

# GLOBAL POLIO ERADICATION INITIATIVE

## FINANCIAL RESOURCE **REQUIREMENTS**

**2010-2012** As of February 2010



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# 1. Executive summary

The year 2009 was one of critical self-examination for the Global Polio Eradication Initiative (GPEI). Following the intensive use of type 1 monovalent oral polio vaccine (mOPV1), type 3 polio soared in India and Nigeria. Transmission continued in Afghanistan, where conflict made reaching children extremely difficult, and in Pakistan, where the quality of vaccination campaigns suffered from weak local ownership and accountability. Nineteen other countries reported outbreaks of polio following importations – and transmission was re-established in at least two of these countries.

A special one-year *Programme of Work 2009* was implemented against this backdrop, to pilot and assess new vaccines and new approaches to solve chronic challenges. Technically, a major breakthrough was the development of a new bivalent oral polio vaccine (bOPV) – 30% more effective than the traditional trivalent vaccine at tackling both surviving serotypes of wild poliovirus at once – which will markedly facilitate the logistics of eradication and maximize the impact of each campaign.

Operationally, the Government of Nigeria enlisted State Governors and traditional leaders to impressive effect, resulting in a 90% drop in that country of the most dangerous type of poliovirus (type 1). The Government of India established a new health infrastructure in the flood plains of central Bihar to ensure that millions of additional children could be reached with the polio vaccine in this last critical reservoir.

In Afghanistan, multiple new strategies were piloted to reach children in conflict-affected areas who had sometimes not been reached for up to a year: the use of local access negotiators, the dialogue with NATO forces as well as with anti-government forces, formalized contracts with local non-governmental organizations. In Pakistan, the President and Prime Minister officially assumed leadership of the eradication effort, signalling their commitment to harnessing inter-sectoral resources and increasing accountability at the district level.

Based on the outcomes of the *Programme of Work 2009*, a new country-driven *Global Polio Eradication Initiative Strategic Plan 2010-2012* is being finalized, taking into account the results of both scientific and operational research, the findings of an *Independent Evaluation of the Major Barriers to Interrupting Poliovirus Transmission* and input from a broad range of stakeholders.

Achieving the milestones outlined in the *Strategic Plan 2010-2012* will require – in addition to full ownership and engagement of the political leadership at all levels in the remaining polio-infected countries – the continued support of the international development community to rapidly make available the necessary financial resources.

This Financial Resource Requirements document (FRR) outlines the range of activities and funding that will be required to finance the *Strategic Plan 2010-2012*, to successfully interrupt wild poliovirus transmission globally and prepare for the post-eradication era. Activities have been assigned a priority level (1, 2 or 3) that will be reviewed quarterly, based on epidemiology and available financing.

For core running costs and all activities (priorities 1 to 3 inclusive), the budget is US\$ 2.6 billion and the funding gap is US\$ 1.4 billion. For core costs and priority 1 activities, the budget is US\$ 2.1 billion. The FRR will be regularly updated, including in the second quarter of 2010, as the *Strategic Plan* is finalized, based on the prevailing epidemiological and financial situation, with primary emphasis on meeting core costs and implementing priority 1 activities.

The overarching milestones in the *Strategic Plan* are to stop wild poliovirus transmission:

- by mid-2010 in all countries with new outbreaks in 2009;<sup>1</sup>
- by end-2010 in the countries with re-established transmission;<sup>2</sup>
- by mid-2011 in all countries with new outbreaks in 2010;<sup>3</sup>
- by end-2011 in two of the four endemic countries;<sup>4</sup>
- by end-2012 in the remaining two endemic countries.

Process milestones are in place to monitor progress towards each of these expected results.

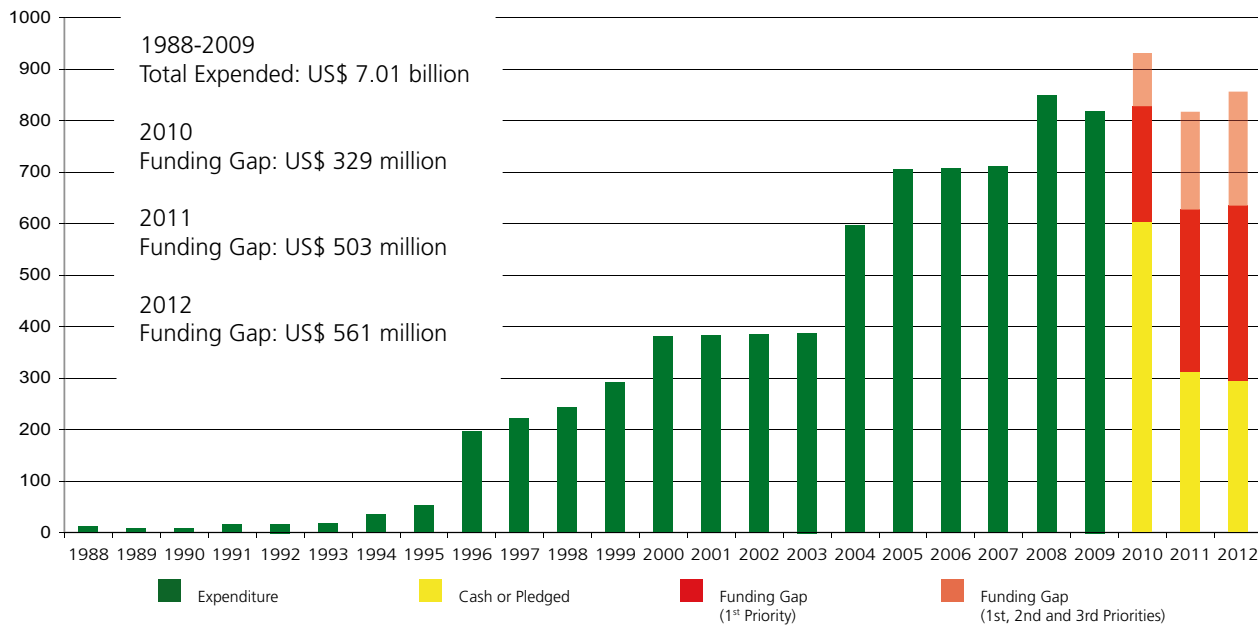
1 Validated when at least six months have passed without a polio case genetically linked to an importation event from 2009 (i.e. by Q4 2010)

2 Validated when at least 12 months have passed without a polio case genetically linked to the re-established transmission train (i.e. by Q4 2011)

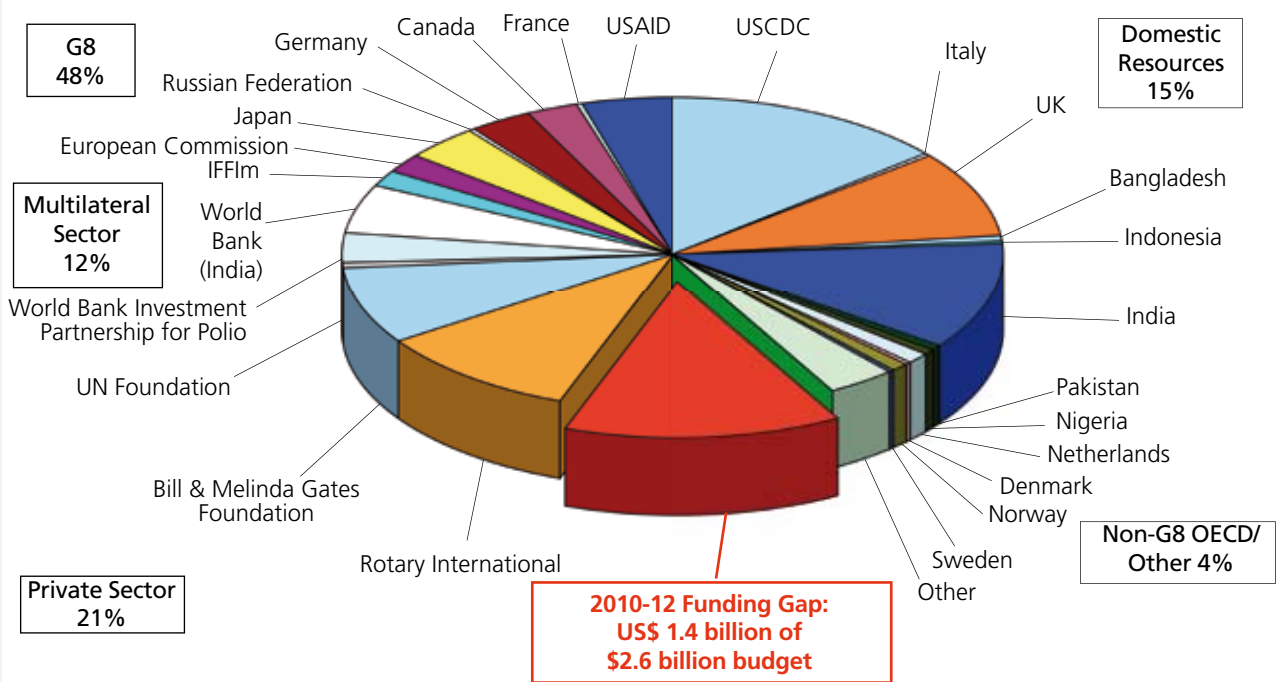
3 Validated when at least six months have passed without a polio case genetically linked to an importation event from 2010 (i.e. by Q4 2011)

4 Validated when at least 12 months have passed without a polio case genetically linked to an indigenous virus (i.e. by Q4 2012)

**Figure 1: Annual Expenditure, 1988-2009, Financial Resource Requirements, Contributions, Funding Gap, 2010-2012 (All figures in US\$)**



**Figure 2: Financing 1985 to 2012: US\$8.22 billion**  
 1985 - 2009: US\$7.01 billion expenditure; 2010 - 2012: US\$1.21 billion contributions



'Other' includes: the Governments of Angola, Austria, Australia, Azerbaijan, Belgium, Brunei, Czech Republic, Cyprus, Finland, Hungary, Iceland, Ireland, Kuwait, Liechtenstein, Luxembourg, Malaysia, Mali, Malta, Monaco, Namibia, New Zealand, Oman, Portugal, Qatar, Republic of Korea, Saudi Arabia, Singapore, Spain, Switzerland, Turkey, the United Arab Emirates, Yemen; African Development Bank; AG Fund; American Red Cross; De Beers, Inter-American Development Bank, Central Emergency Response Fund (CERF), International Federation of Red Cross and Red Crescent Societies, Oil for Food Programme, OPEC Fund, Sanofi Pasteur; Saudi Arabian Red Crescent Society, Smith Kline Biologicals, UNICEF National Committees, UNICEF Regular and Other Resources, United Arab Emirates Red Crescent Society, Shimmyo-en WHO Regular Budget and Wyeth.

