WHO-UNICEF Joint Strategic Action Plan for the Polio Outbreak Response in the Horn of Africa

Nairobi, November 2013

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Acronyms and abbreviations

AFP	Acute flaccid paralysis
BMGF	Bill & Melinda Gates Foundation
bOPV	Bivalent Oral Polio Vaccine
CDC	U.S. Centers for Disease Control and Prevention
CHD	Child Health Days
CLTS	Community Led Total Sanitation
cVDPV	Circulating vaccine-derived poliovirus
ECSA-HC	East, Central and Southern Africa Health Community
EPI	Expanded Programme on Immunization
FAO	Food and Agriculture Organization
FRR	Financial Resource Requirement
GCC	Global Commission for Certification of the Eradication of Poliomyelitis
GPEI	Global Polio Eradication Initiative
HoA	Horn of Africa
IEC	information, education and communication
IM	Independent Monitoring
IOM	International Office for Migration
KEMRI	Kenya Medical Research Institute
MoH	Ministry of Health
NGO	Nongovernmental organization
NID	National Immunization Day
OPV	Oral polio vaccine
SIA	Supplementary immunization activity
SIAD	Short Interval Additional Doses
SNID	Subnational Immunization Day
STOP	Stop Transmission of Polio Programme
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WPV	Wild poliovirus
WPV1	Wild poliovirus type 1

A. Executive summary

The Horn of Africa (HoA) region is experiencing an outbreak of wild poliovirus (WPV) type 1 that started in April 2013 after a WPV importation from West Africa to the Banadir region of Somalia. Most of the cases at the start of the outbreak occurred in the Banadir region and then spread to other areas in the Central South Zone of Somalia and to neighbouring areas of Kenya and Ethiopia. As of 31 October 2013, a total of 200 cases have been reported to date (180 in Somalia, 14 in Kenya and 6 in Ethiopia). These cases represent more than 60% of WPV type 1 cases reported worldwide up to November2013.

HoA countries have had repeated WPV outbreaks, mainly due to importations fuelled by low population immunity and massive population movements. The largest and longest occurred between 2004 and 2007, affecting Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Yemen. HoA countries were polio free between July 2011 and the beginning of the current outbreak.

The ongoing polio outbreak occurred in a complex context that has influenced its occurrence and magnitude as well as the response strategies. Inaccessibility, mainly due to security concerns in south and central Somalia and in border areas of north-eastern Kenya, makes it difficult for vaccinators to reach all children during campaigns, resulting in suboptimal population immunity. Large population movements help the virus spread and lead to large pools of unvaccinated children in some areas. Subnational acute flaccid paralysis surveillance gaps exist in all the countries in the epidemiologic block, while specific communication challenges make it difficult for the public to perceive the risks of polio among other priorities, and hinder adequate support from governments, social and religious institutions, the media, community leaders and other stakeholders.

Phase 1 of the outbreak response plan, in the first six months, had four objectives: (a) to interrupt WPV transmission in the outbreak zone within four months; (b) to protect populations at high risk of the WPV outbreak; (c) to maximize opportunities for immunization in the inaccessible areas of south-central Somalia; and (d) to protect populations in other areas that may be at risk due to population movements. Innovative strategies such as expanded age group vaccination, short interval administration of OPV doses and the use of bivalent OPV (bOPV) were effective in responding to the outbreak.

Considering the high risk of importation in the HoA region and the specific challenges facilitating the spread of viral transmission, preventive campaigns have been implemented in HoA countries with particular focus on high-risk areas and populations. This, together with the aggressive outbreak response, contained the spread of the virus to limited geographic zones in the three infected countries and averted the spread to other countries in the region.

The Global Polio Eradication Initiative has been working closely with governments to design and implement the HoA emergency outbreak response plan. Regional and country responses have been adaptive and flexible to address the HoA challenges mentioned above and to respond to epidemiological developments. The rapid immunization response, strong commitment by the Presidency in Kenya, the chairing of the polio command post by the Minister of Health in Ethiopia, the declaration of the

outbreak as a public health emergency by all countries in the East African Community in August 2013, cross-border coordination and communication efforts among affected and at-risk countries have contributed significantly to limiting the spread of the virus in the HoA countries.

The current epidemiology shows that transmission in the outbreak zone has dropped, with no case reported in north-eastern Kenya and the Banadir region of Somalia after July. Despite preventive supplementary immunization activity (SIA) and permanent vaccination points, transmission did spread to other parts of the Central South Zone of Somalia and is continuing in non-SIA areas, and new cases have been reported in the Somali region of Ethiopia. The countries in the HoA therefore remain at substantial risk. Previous experience suggests that extensive circulation could continue throughout Somalia, eastern Ethiopia and eastern Kenya, with significant risk of circulation in neighbouring countries and areas. Thus a comprehensive and coordinated action plan for a second phase of response from November 2013 to April 2014 has been agreed upon to stop the outbreak.

The objectives of **Phase 2** of the outbreak response plan from November 2013 to April 2014 are: (a) to interrupt WPV transmission in non-SIA areas of the Central South Zone of Somalia by April 2014; (b) to interrupt transmission in the Somali region of Ethiopia by the end of 2013 and sustain protective immunity throughout the epidemiologic block (Banadir, the remainder of the Central South Zone of Somalia and the North-Eastern Province of Kenya); (c) to sustain high population immunity in areas at high risk of transmission; and (d) to continue routine vulnerability reduction activities and outbreak response preparations.

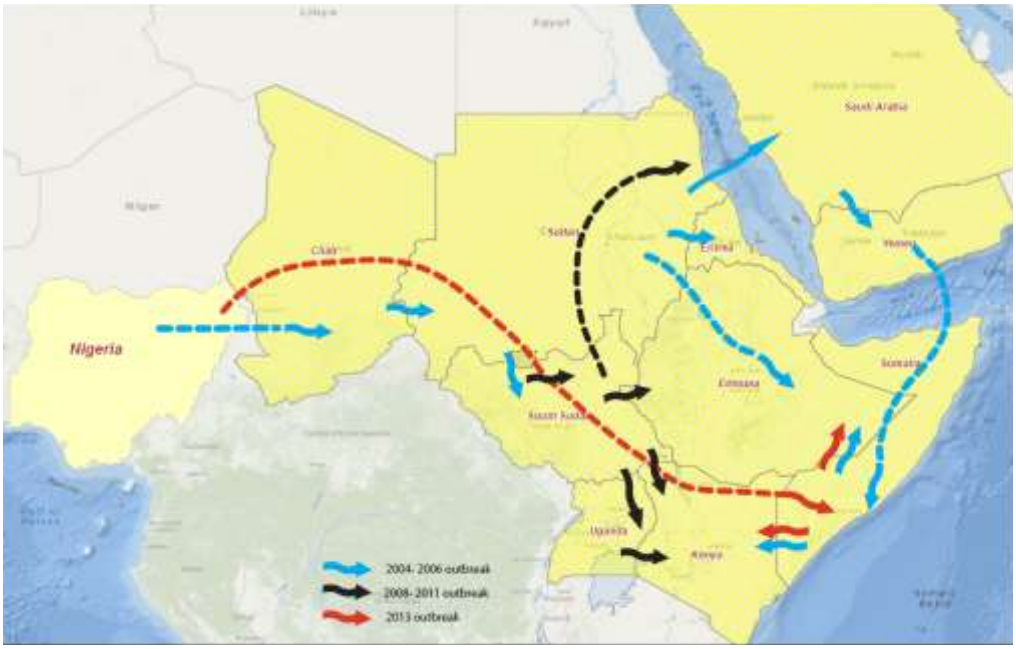
Moreover, innovative and adaptive strategies will be used to maximize opportunities for immunization in inaccessible areas as well as in accessible areas bearing in mind population travel trends. Renewed efforts are needed to maintain an enabling communication environment and positive public perception for the repeated polio vaccination campaigns across the HoA. Once the outbreak has been stopped, improving routine immunization, carrying out preventive campaigns and maintaining a high-quality surveillance system will be crucial to maintain a polio-free HoA.

B. History of polio outbreaks in the Horn of Africa

Countries in the Horn of Africa (HoA) have experienced repeated wild poliovirus (WPV) outbreaks, mainly due to importations fuelled by low population immunity and massive population movements. Wild poliovirus type 1 (WPV1) originating from West Africa moved through Chad into Sudan and crossed into Saudi Arabia and Yemen in the Middle East, and then returned to other HoA countries, especially Somalia. Outbreaks have repeatedly spread from Somalia into Kenya and Ethiopia and from Sudan and South Sudan into Eritrea, Ethiopia, Kenya and Uganda (Figure 1).

Outbreaks of circulating vaccine-derived polioviruses (cVDPV) have been confirmed in Ethiopia, Yemen and Somalia with spread to north-eastern Kenya. The occurrence of cVDPV is attributable to persistently low population immunity due to poor routine immunization coverage.

Figure 1: Horn of Africa wild poliovirus type 1 outbreaks



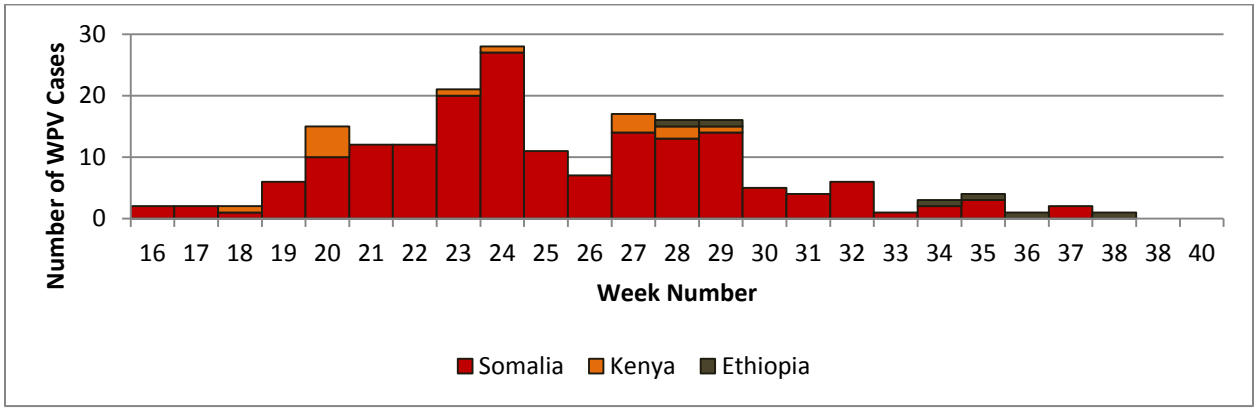
All countries in the HoA had been polio free since July 2011. Somalia, Kenya and Ethiopia are so far the only three countries that have been infected during the current outbreak, which started in Somalia in April 2013.

C. Outbreak response

1. Epidemiology

Only three of nine countries in the HoA have confirmed cases of WPV1. They are Somalia, Kenya and Ethiopia, with the onset of first cases on 18 April 2013, 30 April 2013, and 10 July 2013 respectively (Figure 2).

Figure 2: Confirmed polio cases in Horn of Africa countries by week of onset, 2013



The other countries, Djibouti, Eritrea, South Sudan, Sudan, Uganda and Yemen remain polio free. The status of the three infected countries as of 31 October 2013 is summarized below.

Somalia. On 9 May 2013, the Kenya Medical Research Institute (KEMRI), the HoA regional reference laboratory, reported isolation of WPV1 from stool specimens collected from a 32-month-old girl with acute flaccid paralysis (with date of onset established at 18 April 2013) from the Banadir region in south-central Somalia. Stool specimens from three asymptomatic close contacts also tested positive for WPV1. Genetic sequencing showed the virus was related to those seen in northern Nigeria. As of 31 October 2013, 180 WPV1 cases have been reported from 46 districts. The outbreak has spread to other areas of south-central Somalia. The last case from the Banadir region had onset on 19 July 2013 and the last case from the accessible Central South Zone of Somalia had onset in mid-August 2013. All the recent cases in the Somalia outbreak are from areas not implementing SIAs. Of the reported cases, 59% of them were male, 66% under 5 years of age, 33% 5–15 years of age and 0.6% above 15 years of age. The oldest case was 27 years old and the youngest was 2 months old. Fifty-four per cent (54%) of all had never received any oral polio vaccine. Most of the zero-dose cases were from inaccessible areas.

Kenya. On 17 May 2013, two contacts of a 4-month old female with onset on 30 April 2013 of acute flaccid paralysis (AFP) based in Dadaab refugee camp in Kenya tested positive for WPV1. Genetic sequencing showed the WPV1 isolate was linked to the WPV1 in Somalia. The AFP case stools were negative, but the case was confirmed on the basis of WPV1 isolation from the contacts. To date, 14 cases have been reported, seven among residents of Dadaab refugee camp and seven among residents of the host communities of Fafi, Dadaab and Hulugo subcounties. Nine of the 14 cases were females; three were aged above 15 years, two were 19 years old and one was 22 years old. One of the adult cases died during the course of the illness. The latest date of onset for Kenya WPV1 outbreak cases is 14 July 2013.

Ethiopia. On 14 August 2013, the KEMRI reported a case of WPV1 in Ethiopia, with date of onset established at 10 July 2013. The 18-month-old child is from a nomadic family, from Injiro Kebele, Geladi Woreda, Warder/Dolo zone, Somali region. The child had never been vaccinated during routine or previous polio SIAs. The AFP case was detected on the Somalia side of the border where the child was taken for medical services, and investigation was undertaken by the Somalia polio eradication programme. An additional five cases, all from Geladi and neighbouring Bokh Woreda, have been confirmed. This brings the total number of WPV cases to six, with the latest date of onset established at 19 September 2013.

2. Risks posed by the outbreak to the Global Polio Eradication Initiative

The major risks from the outbreak to the Global Polio Eradication Initiative are:

- prolonged circulation in non-SIA implementing areas of Somalia due to the large number of susceptible children, accompanied by the clear risk of re-establishment of WPV transmission in Somalia;
- spread from the current focus of transmission (south-central Somalia, north-eastern Kenya, eastern Ethiopia) to other areas within Somalia, Kenya and Ethiopia;

- spread to other countries/areas within the HoA, including Yemen, Uganda and South Sudan, due to trade or social population movement; and
- spread outside the HoA due to population movements for pilgrimages, trade or social reasons.

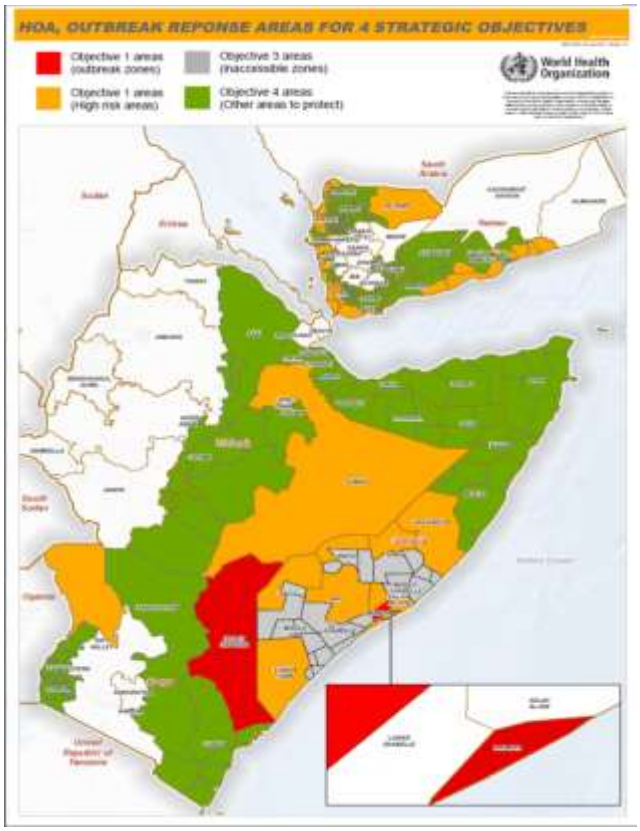
3. Outbreak Response Phase 1 – May 2013 to October 2013

a) Outbreak response objectives

At the onset of the outbreak, a 6 month outbreak response plan (May-October 2013) was developed that identified four response objectives across 4 geographic zones determined by risk assessment and epidemiology at that time:

- **Objective 1** (Red areas): To interrupt WPV transmission in outbreak zone within 4 months
- **Objective 2: (**Orange areas)**:** To protect populations at high risk of WPV outbreak
- **Objective 3**: (Grey areas) : To maximize opportunities for immunization in inaccessible areas of south central Somalia
- **Objective 4**: (Green areas) To protect populations in other areas that may be at risk due to population movement

Figure 3: HoA strategic objectives areas for Phase 1 of outbreak response



This zone demarcation was dynamic and based on epidemiology. The areas that were infected later, i.e. the Somali region of Ethiopia and Central South Zone of Somalia, were included in Zone 1 and the response was modified accordingly.

These strategic objectives correspond to a response involving regional and national efforts. As WPV1 is spreading across the HoA region, combined national and regional efforts are necessary to interrupt its transmission. Regional partnerships, regional advocacy and cross-border efforts are tackling the challenges described above significantly and have facilitated the implementation of key outbreak response activities. All the activities relate to **maximizing** opportunities for **immunization**, **strengthening surveillance** and **enhancing communications**.

b) Progress towards achieving Phase 1 objectives

Objective 1: To interrupt WPV transmission in outbreak zone within 4 months

The outbreak started in Banadir of Somalia and North Eastern province of Kenya. Objective 1 of the Phase 1 outbreak response plan targeted interrupting of transmission in these two zones within four months.

