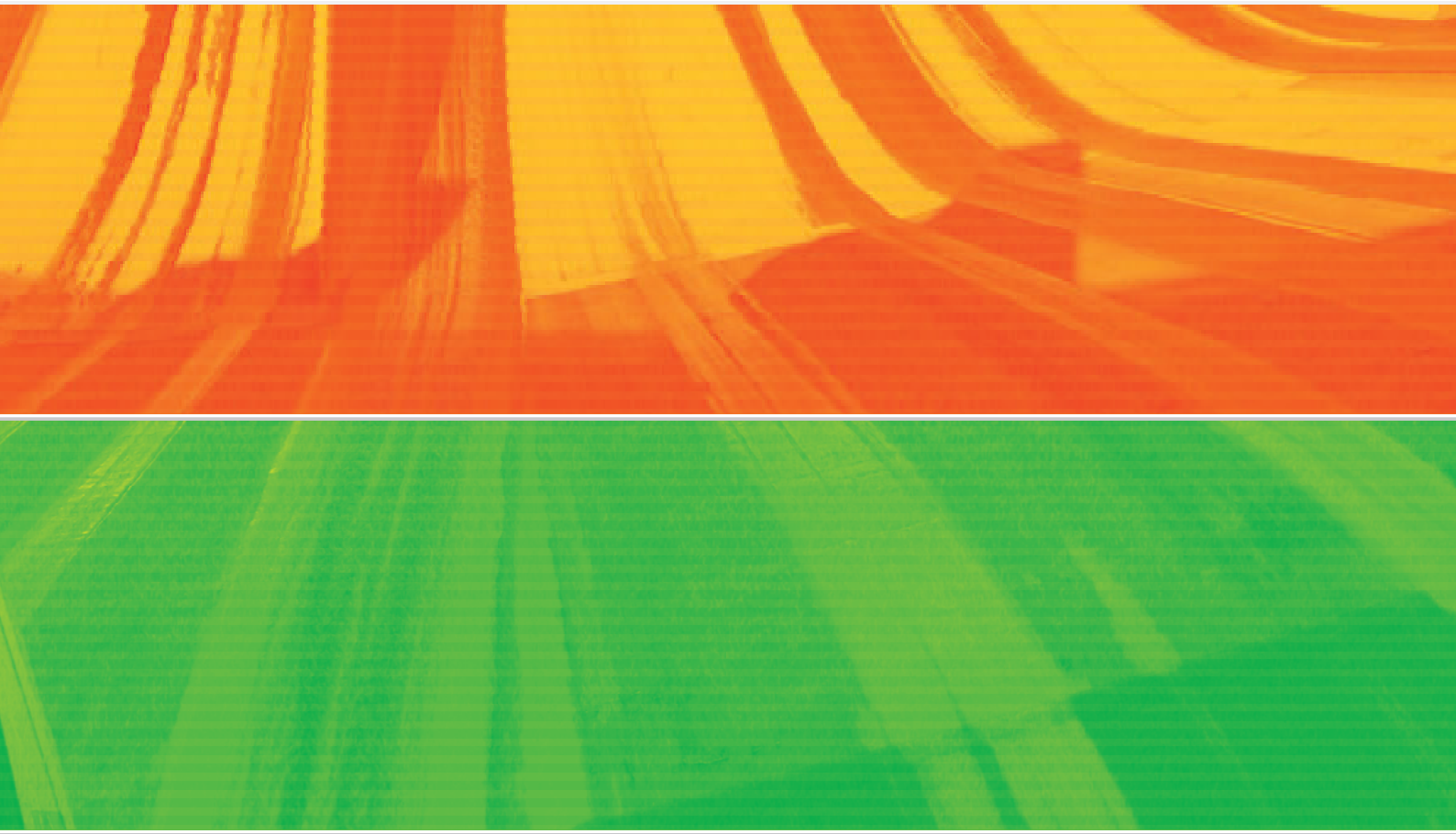
THE GLOBAL FUND TO FIGHT AIDS, TUBERCULOSIS AND MALARIA
THIRD REPLENISHMENT (2011-2013)

RESOURCE SCENARIOS 2011-2013

Funding the Global Fight against HIV/AIDS, Tuberculosis and Malaria



Investing in our future
The Global Fund
To Fight AIDS, Tuberculosis and Malaria

LIST OF ABBREVIATIONS

ARV	antiretroviral
DOTS	the basic package that underpins the Stop TB strategy
PMTCT	prevention of mother-to-child transmission (of HIV)
TB	tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

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EXECUTIVE SUMMARY

1 Demand for donor support (as measured by technically sound proposals that have been recommended for funding by the Global Fund's independent Technical Review Panel) has more than doubled since the last replenishment in 2007, as implementing countries have scaled up well-performing programs. Grant commitments made in 2009 (US$ 4.2 billion) represent 235 percent of the 2006 amount (US$ 1.8 billion).

2 The increased investments enabled countries to achieve the impressive results described in the report *The Global Fund 2010: Innovation and Impact*.

3 If new demand was sustained at the current level, resources of at least US$ 17 billion would need to be contributed in 2011-2013 to meet that demand and continue funding existing programs. If demand (as defined in paragraph 1) increased further to allow for further scale-up of programs in an attempt to accelerate progress towards the health-related Millennium Development Goals, the resources needed would exceed that amount.

4 Meeting such levels of demand - requiring significantly more funds than the US$ 10 billion provided by donors for the 2008-2010 replenishment period - clearly represents a major challenge in the midst of difficult economic circumstances. At the same time, the results and impact achieved to date have been substantial and show that investments made through the Global Fund make a major difference in the fight against the three diseases, while strengthening health systems and also significantly contributing to progress on Millennium Development Goals 4 and 5.

5 The streamlining of the grant architecture that the Global Fund is currently undertaking will reduce the reporting and administrative burden on countries that are implementing grants. Easing absorptive capacity constraints in this manner could conceivably translate into larger proposals being submitted in future rounds.

6 Against this background, three resource scenarios are presented for consideration, each with an indication of the results that could be expected in terms of achievements on the ground at the end of the replenishment period:

> **Scenario 1** would allow for the continuation of funding of existing programs. New programs could only be funded at a significantly lower level than in recent years. This scenario therefore does not represent an estimation of the volume of high-quality proposals expected to be submitted. Rather, it indicates the level of demand that could be met by the foreseen resources.
>
> **RESOURCES REQUIRED IN 2011-2013: US$ 13 BILLION**
>
> **Scenario 2** would allow for the continuation of funding of existing programs. In addition, it would allow for funding of new proposals at a level that comes close to that of recent years. This would allow current trajectories of progress to be preserved.
>
> **RESOURCES REQUIRED IN 2011-2013: US$ 17 BILLION**
>
> **Scenario 3** would allow for the continuation of funding of existing programs. In addition, well-performing programs could be scaled up significantly, allowing for more rapid progress towards achievement of the health-related Millennium Development Goals.
>
> **RESOURCES REQUIRED IN 2011-2013: US$ 20 BILLION**

7 The Joint UN Programme on HIV/AIDS (UNAIDS) has estimated that US$ 28 billion to US$ 50 billion would be needed globally every year from 2010 to 2015 in order to progressively reach universal access targets for HIV/AIDS by 2015. For malaria, the 2008 *Global Malaria Action Plan* estimated a total global cost of US$ 5.9 billion per year, on average, between 2011 and 2020. Tuberculosis (TB) control, according to the 2006 *Global Plan to Stop TB 2006–2015*, would cost an average of US$ 5.6 billion per year between 2010 and 2015. (The latter figure does not take into account recent higher estimates of the cost of treating multidrug-resistant TB.)

8 Projected service deliveries provided under the three scenarios correspond to varying degrees of progress towards meeting international targets and the Millennium Development Goals by 2015. For long-lasting insecticidal nets, Global Fund investments alone would achieve between 42 and 72 percent of global 2015 need (or 54 to 94 percent of need in sub-Saharan Africa). When combined with 2014 targets of the U.S. Global Health Initiative, joint achievements would amount to 70 to 100 percent of global long-lasting insecticidal nets need. Similarly, Global Fund investments alone would represent 44 to 76 percent of estimated global prevention of mother-to-child transmission of HIV (PMTCT) need, and Global Fund investments with those of the U.S. Global Health Initiative would represent 78 to 110 percent. For antiretroviral (ARV) therapy, the Global Fund investments would meet 20 to 34 percent of the 2015 universal access target; combined with the U.S. Global Health Initiative 2014, they would meet 38 to 53 percent.

9 This would translate to an estimated 16 million to 23.5 million life-years saved by long-lasting insecticidal nets, 2.8 million to 3.0 million life-years saved by ARV therapy and 2.5 million to 4.3 million life-years saved by PMTCT, each, in 2015 alone. Over subsequent years, these annual health impacts would increase, especially under Scenarios 2 and 3.

OVERVIEW OF RESOURCE NEEDS IN 2011-2013

RESPONDING TO COUNTRY DEMAND

1 The Global Fund responds to demand from countries as manifested through new proposals for funding (for an initial two-year period) and through requests for the continuation of funding for subsequent periods. New proposals are assessed for technical soundness by an independent Technical Review Panel, which makes funding recommendations to the Global Fund Board. Continuation funding is dependent on performance as measured against nationally identified targets and verified by an external entity, the Local Fund Agent. Throughout the life of a grant, funds are disbursed in installments, based on performance.

GRANT ARCHITECTURE

2 New proposals are initially approved for funding for two years (the so-called "Phase 1"). Well-performing programs can access continued and scaled-up funding for up to three further years ("Phase 2"). Previously, upon completion of Phase 2, high-performing programs could receive continued funding for two further three-year phases (known as the "Rolling Continuation Channel"). The Board has now decided that programs already accepted to the Rolling Continuation Channel will receive funding as envisaged but that the facility will be closed to new entrants in 2010. Thus, in future, programs completing Phase 2 will need to seek renewal of funding by submitting a new proposal.

3 The grant-making architecture of the Global Fund is in the course of being revised in order to better align funding cycles with country budgetary cycles, to consolidate grants and to streamline processes. These factors may slightly alter the timing and duration of commitments for individual grants. As noted above, it is possible that countries will submit larger, high-quality proposals once transaction costs have been reduced as a result of the reforms to streamline the way in which Global Fund support is provided. However, this is difficult to quantify. Therefore, it is assumed for the purposes of this paper that the transition to the new architecture will be of neutral overall impact on demand as expressed through new proposals and grant continuations. Although the timing of commitments may in some instances be transferred to adjacent years, this should not materially affect the commitments projected over three-year rolling periods.

COMPOSITION OF RESOURCE NEEDS IN 2011-2013

4 The provision of grant funding serves to meet two main categories of demand:

- continuation of programs, and
- new proposals
  (including the renewal of funding for existing programs that have used up their entitlements to continuation funding).

Continuation Funding

5 The Global Fund gives priority to the continuation of funding for well-performing programs over support for new proposals. In 2011-2013, this so-called prioritized continuation funding will be needed for programs that complete Phase 1, as well as for programs that complete the initial three years of Rolling Continuation Channel funding (provided they have performed well). Currently known as Phase 2 or Rolling Continuation Channel funding, continuation funding will be referred to as "additional commitments" upon transition to the new grant architecture.

6 Because of resource constraints that existed when it approved proposals in Rounds 8 and 9, the Board decided that a reduction of 25 percent should be applied to the Phase 2 amounts of those proposals and that this reduction should be eased to 10 percent when additional resources become available.[1] The resources required to abide by this decision therefore need to be added to the regular Phase 2 continuation funding.

1 Decision Point GF/B20/DP9, paragraph 3: "Round 9 and National Strategy Application additional commitments: Approval by the Board of additional commitments for Round 9 proposals and National Strategy Applications shall be subject to a collective maximum limit of US$ 2,852 million (being 75 percent of the amounts requested in Round 9 proposals for the third, fourth and fifth year of implementation and 75 percent of the amounts requested in National Strategy Applications for implementation periods beyond the first two years). These limitations, as well as the limitations placed on Round 8 Phase 2 in the decision entitled "Funding Decisions" made at the Eighteenth Board Meeting (GF/B18/DP13, paragraph 2) shall be increased from 75 percent to 90 percent when new resources become available, subject to approval by the Board at that time."

Funding for new and expanded proposals

7 Global Fund policy[2] foresees that the Board will announce a minimum of one call for proposals per calendar year and that the Board can adjust this based on the resources available and the level of expressed demand. This provides an opportunity for applicants to seek funding for new programs or the continuation or expansion of existing programs when their funding expires.