**Table 1: Summary of external resource requirements by major category of activity, 2010-2012 (all figures in US\$ millions)**

<b>Core Costs</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2010-2012</b>
Emergency response/ mOPV evaluation	\$45.00	\$35.00	\$25.00	\$105.00
Surveillance*	\$61.89	\$63.75	\$65.66	\$191.31
Laboratory	\$8.21	\$8.46	\$8.71	\$25.38
Technical assistance**	\$133.47	\$137.66	\$141.55	\$412.68
Certification and containment	\$5.00	\$10.00	\$10.00	\$25.00
Product development for OPV cessation	\$8.45	\$5.00	\$5.00	\$18.45
Vaccine for post-eradication era stockpile (finished product and bulk)	\$12.30	-	\$36.92	\$49.22
<b>Subtotal</b>	<b>\$274.32</b>	<b>\$259.88</b>	<b>\$292.83</b>	<b>\$827.03</b>
<b>1<sup>st</sup> Priority Activities</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2010-2012</b>
Oral polio vaccine	\$269.51	\$180.94	\$176.79	\$627.24
NIDs/SNIDs operations***	\$226.58	\$144.57	\$132.91	\$504.06
Social Mobilization	\$57.22	\$41.18	\$35.15	\$133.56
<b>Subtotal</b>	<b>\$553.31</b>	<b>\$366.69</b>	<b>\$344.85</b>	<b>\$1264.86</b>
<b>Total budget (Core Costs &amp; 1<sup>st</sup> Priority Activities)</b>	<b>\$827.63</b>	<b>\$626.57</b>	<b>\$637.68</b>	<b>\$2 091.88</b>
<b>Contributions (Core Costs &amp; 1<sup>st</sup> Priority Activities)</b>	<b>\$602.98</b>	<b>\$312.90</b>	<b>\$295.33</b>	<b>\$1 211.21</b>
<b>Funding gap</b>	<b>\$224.65</b>	<b>\$313.67</b>	<b>\$342.35</b>	<b>\$880.67</b>
<b>Funding gap (rounded)</b>	<b>\$225.00</b>	<b>\$315.00</b>	<b>\$340.00</b>	<b>\$880.00</b>
<b>2<sup>nd</sup> Priority Activities</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2010-2012</b>
Oral polio vaccine	\$32.90	\$66.71	\$78.15	\$177.76
NIDs/SNIDs operations***	\$47.95	\$58.51	\$67.52	\$173.98
Social Mobilization	\$5.75	\$8.20	\$12.38	\$26.34
<b>Subtotal</b>	<b>\$86.60</b>	<b>\$133.42</b>	<b>\$158.05</b>	<b>\$378.08</b>
<b>3<sup>rd</sup> Priority Activities</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2010-2012</b>
Oral polio vaccine	\$5.29	\$18.65	\$21.45	\$45.39
NIDs/SNIDs operations***	\$13.18	\$36.53	\$38.81	\$88.52
Social Mobilization	-	\$0.86	\$0.90	\$1.76
<b>Subtotal</b>	<b>\$18.47</b>	<b>\$56.04</b>	<b>\$61.16</b>	<b>\$135.67</b>
<b>Grand Total (Core Costs &amp; 1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup> Priority Activities)</b>	<b>\$932.70</b>	<b>\$816.03</b>	<b>\$856.90</b>	<b>\$2 605.64</b>
<b>Funding Gap (Core Costs &amp; 1<sup>st</sup>, 2<sup>nd</sup> &amp; 3<sup>rd</sup> Priority Activities)</b>	<b>\$329.72</b>	<b>\$503.13</b>	<b>\$561.57</b>	<b>\$1 394.42</b>

\* Country-level surveillance and laboratory summary for 2010 provided in Annex C.

\*\* Technical assistance includes the cost of human resources deployed through UN agencies. Country-level breakdown for 2010 provided in Annex D

\*\*\* Operations costs include manpower and incentives, training and meetings, supplies and equipment, transportation, social mobilization and running costs.



## 2. Financial Resource Requirements 2010-2012

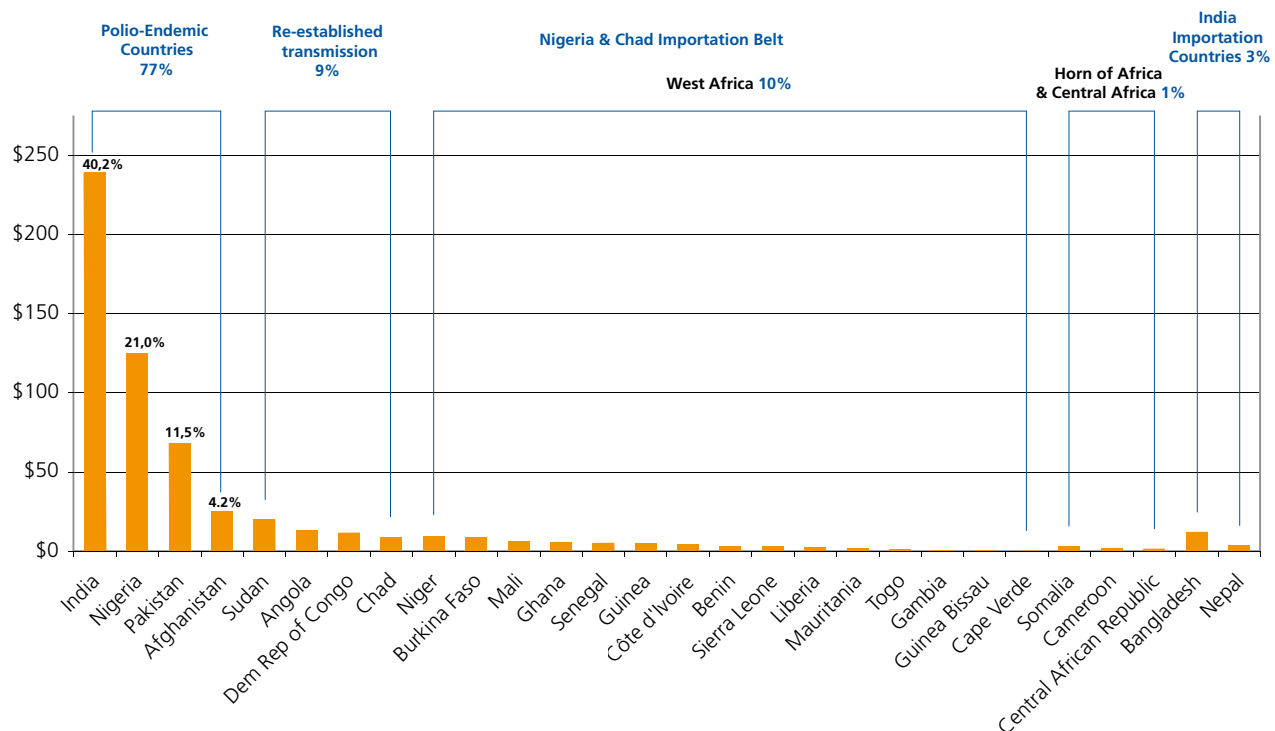
This Financial Resource Requirements document (FRR) outlines the budget to implement the core strategies to stop polio and – in keeping with the new country-driven *Strategic Plan 2010-2012* – to institutionalize recent innovations to improve the quality of intensified SIAs, increase technical assistance to countries with re-established polio transmission, enhance surveillance, systematize the synergies between immunization systems and polio eradication and expand pre-planned vaccination campaigns across the “importation belt” of sub-Saharan Africa. Filling sub-national surveillance gaps, revitalizing surveillance in polio-free regions and implementing new global surveillance strategies are also costed in the 2010–2012 budget.

The FRR will be regularly updated, including in the second quarter of 2010, as the *Strategic Plan* is finalized.<sup>5</sup> SIAs have been prioritized according to epidemiology, the milestones in the *Strategic Plan* and the objectives of strengthening immunization systems and ensuring sustainable surveillance for polioviruses.

Core running costs include surveillance and technical assistance; priority 1 activities are those in areas of ongoing poliovirus transmission, whereas priorities 2 and 3 are activities to reduce the risk of international spread. When updating the FRR, primary emphasis will be placed on meeting core costs and implementing priority 1 activities.

Endemic countries account for 77% of the country budgets; countries with re-established transmission for 9%; re-infected countries and areas at high risk for 14%.

Figure 3: Comparison of Country Budgets for 2010\*



\*As a percentage of 1st-level priority country-level vaccine, operational and surveillance costs.

<sup>5</sup> The FRR will be updated to fully reflect all elements of the *Strategic Plan*. While the FRR provides overall budget estimates, detailed budgets are available upon request.

Recent and upcoming studies on the cost-effectiveness of polio eradication demonstrate that where eradication is feasible, “control” is never the most cost-effective option. In contrast to the US\$ 2.6 billion budget presented here, an estimated US\$ 10 billion would be needed over a 20-year period to maintain polio cases at current levels, were the goal of eradication to be abandoned.<sup>6</sup> Just as high-cost “control” is not sustainable, low-cost “control” is not effective, since depending on routine immunization alone would lead to 200,000 to 250,000 cases per year. Neither is optimal when eradication is feasible.<sup>7</sup>

## 3. Roles and Responsibilities of Spearheading Partners

The spearheading partners of the GPEI are the World Health Organization (WHO), Rotary International, the United States Centers for Disease Control and Prevention (CDC) and the United Nations Children’s Fund (UNICEF). Rotary International is the leading private-sector donor to polio eradication, advocates with governments and communities and provides field-level support in SIA implementation and social mobilization. CDC deploys a wide range of public health assistance in the form of staff and consultants, provides specialized laboratory and diagnostic expertise and contributes funding.

The budgets that underpin the FRR are prepared by WHO, UNICEF and national governments.

The funds to finance polio eradication activities flow from multiple channels, primarily through these stakeholders. The national governments manage polio eradication activities; UNICEF usually takes the lead in procuring vaccine and supporting social mobilization and WHO provides technical assistance and supports surveillance. Both UN agencies support the government in the preparation and implementation of Supplementary Immunization Activities (SIAs).

