living with HIV (PLHIV)	\$ 302,120
		ASC 1.08	Prevention programmes for sex workers and their clients	\$ 784,467
		ASC 1.09	Programmes for men who have sex with men (MSM)	\$ 308,047
		ASC 1.17.98	PMTCT not broken down by intervention	\$ 313,147
		ASC 1.22.98	Post-exposure prophylaxis not broken down by intervention	\$ 1,651
		ASC 4.05	Serological-surveillance (serosurveillance)	\$ 681,127
		ASC 4.06	HIV drug-resistance surveillance	\$ 75,681

Links to investment cases and financial sustainability analyses

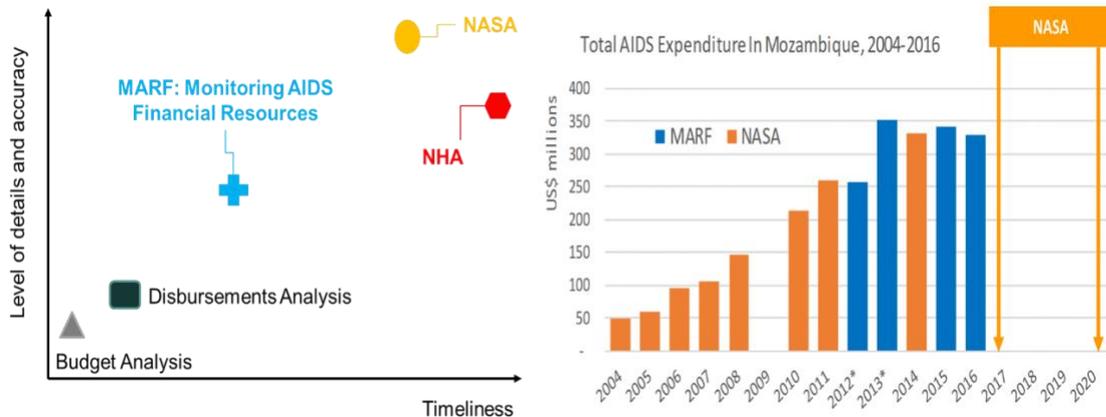
30. While additional funds will be needed to end the AIDS epidemic as a global public health threat by 2030, resources should be prioritized to achieve efficiency gains in HIV programmes. Prioritization of HIV programmes depends on the epidemiology and cost-effectiveness of service delivery in each setting, as well as resource availability. The NASAs can guide strategic planning by estimating resource availability and actual resource allocation across HIV interventions. NASA standard findings therefore can serve as an entry point to various types of efficiency analyses, which are critical for investment cases.
31. Transitioning from donor support to a sustainable domestic response is a new imperative for many countries faced with the prospect of losing eligibility for development assistance funds. Major funding partners also increasingly emphasize sustainability in their policy documents. The US President's Emergency Plan for AIDS Relief (PEPFAR) Blueprint 3.0, for example, includes a Sustainability Action Agenda. Sustainability and transitioning were also themes discussed at the three partners forums leading up to the Global Fund's new 2017–2021 strategy.
32. The NASAs can tap into information regarding credible, long-term financing scenarios and can serve as a basis for financial sustainability analysis. Combined with information on resource needs and financial targets, the NASAs also make it possible to estimate financing gaps.
33. Resource tracking and global resource needs information are useful for supporting country planning of domestic resources, as well as for the country operational plans and regional operational plans of PEPFAR and Global Fund planning. Higher-level aggregates also support the Global Fund investment cases for its replenishment cycles.

Example: Mozambique's 2014 National AIDS Spending Assessment

34. Mozambique is a good practice example. It has developed a number of NASA projects since 2004, when UNAIDS supported its first NASA. National bodies and national consultants now lead that process.
35. The NASAs were implemented annually up to 2011 and subsequently every three-to-four years (with reconstruction of the time series). For the intermediate years, a subsidiary

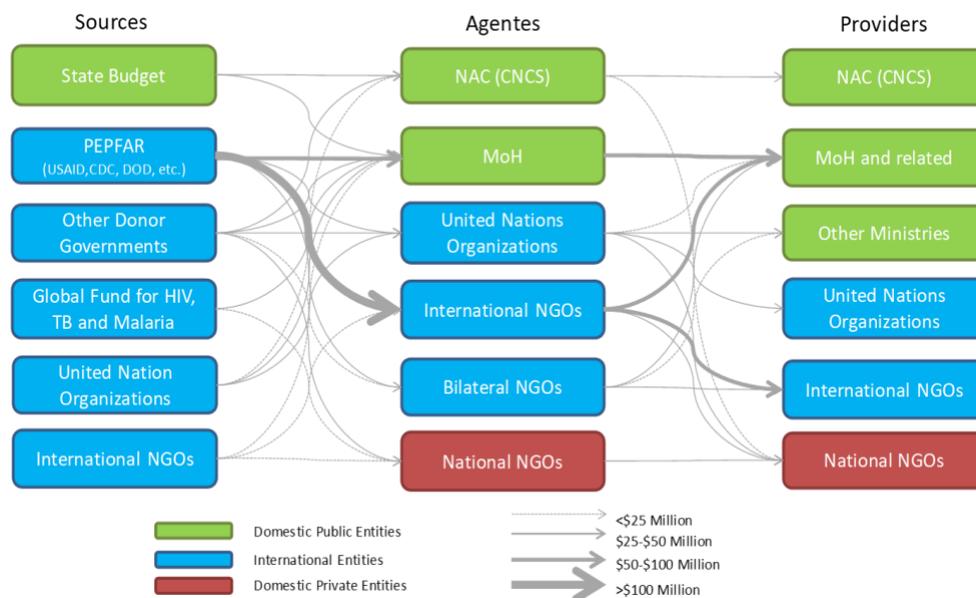
approach to monitor HIV financial resources was developed, balancing granularity and accuracy with timeliness and cost considerations. Examples of the findings are shown in Figure 7. Mozambique’s most recent, full NASA reported HIV expenditures in 2014 along with the in public policy and implementation of the response, as derived from HIV resource-tracking analysis.⁹

Figure 7. Decision making on the selection of framework to conduct HIV resource tracking and estimates of HIV financing flows and expenditures in Mozambique, 2004–2016



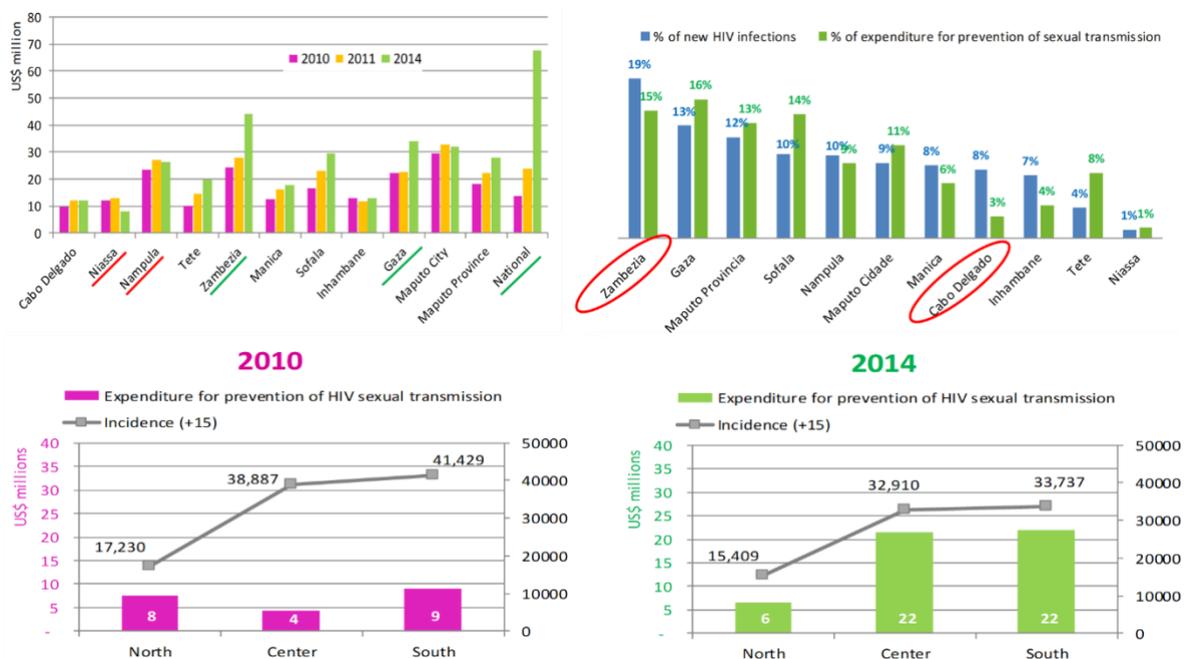
36. The NASA can be used for more than measuring financing flows and expenditures,. For example, the mapping of financing flows reveals not only volumes of funding, but the number of actors involved as funds flow from financing sources and financing agents to service providers, as well as the volumes of the flows (Figure 8).

Figure 8. Financing flows from the financing sources to financing agents to providers of services, Mozambique, 2014



37. NASA analysis also allows for determining the use of the funds for each service. For example, when HIV prevention data are disaggregated by activity or service, the analysis can reveal whether a recent increase in expenditure for HIV prevention was due to the rollout of a specific programme (e.g. voluntary medical male circumcision).
38. In the Mozambique example, only 15% of total HIV expenditure was allocated to prevent sexual transmission of HIV. If the voluntary medical male circumcision programme component is excluded from the analysis, the remaining resources for preventing sexual transmission showed no increase. This information has been used to mobilize additional resources for preventing sexual transmission of HIV, with a focus on girls and young women.
39. The calculations show that the US\$ 350 million available for HIV in 2014 in Mozambique would need to almost triple to US\$ 1.1 billion by 2020 to meet the Fast-Track targets. When HIV expenditures were analysed per province for 2010, 2011 and 2014, it revealed the uneven distribution of expenditures across provinces, as well as the significant scale of expenditure at national level (see the top left-hand graphic in Figure 9). The rise at national level was due to the growing number of partners and overheads associated with vertical programmes, as well as increased expenditure for health system strengthening and for strategic information systems. This information was used to inform the geographical efficiency analysis for the Global Fund.