The Global Funding window for new proposals also provides an opportunity for programs with existing grants that are no longer eligible for prioritized continuation funding (i.e. upon completion of Phase 2 or Rolling Continuation Channel) to seek renewal of grant funding. This will be of particular importance to programs that would previously have had prioritized access to continued funding through the Rolling Continuation Channel.

QUANTIFICATION OF RESOURCE SCENARIOS

8 The resource scenarios that follow quantify needs in terms of the contributions that would be required from donors to cover grant commitments in the years 2011-2013.

9 In accordance with the Global Fund's Comprehensive Funding Policy, the Board may approve funding for grants up to the amount of uncommitted assets that it determines will be available at the time when the Global Fund assumes a commitment for the grant amount (i.e. upon signing the grant agreement or at another time specified in the grant agreement). However, a grant agreement cannot be signed unless, at the time of signing, there are sufficient uncommitted assets in the form of cash or promissory notes deposited with the Trustee to cover the full amount of the grant agreement. Accordingly, the amount identified under each scenario corresponds to the contributions required to meet the financial **commitments** that will arise during the replenishment period.

10 In previous replenishments, resource needs were expressed in terms of the amounts required at the time when grants were **approved** for funding by the Board, Since then, the Board has introduced measures that split the timing of grant commitments for continuation funding into two stages, with the later commitment potentially occurring a year or more after the first. This has the intended effect of postponing commitment of part of the total funding approved for a grant until the year(s) following the year of approval. In addition, there is also a lead time between approval of a grant and signing of the grant agreement.

11 Because of the aforementioned factors, there is now a significant difference between the amounts *approved* and those *committed* in any given period. As mentioned in paragraph 10, the amount of grants that the Board may approve is determined by the amount of funds that will be available for commitment when the grants are signed. Accordingly, it is now both more appropriate and more efficient from a financial management perspective to quantify resource needs as the contributions that are needed (in the replenishment period) to cover the grant *commitments* – rather than grant *approvals* – that will be made during that period. At the same time, it is important to recognize that a share of the grants approved during the replenishment period will rely on contributions being made subsequent to that period but prior to the time the commitments for those grants are entered into. The scenarios therefore explicitly indicate the financial commitments arising after the 2013 replenishment period in respect of grants approved during the 2011–2013 replenishment period.

RETURN ON INVESTMENT

12 The resources sought under each scenario will augment the resources already invested through previously approved Global Fund grants, to build on the results that have been achieved in the fight against the three diseases, and to maintain or increase the many benefits those investments have had for the broader health systems of the recipient countries.

13 This paper provides an indication of the results that the investment in each funding scenario could yield.

2 The Comprehensive Funding Policy of the Global Fund (as revised at the Twentieth Board Meeting, 9-11 November 2009), paragraph 5: "The Board will announce a minimum of one call for proposals per calendar year. The Board can adjust this based on need and on resources available."

SCENARIO 1

NEW PROPOSALS OF US$ 1.3 BILLION PER YEAR
TOTAL CONTRIBUTION: US$ 13 BILLION

1 Scenario 1 illustrates the amount of demand that could be met if contributions for 2011-2013 amounted to US$ 13 billion. **This is not an estimation of expected demand, which - as the experience of the last few years has shown - will exceed this amount significantly.**

2 Funding approved in 2011-2013 would total almost US$ 14.0 billion (Row 18 of the table below), comprised of:

- **(a)** US$ 8.5 billion for prioritized continuations (Phase 2 and Rolling Continuation Channel) of existing grants (up to and including Round 9).
- **(b)** US$ 3.9 billion for three rounds of new proposals of US$ 1.3 billion each for Phase 1.[3]
- **(c)** US$ 1.5 billion for prioritized continuations (Phase 2) of Round 10 grants.

3 Of the funding approved during and prior to 2011-2013, US$ 13.8 billion would be **committed** during 2011-2013 (Row 22), leaving a further US$ 3.3 billion to be committed later (Row 27) from new contributions to be made after 2013.

4 After taking account of uncommitted assets of US$ 0.8 billion projected to remain at the end of 2010 (Row 26), contributions of **US$ 13 billion** would be needed in 2011-2013 (Row 24).

3 It is assumed that Round 10 would be approved in 2010 at the same amount of US$ 1.3 billion for Phase 1.

SCENARIO 1

		2008-2010				2011-2013			
		2008	2009	2010	Total	2011	2012	2013	Total
1	**APPROVALS**								
2	**Phase 1 of Rounds 8 and 9**								
3	Round 8	1.9	0.9		2.8				
4	Round 9		1.7	0.7	2.4				
5	***Rounds 8 and 9***	1.9	2.6	0.7	**5.2**				
6	**Prioritized continuation funding through Round 9**								
7	Phase 2	0.9	1.0	1.1	3.1	2.6	1.6	0.9	5.1
8	Easing of Phase 2 reductions on Rounds 8 and 9					0.4	0.3	0.2	0.9
9	Rolling Continuation Channel (until cessation)	1.0	1.0	0.4	2.4	1.0	1.4	0.0	2.5
10	***Prioritized continuations***	1.9	2.0	1.5	**5.4**	4.0	3.3	1.1	**8.5**
11	**New proposals** (and continuation of)								
12	Phase 1 of Round 10 and beyond:								
13	– Existing grants seeking renewal			0.8	0.8	0.5	0.6	0.6	1.7
14	– New/expanded proposals			0.5	0.5	0.8	0.7	0.7	2.2
15	***Phase 1 of new proposals***			1.3	**1.3**	1.3	1.3	1.3	**3.9**
16	Prioritized continuation of Round 10 and beyond							1.5	1.5
17	***New proposals*** - Phase 1 and continuation			1.3	**1.3**	1.3	1.3	2.9	**5.4**
18	**Total grant approvals**	3.8	4.6	3.5	**11.9**	5.3	4.6	4.0	**14.0**
19	Plus: commitment of prior year approvals	1.9	3.5	4.0	} (0.9)	2.9	4.8	5.3	} (0.4)
20	Minus: approvals to be committed next year	(3.5)	(4.0)	(2.9)		(4.8)	(5.3)	(3.3)	
21	Operating expenses, minus investment income	(0.1)	0.1	0.1	0.0	0.1	0.1	0.1	0.3
22	**Total commitments to be made**	2.2	4.1	4.7	**11.0**	3.5	4.3	6.0	**13.8**
23	Less: uncommitted assets at start of period				(1.8)				(0.8)
24	**Contributions needed in the period**				**9.2**				**13.0**
25	Contributions pledged for 2008-2010	3.1	3.3	3.6	**10.1**				
26	Uncommitted assets at end of period				0.8				0.0
27	**Grants approved for funding, to be committed next year**				**2.9**				**3.3**

Numbers may not add up due to rounding

See Annex 1 for an explanation of each row of the scenario tables.

KEY FEATURES OF SCENARIO 1

5 The US$ 14.0 billion foreseen to be approved in 2011-2013 under Scenario 1 would:

(a) Enable funding of existing programs to be continued through 2011-2013. This includes programs entitled to prioritized continuation funding (through Phase 2 or the Rolling Continuation Channel), and programs that would seek renewal of funding through new proposals.

(b) Provide US$ 0.9 billion of extra funding for Phase 2 of the Rounds 8 and 9, by easing the previously set 25 percent reduction to 10 percent (Row 8).

(c) **Provide US$ 3.9 billion for Phase 1 of three rounds of new proposals** of US$ 1.3 billion each per round (Row 15). Of this, an estimated US$ 1.7 billion would be provided to existing programs seeking renewal of funding through new proposals (Row 13).

6 The funding of US$ 4.8 billion outlined in (b) and (c) would be available in addition to the amounts required for prioritized continuations. This level of funding, equivalent to US$ 1.6 billion per year, is lower than the demand from new proposals in Round 9 and is approximately midway between the Round 9 (US$ 2.4 billion) and the pre-Round 8 (US$ 0.9 billion) levels of approvals per round of new proposals.

7 The level of funding envisaged under Scenario 1 would be sufficient to meet only part of the demand that is likely to be presented through high-quality proposals in the next years, and would result in a decreased rate of scale-up of efforts to fight the three diseases.

8 Note: Prior to approval of further new proposals after Round 9 and after allowing for the easing of the reduction to Phase 2 of Rounds 8 and 9 from 25 percent to 10 percent, the contributions needed for 2011-2013 would amount to US$ 8.2 billion (as outlined in Annex 2). This figure is consistent with the preliminary estimate of US$ 8.1 billion considered at the Twentieth Board Meeting in November 2009.

RETURN ON INVESTMENT: RESULTS THAT CAN BE FORESEEN (SCENARIO 1)

9 We estimate that an investment as foreseen by Scenario 1 would result in the following increases in services delivered in 2015, compared to 2009 levels:

- A total of **4.4 million people on ARV therapy**, up from **2.5 million** at the end of 2009
- **3.9 million DOTS treatments** provided annually, up from **1.4 million** in 2009
- **110 million long-lasting insecticidal nets** distributed annually, up from **34 million** in 2009
- **2.5 million orphans** and other vulnerable children provided with support annually, up from **1.4 million** in 2009
- **610,000** HIV-positive women receiving **PMTCT** annually, compared to **345,000** in 2009.[4]

10 This would correspond to 20 percent of the ARV therapy universal access target, 42 percent of global long-lasting insecticidal net need, 44 percent of current global PMTCT need; and support for 13 to 17 percent of children orphaned by AIDS (or 2 percent of all orphans). For DOTS, expected results would meet the treatment target of the Global Plan to Stop TB in full.

11 Under Scenario 1, ARV therapy delivered would save an estimated 2.8 million life-years in 2015 alone; long-lasting insecticidal net distribution would save an estimated 16 million life-years and PMTCT an estimated 2.5 million life-years.[5]

4 Projections based on assumed fixed proportions of disbursements allocated to HIV, TB and malaria and their respective service delivery areas, according to 2007-2009 patterns. Estimated future life-years saved are discounted at 3 percent per year. See Annex 3 for detailed description.

5 An outcome measure computed by multiplying the number of affected individuals by the number of years the average individual is expected to live.

LONGER-TERM VIEW OF SCENARIO 1

12 If new proposals were to continue being approved at the level of US$ 1.3 billion per year,[6] the commitment needs through 2017 would be as follows:

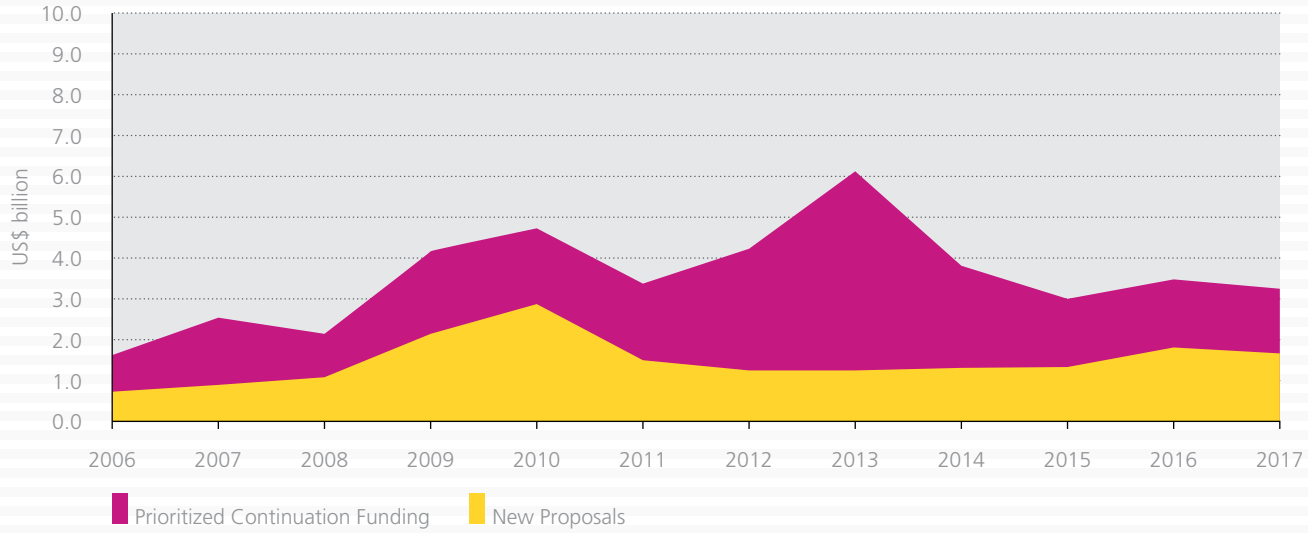
SCENARIO 1			Total: US$ 9 bn			Total: US$ 13 bn			Total: US$ 11 bn			
Commitments in the year (US$ billions)	2006	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	2014	2015	2016	2017
Prioritized continuation funding	1.0	1.7	1.1	1.8	2.0	2.0	3.0	4.8	2.5	1.8	1.7	1.7
New proposals	0.8	0.9	1.1	2.3	2.8	1.5	1.3	1.3	1.3	1.3	1.8	1.7
Total commitments in year	**1.8**	**2.6**	**2.2**	**4.1**	**4.7**	**3.5**	**4.3**	**6.0**	**3.9**	**3.1**	**3.6**	**3.3**
less: uncommitted assets at start:			(1.8)			(0.8)						

Numbers may not add up due to rounding

13 The lower level of funding for new proposals approved (starting in 2011) would result in lower levels of prioritized continuation funding from 2014. As a result, the total annual commitment required would decrease from a peak of US$ 6.0 billion in 2013 to US$ 3.3 billion by 2017. (The increased levels of continuation funding in 2012 and 2013 are a result of the fact that the Phase 2 amounts of Rounds 8 and 9 are much greater than in earlier rounds.)