Both Kenya and Somalia had aggressive response in the outbreak zone. Banadir region of Somalia where the outbreak started has conducted 8 SIAs through November, of which 6 covered expanded age groups including the campaigns targeting all age group. North Eastern province of Kenya, has conducted 5 SIAs through November, all of which covered all age groups. This intense and aggressive response has shown results with the last case from Banadir region having onset on 19 July 2013 and from the north eastern province of Kenya on 14 July 2013.

Objective 2: To protect populations at high risk of WPV outbreak

Areas immediately around the infected zone were at highest risk of WPV spread. This included South Central zone of Somalia; High risk areas of Nairobi, Turkana etc. in Kenya; Somali region of Ethiopia and refugee areas/ IDP camps in Yemen. All these areas had intense SIA schedule to raise the population immunity with Somalia conducting 7 SIAs in South Central zone of which 5 targeted higher age groups. Kenya, Ethiopia and Yemen conducted 3-4 campaigns in Objective 2 areas.

Apart from conducting SIAs to raise the population immunity, the countries also established Permanent Vaccination Points at the borders and major transit points to vaccinate children/population in movement. This strategy was successful in Kenya and Yemen where no evidence of spread of transmission have been found.

Despite preventive campaigns and new strategies like permanent vaccination points, transmission did spread to rest of south central Somalia and Somali region of Ethiopia. Transmission in accessible areas in South Central Somalia is slowing down with last detected case having onset on 14th August 2013.

Objective 3: To maximize opportunities for immunization in inaccessible areas of south central Somalia

Inaccessibility due to insecurity, geographic expanse, difficult terrain, harsh climatic conditions and lack of roads poses major challenges. In addition to the chronic conflict and insecurity in Somalia, mass immunization activities for polio have been banned in regions controlled by non-state entities since 2009. This has resulted in the accumulation of a pool of nearly one million unprotected children under five years of age. Permanent vaccination teams in transit points and cross border areas have been established in these Non-SIA areas. Negotiations to initiate immunization in inaccessible areas have also been conducted. In partially accessible districts stocks of vaccines and financial resources have been prepositioned in order to vaccinate children that might be coming from inaccessible villages or to immediately start SIAs in case they become accessible. Altogether, 334 cross-border and transit points for permanent vaccination teams were identified all over Somalia. Local authorities approved 299

vaccination points and as of 31 October 2013, 284 of these points were functional. The programme monitors the number of children vaccinated at these points on a weekly basis. During week 42, a total of 83,857 children were vaccinated, 84% being from the south and central zones.

Despite the efforts, transmission spread to inaccessible areas of south central Somalia. All the recent cases in the Somalia outbreak are from areas not implementing SIAs.

Objective 4: To protect populations in other areas that may be at risk due to population movement

This objective targeted rest of areas of Somalia, Kenya, Ethiopia, Yemen and other countries in the Horn of Africa. Preventive campaigns were undertaken in all of these areas to raise population immunity. Somalia conducted 7 SIAs covering Somaliland and Puntland while Kenya and Ethiopia conducted 2-3 campaigns. Other countries in the HoA also conducted preventive campaigns. This strategy has been successful till now and no transmission has been detected in the area targeted under objective 4.

Table 1: Summary of SIAs conducted during Phase 1 of HoA Outbreak response

Risk zone	Definition	Country	Sub national area	SIAs since start of outbreak in phase I (May to Oct)	Epidemiological status	2013 Phase I					
						May	June	July	August	September	October
Zone 1	Outbreak zones	Somalia	Banadir	**8**	Last case with onset on 19th July	YY	Y	YY	Y	Y	Y
		Kenya	North eastern Kenya	**5**	Last case with onset on 14th July	Y	Y	Y	Y	Y	
Zone 2	High risk areas	Somalia	Accessible South Central	**7**	Last case with onset on 14th Aug	Y	Y	YY	Y	Y	Y
		Ethiopia	Somali Region	**4**	**6 cases, Most recent on 19 Sept**		Y	Y	Y		Y
		Kenya	Other high risk areas of Kenya	**3**	No transmission			Y	Y	Y	
		Yemen	High risk areas	**3**	No transmission		Y	Y			Y
Zone 3	Non SIA areas of Somalia	Somalia	Non SIA areas of South Central Zone	Vaccination at fixed sites & permanent Vaccination posts	**Most recent in Oct**						
Zone 4	Other areas to protect	Kenya	Rest of the areas	**0**	No transmission						
		Somalia	Somaliland; Puntland	**7**	No transmission	Y	Y	YY	Y	Y	Y
		Ethiopia	Other high risk areas of Ethiopia (Oromia, Harari, Diredawa, SNNPR)	**3**	No transmission		Y	Y			Y
			Other areas	**1**	No transmission						Y
		Yemen	Rest of the areas	**1**	No transmission			Y			
		South Sudan	High risk areas	**2**	No transmission				Y		Y
			Rest of country	**0**	No transmission						
		Djibouti	Whole country	**2**	No transmission			Y			Y
		Eritrea	High risk areas	**2**	No transmission	Y	Y				
			Rest of country	**0**	No transmission						
		Uganda	High risk areas	**2**	No transmission					Y	Y
			Rest of country	**0**	No transmission						
		Sudan	High risk areas	**2**	No transmission	Y	Y				
			Rest of country	**1**	No transmission	Y					

c) Achievements and lessons learnt

More than six months have elapsed since the first case of polio in the current HoA outbreak was detected in Somalia on 9 May 2013. The **rapid immunization response, cross-border coordination and communication activities** in affected and at-risk countries have contributed significantly to limiting the spread of the HoA outbreak and virus spread has been tightly restricted to geographic zones in the three infected countries. The aggressive and timely response launched by Somalia, Kenya and Ethiopia has

helped to contain cases to just three related clusters: the Central South Zone of Somalia, Dadaab, Kenya, and the Somali region of Ethiopia.

Effective communication between HoA countries and cross-border meetings have led to coordinated immunization activities, sharing of AFP surveillance data, and to an improved understanding of cross-border population movement. Follow-up meetings are planned for December 2013 and January 2014. Similarly, the rapid establishment and weekly dissemination of country situation reports throughout the sub-region by Somalia, Kenya, Ethiopia, and South Sudan have provided timely updates on the characteristics of the changing outbreak epidemiology and surveillance.

The outbreak response has adequately addressed **major challenges**, namely the inaccessibility to certain geographic areas, difficulties related to population movements, suboptimal population immunity, subnational surveillance gaps and communication hurdles.

As regards **inaccessibility**, special plans and strategies are needed to maximize opportunities for vaccination. Specific analysis is crucial to fully understand the security environment in the HoA with focus on the root causes behind insecurity and inaccessibility. Establishing permanent vaccination points in surrounding areas and using existing health facilities to pre-position vaccines have allowed increased vaccination.

As regards **population movements**, both the historical and the current epidemiology clearly identify the role of cross-border movements and hard-to-reach and/or mobile populations in WPV transmission. This includes the need for programmes that focus on nomadic and pastoralist populations who may be hard to reach by vaccination services and who, if infected, may participate in the transmission of WPV.

As regards **suboptimal population immunity**, a major lesson learnt for the region is the importance of maintaining high population immunity through preventive campaigns that supplement routine immunization in high-risk areas. Regional risk assessments clearly identified locations at highest risk of an outbreak, such as Somalia, eastern Kenya and the Somali region of Ethiopia. Had greater preventive efforts taken place, the outbreak may not have occurred and its impact would have been reduced. Prompt and quality vaccination response efforts are needed to sufficiently limit spread. In the HoA outbreak countries, although response efforts were rapid, a funding gap still exists between the costs of high-quality campaigns and monitoring and evaluation activities.

As regards **subnational surveillance gaps,** heightened surveillance efforts are needed in the HoA. Historically, some countries in the region (Kenya and Uganda) shared transmission with as long as a one-year gap between WPV identification. As long as the outbreak continues, and even long after the last WPV case in each HoA country is reported, surveillance must be vigilant and the resources sufficient to confirm that WPV no longer circulates in the entire HoA.

As regards **communication hurdles**, recent HoA regional planning discussions identified multiple areas within each country and across the region where evidence-based polio eradication communication strategies could be improved and enhanced. Although these needs have been identified, further resources are needed to effectively implement strategic communication initiatives that help extinguish

the outbreak in the HoA and prevent further transmission inside the area and outside to other world regions.

Coordination is key. In the HoA, cross-border coordination is of historic importance, as is cross-agency coordination in a setting where multiple UN regions intersect. Within each country, programmes that achieve successful coordination are those that use existing mechanisms, such as interagency coordination committees and national immunization technical advisory groups, but these existing mechanisms can be further strengthened. Coordination must be efficient between the epidemiology and the laboratory, and adequate resources must be in place in the laboratory system to effectively and carefully manage the increased influx and capacity needed to respond to the outbreak.

Expanded partnerships are vital within each country and across the region for success. This ranges from local partnerships at the lowest levels to highest level advocacy and management functions, and the strengthening of cross-regional partnerships combined with strong national programme ownership. Building new or strengthening existing partnerships can invigorate and refresh polio eradication efforts.

Three-monthly assessment of Outbreak response for Kenya and Somalia were done in August 2013. The assessment team found response to be timely, aggressive and flexible. The quality of response in Zone 1 of outbreak response area in both Kenya and Somalia was found to be of high standard.

4. Outbreak Response Phase 2 - November 2013 to April 2014

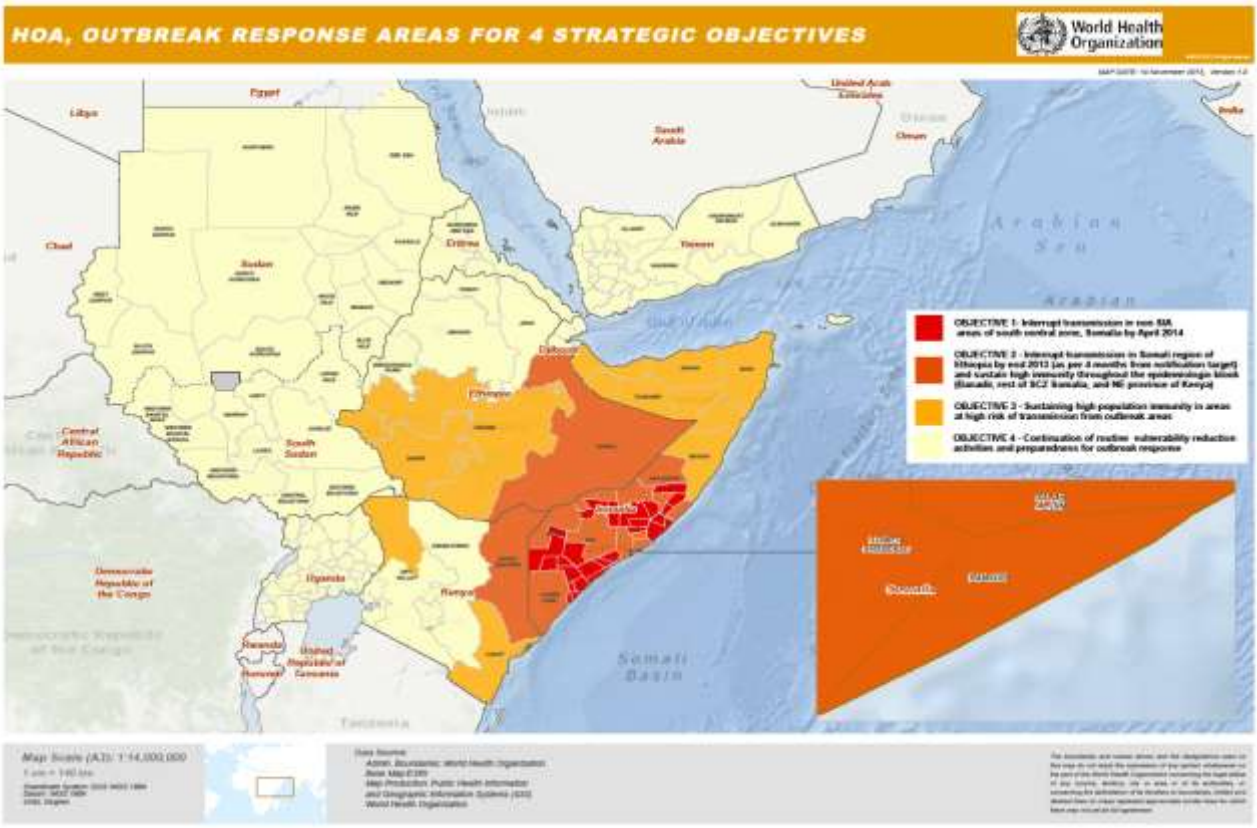
The current epidemiology shows that the transmission in the outbreak zone has decreased with no case in North Eastern Kenya and Banadir of Somalia after July. Despite preventive SIAs and permanent vaccination points, transmission did spread to other parts of south central zone of Somalia and is still continuing in non SIA areas of south central Somalia and, new cases have been reported in Somali region of Ethiopia. The countries in the HoA, therefore, remain at substantial risk. Previous experience suggests that extensive circulation could continue throughout Somalia, Eastern Ethiopia and Eastern Kenya, with significant risk of circulation in neighbouring countries and areas. **Therefore a comprehensive and coordinated plan of activities for Phase 2 of outbreak response from November 2013 to April 2014 has been agreed upon to stop the outbreak.**

a) Revised outbreak response objectives

The strategic objectives Phase 2 of the outbreak response plan are:

- **Objective 1 (Red Zone):** To interrupt transmission in non SIA areas of south central Somalia by April 2014
- **Objective 2 (Orange area):** To interrupt transmission in Somali region of Ethiopia by end 2013 (as per 4 months from notification target) and sustain protective immunity throughout the epidemiologic block (Banadir, remainder of South Central Zone of Somalia, and North Eastern province of Kenya)
- **Objective 2 (Dark yellow area):** To sustaining high population immunity in areas at high risk of transmission
- **Objective 4 (Light yellow area):** To continue carrying out routine vulnerability reduction activities and preparation of outbreak response

Figure 4: Strategic objectives for Phase 2 of the outbreak response (November 2013 to April 2014)



b) Outbreak response challenges

Five challenges pertaining to the current HoA WPV1 outbreak have been identified. They are:

1. **inaccessibility**, with security concerns in south-central Somalia and the border areas of north-eastern Kenya making it difficult for vaccinators to reach all children during campaigns;
2. **population movements** that help spread the virus and lead to a large pool of unvaccinated children in some areas;
3. **suboptimal population immunity** levels with a large pool of susceptible children in south-central Somalia and the high-risk border areas of eastern Ethiopia and north-eastern Kenya;
4. **subnational AFP surveillance gaps** in all the countries in the HoA; and
5. specific **communication difficulties**.

1. Inaccessibility

Inaccessibility due to insecurity, geographic expanse, difficult terrain, harsh climatic conditions and the lack of roads poses major challenges. In addition to chronic conflict and insecurity in Somalia, mass immunization activities for polio have been banned in regions controlled by non-state entities since 2009. This has resulted in an accumulated pool of nearly 1 million unprotected children aged under 5 years. In Sudan, armed conflict and insecurity in the South Kordofan and Blue Nile states have left over 150 000 children unvaccinated. Furthermore, repeated scattered inter-communal violence between

tribes in South Sudan continues to result in temporary population displacements, impacting accessibility and the utilization of services. Recently, insecurity has posed a great risk to vaccinators and polio eradication teams.

Inaccessibility poses a number of issues to eradication efforts, including to:

- the overall capacity of the vaccination teams to fully deliver the campaign and the capability of Global Polio Eradication Initiative (GPEI) partners to monitor the programme's implementation;
- the means to obtain detailed and standard information to determine the extent of coverage and the reasons for children missed, which are hampered by the imposed ban, areas of insecurity and partial or complete inaccessibility, further eroding the ability to plan future campaigns;
- the confidence of vaccination teams to undertake campaigns and routine immunization, which has been negatively impacted by the level of insecurity, and the aptitude of government entities to support the teams if a security incident were to occur; and
- the logistical infrastructure to fully support the eradication efforts, especially in areas that are hard to reach due to the environment and insecurity.

2. Population movements

Regional and internal population movements due to insecurity, natural disasters, pastoralists and weather-related events pose a serious challenge to containing further WPV spread in the HoA. The most recent quarterly analysis of mass migration trends in the HoA by the Regional Mixed Migration Secretariat (RMMS) through August 2013 indicates a continuing increase in refugees in most countries. The highest increases in refugees as compared to the first quarter of 2013 were in Yemen and Ethiopia where the numbers grew by 7% and 22%, respectively. In addition, during the first half of 2013, relative peace and stability in Somalia led to an increase in Somali refugees either returning home or expressing an interest to do so. The recurring travel of refugees from temporary settled locations outside their native country back to their country of origin and back again to their temporary settlements in a host country remains a serious threat to efforts to contain the further spread of WPV in the region.

3. Suboptimal population immunity

High levels of population immunity are required to prevent the introduction and spread of WPV or cVDPV. A good routine immunization programme that achieves OPV3 coverage in over 80% of children and high coverage of supplementary OPV preventive campaigns in countries with lower routine OPV3 coverage are often adequate to maintain high levels of population immunity.

Over the past 2–3 years, HoA countries accounted for more than 60-70% of the unimmunized and under-immunized children in eastern and southern African countries. According to World Health Organization/United Nations Children's Fund estimates, of the total estimated 3 million children unimmunized for diphtheria–tetanus–pertussis vaccine third dose routine immunization in the subregion in 2012, about 2 million (65%) were in HoA countries (Ethiopia, Kenya, Somalia, South Sudan and Uganda). It is not surprising that most outbreaks of vaccine-preventable diseases in the subregion over the last couple of years have occurred in HoA countries. The very low routine immunization coverage and the ban of supplementary immunizations in most parts of the Central South Zone of Somalia for over 3 years (2009–2012) created the largest known reservoir of unvaccinated children in a

single geographic area in the world – approximately 1 million children aged under 5 years. However, 500 000 of these children have been vaccinated through campaigns conducted during the current outbreak response. Other factors for suboptimal immunity include weak health systems and infrastructure, an inadequate cold chain, the lack of adequate human resources and financing, and weak demand for immunization among communities.