Figure 9. HIV prevention expenditures and new HIV infections by province and changes in resource allocation using expenditure data, 2010 to 2014, Mozambique, 2014 NASA results



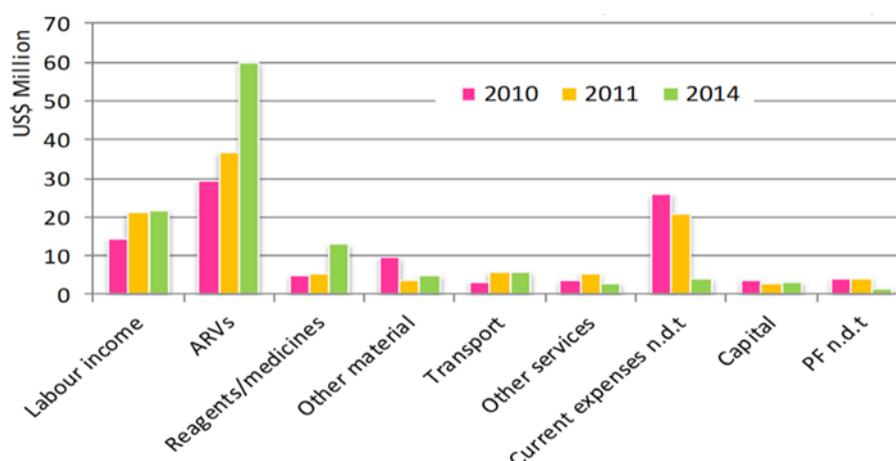
40. Expenditure data per province was also analysed for each of the different programmes. Expenditure data for sexual prevention was analysed by province to identify disparities within provinces, especially in Zambézia and Cabo Delgado (see the top right-hand graphic in Figure 9). The same analysis was conducted for other services, including expenditures for condom distribution and sexual and behavioural change communication (set against new HIV infections); expenditures for HIV counselling and testing (set against the estimated number of undiagnosed people living with HIV); expenditures for voluntary medical male circumcision (compared with provincial targets).

41. This analysis showed important differences across provinces. Annual per capita expenditures for preventing sexual transmission of HIV in Cabo Delgado, Inhambane and Zambézia provinces were lowest at US\$ 1.60, US\$ 2.30 and US\$ 3.40 per adult (15–49 years), respectively. Per capita spending was much higher in Gaza province (US\$ 10.70) and Sofala province (US\$ 7.70).
42. Expenditure for preventing the sexual transmission of HIV was compared with the distribution of new HIV infections by region for 2010 and 2014 (lower two graphs in Figure 9). The information collected in the baseline NASA made it possible to gradually improve the alignment of spending, with increased allocation of resources to the centre and south of the country. However, no allocative efficiency analysis was included in the 2014 NASA report.
43. Expenditures per unit for treatment and care were analysed between 2010 and 2014. There was significant variation across provinces, though these unit expenditures were generally decreasing sharply by 2014 (Figure 10). The gains were mainly due to economies of scales, reduction of commodity prices and important reductions in various current expenditures to support the antiretroviral therapy programme. The total expenditures on antiretroviral drugs, other medicines and diagnostics increased because of the increase in the number of patients, even though unit prices were reduced (Figure 11).

Figure 10. Expenditure per person living with HIV and by province, 2010 and 2014, Mozambique



Figure 11: Cost input factors for the delivery of HIV treatment and care, 2010, 2011 and 2014, Mozambique



NEXT STEPS AND RECOMMENDATIONS

44. To enable countries to end the AIDS epidemic as a global public health threat, UNAIDS has set ambitious diagnosis, treatment, and viral suppression targets supplemented with high coverage of prevention and enabling policies and programme elements.
45. While additional funds will be needed to reach that goal, resources should be prioritized to achieve efficiency gains in HIV programme, for example by using location- and population-focused approaches and by concentrating on using cost-effective key services.
46. Existing resource-tracking approaches provide a variety of options with respect to the desired scope (what is included as HIV expenditure), granularity (programme-level details of expenditure) and intended use of financing data.
47. Although public expenditure reviews, budget analysis, health accounts or resource availability surveys may provide interesting and useful information, the unit of analysis should be the HIV response. The scope of the analysis should be determined by the information needed to properly manage national responses and estimate the global support that is required. The NASA is the recommended method for HIV in-depth resource tracking.
48. The NASA can support the monitoring of the commitments in the 2016 Political Declaration, help support strategic planning processes and address questions regarding resource availability and actual resource allocation across HIV interventions. A major challenge is to increase the implementation of NASAs in countries and provide technical assistance, as well as assure the quality of the findings.
49. Monitoring of financial resources for HIV is a global public good and it should be strengthened. Countries should be urged to develop NASAs periodically and to align them with donor expenditure analyses, as appropriate. In the longer term, it is also desirable for countries to simultaneously implement a NASA and a System of Health Accounts-2011.

50. Private expenditures, especially out-of-pocket spending, are very difficult to track systematically due to significant challenges for establishing the internal and external validity of measurements. Household survey data are therefore often used to calculate these estimates.
51. Reporting to the annual GAM cycles can enhance the global, regional and country process to monitor the implementation of the 2016 Political Declaration.
52. In the absence of complete, timely and high-quality reports by all countries, the global and regional estimates of resource availability and in-country expenditures for HIV responses will continue to depend on data collection systems from donor governments. Related data collection mechanisms and econometric modelling will be used to adjust for missing data. The completion of other core sub-indicators (e.g. tracking the resources for prevention, treatment, care and social enablers) requires that countries complete an in-depth HIV resource-tracking exercise such as the NASA.
53. Institutionalization and country-owned periodic processes are highly recommended, while there remains a need for technical assistance and quality assurance to support countries.
54. In summary, this report concludes that:
 - countries should do in-depth HIV resource tracking periodically, using the best available tools that provide the necessary granularity for HIV programme improvement;
 - countries are urged to perform efficiency analyses periodically, for which HIV in-depth resource tracking is needed;
 - countries are advised to monitor their resource availability and expenditures taking into account their resource needs to end AIDS as a public health threat by 2030 and to meet the 2020 programme targets;
 - consensus between national authorities and international partners on the use of expenditure analysis, System Health Accounts and NASAs require coordinated efforts to achieve consistent results; and
 - in addition to monitoring financial resources for domestic needs, countries are encouraged to annually report to UNAIDS against the globally-agreed indicator on spending for global and regional monitoring.

PROPOSED DECISION POINTS

The Programme Coordinating Board is invited to:

55. *Take note* of the report and the existing HIV resource-tracking frameworks, tools and methods to annually monitor HIV resource availability for the HIV response;
56. *Renew* call to all countries to improve their systematic reporting and institutionalize systematic data collection, analysis and use of the results, as well as routine reporting to UNAIDS through the GAM annual cycles;
57. *Welcome* UNAIDS' role in resource tracking activities and the annual publication of resource availability estimates;
58. Further *acknowledge* the existing funding challenges for capacity building, provision of technical support and quality assurance for HIV resource-tracking processes;

59. *Encourage* all countries to increase domestic spending on the HIV response and explore innovative ways to close the funding gap; and
60. *Commend* high-income countries for their report of bilateral and multilateral disbursements, encourage them to contribute to closing the funding gap in low- and middle-income countries, and *invite* them to report their own domestic HIV expenditures.
61. *Request* UNAIDS to present to the 43rd Programme Coordinating Board meeting a report on the work of the Joint Programme to ensure the sustainability of HIV response results in the SDG era.

[Annexes follow]

Annex 1

MEASURING IN-COUNTRY HIV EXPENDITURES

The monitoring of national responses to HIV includes the measurement of available financial resources (domestic and international), donor dependency and the efficient allocation of available resources.

Since global resource needs estimates were first adopted in the 2001 Political Declaration on HIV/AIDS “Global Crisis – Global Action”,¹⁰ the UNAIDS Secretariat has been tasked with issuing guidance and recommendations for HIV resource tracking to monitor the mobilization of resources, as agreed by all Member States.

There are two main approaches for tracking domestic resources (public or private), each with varying levels of accuracy. In some cases, domestic public expenditures can be analysed directly. However, the results are usually a significant underestimate and provide less granularity and validity than is needed for most type of analyses.

Some analyses provide partial data or are focused on broader frameworks. For example, budget analyses or public expenditure reviews usually use indicators that focus only on planned or executed HIV-earmarked resources. However, not all HIV services are budgeted (for example, when HIV services are integrated into broader systems or delivery arrangements) or budgets are not actually spent as originally planned.

The UNAIDS Secretariat has conducted several global resource needs estimates. These delineate the generic approaches of HIV responses to be implemented, based on the type of epidemic, progress (coverage) of basic programmes and critical enablers (programmatic or social). The estimates also set targets and objectives for HIV responses as laid out in the initial global resource needs estimates in 2001,¹¹ and subsequently updated as the UNAIDS Investment Framework in 2011,¹² and more recently in 2014¹³ and 2016.^{14 15}

The NASAs were designed to match the categories used in estimating resource needs. As described in the UNAIDS 2011 Investment Framework, services with proven impact were considered as basic programmes plus activities for addressing stigma and discrimination, and social enabler interventions.