14 The amounts projected under Scenario 1 would allow for the continuation of all planned components of the supported programs, and not just for those elements considered long-term life-sustaining. For an indication of the resources required to maintain long-term life-sustaining services to those projected to be already receiving such services as a result of Global Fund support, see the replenishment document *Financial and Health Impacts of Continued Support to the Three Diseases: Long-term Estimates*.

EVOLUTION OF THE DEMAND THAT COULD BE MET IN SCENARIO 1 (IF EXTENDED THROUGH 2017)



6 In years when the number in the table exceeds US$ 1.3 billion, this reflects the amounts needed for the renewal of **existing** programs (through the new proposals channel) that have reached the end of the approved funding period.

SCENARIO 2

NEW PROPOSALS OF US$ 2.2 BILLION TO US$ 2.3 BILLION PER YEAR
TOTAL CONTRIBUTIONS: US$ 17 BILLION

1 Scenario 2 illustrates the resources that would be needed if demand through new proposals amounted to US$ 2.2 billion per year. As in Scenario 1, funding of an additional US$ 0.3 billion per year would be provided to allow for an increase in the Phase 2 amounts of Rounds 8 and 9 (by easing the 25 percent reduction to 10 percent). **If these two elements are combined, the level of funding is similar to the level of US$ 2.5 billion approved, on average, in Rounds 8 and 9. This would broadly allow current trajectories of progress to be maintained.**

2 Funding approved in 2011-2013 would total US$ 18.3 billion (Row 18 of the table), comprised of:

(a) US$ 8.5 billion for prioritized continuations (Phase 2 and Rolling Continuation Channel) of existing grants (through Round 9).

(b) US$ 6.8 billion for three rounds of new proposals, of US$ 2.2 billion to US$ 2.3 billion each for Phase 1.[7]

(c) US$ 3.0 billion for prioritized continuations (Phase 2) of Round 10 grants.

3 Of the funding approved during and prior to 2011-2013, US$ 17.8 billion would be committed during 2011-2013 (Row 22), leaving a further US$ 4.8 billion to be committed later (Row 27) from new contributions to be made after 2013.

4 After taking account of uncommitted assets of US$ 0.8 billion projected to remain at the end of 2010 (Row 26), contributions of **US$ 17 billion** would be needed in 2011-2013 (Row 24).

7 It is assumed that Round 10 would be approved in 2010 at an amount of US$ 2.5 billion for Phase 1.

SCENARIO 2

		2008-2010				2011-2013			
		2008	2009	2010	Total	2011	2012	2013	Total
1	**APPROVALS**								
2	**Phase 1 of Rounds 8 and 9**								
3	Round 8	1.9	0.9		2.8				
4	Round 9		1.7	0.7	2.4				
5	***Rounds 8 and 9***	1.9	2.6	0.7	**5.2**				
6	**Prioritized continuation funding through Round 9**								
7	Phase 2	0.9	1.0	1.1	3.1	2.6	1.6	0.9	5.1
8	Easing of Phase 2 reductions on Rounds 8 and 9					0.4	0.3	0.2	0.9
9	Rolling Continuation Channel (until cessation)	1.0	1.0	0.4	2.4	1.0	1.4	0.0	2.5
10	***Prioritized continuations***	1.9	2.0	1.5	**5.4**	4.0	3.3	1.1	**8.5**
11	**New proposals** (and continuation of)								
12	Phase 1 of Round 10 and beyond:								
13	– Existing grants seeking renewal			0.8	0.8	0.5	0.6	0.6	1.7
14	– New/expanded proposals			1.7	1.7	1.7	1.7	1.7	5.1
15	***Phase 1 of new proposals***			2.5	**2.5**	2.2	2.3	2.3	**6.8**
16	Prioritized continuation of Round 10 and beyond							3.0	3.0
17	***New proposals*** - Phase 1 and continuation			2.5	**2.5**	2.2	2.3	5.3	**9.8**
18	**Total grant approvals**	3.8	4.6	4.7	**13.1**	6.3	5.6	6.4	**18.3**
19	Plus: commitment of prior year approvals	1.9	3.5	4.0	} (2.1)	4.1	5.8	6.3	} (0.8)
20	Minus: approvals to be committed next year	(3.5)	(4.0)	(4.1)		(5.8)	(6.3)	(4.8)	
21	Operating expenses, minus investment income	(0.1)	0.1	0.1	0.0	0.1	0.1	0.1	0.3
22	**Total commitments to be made**	2.2	4.1	4.7	**11.0**	4.7	5.2	7.9	**17.8**
23	Less: uncommitted assets at start of period				(1.8)				(0.8)
24	**Contributions needed in the period**				**9.2**				**17.0**
25	Contributions pledged for 2008-2010	3.1	3.3	3.6	**10.1**				
26	Uncommitted assets at end of period				0.8				0.0
27	**Grants approved for funding, to be committed next year**				**4.1**				**4.8**

Numbers may not add up due to rounding

See Annex 1 for an explanation of each row of the scenario tables.

KEY FEATURES OF SCENARIO 2

5 The US$ 18.3 billion foreseen to be approved under Scenario 2 would:

(a) Enable funding for all existing programs to be continued through 2011-2013. This includes programs entitled to prioritized continuation funding (through Phase 2 or the Rolling Continuation Channel) and programs that would seek renewal of funding through new proposals.

(b) Provide US$ 0.9 billion of extra funding for Phase 2 of the Rounds 8 and 9, by easing the 25 percent reduction to 10 percent (Row 8).

(c) Provide **US$ 6.8 billion for Phase 1 of three rounds of new proposals** of approximately US$ 2.3 billion each (Row 15). Of this, an estimated US$ 1.7 billion would be for existing programs seeking renewal of funding through new proposals (Row 13).

6 The funding of US$ 7.7 billion outlined in (b) and (c) would be available in addition to the funding required for prioritized continuations. At approximately US$ 2.6 billion per year, it lies between the levels of demand from new proposals seen in Rounds 8 and 9 (US$ 2.7 billion and US$ 2.4 billion, respectively).

RETURN ON INVESTMENT: RESULTS THAT CAN BE FORESEEN (SCENARIO 2)

7 An investment as foreseen by Scenario 2 would result in a phased increase in services delivered in 2015, compared to 2009, as follows:

- A total of **5.8 million people on ARV therapy**, up from **2.5 million** at the end of 2009
- **5.2 million DOTS treatments** provided annually, up from **1.4 million** in 2009
- **147 million long-lasting insecticidal nets** distributed annually, up from **34 million** in 2009
- **3.4 million orphans** and other vulnerable children provided with support annually, up from **1.4 million** in 2009
- **820,000** HIV-positive women receiving **PMTCT** annually, compared to **345,000** in 2009.

8 This would correspond to 27 percent of the ARV therapy universal access target; 56 percent of the global long-lasting insecticidal net need; 58 percent of the current global PMTCT need; and support for 18 to 23 percent of children orphaned by AIDS (or 2.3 percent of all orphans). For DOTS, expected results would correspond to 134 percent of the Global Plan to Stop TB's treatment target.[8]

9 Under Scenario 2, ARV therapy services would save an estimated 3.0 million life-years in 2015 alone; long-lasting insecticidal net distribution an estimated 21 million life-years and PMTCT an estimated 3.3 million life-years. For long-lasting insecticidal nets and PMTCT, this represents a considerable increase in health impact compared to Scenario 1. For ART, a greater difference relative to Scenario 1 is seen primarily in years 2016 and 2017 if patients are maintained on treatment (see Annex 3).

8 This overachievement is the result of the assumed fixed proportions of disbursements, allocated to TB services and basic DOT specifically, as for the other service delivery areas, according to 2007-2009 patterns. In reality, future increases in funding would likely be shifted to other service areas (such as treatment of multidrug-resistant TB and expanded outreach activities to improve case detection and cure rates). See Annex 3 for a detailed description.

LONGER-TERM VIEW OF SCENARIO 2

10 If the demand presented through new proposals were to continue at the level of US$ 2.2 billion to US$ 2.3 billion foreseen under Scenario 2,[9] the commitment needs through 2017 would be as follows:

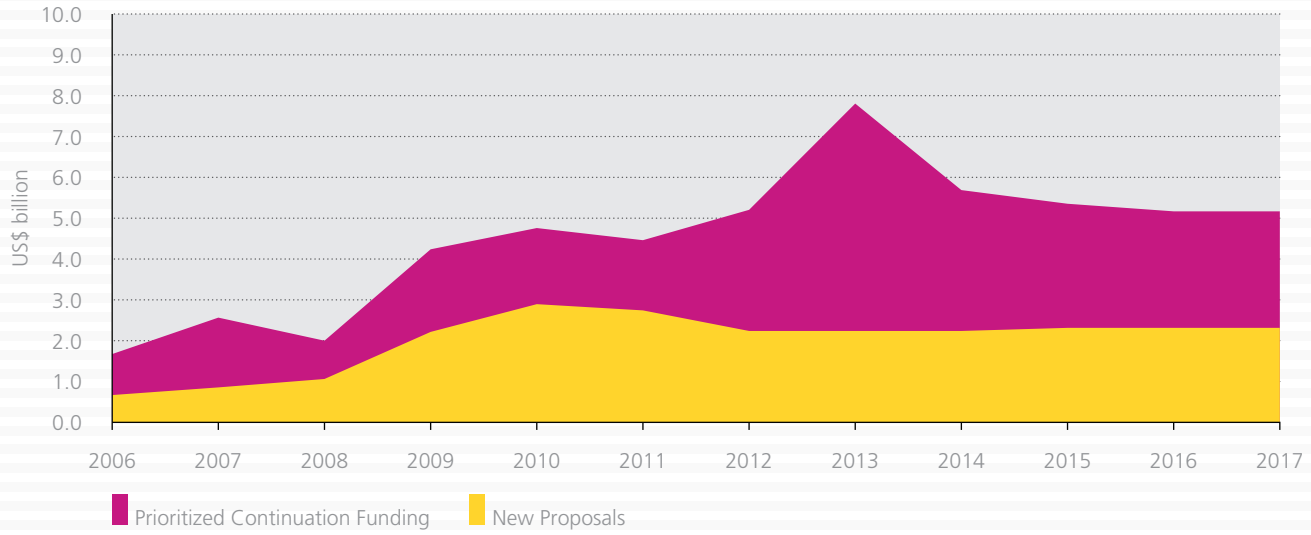
SCENARIO 2			Total: US$ 9 bn			Total: US$ 17 bn			Total: US$ 16 bn			
Commitments in the year (US$ billions)	2006	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	2014	2015	2016	2017
Prioritized continuation funding	1.0	1.7	1.1	1.8	2.0	2.0	3.0	5.7	3.3	3.0	2.9	2.9
New proposals	0.8	0.9	1.1	2.3	2.8	2.7	2.2	2.3	2.3	2.3	2.3	2.3
Total commitments in year	**1.8**	**2.6**	**2.2**	**4.1**	**4.7**	**4.7**	**5.2**	**7.9**	**5.7**	**5.3**	**5.2**	**5.2**
less: uncommitted assets at start:			(1.8)			(0.8)						

Numbers may not add up due to rounding

11 The increased levels of continuation funding in 2012 and 2013 are a result of the fact that the Phase 2 amounts of Rounds 8 and 9 are much greater than in earlier rounds. If the level of new proposals approved from 2011 onwards remained constant, total annual commitment requirements would peak at US$ 7.9 billion in 2013 and thereafter settle at a level of approximately US$ 5.2 billion.