4. Subnational AFP surveillance gaps

High-quality surveillance is key for early detection and timely response to WPV cases. AFP surveillance should satisfy the international criteria for sensitivity and timeliness with appropriate geographic representation. The quality of AFP surveillance should be monitored at subnational level and ensured in border areas and in those with refugees and high-risk populations. AFP surveillance is the foundation that guides and directs immunization activities and the tool to determine the extent of virus circulation and the impact of control measures. It is also important because it documents the cessation of transmission and excludes the re-establishment of virus circulation.

While most of the countries in the HoA have achieved certification standards for surveillance at the national level, subnational gaps still exist, especially in hard-to-reach and border areas. Examples of subnational gaps include delays in case detection and sample transport, and the presence of so-called silent districts as well as suboptimal active surveillance.

5. Communication difficulties

Effective communication during an outbreak is critical. Two overarching communication outcomes create an enabling environment for polio campaigns: (a) the public must perceive the risks of polio and see vaccination as a solution; and (b) governments, social and religious institutions, the media, community leaders and other stakeholders must support the campaigns. Abruptly elevating a health issue such as polio to the top of public and personal agendas is in itself a paramount task. While polio unquestionably is a dangerous disease that paralyses children for life, people face numerous other competing security, public health and social risks every day in the HoA.

The communication challenges associated with the response to this outbreak include:

- aggressive campaign schedules with short-interval additional doses and repeated campaigns that may create distress and fatigue, especially in the absence of other health services;
- staggered campaigns and spot selection of geographic areas for vaccination that make messaging difficult especially when mass communication channels are engaged;
- special communication strategies to extend the age group to 15 years or even to the whole population. Age groups for vaccination may vary from place to place, even in the same vaccination round in a given country. Accommodating this situation is also a communications difficulty that requires the use of highly localized approaches;
- inadequate communication capacity and infrastructure to effectively respond to a complex, explosive, multi-country outbreak of such magnitude, proportion and longevity. The intensity of the response in the HoA is comparable to that of eradication activities in the endemic countries; however available communication and financial resources are grossly incomparable. Establishing communication takes effort, time and money; and

- the lack of social data and its inadequate use for evidence-based communication planning. Linked to the unavailability of resources and research capacity, there is poor empirical knowledge of the behavioural or social barriers that are linked to polio vaccination in the HoA. While health seeking behaviour and vaccination intent are generally high (few refusals), a thorough understanding of community sentiment is critical for sustained demand and ownership.

c) Planned Response Activities

The proposed SIAs for the second Phase of outbreak response are given in Table 2.

Table 2: Proposed SIAs Calendar (November 2013 to April 2014)

Risk zone	Definition	Country	Sub national area	Epidemiological status	SIAs in phase II (Nov 13 to April 14)	2013 Phase II		2014 Phase II			
						November	December	January	February	March	April
Zone 1	Non SIA areas of Somalia	Somalia	Non SIA areas of South Central Zone	**Most recent on 9th Oct**	Vaccination at fixed sites & permanent Vaccination posts						
Zone 2	Outbreak zones	Ethiopia	Somali Region	**6 cases, Most recent on 19th Sept**	**5**		Y	Y	Y	Y	Y
		Somalia	Accessible South Central	Last case with onset on 14th Aug	**6**	Y	Y	Y	Y	Y	Y
		Kenya	North eastern Kenya	Last case with onset on 14th July	**6**	Y	Y	Y	Y	Y	Y
Zone 3	At risk areas	Kenya	Other high risk areas of Kenya (Turkana, Nairobi, high risk areas of Rift valley and Coast province)	No transmission	**5**	Y	Y		Y	Y	Y
		Somalia	Somaliland; Puntland	No transmission	**4**	Y	Y	Y		Y	
		Ethiopia	Other high risk areas of Ethiopia (Gambella, Benshangul, Afar and some zones in Amhara, Tigray, Oromia and SNNPR)	No transmission	**5**		Y	Y	Y	Y	Y
Zone 4	Other areas to protect	Kenya	Rest of the areas	No transmission	**3**	Y	Y				Y
		Ethiopia	Other areas	No transmission	**2**		Y				Y
		Yemen	High risk areas	No transmission	**2**				Y		Y
			Rest of the areas	No transmission	**2**				Y		Y
		South Sudan	Whole country	No transmission	**4**	Y	Y		Y		Y
		Djibouti	Whole country	No transmission	**1**	Y					
		Eritrea	Whole country	No transmission	**4**	Y	Y			Y	Y
		Uganda	High risk areas	No transmission	**3**		Y	Y	Y		
			Rest of the areas	No transmission	**3**		Y	Y	Y		
		Sudan	High risk area	No transmission	**4**	Y	Y		Y		Y
			Rest of the country	No transmission	**3**	Y			Y		Y

The challenges described above will be dealt with as follows:

Inaccessibility: Innovative and adaptive strategies will be used in order to maximize opportunities for immunization of children in non SIA areas of south central Somalia. Priority will be given to:

- Regular mapping and analysis to fully understand the security and inaccessible environment
- Collaboration with NGOs, UN Agencies (UNHCR, IOM, FAO, WFP) and use of community volunteers and linkages with livestock vaccination activities.
- Creating community demand and using any existing fixed posts and outreach activities to vaccinate all visiting children <10 years and provision of other antigens.

- Pre-positioning of vaccines and adequate logistics arrangements in strategic areas for vaccinations when opportunities or areas open up
- Implementation of Short Interval Additional Doses (SIADs) of vaccination where required as well as implementing shorter duration, low profile campaigns whenever an opening occurs in the non SIA areas
- Measures to prevent poliovirus spread from inaccessible areas through Intensification of campaign and ensuring quality in all surrounding accessible areas and the vaccination of travellers moving in and out of the infected areas.

Population movement: Specific strategies will be put in place to maximize vaccination opportunities bearing in mind population travel trends in the HoA. These activities will apply to all objectives.

- Vaccination posts will remain and be expanded at identified crossing points between countries and along routes of movements
- Special plans to reach and immunize specific nomadic, displaced and mobile populations with vaccination posts at congregation points such as water sources and permanent vaccination posts in refugee camps, mosques, markets, ports and terminals.
- Micro plans will be regularly updated to capture changes in population
- Cross border coordination meetings are planned at all critical borders to ensure joint planning, synchronized activities, cross notification and information exchange

Sub-optimal population immunity:

Countries will continue to implement Supplementary Immunization Activities through 2014 using strategies and innovations to reach children in high risk areas/ populations. A flexible approach informed by epidemiologic developments will still be adopted in relation to target age group, type of vaccine and interval between rounds.

Efforts to improve the quality of SIAs and ensure the highest coverage will continue including

- Capacity building at all levels for quality microplanning, training and supervision;
- Review and revision of microplans using standard updated tools with data driven communication component;
- Strengthening of cold chain, vaccine management and logistics; and
- Expanding intra-campaign monitoring and post-campaign evaluation by independent monitors.

Sub-national surveillance gaps

The objective of AFP surveillance for outbreak response in the HoA is to ensure sensitivity and timeliness to rapidly detect and investigate all AFP cases and collect stool specimens within 14 days of onset of paralysis which will be tested in a WHO network laboratory to confirm the AFP cause. The main activities include:

- Strengthening active surveillance and AFP case search in facilities in high risk areas and during SIAs
- Re-orientation of district surveillance focal persons
- Community sensitization for AFP surveillance

- Regular analysis and identification of sub-national gaps and taking corrective action
- Reverse cold chain monitoring
- Environmental surveillance when appropriate

Communication challenges

The overarching regional goal of the communication strategy is *to* ***create an enabling communication environment and positive public perception for the repeated polio vaccination campaigns across the Horn of Africa in response to the outbreak through****:*

- Engaging media and the public to create awareness, amplify risk perception of polio and build public momentum and supportive attitude towards vaccination and repeated campaigns
- Mobilizing communities through relevant socio-cultural channels to support local ownership and generate wide community support and vaccine acceptance
- Sensitizing the decision makers and influencers to treat polio outbreak response as priority
- Involving public and private sectors of the society to support polio campaigns
- Joint work will continue with integration of nutrition, water, sanitation and hygiene messages into polio outbreak response awareness communication messages

Development and implementation of comprehensive communication plans that accommodate flexibility in operational response will be ensured in all countries. The plans employ advocacy, mass media/promotion, social mobilization/community engagement, behaviour change/participatory communication and capacity building strategies.

d) Coordination of outbreak response

Regional coordination activities that started with phase 1 of the outbreak response are continuing through Phase 2.

Regional partnerships

The GPEI has been built upon strong partnerships. The GPEI spearheading partners (WHO, United Nations Children's Fund, the US Centers for Disease Control and Prevention, and Rotary International) continue to coordinate the response at the global, regional and country levels. They support country governments, typically through existing ministry of health (MoH) partnerships with UN country programmes.

HoA infected and at-risk countries are covered under the jurisdiction of two WHO regional offices (Africa and the Eastern Mediterranean regions) and two UNICEF regional offices (Eastern and Southern Africa and Middle East and North Africa). With the support of GPEI partners, these offices are supporting national MoH in outbreak investigation, in planning and supporting appropriate response, advocacy and resource mobilization, and alerting countries to the potential spread in addition to regularly sharing information and coordinating between countries. UNICEF is ensuring the timely availability of the appropriate vaccine in sufficient quantity for the response to the polio outbreak. The U.S. Centers for

Disease Control and Prevention (CDC) is providing surge support to UNICEF and WHO through various modalities including the Stop Transmission of Polio (STOP) programme.

At the national level, MoH immunization programme staff are working closely with communicable disease surveillance staff who carry out AFP/polio surveillance. The role of numerous other partners, such as governmental or nongovernmental organizations (NGOs), varies by country, and most support the activities at the local level.

Regional advocacy

In addition to advocacy efforts with national political leaders, polio eradication partners are engaged in high-level political advocacy with regional bodies such as the East, Central and Southern Africa Health Community (ECSA-HC), a regional body collaborating at the MoH and policy level. At their annual meeting in September 2013, the team reached out to technical specialists, health professionals and academia about the ongoing HoA polio outbreak and highlighted specific actions for ECSA to strengthen collaboration and coordination between the ministries of their member states in response to the outbreak. As a result of this outreach, ECSA-HC has adopted a resolution emphasizing critical actions that need to be taken by the member states and presented it to the ministers of health at their ministerial meeting. A regional donor meeting held in September 2013 with participants from various donor and technical agencies served as a very good opportunity for advocacy for the outbreak response. In November 2013, polio was included on the agenda of a ministerial roundtable meeting for African ministers of health, hosted in Ethiopia during the 5th AFENET Scientific Conference, highlighting the risk of importation and the need to strengthen cross-border surveillance and outbreak response.

Regional cross-border coordination

Cross-border coordination activities include regular interaction and sharing of information, joint SIA planning and case investigation, the sharing of best practices at common borders and the synchronization of activities. Seven cross-border meetings between districts of infected or at-risk countries have been conducted since 1 July 2013 and 3 more planned before the end of 2013. These meetings focus on the coordination of vaccination planning and AFP surveillance in cross-border areas. Key activities are joint microplanning, mapping the border-crossing points of nomads and pastoralists, and exchanging information on surveillance.

Recent meetings of the northern districts of Uganda and Kenya with the bordering districts of South Sudan included technical representatives from the offices of the Ugandan and Kenyan Food and Agriculture Organization (FAO) and representatives of the divisions of veterinary services to reflect the predominant livestock and nomadic lifestyle shared by the tri-country climate and economy. In meetings of Uganda and Kenya's southern districts, an officer from Kenya's Department of Immigration Services used border maps and immigration data to help participants understand and prioritize coverage of crossing points for passenger bus, commercial and trade routes.

Regional communication strategies

All infected countries have developed and are implementing Communication for Development outbreak response plans focusing on maintaining high levels of awareness about polio disease, the amplified risk

perception of the virus, confidence in the polio vaccine, and the generation of positive attitudes and support for polio vaccination. To improve the use of empirical evidence for communication planning in the region, WHO and UNICEF held a joint workshop in August 2013 on evidence-based communication and social data for polio campaign planning that drew national Expanded Programme on Immunization (EPI) managers and UNICEF and WHO specialists from Ethiopia, Kenya, Somalia, South Sudan, Uganda and Yemen. As a result of regional capacity-building, social data are being collected and used for campaign planning.

The HoA features prominent radio platforms that are very popular among the Somali population residing in the outbreak area (Central South Zone of Somalia, Somali region of Ethiopia and North-Eastern Province of Kenya). To leverage this opportunity in the region, platforms such as the BBC Somali service and the Voice of America Somali service are coming on board through BBC Media Action and the Broadcasting Board of Governors, respectively, the development agencies associated with these two stations. Polio issues will be integrated into ongoing Somali programmes in the HoA.

Convergence of polio eradication and Water, Sanitation and Hygiene programmes is essential. In Somalia where the polio outbreak has hit worst, integration resulted in sanitary risk assessments to assess boreholes, shallow wells and communal latrines in 10 districts of Mogadishu. Other interventions include monitoring outbreak hotspots, promoting hygiene and scaling up Community Led Total Sanitation (CLTS) for all projects, aimed at controlling open defecation and improving hygiene practices. There has been integration of polio messages and polio outreach workers have been used to promote CLTS and reinforce messages around the risks of open defecation.

UNICEF continues to coordinate and leverage the best communication practices to reach the population in the outbreak areas across countries. Given high mobility and sharing of similar ethnographic, cultural and socio-demographic characteristics, some communication products are easily adaptable across the three outbreak zones (Central South Zone of Somalia, Somali region of Ethiopia and North-Eastern Province of Kenya).

e) Outbreak response personnel surge needs

During the outbreak, surge staff are essential to provide technical support and implement the planned immunization, surveillance and communication activities throughout the outbreak period. Most of the staff were deployed during Phase 1 of the response and will be needed until the end of Phase 2. While in the first six months, HoA surge requirements of necessity included the recruitment of international and longer-term national staff, the cost and requirements of these positions for 2014 will be transferred to the 2014 GPEI Financial Resource Requirements Technical Assistance line rather than to the HoA surge for 2014 requirements (included as part of the One page Financial Resource Requirements for the 3 outbreaks countries in annex 2).

Table 3: Outbreak response surge positions in the Horn of Africa

Implementing partner	Items	Number/ quantity	Unit Description	May - Oct 2013	Nov 13 - Apr 14
	HR surge - Somalia				
WHO	International consultants in each zone	4	persons	Deployed	Planned
UNICEF	M&E specialist	1	person		Planned
WHO	Security officer	1	person	Under recruitment	
WHO	Operations officer	1	person	Deployed	Planned
UNICEF	Logistics specialist	2	persons	Deployed	Deployed
WHO	Communications Officer	1	person	Already in place	
UNICEF	C4D officer (4 International, 1 National)	5	persons	3/5 Deployed	Planned, 1 under recruitment
UNICEF	C4D officer (MoH)	3	persons	1/3 Deployed	2 under recruitment
WHO	Focal point in government	4	person	3/4 Deployed	Planned
WHO	SIAs coordinators in each zone	4	persons	3/4 Deployed	Planned
WHO	Admin/fin and Ops/log in each zone	8	persons	7/8 Deployed	Planned
WHO	Mogadishu driver	1	person	Deployed	
WHO	Local security assistants in SCZ	4	persons	Deployed	
WHO	Data assistant in 4 zones	4	persons	Deployed	Planned
UNICEF	Polio Coordinator (each zone and Nairobi, plus SSA)	5	persons	Deployed	Deployed
UNICEF	Programme Assistant in Nairobi	1	persons	Deployed	Deployed
UNICEF	Vaccine/Supply/Logistics staff (one in each zone)	4	persons		Planned for 2014
UNICEF	Partnership Coordinator (SCZ)	1	person		Planned for 2014
UNICEF	Polio Team Lead (Nairobi)	1	person		Under recruitment
	HR surge - Kenya				
WHO	International team leader	1	person	Deployed	
WHO	International consultants for technical support	4	persons	Deployed	Planned
WHO	Data manager	1	person	Deployed	
UNICEF	M&E consultant for social mobilization	1	person		Planned
WHO	Logistician	1	person	Deployed	Planned
UNICEF	Reviewer of cold chain and activities	1	person		Planned
UNICEF	Coordinator for EPI outbreak and RI activities	2	persons		Planned
WHO	Communications Officer	1	person	Under recruitment	Planned
UNICEF	ACSM consultant to develop nomadic strategy	1	person		Planned
UNICEF	ACSM consultant to support planning	1	person		Planned
UNICEF	ACSM consultant for training and capacity building	1	person		Planned
UNICEF	ACSM consultant to support schools strategy	1	person		Planned
WHO	Lab support	1	person	Deployed	Planned
WHO	Regional surveillance coordinators RSCs	3	persons	Under recruitment	
WHO	Drivers for RSCs	3	persons	Under recruitment	
	HR surge - Ethiopia				
WHO	Outbreak response coordination	1	person	Deployed	Planned
WHO	Technical field coordination	1	person	Deployed	Planned
WHO	SIA coordinator	1	person	Deployed	Planned
WHO	Operations officer	1	person	Deployed	Planned
UNICEF	Social mobilization officer (district)	2	persons		Planned
WHO	M&E consultant for independent monitoring	1	person	Deployed	
WHO	Logistics officer (vaccine management)	1	person	Deployed	Planned
UNICEF	Technical officer	4	persons		Planned
WHO	National SIA officer	1	person	Deployed	Planned
WHO	Local surveillance officers	8	persons	6/8 Deployed	Planned
WHO	Drivers	8	persons	Deployed	Planned
WHO	SIA facilitators	37	persons	22/37 Deployed	
WHO	District surveillance focal persons + transport	85	persons	Under recruitment	Planned
WHO	Data manager for Somali region	1	person	Under recruitment	Planned
WHO	Operations assistant for Jijiga hub	1	person	Deployed	Planned
WHO	Admin assistant for Jijiga hub	1	person	Deployed	Planned

**** Funding for surge positions contained in the HOA budget surge lines***

D. Maintaining polio-free status in the HoA

The implementation of the planned outbreak response activities **will** succeed in interrupting virus transmission in the HoA. It is absolutely crucial that HoA countries sustain high population immunity levels to **maintain** this polio-free status once this is regained. It is quite clear that these countries will continue to face the threat of importation of WPV from remaining polio sanctuaries. Hence, updating and implementing polio importation preparedness and response plans is a must. The main pillars of preparedness hinge on boosting population immunity through routine immunization and preventive SIAs, and ensuring sensitive surveillance for early detection of WPV with a timely/adequate response to any outbreak. The implementation of preparedness activities as directed by the Regional Certification Commissions for Poliomyelitis Eradication has been hampered in the past by the lack of financial resources and complacency.