The 2016 global resource needs estimates update was used to inform discussions during the 2016 High-Level Meeting, which led to the adoption of specific targets. One such target calls for mobilizing at least US\$ 26.2 billion globally by 2020.¹⁶ Efficiency gains and front-loading of resources will be required to reach 90% reduction in HIV incidence and HIV-related mortality in 2030 (against a 2010 baseline).

The same estimates indicated that globally an average 25% of total investments should go towards HIV prevention (though this is not a benchmark for any one country or region) and 6% for social enablers. Also indicated was a need to adopt a differentiated model of care that includes increasing the use of community-based methods for HIV treatment service delivery through community-based modalities (by public employees or civil society organizations) from 5% currently to 30% by 2030.

If the financing targets and efficiencies assumed in the 2016 Political Declaration are not met by 2020, the goal of ending AIDS as a global public health threat by 2030 (an SDG target) will be at risk. It is therefore vitally important to monitor both the implementation and financing of programmes.

In 2016, an estimated US\$ 19.1 billion was available for HIV in low-and-middle income countries.¹⁷ Domestic resources (public and private) were estimated to comprise 57% of total HIV resources. International assistance for HIV accounted for US\$ 8.2 billion in 2016.

The intended use for the resource-tracking data determines the degree of granularity that is required, as well as the frequency and intensity of data collection, analysis and reporting.

The main objective is to use the information at country level at different stages of the planning cycle to improve the HIV response (while considering its links to the health and development systems). A secondary objective is regional or global reporting, which allows cross-country comparison and assessment of progress towards regional and global targets.

The complexity of resource-tracking exercises depends, among other variables, on:

- the availability of data to quantify resource flows from the origin (source of the funds), to financing agents and providers of services all the way to the end users (beneficiaries), by type of service;
- the complexity of the existing architecture of financing mechanisms to execute and track funds;
- the granularity of existing data;
- the feasibility of extracting data from existing information systems; and
- the validity and reliability of assumptions used for making estimates in cases where direct accounting is not feasible.

Information systems with HIV-specific financing data are scarce and are mainly used for administrative purposes. Few countries and donor organizations link such administrative systems with programmatic data, intended results or impact.

The sources of information are also diverse. Existing resource-tracking frameworks, tools and mechanisms use accounting or estimation approaches to assess HIV financing flows and expenditures of the in-country services, which compose the national HIV responses. Some approaches focus exclusively on selected financing sources (e.g. global flows for specific bilateral or multilateral channels) without the aim of integrating the tracking and reporting of all the resources that are used for a country's HIV response.

Major international funders, including PEPFAR and the Global Fund, have established their own expenditure analysis frameworks to monitor grant implementation. There are also resource-tracking approaches which were not developed explicitly for HIV and which can support some estimates for monitoring HIV expenditures, including health accounts, budget analyses and expenditure tracking surveys, along with various ad hoc analyses.

The National AIDS Spending Assessment (NASA) is a social accounting framework and tool developed explicitly for measuring all the resources that are included in a country's national HIV response. In addition to reporting on progress, the NASA methodology has been used to support countries in monitoring their HIV activities and providing input data for the economic evaluation of HIV programmes, estimates of funding gaps and sustainability analyses.

A summary of the major, identified resource-tracking frameworks and approaches is presented below, focusing on their utility for monitoring progress towards the HIV-specific targets set in the 2016 Political Declaration and their usefulness for HIV programme management.

Public expenditure reviews

Public expenditure reviews are usually aimed at supporting the governments of low- and middle-income countries in preparing their budgets and medium-term expenditure frameworks, as well as providing external evaluation of public budget performance. These reviews are usually led by the Ministry of Finance, often in cooperation with the World Bank.

The main features of the public expenditure reviews process include a review of fiscal performance and public expenditure management, and assessment of systemic fiscal issues that are important for enhancing the efficiency and effectiveness of public expenditures. The process includes several sectoral expenditure reviews which priority sector ministries carry out with the support of local and international consultants.

The medium-term expenditure framework consists of a description of the macroeconomic context, a cross-sectoral medium-term expenditure framework (which provides the resource envelopes for individual sectors), and sectoral frameworks of the priority sectors (e.g. education, health, water, works, agriculture, justice and land). In addition, the medium-term expenditure framework can include detailed discussion of other areas as determined by national governments (e.g. public sector reform or the HIV programme) as a multisectoral approach.

The scope and granularity of the analyses present major challenges for public expenditure reviews of HIV programmes. They can yield different estimates for entire sectors, as seen when comparing data from health public expenditure reviews with data from health accounts, for example. This may be a source of discrepancy for specific programmes such as HIV.

Budget analyses

One of the principles of resource tracking is to describe the HIV response from an expenditure perspective. In cases where comprehensive resource tracking is absent and an understanding of public sector financing for health and HIV is needed, national budget analysis is often performed.

Budget analysis can provide insights, but it has limitations and should be interpreted with caution. The limitations include:

- variations from actual expenditures, including anticipated (but not yet definitive) allocations;
- various classification systems and line item reporting; and
- extrabudgetary funds, special accounts, foreign funds, basket funding with non-earmarked resources, etc. with varying scrutiny of data reporting and disaggregation.

Budget analysis rarely provides a comprehensive account of the services that are integrated in the financing or implementation of programmes (i.e. shared costs that are not captured in programme budgeting processes). When used, the approach often only identifies earmarked expenditures for commodities and stand-alone services. It seldom reflects full costs, which can include salaries, utilization of infrastructure, and current expenditures of shared services.

Thus budget analysis, while useful for certain purposes and sometimes favoured because of its feasibility, can result in under-estimations of expenditures. This is because it misses expenditures that were not budgeted specifically for an HIV objective. It can also result in over-estimations of expenditures if all the budgeted resources were executed in full or if some of the resources were used for purposes other than HIV.

Ultimately, the usefulness of this approach depends on a country's existing budgeting system. It will prove less useful if it is item- or input-based and more useful if it uses a results-based financing framework.

System of health accounts (OECD SHA-2011)

The framework of the System of Health Accounts (SHA) focuses on all health financing, allowing (since 2011) for the possibility of fully disaggregating the total health expenditure by programme. Even though the System of Health Accounts is used to quantify the resources for HIV or other specific programmes, it frequently uses non-disaggregated data collection

and it estimates the disease-specific expenditures by using allocation keys (percentage attributed use of shared resources).

The World Bank, WHO and the United States Agency for International Development (USAID) for several years promoted the production of the older framework of the “national health accounts”.¹⁸ The OECD released an updated version of the manual for conducting health accounts in 2011, known as the System of Health Accounts (SHA-2011).¹⁹ It provides a standard for tracking and classifying health expenditures according to the three axes of consumption, provision and financing. It also provided guidance and methodological support for compiling health accounts.

More specifically, the purpose of the System of Health Accounts is to:

- provide a framework of the main aggregates relevant to international comparisons of health expenditures and health systems analysis;
- provide a tool, expandable by individual countries, which can produce useful data for the monitoring and analysis of health systems; and
- define internationally harmonized boundaries of health care for tracking expenditure on consumption.

In order to fulfil these purposes, the System of Health Accounts provides the basis for collecting, cataloguing and estimating all monetary flows related to health-care expenditure.

The System of Health Accounts presented for the first time a framework to track fully-distributed health expenditures. This means that, in principle, the total health expenditure can be disaggregated by each of the existing programmes. The full-distribution principle allows for tracking HIV expenditures within the boundaries of the health system, i.e. excluding the non-health-related interventions that lie outside the System of Health Accounts’ scope (e.g. enabling environment interventions, reduction of stigma and discrimination, social protection, programmes for orphans and vulnerable children, etc.).

Data collection requirements for resource allocation estimates across various programmes and interventions (e.g. including HIV and other strategic programmes at national or sub-national levels) are intensive. If the design does not include granular data collection from the outset, it is extremely difficult to disaggregate data further at later stages. Such delayed disaggregation might also lead to errors. For example, if a country initiates data collection of health expenditures without collecting granular HIV programme data, it becomes very challenging to disaggregate the data by programme relevant categories.

The estimation of programme-specific expenditures is performed in a three-stage approach:

- identifying the unique expenditures which can be attributed only to the programme (in the case of HIV these would include antiretrovirals, HIV tests, viral load or CD4 cell quantifications etc.);
- applying “allocation keys” (percentages) of utilization of shared costs (e.g. staff time and utilization of infrastructure that is attributable to HIV services) based on costing studies in a facility that provides all services corresponding to all of the disaggregated programmes (usually a costing study for a large facility such as a hospital in the country under study or in a country with similar characteristics); and
- proportionally allocating all the other costs into each programme.

Precision is vital and requires that research teams conduct data collection at the provider level. This makes it feasible to capture the costs and consumption of various HIV-related services and to compute the results, followed by aggregation of spending at national level. This is particularly important for investigating domestic public spending on HIV. Resource-tracking exercises are therefore resource intensive.

The System of Health Accounts aims to describe health systems from a financial perspective and therefore follows a “top-down”²⁰ approach to data collection at the central level, which makes the compound exercise feasible. However, this also results in a major limitation when using System of Health Accounts to produce spending estimates for HIV programmes.

Given the limitations of reporting from the central level (e.g. line-item reporting of government expenditures), only earmarked expenditures for HIV (generally those related to procurement of various consumables) are considered. As a result, expenditures for HIV can be underestimated.

To compensate for this shortcoming, overall non-earmarked expenditures (including direct and non-direct costs and overheads) are added to HIV by using various assumptions and allocation keys (e.g. health facility census data, unit costs and weights). This complicates the interpretation of the estimates and renders less comparable across countries and over time.