12 This scenario would allow for continuation of all planned components of the supported programs – not just the long-term life-sustaining elements. For an indication of the resources required to maintain long-term life-sustaining services to those projected to be receiving such services as a result of Global Fund support, see the replenishment document *Financial and Health Impacts of Continued Support to the Three Diseases: Long-term Estimates*.

EVOLUTION OF THE DEMAND THAT COULD BE MET IN SCENARIO 2 (IF EXTENDED THROUGH 2017)



9 In years when the number in the table exceeds US$ 2.2 billion, this reflects the amounts needed for the renewal of **existing** programs (through the new proposals channel) that have reached the end of the approved funding period.

SCENARIO 3

NEW PROPOSALS INCREASE FROM US$ 3.5 BILLION IN 2011 TO US$ 4.5 BILLION IN 2013 TOTAL CONTRIBUTIONS: US$ 20 BILLION

1 Scenario 3 illustrates the resources that would be needed if demand through new proposals were to increase to US$ 3.5 billion in 2011 and to US$ 4.5 billion by 2013. This higher level of demand - as compared to the demand of US$ 2.7 billion and US$ 2.4 billion for new proposals in Rounds 8 and 9, respectively - would allow programs to scale up more quickly than in recent years in an effort to further accelerate progress towards achieving key components of the Millennium Development Goals by 2015.

2 Funding approved in 2011-2013 would total US$ 23.5 billion (Row 18 of the table), comprised of:

(a) US$ 8.5 billion for prioritized continuations (Phase 2 and Rolling Continuation Channel) of existing grants (through Round 9)

(b) US$ 12 billion for three rounds of new proposals[10]

(c) US$ 3 billion for prioritized continuations (Phase 2) of Round 10 grants.

3 Of the funding approved during and prior to 2011-2013, **US$ 20.8 billion** would be committed during 2011-2013 (Row 22), leaving US$ 7.0 billion to be committed later (Row 27) from new contributions to be made after 2013.

4 After taking account of uncommitted assets of US$ 0.8 billion projected to remain at the end of 2010 (Row 26), contributions of US$ 20 billion would be needed in 2011-2013 (Row 24).

10 It is assumed that Round 10 would be approved in 2010 for US$ 2.5 billion.

SCENARIO 3

		2008-2010				2011-2013			
		2008	2009	2010	Total	2011	2012	2013	Total
1	**APPROVALS**								
2	**Phase 1 of Rounds 8 and 9**								
3	Round 8	1.9	0.9		2.8				
4	Round 9		1.7	0.7	2.4				
5	***Rounds 8 and 9***	1.9	2.6	0.7	**5.2**				
6	**Prioritized continuation funding through Round 9**								
7	Phase 2	0.9	1.0	1.1	3.1	2.6	1.6	0.9	5.1
8	Easing of Phase 2 reductions on Rounds 8 and 9					0.4	0.3	0.2	0.9
9	Rolling Continuation Channel (until cessation)	1.0	1.0	0.4	2.4	1.0	1.4	0.0	2.5
10	***Prioritized continuations***	1.9	2.0	1.5	**5.4**	4.0	3.3	1.1	**8.5**
11	**New proposals** (and continuation of)								
12	Phase 1 of Round 10 and beyond:								
13	– Existing grants seeking renewal			0.8	0.8	0.5	0.6	0.6	1.7
14	– New/expanded proposals			1.7	1.7	3.0	3.4	3.9	10.3
15	***Phase 1 of new proposals***			2.5	**2.5**	3.5	4.0	4.5	**12.0**
16	Prioritized continuation of Round 10 and beyond							3.0	3.0
17	***New proposals*** - Phase 1 and continuation			2.5	**2.5**	3.5	4.0	7.5	**15.0**
18	**Total grant approvals**	3.8	4.6	4.7	**13.1**	7.6	7.3	8.6	**23.5**
19	Plus: commitment of prior year approvals	1.9	3.5	4.0	} (2.1)	4.1	7.1	8.0	} (3.0)
20	Minus: approvals to be committed next year	(3.5)	(4.0)	(4.1)		(7.1)	(8.0)	(7.0)	
21	Operating expenses, minus investment income	(0.1)	0.1	0.1	0.0	0.1	0.1	0.1	0.3
22	**Total commitments to be made**	2.2	4.1	4.7	**11.0**	4.7	6.5	9.6	**20.8**
23	Less: uncommitted assets at start of period				(1.8)				(0.8)
24	**Contributions needed in the period**				**9.2**				**20.0**
25	Contributions pledged for 2008-2010	3.1	3.3	3.6	**10.1**				
26	Uncommitted assets at end of period				0.8				0.0
27	**Grants approved for funding, to be committed next year**				**4.1**				**7.0**

Numbers may not add up due to rounding

See Annex 1 for an explanation of each row of the scenario tables.

KEY FEATURES OF SCENARIO 3

5 The US$ 23.5 billion foreseen to be approved under Scenario 3 would:

(a) Enable funding of all existing programs to be continued through 2011-2013. This includes programs entitled to prioritized continuation funding (through Phase 2 or the Rolling Continuation Channel), and programs that would seek renewal of funding through new rounds-based proposals.

(b) Provide US$ 0.9 billion of extra funding for Phase 2 of Rounds 8 and 9, by easing the 25 percent reduction to 10 percent (Row 8).

(c) Provide **US$ 12 billion for Phase 1 of three rounds of new proposals**, ranging from US$ 3.5 billion to US$ 4.5 billion per round (Row 15). Of this, an estimated US$ 1.7 billion would be sought by existing programs seeking renewal of funding through new proposals (Row 13).

6 An overall grant approval amount of US$ 23.5 billion, of which US$ 20.8 billion would be committed in 2011-2013, would enable much greater progress towards achieving the Millennium Development Goals, as described below.

RETURN ON INVESTMENT: RESULTS THAT CAN BE FORESEEN (SCENARIO 3)

7 An investment as foreseen by Scenario 3 would result in a pronounced increase in services delivered in 2015, compared to end-2009 levels:

- A total of **7.5 million people on ARV therapy**, up from **2.5 million** at the end of 2009
- **6.8 million DOTS treatments** provided annually, up from **1.4 million** in 2009
- **190 million long-lasting insecticidal nets** distributed annually, up from **34 million** in 2009
- **4.4 million orphans** and other vulnerable children provided with support annually, up from **1.4 million** in 2009
- **1.1 million** HIV-positive women receiving **PMTCT** annually, compared to **345,000** in 2009.

8 This would correspond to 34 percent of the ARV therapy universal access target; 72 percent of global long-lasting insecticidal nets need; 76 percent of global PMTCT need; and support for 23 to 29 percent of children orphaned by AIDS (or 3 percent of all orphans). For DOTS, expected results would correspond to 173 percent of the *Global Plan to Stop TB* treatment target.[11]

9 Under Scenario 3, ARV therapy services would save an estimated 3 million life-years in 2015 alone; long-lasting insecticidal nets distribution an estimated 23.5 million life-years and PMTCT an estimated 4.3 million life-years. For long-lasting insecticidal nets and PMTCT, this represents a significant increase in health impact compared to Scenario 2. As the impact of ARV therapy is assumed to be lagged, the health impact of ARV therapy in 2015 is similar to that under Scenario 2. However, a measurable increase over Scenario 2 would be expected in 2016 and 2017 if patients are maintained on treatment (see Annex 3 for details).

11 However, as described in more detail in footnote 8 and in Annex 3, increased resources would likely be shifted to other service areas such as treatment of multidrug-resistant TB and expanded outreach activities to improve case detection and cure rates.

LONGER-TERM VIEW OF SCENARIO 3

10 If approvals of new proposals were to continue after 2013 at the level of US$ 4.5 billion, and allowing for the continuation of programs, the commitment needs could be projected as follows through 2017:

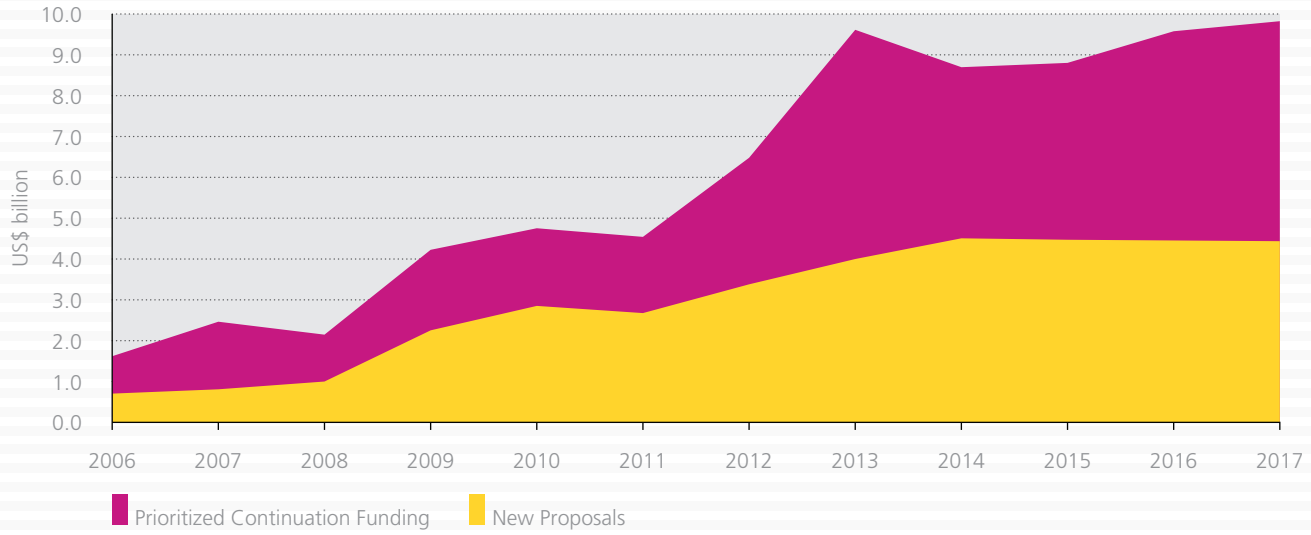
SCENARIO 3			Total: US$ 9 bn			Total: US$ 20 bn			Total: US$ 27 bn			
Commitments in the year (US$ billions)	2006	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	2014	2015	2016	2017
Prioritized continuation funding	1.0	1.7	1.1	1.8	2.0	2.0	3.0	5.7	4.3	4.4	5.1	5.3
New proposals	0.8	0.9	1.1	2.3	2.8	2.7	3.5	4.0	4.5	4.5	4.5	4.5
Total commitments in year	**1.8**	**2.6**	**2.2**	**4.1**	**4.7**	**4.7**	**6.5**	**9.6**	**8.8**	**8.9**	**9.6**	**9.8**
less: uncommitted assets at start:			(1.8)			(0.8)						

Numbers may not add up due to rounding

11 The increased levels of continuation funding in 2012 and 2013 are a result of the fact that the Phase 2 amounts of Rounds 8 and 9 are much greater than in earlier rounds. If the funding level of new proposals approved from 2013 onward remained constant, overall commitment needs would peak at US$ 9.6 billion in 2017 and thereafter settle at a level of almost US$ 10 billion.

12 The scenario allows for continuation of all planned components of the supported programs, and not just the long-term life-sustaining elements. For an indication of the resources required to maintain long-term life-sustaining services to those projected to be already receiving such services as a result of Global Fund support, see the replenishment document *Financial and Health Impacts of Continued Support to the Three Diseases: Long-term Estimates*.

EVOLUTION OF THE DEMAND THAT COULD BE MET IN SCENARIO 3 (IF EXTENDED THROUGH 2017)



SUMMARY

Scenario 1 would allow for the continuation of funding of existing programs. New programs could only be funded at a significantly lower level than in recent years. This scenario therefore does not represent an estimation of the volume of high-quality proposals expected to be submitted. Rather, it indicates the level of demand that could be met by the foreseen resources.