Focus needs to be directed to strengthening immunization systems and improving routine coverage rates, especially in the worst performing districts. Increasing immunization coverage will have several direct benefits for polio eradication efforts, including minimizing the risk, rate and extent of polio outbreaks. In addition, high immunization coverage is the best strategy for reducing the risk of cVDPV emergence.

Immunization programmes in the HoA countries face challenges in a number of specific areas where building on the lessons learnt and experience gained in eradicating polio could be of great benefit. These areas include: (a) programme management and accountability; (b) human resource capacity and supervision; (c) programme monitoring; (d) vaccine-preventable disease surveillance and data use; (e) vaccine management, supply and cold chain; (f) communications, health education and social mobilization; and (g) political support, funding and advocacy. In addition, the GPEI has acquired extensive experience in accessing the most difficult-to-reach children in these countries. The polio programme has developed the knowledge, capacities and systems to overcome the logistic, geographic, social, political, cultural, ethnic, gender, financial and other barriers to working with the most marginalized, deprived and often security-compromised children and communities. Key elements of the GPEI that allowed it to reach chronically missed children include the programme's detailed microplanning and mapping, the tracking of mobile and migrant groups and social mobilization programmes.

If countries in the HoA are to **remain** polio free, governments and technical and developmental partners need to join efforts and take concerted action to improve immunization systems and make sure preparedness plans are implemented.

Preventive campaigns will also be required to maintain high population immunity. SIAs have been planned in all countries for 2014. SIA plan for year 2014 is as below in Table 4.

Table 4. SIA plan for 2014 by country indicating % of <5 population covered

Country	Outbreak Response Phase II-2014				Rest of 2014							
	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Djibouti	0	0	0	0	0	0	0	100	100	0	0	0
South Sudan	0	100	0	100	0	0	0	0	100	100	0	0
Sudan	0	100	0	100	0	0	0	0	38	38	0	0
Yemen	0	100	0	100	0	0	0	100	0	0	0	0
Eritrea	0	0	100	100	0	0	0	0	0	0	0	0
Uganda	100	100	0	0	0	0	0	38	38	0	0	0
Ethiopia	38	38	38	100	15	0	0	0	0	100	0	0
Kenya	25	38	38	100	38	0	0	0	38	0	0	0
Somalia	100	66 (10	100	66	100	66	0	0	100	0	C	0

	Activities planned in response to outbreak
	Planned activities

E. Resource requirements for the outbreak in the HoA

As of 12 November 2013, the gap in 2013 outbreak funding is US$11 million, against the total outbreak funding requirement of US$69 million. Figure 5 provides a summary of the 2013 donor funding against incremental outbreak activities while Figure 6 provides a summary of 2013 Donor Funding against total activities in HoA.

Figure 5: 2013 outbreak response budget and funding

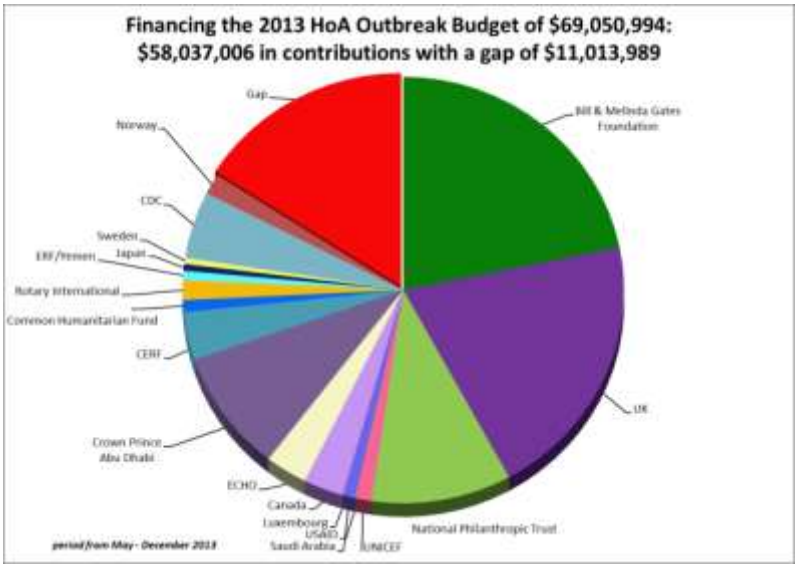
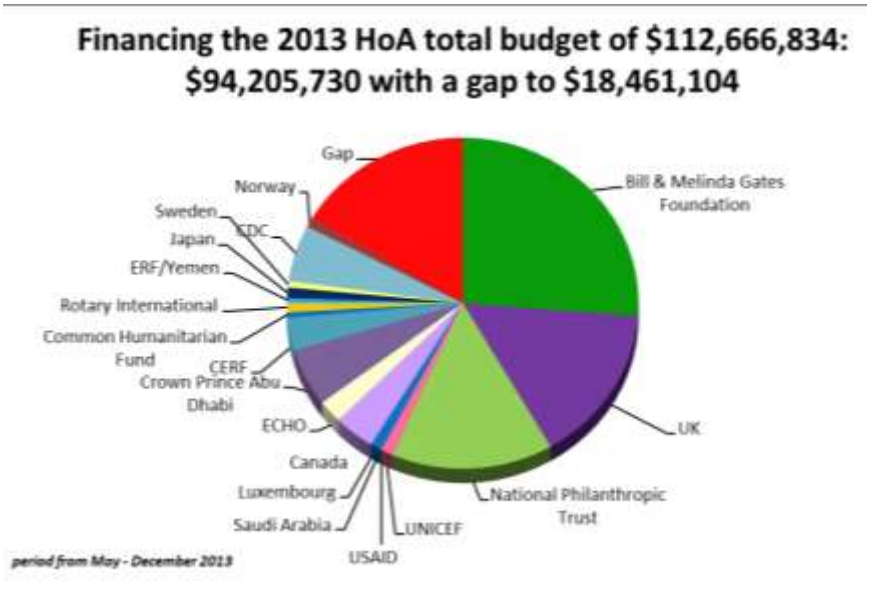


Figure 6: 2013 Donor Funding against total activities in HoA



These resources, channelled through WHO and UNICEF, are additional to the substantial but difficult to cost contributions made by the countries. Governments contribute to the implementation of the outbreak response in different ways including:

- Management and coordination: Governments lead the response activities and coordinate partners input. They host meetings, trainings and consultations and communicate with different partners through their own resources
- Logistic support: Most of the logistics needed for the distribution of vaccines and related supplies are provided by governments (estimated at ~ 7% of vaccine cost in some countries).
- Personnel: health staff are involved in planning, coordination, implementation, supervision and evaluation of campaigns, though some of them receive allowances for the days of the campaign, their input extends for about a month around the actual campaign days. In addition, top managers spend a significant amount of their time on high level advocacy.
- Transport: Vehicles, fuel and drivers are always provided by different governmental sectors.
- Media engagement: Government officials play a major role in media advocacy and mobilizing media resources in support of the activities. Getting free media time, talk shows and articles is a significant contribution.

Tables 5 provides details on the total resource requirements for the HoA in 2013. Table 6 which is a subset of Table 5 provides requirements for the incremental activities of the outbreak response in 2013.

Table 5: Total resource requirement for the Horn of Africa in 2013

Outbreak Countries (in US dollars)	Target population	OPV	Ops Cost/ Soc Mob	Ops Costs	Surge Technical Assistance		Surveillance	Total Costs	Total Costs (PSC 7%)	Gap	
		UNICEF	*UNICEF*	*WHO*	*WHO*	*UNICEF*	*WHO*			*WHO*	*UNICEF*
Ethiopia (total)	**34,686,355**	**5,410,416**	**2,368,767**	**12,262,520**	**2,067,000**	**-**	**-**	**22,108,703**	**23,656,313**	**(1,244,132)**	**(489,424)**
Immunization Activities											
May	184,611	-	-	60,326				60,326	64,549	-	-
June	2,664,894	440,508	319,377	1,087,379				1,847,264	1,976,572	-	-
July	2,664,894	440,508	186,135	1,039,965				1,666,608	1,783,271	-	-
August	947,480	130,500	114,845	431,680				677,025	724,417	-	-
September	12,881,754	1,708,900	650,000	4,605,086				6,963,986	7,451,465	-	-
November	14,246,364	2,490,000	341,004	4,492,344				7,323,348	7,835,982	-	-
December	1,096,358	200,000	257,406	545,740				1,003,146	1,073,366	(583,942)	(489,424)
SocMob network			500,000					500,000	535,000		-
Surge requirements					2,067,000	TBD		2,067,000	2,211,690	(660,190)	-
Kenya (total)	**32,566,706**	**5,013,300**	**3,032,552**	**19,361,243**	**1,059,676**	**-**	**-**	**28,466,771**	**30,459,444**	**(0)**	**(1,833,195)**
Immunization Activities											
May	512,610	113,640	15,239	322,035				450,914	482,478	-	-
June	1,222,538	211,000	70,142	784,057				1,065,199	1,139,763	-	-
July	4,373,238	595,000	315,371	2,762,846				3,673,217	3,930,342	-	-
August	4,906,905	568,700	318,859	2,991,198				3,878,757	4,150,270	(0)	-
September	4,906,908	651,000	454,767	2,967,550				4,073,317	4,358,449	-	0
November	8,400,000	1,373,960	969,200	5,078,507				7,421,667	7,941,183	-	-
December	8,244,507	1,500,000	888,974	4,455,050				6,844,024	7,323,106	-	(1,833,196)
Surge requirements					1,059,676	TBD		1,059,676	1,133,853	-	-
Somalia (total)	**37,236,235**	**4,841,973**	**7,900,993**	**10,790,203**	**447,547**	**995,021**	**731,970**	**25,707,707**	**27,507,246**	**(434,509)**	**0**
Immunization Activities											
May	2,109,592	186,411	497,238	799,304				1,482,953	1,586,760	0	(0)
June	3,863,736	694,440	445,603	1,918,347				3,058,390	3,272,477	-	-
July	10,413,252	1,019,200	445,603	2,136,876				3,601,679	3,853,797	-	-
August	3,568,904	426,500	445,603	1,431,381				2,303,484	2,464,728	-	-
September	3,577,266	504,500	824,787	1,455,933		-		2,785,220	2,980,185	-	-
October	10,100,746	1,317,400	218,594	1,702,110		-		3,238,104	3,464,771	-	-
November	1,766,240	439,978	440,835	940,169		-		1,820,982	1,948,451	-	-
December	1,836,499	253,544	350,078	406,083		-		1,009,705	1,080,384	(434,509)	-
Outbreak Surveillance							731,970	731,970	783,207	(0)	
Surge requirements			-		447,547	995,021		1,442,568	1,543,548	-	0
Ongoing C4D Activities			3,105,119			-		3,105,119	3,322,477	-	-
Surge Infrastructure (Cold Chain)			1,127,533			-		1,127,533	1,206,460	-	-
Sub-total activities for Outbreak Countries through December 2013		**15,265,689**	**13,302,312**	**42,413,966**	**3,574,223**	**995,021**	**731,970**	**76,283,181**	**81,623,003**	**(1,678,641)**	**(2,322,620)**
High Risk Countries (in US dollars)	**Target population**	**OPV**	**Ops Cost/ Soc Mob**	**Ops Costs**	**Surge Technical Assistance**		**Surveillance**	**Total Costs**	**Total Costs (PSC 7%)**	**Gap**	
		UNICEF	***UNICEF***	***WHO***	***WHO***	***UNICEF***	***WHO***			***WHO***	***UNICEF***
South Sudan (total)	**11,587,580**	**2,063,047**	**4,244,655**	**3,223,876**	**0**	**-**	**-**	**9,531,578**	**10,198,789**	**-**	**(1,911,958)**
Immunization Activities											
August	1,470,000	260,000	389,000	534,798				1,183,798	1,266,664	-	-
October	3,223,396	695,047	982,919	762,922				2,440,888	2,611,750		
November	3,447,092	554,000	1,425,859	1,010,030	0			2,989,889	3,199,182	-	-
December	3,447,092	554,000	1,446,877	916,126	-			2,917,003	3,121,193	-	(1,911,958)
Uganda (total)	**12,531,661**	**2,220,532**	**359,977**	**4,052,905**	**-**	**-**	**-**	**6,633,414**	**7,097,753**	**(2,616,061)**	**(1,705,234)**
Immunization Activities											
August	2,670,364	424,572	58,575	906,238				1,389,385	1,486,642	-	-
October	2,670,364	467,960	35,725	701,750				1,205,435	1,289,815	-	-
December	7,190,933	1,328,000	265,677	2,444,917				4,038,594	4,321,296	(2,616,061)	(1,705,234)
Yemen (total)	**14,455,658**	**2,019,655**	**626,892**	**2,439,120**	**200,000**	**-**	**-**	**5,285,667**	**5,655,664**	**(1,436,366)**	**(1,255,066)**
Immunization Activities											
June	100,665	20,498	21,914	25,798				68,209	72,984	-	-
July	4,589,286	554,200	132,327	349,916				1,036,443	1,108,994	(0)	-
October	5,029,017	519,650	225,000	721,008				1,465,658	1,568,254	-	-
December	4,736,690	925,307	247,652	1,342,398				2,515,357	2,691,432	(1,436,366)	(1,255,066)
Surge requirements					200,000	TBD		200,000	214,000	-	
Sub-total activities for High Risk Countries through December 2013		**6,303,234**	**5,231,524**	**9,715,902**	**200,000**	**-**	**-**	**21,450,659**	**22,952,206**	**(4,052,428)**	**(4,872,259)**
At Risk Countries (in US dollars)	**Target population**	**OPV**	**Ops Cost/ Soc Mob**	**Ops Costs**	**Surge Technical Assistance**		**Surveillance**	**Total Costs**	**Total Costs (PSC 7%)**	**Gap**	
		UNICEF	***UNICEF***	***WHO***	***WHO***	***UNICEF***	***WHO***			***WHO***	***UNICEF***
Eritrea (total)	**1,144,782**	**142,000**	**203,014**	**871,733**	**-**	**-**	**-**	**1,216,747**	**1,301,919**	**-**	**(217,225)**
Immunization Activities											
November	572,391	82,000	101,507	448,400	-	-	-	631,907	676,140	-	(108,612)
December	572,391	60,000	101,507	423,333	-	-	-	584,840	625,779	-	(108,612)
Djibouti (total)	**244,962**	**40,960**	**67,758**	**162,580**	**-**	**-**	**-**	**271,298**	**290,289**	**(86,980)**	**(116,328)**
Immunization Activities											
October	122,481	20,480	33,879	81,290	-	-	-	135,649	145,144	-	(58,164)
November	122,481	20,480	33,879	81,290	-	-	-	135,649	145,144	(86,980)	(58,164)
Sudan (total)	**10,354,189**	**1,314,200**	**430,000**	**4,330,022**	**-**	**-**	**-**	**6,074,222**	**6,499,417**	**(4,633,123)**	**(481,500)**
Immunization Activities											
November	6,902,793	864,200	215,000	2,886,681	-	-	-	3,965,881	4,243,493	(3,088,749)	-
December	3,451,396	450,000	215,000	1,443,341	-	-	-	2,108,341	2,255,924	(1,544,374)	(481,500)
Sub-total activities for At Risk Countries through December 2013		**1,497,160**	**700,772**	**5,364,335**	**-**	**-**	**-**	**7,562,267**	**8,091,625**	**(4,720,103)**	**(815,053)**
Total 2013 activities for Areas impacted by Outbreak response through December		**23,066,083**	**19,234,608**	**57,494,202**	**3,774,223**	**995,021**	**731,970**	**105,296,107**	**112,666,834**	**(10,451,172)**	**(8,009,932)**
Total 2013 Outbreak Budget excluding FRR scheduled activities		**8,305,164**	**16,001,704**	**34,725,558**	**3,774,223**	**995,021**	**731,970**	**64,533,640**	**69,050,994**	**(5,731,069)**	**(5,282,920)**

Note: plans will continue to be revised in response to changing epidemiology

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Table 6: HoA Phase 2 requirements for outbreak response for November-December 2013