The System of Health Accounts has three major axes of classifications, which are reflected in the International Classification of Health Accounts: Health Care functions (HC), Health Care Providers (HP) and Health Care Financing Schemes (HF).

Additional classifications include those of Revenues of Health Care Financing Schemes (FS), Factors of Health Care Provision (FP), and Health Spending by Beneficiary Characteristics (age, gender, disease, comorbidity, socioeconomic status and geographical region).

The hierarchical classification of the health-care functions in System of Health Accounts is summarized below (in the box below at first-digit level).

Box 5.1. The classification of health care functions at the first-digit level

- HC.1 Curative care
- HC.2 Rehabilitative care
- HC.3 Long-term care (health)
- HC.4 Ancillary services (non-specified by function)
- HC.5 Medical goods (non-specified by function)
- HC.6 Preventive care
- HC.7 Governance and health system and financing administration
- HC.9 Other health care services not elsewhere classified (*n.e.c.*)

Memorandum items: reporting items

- HC.RI.1 Total pharmaceutical expenditure
- HC.RI.2 Traditional complementary alternative medicines
- HC.RI.3 Prevention and public health services (according to SHA 1.0)

Memorandum items: health care related

- HCR.1 Long-term care (social)
- HCR.2 Health promotion with a multi-sectoral approach

The purpose of the System of Health Accounts is to inform the financing of the health system, hence the frequent reference by health accountants that their “unit of analysis” is the health system and not any particular programme. It therefore does not require granular data collection at the programme level. The collection of primary granular data for each of the programmes for which the health spending would be disaggregated may be daunting and may transcend the objectives and usual “top-down” data collection of the System of Health Accounts.

It is challenging for the System of Health Accounts to conduct primary data collection simultaneously for all programmes, given the intensity and granularity required for such an endeavour. The general practice is for the disaggregated expenditure to include only a few programmes or interventions in a given year.

That difficulty is most apparent when the expenditure is classified in broad categories, which is advisable at the health system level although it blurs the details of programmatic expenditure. For example, the “health care function” is one of the substantive variables for classifying expenditure in the System of Health Accounts. That variable uses broad categories that do not allow for the detailed definitions of programme implementation that are possible when using the “AIDS spending categories” in the NASA.

Thus the programme-specific HIV spending categories in the System of Health Accounts would have to be grouped in broad health-care function categories. For example, antiretroviral therapy expenditure would be classified under the code HC 1.3.1 “General outpatient curative care”, along with other services such as “psychological treatment”. Laboratory tests for measuring viral load or CD4 cell count would be classified under HC 1.3 “Unspecified outpatient curative care (n.e.c.)”, along with nutritional support for persons living with HIV. Prevention programmes for key populations, post-exposure prophylaxis, prevention of HIV transmission focused on people living with HIV, serological surveillance and HIV drug resistance surveillance would be coded under HC 6.5 (not elsewhere classified) “Unspecified epidemiological surveillance and risk and disease control programmes (n.e.c.)”.

The algorithm to produce the granular, programme-specific results as described above would emerge from the by-product of the cross-tabulations of two or more bivariate classifications. To obtain the expenditures for prevention among key populations, the estimate would result from the cross-tabulation of the category “Unspecified epidemiological surveillance and risk and disease control programmes (n.e.c.)” by the expenditure under the respective variable under the “Beneficiary Populations” classification. If both variables were properly collected, the result would be precisely obtained. However, if the primary data obtained for the beneficiary populations relies on generic health system wide data collection, mainly based on demographics, the result would be the statistically “expected” value but not the measured value.

The same procedure would have to be followed when the total for the provision of antiretroviral therapy is requested. The commodities unique to the programme would easily be tracked (as they are unique to the HIV programme), but the shared costs would be derived from the use of the “allocation keys” derived from costing work. These challenges are more obvious for the tracking of domestic resources, since the major sources of bilateral and multilateral funding for HIV keep detailed expenditure analysis, including the most relevant HIV core programmes.

Thus more work would be required to establish data standards across various resource-tracking frameworks and indicators in order to inform HIV expenditure indicators.

Private expenditures, in particular, out-of-pocket or household expenditures are typically not collected for any specific programme or disease and are non-disaggregated by programme under the System of Health Accounts framework. Estimates could be obtained by allocating the same proportion as estimated for HIV. This also applies to community service delivery that has not been studied extensively from a financial perspective.

The lead implementers are the national health accountants in the national Ministry of Health, with the varying involvement of specific programme managers. There is reluctance to add estimation (or “bottom-up”²¹ non-audited expenditure) components to the traditional health accounting framework.

Significant progress has been achieved since the rollout of the System of Health Accounts. However, countries have to decide whether to conduct programme-specific resource tracking within the System of Health Accounts. It is frequently observed that the desired disaggregation does not consider granular data collection, hence HIV-specific results vary significantly from year to year.

The most significant added value of using the System of Health Accounts 2011 for the estimation of HIV expenditure is that it can be analysed within the health system financing framework, which is extremely useful for planning purposes. The financing schemes and their revenues feeding into them are extremely useful to inform issues around sustainability of the response.

Countries have begun to strategize on the best ways for conducting the System of Health Accounts simultaneously with in-depth, HIV-specific resource tracking. In 2018, 26 countries reported their intention to implement a nested NASA in their next System of Health Accounts.

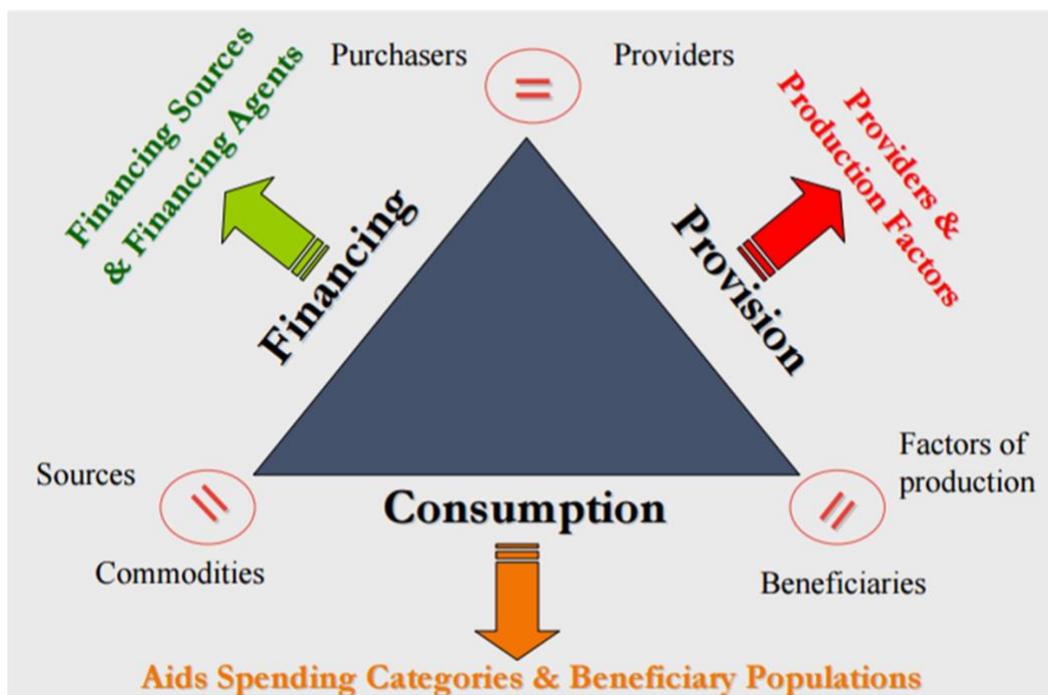
National AIDS Spending Assessments (NASA)

The NASA framework is a comprehensive social accounting methodology that is used to determine the financing flows and expenditures of the HIV response.²² It tracks actual expenditure from all sources (domestic public and private, and international) in health and non-health sectors (e.g. social mitigation, education, labour and justice) that constitute the national HIV response.

The objective of the NASA is to describe the use of resources from origin and management all the way to the level of service utilization by type (AIDS Spending Categories) and beneficiaries.

Even when inspired by the original “national health accounts” framework, the NASA has included since its creation in 2005 the use of three vectors (financing, provision and consumption), similar to those promoted in the System of Health Accounts in the 2011 update. Those three vectors should be tracked simultaneously to achieve full alignment.

Figure 1. National AIDS Spending Assessments: measurement of three vectors with six variables



The need to track HIV expenditure stems from the fact that decisions regarding allocations for HIV-related activities must be based on the real effect of previous expenditure patterns on the profile of the epidemic in all regions of the country.

The fact that the three vectors are identical in magnitude serves the estimation purpose when attempting to fill the information gaps for any one of the vectors. For example, when the data available from the financing sources or agents is not granular enough, the granularity can be obtained by estimates from the provision or the consumption vector.²³ This is one of the objectives of collecting information from the six variables: Financing Sources (FS), Financing Agents (FA), Providers of Services (PS), Factors of Production (PF), AIDS Spending Categories (ASC) and Beneficiary Populations (BP).

The NASA is expected to provide information that will contribute to a better understanding of a country's financial absorptive capacity, as well as the equity, efficiency and effectiveness of the resource allocation process. In addition to establishing a continuous information system on the financing of HIV, the NASA facilitates standardized reporting of indicators for monitoring progress towards the achievement of the global targets.

The NASA follows a system of expenditure tracking that involves systematically capturing the flow of resources from different sources of financing to service providers, through diverse transaction mechanisms. A transaction comprises all the elements of the financial flow, the transfer of resources from a financial source to a service provider that spends the money on various budgetary items to produce interventions or HIV spending categories for addressing HIV for the benefit of specific target groups or to address unspecific populations (or the general population).