## 4. Definition of the GPEI Activities and Budget Estimates

A robust system of estimating costs drives the development of the global budget estimates from the micro-level up. A schedule for SIAs is drawn up based on the guidance of national technical advisory groups (TAGs), Ministries of Health and the country offices of WHO and UNICEF. In 2009, for example, 2.2 billion doses of OPV were administered to more than 361 million children during 273 polio vaccination campaigns.<sup>8</sup>

The recommended schedule of SIAs is used by national governments, working with WHO and UNICEF, to develop budget estimates. These are based on plans drawn up for SIAs at the local level and take into consideration local costs for all elements of an activity – trainings, community meetings, posters, announcements, vaccinator payments, vehicles, fuel, supplies, etc.

### 4.1. Cost Drivers of the GPEI Budget

The key cost drivers of the GPEI budget are oral polio vaccine (OPV) and SIA operations, followed by surveillance and technical assistance (See Table 1, Page 4).<sup>9</sup>

6 Thompson KM, Tebbens RJ. Eradication versus control for poliomyelitis: an economic analysis. *Lancet*. 2007; 369(9570): 1363-71.

7 Barrett S, Economics of eradication vs control of infectious diseases, *Bulletin of the WHO*, Volume 82, Number 9, September 2004, 639-718.

8 OPV was given during 102 National Immunization Days, 122 Sub-national Immunization Days, 28 mop-up campaigns and 21 Child Health Days). Children may have received more than one dose of OPV.

9 For 2010, for example, OPV accounts for 35% of the budget, operations for 40%, technical assistance for 14% and surveillance for 8%, the remainder being dedicated to laboratories, research activities, etc.

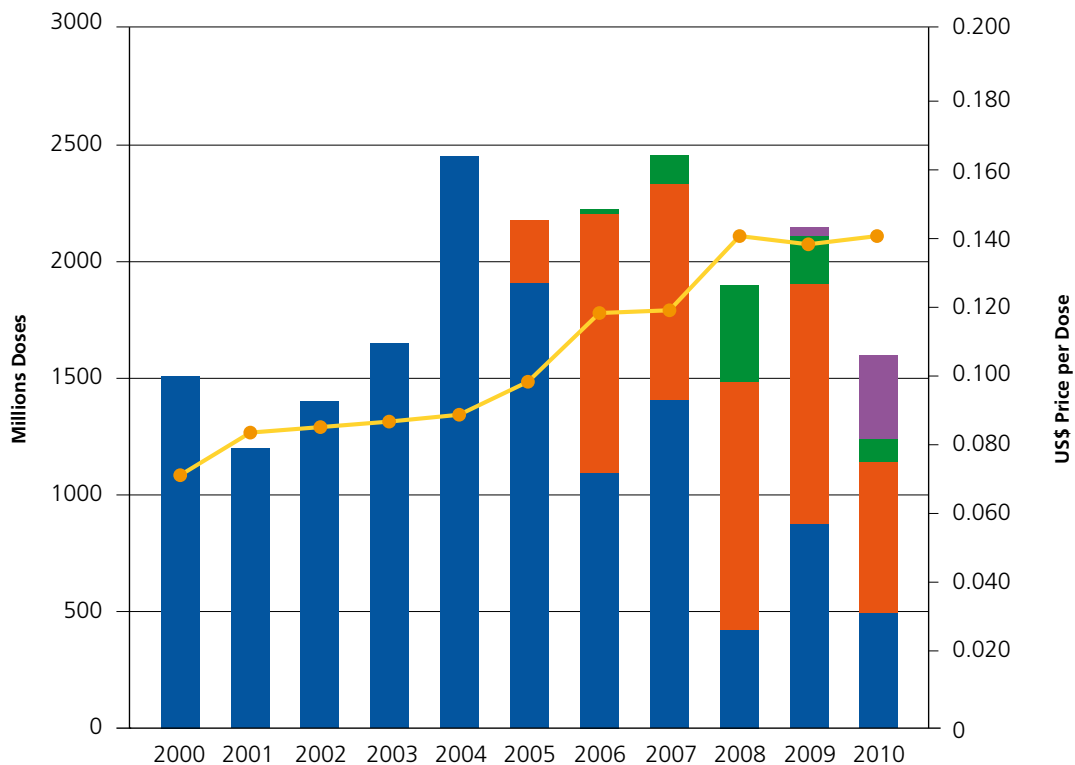
#### 4.1.1. Oral polio vaccine

UNICEF is the agency that procures vaccine for the GPEI, and works to ensure OPV supply security (with multiple suppliers), at a price that is both affordable to governments and donors and reasonably covers the minimum needs of manufacturers.

For Priority 1 activities alone, more than 1.5 billion doses of OPV will be required in 2010. The supply landscape has become more complex since 2005 with the introduction of two types of monovalent OPV (types 1 and 3) and, in 2010, bivalent OPV. This has contributed to a rise in the weighted average price of OPV from US\$ 0.08 per dose to approximately US\$ 0.14 per dose since 2000. The flexibility of manufacturers, to adjust production based on the OPV formulation required, comes at a cost. Currency fluctuations, the demand for high titres and the finite lifespan of OPV – for which demand will drop after the eradication of polio – also contribute to this price increase.

Despite these factors, the weighted average price of each OPV dose in 2009 (US\$ 0.137) and 2010 (US\$ 0.141) is lower than that in 2008 (US\$ 0.142).

Figure 4: OPV Supply & Weighted Average Price, 2000 to 2010



#### 4.1.2. Operations costs

SIAs are vast operations to deliver vaccine to every household: micro-plans have to be drawn up or updated for every dwelling in the area to be covered, whether a single district or an entire country. Vaccine has to be delivered to distribution centres throughout the target area. Vaccinators have to be trained to vaccinate children and mark fingers and houses, to document their work, to report their activities, to communicate with families appropriately, and so on. Vaccinators have to visit every household; supervisors and monitors have to scour every street for unvaccinated children.

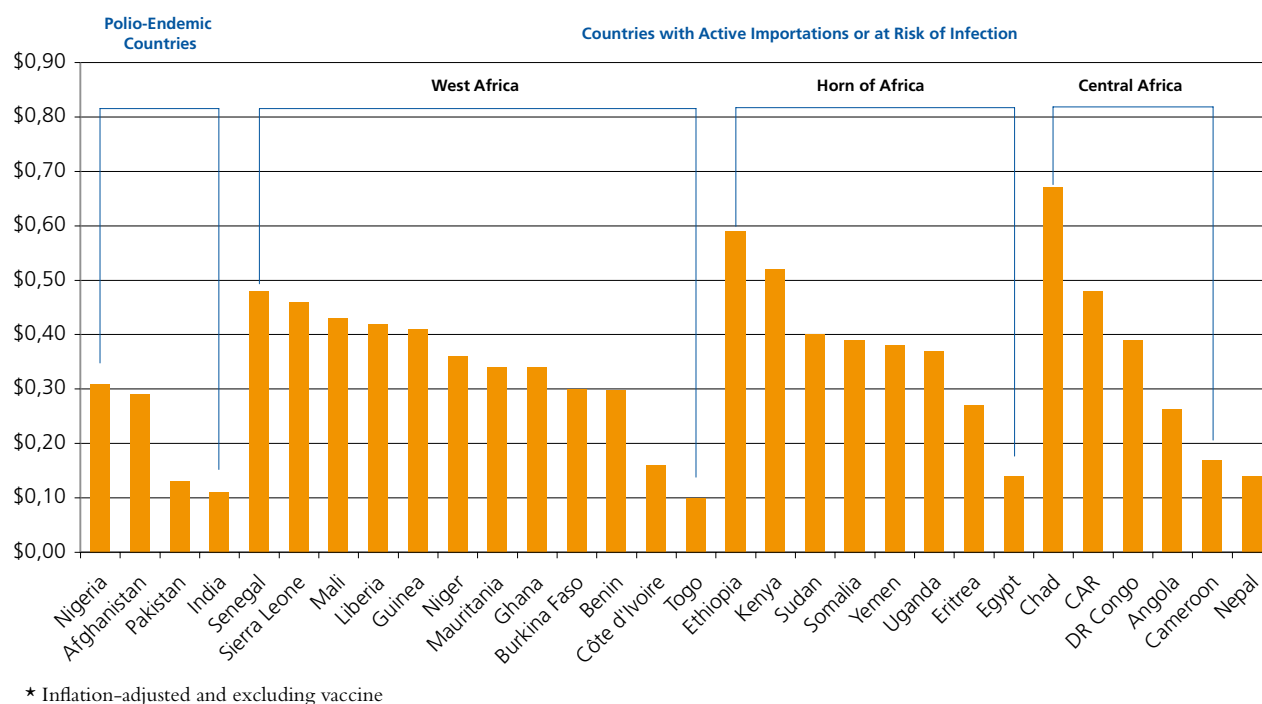
Major factors affecting operations costs are the relative strength of the local infrastructure – whether it be roads, telecommunications or any of a host of facilities – and the local health system, the local economy, availability of semi-skilled workers, security

conditions and population density. In 2009, 1.4 million paid vaccinators worked in SIAs; vaccinator per diems – to cover basic needs such as food and transport – constitute a large portion of operations costs.<sup>10</sup>

Additionally, communications support for immunization outreach must overcome limitations imposed through geography, literacy and local capacity to engage communities both through health workers and more traditional networks, and especially to target high risk groups who are typically underserved and have less access to health services.

Together, these factors contribute to the differences in operations costs, both between and within countries. In India, where operations costs are among the lowest in the endemic countries (cost per child US\$ 0.11 in 2009), high population density allows a single health or communication initiative to reach large swathes of the community. Chad, on the other hand, is one of the most expensive places in the world to conduct polio eradication operations (cost per child US\$ 0.67 in 2009), as interventions must reach a sparse and widely scattered population in a country with a very weak health infrastructure. While there is variability from one country to another as well as within countries, the average SIA operational costs per round per child has varied little from 2000 to the present (US\$ 0.24 per child to \$ 0.20 per child, inflation-adjusted).

Figure 5: Operations Cost Per Child, 2009 (All figures in US\$)\*



#### 4.1.3. Surveillance

Surveillance budgets cover the detection and reporting of acute flaccid paralysis (AFP) cases, through both an extensive informant network of people who first report cases of AFP and active searches in health facilities for such cases. Subsequent case investigation is followed by collection of two stool samples, transportation to the appropriate laboratory, testing and genetic sequencing, the range of activities related to the management of the information and data generated. The Global Polio Laboratory Network comprises 145 facilities, which in 2009 tested over 150,000 stool samples (from nearly 90,000 cases of AFP and other sources).