Outbreak Countries (in US dollars)	Target population	OPV	Ops Cost/ Soc Mob	Ops Costs	Total Costs	Total Costs (PSC 7%)	Gap	
		UNICEF	*UNICEF*	*WHO*			*WHO*	*UNICEF*
Ethiopia (total)	**15,342,722**	**2,690,000**	**598,410**	**5,038,084**	**8,326,494**	**8,909,349**	**(583,942)**	**(489,424)**
Immunization Activities								
November 2013 (NID)	14,246,364	2,490,000	341,004	4,492,344	7,323,348	7,835,982	-	-
December 2013 (SNID)	1,096,358	200,000	257,406	545,740	1,003,146	1,073,366	(583,942)	(489,424)
Kenya (total)	**16,644,507**	**2,873,960**	**1,858,174**	**9,533,557**	**14,265,691**	**15,264,289**	**-**	**(1,833,196)**
Immunization Activities								
November 2013 (NID)	8,400,000	1,373,960	969,200	5,078,507	7,421,667	7,941,183	-	-
December 2013 (NID)	8,244,507	1,500,000	888,974	4,455,050	6,844,024	7,323,106	-	(1,833,196)
Somalia (total)	**3,602,739**	**693,522**	**790,913**	**1,346,252**	**2,830,687**	**3,028,835**	**(434,509)**	**-**
Immunization Activities								
November 2013 (NID)	1,766,240	439,978	440,835	940,169	1,820,982	1,948,451	-	-
December 2013 (NID)	1,836,499	253,544	350,078	406,083	1,009,705	1,080,384	(434,509)	-
Sub-total incremental activities for Outbreak Countries Phase 2 2013		**6,257,482**	**3,247,497**	**15,917,893**	**25,422,872**	**27,202,473**	**(1,018,451)**	**(2,322,620)**
High Risk Countries (in US dollars)	**Target population**	**OPV**	**Ops Cost/ Soc Mob**	**Ops Costs**	**Total Costs**	**Total Costs (PSC 7%)**	**Gap**	
		UNICEF	*UNICEF*	*WHO*			*WHO*	*UNICEF*
South Sudan (total)	**6,894,184**	**1,108,000**	**2,872,736**	**1,926,156**	**5,906,892**	**6,320,374**	**-**	**(1,911,958)**
Immunization Activities								
November 2013 (NID)	3,447,092	554,000	1,425,859	1,010,030	2,989,889	3,199,181	-	-
December 2013 (NID)	3,447,092	554,000	1,446,877	916,126	2,917,003	3,121,193	-	(1,911,958)
Uganda (total)	**7,190,933**	**1,328,000**	**265,677**	**2,444,917**	**4,038,594**	**4,321,296**	**(2,616,061)**	**(1,705,234)**
Immunization Activities								
December 2013 (NID)	7,190,933	1,328,000	265,677	2,444,917	4,038,594	4,321,296	(2,616,061)	(1,705,234)
Yemen (total)	**4,736,690**	**925,307**	**247,652**	**1,342,398**	**2,515,357**	**2,691,433**	**(1,436,366)**	**(1,255,066)**
Immunization Activities								
December 2013 (NID)	4,736,690	925,307	247,652	1,342,398	2,515,357	2,691,432	(1,436,366)	(1,255,066)
Sub-total incremental activities for High Risk Countries Phase 2 2013		**3,361,307**	**3,386,065**	**5,713,471**	**12,460,843**	**13,333,103**	**(4,052,427)**	**(4,872,259)**
At Risk Countries (in US dollars)	**Target population**	**OPV**	**Ops Cost/ Soc Mob**	**Ops Costs**	**Total Costs**	**Total Costs (PSC 7%)**	**Gap**	
		UNICEF	*UNICEF*	*WHO*			*WHO*	*UNICEF*
Eritrea (total)	**1,144,782**	**142,000**	**203,014**	**871,733**	**1,216,747**	**1,301,919**	**-**	**(217,225)**
Immunization Activities								
November 2013 (NID)	572,391	82,000	101,507	448,400	631,907	676,140	-	(108,612)
December 2013 (NID)	572,391	60,000	101,507	423,333	584,840	625,779	-	(108,612)
Djibouti (total)	**122,481**	**20,480**	**33,879**	**81,290**	**135,649**	**145,144**	**(86,980)**	**(58,164)**
Immunization Activities								
November 2013 (NID)	122,481	20,480	33,879	81,290	135,649	145,144	(86,980)	(58,164)
Sudan (total)	**10,354,189**	**1,314,200**	**430,000**	**4,330,022**	**6,074,222**	**6,499,417**	**(4,633,123)**	**(481,500)**
Immunization Activities								
November 2013 (NID)	6,902,793	864,200	215,000	2,886,681	3,965,881	4,243,493	(3,088,749)	-
December 2013 (NID)	3,451,396	450,000	215,000	1,443,341	2,108,341	2,255,924	(1,544,374)	(481,500)
Sub-total incremental activities for At Risk Countries through Phase 2		**1,476,680**	**666,893**	**5,283,045**	**7,426,618**	**7,946,481**	**(4,720,103)**	**(756,889)**
Total incremental activities for Areas impacted by Outbreak response Phase 2 2013		**11,095,469**	**7,300,455**	**26,914,408**	**45,310,333**	**48,482,055**	**(9,790,981)**	**(7,951,768)**

Table 7 includes the resource requirements for Phase 2 of the outbreak response in 2014, while Table 8 reflects the total planned resource requirement for the HoA countries in 2014.

Table 7: Outbreak response resource requirement for the HoA in 2014

Outbreak Countries (in US dollars)	Target population	OPV	Ops Costs		Social Mobilization	Total Ops Costs	Surge Technical Assistance	UNICEF Total Costs	UNICEF Total Costs (PSC 8%***)	WHO Total Costs	WHO Total Costs (PSC 7%***)	TOTAL COSTS WITH PSC (BOTH AGENCIES)	WHO Gap	UNICEF Gap
		UNICEF	*WHO*	*UNICEF*	*UNICEF*									
Ethiopia	**17,383,519**	**2,965,000**	**7,702,875**	-	**2,476,000**	**10,178,875**	**896,424**	**5,615,240**	**6,064,459**	**8,425,059**	**9,014,813**	**15,079,272**	**(9,014,813)**	**(6,064,459)**
Surge Requirements (UNICEF)							174,240	174,240	188,179		-	188,179		(188,179)
Surge requirements (WHO)							722,184	-	-	722,184	772,737	772,737	(772,737)	-
Jan 2014 (SNID)	5,120,726	825,000	2,269,064		704,000	2,973,064		1,529,000	1,651,320	2,269,064	2,427,898	4,079,218	(2,427,898)	(1,651,320)
Feb 2014 (SNID)	5,120,726	825,000	2,269,064		704,000	2,973,064		1,529,000	1,651,320	2,269,064	2,427,898	4,079,218	(2,427,898)	(1,651,320)
Mar 2014 (SNID)	5,120,726	825,000	2,269,064		704,000	2,973,064		1,529,000	1,651,320	2,269,064	2,427,898	4,079,218	(2,427,898)	(1,651,320)
May 2014 (SNID)	2,021,339	490,000	895,683	-	364,000	1,259,683		854,000	922,320	895,683	958,381	1,880,701	(958,381)	(922,320)
Kenya	**16,571,459**	**3,600,000**	**9,883,266**	-	**1,800,000**	**11,683,266**	**348,354**	**5,670,000**	**6,123,600**	**9,961,620**	**10,658,933**	**16,782,533**	**(10,658,933)**	**(6,123,600)**
Surge Requirements (UNICEF)							270,000	270,000	291,600		-	291,600		(291,600)
Surge requirements (WHO)							78,354	-	-	78,354	83,839	83,839	(83,839)	
Jan 2014 (SNID)	2,061,127	600,000	1,229,262	-	300,000	1,529,262		900,000	972,000	1,229,262	1,315,310	2,287,310	(1,315,310)	(972,000)
Feb 2014 (SNID)	3,132,913	800,000	1,868,478	-	400,000	2,268,478		1,200,000	1,296,000	1,868,478	1,999,272	3,295,272	(1,999,272)	(1,296,000)
Mar 2014 (SNID)	3,132,913	800,000	1,868,478	-	400,000	2,268,478		1,200,000	1,296,000	1,868,478	1,999,272	3,295,272	(1,999,272)	(1,296,000)
April 2014 (NID)	8,244,507	1,400,000	4,917,048		700,000	5,617,048		2,100,000	2,268,000	4,917,048	5,261,241	7,529,241	(5,261,241)	(2,268,000)
Somalia	**8,291,637**	**4,550,000**	**3,051,671**	**2,900,000**	**4,547,449**	**10,499,120**	**509,958**	**12,405,299**	**13,397,723**	**3,153,779**	**3,374,544**	**16,772,266**	**(3,374,544)**	**(12,500,396)**
Surge Requirements (UNICEF)						-	407,850	407,850	440,478		-	440,478		456,849
Surge requirements (WHO)							102,108			102,108	109,256	109,256	(109,256)	
In country vaccine transportation				1,200,000		1,200,000		1,200,000	1,296,000	-	-	1,296,000	-	(1,296,000)
Surge Infrastructure (Cold Chain)				1,700,000		1,700,000		1,700,000	1,836,000	-	-	1,836,000	-	(1,836,000)
Jan 2014 (NID)	1,788,000	1,100,000	700,518	-	980,607	1,681,125		2,080,607	2,247,056	700,518	749,554	2,996,609	(749,554)	(2,247,056)
*Feb 2014 (SNID) * under 10*	2,355,477	850,000	824,498	-	1,291,833	2,116,331		2,141,833	2,313,180	824,498	882,213	3,195,393	(882,213)	(2,313,180)
Mar 2014 (NID)	1,788,000	1,100,000	700,518	-	980,607	1,681,125		2,080,607	2,247,056	700,518	749,554	2,996,609	(749,554)	(2,247,056)
April 2014 (SNID)	1,180,080	750,000	413,069	-	647,201	1,060,270		1,397,201	1,508,977	413,069	441,984	1,950,961	(441,984)	(1,508,977)
June 2014 (SNID)	1,180,080	750,000	413,069	-	647,201	1,060,270		1,397,201	1,508,977	413,069	441,984	1,950,961	(441,984)	(1,508,977)
Sub-total -- Outbreak Countries		**11,115,000**	**20,637,812**	**2,900,000**	**8,823,449**	**32,361,261**	**1,754,736**	**23,690,539**	**25,585,782**	**21,540,458**	**23,048,290**	**48,634,072**	**(23,048,290)**	**(24,688,455)**
High Risk Countries (in US dollars)	Target population	OPV	Ops Costs		Social Mobilization	Total Ops Costs	Surge Technical Assistance	UNICEF Total Costs	UNICEF Total Costs (PSC 8%***)	WHO Total Costs	WHO Total Costs (PSC 7%***)	TOTAL COSTS WITH PSC (BOTH AGENCIES)	WHO Gap	UNICEF Gap
		UNICEF	*WHO*	*UNICEF*	*UNICEF*		*WHO*							
Uganda	**14,427,798**	**3,000,000**	**4,343,925**	-	**500,000**	**4,843,925**	-	**3,500,000**	**3,780,000**	**4,343,925**	**4,647,999**	**8,427,999**	**(4,647,999)**	**(35,000)**
Jan 2014 (NID)	7,213,899	1,500,000	2,171,962		250,000	2,421,962		1,750,000	1,890,000	2,171,962	2,324,000	4,214,000	(2,324,000)	(17,500)
Feb 2014 (NID)	7,213,899	1,500,000	2,171,962		250,000	2,421,962		1,750,000	1,890,000	2,171,962	2,324,000	4,214,000	(2,324,000)	(17,500)
Sub-total -- High Risk Countries		**3,000,000**	**4,343,925**	-	**500,000**	**4,843,925**	-	**3,500,000**	**3,780,000**	**4,343,925**	**4,647,999**	**8,427,999**	**(4,647,999)**	**(35,000)**
Total outbreak costs		**14,115,000**	**24,981,736**	**2,900,000**	**9,323,449**	**37,205,185**	**1,754,736**	**27,190,539**	**29,365,782**	**25,884,382**	**27,696,289**	**57,062,071**	**(27,696,289)**	**(24,723,455)**

Table 8: Total planned resource requirement for the HoA in 2014

Outbreak Countries (in US dollars)	Target population	OPV	Ops Costs		Social Mobilization	Total Ops Costs	UNICEF Total Costs	UNICEF Total Costs (PSC 8%***)	WHO Total Costs	WHO Total Costs (PSC 7%***)	TOTAL COSTS WITH PSC (BOTH AGENCIES)	WHO Gap	UNICEF Gap
		UNICEF	*WHO*	*UNICEF*	*UNICEF*								
Ethiopia	**26,951,192**	**5,000,000**	**9,066,077**	-	**1,788,000**	**10,854,077**	**6,788,000**	**7,331,040**	**9,066,077**	**9,700,702**	**17,031,742**	**(9,700,702)**	**(7,331,040)**
April 2014 (NID)	13,475,596	2,500,000	4,533,038		894,000	5,427,038	3,394,000	3,665,520	4,533,038	4,850,351	8,515,871	(4,850,351)	(3,665,520)
Oct 2014 (NID)	13,475,596	2,500,000	4,533,038		894,000	5,427,038	3,394,000	3,665,520	4,533,038	4,850,351	8,515,871	(4,850,351)	(3,665,520)
Kenya	**6,265,825**	**1,600,000**	**3,736,956**	-	**800,000**	**4,536,956**	**2,400,000**	**2,592,000**	**3,736,956**	**3,998,543**	**6,590,543**	**(3,998,543)**	**(2,592,000)**
May 2014 (SNID)	3,132,913	800,000	1,868,478		400,000	2,268,478	1,200,000	1,296,000	1,868,478	1,999,272	3,295,272	(1,999,272)	(1,296,000)
Sept 2014 (SNID)	3,132,913	800,000	1,868,478		400,000	2,268,478	1,200,000	1,296,000	1,868,478	1,999,272	3,295,272	(1,999,272)	(1,296,000)
Somalia	**3,576,000**	**2,200,000**	**1,401,035**	-	**1,961,214**	**3,362,249**	**4,161,214**	**4,494,111**	**1,401,035**	**1,499,108**	**5,993,219**	**(1,499,108)**	**(4,494,111)**
May 2014 (NID)	1,788,000	1,100,000	700,518	-	980,607	1,681,125	2,080,607	2,247,056	700,518	749,554	2,996,609	(749,554)	(2,247,056)
Sept 2014 (NID)	1,788,000	1,100,000	700,518	-	980,607	1,681,125	2,080,607	2,247,056	700,518	749,554	2,996,609	(749,554)	(2,247,056)
Sub-total -- Outbreak Countries		**8,800,000**	**14,204,068**	-	**4,549,214**	**18,753,282**	**13,349,214**	**14,417,151**	**14,204,068**	**15,198,353**	**29,615,504**	**(15,198,353)**	**(14,417,151)**
High Risk Countries (in US dollars)	Target population	OPV	Ops Costs		Social Mobilization	Total Ops Costs	UNICEF Total Costs	UNICEF Total Costs (PSC 8%***)	WHO Total Costs	WHO Total Costs (PSC 7%***)	TOTAL COSTS WITH PSC (BOTH AGENCIES)	WHO Gap	UNICEF Gap
		UNICEF	*WHO*	*UNICEF*	*UNICEF*								
South Sudan	**13,286,952**	**2,400,000**	**3,645,350**	-	**3,400,000**	**7,045,350**	**5,800,000**	**6,264,000**	**3,645,350**	**3,900,525**	**10,164,525**	**(3,900,525)**	**(6,264,000)**
Feb 2014 (NID)	3,321,738	600,000	911,338		850,000	1,761,338	1,450,000	1,566,000	911,338	975,131	2,541,131	(975,131)	(1,566,000)
April 2014 (NID)	3,321,738	600,000	911,338		850,000	1,761,338	1,450,000	1,566,000	911,338	975,131	2,541,131	(975,131)	(1,566,000)
Sept 2014 (NID)	3,321,738	600,000	911,338		850,000	1,761,338	1,450,000	1,566,000	911,338	975,131	2,541,131	(975,131)	(1,566,000)
Oct 2014 (NID)	3,321,738	600,000	911,338		850,000	1,761,338	1,450,000	1,566,000	911,338	975,131	2,541,131	(975,131)	(1,566,000)
Uganda	**5,482,563**	**1,200,000**	**1,650,691**	-	**300,000**	**1,950,691**	**1,500,000**	**1,620,000**	**1,650,691**	**1,766,240**	**3,386,240**	**(1,766,240)**	**(15,000)**
Aug 2014 (SNID)	2,741,282	600,000	825,346		150,000	975,346	750,000	810,000	825,346	883,120	1,693,120	(883,120)	(7,500)
Sept 2014 (SNID)	2,741,282	600,000	825,346		150,000	975,346	750,000	810,000	825,346	883,120	1,693,120	(883,120)	(7,500)
Yemen	**13,767,858**	**1,500,000**	**1,804,244**	-	**675,000**	**2,479,244**	**2,175,000**	**2,349,000**	**1,804,244**	**1,930,541**	**4,279,541**	**(1,930,541)**	**(21,750)**
Feb 2014 (NID)	4,589,286	500,000	601,415		225,000	826,415	725,000	783,000	601,415	643,514	1,426,514	(643,514)	(7,250)
April 2014 (NID)	4,589,286	500,000	601,415		225,000	826,415	725,000	783,000	601,415	643,514	1,426,514	(643,514)	(7,250)
Aug 2014 (NID)	4,589,286	500,000	601,415		225,000	826,415	725,000	783,000	601,415	643,514	1,426,514	(643,514)	(7,250)
Sub-total -- High Risk Countries		**5,100,000**	**7,100,285**	-	**4,375,000**	**11,475,285**	**9,475,000**	**10,233,000**	**7,100,285**	**7,597,305**	**17,830,305**	**(7,597,305)**	**(6,300,750)**
At Risk Countries (in US dollars)	Target population	OPV	Ops Costs		Social Mobilization	Total Ops Costs	UNICEF Total Costs	UNICEF Total Costs (PSC 8%***)	WHO Total Costs	WHO Total Costs (PSC 7%***)	TOTAL COSTS WITH PSC (BOTH AGENCIES)	WHO Gap	UNICEF Gap
		UNICEF	*WHO*	*UNICEF*	*UNICEF*								
Djibouti	**244,962**	**60,000**	**200,918**	-	**70,000**	**270,918**	**130,000**	**140,400**	**200,918**	**214,982**	**355,382**	**(214,982)**	**(140,400)**
Aug 2014 (NID)	122,481	30,000	100,459		35,000	135,459	65,000	70,200	100,459	107,491	177,691	(107,491)	(70,200)
Sept 2014 (NID)	122,481	30,000	100,459		35,000	135,459	65,000	70,200	100,459	107,491	177,691	(107,491)	(70,200)
Eritrea	**1,144,782**	**200,000**	**689,446**	-	**200,000**	**889,446**	**400,000**	**432,000**	**689,446**	**737,707**	**1,169,707**	**(737,707)**	**(432,000)**
March 2014 (NID)	572,391	100,000	344,723		100,000	444,723	200,000	216,000	344,723	368,853	584,853	(368,853)	(216,000)
April 2014 (NID)	572,391	100,000	344,723		100,000	444,723	200,000	216,000	344,723	368,853	584,853	(368,853)	(216,000)
Sudan	**19,051,709**	**2,595,000**	**7,575,356**	-	**650,000**	**8,225,356**	**3,245,000**	**3,504,600**	**7,575,356**	**8,105,631**	**11,610,231**	**(8,105,631)**	**(3,504,600)**
Feb 2014 (NID)	6,902,793	865,000	2,744,694		216,667	2,961,361	1,081,667	1,168,200	2,744,694	2,936,823	4,105,023	(2,936,823)	(1,168,200)
April 2014 (NID)	6,902,793	865,000	2,744,694		216,667	2,961,361	1,081,667	1,168,200	2,744,694	2,936,823	4,105,023	(2,936,823)	(1,168,200)
Sept 2014 (SNID)	2,623,061	432,500	1,042,984		108,333	1,151,317	540,833	584,100	1,042,984	1,115,993	1,700,092	(1,115,993)	(584,100)
Oct 2014 (SNID)	2,623,061	432,500	1,042,984		108,333	1,151,317	540,833	584,100	1,042,984	1,115,993	1,700,092	(1,115,993)	(584,100)
Sub-total At Risk Countries		**2,855,000**	**8,465,719**	-	**920,000**	**9,385,719**	**3,775,000**	**4,077,000**	**8,465,719**	**9,058,320**	**13,135,320**	**(9,058,320)**	**(4,077,000)**
Total FRR Planned activities		**16,755,000**	**29,770,073**	-	**9,844,214**	**39,614,287**	**26,599,214**	**28,727,151**	**29,770,073**	**31,853,978**	**60,581,129**	**(31,853,978)**	**(24,794,901)**