The use of the AIDS Spending Categories allows for selecting the granular information of core meaningful programmatic content. It differs from the Health Production functions (HC) codes in the health accounts.

The NASA also reconciles the resource availability (budgets, donor disbursements) with actual expenditures. The NASA has to ensure that the results provide the necessary inputs for allocative efficiency and the entry points for technical efficiency analyses, as well as a comparison between the resource needs and actual expenditures, with granularity allowing for program-level decision-making.

The NASA uses both “top-down” and “bottom-up” techniques to obtain and consolidate information. The “top-down” approach tracks sources of funds from donor reports, commitment reports and government budgets. The “bottom-up” approach tracks expenditures from service providers’ expenditure records, facility-level records and government department expenditure accounts.

The NASA applies standard social accounting methods to reconstruct all transactions in a given country. This makes it possible to “follow the money” from the funding sources to agents and providers, and eventually to the beneficiary populations. These data are collected from every institution and organization that intervenes financially in the national response to HIV at various levels.

As part of its methodology, the NASA employs double-entry tables or matrices to represent the origin and destination of resources. This avoids double-accounting of expenditures by reconstructing the resource flows for each transaction from funding source to service provider and beneficiary population, rather than by simply adding up the expenditures of every agent that commits resources to HIV activities.

The feasibility of the NASA depends on background information, identification of key players and potential sources of information, and understanding users’ and informants’ interests. It typically involves an inter-institutional group responsible for facilitating access to information, participating in data analysis and contributing to data dissemination.

The NASA has been recommended since 2005 as the framework to track and report HIV expenditure. It has been applied in more than 70 countries worldwide and was designed to describe financing flows and resource allocation using the same categories as the globally estimated resource needs. This alignment was conducted to provide the information required to measure financing gaps.

UNAIDS is in the process of updating the existing NASA guidance in the context of improved standard resource tracking for HIV and global AIDS monitoring, lessons learned and adoption of the financing schemes and revenues as they exist in the System of Health Accounts.

Countries have adopted NASAs to such an extent that they are now country-owned, with national authorities taking the decisions regarding their implementation. Some countries have developed annual NASAs (e.g. Burkina Faso).

The quality of the NASAs has varied over time. During the initial rollout in the early 2000s, high-quality assurance and capacity building components were a feature.

When international or national players have supported the implementation of the NASA, the results could be of variable quality. In some instances, national counterparts would apply decisions that could reduce the total cost incurred by reducing data collection. Anecdotal reports indicate that some country exercises have reduced the time allocated for data collection, which implies that some costs may not be properly classified (e.g. staff costs have been classified as “programme support” costs rather than attributing them to the specific service that was being provided).

In other instances, the classifications used have resided outside the purview of the HIV programme. This has occurred when a consultancy firm from a major bilateral donor has supported the exercise. It has resulted in less granular data collection and analysis or in the

lumping of sums of money into generic terms without standardized definitions, such as “health systems strengthening”.

The more the NASAs are country-owned and implemented with the purpose of programme-decision making, the less likely it is for the reports to be shared with global institutions. Nevertheless, UNAIDS has collected the publicly available reports and collates them on the UNAIDS web page.²⁴

There are additional processes that can help the estimation of in-country resource tracking for specific services, though these will not be described in this report since they pertain mainly to other domains. These initiatives include the estimation of the market size of generic antiretrovirals from India, using custom and shipment data from the Indian Government, estimated at approximately US\$ 2 billion per year.²⁵

The NASA framework allows for tracking the total expenditures for HIV from all financing sources, which supports monitoring of 2016 Political Declaration commitment to mobilize at least US\$ 26 billion by 2020.

There are specific codes that allow for tracking the resources used for care and treatment, for prevention (both for prevention services with proven impact, the “five pillars” of prevention, and for all other services classified under prevention (assuming fungibility, increased allocative efficiency could be achieved), social enablers and programme enablers (which have their own codes).

With respect to the use of resources by civil society organizations, the NASA allows for tracking the resources generated by these organizations, as well as resources received from any financing source or financing agent to contract such organizations as providers of services.

The key populations of relevance for HIV programming are clearly identified with their own codes in the AIDS spending categories, thus allowing for any cross-tabulation. Allocative and technical efficiency analysis can be performed using the NASA data.

Annex 2

GLOBAL AIDS MONITORING: SYSTEM TO MONITOR HIV/AIDS EXPENDITURES ANNUALLY

The 2016 United Nations Political Declaration on Ending AIDS,¹ adopted at the UN General Assembly High-Level Meeting on AIDS in June 2016, mandated UNAIDS to support countries in their reporting on the commitments set out in the Political Declaration.

The 2016 Political Declaration built on three previous United Nations political declarations: the 2001 Declaration of Commitment on HIV/AIDS, the 2006 Political Declaration on HIV/AIDS and the 2011 Political Declaration on HIV and AIDS.

In previous reporting rounds, countries have been encouraged to integrate indicators into their ongoing monitoring efforts. Those indicators are designed to help countries assess the status of their national response and progress made toward national HIV targets. They will contribute to improving understanding of the global response to the HIV epidemic, including progress towards achieving the global targets set in the 2016 Political Declaration and the Sustainable Development Goals.

Global AIDS Monitoring Indicator 8.1: Total AIDS Expenditures

Indicator 8.1 measures financing flows and expenditures of in-country HIV programmes or services by source in a standardized and comparable manner according to mutually exclusive categories. The HIV expenditures by programme or service reported under this indicator would need to be consistent with the number of people who have received the services, as reported elsewhere. The reporting window for countries runs from 15 February to 30 March annually.

The basis for this report is the National Funding Matrix, a reporting template which sets out HIV programme areas that are disaggregated by individual interventions or services and by financing source.

The matrix was designed to include all resources invested in HIV in a given year, from all sources. Thus there is a longer list of services or programmes, which can be used to describe the use of resources, while only a subset will be used to inform the sub-indicators.

Most of the AIDS Spending Categories or sub-indicators are drawn from existing frameworks and are now structured around the 10 commitments derived from the 2016 Political Declaration.

The cover page of the funding matrix has been expanded to capture information on budgets and the resource-tracking exercises conducted in the country. The indicator to be reported is "Total HIV Expenditure" by services or programme categories and by financing sources.

There are eight core sub-indicators:

- a. expenditure on HIV testing and counselling (non-targeted);
- b. expenditure on antiretroviral therapy (adults and paediatric);
- c. expenditure on HIV-specific laboratory monitoring (CD4+ cell counts, viral load quantification);
- d. expenditure on tuberculosis/HIV;
- e. expenditure on the five pillars of combination prevention:
 - prevention for young women and adolescent girls,
 - voluntary medical male circumcision,
 - pre-exposure prophylaxis stratified by key population (gay men and other men who have sex with men, sex workers, people who inject drugs, transgender persons, prisoners, young women and adolescent girls (10–24 years); sero-discordant couples),
 - condoms (non-targeted), and

- prevention among key populations (gay men and other men who have sex with men, sex workers and their clients, people who inject drugs, transgender persons, prisoners and other incarcerated people);
- f. expenditure on prevention of vertical transmission of HIV;
- g. expenditure on social enablers; and
- h. expenditure on cash transfers for young women and girls.

The report on HIV expenditures addresses the need to report progress in implementing the 2001 Political Declaration by collecting country reports every two years up to the 2011 Political Declaration. Since 2011 annual reporting became the norm, first as part of the Global AIDS Response Progress Reporting system and after the 2016 Political Declaration as part of the Global AIDS Monitoring system (GAM).

The number of country reports by year since 2008 are shown in Table 1. The number peaked in 2012 and declined subsequently. In 2018, 65 countries (preliminary data) reported on the HIV expenditure indicator 3. The table does not include seven high-income countries from western Europe which reported through the Dublin Declaration Monitoring System and provided only total domestic spending without further details on methods, definitions or actual expenditures.

Table 1. Numbers of country reports submitted in the GAM 2018 reporting cycle

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 (*)
96	-	132		122	42	98	63	73	54	65

The 2018 GAM reporting from 65 countries includes expenditures dating to 2013. Since some countries reported more than once in 2018, their reports come to total 106 country/years of expenditures.

Country reports in the 2018 GAM reporting cycle show that most countries (66 or 62%) used a NASA, 12 countries (18%) indicated the use of System of Health Accounts, and the remainder used other frameworks.

Table 2. Country/years by resource-tracking methodology

Country/years by resource-tracking methodology GAM 2018 (as of 23 May 2018)						
	Expenditures reported by year of occurrence					Total country/year reported in 2018 GAM
	2013	2014	2015	2016	2017	
National AIDS Spending Assessment (NASA)	8	6	7	17	28	66
PEPFAR expenditure analysis				1	2	3
Public expenditure reviews					4	4
System of Health Accounts		2		2	8	12
Other	1		1	2	11	15
Not specified		1	1	2	2	6
Total	9	9	9	24	55	106

The reporting of HIV spending by country income level indicates that 16% of the reports were from high-income countries, while 29%, 31% and 24% were from upper-middle, lower-middle and low-income countries, respectively.

Table 3. Reports by country income level, GAM 2018 by year reported

Income level of countries	2008	2010	2012	2013	2014	2015	2018 (preliminary) Incl. High income via Dublin declaration
High-income	12	22	19	12	14	8	15
Upper-middle income	31	40	39	11	28	18	18
Lower-middle income	27	40	37	15	30	23	22
Low-income	26	30	27	9	26	14	18
Total	96	132	122	47	98	63	73

A total of 93 countries reported their plans to conduct HIV resource tracking and stated the methodology they would use. Fifty-five countries stated that a NASA would be conducted at least once in the next three years (2018–2021), and 25 of them noted their intention to implement the NASA simultaneously with the System of Health Accounts. Only two countries indicated that they would rely solely on the System of Health Accounts, while 17 stated they would use budget reviews to collect HIV resource-tracking data in the same period. Fourteen countries informed UNAIDS that they did not have plans to conduct a HIV resource-tracking exercise in the next three years.