Some of the other activities included under surveillance budget lines are the training of personnel to carry out each of the steps outlined above, as well as regular reviews of the surveillance systems and the purchase and maintenance of equipment, from photocopiers to vehicles. The average cost per AFP case reported dropped from a high of more than US\$ 1,500 in the year 2000, when there was heavy investment in establishing the infrastructure for AFP surveillance to approximately US\$ 700 per case since 2006. The range among countries in cost per AFP case investigated is based on factors similar to those which affect differences in SIA costs.

<sup>10</sup> Based on local rates for semi-skilled labour and government remuneration for similar tasks.

Figure 6: Surveillance Cost per AFP Cases Analysis, 2009 (All figures in US\$)

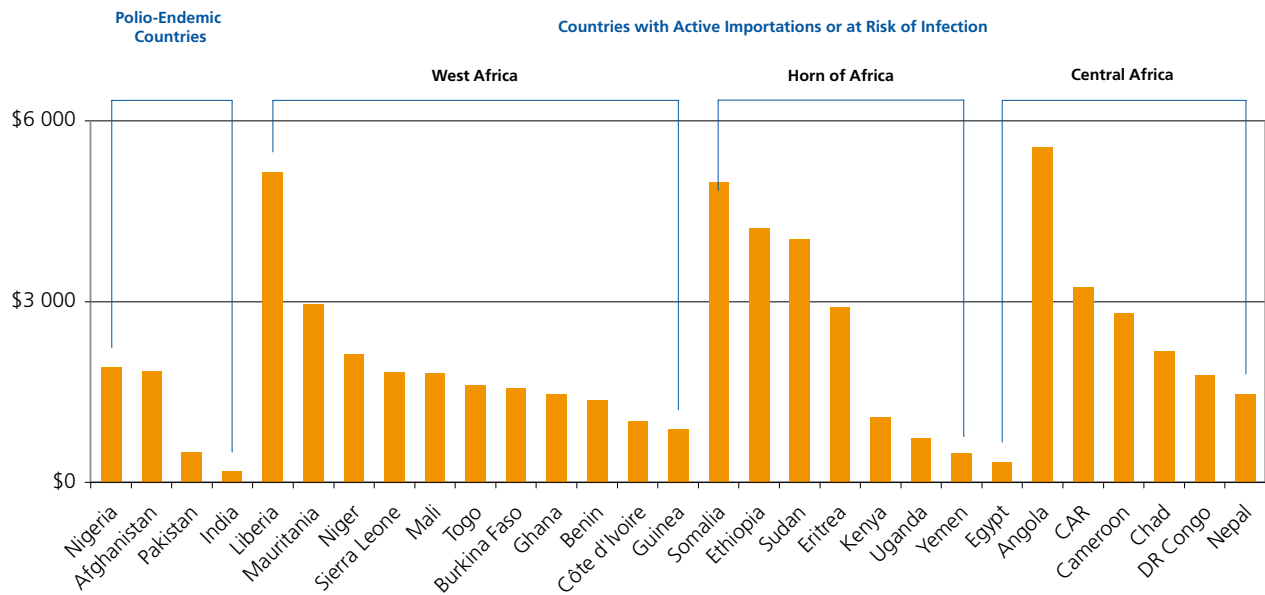
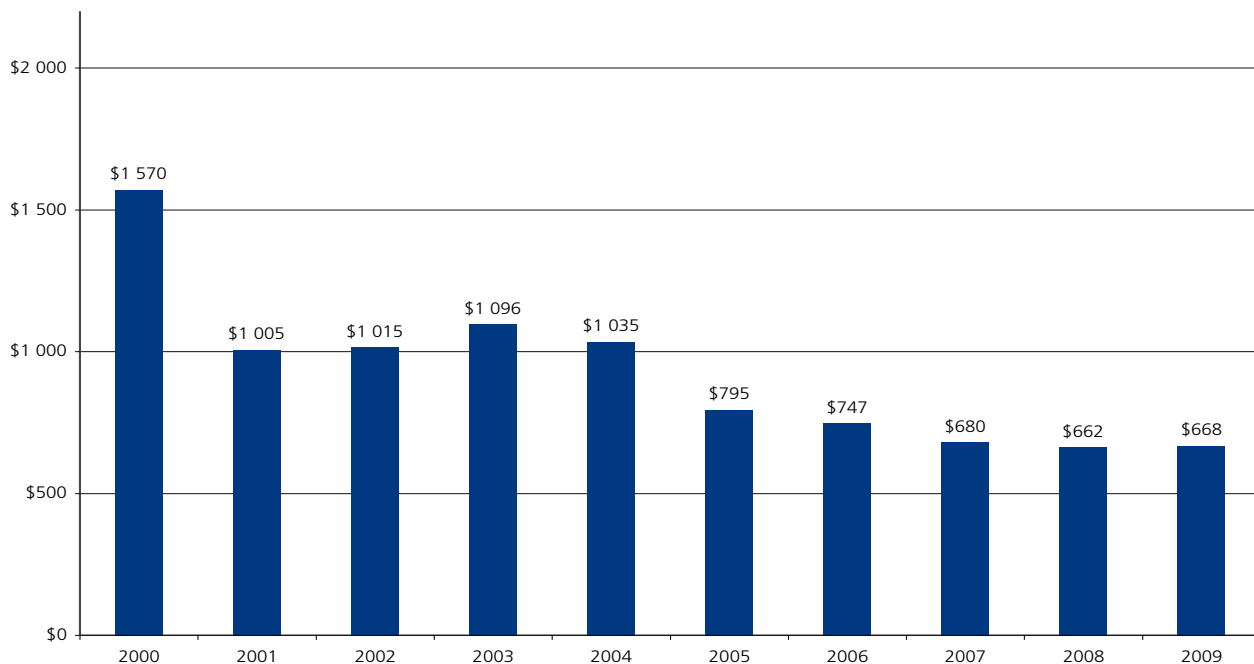


Figure 7: Average Cost Per AFP Case Reported in Endemic Regions (All figures in US\$)\*



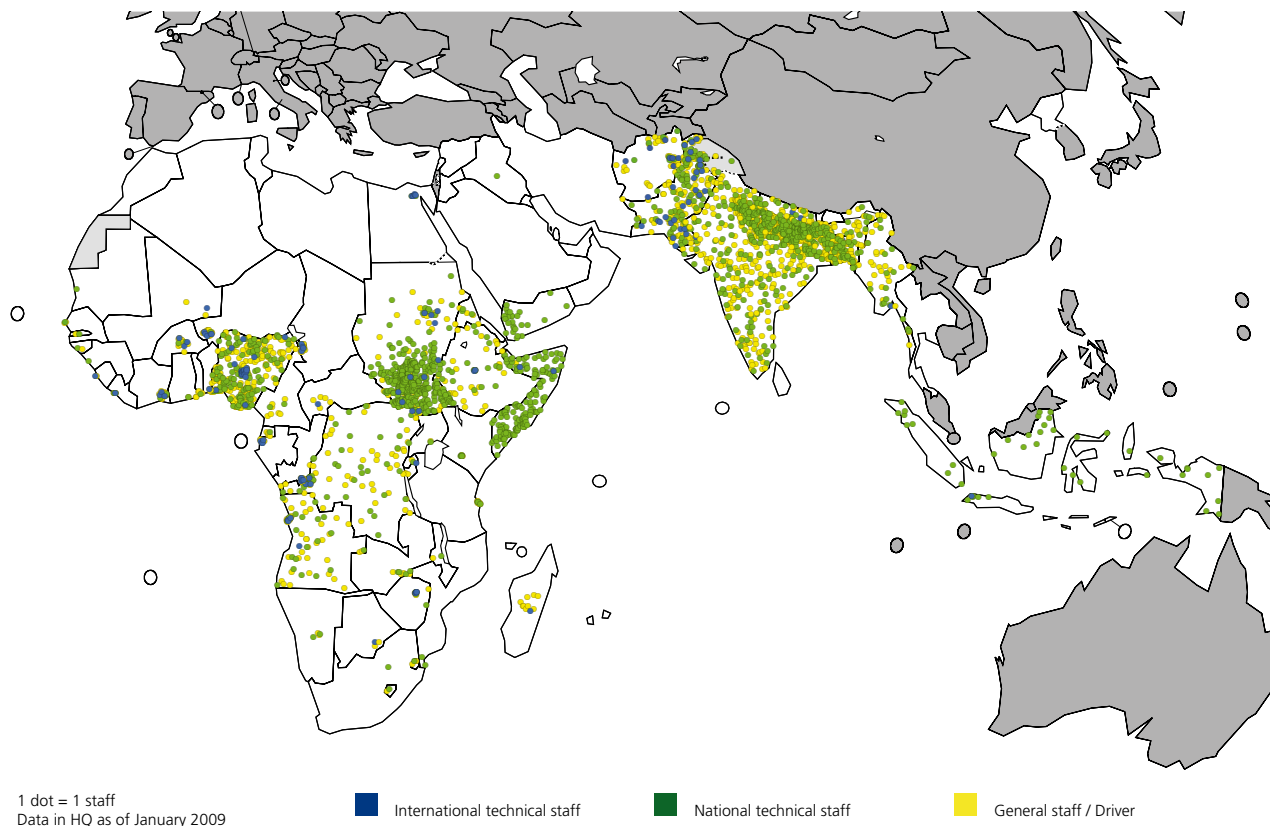
\*AFR, EMR, SEAR Adjusted for inflation (2009 \$)

#### 4.1.4. Technical Assistance

GPEI-funded technical assistance (staff and consultants) is deployed to fill capacity gaps when relevant skills are not available within a national health system, to build capacity and to facilitate international information exchange. The priorities for technical assistance are therefore driven by the relative strength of health systems in polio-affected countries as well as how critical the country is to global polio eradication. In 2010, technical assistance is heavily weighted towards the polio-endemic countries (47% of cost), with the next concentration of funds in re-infected countries and high-risk areas (23% of cost) and countries with re-established transmission (15% of cost).<sup>11</sup>

This assistance provides the human resources necessary for immunization campaign planning, including communication and social mobilization strategy development and implementation, micro-planning, logistics, forecasting and supply management. Funding ensures resources are in place for overall communication capacity development, management skills in strategic planning, finance, human resources and social mobilization in a programme that manages some 20 million workers and volunteers, and communication efforts that help reach over 360 million children each year multiple times with OPV. Finally, technical assistance maintains the surveillance network, which provides reporting on AFP incidence from every district in the world on a weekly basis.