Annex 1: Country Specific Responses

Somalia

Somalia reported its last indigenous WPV case in 2002. Somalia remained polio free from November 2002 until June 2005. In 2005 WPV1 originating from Nigeria was reintroduced though Yemen. This outbreak lasted until 2007. Somalia also had an outbreak of cVDPV type 2 started in 2008 lasted until January 2013.

AFP Surveillance:

In 2012, the overall non-polio rate for Somalia was 2.8 per 100,000 under 15 years of age. Four zones in South Central which had non-polio AFP rates below 2.0 ***(Lower Juba, Lower Shabelle and Middle Shabelle)***. As a result of the outbreak, and because of heightened activities, in 2013, all the zones have rates above 2.0 and the national annualized rate is 6.5 per 100,000 children under 15 years. Key surveillance activities in response to the outbreak included (a) expanded investigation of operational and social factors affecting immunization of the case and community, (b) all suspected AFP cases had stool specimens taken without verification of AFP, (d) a surveillance alert was issued through the health cluster network of agencies and NGOs (d) In Mogadishu, WHO identified and trained paediatricians in private hospitals to ensure these hospitals are included in the active surveillance network.

Population immunity

The lack of routine and supplementary immunization in most parts of the South and Central Zones (SCZ) of Somalia created the largest known reservoir of unvaccinated children in a single geographic area in the world – approximately one million children under 5 years of age. The declining population immunity was reflected in an increase in the proportion of zero-dose AFP cases from 8% in 2010 to 16% in 2012. The estimated routine EPI coverage was 42% in both 2011 and 2012. A key strategy for boosting routine EPI is the conduct of nationwide child health days (CHDs).

Outbreak response:

The outbreak has been prioritized by all three major administrative authorities in Somalia as a public health emergency. Somalia completed 8 SIAs rounds between May and October 2013 as an outbreak response.

Highlights of the Somalia outbreak response strategy are:

1. **Inaccessibility:** Permanent vaccination teams in transit points and cross border areas have been established in inaccessible areas. Negotiations to initiate immunization in inaccessible areas have also been conducted. In partially accessible districts stocks of vaccines and financial resources have been prepositioned in order to vaccinate children that might be coming from inaccessible villages or to immediately start SIAs in case they become accessible. Altogether,

334 cross-border and transit points for permanent vaccination teams were identified all over Somalia. Local authorities approved 299 vaccination points and as of 31 October 2013, 284 of these points were functional. The programme monitors the number of children vaccinated at these points on a weekly basis. During week 42, a total of 83,857 children were vaccinated, 84% being from the south and central zones.

2. **Population movement:** The strategy is to deploy vaccination teams at the cross-border and major transit points to vaccinate children going to and coming out of inaccessible districts and border countries. In addition, special plans were developed to reach nomadic populations.

3. **Sub-optimal population immunity:** Steps to improve immunization quality in the South-Central Zone, Somaliland and Puntland include enhanced micro-planning, training and intra and post-campaign monitoring. Independent monitoring was introduced in Banadir in June and has since been expanded to 49 out of 82 accessible districts all over Somalia. A flexible approach in vaccination strategies allowed for responsive SIA campaigns, with age groups adjusting from children of under five years, to under 10 years and then to all age groups (children and adults). These activities were conducted within 2-3 weeks intervals to rapidly build immunity through progressively improving vaccination activities.

4. **Outreach**: Facilities providing health care and nutrition services (at fixed or outreach sites) have been incorporated to vaccinate all children up to age 10 who visit a facility. Across the 26 inaccessible districts, there are 23 health facilities where vaccination has begun in five facilities and discussions are ongoing in the rest.

5. **Sub-national surveillance gaps:** Efforts to heighten surveillance included sensitization of polio surveillance staff and focal points in reporting sites, active community case search through district field assistants and community health workers and inquiring about AFP during SIAs. Contact sampling increased from 3 to 5 for 2 months and sample collection was initiated from healthy children (5 samples per month) for all districts that did not report AFP for one month and until a case is reported.

6. **Communication challenges:** Communication response included development and implementation of a comprehensive communication plan that accommodates flexibility in operational response. A public Information risk strategy has been activated to address issues like fatigue which has come up as the main reason for non-vaccination. Other IEC materials to cover key challenges like vaccination of sleeping, sick and new born children, as well as transit point vaccinations have been developed and are in use. The media action humanitarian arm of BBC Radio has partnered with UNICEF and a one hour weekly radio programme on polio will commence in November 2013.

Table 1: Summary of SIAs and outcomes, Somalia, May – December 2013

	Date	Campaign type	Area	Age Groups	Target population	Admin coverage (%)
Round 1	**14 - 17 May**	**SNID**	16 districts of Benadir	<5 years	367,206	96%
	15 - 18 May		Afgoye district	<10 years	90,862	87%
Round 2	**26 - 29 May**	**SNID**	16 districts of Benadir	<10 years	734,413	93%
	26 - 29 May		Other accessible areas of South and Central regions + Puntland	<5 years	927,641	84%
Round 3	**12- 18 June**	**NID**	16 districts of Benadir	All ages	1,800,000	77%
	12 - 17 June		Other accessible areas of South and Central regions	<10 years	1,447,154	91%
	12 - 15 June		Puntland + Somaliland	<5 years	616,852	108%
Round 4	**1 - 6 July**	**NID**	All accessible areas of South and Central regions	All ages	5,453,915	74%
	1 - 4 July		Puntland + Somaliland	<5 years	616,582	109%
Round 5	**21-25 July**	**NID**	All accessible areas of South and Central regions	<5 years	1,707,365	97%
	25-29 July		Puntland + Somaliland			
Round 6	**18 - 21 Aug**	**NID**	All accessible areas of South and Central regions + Puntland + Somaliland	<10 years	3,440,533	96%
Round 7	**15 - 20 Sept**	**NID**	All accessible areas of South and Central regions + Puntland + Somaliland	<10 years	3,440,533	96%
Round 8	**20 - 26 Oct**	**NID**	All accessible areas of South and Central regions + Puntland + Somaliland	All ages	8,538,175	92%
	17 - 20 Nov	**NID**	All accessible areas of South and Central regions	<5 years	1,707,365	On-going
Round 9			Puntland + Somaliland	<5 years		
Round 10	**December**	**CHDs**	All accessible areas of South and Central regions + Puntland & Somaliland if funding allows	<5 years	1,707,365	Planned

Kenya

Kenya had its last indigenous WPV1 case in 1984. Prior to the current outbreak Kenya has had WPV1 importations from Somalia in 2006, Sudan in 2009 and Eastern Uganda in 2011. In 2012, cVDPV type 2 cases originated from Somalia were confirmed in Dadaab Refugee camps North Eastern Kenya.

AFP surveillance

In 2012, the overall non-polio AFP rate was 2.68. Six counties had detection rates below 2.0 and include the high risk counties of ***Turkana and Wajir.*** The rate for 2013 is 2.68, but three provinces have rates below 2.0 (***Rift Valley, Central and Eastern).***

Population immunity

Although national OPV3 coverage was 82% in 2012 and 54% of the districts achieved greater than 80% OPV3 coverage in 2012, gaps in population immunity remain in districts in North Eastern Kenya bordering Somalia and the districts of Turkana County bordering Uganda and South Sudan. A review of the immunization status of non-polio AFP cases for 2013 indicates that in the highest risk counties of the northeast and Turkana, indicate the proportion of non-polio AFP cases with 3 or more doses of OPV is 50% in Wajir, 35% in Mandera, 22% in Garissa, and 28% in Turkana. In addition, these areas have weak routine immunization systems, large refugee populations, and high population movement across borders. In Kenya's northeast, the official border closure with Somalia is adversely affecting the vaccination of refugees.

Outbreak response

As part of the outbreak response, Kenya conducted five house-to-house rounds of SIAs, with the first round within four weeks of confirmation of the index case. These rounds covered the outbreak area (North Eastern Province), high risk areas in Coast Province (Mombasa) and high risk areas in Rift Valley Province (Turkana county). The highlights of the response were:

1. **Inaccessibility:** In the difficult and security compromised areas in North Eastern Province, local community volunteers were trained to vaccinate and look for AFP cases during the SIAs. These volunteers were able to cover areas previously missed in the first two rounds of the response in Garissa county areas that border Somalia. Two of the most recent 3 confirmed cases were identified by the community volunteers.

2. **Sub-optimal population immunity:** Steps to improve SIA quality have included the updating of micro planning tools and training which has been rolled out to the lowest level, completed the first week of November 2013 in preparation for the November NID round. In Dadaab (refugee camps and host population) the campaigns covered an expanded age group (under 15 years) and then the whole population because there were cases in adults. In all the high risk areas, the target population remained the under 5 years.

3. **Sub-national surveillance gaps:** Immediately after confirmation of the first case, the Kenya MoH Division of Disease Surveillance and Response issued an alert to all counties and districts to heighten surveillance and strengthen active case search with particular attention on 'silent' and border districts. Surge support to boost AFP surveillance in the outbreak zones and high risk area was achieved by re-deployment of STOP Team members and recruitment and deployment of international consultants to poor performing districts. In order to increase the sensitivity of the surveillance system, Kenya will be introducing environmental surveillance for polio viruses.

4. **Communications challenges:** The work of the Advocacy, Communication, and Social Mobilization sub-committee was spearheaded by the Ministry of Health with the technical support of UNICEF. Social mobilization for outbreak response was further strengthened through multiple channels including mass media, community (chiefs, village elders) and religious leaders, health facility workers, community health workers, volunteers, and schools.

Table 2: Polio SIAs, Kenya, May - December 2013

	Date	Type	Area	Age Group	Target population	Coverage IM
Round 1	27-31 May	**SNID**	Dadaab Refugee Camps & host districts (Dadaab, Lagdera, Fafi)	<15 yrs	421,874	86%
	27-31 May		Other districts	<5 yrs	90,736	
Round 2	17-21 June	**SNID**	Dadaab Refugee Camps	All ages	441,872	91%
	17-21 June		Host districts (Dadaab, Lagdera, Fafi)	<15 yrs	133,468	
	17-21 June		Other districts	<5 yrs	731,274	
Round 3	1-5 July	**SNID**	Dadaab Refugee Camps	All ages	441,872	93%
	3-7 July		Host districts (Dadaab, Lagdera, Fafi)	<15 yrs	133,468	
	3-7 July		North Eastern, Eastern and Coast provinces	<5 yrs	1,159,258	
	6-10 July		Nairobi, Nyanza, Western, and Rift Valley provinces	<5 yrs	3,017,562	
Mop-up	27-31 July	**Mop-up**	Divisions around the latest confirmed case in North Eastern province including Dadaab, Liboi, Jarajilla and Sabuli.	<5 yrs	25,787	

Round 4	17-21 Aug	**SNID**	Dadaab Refugee Camps	All ages	441,872	94%
	17-21 August		Host districts (Dadaab, Lagdera, Fafi)	<15 yrs	133,468	
	17-21 Aug		Other districts	<5 yrs	4,176,820	
Round 5	21-25 Sep	**SNIDs**	Dadaab refugee camp, Garissa count and Habaswein district Other districts	All age group <5 yrs	5,184,856	94%
Round 6	16-20 Nov	**NIDs**	All districts	<5 yrs	8,244,507	Ongoing
Round 7	14-18 Dec	**NIDs**	All districts	<5 yrs	8,244,507	

Ethiopia

Ethiopia reported its last indigenous WPV1 case in December 2001. Prior to the current outbreak, repeated WPV1 importations from Sudan, Somalia and southern Sudan (with origin in Nigeria), occurred in 2004, 2005 and 2006 and 2008. Ethiopia also had outbreaks of cVDPV type 2 and 3 in 2008, 2009 and 2010.

AFP surveillance

In 2012 the national non-polio AFP rate was 2.9. in 2013, the rate is 2.7 and except for Somali region, the high risk provinces of ***Afar, Gambella*** have rates below 2.0. However there are still gaps in ***Somali region at zonal level***.

Population immunity

Since 2011, Ethiopia's national coverage of routine immunization has declined particularly the four developing regions of Somali, Gambella, Benshangul and Afar. Somali region is one of the four regions contributing to a high number of unvaccinated children in the country. The percentage of children with non-Polio AFP who had 3 or more doses of OPV for 2012 was 27% in Somali Region and 35% in Afar. For 2013 in Somali region, this declined to 11% for the first 8 months and 44% of children with non-polio AFP had zero doses of OPV. Gambella also faced a drop from 75% in 2012 to 0% in 2013 with 50% of non-polio AFP cases receiving zero doses of OPV and 50% receiving 1-2 doses of OPV.

Outbreak response

The Government of Ethiopia mounted a swift response to the HoA outbreak, focusing on the Somali region which borders Somalia. A command post was set up in Jijiga the capital of Somali Region. Six rounds of SIAs have been conducted. The first round was an emergency response activity covering initially the refugee camps in Dollo Ado and host community and high risk zones of Oromia, SNNPR, Dire Dawa and Harari.

Highlights of the Ethiopia response strategy include:

1. **Inaccessibility:** Negotiations and advocacy was done to ensure that local police, military and immigration services were aware of planned operations and their support was solicited to ensure vaccinators' access.
2. **Population movement:** Permanent vaccination posts were established in 28 locations on the Ethiopia-Somali borders (targeting children under 15 years), crossing points and in large transit points. Vaccination teams are assigned to cover remaining transit points during SIAs.
3. **Sub-optimal population immunity:** In the refugee camps and host communities in Dollo Ado, expanded age groups were covered during the SIAs and short interval additional dose (SIAD) immunization rounds were implemented in Nogob zone.
4. **Sub-national surveillance gaps:** Surveillance activities were enhanced by activities such as expanding active surveillance to facilities where cases might seek treatment, identification of areas with suboptimal surveillance, clusters or compatibles, refresher training in prioritizing silent and poor performing zones, and detailed epidemiological investigations.
5. **Communications challenges:** Partners engaged in community mobilization developed communication strategy that focused on the increased awareness of services and perception of polio threat, disease risk and vulnerability in high risk populations' communities, along with the importance of immunization, vaccine safety and efficacy. Strengthening communication in scarcely populated Somali region of Ethiopia has been a critical task.