Validation process

Desk reviews for completeness and plausibility are undertaken to ensure that the expenditures include all major sources of financing along with the core components of the national HIV response.

Analysis of missing data (and estimated weights, out of the total estimated in-country expenditures) is conducted. Outliers are identified through comparisons with similar country trends or with regional or income-level benchmarks. Subtotals that are reported in the country reports for PEPFAR and the Global Fund as financing sources are compared to reports to UNAIDS from the strategic information units in each of their respective headquarters.

Any significant inconsistencies are queried with the reporting countries. Verification of the currency reported and exchange rates are the most frequent inconsistencies encountered in the reports. These are easily amended (with confirmation from the reporting country). Historical trend series are verified and cross-tabulated by the estimated number of people receiving the main services (as part of the other indicators reported in

UNGASS/GARPR/GAM historically and from other sources), for example by examining the expenditures per unit.

The figures in the approved and executed budgets are also compared to reported expenditures by country. The validated domestic public expenditures are used to allow for econometric modelling to estimate regional and global figures, taking into account the delay in reporting years and any differences between calendar and fiscal years (donors and recipient countries), and adjusting for missing data.

It is anticipated that some countries will have their reports immediately validated and entered in the publicly available dataset, with the data being used for aggregate analysis. For other countries, consultations will be held with national counterparts to clarify the reported contents, ensure consistency with any available spending assessment or health account, and document or source the most relevant figures and methods used for the report (as well as ensure consistency with previously reported years).

The country reports are published in AIDSinfo (<http://aidsinfo.unaids.org/>). A legend indicating the reports that have been validated by UNAIDS is added. Country-reported expenditures that are funded through governments and private and international sources are published on AIDSInfo, along with estimated resources for HIV, disaggregated by regions and income-level groups.

Annex 3

MEASURING DEVELOPMENT ASSISTANCE FOR HIV (GLOBAL FLOWS)

We use the term of HIV global flows to refer to the resources that originate in donor governments or philanthropic organizations for use in the HIV programmes of low- and middle-income countries and that flow along bilateral or multilateral channels.

Estimates of development assistance for HIV

Donors report these resource flows as part of Official Development Assistance (ODA) statistics. The information is available in existing databases, such as the Organization for Economic Cooperation and Development/Development Assistance Committee's (OECD/DAC) Creditor Reporting System (CRS). The flows are also estimated or measured via direct surveys of donor disbursements, in-depth ad hoc studies for specific donor countries and official data from multilateral organizations and philanthropic entities.

ODA is defined as official financing flows that are that are intended mainly to promote the economic development and welfare of low- and middle-income countries and that are concessional in character with a grant element of at least 25% (using a fixed 10% discount rate). ODA receipts comprise disbursements by bilateral donors and multilateral institutions.

The OECD's CRS allows for tracking international assistance across several development sectors, including HIV. Data included in the OECD/DAC-CRS refer to government and donor agency official reports and therefore constitute a reliable source of information which can be used easily.²⁶

The OECD/DAC-CRS has two sector codes for HIV: "13040 STD control including HIV" (as part of the health sector), and "16064 Social mitigation of HIV/AIDS" (for non-health). Donor government funding is not always fully captured within these codes.

There are limitations to the OECD/DAC-CRS data, including the fact that the data are published in December of the following year in which the data are gathered (i.e. T-1 as aggregated data) and two years after the year to which the data apply (T-2) with details on classification of disbursements and expenditures. As a result, the data can be of limited usefulness for certain time-sensitive purposes.

Donor funding will only be reported in the OECD/DAC-CRS as HIV funding if the project or programme is exclusively or mainly focused on HIV. However, many donors have developed a multisectoral approach to HIV, incorporating HIV in different development areas (e.g. education, gender, support to nongovernmental organizations, reproductive health, etc.). In the absence of a clear classification indicating the proportion of funding going to HIV, the HIV funding therefore could be underestimated in the OECD/DAC-CRS database.

The database can show commitments, disbursements and expenditures. Those data can be disaggregated by country in most cases, though for some regional or global projects the share per country is not indicated.

Nevertheless, the ODA data on HIV-related expenditures that are available through this official reporting mechanism are extremely valuable. The limitations for some purposes, mainly due to the existing rules to make the information publicly available, warrant the use of additional approaches for other purposes that may require more recent data. The "screengrab" below shows the information that appears when one accesses the online database.

Additional efforts could be conducted for more precise data. For example, data on donor funding from Japan for HIV can be obtained directly from the responsible ministries within the Government and through the Japanese International Cooperation Agreement for correcting possible underestimations.²⁷

Figure 1. Sample results from a web-based consultation of the online database from OECD/DAC-CRS²⁸

The screenshot shows the OECD/DAC-CRS web-based consultation interface. At the top, there are several dropdown menus for data selection: Donor(s) (All Donors, Total), Recipient(s) (All Developing Countries, Total), Flow(s) (ODA), Flow Type(s) (Commitments), Sector(s) (2 Selected), and Time Period (12 Selected). Below these are options to 'Reset All Selections' and a checkbox for 'Show project-level data [commitments or gross disbursements] and/or detailed sector level data (CRS)'. A 'Refresh Data' button is located on the right.

The 'Data Results' section displays a table with the following columns: Recipient(s), Flow(s), Amount Constant Prices (2016), Type of Aid, Flow Type(s), Channels, and Donor(s). The table shows data for two sectors: 'STD control including HIV/AIDS (13040)' and 'Social mitigation of HIV/AIDS (16064)' from 2005 to 2016.

Time Period	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
STD control including HIV/AIDS (13040)	4267.854147	5183.372873	7475.086969	7675.874443	8380.450053	7294.092302	7986.437779	6302.418585	7525.664614	5794.112683	8046.364409	6557.43217
Social mitigation of HIV/AIDS (16064)	98.126548	213.08927	161.91629	159.388102	148.395618	231.749333	117.247724	97.510709	121.44559	36.308793	98.846637	59.049561

These data are an excerpt from Creditor Reporting System (CRS) [click here to see all datasets](#).

Direct surveys to donor governments to track international assistance for HIV

Commitments and disbursements from the top 14 donor governments (including the European Commission) have been tracked annually since 2005 through a collaboration between the Kaiser Family Foundation and UNAIDS since 2005. This process identifies commitments and disbursements for supporting HIV responses in low-and-middle-income countries. The disbursements are differentiated by the channel used, i.e. bilateral or multilateral.

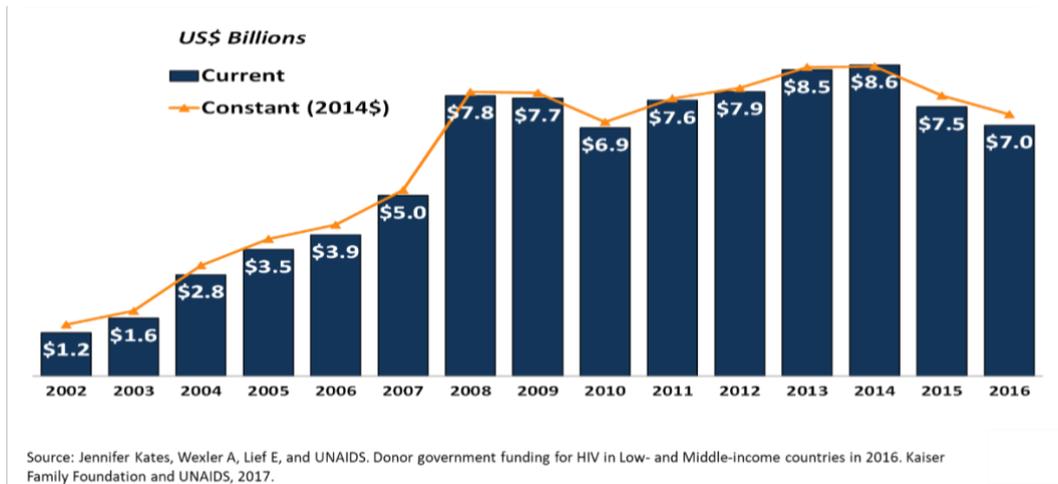
The data are solicited directly from the Governments of Australia, Canada, Denmark, France, Germany, Ireland, Japan, Netherlands, Norway, Sweden, the United Kingdom and the United States of America during the first half of each year. The amounts included in the UNAIDS/ Kaiser Family Foundation report refer exclusively to donor government funding and do not reflect funding from private donors. The report considers the contributions made to the Global Fund and UNITAID but does not include those made to UN agencies and programmes or to development banks and development funds.^{29 30} Data on Japanese international funding for HIV are collected directly by UNAIDS.

Assistance through bilateral channels

The annual amounts of bilateral assistance for HIV reported by UNAIDS includes the results from the collaborative project with the Kaiser Family Foundation for the top 14 donors, which account for 98% of all the bilateral (government) assistance for HIV.

A trend analysis from 2002 to 2016 (in current US\$ and in 2014 constant US\$) shows that there was a sharp increase up to 2008 (mainly showing the effect of PEPFAR but also from other donor governments), slowed down by the effects of the global economic crisis, before rising again to peak in 2014 (Figure 2). An update for 2017 is likely to show a change in the decreasing trend for disbursements (if preliminary data are confirmed), possibly because of the disbursement of previously committed funds.