Figure 8: Geographic distribution of WHO technical assistance for polio eradication



<sup>11</sup> The remaining 15% is allocated to polio-free regions, regional offices and eadquarters.

Table 2: WHO Technical Assistance by category of polio-infected country, 2010

Category	Total Cost	% of Cost	International	National
Endemic	\$50 308 009	44%	58	1704
Re-Established Transmission	\$16 399 667	14%	26	583
Re-Infected	\$5 148 000	4%	7	77
Others (in endemic regions)	\$19 222 928	17%	37	795
Polio-Free	\$2 101 050	2%	7	0
Regional Offices	\$4 641 920	4%	23	23
HQ	\$17 730 250	15%	56	0
<b>Grand Total</b>	<b>\$115 551 824</b>		<b>214</b>	<b>3182</b>

Re-established transmission = Angola, Chad, Democratic Republic of Congo, Sudan

Re-infected = countries re-infected in 2009 who have reported virus in past 6 months: Benin, Burkina Faso, Burundi, Central African Republic, Cameroon, Côte d'Ivoire, Guinea, Kenya, Liberia, Mali, Mauritania, Sierra Leone.

Other = other countries in the three endemic regions.

Polio-free = EUR, WPR

Regional Offices = AFRO, EMRO, SEARO

Technical assistance on this scale is unique in public health and essential to finishing polio eradication. Polio eradication staff now constitute the single largest resource of technical assistance for immunization in low-income countries. For example, in 2009, of the 998 immunization staff in the WHO African Region, 940 (94%) were funded by the polio programme; at national or sub-national level, this proportion sometimes rose to 100%. In each component of a strong immunization system – logistics, service delivery, monitoring and supervision, surveillance and community participation – polio eradication staff have a wealth of experience.

Working to contribute to the objectives of the Global Immunization Vision and Strategy,<sup>12</sup> GPEI staff will designate a minimum of 25% of their time to specific 'high impact' tasks and activities to strengthen immunization systems. Capacity-building workshops on the intersections between immunization systems and polio eradication are also part of the *Strategic Plan 2010-2012*. Priority will be given to areas at highest risk of outbreaks following importations, especially those in sub-Saharan Africa.

## 5. Polio Research

In the GPEI *Strategic Plan 2010-2012*, the role of research continues to expand. The research agenda helps identify ways to reach more children and to enhance both humoral and mucosal immunity in targeted populations. The *Independent Evaluation of Major Barriers to Interrupting Poliovirus Transmission* endorsed the programmatic decision to intensify operational research. Scientific and operational research are guided by the Polio Research Committee, composed of experts in epidemiology, public health communications, virology and immunology.

Going forward, the research agenda encompasses expanded work in operational as well as scientific research. The former includes intervention studies to evaluate innovative approaches to further increase vaccination coverage and population immunity; to develop and evaluate tools to improve SIA and AFP surveillance management; and to evaluate vaccinator performance and assess ways to improve performance.

Among the studies being carried out or planned are those to improve understanding of both the evolving epidemiology of wild poliovirus and potential interventions to boost mucosal or "gut" immunity to address low vaccine efficacy in northern India,

<sup>12</sup> *Global Immunization Vision and Strategy 2006-2015*. World Health Organization / UNICEF, 2005.

where the “threshold” to protect children is higher than anywhere else on earth.<sup>13</sup> Research will also focus on ways to lower that threshold, through add-ons such as zinc, as well as water and sanitation measures. Studies will be implemented to investigate the risk factors for decreased mucosal immunity; to evaluate possible interventions to boost mucosal immunity; and if possible, to assess potential surrogate measures of mucosal immunity against poliovirus.

## 6. Review of the GPEI Budgets and Allocation of Funds

The GPEI budget development is paired with a regular, interactive process of reviewing and reprioritizing activities in light of evolving epidemiology and available resources.

Twice a year, the Global Polio Management Team (GPMT) formally reviews the epidemiology of poliovirus globally and the SIA priorities based on principles established annually by the Advisory Committee on Poliomyelitis Eradication (ACPE) and reviewed by the Strategic Advisory Group of Experts on Immunization (SAGE). An in-depth weekly epidemiological review is complemented by weekly and bi-weekly teleconference check-ins between WHO and UNICEF headquarters and regional offices which provide opportunities to adjust allocations. The FRR is therefore updated regularly to adapt to the changing epidemiology and priorities.

After a budget review process at the regional office and headquarters levels, funds for country SIAs are released from WHO and UNICEF headquarters to regions and then countries. For staff and surveillance, funds are disbursed on a quarterly or semi-annual basis, depending on the GPEI cash flow. For most countries, funds for OPV are released by UNICEF six to eight weeks before SIAs.

## 7. Post-eradication era

After interruption of wild poliovirus transmission and certification of that achievement, the budget of the GPEI will be driven primarily by the costs of maintaining AFP surveillance and laboratory capacity and outbreak response capacity for circulating vaccine-derived poliovirus. This capacity will be required until and during the cessation of routine OPV use globally and the subsequent verification of the elimination of vaccine-associated paralytic polio (VAPP) and vaccine-derived polioviruses (VDPV).

Consequently, annual financial resource requirements of the GPEI in the post-eradication period will be significantly lower than the (current) costs associated with the intensified polio eradication effort. The annual costs of these activities during the VAPP/VDPV Elimination Phase are estimated to be approximately US\$150 million. The major uncertainty pertaining to GPEI costs during this period is the extent to which low- and low/middle-income countries will use IPV, how they will use it (e.g. fractional doses, reduced dose schedules) and how IPV will be produced at that time.

The costs of the GPEI will stop once VAPP/VDPV elimination is verified. All long-term functions will by that point have been incorporated into existing mechanisms for managing the residual risks associated with eradicated and/or dangerous pathogens (e.g. smallpox) and routine immunization programmes.

<sup>13</sup> Population immunity levels must reach at least 95% to interrupt transmission of poliovirus in northern India, whereas levels of 75-80% have sufficed in Africa.



## 8. Donors

Since the 1988 World Health Assembly (WHA) resolution to eradicate polio, funding commitments have totalled US\$ 9 billion. In addition to contributions by national governments to their own polio eradication efforts, 45 public and private donors have each given more than US\$ 1 million, with 19 of these having given US\$ 25 million or more.

This support has come from across the full spectrum of the international development community. Donors to the GPEI include: a wide range of donor governments; private foundations (e.g. Rotary International, the Bill and Melinda Gates Foundation, the United Nations Foundation); development banks (e.g. the African Development Bank, the World Bank); humanitarian organizations (e.g. the International Federation of Red Cross and Red Crescent Societies); non-governmental organizations; and corporate partners.

International contributions to national polio eradication efforts have been complemented by domestic resources. Of note, India has largely self-financed for the past several years, and in September 2009 re-affirmed its commitment by setting aside US\$ 657 million of its budget for polio eradication in the 2010–2012 period. Nigeria and Pakistan have also provided substantial domestic resources towards eradicating polio. Other contributions from polio-affected countries – including both financial and non-monetary expenditures, and in-kind contributions such as the time spent by volunteers, health workers and others in the planning and implementation of SIAs – are estimated to have a dollar value approximately equal to that of international financial contributions.<sup>14</sup>

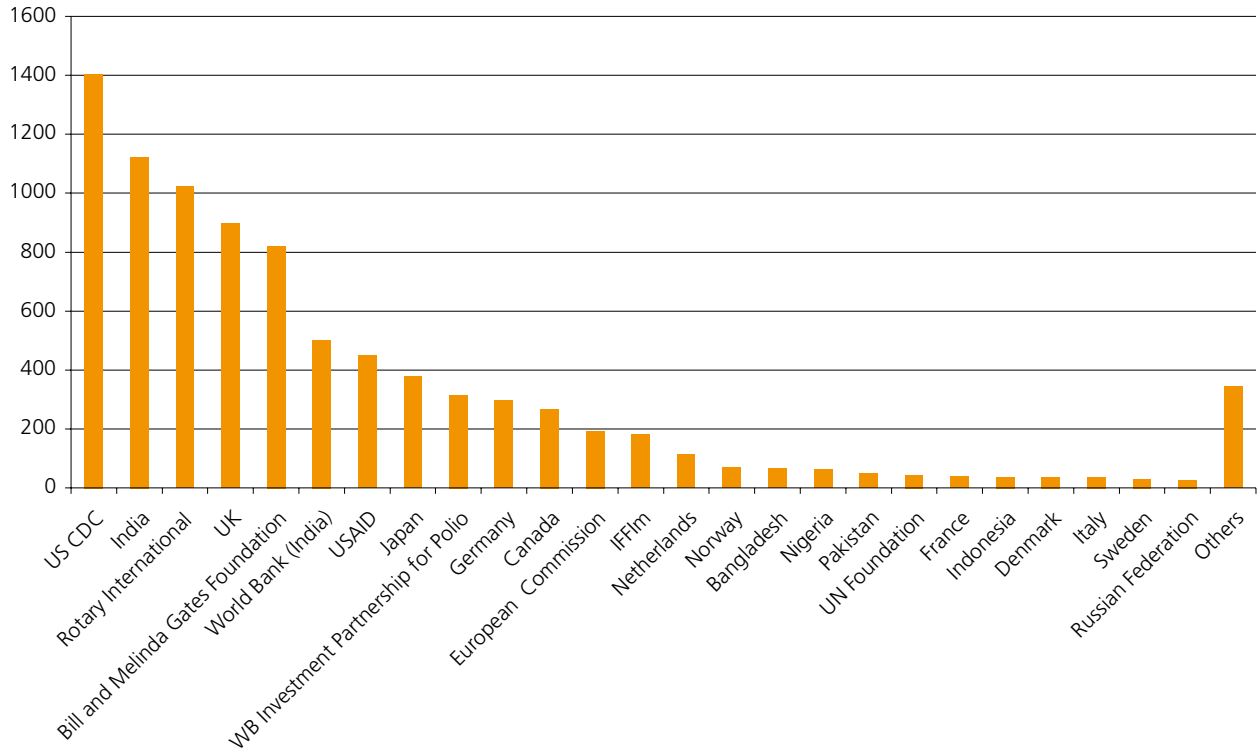
Table 3: Donor profile for 1988-2012

Contribution (US\$ million)	Public Sector Partners	Development Banks	Private Sector Partners
> 1,000	United State of America		Rotary International
500 - 1,000	United Kingdom	World Bank	Bill & Melinda Gates Foundation
250 - 499	Japan, Canada, Germany		
100 - 249	European Commission, Netherlands, GAVI/IFFIm, WHO Regular Budget		
50 - 99	Norway, UNICEF Regular Resources		
25 - 49	Denmark, France, Italy, Sweden, Russian Federation		United Nations Foundation
5 - 24	Australia, Ireland, Luxembourg, Spain		Sanofi Pasteur, IFPMA, UNICEF National Committees, American Red Cross, Oil for Food Program
1 - 4	Austria, Belgium, Finland, Kuwait, Malaysia, New Zealand, Saudi Arabia, Switzerland, United Arab Emirates	Inter-American Development Bank, African Development Bank	Advantage Trust (HK), De Beers, International Federation of Red Cross and Red Crescent Societies, Pew Charitable Trust, Wyeth, Shinnyo-en, OPEC

Updated: 2 February 2010

14 Aylward R, et al, Politics and practicalities of polio eradication, *Global Public Goods for Health. Health Economic and Public Health Perspectives*, editors Smith R, Beaglehole R, Woodward D, Drager N. Oxford University Press, 2003.