Table 3: SIA Implementation: May – December 2013

Round	Campaign Type	Areas	Date	Age Groups	Target population	Coverage Achievement
Emergency		Refugee camps + Dollo Ado host community	June 5-8	<15 yrs	184,611	IM: 92%
Round 1	SNIDs	Somali Region	June 21-27	<5 yrs	2,664,894	IM:91%
		Harar/Dire Dawa	June 21-24			
		Oromiya/SNNPR	June 27- July 1			
Round 2	SNIDs	Somali Region	July 19-22	<5 yrs	2,664,894	96% (admin)
		Dire Dawa/Harar	July 26-29			
		Oromiya				
		SNNPR	Aug 17-20			
Round 3	SNIDs	Somali Region (except Nogob zone)	Aug 30 -Sept 12	<5 yrs	846,934	96% (Admin)
Mop up		Somali, Charati	Aug 18-22	<15yrs	10,000	63% (Admin)
		Somali, Galadi	Aug 20-24		12,500	98% (Admin)
		Somali Galadi, Bohk	Oct		20000	109% Admin)
Border vaccination		Permanent vaccination posts on Somalia border areas	On-going	<15yrs	Varies	26,513 (Moyale)
Round 4	NID	Nation wide	Oct 3-6	<5 yrs	12,881,750	IM: 93%
Round 5	NID	Nation wide	Dec 20 – 23	<5 yrs <15 yrs	10,658,396 8,336,090*	Planned

Under 15 year old children will be targeted in Somali, Gambella, Benishangul-Gumuz, and selected high-risk zones of Oromia and SNNPR as well the refugee communities in these selected areas

South Sudan

South Sudan reported its last indigenous WPV case in 2002 and has experienced repeated WPV importations and outbreaks in 2004, 2005, 2008 and 2009. No cVDPV has been detected in South Sudan.

AFP surveillance

In 2012, the non-polio AFP rate was 4.29. Although all 10 states achieved the minimum detection rate of 2.0, sub-national gaps existed in seven of the states. States that have had persistent surveillance gaps at county level in 2012 and 2013 are Jonglei, Unity, Eastern Equatoria and Northern Bahl El Gazhar.

Population immunity

In 2012, the administrative coverage of DPT3 was estimated at 69%. However lower coverage rates were recorded by the Sudan Household Health Survey (SHHS 2010) and the Coverage Evaluation Survey (CES 2012) which showed that the vast majority of eligible children remain unprotected from vaccine preventable diseases, with a DPT3 coverage of only 24% at national level (range of 5% to 40% in the States). The immunity profile of non-polio AFP cases indicate that the number of unprotected children (those with less than 4 doses) has decreased over the past four years ranging from 31 to 20%, indicating that more children were reached through several polio SIAs and perhaps also through routine immunization due to improved access.

Outbreak response

When the WPV outbreak in Somalia was confirmed, South Sudan initiated its emergency outbreak plan as it is considered at high risk for spread in case of importation. The country conducted one round of SIAs in August 2013 covering population groups or areas that have significant Somali populations or immigrants. A second SIA was conducted in October 2013 in response to initial reports of isolation of WPV1 from 3 AFP cases in Northern Bahr El Gazal and Eastern Equatoria. South Sudan quickly responded by declaring a heightened state of emergency after these suspected polio cases initially tested positive for WPV. Additional molecular and genetic testing by the Global Polio Specialized Laboratory at the CDC revealed that an initial instance of simultaneous handling of test specimens from a number of countries in the Horn of Africa resulted in the unintended contamination of the South Sudan specimens with WPV1. The country however still went ahead with response activities to strengthen population immunity and AFP surveillance.

The highlights of the response are:

1. **Inaccessibility**: Special campaigns were implemented in counties affected by prolonged conflict, particularly Pibor county in Jonglei, where 150,000 children under 5 had been missed for over 18 months.

2. **Population movement:** Special measures have been taken to reach high-risk and migrating populations. Social mapping of high risk populations has allowed targeted, repeated vaccination rounds for routine immunization program defaulters.

3. **Sub-national surveillance gaps:** The number of community informants for AFP case surveillance was increased, contact sampling for every AFP case was intensified, and sampling of healthy children is done in counties not reporting any AFP case in the past six months.

4. **Communication challenges**: An intensive social mobilization campaign promoting vaccination was implemented in which messages were shared with NGO partners and social mobilizers and disseminated during house-to-house mobilization and community meetings.

Yemen

Yemen reported its last indigenous case in February 2006. The last WPV1 importation in 2005 originated from Nigeria and was introduced through Sudan and Saudi Arabia. Outbreaks of both type 1 and type 3 cVDPV were reported in 2011.

AFP surveillance

In 2012, the non-polio AFP rate was 4.0 per 100,000 under 15 population. Although all governorates achieved the minimum detection rate of 2.0, sub-national gaps existed in 8 out of the 22 states (Abyan, Albaidah, Hadramoat Sayeun, Hajjah, Lahaj, Marib, Saadah and Shabwah).

Population immunity

In 2012, 8 (36%) of 22 governorates that reported <80% routine OPV3 coverage mainly because of security issues. Overall, the immunization profile for non-polio AFP cases in 2012 showed that 60% had received 3 or more doses of OPV while 13% had not received any OPV. The continuous flow of migrants and refugees into Yemen from Somalia, Ethiopia and Eritrea has led to a large pool of unvaccinated children in some provinces.

Outbreak response

Following confirmation of WPV1 outbreak in Somalia, Yemen implemented their outbreak preparedness and response plan. A control room was established for coordination of response activities. The June 2013 round targeted 1.86 million children aged less than 5 years in 10 governorates, followed by a nationwide campaign in July targeting 4.7 million under-5 children. A large sub national round in October 2013 expanded to cover 3 million children in 14 governorates.

Key highlights of the response are:

1. **Sub-national surveillance gaps:** WHO, in collaboration with the Ministry of Health, deployed 9 Field Epidemiology programme participants to assist the high risk governorates in accelerating the AFP

activities. In addition, 304 AFP surveillance coordinators from 20 of the 22 governorate received refresher training in September 2013. Active searches for AFP cases were conducted covering 249 health facilities and 10,569 health workers were sensitized on the outbreak risk and AFP surveillance. Collection of stool specimens from contacts of all AFP cases was made mandatory. Mapping of high risk areas including the refugee populations has been done.

2. **Communication challenges:** The Ministry of Health communication strategy is geared a) to mobilize political commitment and advocacy in the provision of the services, including access to the most vulnerable populations, b) creating public demand for immunization programs through community mobilization and media mobilization programs, c) mobilize and educate parents to adopt the right behaviour in immunizing their children through behaviour change programs, d) address rumours and enhance confidence in the provided services, d) raising the level of awareness about the benefits of immunization and the availability of services.

Uganda

Uganda had its last indigenous case in 1996. There was a WPV type 1 importation from southern Sudan in 2009 and from Kenya in 2010. No cVDPV has been detected in Uganda.

AFP surveillance

In 2012, 15 districts were either silent or had low (less than 0.5 per 100,000) AFP detection rates for two consecutive years. Sixty-seven per cent (10/15) share borders with high risk zones in DR Congo, Kenya and South Sudan. These *include Abin, Alebtoy, Kaabong, Buvuma, Amudaf* on the Kenya and South Sudan and *Balambuli, Badaka and Agogo* on the western borders with DR Congo

Population immunity

In 2012, only 48% of the districts had achieved above 80% routine coverage with OPV3, 42% were between 50 – 79% and 10% were below 50%. For 2013, the corresponding percentages for 2013 are 72%, 25% and 3%. Data from AFP surveillance shows in 2012, the 70% of non-polio AFP cases had received 3 or more doses of OPV, 20% had 1-2 doses and 10% were zero dose. For 2013, it was 73%, 24% and 3% respectively. Uganda has pockets of unimmunized children in the districts bordering the Democratic Republic of Congo (DRC) in the west and Kenya in the east and those bordering South Sudan on the north.

Outbreak response

Following confirmation of the outbreak in Somalia and Kenya, SIAs were implemented in September and October 2013 in 37 high risk districts bordering Kenya and districts with influx of refugees. The SIAs covered 2,670,364 children under 5 years (37% of the total under 5 population). In addition, Family

Health Days began on 4th October (every weekend through October) and were utilized for intensification of immunization around the border districts

Two nationwide rounds are scheduled for December 2013 and January 2014.

Highlights of the response are:

1. **Sub-optimal population immunity**
   Family Health Days in October 2013 were used for intensification of immunization around border districts. Family health days, offering an integrated package of services including immunization, were held at places of worship. This has strengthened linkages with religious leaders. Specific focus was placed on linking services to communities and leveraging community resources for mobilization and defaulter vaccination tracking. After regional workshops, district-specific communication plans are in place for 112 districts.

2. **Improving quality of SIAs**
   In order to improve quality of SIAs, micro-planning workshops were held and micro-plans were developed using a bottom up approach from vaccination team level, to parish, to sub-county, then district micro-plan.

3. **Communications challenges:**
   Sixty districts with hard-to-reach populations and communities that resist vaccinations were mapped. Dialogue was initiated with vaccine-resistant communities through social mobilizers and parliamentarians. Polio communication materials were developed and distributed and the communication strategy employed electronic media and info-entertainment (immunization song, featuring Polio and other diseases, by a popular artist in 11 languages). Engagement of many sectors has occurred ranging from NGO health partners, to Parliamentarians religious leaders and traditional healers.

4. **Sub-national surveillance gaps:**
   To strengthen surveillance, teams and supervisors were trained on AFP case search. During SIAs, teams conducted active searches in households, and international consultants were deployed to investigate non-reporting districts.

Eritrea

Eritrea had its last indigenous polio case in 2000. One WPV case was confirmed in 2005; genetic sequencing showed linkage with the then on going wild polio outbreak in Sudan. There has been no cVDPV detected in Eritrea.

AFP surveillance

The non-polio AFP rate has been maintained above the target of 2 cases per 100,000 <15 children between 2010 and 2013 (6.4, 4.7, 3.5 and 2.6 respectively). Similarly, the national stool adequacy rate was sustained at above 80%. All the zones have achieved the target for surveillance sensitivity in 2012 (non-polio AFP rate >2 per 100,000 <15) and stool adequacy (>80%).

Population immunity

Since 2006, each year three to four rounds of Integrated Sustainable Outreach Services (SOS) has been conducted in 16 districts with hard-to-reach communities. In 2012 the routine OPV3 coverage over 90%: Among non-polio AFP cases, 92% received 3 or more doses of OPV3, 2% had not received any OPV.

Outbreak response

Following notification of the outbreak in the HoA, two SNIDs were conducted in May and June 2013 to reach 68,495 targeted under five children in high risk zobas. In addition, integrated Outreach Immunization Services were conducted in 18 targeted sub-zobas of the Northern Red Sea, Southern Red Sea, Anseba and Gash Barka zobas.

Key highlights of the response are:

1. **Sub-optimal population immunity:** Eritrea conducted two preventive SNIDs in May and June 2013, and further included OPV in the integrated outreach immunization services in 18 sub-zobas of the Northern Red Sea, Southern Red Sea, Anseba and Gash Barka zobas.
2. **Sub-national surveillance gaps:** Integrated Disease surveillance which includes AFP was enhanced in priority sites. Operational guidelines were distributed and training of AFP focal points, sensitization of traditional-healers and community health workers took place. Thirty surveillance sites were created along the Somalia, Sudan and Ethiopian borders where teams performed active AFP case searches and reviewed children's vaccination. Sixty community Health workers were trained to ensure active case finding in communities and health facilities.
3. **Communication challenges:** Efforts focused on advocacy for resource mobilization and coordination with line Ministries building on political commitment. Partners have engaged the media to ensure that media professionals covering the outbreak have the right knowledge. National unions such as women and youth groups, school teachers, pupils, religious leaders, political leaders and health workers have been mobilized to persuade parents to obtain immunization. Radio and TV have been used for messages since September and efforts are ongoing to reach populations in remote areas, including nomads.

Djibouti

Djibouti had its last indigenous polio case in 1999. None of the HoA outbreaks have spread to Djibouti. The country remains at high risk because it has contacts with populations coming from the high risk areas in Somalia and Somali Region of Ethiopia. No cVDPV have been detected in Djibouti.

AFP surveillance

In 2012 the non-polio AFP rate was 2 per 100,000 under 15 years of age. Rates of less than 2 were reported from 4 out of 6 districts (Arda, Dikhil, Tadjourah and Djibouti city).

Population immunity

In Djibouti an important progress has been made in immunization coverage but there are still many disparities between Djibouti City (more than 90% coverage for polio) and the other regions and rural areas (with coverage around 70%) with dropout rate reaching 15% in some areas. Among the 13 non-polio AFP cases reported in 2012 and 2013, only 2 were under immunized (received less than 3 doses of OPV).

Outbreak response

After the re-infection of neighbouring countries, partners have alerted the Government of Djibouti on the critical situation in the region and the potential impacts on Djibouti. An SIA was implemented in July 2013 targeting 122,480 children with reported coverage of 96%.

Key highlights of the response are:

1. **Sub-optimal population immunity:** A preventive SIA was conducted in July 2013 targeting 122,480 children with reported coverage of 96%.

2. **Sub-national surveillance gaps:** Measures for surveillance strengthening included creation of 30 surveillance sites along the borders with Somalia, Eritrea and Ethiopia with teams trained in active AFP case search and a review of the vaccination status of children aged under five years. Sixty Community Health Workers and health care providers were trained to ensure active case finding in both communities (door to door strategy) and health facilities.

3. **Communication challenges:** Communication efforts have focused on mobilization of local women groups to increase community awareness through face-to-face communication; community meetings with local leaders; and implementation of an intensified mass media campaign prior and during the campaign. IEC materials informing families on the date and site of vaccination were widely distributed throughout the country in public places. Community mobilizers (185) participated in Djibouti city and hard-to-reach areas while 20 UNHCR workers were used to mobilize refugee families at the border area.

Sudan

Sudan reported its last indigenous WPV in 2001. Outbreaks of WPV1 occurred in 2004 and 2005. Repeated importations occurred between 2007 and 2009. No cVDPV have been detected in Sudan.

AFP surveillance

In 2012 and in 2013, the non-polio AFP rate was 2.5 per 100,000. Only three states had detection rates below 2.0 during the two years (South Darfur in 2012 and River Nile and Southern Kordofan in 2013).

Population immunity

With the support of GAVI and other partners, EPI has improved coverage among infants in Sudan. Subnational gaps exist in the states of West Darfur, Central Darfur, East Darfur and South Kordafan all of which have routine coverage of less than 80% in 2013. Overall the OPV status of non-polio AFP cases in 2013 shows 96% have received more than 4 doses of OPV3, 4% had received 1 to 3 doses of OPV3. There were no zero dose AFP cases.

Outbreak response

Since the onset of the outbreak in the HoA, Sudan has conducted one nationwide SIA and one sub-national SIA covering high risk states. An additional SIAs round covering the high risk population in Khartoum was conducted in October 2013 targeting 90,000 children under 5 years of age. A nationwide NID campaign is planned for November 2013 synchronized with South Sudan. International NGOs will collaborate to reach children in security-compromised areas in Darfur for SIAs and AFP surveillance.

Key highlights of the response are:

1. **Sub-optimal population immunity/Population movement:** The national plan for poliovirus importation preparedness was updated according to the new situation in HoA with emphasis on the Darfur states and states bordering South Sudan, Ethiopia. Cross border surveillance activities were strengthened. A special review of the high risk population (Southern Sudanese and people from West Africa) living in Khartoum was done. Efforts are underway to secure a period of tranquillity between Government and rebels (SPLM-N) during November 2013 in order to conduct a polio campaign with supplemental vitamin A in rebel-controlled areas in South Kordofan and Blue Nile states. A total of 160,000 children under five will be vaccinated.

2. **Sub-national surveillance gaps:** A team from the Federal EPI visited Eastern states (Gedarif and Kassala) to review the AFP surveillance system and address the gaps.