Figure 2. Donor government disbursements for HIV, 2002–2016

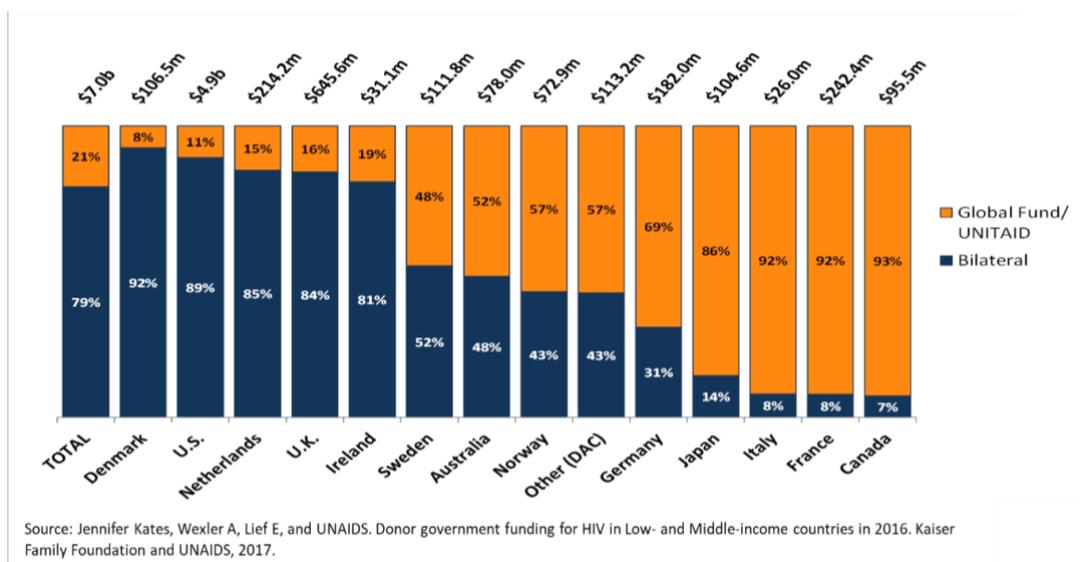


For donors other than the 14 included in the UNAIDS/ Kaiser Family Foundation annual exercise (contributing approximately 2% of total bilateral ODA for HIV), the latest data available from the OECD/DAC-CRS database are used and projected to the current year for DAC members. For non-OECD/DAC countries, ad hoc analyses (direct surveys) are conducted every 3–5 years based on data from countries such as Brazil, India, China, Poland, South Africa, Saudi Arabia, and the United Arab Emirates.³¹

There may be a difference between commitments and disbursements. Bilateral disbursements from governments can be executed in the same or different fiscal or calendar year or even may extend over several years. There may be a difference between donor disbursements and in-country expenditures; when using donor disbursements, UNAIDS labels the results as “resource availability”; otherwise the indication is: expenditures referring to in-country expenditures; the term “total expenditures” is used when above-country expenditures are included.

Almost 80% of the top donor governments’ HIV assistance pass through bilateral channels, government preferences vary widely. Denmark, Ireland, Netherlands, Sweden, the United Kingdom and the United States of America tend to prefer bilateral channels, while the other main donor countries prefer contributing to the Global Fund and to UNITAID (Figure 3).

Figure 3. Donor government disbursements by funding channel, 2016



Assistance through multilateral channels

Disbursements from multilateral organisations include data from different sources, referring mainly to annual reports from multilateral organisations and the OECD/DAC-CRS online database. Disbursements from the Global Fund and UNITAID are obtained from direct data collection. Together they account for 85% of all multilateral disbursements.

Disbursements from the World Bank and regional development banks, and UN organisations (UNDP, UNICEF and UNFPA), were obtained from the OECD/DAC-CRS online database and are from the previous calendar year. To avoid double counting, expenditure from UNAIDS is not included in these estimates as it is already captured in the government bilateral funding (in accordance with the UNAIDS/ Kaiser Family Foundation report).

Estimates of philanthropic funding

Philanthropic funding constituted approximately 6% of international assistance for HIV in 2016. The data on philanthropic disbursements are obtained directly from the reports of the top 10 philanthropic funders, including the largest donor, which is the Bill and Melinda Gates Foundation.

PEPFAR HIV expenditure analysis

The PEPFAR Expenditure Analysis, introduced in 2012, is a legislatively mandated reporting requirement for all recipients of PEPFAR funding. Expenditure data are derived from a specific data collection process conducted annually among PEPFAR implementing partners.

The initiative has been implemented in phases, beginning with nine countries in 2012: Ethiopia, Kenya, Mozambique, Namibia, Nigeria, South Africa, Uganda, United Republic of Tanzania and Zambia. Ten countries were added in 2013, including Botswana, Cameroon, Côte d'Ivoire, Haiti, Lesotho, Malawi, Rwanda, Swaziland, Viet Nam and Zimbabwe. By the end of 2014, all PEPFAR countries and regional programmes were required to report comprehensive expenditures through this process.

Data are reported and displayed on an annual basis, using the United States Government fiscal year (October 1 of the prior year to September 30 of the labelled year). Expenditures data on the PEPFAR Dashboard for 2012 and 2013 represent only the data from the programmes and partners that were required to report data for those years. Data from 2014 onwards are inclusive of PEPFAR’s total global support.

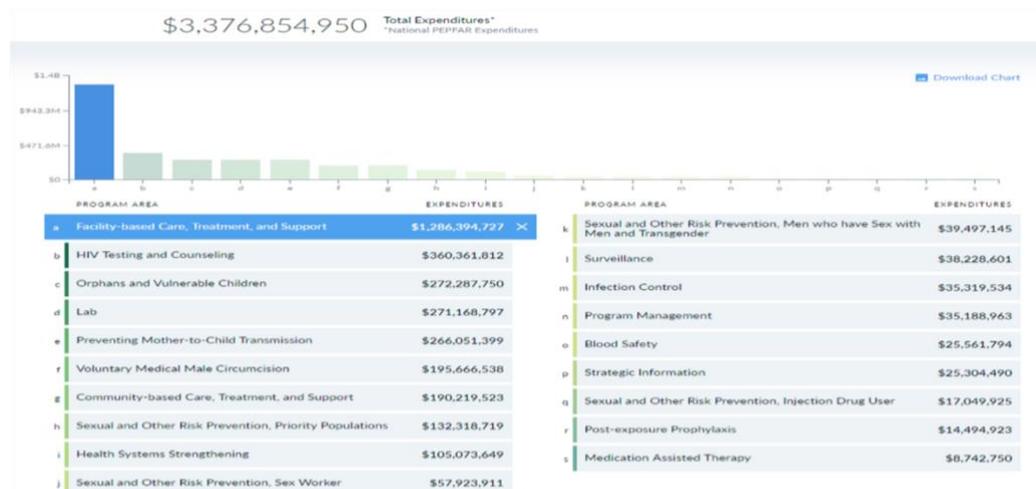
Finally, PEPFAR funds that are programmed through Country or Regional Operation Plans are included in the expenditures data. Central initiatives, “plus-up” funds, and other special-initiative funding to bolster field programmes are not typically included in the expenditure results.

Funding for Headquarters Operational Plans, United States Government agency operating costs and funds transferred to the Global Fund are not included in the expenditures data.

To support countries’ efforts to monitor and report expenditures for HIV in a comparable manner, the PEPFAR Expenditure Analysis indicators and data were mapped to the GAM Indicator 8.1 “HIV Expenditure”. These have been shared with the respective PEPFAR countries since 2016 for reporting in the last GAM cycles. This was done through a collaboration between the UNAIDS Strategic Information and Evaluation Department and the United States Office of the Global AIDS Coordinator Strategic Information Area. Nonetheless, variation in mapping the PEPFAR programmes and the GAM Indicator 8.1 exists and more work on alignment is still needed.

The results from PEPFAR expenditure analysis are publicly available in the respective dashboards.³² The results indicate the total expenditures inclusive of in-country and other costs. For example, in the 2016 Fiscal Year, US\$ 3 376 854 950 was spent in all countries receiving PEPFAR funds. Figure 4, a “screengrab” from the online site, shows how the total expenditure can be disaggregated by programme area. Additional information is also available on the site.

Figure 4. PEPFAR expenditures in all countries for financial year 2016



Source: The United States President’s Emergency Plan for AIDS Relief (PEPFAR). Expenditure Analysis Dashboard. Available at: <https://data.pepfar.net/country/expenditure?country=Global&year=2016>. Last consulted 25th May 2018.

Resource tracking for HIV prevention research and development

Since 2004, the Resource Tracking for HIV Prevention Research and Development Working Group has tracked trends in research and development investments and expenditures for biomedical HIV prevention options. These options include research and development for HIV

vaccines, microbicides, pre-exposure prophylaxis, voluntary medical male circumcision and female condoms.

Data are collected via annual surveys and direct outreach on disbursements by public, private and philanthropic funders for product development, clinical trials, implementation and behavioural research, and policy and advocacy to estimate annual investments in HIV prevention research and development. Investment trends were assessed and compared by year, prevention type, research phase, funder category and geographic location.³³

Global, regional and country estimation of HIV expenditures by conducting statistical analysis

The Institute for Health Metrics and Evaluation, on behalf of the Global Burden of Disease Health Financing Collaborator Network, conducts periodic exercises to produce global estimates of the global burden of disease and more recently health expenditures. In May 2018, the Network launched its first report with 2015 expenditures that include development assistance for HIV.³⁴ The estimates of HIV spending by source and the estimates of HIV spending on prevention and treatment were obtained by using a spatiotemporal Gaussian process regression.