RESOURCES REQUIRED IN 2011-2013: US$ 13 BILLION

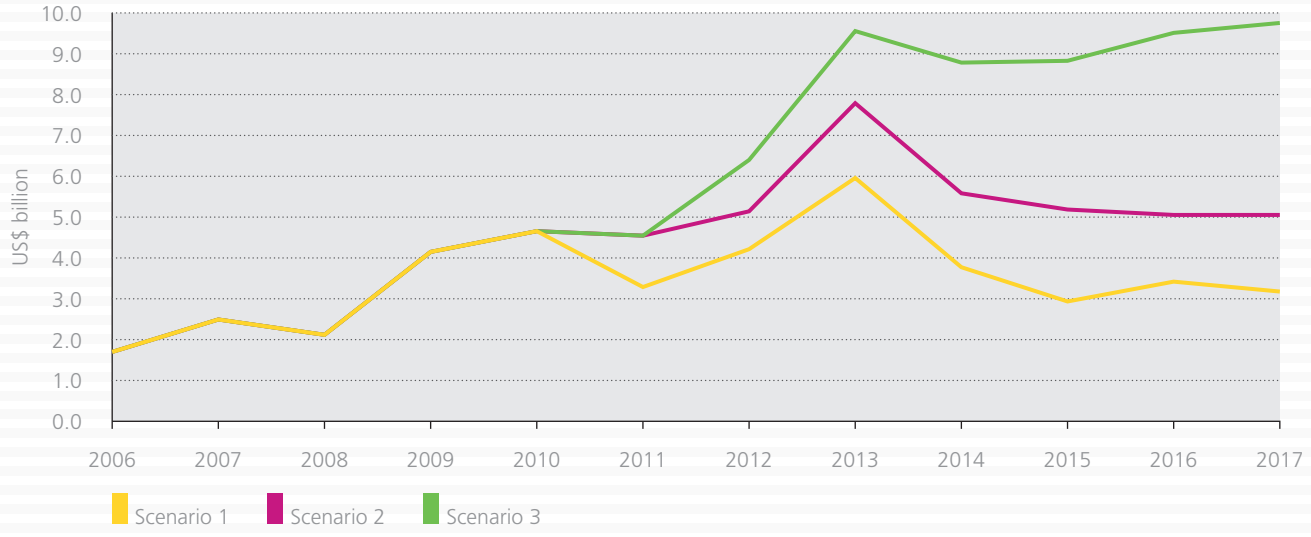
Scenario 2 would allow for the continuation of funding of existing programs. In addition, it would allow for funding of new proposals at a level that comes close to that of recent years. This would allow current trajectories of progress to be preserved.

RESOURCES REQUIRED IN 2011-2013: US$ 17 BILLION

Scenario 3 would allow for the continuation of funding of existing programs. In addition, well-performing programs could be scaled up significantly, allowing for more rapid progress towards achievement of the health-related Millennium Development Goals.

RESOURCES REQUIRED IN 2011-2013: US$ 20 BILLION

LEVEL OF FUNDING UNDER THE THREE SCENARIOS



SERVICES AND HEALTH IMPACT

Projected service deliveries provided under the three scenarios correspond to varying degrees of progress towards meeting international targets and the Millennium Development Goals by 2015. For long-lasting insecticidal nets, Global Fund investments alone would achieve between 42 and 72 percent of global 2015 need (or 54 to 94 percent of need in sub-Saharan Africa). When combined with 2014 targets of the U.S. Global Health Initiative, joint achievements would amount to 70 to 100 percent of global long-lasting insecticidal nets need (See table below). Similarly, Global Fund investments alone would represent 44 to 76 percent of estimated global PMTCT need, and Global Fund investments together with those of the U.S. Global Health Initiative would represent 78 to 110 percent. For ARV therapy, the Global Fund investments would meet 20 to 34 percent of the 2015 universal access target; combined with the U.S. Global Health Initiative 2014, they would meet 38 to 53 percent (see the table below, and Table 4 of Annex 3 for U.S. Global Health Initiative targets).[12]

12 See Annex 3 for detailed description.

This would translate to an estimated 16 million to 23.5 million life-years saved by long-lasting insecticidal nets, 2.9 million to 3.0 million life-years saved by ARV therapy and 2.5 million to 4.3 million life-years saved by PMTCT, each, in 2015 alone. Over subsequent years, these annual health impacts would increase, especially under Scenarios 2 and 3.

TABLE. ESTIMATED SERVICE DELIVERIES, TARGETS AND NEEDS IN 2015

		2015 Results				
	2009 Global Fund results	**Scenario 1**	**Scenario 2**	**Scenario 3**	**Global target or need**	**Definition & source of target or need**
ARV: People on ARV therapy	**2.5 million**	**4.4 million** (20%)	**5.8 million** (27%)	**7.5 million** (34%)	2015: **21.9 million**	2015 target for universal access/Millennium Development Goal scenario, i.e. 80 percent of need [1], based on 2006 WHO guidelines. According to WHO's 2009 revised treatment guidelines [2], the need and target would increase by ≥50 percent
DOTS: treatment of smear-positive cases	**1.4 million**	**3.9 million** (100%)	**5.2 million** (134%)	**6.8 million** (173%)	2015: **3.9 million**	Target according to targeted case detection rate for 2015 in the Global Plan to Stop TB [3], applied to WHO's 2008 estimated smear-positive cases [12] which was adjusted to 2015 by log-linear forward projection (WHO 2010)
LLIN: annual distributions (of which ~64 percent in sub-Saharan Africa)	**34 million**	Global: **110 million** (42%)	Global: **147 million** (56%)	Global: **190 million** (72%)	Global 2015: **264 million**	Global Malaria Action Plan, for an effective coverage of 790 million long-lasting insecticidal nets, protecting 1.6 billion people at risk [4]
	27 million	Africa: **70 million** (54%)	Africa: **94 million** (73%)	Africa: **121 million** (94%)	Africa 2015: **129 million**	Global Malaria Action Plan [4],[13], WHO GMP dept., for an effective coverage of 388 million long-lasting insecticidal nets, protecting 776 million people at risk
PMTCT: HIV-positive women receiving ARVs	**0.35 million**	**0.61 million** (44%)	**0.82 million** (58%)	**1.06 million** (76%)	2008: **1.4 million**	Global need, 2008, defined as pregnancies in HIV-infected women [5]. Assuming constant disbursement per HIV-positive woman
Orphans and other vulnerable children supported	**1.4 million**	**2.5 million** (17%)	**3.4 million** (23%)	**4.4 million** (29%)	2007: **15 million**	Orphans due to AIDS living in 2007 [7]
		13%	18%	23%	2015: **19 million**	2015 UNAIDS target for universal access/ Millennium Development Goal scenario, i.e. covering 80 percent of need [1]
		1.8%	2.3%	3%	2007: **145 million**	Total orphans in 2007 (UNICEF)

Note: ARV therapy numbers represent patients alive on ARV therapy; all other numbers are annual (noncumulative) service deliveries. For references, see Annex 3.

ANNEX 1: GUIDE TO CONTENTS OF EACH ROW OF THE SCENARIO TABLES

The rows in the scenario tables have the following meaning:

ROW 1 – APPROVALS:

The amounts of funding **approved** in the year by the Board for grants.

ROWS 2 TO 5 – PHASE 1 OF ROUNDS 8 AND 9:

Phase 1 is the initial two-year phase of grants approved in Rounds 8 and 9.

Rows 3 and 4 give the amounts of funding approved in the year for grants approved in each of these rounds.

ROWS 6 TO 10 – CONTINUATION FUNDING THROUGH ROUND 9:

Funding approved in the year for continuation of grants for Phase 2 and both phases of the Rolling Continuation Channel for grants that were originally approved in rounds through Round 9. This funding has priority over funding for new proposals (and will be known as "additional commitments" upon transition to the new grant architecture).

Phase 2 is a period of (usually) three years following Phase 1. Rolling Continuation Channel-1 and Rolling Continuation Channel-2 are two consecutive phases after Phase 2, each for a period of up to three years. Access to Phase 2 and Rolling Continuation Channel funding is dependent on performance of the supported program. The continuation rates assumed are based on experience.

Rows 7 and 9 show the amounts of funding projected to be approved in the year for Phase 2 and Rolling Continuation Channel, respectively. Access to Rolling Continuation Channel-1 will cease in 2010; grants already approved for Rolling Continuation Channel-1 will be eligible for Rolling Continuation Channel-2, subject to performance.

Row 8 provides for an increase in the Phase 2 amounts projected for Rounds 8 and 9, which have been reduced by 25 percent of the Technical Review Panel-recommended amount in accordance with a limitation decided by the Board. The Board also decided that this limitation shall be increased from 75 percent to 90 percent when new resources become available, subject to approval by the Board at that time.

ROWS 11 TO 17 – NEW PROPOSALS (AND CONTINUATION OF):

The amounts projected to be approved under each scenario for proposals submitted through the new proposals funding window, and the subsequent prioritized continuation of these grants upon completion of Phase 1 (subject to performance). Gives the amounts to be approved in the year for new proposals subsequent to Round 9.

As well as new or expanded requests for funding, programs that have reached the end of an existing grant can also seek renewal of funding by applying for a new grant through the new proposals window. Rows 13 and 14 give the projected amounts of demand for each of these components for an initial two-year phase, with the total on Row 15.

Row 17 projects the demand for prioritized continuation funding (additional commitments) for these grants, following completion of an initial two-year phase.

ROW 18 – TOTAL GRANT APPROVALS:

The total of the amounts of funding projected to be approved in the year.

ROWS 19 TO 22 – TOTAL COMMITMENTS TO BE MADE:

"Commitments" means the financial amount of contractual commitments projected to be entered into in the year upon signing a grant agreement (or extension thereof) in respect of funding approved by the Board for a grant (or continuation thereof). There is necessarily a lead time between Board approval of funding and the entering into of the related contractual commitment. Furthermore, grant extensions for Phase 2 and Rolling Continuation Channel now provide for commitment of funding in two stages, thus deferring commitment of one-third of the approved funding until the second year of the phase. Hence, at any given time, there will be an amount of approved funding for which a commitment has not yet been made.

Row 19 gives the amount of approved funding projected to have not yet been committed at the start of the year.

Row 20 gives the corresponding amount at the end of the year.

Row 21 gives the amount of commitments projected to arise for operating expenses (as distinct from grants), minus the projected amount of investment income earned on funds held by the Trustee until disbursed to grant recipients.

Accordingly, the sum of rows 19, 20 and 21 gives the amount of commitments projected to be entered into in the year.

Row 22, being the sum of rows 18 through 21, gives the total commitments projected to be entered into in the year.

ROWS 23 AND 24:

Row 23 – Uncommitted Assets at start of period: the amount of assets (cash and promissory notes) projected to be deposited with the Trustee at the start of the period, minus the amount of commitments that have not by then been disbursed. This amount is available towards financing commitments to be entered into during the period.

Row 24 subtracts the uncommitted assets at the start of the period (per Row 23) from the amount of commitments to be entered into during the year (per Row 22). The result (per Row 24) is the amount of contributions needed during the year to cover commitments projected to be made in the year.

ROWS 25 AND 26:

Row 25 gives the amount of contributions received, or pledged but not yet received, during 2008-2010 (US$10.1 billion). This exceeds the US$ 9.3 billion amount of contributions needed in the period to cover commitments (per Row 24), leaving an amount of uncommitted assets of US$ 0.8 billion (per Row 28) projected to be available at the end of 2010 towards covering commitments in 2011 (as indicated in Row 23 for 2011-2013).

ROW 27 — GRANTS APPROVED FOR FUNDING, TO BE COMMITTED NEXT YEAR:

This is the same number as shown on Row 20. It gives the amount of approved funding projected to have not yet been committed at the end of the replenishment period, which will need to be covered by contributions in the following year.

ANNEX 2: RESOURCE NEEDS PRIOR TO APPROVAL OF FURTHER NEW PROPOSALS (IN ROUND 10 AND LATER)

Prior to approval of further new proposals after Round 9, the contributions needed for 2011-2013 would amount to **US$ 8.2 billion** (per Row 24 below). This is after allowing for the easing of the reduction to Phase 2 of Rounds 8 and 9 from 25 percent to10 percent.

Note: The projected need of US$ 8.2 billion prior to new proposals is consistent with the estimate of US$ 8.1 billion considered at the Twentieth Board Meeting in November 2009.