Figure 9: Contributions and pledges to the Global Polio Eradication Initiative, 1985-2012 (all figures in US\$ millions)



# 9. Annexes

## ANNEX A: Supplementary immunization activities required for polio eradication, 2010-2012 as of 18 January 2010 (all activities expressed in percentages)

1<sup>st</sup> Level Priority      2<sup>nd</sup> Level Priority      3<sup>rd</sup> Level Priority

Region/ Country	2010												2011												2012																													
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D																		
<b>1. Endemic Countries</b>																																																						
Afghanistan	50	100	100			50	50		100	100	50					100	100	30	30	30	30	30	100	100	100	100	30	30	30	30	30	30	30	30	30	30	30	100	100	100	100	30	30	30	30	30	30	30	30					
India	100	100	20	40	20	20	20	20	40	40						100	100	40	40				100	100	100	100	40	40														100	100	100	100	40	40							
Nigeria	100	100	40	50				50	25	50	50	50				100	100	30	30				100	100	100	100	30	30															100	100	100	100	30	30						
Pakistan	64	100	50	100	50				100	100	50					100	100	30	30				100	100	100	100	30	30															100	100	100	100	30	30						
<b>2. Re-established transmission</b>																																																						
Chad	100	100	100						50	50	50					100	100						100	100	100	100																100	100	100	100									
Sudan	100	100	100	50					100	100	50					100	100						100	100	100	100																100	100	100	100									
Angola																50	50	100	100				50	50	100	100																50	50	100	100									
DR Congo																35	65	35	65	35	65	35	65	35	65	35	65														35	65	35	65										
<b>3. Nigeria &amp; Chad Importation Belt</b>																																																						
West Africa																																																						
Niger																																																						
Benin																																																						
Burkina Faso																																																						
Cote d'Ivoire																																																						
Sierra Leone																																																						
Guinea																																																						
Guinea Bissau																																																						
Liberia																																																						
Mali																																																						
Mauritania																																																						
Senegal																																																						
Gambia																																																						
Cape Verde																																																						
Togo																																																						
Ghana																																																						
Horn of Africa																																																						
Somalia																																																						
Ethiopia																																																						
Kenya																																																						
Uganda																																																						
Yemen																																																						
Eritrea																																																						
Djibouti																																																						
Central Africa																																																						
Central African Republic																																																						
Cameroun																																																						
Congo																																																						
4. India Importation Countries																																																						
Burundi																																																						
Rwanda																																																						
Nepal																																																						
Bangladesh																																																						

## Annex B: Details of external funding requirements in polio-endemic and highest-risk countries, 2010-2012

(all figures in US\$ millions)

Country	2010						Total Costs
	AFP Surveillance	1 <sup>st</sup> Priority		Total Cost 1 <sup>st</sup> Priority	2 <sup>nd</sup> & 3 <sup>rd</sup> Priorities		
		OPV	Op Costs		OPV	Op Costs	
<b>1. Endemic Countries</b>							
Afghanistan	\$2.51	\$9.01	\$13.57	<b>\$25.10</b>	-	-	<b>\$25.10</b>
India	\$8.26	\$133.96	\$96.41	<b>\$238.63</b>	\$6.70	\$3.68	<b>\$249.00</b>
Nigeria	\$9.60	\$44.13	\$71.05	<b>\$124.78</b>	\$2.41	\$3.55	<b>\$130.75</b>
Pakistan	\$2.43	\$37.32	\$28.39	<b>\$68.15</b>	-	-	<b>\$68.15</b>
<b>2. (Re-established transmission)</b>							
Chad	\$0.70	\$2.14	\$6.03	<b>\$8.87</b>	\$0.54	\$1.51	<b>\$10.91</b>
Sudan	\$2.37	\$5.62	\$11.93	<b>\$19.92</b>	\$2.81	\$5.65	<b>\$28.38</b>
Angola	\$1.80	\$3.94	\$7.62	<b>\$13.36</b>	-	-	<b>\$13.36</b>
Dem Rep of Congo	\$2.50	\$2.96	\$6.32	<b>\$11.79</b>	\$8.32	\$17.77	<b>\$37.87</b>
<b>3. (Nigeria &amp; Chad Importation Belt)</b>							
<b>West Africa</b>							
Niger	\$0.66	\$2.99	\$5.98	<b>\$9.62</b>	-	-	<b>\$9.62</b>
Benin	\$0.20	\$0.96	\$1.76	<b>\$2.92</b>	\$0.96	\$1.76	<b>\$5.64</b>
Burkina Faso	\$0.34	\$2.43	\$5.93	<b>\$8.70</b>	\$1.62	\$3.95	<b>\$14.27</b>
Côte d'Ivoire	\$0.32	\$1.98	\$1.90	<b>\$4.20</b>	\$0.99	\$0.95	<b>\$6.14</b>
Sierra Leone	\$0.30	\$0.73	\$1.87	<b>\$2.91</b>	\$0.24	\$0.62	<b>\$3.77</b>
Guinea	\$0.15	\$1.22	\$3.54	<b>\$4.91</b>	\$0.41	\$1.18	<b>\$6.49</b>
Liberia	\$0.30	\$0.66	\$1.32	<b>\$2.28</b>	\$0.22	\$0.44	<b>\$2.93</b>
Mali	\$0.24	\$1.97	\$3.89	<b>\$6.10</b>	\$2.81	\$1.95	<b>\$10.86</b>
Mauritania	\$0.15	\$0.49	\$1.24	<b>\$1.88</b>	-	-	<b>\$1.88</b>
Senegal	\$0.28	\$1.36	\$3.68	<b>\$5.32</b>	-	-	<b>\$5.32</b>
Guinea Bissau	\$0.07	\$0.14	\$0.29	<b>\$0.50</b>	-	-	<b>\$0.50</b>
Gambia	\$0.06	\$0.10	\$0.36	<b>\$0.52</b>	-	-	<b>\$0.52</b>
Cape Verde	\$0.05	\$0.03	\$0.06	<b>\$0.14</b>	-	-	<b>\$0.14</b>
Togo	\$0.15	\$0.50	\$0.59	<b>\$1.24</b>	-	-	<b>\$1.24</b>
Ghana	\$0.40	\$1.89	\$3.35	<b>\$5.64</b>	-	-	<b>\$5.64</b>
<b>Horn of Africa</b>							
Ethiopia	\$3.73	-	-	<b>\$3.73</b>	\$4.89	\$11.30	<b>\$19.92</b>
Somalia	\$0.75	\$0.75	\$1.49	<b>\$2.99</b>	\$0.75	\$1.49	<b>\$5.22</b>
Kenya	\$0.49	-	-	<b>\$0.49</b>	\$0.85	\$1.84	<b>\$3.18</b>
Uganda	\$0.44	-	-	<b>\$0.44</b>	\$0.82	\$1.44	<b>\$2.71</b>
Eritrea	\$0.22	-	-	<b>\$0.22</b>	\$0.19	\$0.30	<b>\$0.72</b>
Yemen	\$0.17	-	-	<b>\$0.17</b>	\$0.90	\$2.99	<b>\$4.06</b>
Djibouti	\$0.10	-	-	<b>\$0.10</b>	\$0.02	\$0.28	<b>\$0.41</b>
<b>Central Africa</b>							
Cameroon	\$0.44	\$0.94	\$0.76	<b>\$2.14</b>	-	-	<b>\$2.14</b>
Central African Republic	\$0.52	\$0.27	\$0.72	<b>\$1.51</b>	\$0.27	\$0.72	<b>\$2.50</b>
Congo	\$0.15	-	-	<b>\$0.15</b>	\$0.27	\$0.55	<b>\$0.97</b>
<b>4. India Importation Countries</b>							
Burundi	\$0.14	-	-	<b>\$0.14</b>	\$0.61	\$0.78	<b>\$1.53</b>
Rwanda	\$0.20	-	-	<b>\$0.20</b>	\$0.59	\$0.92	<b>\$1.70</b>
Nepal	\$0.61	\$1.83	\$1.25	<b>\$3.69</b>	-	\$1.25	<b>\$4.94</b>
Bangladesh	\$0.91	\$9.19	\$2.01	<b>\$12.12</b>	-	-	<b>\$12.12</b>

\* Unicef Social Mobilization Costs are included in Operations Costs for 2010 - 2011 & 2012