HIV expenditure estimates were provided in 2017 purchasing-power-adjusted US dollars. The data for HIV spending that were used in the estimations (between 2000 and 2015) were extracted from online databases, country reports and proposals submitted to multilateral organizations. They included the AIDSinfo database, which UNAIDS publishes, public and private spending data, which countries report in proposals and concept notes submitted to the Global Fund, national health accounts that capture HIV spending (including sub-accounts and accounts that adhere to the System of Health Accounts 2011 methodology), and all NASAs. Data for Asia-Pacific were downloaded from the AIDS Data Hub.

To make the estimates comparable across the definition of HIV health-related expenditures, expenditures related to orphans and vulnerable children, to the creation of enabling environments and to social protection services were subtracted from the respective sources and functions of health expenditure reported in the NASAs. When the reported data were not granular enough to make the adjustments, the relevant data points were down-weighted.

The country-by-country estimates do not include global and regional development assistance for HIV. Thus the Global Burden of Disease estimate of total spending for HIV responses in low- and middle-income countries in 2015 (purchasing-power-parity-adjusted US\$ 32.6 billion in 2017) may appear to exceed the UN General Assembly commitment to fully fund the global HIV response. However, when compared in nominal (current) 2015 US dollars and when the regional and global development assistance for HIV is factored in, the estimates are almost identical to UNAIDS' published data (a difference of less than 2%).

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- ¹ United Nations. Declaration of Commitment on HIV/AIDS. United Nations General Assembly Special Session on HIV/AIDS. 25-27 June 2001. Available at http://www.unaids.org/sites/default/files/sub_landing/files/aidsdeclaration_en_0.pdf. Last accessed on 25 May 2018.
- ² B. Schwartländer, Stover J, Walker N, et al. Resource Needs for HIV/AIDS. Scienceexpress. Published online 21 June 2001; 10.1126/science.1062876. Available at http://data.unaids.org/publications/irc-pub04/science_en.pdf. Last accessed on 26 May 2018.
- ³ Schwartländer B1, Stover J, Hallett T, et al and the Investment Framework Study Group. Towards an improved investment approach for an effective response to HIV/AIDS. Lancet. 2011 Jun 11;377(9782):2031-41. doi: 10.1016/S0140-6736(11)60702-2.
- ⁴ UNAIDS. 2014 World AIDS Day publication. Fast-Track - Ending the AIDS epidemic by 2030. UNAIDS, 2014. Available at http://www.unaids.org/sites/default/files/media_asset/JC2686_WAD2014report_en.pdf
- ⁵ fast-track update on Investments needed in the AIDS response. UNAIDS 2016 Available at http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Reference_FastTrack_Update_on_investments_en.pdf, last accessed on 25 May 2018.
- ⁶ John Stover, Bollinger L, Izazola-Licea JA, et al and the Fast Track modelling working group. What Is Required to End the AIDS Epidemic as a Public Health Threat by 2030? The Cost and Impact of the Fast-Track Approach. PLOS ONE 11(6): e0158253. <https://doi.org/10.1371/journal.pone.0158253>
- ⁷ United Nations General Assembly. Political Declaration on HIV and AIDS: On the Fast-Track to Accelerate the Fight against HIV and to End the AIDS Epidemic by 2030. A/RES/70/266. 22 June 2016. (Available at: http://www.unaids.org/sites/default/files/media_asset/2016-political-declaration-HIV-AIDS_en.pdf)
- ⁸ United Nations General Assembly. Political Declaration on HIV and AIDS: On the Fast-Track to Accelerate the Fight against HIV and to End the AIDS Epidemic by 2030. A/RES/70/266. 22 June 2016. (Available at: http://www.unaids.org/sites/default/files/media_asset/2016-political-declaration-HIV-AIDS_en.pdf)
- ⁹ National Aids Spending Assessment (NASA) for the period 2014 in Mozambique. Conselho Nacional de Combate ao HIV/SIDA (CNCS), September 2016. (English) available at http://www.unaids.org/sites/default/files/media/documents/mozambique_NASA_2014_en.pdf. Last accessed on May 25, 2018.
- ¹⁰ United Nations. Declaration of Commitment on HIV/AIDS. United Nations General Assembly Special Session on HIV/AIDS. 25-27 June 2001. Available at http://www.unaids.org/sites/default/files/sub_landing/files/aidsdeclaration_en_0.pdf. Last accessed on 25 May 2018.
- ¹¹ B. Schwartländer, Stover J, Walker N, et al. Resource Needs for HIV/AIDS. Scienceexpress. Published online 21 June 2001; 10.1126/science.1062876. Available at http://data.unaids.org/publications/irc-pub04/science_en.pdf. Last accessed on 26 May 2018.
- ¹² Schwartländer B1, Stover J, Hallett T, et al and the Investment Framework Study Group. Towards an improved investment approach for an effective response to HIV/AIDS. Lancet. 2011 Jun 11;377(9782):2031-41. doi: 10.1016/S0140-6736(11)60702-2.
- ¹³ UNAIDS. 2014 World AIDS Day publication. Fast-Track - Ending the AIDS epidemic by 2030. UNAIDS, 2014. Available at http://www.unaids.org/sites/default/files/media_asset/JC2686_WAD2014report_en.pdf
- ¹⁴ fast-track update on Investments needed in the AIDS response. UNAIDS 2016 Available at http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Reference_FastTrack_Update_on_investments_en.pdf, last accessed on 25 May 2018.
- ¹⁵ John Stover, Bollinger L, Izazola-Licea JA, et al and the Fast Track modelling working group. What Is Required to End the AIDS Epidemic as a Public Health Threat by 2030? The Cost and Impact of the Fast-Track Approach. PLOS ONE 11(6): e0158253. <https://doi.org/10.1371/journal.pone.0158253>
- ¹⁶ United Nations General Assembly. Political Declaration on HIV and AIDS: On the Fast-Track to Accelerate the Fight against HIV and to End the AIDS Epidemic by 2030. A/RES/70/266. 22 June 2016. (Available at: http://www.unaids.org/sites/default/files/media_asset/2016-political-declaration-HIV-AIDS_en.pdf)
- ¹⁷ This estimation does not include countries which were later re-classified as upper-middle-income countries (from a high-income level) like the Russian Federation, Argentina, Venezuela and others.
- ¹⁸ Guide to producing national health accounts with special applications for low and middle-income countries. WHO, 2003.
- ¹⁹ OECD, Eurostat, WHO. A System of Health Accounts, OECD Publishing. doi:10.1787/9789264116016-en. OECD, 2011.
- ²⁰ Definition of top down estimation: An estimation method in which figures are estimated for the most aggregate level and then distributed to less aggregate levels.
- ²¹ Definition of Bottom-up estimation: An estimation method where figures are estimated for elements of an aggregate and then added up to generate the estimate of the total.
- ²² Guide to produce National AIDS Spending Assessment (NASA). September 2009. Available at http://www.unaids.org/sites/default/files/media_asset/jc1557_nasa_en_0.pdf

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- ²³ National AIDS Spending Assessment (NASA): Classification taxonomy and Definitions. UNAIDS, 2009. Available at http://www.unaids.org/sites/default/files/media_asset/20090916_nasa_classifications_edition_en_0.pdf . Last accessed 25 May 2018.
- ²⁴ NASA Country Reports. Available at <http://www.unaids.org/en/dataanalysis/knownyourresponse/nasacountryreports#M>
- ²⁵ UNAIDS. How many people living with HIV access treatment? A triangulation of data to verify the UNAIDS global estimate of people accessing antiretroviral therapy at the end of 2015. UNAIDS, 2016. Available at http://www.unaids.org/sites/default/files/media_asset/JC2891_How-many-people-living-with-HIV-access-treatment_en.pdf .
- ²⁶ Creditor Reporting System on Aid Activities 2007 Aid Activities in Support of HIV/AIDS Control. OECD, 2008. ISBN 9264032843, 9789264032842
- ²⁷ Koichiro Mori, Yonemoto K, Takei T, Izazola-Licea JA, Gobet B. Estimation of Japanese International financial assistance for HIV/AIDS control for 2003–2007: Difficulties and limitations of data collection. Health Policy, Volume 94 , Issue 1 , 54 - 60
- ²⁸ Available at <http://stats.oecd.org/qwids>, accessed on 25th May 2018.
- ²⁹ Financing the response to HIV/AIDS in Low- and Middle-Income countries: funding for HIV/AIDS from the G7 and the European Commission. Kaiser Family Foundation publication number 7344 (available at <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/financing-the-response-to-hiv-aids-in-low-and-middle-income-countries-funding-for-hiv-aids-from-the-g7-and-the-european-commission-report.pdf>; last accessed on 25th May 2018)
- ³⁰ Jennifer Kates, Wexler A, Lief E, and UNAIDS. Donor government funding for HIV in Low- and Middle-income countries in 2016. Kaiser Family Foundation and UNAIDS, 2017. Available at http://www.unaids.org/sites/default/files/media_asset/20170721_Kaiser_Donor_Government_Funding_HIV.pdf; last consulted on 25th May 2018).
- ³¹ UNAIDS-AID Data. International HIV/AIDS Financing: Reporting on emerging donor HIV financing. UNAIDS, 2014.
- ³² The United States President’s Emergency Plan for AIDS Relief (PEPFAR). Expenditure Analysis Dashboard. Available at: <https://data.pepfar.net/country/expenditure>.
- ³³ Resource Tracking for HIV Prevention Research and Development Working Group. “HIV Prevention Research & Development Investments. 2000-2016 Investment priorities to fund innovation in a challenging global health landscape.
- ³⁴ Dieleman, Joseph L et al. Spending on health and HIV/AIDS: domestic health spending and development assistance in 188 countries, 1995–2015. The Lancet, Volume 391 , Issue 10132 , 1799 – 1829.