		2008-2010				2011-2013			
		2008	2009	2010	Total	2011	2012	2013	Total
1	**APPROVALS**								
2	**Phase 1 of rounds 8 and 9**								
3	Round 8	1.9	0.9		2.8				
4	Round 9		1.7	0.7	2.4				
5	***Rounds 8 and 9***	1.9	2.6	0.7	**5.2**				
6	**Prioritized continuation funding through round 9**								
7	Phase 2	0.9	1.0	1.1	3.1	2.6	1.6	0.9	5.1
8	Easing of Phase 2 reductions on rounds 8 and 9					0.4	0.3	0.2	0.9
9	Rolling Continuation Channel (until cessation)	1.0	1.0	0.4	2.4	1.0	1.4	0.0	2.5
10	***Prioritized continuations***	1.9	2.0	1.5	**5.4**	4.0	3.3	1.1	**8.5**
18	**Total grant approvals**	3.8	4.6	2.2	**10.6**	4.0	3.3	1.1	**8.5**
19	Plus: commitment of prior year approvals	1.9	3.5	4.0	} 0.4	1.6	3.5	4.0	} 0.2
20	Minus: approvals to be committed next year	(3.5)	(4.0)	(1.6)		(3.5)	(4.0)	(1.4)	
21	Operating expenses, minus investment income	(0.1)	0.1	0.1	0.0	0.1	0.1	0.1	0.3
22	**Total commitments to be made**	2.2	4.1	4.7	**11.0**	2.2	3.0	3.8	**9.0**
23	Less: uncommitted assets at start of period				(1.8)				(0.8)
24	**Contributions needed in the period**				**9.2**				**8.2**
25	Contributions pledged for 2008-2010	3.1	3.3	3.6	**10.1**				
26	Uncommitted assets at end of period				0.8				0.0
27	**Grants approved for funding, to be committed next year**				**1.6**				**1.4**

Numbers may not add up due to rounding

See Annex 1 for an explanation of each row of the scenario tables.

ANNEX 3: RETURN ON INVESTMENT – METHODOLOGY AND DETAILS

1. BACKGROUND

Seven years after its first disbursements in 2003, Global Fund-supported programs enabled 2.5 million people with advanced HIV infection to be put on ARV therapy, the provision of DOTS treatment for 6 million people; and the distribution of 104 million insecticide-treated nets. The 2010 replenishment will determine the pace at which the further scale-up of these services will occur.

The three scenarios project different levels of Global Fund investment for the period 2010 to 2015 (Table 1). This paper translates those finance scenarios into corresponding expected outputs of Global Fund-supported programs for the key services of ARV therapy, DOTS treatment, distribution of long-lasting insecticidal nets, PMTCT, and support to orphans and other vulnerable children. Projected service deliveries are compared against estimates of need and international targets such as the Millennium Development Goals and targets set by the World Health Organization (WHO) and the Roll Back Malaria and Stop TB partnerships.

2. METHODS

Future service deliveries are estimated as:

$$\frac{\text{FUTURE DISBURSEMENTS} \times \text{DISEASE SHARE IN THE PORTFOLIO}}{\text{AVERAGE DISBURSEMENT PER UNIT OF SERVICE DELIVERY}}$$

Where:

- **Future disbursement:** annual forecasted disbursements from funding scenarios for 2010–2015. The disbursements used are from one year prior to that of the projection to reflect an assumed one calendar year lag between grant disbursements and actual service deliveries reported.
- **Disease share in the portfolio:** estimated as the average of the disease proportions in 2007-2009 disbursements and approved Round 8, Round 9 and National Strategy Applications proposals (Table 2).
- **Average disbursement per unit of service delivery:** calculated as service delivery results reported by recipients, divided by the relevant total disease disbursements from one year prior, over the period 2007-2009.

The method assumes that the following remain constant over the projection period:

- the distribution of expenditures for service delivery areas within disease components (Table 2);
- average disbursement per unit of service delivery, in nominal US$; and
- average non-Global-Fund-financed contribution per unit of service delivery, in nominal US$.

3. RESULTS

3a. Antiretroviral therapy

For **ARV therapy**, finance scenarios translate to a gradual increase in patients alive on ARV therapy, from the end-2009 portfolio-aggregate result of 2.5 million people to 4.4 million (Scenario 1), 5.8 million (Scenario 2), or 7.5 million (Scenario 3) by 2015 (Figure 1a).

In comparison, the universal access target, corresponding to 80 percent of need according to 2007-2008 definitions, is 21.9 million in 2015 [1]. The Global Fund's contribution to this global target would be 20 percent in Scenario 1 and 34 percent in Scenario 3 (Table 3). These targets and proportional achievements refer to the people living with HIV in most urgent need of ARV therapy (with CD4 cell count below 200/uL), but do not yet incorporate the additional need of people living with HIV with CD4 cell counts between 200/uL and 350/uL according to WHO's 2009 revised treatment guidelines [2], which would increase total need by 50 percent or more.

3b. DOTS

For **DOTS**, finance scenarios translate to an increase in the number of smear-positive TB case detections and treatments, from 1.4 million in 2009 to 3.9 million (Scenario 1), 5.2 million (Scenario 2) or 6.8 million (Scenario 3) by 2015 (Figure 1b). In comparison, WHO estimates that a total of 3.9 million smear-positive TB patients would need treatment in 2015 (Table 3 [3]).

The Global Fund's contribution would therefore, by 2015, correspond to 100 percent of global need in Scenario 1 and 173 percent in Scenario 3 (Table 3). The overachievement compared to the global target reflects the assumption that DOTS of smear-positive TB patients would maintain a fixed share in overall TB and overall portfolio disbursements and expenditures. In reality, however, increasing TB funding would probably go to expanded and improved treatment of multidrug-resistant TB, or to expansion of DOTS-Plus activities such as community outreach to improve treatment quality and case detections in hard-to-reach groups, or improved treatment of (often smear-negative) TB/HIV co-infected patients.

3c. Long-lasting insecticidal nets

For **long-lasting insecticidal nets distribution**, finance scenarios translate to a phased increase in the number of long-lasting insecticidal nets distributed in a year, from 34 million in 2009 to 110 million (Scenario 1), 147 million (Scenario 2) or 190 million (Scenario 3) by 2015 (Figure 1c).

In comparison, the Roll Back Malaria Partnership estimates that a total of 264 million long-lasting insecticidal nets would need to be distributed every year to cover the 1.58 billion people globally living at risk of malaria, assuming a three-year long-lasting insecticidal nets lifespan and two people protected by each long-lasting insecticidal net distributed [4]. The three scenarios would therefore realize between 40 and 72 percent of this total global need by 2015.

For sub-Saharan Africa specifically, which received 64 percent of Global Fund-supported insecticide-treated nets deliveries in 2008–2009, out of a total need of 129 million annual long-lasting insecticidal nets distributions, Scenario 1 would achieve 52 percent coverage and Scenario 3, 94 percent coverage.

3d. Prevention of mother-to-child transmission

For **PMTCT**, finance scenarios translate to an increase in HIV-positive women given ARVs for preventing mother-to-child transmission of HIV, from 345,000 women in 2009 to 610,000 women annually (Scenario 1), 820,000 women annually (Scenario 2) or 1.1 million women annually (Scenario 3) by 2015 (Figure 1d).

In comparison, UNAIDS and WHO estimated that a total of 1.4 million HIV-infected women needed PMTCT in 2008 [5]. By 2015, the Global Fund's contribution would approximate 44 percent of the global 2008 need under Scenario 1 and 76 percent in Scenario 3 (Table 3).

There are no need estimates for PMTCT for the year 2015, but PMTCT need might be expected to be relatively stable over coming years, in view of stable adult HIV prevalence in the most countries with a high HIV burden. WHO and UNAIDS are in the process of developing new PMTCT targets for 2015, that will reflect WHO's 2009 revised treatment recommendations and a new global focus on PMTCT.

Also, in light of the 2009 WHO recommendations [6] the unit cost of PMTCT will increase as countries move from single-dose nevirapine (costing US$ 2 per woman treated) to more effective and more costly treatment options (average cost per woman treated, around US$ 282, Futures Institute unpublished 2009). Our projected achievements relative to need are therefore maximum estimates, contingent on reprogramming of HIV disbursements from other HIV program areas to PMTCT.

3e. Support to orphans and other vulnerable children

For **support to orphans and other vulnerable children**, finance scenarios translate to an increase in the number of orphans and other vulnerable children supported from 1.4 million in 2009 to 2.5 million (Scenario 1), 3.4 million (Scenario 2) or 4.4 million (Scenario 3) by 2015 (Figure 1e).

In comparison, UNAIDS estimated that a total of 15 million orphans due to AIDS were living in 2007 [7], and 19 million HIV-related orphans and other vulnerable children would be targeted in 2010 and 2015 according to UNAIDS' 2007 resource-need estimates [1]. The Global Fund's support by 2015 would, therefore, be approximately 13 to 17 percent of the global HIV-related orphans and other vulnerable children need in 2007 under Scenario 1 and 23 to 29 percent in Scenario 3 (Table 3). In practice, children orphaned by HIV/AIDS may not be separated from children orphaned by other causes. The total number of orphans has been estimated at 145 million in 2007, and the Global Fund's support to orphans and other vulnerable children by 2015 would cover approximately 2 percent of total orphans and other vulnerable children.

4. HEALTH IMPACT

Expected health impacts corresponding to each finance scenario were estimated using the *Spectrum* epidemiological model for ARV therapy and PMTCT [8], and the LiST epidemiological model for long-lasting insecticidal nets [9].[13]

In 2015, **ARV therapy** is estimated to avert 390,000 deaths from AIDS in Scenario 1, 550,000 deaths in Scenario 2 and 600,000 deaths in Scenario 3. These averted deaths result in an estimated 2.8 million to 3 million life-years saved in 2015 alone. The effect of more patients enrolling in Scenarios 2 and 3 compared to Scenario 1 becomes more prominent after 2015 (Figure 2a): in 2017 alone, Scenarios 2 and 3 would save an additional 600,000 and 1.2 million life-years, respectively, compared to Scenario 1. The time lag in additional ARV therapy impact relative to the financial investment of the more ambitious scenarios reflects the fact that in untreated AIDS patients, the peak of mortality occurs in the second year after the time that patients would typically start ARV therapy.

Long-lasting insecticidal nets would avert 330,000 deaths among children under five years in 2015 in Scenario 1, and 424,000 and 484,000 deaths in Scenarios 2 and 3, respectively. This impact translates into an estimated 16 million, 21 million and 24 million life-years saved in the three scenarios (Figure 2b). Despite more deaths averted by ARV therapy, long-lasting insecticidal nets save many more life-years because: (1) malaria deaths typically occur at much younger age (median 2 years) than AIDS deaths (median 30 to 35 years), and (2) ART postpones but does not ultimately avert deaths due to AIDS.

PMTCT is estimated to avert 100,000 deaths from perinatal HIV infection in 2015 in Scenario 1, and 133,000 and 172,000 deaths in Scenarios 2 and 3, respectively. This corresponds to around 2.5 million, 3.3 million and 4.3 million life-years saved in the three scenarios. In 2017 only Scenario 3 continues to increase in (annual) health impact: in Scenarios 1 and 2 the annual deaths averted and life-years saved decrease compared to their 2015-2016 peak, due to the assumed slight reduction in disbursements in these scenarios.

These health impact estimates assume that PMTCT will gradually become more effective in preventing infant HIV infections between 2010 and 2017 as countries start implementing WHO's 2009 new PMTCT guidelines [6], which recommend more effective ARV prophylactic regimens (for the mother during pregnancy and for the infant during breastfeeding) than the current single-dose nevirapine given just before the birth.

5. DISCUSSION

Service delivery achievements compared to international targets

These calculations illustrate that the Global Fund finance scenarios would result in varying extents of progress towards meeting international targets and the Millennium Development Goals, by 2015, for five key services.

When considered together with targets set by the U.S. government for the U.S. Global Health Initiative [10], the Global Fund Scenario 3 and the U.S. Global Health Initiative together would, by 2015, achieve service levels close to international access targets for long-lasting insecticidal nets, PMTCT and DOTS, and realize nearly half of international access targets for ARV therapy and support to orphans and other vulnerable children (Table 4). Under Scenario 1, by contrast, even with the U.S. Global Health Initiative combined, access would stay far below the 2015 targets for all services except basic DOTS.