\*\* as of 31 January 2010

Country	2011						Total Costs
	AFP Surveillance	1 <sup>st</sup> Priority		Total Cost 1 <sup>st</sup> Priority	2 <sup>nd</sup> & 3 <sup>rd</sup> Priorities		
		OPV	Op Costs		OPV	Op Costs	
<b>1. Endemic Countries</b>							
Afghanistan	\$2.59	\$6.68	\$9.79	\$19.05	\$0.95	\$1.40	\$21.40
India	\$8.51	\$96.51	\$70.57	\$175.59	\$27.57	\$14.70	\$217.86
Nigeria	\$9.89	\$29.41	\$46.79	\$86.09	\$5.51	\$8.77	\$100.38
Pakistan	\$2.50	\$28.21	\$18.52	\$49.24	-	-	\$49.24
<b>2. (Re-established transmission)</b>							
Chad	\$0.72	\$2.24	\$6.21	\$9.17	-	-	\$9.17
Sudan	\$2.44	\$7.69	\$16.39	\$26.52	-	-	\$26.52
Angola	\$1.85	\$2.73	\$5.08	\$9.66	\$1.36	\$2.54	\$13.57
Dem Rep of Congo	\$2.58	\$2.10	\$4.22	\$8.89	\$6.89	\$13.85	\$29.63
<b>3. (Nigeria &amp; Chad Importation Belt)</b>							
<b>West Africa</b>							
Niger	\$0.68	\$1.74	\$3.07	\$5.49	\$1.74	\$3.07	\$10.30
Benin	\$0.21	\$1.12	\$1.81	\$3.13	\$1.12	\$1.81	\$6.06
Burkina Faso	\$0.35	-	-	\$0.35	\$3.75	\$7.95	\$12.06
Côte d'Ivoire	\$0.33	-	-	\$0.33	\$3.99	\$3.02	\$7.34
Sierra Leone	\$0.31	-	-	\$0.31	\$0.76	\$1.93	\$3.00
Guinea	\$0.15	-	-	\$0.15	\$1.50	\$3.79	\$5.45
Liberia	\$0.31	-	-	\$0.31	\$0.54	\$1.36	\$2.21
Mali	\$0.25	-	-	\$0.25	\$2.77	\$5.87	\$8.89
Mauritania	\$0.15	-	-	\$0.15	\$0.38	\$0.96	\$1.49
Senegal	\$0.29	-	-	\$0.29	\$0.90	\$2.34	\$3.53
Guinea Bissau	\$0.07	-	-	\$0.07	\$0.11	\$0.29	\$0.47
Gambia	\$0.06	-	-	\$0.06	\$0.28	\$0.37	\$0.71
Cape Verde	\$0.05	-	-	\$0.05	\$0.05	\$0.06	\$0.17
Togo	\$0.15	-	-	\$0.15	\$0.63	\$0.61	\$1.40
Ghana	\$0.41	-	-	\$0.41	\$2.01	\$3.35	\$5.77
<b>Horn of Africa</b>							
Ethiopia	\$3.84	-	-	\$3.84	\$5.62	\$11.37	\$20.83
Somalia	\$0.77	\$0.78	\$1.53	\$3.08	\$0.78	\$1.53	\$5.39
Kenya	\$0.50	-	-	\$0.50	\$1.01	\$1.89	\$3.41
Uganda	\$0.45	-	-	\$0.45	\$0.98	\$1.44	\$2.87
Eritrea	\$0.23	-	-	\$0.23	\$0.23	\$0.31	\$0.77
Yemen	\$0.18	-	-	\$0.18	\$0.95	\$3.08	\$4.21
Djibouti	\$0.10	-	-	\$0.10	\$0.03	\$0.29	\$0.42
<b>Central Africa</b>							
Cameroon	\$0.45	\$0.49	\$0.39	\$1.33	\$0.49	\$0.39	\$2.21
Central African Republic	\$0.54	\$0.28	\$0.72	\$1.54	\$0.28	\$0.72	\$2.54
Congo	\$0.15	-	-	\$0.15	\$0.28	\$0.57	\$1.01
<b>4. India Importation Countries</b>							
Burundi	\$0.14	-	-	\$0.14	\$0.64	\$0.80	\$1.59
Rwanda	\$0.21	-	-	\$0.21	\$0.62	\$0.94	\$1.77
Nepal	\$0.63	\$0.98	\$0.64	\$2.25	\$0.98	\$0.64	\$3.88
Bangladesh	\$0.94	-	-	\$0.94	\$9.64	\$2.05	\$12.63

\* Unicef: Social Mobilization Costs are included in Operations Costs for 2010 - 2011 & 2012

\*\* as of 31 January 2010

Country	2012						Total Costs
	AFP Surveillance	1 <sup>st</sup> Priority		Total Cost 1 <sup>st</sup> Priority	2 <sup>nd</sup> & 3 <sup>rd</sup> Priorities		
		OPV	Op Costs		OPV	Op Costs	
<b>1. Endemic Countries</b>							
Afghanistan	\$2.66	\$5.40	\$7.68	\$15.74	\$1.01	\$1.44	\$18.20
India	\$8.76	\$99.40	\$66.86	\$175.03	\$28.40	\$14.70	\$218.13
Nigeria	\$10.18	\$31.20	\$48.20	\$89.58	\$5.85	\$9.04	\$104.47
Pakistan	\$2.58	\$25.20	\$16.07	\$43.85	\$4.73	\$3.01	\$51.58
<b>2. (Re-established transmission)</b>							
Chad	\$0.74	\$1.19	\$3.20	\$5.13	\$1.19	\$3.20	\$9.51
Sudan	\$2.51	\$4.08	\$8.44	\$15.03	\$4.08	\$8.44	\$27.55
Angola	\$1.91	\$2.89	\$5.23	\$10.04	\$1.45	\$2.62	\$14.10
Dem Rep of Congo	\$2.65	\$2.22	\$4.34	\$9.22	\$7.31	\$14.27	\$30.80
<b>3. (Nigeria &amp; Chad Importation Belt)</b>							
<b>West Africa</b>							
Niger	\$0.70	\$1.84	\$3.17	\$5.71	\$1.84	\$3.17	\$10.72
Benin	\$0.21	\$1.19	\$1.86	\$3.26	\$1.19	\$1.86	\$6.32
Burkina Faso	\$0.36	-	-	\$0.36	\$3.98	\$8.19	\$12.53
Côte d'Ivoire	\$0.34	-	-	\$0.34	\$4.23	\$3.11	\$7.69
Sierra Leone	\$0.32	-	-	\$0.32	\$0.81	\$1.99	\$3.11
Guinea	\$0.16	-	-	\$0.16	\$1.59	\$3.90	\$5.66
Liberia	\$0.32	-	-	\$0.32	\$0.40	\$1.40	\$2.12
Mali	\$0.25	-	-	\$0.25	\$0.57	\$6.05	\$6.87
Mauritania	\$0.16	-	-	\$0.16	\$2.94	\$0.99	\$4.08
Senegal	\$0.30	-	-	\$0.30	\$0.81	\$2.41	\$3.52
Guinea Bissau	\$0.07	-	-	\$0.07	\$2.13	\$0.30	\$2.51
Gambia	\$0.06	-	-	\$0.06	\$0.67	\$0.38	\$1.12
Cape Verde	\$0.05	-	-	\$0.05	\$0.93	\$0.07	\$1.05
Togo	\$0.16	-	-	\$0.16	\$0.11	\$0.63	\$0.90
Ghana	\$0.42	-	-	\$0.42	\$0.29	\$3.45	\$4.17
<b>Horn of Africa</b>							
Ethiopia	\$3.96	-	-	\$3.96	\$5.96	\$11.71	\$21.63
Somalia	\$0.80	\$0.82	\$1.58	\$3.20	\$0.82	\$1.58	\$5.60
Kenya	\$0.52	-	-	\$0.52	\$1.07	\$1.95	\$3.55
Uganda	\$0.47	-	-	\$0.47	\$1.04	\$1.04	\$2.55
Eritrea	\$0.23	-	-	\$0.23	\$0.24	\$0.32	\$0.80
Yemen	\$0.18	-	-	\$0.18	\$1.01	\$3.17	\$4.37
Djibouti	\$0.10	-	-	\$0.10	\$0.03	\$0.30	\$0.43
<b>Central Africa</b>							
Cameroon	\$0.47	-	-	\$0.47	\$1.03	\$0.81	\$2.31
Central African Republic	\$0.55	\$0.30	\$0.77	\$1.61	\$0.30	\$0.77	\$2.68
Congo	\$0.16	-	-	\$0.16	\$0.30	\$0.59	\$1.05
<b>4. India Importation Countries</b>							
Burundi	\$0.15	-	-	\$0.15	-	-	\$0.15
Rwanda	\$0.21	-	-	\$0.21	-	-	\$0.21
Nepal	\$0.65	\$1.04	\$0.66	\$2.35	\$1.04	\$0.66	\$4.06
Bangladesh	\$0.97	-	-	\$0.97	\$10.23	\$2.11	\$13.30

\* Unicef Social Mobilization Costs are included in Operations Costs for 2010 - 2011 & 2012