13 For detailed methods description, see Replenishment paper *Financial and Health Impacts of Continued Support to the Three Diseases: Long-term Estimates.*

14 Futures Institute (unpublished). HIV infections averted by PMTCT were estimated based on the following assumed rates of perinatal HIV transmission, as infections per HIV-infected woman giving birth:

- in absence of PMTCT: 33 percent – based on **20 percent** peripartum + (among infants who did not get infected peripartum) **16.5 percent** through breastfeeding;
- with PMTCT in current (2008-9) practice (single-dose nevirapine or dual ARV): **23 percent** – based on **14 percent** peripartum + (among infants who did not get infected peripartum) **16.5 percent** through breastfeeding;
- with PMTCT according to WHO 2009 guideline (option A: Option A: Daily AZT for mother starting at 14 weeks of pregnancy, plus daily NVP for child for at least one year AZT for the last 25 weeks of pregnancy; Option B: Triple ARV therapy for the mother from 14 weeks to cessation of breastfeeding): **9 percent** – based on **4 percent** peripartum + (among infants who did not get infected peripartum) **5.4 percent** through breastfeeding.

Impact projections assume that by 2017, all supported countries will have fully implemented WHO's 2009 recommended PMTCT options, following an annual linear increase in the proportion of women accessing the 2009-recommended options between 2010 to 2017. See Annex to replenishment paper *Financial and Health Impacts of Continued Support to the Three Diseases: Long-term Estimates* for more details.

Limitations

Interpretation of these results should take into account several important limitations. First, we assumed constant shares of each disease and service delivery area in the future Global Fund portfolio throughout the forecast period, based on recent trends in grants and recently approved proposals (Table 2). For DOTS treatments, these assumptions led to service delivery numbers that, in Scenarios 2 and 3, exceeded the global need. However, it is reasonable to expect that if such a projected increase in TB funding materialized, additional funds will be allocated towards improved treatment of multidrug-resistant TB, or to the expansion of DOTS-Plus activities such as community outreach to improve treatment quality and case detections in hard-to-reach groups, rather than to additional first-line DOTS treatments. The projected overachievement of DOTS targets does therefore not equal the full implementation of the Global Plan to Stop TB – which would cost an average of US$ 5.6 billion per year between 2010 and 2015 [11] (This figure does not take into account recent higher estimates of the cost of treating multidrug-resistant TB).

For PMTCT, projected achievements for given finance scenarios are even more uncertain. On the one hand, the unit disbursement needed per HIV-positive woman may increase as countries adopt improved but more costly PMTCT treatment options following WHO's 2009 guidelines [6] – which would decrease the service level that could be provided under each finance scenario. On the other hand, in Global Fund HIV grants the share of PMTCT may increase above the current four percent as a result of reprogramming, which could compensate or even overcompensate for the increased unit cost.

Second, the average Global Fund disbursement needed per unit of service delivery is assumed to be constant, whereas fluctuations have been observed over recent years. For ARV therapy, the total HIV disbursements including all HIV-associated service delivery areas but expressed per patient on ARV therapy increased from US$ 492 to US$ 555 from 2007 to 2009. Similarly, total TB-associated disbursements expressed per DOTS treatment increased from US$ 151 to US$ 226 over the same period. Total malaria-associated disbursements per insecticide-treated net distributed has remained relatively stable at approximately US$ 15 for the last three years.

At the level of the overall program (to which the Global Fund contributes alongside other donors and domestic resources), service unit costs may decrease over time for many reasons, such as achieving economies of scale as services are scaled up. Conversely, however, unit costs may rise over time as programs expand to target hard-to-reach groups.

Third, the non-Global Fund contributions per unit of service delivery are assumed to be constant over time. This would be consistent with the principle of the Global Fund's additionality, however it is not certain that domestic and non-Global Fund international financing could be maintained at the same level (Scenario 1) or same rate of scale-up (Scenarios 2 and 3) as Global Fund funding.

In comparison to the Global Fund scenarios of US$ 13 billion, US$ 17 billion and US$ 20 billion as three-year totals, UNAIDS has estimated the global HIV/AIDS resource needs at US$ 28 billion to US$ 50 billion every year from 2010 to 2015, in a scenario of phased scale-up that would reach universal access targets by 2015 [1]. For malaria, the 2008 *Global Malaria Action Plan* estimated a total global cost of on average US$ 5.9 billion per year over 2011 to 2020 [4]. And the Global Plan to Stop TB has been costed at an average US$ 6.3 billion per year between 2020 and 2015, when including 2009 estimates of the cost of multidrug-resistant TB management [11]. These numbers illustrate that in all Global Fund funding scenarios, the continued and increased contributions from other donors and from countries themselves will be of paramount importance.

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TABLE 1. SCENARIOS OF GLOBAL FUND FINANCING FOR 2011-2013

Scenario	Amount 2011-2013
1. Continue funding for existing programs, and allow for an additional, lower level of funding for new programs	$ 13 billion
2. Continue funding for existing programs, and maintain current level of funding for new programs	$ 17 billion
3. Accelerated scale-up	$ 20 billion

TABLE 2. ESTIMATED SHARE OF DISEASE COMPONENTS AND SERVICE DELIVERY AREAS IN GLOBAL FUND PORTFOLIO

	2004	2005	2006	2007	2008	2009	**Assumption 2010-2015**
HIV	61%	58%	54%	63%	62%	48%	**48%**
TB	17%	12%	15%	16%	14%	14%	**16%**
Malaria	22%	29%	31%	20%	23%	37%	**34%**
ARV therapy as percentage of HIV		23%			25%		**24%**
PMTCT as percentage of HIV		4%			4%		**4%**
Orphans and other vulnerable children as percentage of HIV		2%			3%		**4%**
DOTS as percentage of TB		86%			78%		**79%**
Long-lasting insecticidal nets as percentage of malaria		34%			38%		**37%**

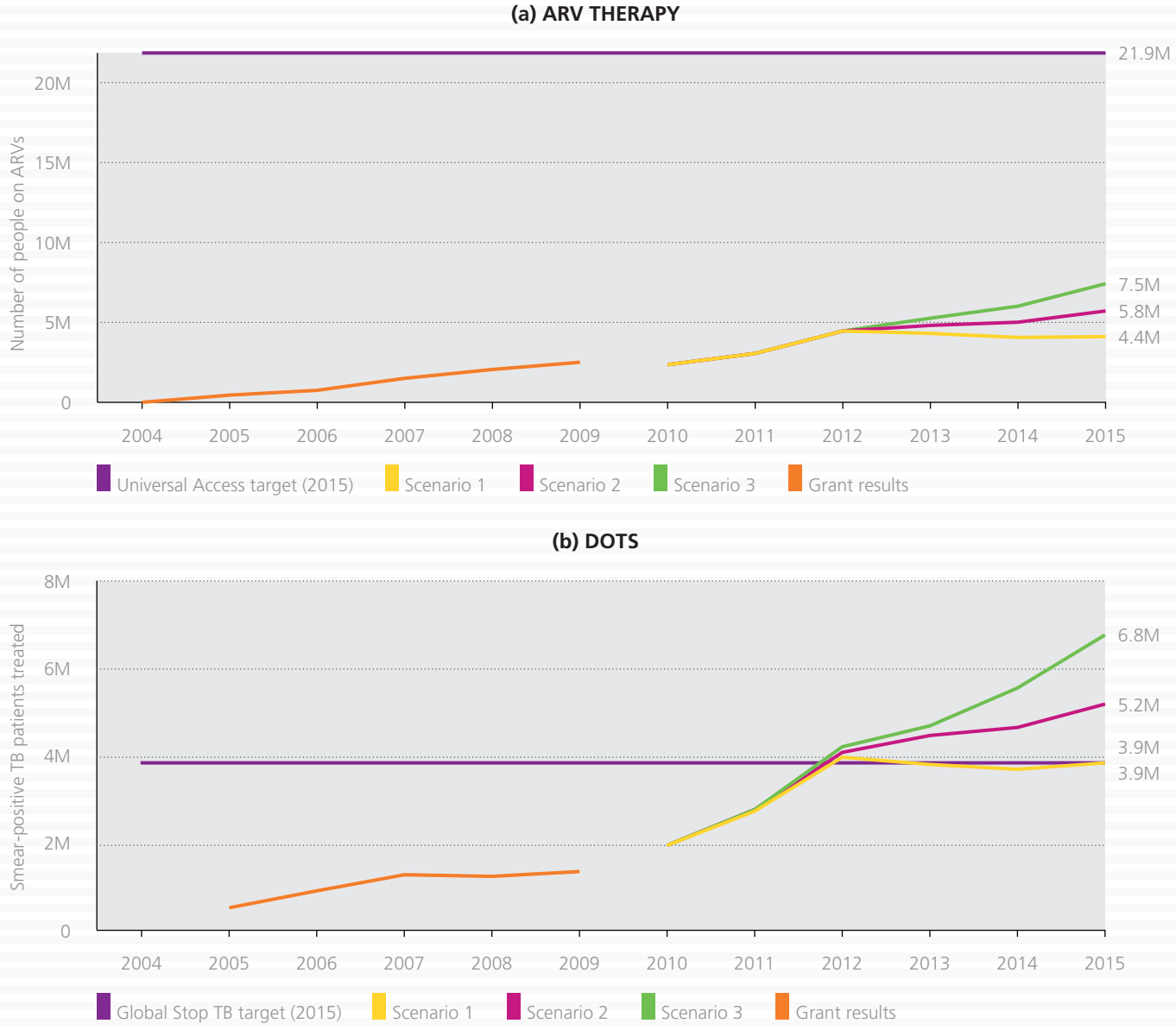
TABLE 3. ESTIMATED GLOBAL FUND CONTRIBUTION TO INTERNATIONAL TARGETS AND NEEDS IN 2015, FOR THREE FUNDING SCENARIOS

	Scenario 1	**Scenario 2**	**Scenario 3**	**Global target or need**	**Definition & source of target or need**
ARV: People on ARV therapy	**20%**	**27%**	**34%**	2015: **21.9 million**	2015 target for universal access/Millennium Development Goals scenario, i.e. 80 percent of need [1], based on 2006 WHO guidelines. According to WHO's 2009 revised treatment guidelines [2], the need and target would increase by ≥50 percent
DOTS: treatment of smear-positive cases	**100%**	**134%**	**173%**	2015: **3.9 million**	Target according to targeted case detection rate for 2015 in the Global Plan to Stop TB [3], applied to WHO's 2008 estimated smear-positive cases [12] which was adjusted to 2015 by log-linear forward projection (WHO 2010)
LLIN: annual distributions (of which 64 percent in sub-Saharan Africa)	Global: **42%**	Global: **56%**	Global: **72%**	Global 2015: **264 million**	Global Malaria Action Plan, for an effective coverage of 790 million long-lasting insecticidal nets, protecting 1.6 billion people at risk [4]
	SSA: **54%**	SSA: **73%**	SSA: **94%**	SSA 2015: **129 million**	Global Malaria Action Plan [4], WHO GMP dept. and [13], for an effective coverage of 388 million long-lasting insecticidal nets, protecting 776 million people at risk
PMTCT: HIV-positive women receiving ARVs	**44%**	**58%**	**76%**	2008: **1.4 million**	Global need, 2008, defined as pregnancies in HIV-infected women [5]. Assuming constant disbursement per HIV-positive woman
Orphans and other vulnerable children supported	**17%**	**23%**	**29%**	2007: **15 million**	Orphans due to AIDS living in 2007 [7]
	13%	**18%**	**23%**	2015: **19 million**	2015 UNAIDS target for universal access/Millennium Development Goals scenario, i.e. covering 80 percent of need [1]
	1.8%	**2.3%**	**3%**	2007: **145 million**	Total orphans in 2007 (UNICEF)

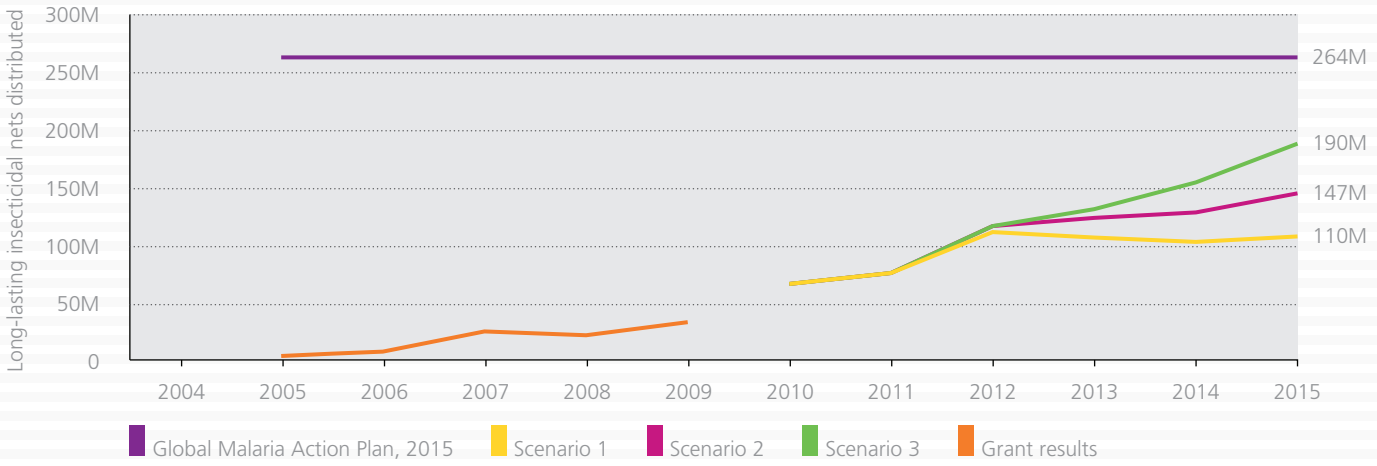
TABLE 4. US GLOBAL HEALTH INITIATIVE TARGETS, 2014 [10], AND CONTRIBUTION TO 2015 INTERNATIONAL TARGET OR NEED, IN ISOLATION OR IN COMBINATION WITH GLOBAL FUND FINANCING SCENARIOS

Service	2014 Target	Contribution to global target				Definition / calculation
	U.S. GHI	U.S. GHI	U.S. GHI + GF Scenario 1	U.S. GHI + GF Scenario 2	U.S. GHI + GF Scenario 3	
ARV Therapy	4M	18%	38%	45%	53%	
DOTS	2.6M	66%	167%	200%	239%	
LLINs (Global)	75M	28%	70%	84%	100%	"Reduce the burden of malaria by 50 percent for 450 million people", which could be realized by an annual 75 million long-lasting insecticidal net distribution, assuming three-year long-lasting insecticidal net lifespan and two people protected per insecticide-treated net
PMTCT	480,000	34%	78%	93%	110%	Contributions as percentage of 2008 HIV-positive pregnancies
Orphans and other vulnerable children	5M	26%	40%	44%	49%	Contributions as percentage of 2015 UNAIDS universal access target

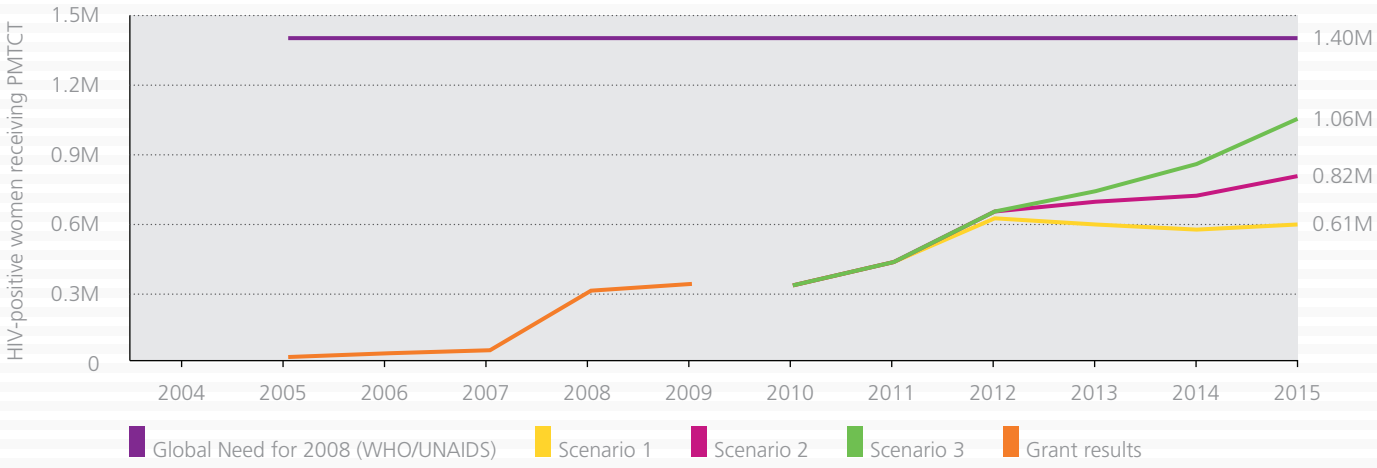
FIGURE 1. ESTIMATED SERVICES DELIVERED IN THE THREE FUNDING SCENARIOS PER YEAR



(c) LONG-LASTING INSECTICIDAL NETS



(d) PREVENTION OF MOTHER-TO-CHILD TRANSMISSION



(e) SUPPORT TO ORPHANS AND OTHER VULNERABLE CHILDREN

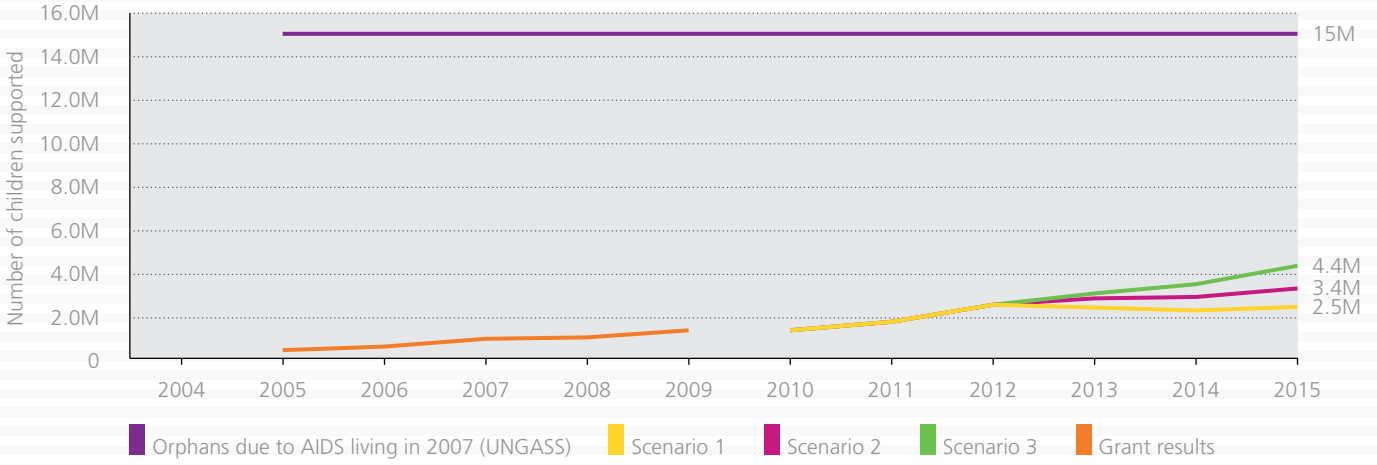
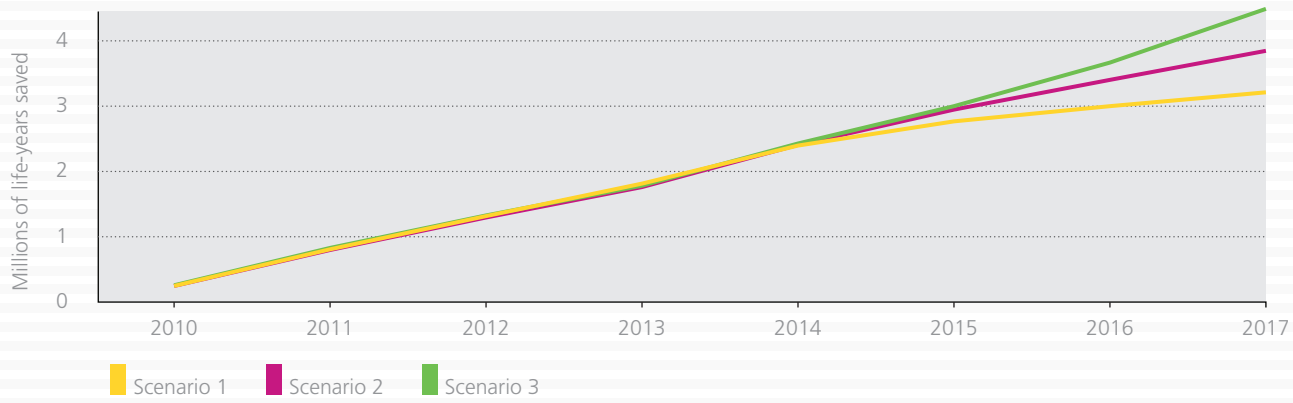


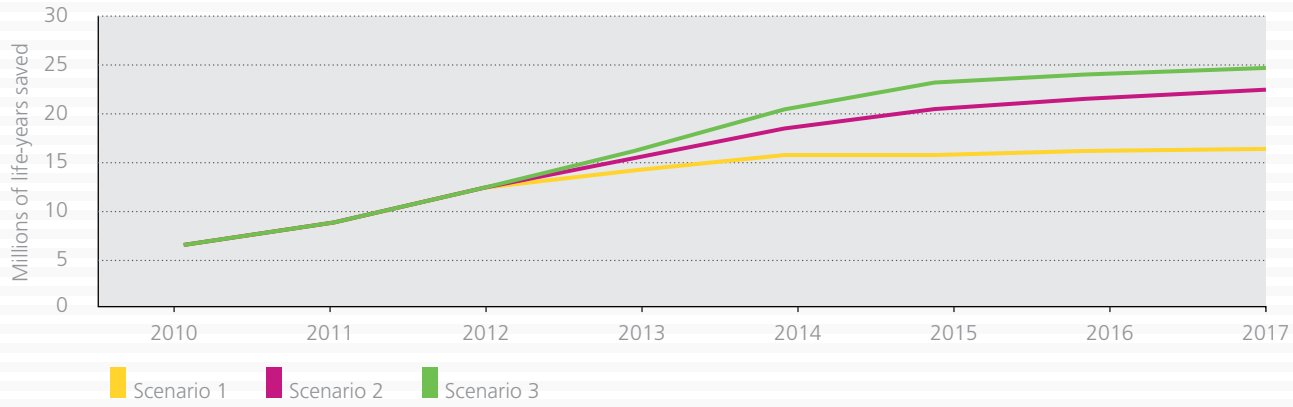
FIGURE 2. EXPECTED LIFE-YEARS SAVED FROM (A) ARV THERAPY, (B) LONG-LASTING INSECTICIDAL NETS, AND (C) PREVENTION OF MOTHER-TO-CHILD TRANSMISSION PER YEAR

For long-lasting insecticidal nets and PMTCT, life-years saved by each death averted are attributed to the year of the death averted. After application of a 3 percent annual discounting, these averaged 25 years per death averted, for both long-lasting insecticidal nets and PMTCT. No discounting is applied between deaths averted in 2010 and in later years, for any of the services.

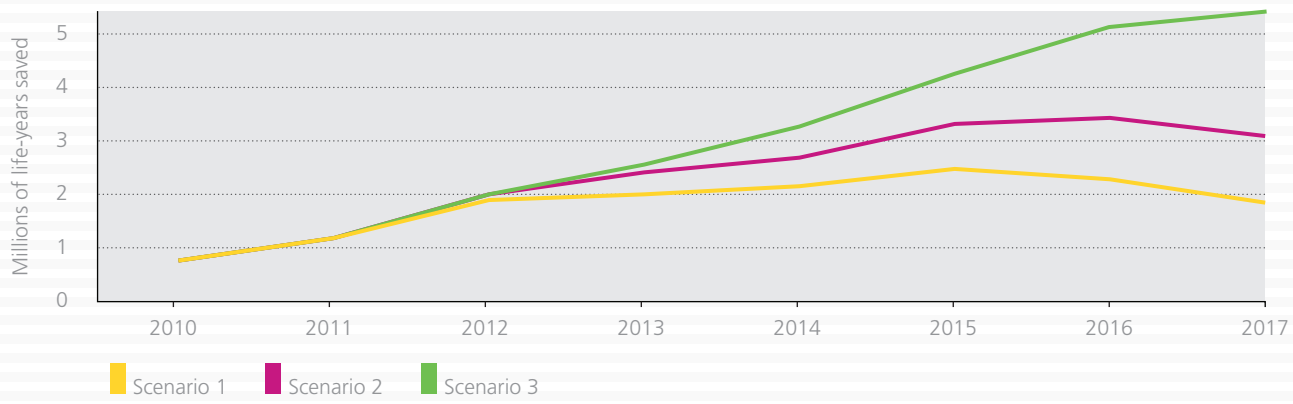
(a) ARV THERAPY



(b) LONG-LASTING INSECTICIDAL NETS



(c) PREVENTION OF MOTHER-TO-CHILD TRANSMISSION



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