\*\* as of 31 January 2010

Country	2010 to 2012						Total Costs
	Total AFP Surveillance	1 <sup>st</sup> Priority		Total Cost 1 <sup>st</sup> Priority	2 <sup>nd</sup> & 3 <sup>rd</sup> Priorities		
		Total OPV	Total Op Costs		Total OPV	Total Op Costs	
<b>1. Endemic Countries</b>							
Afghanistan	\$7.76	\$21.09	\$31.04	<b>\$59.89</b>	\$1.97	\$2.84	<b>\$64.70</b>
India	\$25.53	\$329.87	\$233.84	<b>\$589.24</b>	\$62.67	\$33.08	<b>\$684.99</b>
Nigeria	\$29.67	\$104.75	\$166.04	<b>\$300.46</b>	\$13.78	\$21.36	<b>\$335.60</b>
Pakistan	\$7.51	\$90.74	\$62.98	<b>\$161.23</b>	\$4.73	\$3.01	<b>\$168.97</b>
<b>2. (Re-established transmission)</b>							
Chad	\$2.16	\$5.56	\$15.44	<b>\$23.17</b>	\$1.72	\$4.71	<b>\$29.60</b>
Sudan	\$7.33	\$17.39	\$36.76	<b>\$61.47</b>	\$6.89	\$14.09	<b>\$82.45</b>
Angola	\$5.56	\$9.56	\$17.94	<b>\$33.06</b>	\$2.81	\$5.16	<b>\$41.03</b>
Dem Rep of Congo	\$7.73	\$7.28	\$14.88	<b>\$29.89</b>	\$22.52	\$45.89	<b>\$98.30</b>
<b>3. (Nigeria &amp; Chad Importation Belt)</b>							
<b>West Africa</b>							
Niger	\$2.04	\$6.57	\$12.21	<b>\$20.82</b>	\$3.58	\$6.24	<b>\$30.65</b>
Benin	\$0.62	\$3.27	\$5.43	<b>\$9.32</b>	\$3.27	\$5.43	<b>\$18.02</b>
Burkina Faso	\$1.05	\$2.43	\$5.93	<b>\$9.41</b>	\$9.35	\$20.10	<b>\$38.86</b>
Côte d'Ivoire	\$0.99	\$1.98	\$1.90	<b>\$4.87</b>	\$9.21	\$7.09	<b>\$21.17</b>
Sierra Leone	\$0.93	\$0.73	\$1.87	<b>\$3.53</b>	\$1.82	\$4.54	<b>\$9.89</b>
Guinea	\$0.46	\$1.22	\$3.54	<b>\$5.22</b>	\$3.50	\$8.88	<b>\$17.60</b>
Liberia	\$0.93	\$0.66	\$1.32	<b>\$2.90</b>	\$1.16	\$3.20	<b>\$7.26</b>
Mali	\$0.74	\$1.97	\$3.89	<b>\$6.60</b>	\$6.15	\$13.86	<b>\$26.61</b>
Mauritania	\$0.46	\$0.49	\$1.24	<b>\$2.19</b>	\$3.32	\$1.94	<b>\$7.45</b>
Senegal	\$0.87	\$1.36	\$3.68	<b>\$5.91</b>	\$1.71	\$4.76	<b>\$12.37</b>
Guinea Bissau	\$0.22	\$0.14	\$0.29	<b>\$0.65</b>	\$2.24	\$0.59	<b>\$3.48</b>
Gambia	\$0.19	\$0.10	\$0.36	<b>\$0.64</b>	\$0.96	\$0.75	<b>\$2.35</b>
Cape Verde	\$0.15	\$0.03	\$0.06	<b>\$0.24</b>	\$0.98	\$0.13	<b>\$1.35</b>
Togo	\$0.46	\$0.50	\$0.59	<b>\$1.55</b>	\$0.75	\$1.23	<b>\$3.53</b>
Ghana	\$1.24	\$1.89	\$3.35	<b>\$6.47</b>	\$2.30	\$6.80	<b>\$15.58</b>
<b>Horn of Africa</b>							
Ethiopia	\$11.53	-	-	<b>\$11.53</b>	\$16.48	\$34.38	<b>\$62.39</b>
Somalia	\$2.32	\$2.35	\$4.59	<b>\$9.26</b>	\$2.35	\$4.59	<b>\$16.21</b>
Kenya	\$1.51	-	-	<b>\$1.51</b>	\$2.94	\$5.68	<b>\$10.14</b>
Uganda	\$1.36	-	-	<b>\$1.36</b>	\$2.84	\$3.92	<b>\$8.13</b>
Eritrea	\$0.68	-	-	<b>\$0.68</b>	\$0.67	\$0.94	<b>\$2.29</b>
Yemen	\$0.53	-	-	<b>\$0.53</b>	\$2.86	\$9.25	<b>\$12.65</b>
Djibouti	\$0.30	-	-	<b>\$0.30</b>	\$0.08	\$0.88	<b>\$1.26</b>
<b>Central Africa</b>							
Cameroon	\$1.36	\$1.42	\$1.15	<b>\$3.94</b>	\$1.52	\$1.20	<b>\$6.65</b>
Central African Republic	\$1.61	\$0.84	\$2.21	<b>\$4.66</b>	\$0.84	\$2.21	<b>\$7.72</b>
Congo	\$0.46	-	-	<b>\$0.46</b>	\$0.85	\$1.71	<b>\$3.03</b>
<b>4. India Importation Countries</b>							
Burundi	\$0.43	-	-	<b>\$0.43</b>	\$1.25	\$1.59	<b>\$3.27</b>
Rwanda	\$0.62	-	-	<b>\$0.62</b>	\$1.21	\$1.86	<b>\$3.69</b>
Nepal	\$1.89	\$3.85	\$2.56	<b>\$8.30</b>	\$2.02	\$2.56	<b>\$12.88</b>
Bangladesh	\$2.81	\$9.19	\$2.01	<b>\$14.02</b>	\$19.87	\$4.15	<b>\$38.05</b>

\* Unicef: Social Mobilization Costs are included in Operations Costs for 2010 - 2011 & 2012

\*\* as of 31 January 2010

## ANNEX C: Surveillance and laboratory costs by country and region, 2010 (all figures in US\$ millions)

WHO African Region	2010
Algeria	\$0.03
Angola	\$1.80
Benin	\$0.20
Botswana	\$0.10
Burkina Faso	\$0.34
Burundi	\$0.14
Cameroon	\$0.44
Cape Verde	\$0.05
Central African Republic	\$0.52
Chad	\$0.70
Comoros	\$0.05
Congo	\$0.15
Côte d'Ivoire	\$0.32
Democratic Republic of Congo	\$2.50
Equatorial Guinea	\$0.05
Eritrea	\$0.22
Ethiopia	\$3.73
Gabon	\$0.11
Gambia	\$0.06
Ghana	\$0.40
Guinea	\$0.15
Guinea-Bissau	\$0.07
Kenya	\$0.49
Lesotho	\$0.08
Liberia	\$0.30
Madagascar	\$0.45
Malawi	\$0.23
Mali	\$0.24
Mauritania	\$0.15
Mauritius	\$0.02
Mozambique	\$0.32
Namibia	\$0.15
Niger	\$0.66
Nigeria	\$9.66
Rwanda	\$0.20
Sao Tome and Principe	\$0.01
Senegal	\$0.28
Seychelles	\$0.01
Sierra Leone	\$0.30
South Africa	\$0.15
Swaziland	\$0.10
Togo	\$0.15
Uganda	\$0.44
United Republic of Tanzania	\$0.45
Zambia	\$0.40
Zimbabwe	\$0.25
Regional surveillance and laboratory	\$5.38
<b>Subtotal</b>	<b>\$33.00</b>

WHO Region of the Americas	2010
Regional surveillance and laboratory	\$0.60

WHO Eastern Mediterranean Region	2010
Afghanistan	\$2.51
Djibouti	\$0.10
Egypt	\$0.37
Iraq	\$0.10
Pakistan	\$2.43
Somalia	\$0.76
Sudan	\$2.37
Yemen	\$0.18
Regional surveillance and laboratory	\$1.10
<b>Subtotal</b>	<b>\$9.91</b>

WHO South-East Asia Region	2010
Bangladesh	\$0.90
India	\$8.25
Indonesia	\$1.08
Myanmar	\$0.52
Nepal	\$0.65
Regional surveillance and laboratory	\$3.49
<b>Subtotal</b>	<b>\$14.89</b>

WHO European Region	2010
Regional surveillance and laboratory	\$1.06

WHO Western Pacific Region	2010
Regional surveillance and laboratory	\$1.23

WHO/HQ	2010
WHO/HQ	\$9.41

Global	2010
<b>Total</b>	<b>\$70.10</b>



## ANNEX D: Technical assistance, country-level details 2010

(all figures in US\$ millions)

WHO African Region	2010
Angola	\$4.77
Benin	\$0.39
Botswana	\$0.23
Burkina Faso	\$0.20
Burundi	\$0.04
Cameroon	\$0.50
Central African Republic	\$0.61
Chad	\$1.73
Congo	\$0.45
Côte d'Ivoire	\$1.19
Democratic Republic of Congo	\$5.05
Equatorial Guinea	\$0.14
Eritrea	\$0.11
Ethiopia	\$2.55
Gabon	\$0.37
Gambia	\$0.05
Ghana	\$0.10
Guinea	\$0.10
Guinea-Bissau	\$0.12
Kenya	\$0.83
Lesotho	\$0.07
Liberia	\$0.44
Madagascar	\$0.25
Malawi	\$0.07
Mali	\$0.39
Mauritania	\$0.06
Mozambique	\$0.27
Namibia	\$0.13
Niger	\$1.49
Nigeria	\$26.87
Rwanda	\$0.31
Senegal	\$0.16
Sierra Leone	\$0.40
South Africa	\$0.31
Swaziland	\$0.09
Togo	\$0.19
Uganda	\$0.41
United Republic of Tanzania	\$0.34
Zambia	\$0.57
Zimbabwe	\$0.12
IST (Central block)	\$1.46
IST (South/East block)	\$1.24
IST (West block)	\$1.01
Regional Office	\$1.43
<b>Subtotal</b>	<b>\$57.81</b>
WHO European Region	2010
Regional Office/Countries	\$0.50
<b>Subtotal</b>	<b>\$0.50</b>

WHO Eastern Mediterranean Region	2010
Afghanistan	\$3.90
Djibouti	\$0.00
Egypt	\$0.03
Iran	\$0.01
Iraq	\$0.00
Pakistan	\$7.23
Somalia	\$2.00
Sudan	\$4.88
Yemen	\$0.18
Regional Office	\$1.17
<b>Subtotal</b>	<b>\$19.39</b>
WHO South-East Asia Region	2010
Bangladesh	\$1.42
India	\$14.18
Indonesia	\$0.88
Myanmar	\$0.43
Nepal	\$0.84
Regional Office	\$0.77
<b>Subtotal</b>	<b>\$18.52</b>
WHO Western Pacific Region	2010
Cambodia	\$0.10
China	\$0.30
Fiji	\$0.10
Lao PDR	\$0.10
Philippines	\$0.10
Papua New Guinea	\$0.10
Viet Nam	\$0.10
Regional Office	\$0.70
<b>Subtotal</b>	<b>\$1.60</b>
WHO/HQ	\$10.23
Short Term Tech Assistance	\$7.50
UNICEF	2010
UNICEF/ HQ	\$2.50
Afghanistan	\$1.41
Angola	\$0.50
Democratic Republic of Congo	\$1.03
India	\$1.84
Nepal	\$0.57
Niger	\$0.46
Nigeria	\$6.25
Pakistan	\$1.76
Sudan	\$1.58
<b>Subtotal</b>	<b>\$17.90</b>
Global WHO-Unicef	2010
<b>Total</b>	<b>\$133.47</b>

\* IST= Inter-country Support Team

## 10. Acronyms and abbreviations

AFP	Acute flaccid paralysis
bOPV	Bivalent oral polio vaccine
CDC	US Centers for Disease Control and Prevention
GPEI	Global Polio Eradication Initiative
mOPV	Monovalent oral polio vaccine
NIDs	National Immunization Days
OPV	Oral polio vaccine
SIAs	Supplementary Immunization Activities
SNIDs	Sub-national Immunization Days
tOPV	Trivalent oral polio vaccine
UNICEF	United Nations Children's Fund
VAPP	Vaccine-associated paralytic polio
VDPV	Vaccine-derived poliovirus
WHO	World Health Organization
WPV	Wild poliovirus



[www.polioeradication.org](http://www.polioeradication.org)