Annex 2: Financial Resource Requirements

Draft - Somalia: GPEI External Financial Requirements, 2013-2015
[All amounts in USD millions, excluding indirect (overhead) costs, as of November 2013]

Updated 20/11/13

	2013	2014	2015	2013-2015
National Immunization Days (NIDs)	5	4	2	**11**
Sub-national Immunization Days (SNIDs)	7	3	0	**10**
Short Interval Additional Dose (SIADS)	0	0	0	**0**
Case response (mop-ups)	2	0	0	**2**
Child Health Day (CHD)	1	1	0	**2**
Oral Polio Vaccine				
Requirements	**$4.84**	**$7.45**	**$7.67**	**$19.96**
Confirmed Funding				
CDC	$1.90	$0.00	$0.00	**$1.90**
BMGF	$0.43	$0.00	$0.00	**$0.43**
CERF	$0.00	$0.00	$0.00	**$0.00**
CIDA	$0.27	$0.00	$0.00	**$0.27**
ECHO	$1.32	$0.00	$0.00	**$1.32**
Japan	$0.68	$0.00	$0.00	**$0.68**
Rotary	$0.25	$0.00	$0.00	**$0.25**
TOTAL	$4.84	$0.00	$0.00	**$4.84**
Tentative Funding				
World Bank Buy-down (Supp)	$0.00	$0.00	$0.00	**$0.00**
Islamic Development Bank (IsDB)	$0.00	$0.00	$0.00	**$0.00**
TOTAL	$0.00	$0.00	$0.00	**$0.00**
Funding Gap (exclusive of tentative funding)	***$0.00***	***$7.45***	***$7.67***	***$15.12***
Funding Gap (inclusive of tentative funding)	***$0.00***	***$7.45***	***$7.67***	***$15.12***
Operational Costs				
Requirements	**$13.23**	**$10.12**	**$1.58**	**$24.93**
Operational costs (WHO)	$10.79	$7.52	$1.58	**$19.89**
Operational costs (UNICEF)	$1.31	$0.90	$0.00	**$2.21**
Surge infrastructure (UNICEF)	$1.13	$1.70	$0.00	**$2.83**
Confirmed Funding				
BMGF (WHO)	$2.67	$0.00	$0.00	$2.67
DFID (WHO)	$3.57	$0.00	$0.00	$3.57
Rotary International (WHO)	$0.46	$0.00	$0.00	$0.46
United Arab Emirates (WHO)	$4.09	$1.53	$0.00	$5.62
BMGF (UNICEF)	$0.95	$0.00	$0.00	$0.95
Japan (UNICEF)	$0.37			
Rotary (UNICEF)	$0.11			
Crown Prince (UNICEF)	$0.83	$0.00	$0.00	$0.83
CIDA (UNICEF)	$0.10	$0.00	$0.00	$0.10
ECHO(UNICEF)	$0.08			
TOTAL	**$13.23**	**$1.53**	**$0.00**	**$14.76**
Tentative Funding				
TOTAL	$0.00	$0.00	$0.00	$0.00
Funding Gap (exclusive of tentative funding)	**$0.00**	**$8.59**	**$1.58**	**$10.17**
WHO	***$0.00***	***$5.99***	***$1.58***	**$7.57**
UNICEF	***$0.00***	***$2.60***	***$0.00***	**$2.60**
Funding Gap (inclusive of tentative funding)	**$0.00**	**$8.59**	**$1.58**	**$10.17**
WHO	***$0.00***	***$5.99***	***$1.58***	**$7.57**
UNICEF	***$0.00***	***$2.60***	***$0.00***	**$2.60**

Surveillance (includes security)					
	Requirements	**$2.23**	**$0.44**	**$0.45**	**$3.12**
	Confirmed Funding				
	BMGF	$0.46	$0.00	$0.00	$0.46
	CIDA	$0.73	$0.00	$0.00	$0.73
	DFID (UK)	$0.11	$0.00	$0.00	$0.11
	USAID	$0.72	$0.00	$0.00	$0.72
	USCDC	$0.21	$0.00	$0.00	$0.21
	TOTAL	$2.23	$0.00	$0.00	$0.11
	Tentative Funding				
	TOTAL	$0.00	$0.00	$0.00	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.00***	***$0.44***	***$0.45***	***$0.89***
	Funding Gap (inclusive of tentative funding)	***$0.00***	***$0.44***	***$0.45***	***$0.89***
Technical assistance					
	Requirements	**$2.94**	**$4.30**	**$0.85**	**$8.09**
	Technical assistance (WHO)	$1.51	$0.85	$0.85	$3.21
	Technical assistance (UNICEF)	$0.00	$3.00	$0.00	$3.00
	Surge Capacity (WHO)	$0.44	$0.04	$0.00	$0.48
	Surge Capacity (UNICEF)	$0.99	$0.41	$0.00	$1.40
	Confirmed Funding				
	DFID (WHO)	$0.84	$0.00	$0.00	$0.84
	BMGF - Surge Capacity (WHO)	$0.44	$0.00	$0.00	$0.44
	CIDA(WHO)	$0.35	$0.00	$0.00	$0.35
	Norway (WHO)	$0.18	$0.00	$0.00	$0.18
	BMGF (UNICEF)	$0.34	$0.00	$0.00	$0.34
	CERF(UNICEF)	$0.27	$0.00	$0.00	$0.27
	JAPAN (UNICEF)	$0.05	$0.04	$0.00	$0.09
	United Arab Emirates (UNICEF)	$0.21	$0.00	$0.00	$0.21
	Rotary International (UNICEF)	$0.12	$0.42	$0.00	$0.54
	Sweden SIDA (UNICEF)	$0.01	$0.00	$0.00	$0.01
	Crown Prince	$0.00	$0.58	$0.00	$0.58
	TOTAL	$2.80	$1.04	$0.00	$3.84
	Tentative Funding				
		$0.00	$0.00	$0.00	**$0.00**
	TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.14***	***$3.26***	***$0.85***	***$4.25***
	WHO	***$0.14***	***$0.89***	***$0.85***	***$1.88***
	UNICEF	***$0.00***	***$2.37***	***$0.00***	***$2.37***
	Funding Gap (inclusive of tentative funding)	***$0.14***	***$3.26***	***$0.85***	***$4.25***
	WHO	***$0.14***	***$0.89***	***$0.85***	***$1.88***
	UNICEF	***$0.00***	***$1.33***	***$0.00***	***$1.33***
UNICEF Social Mobilization					
	Requirements	**$5.46**	**$7.49**	**$0.00**	**$12.95**
	Confirmed Funding				
	BMGF	$0.82	$0.00	$0.00	$0.82
	DFID	$1.91	$0.00	$0.00	$1.91
	CIDA	$0.24	$0.00	$0.00	$0.24
	CERF	$1.14	$0.00	$0.00	$1.14
	ECHO	$0.07	$0.00	$0.00	$0.07
	Crown Prince	$0.87	$0.00	$0.00	$0.87
	JAPAN	$0.09	$0.00	$0.00	$0.09
	Rotary International	$0.32	$0.00	$0.00	$0.32
	TOTAL	**$5.46**	**$0.00**	**$0.00**	**$5.46**
	Tentative Funding				
	TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.00***	***$7.49***	***$0.00***	***$7.49***
	Funding Gap (inclusive of tentative funding)	***$0.00***	***$7.49***	***$0.00***	***$7.49***
SUMMARY	**TOTAL REQUIREMENTS:**	**$28.70**	**$29.80**	**$10.56**	**$69.06**
	TOTAL FUNDING GAP (exclusive of tentative funding)	***$0.13***	***$27.23***	***$10.56***	***$37.92***
	WHO	***$0.13***	***$9.92***	***$2.88***	***$12.94***
	UNICEF	***$0.00***	***$19.91***	***$7.67***	***$24.98***
	TOTAL FUNDING GAP (inclusive of tentative funding)	***$0.13***	***$27.23***	***$10.56***	***$37.92***
	WHO	***$0.13***	***$9.92***	***$2.88***	***$12.94***
	UNICEF	***$0.00***	***$18.87***	***$7.67***	***$23.94***

Table…

Draft - Kenya: GPEI External Financial Requirements, 2013-2015
[All amounts in USD millions, excluding indirect (overhead) costs, as of November 2013]

Updated 20/11/13

			FRR		
		2013	**2014**	**2015**	**2013-2015**
	National Immunization Days (NIDs)	2	1	0	**3**
	Sub-national Immunization Days (SNIDs)	4	5	0	**9**
	Short Interval Additional Dose (SIADS)	0	0	0	**0**
	Case response (mop-ups)	1	0	0	**1**
Oral Polio Vaccine	**Requirements**	**$5.01**	**$5.20**	**$0.00**	**$10.21**
	Confirmed Funding				
	CDC	$2.18	$0.00	$0.00	**$2.18**
	BMGF	$1.33	$0.00	$0.00	**$1.33**
	Japan	$0.00	$0.00	$0.00	**$0.00**
	ECHO	$0.68	$0.00	$0.00	**$0.68**
	TOTAL	$4.19	$0.00	$0.00	**$4.19**
	Tentative Funding				
	World Bank Buy-down (Supp)	$0.00	$0.00	$0.00	**$0.00**
	Islamic Development Bank (IsDB)	$0.00	$0.00	$0.00	**$0.00**
	TOTAL	$0.00	$0.00	$0.00	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.82***	***$5.20***	***$0.00***	***$6.02***
	Funding Gap (inclusive of tentative funding)	***$0.82***	***$5.20***	***$0.00***	***$6.02***
Operational Costs	**Requirements**	**$19.33**	**$12.20**	**$0.00**	**$31.53**
	Operational costs (WHO)	$19.33	$12.20	$0.00	**$31.53**
	Operational costs (UNICEF)	$0.00	$0.00	$0.00	**$0.00**
	Confirmed Funding				
	BMGF(WHO)	$3.79	$0.00	$0.00	$3.79
	Nat'l Phil Trust (WHO)	$5.08	$0.00	$0.00	$5.08
	CERF (WHO)	$0.86	$0.00	$0.00	$0.86
	DFID (UK) (WHO)	$9.28	$0.00	$0.00	$9.28
	Norway(WHO)	$0.32	$0.00	$0.00	$0.32
	TOTAL	**$19.33**	**$0.00**	**$0.00**	**$19.33**
	Tentative Funding				
	Saudi Arabia(WHO)	$0.00	$0.00	$0.00	$0.00
	TOTAL	$0.00	$0.00	$0.00	$0.00
Funding Gap (exclusive of tentative funding)		**$0.00**	**$12.20**	**$0.00**	**$12.20**
WHO		$0.00	$12.20	$0.00	$12.20
UNICEF		$0.00	$0.00	$0.00	$0.00
Funding Gap (inclusive of tentative funding)		**$0.00**	**$12.20**	**$0.00**	**$12.20**
WHO		$0.00	$12.20	$0.00	$12.20
UNICEF		$0.00	$0.00	$0.00	$0.00
Surveillance (includes security)					
	Requirements	**$0.44**	**$0.44**	**$0.00**	**$0.88**
	Confirmed Funding				
	BMGF	$0.44	$0.00	$0.00	$0.44
	DFID (UK)	$0.00	$0.00	$0.00	$0.00
	USAID	$0.00	$0.00	$0.00	$0.00
	TOTAL	$0.44	$0.00	$0.00	$0.00
	Tentative Funding				
	TOTAL	$0.00	$0.00	$0.00	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.00***	***$0.44***	***$0.00***	***$0.44***
	Funding Gap (inclusive of tentative funding)	***$0.00***	***$0.44***	***$0.00***	***$0.44***
Technical assistance	**Requirements**	**$2.36**	**$1.64**	**$0.00**	**$4.00**
	Technical assistance (WHO)	$0.85	$0.85	$0.00	$1.70
	Technical assistance (UNICEF)	$0.23	$0.00	$0.00	$0.23
	Surge Capacity (WHO)	$0.04	$0.52	$0.00	$0.56
	Surge Capacity (UNICEF)	$0.00	$0.27	$0.00	$0.27
	*Surge Capacity (outbreak)**	$1.24	$0.00	$0.00	$1.24
	Confirmed Funding				

	DFID (UK) (WHO)	$0.75	$0.00	$0.00	$0.75
	BMGF - Surge Capacity (WHO)	$0.60	$0.00	$0.00	$0.60
	CIDA(WHO)	$0.14	$0.00	$0.00	$0.14
	Norway (WHO)	$0.17	$0.00	$0.00	$0.17
	AusAID (UNICEF)	$0.00	$0.00	$0.00	$0.00
	BMGF (UNICEF)	$0.00	$0.00	$0.00	$0.00
	Rotary International (UNICEF)	$0.23	$0.00	$0.00	$0.23
	USAID (UNICEF)	$0.00	$0.00	$0.00	$0.00
	USCDC (UNICEF)	$0.00	$0.00	$0.00	$0.00
	TOTAL	$1.89	$0.00	$0.00	**$1.89**
	Tentative Funding				
		$0.00	$0.00	$0.00	**$0.00**
	TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.47***	***$1.64***	***$0.00***	***$2.11***
	WHO	***$0.47***	***$1.37***	***$0.00***	***$1.84***
	UNICEF	***$0.00***	***$0.27***	***$0.00***	***$0.00***
	Funding Gap (inclusive of tentative funding)	***$0.47***	***$1.64***	***$0.00***	***$2.11***
	WHO	***$0.47***	***$1.37***	***$0.00***	***$1.84***
	UNICEF	***$0.00***	***$0.27***	***$0.00***	***$0.00***
UNICEF Social Mobilization	**Requirements**	**$3.03**	**$2.60**	**$0.00**	**$5.63**
	Confirmed Funding				
	BMGF	$0.11	$0.00	$0.00	$0.11
	CERF	$0.42	$0.00	$0.00	$0.42
	Nat'l Phil Trust	$0.84	$0.00	$0.00	$0.84
	ECHO	$0.43	$0.00	$0.00	$0.43
	SIDA	$0.35	$0.00	$0.00	$0.35
	TOTAL	**$2.15**	**$0.00**	**$0.00**	**$2.15**
	Tentative Funding				
	Islamic Development Bank (IsDB)	$0.00	$0.00	$0.00	**$0.00**
	TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.88***	***$2.60***	***$0.00***	***$3.48***
	Funding Gap (inclusive of tentative funding)	***$0.88***	***$2.60***	***$0.00***	***$3.48***
SUMMARY	**TOTAL REQUIREMENTS:**	**$30.17**	**$22.08**	**$0.00**	**$52.25**
	TOTAL FUNDING GAP (exclusive of tentative funding)	***$2.17***	***$22.08***	***$0.00***	***$24.25***
	WHO	***$0.47***	***$14.01***	***$0.00***	***$14.48***
	UNICEF	***$1.70***	***$8.07***	***$0.00***	***$9.50***
	TOTAL FUNDING GAP (inclusive of tentative funding)	***$2.17***	***$22.08***	***$0.00***	***$24.25***
	WHO	***$0.47***	***$14.01***	***$0.00***	***$14.48***
	UNICEF	***$1.70***	***$8.07***	***$0.00***	***$9.77***

** includes start up costs as well as staff costs*

Draft - Ethiopia: GPEI External Financial Requirements, 2013-2015
[All amounts in USD millions, excluding indirect (overhead) costs, as of October 2013]

Updated 20/11/13

		2013	FRR 2014	2015	2013-2015
	National Immunization Days (NIDs)	2	2	0	**4**
	Sub-national Immunization Days (SNIDs)	4	3	2	**9**
	Short Interval Additional Dose (SIADS)	0	1	0	**1**
	Case response (mop-ups)	0	0	0	**0**
Oral Polio Vaccine	**Requirements**	**$5.41**	**$7.97**	**$2.42**	**$15.80**
	Confirmed Funding				
	CDC	$1.01	$0.00	$0.00	**$1.01**
	BMGF	$1.70	$0.00	$0.00	**$1.70**
	Nat'l Phil Trust	$2.14	$0.00	$0.00	**$2.14**
	ECHO	$0.34	$0.00	$0.00	**$0.34**
	TOTAL	$5.19	$0.00	$0.00	$5.19
	Tentative Funding				
	TOTAL	$0.00	$0.00	$0.00	$0.00
	Funding Gap (exclusive of tentative funding)	***$0.22***	***$7.97***	***$2.42***	***$10.61***
	Funding Gap (inclusive of tentative funding)	***$0.22***	***$7.97***	***$2.42***	***$10.61***
Operational Costs	**Requirements**	**$12.83**	**$14.63**	**$4.40**	**$31.86**
	Operational costs (WHO)	$12.20	$14.63	$4.40	**$31.23**
	Operational costs (UNICEF)	$0.63	$0.00	$0.00	**$0.63**
	Confirmed Funding				
	BMGF(WHO)	$6.60	$0.00	$0.00	$6.60
	Nat'l Phil Trust (WHO)	$4.49	$0.00	$0.00	$4.49
	DFID (UK) (WHO)	$1.11	$0.00	$0.00	$1.11
	Sweden (UNICEF)	$0.19	$0.00	$0.00	$0.19
	Nat'l Phil Trust (UNICEF)	$0.30	$0.00	$0.00	$0.30
	TOTAL	**$12.69**	**$0.00**	**$0.00**	**$12.69**
	Tentative Funding				
	TOTAL	$0.00	$0.00	$0.00	$0.00
Funding Gap (exclusive of tentative funding)		**$0.14**	**$14.63**	**$4.40**	**$19.17**
WHO		$0.00	$14.63	$4.40	$19.03
UNICEF		$0.14	$0.00	$0.00	$0.14
Funding Gap (inclusive of tentative funding)		**$0.14**	**$14.63**	**$4.40**	**$19.17**
WHO		$0.00	$14.63	$4.40	$19.03
UNICEF		$0.14	$0.00	$0.00	$0.14
Surveillance (includes security)	**Requirements**	**$3.06**	**$3.06**	**$3.06**	**$9.18**
	Confirmed Funding				
	BMGF	$3.06	$0.00	$0.00	$3.06
	DFID (UK)	$0.00	$0.00	$0.00	$0.00
	USAID	$0.00	$0.00	$0.00	$0.00
	TOTAL	$3.06	$0.00	$0.00	$0.00
	Tentative Funding				
	TOTAL	$0.00	$0.00	$0.00	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.00***	***$3.06***	***$3.06***	***$6.12***
	Funding Gap (inclusive of tentative funding)	***$0.00***	***$3.06***	***$3.06***	***$6.12***
Technical assistance	**Requirements**	**$3.87**	**$3.03**	**$1.57**	**$8.47**
	Technical assistance (WHO)	$1.57	$1.57	$1.57	$4.71
	Technical assistance (UNICEF)	$0.23	$0.74	$0.00	$0.97
	Surge Capacity	$0.36	$0.72	$0.00	$1.08
	*Surge Capacity (outbreak)**	$1.71	$0.00	$0.00	$1.71
	Confirmed Funding				
	DFID (UK) (WHO)	$0.38	$0.00	$0.00	$0.38
	BMGF - Surge Capacity (WHO)	$1.55	$0.00	$0.00	$1.55
	CIDA(WHO)	$0.61	$0.00	$0.00	$0.61
	Norway (WHO)	$0.18	$0.00	$0.00	$0.18
	USCDC (WHO)	$0.15	$0.00	$0.00	$0.15
	AFRO(Unspecified)	$0.25	$0.00	$0.00	$0.25
	AusAID (UNICEF)	$0.00	$0.00	$0.00	$0.00
	BMGF (UNICEF)	$0.00	$0.00	$0.00	$0.00
	Rotary International (UNICEF)	$0.23	$0.00	$0.00	$0.23
	USAID (UNICEF)	$0.00	$0.00	$0.00	$0.00
	USCDC (UNICEF)	$0.00	$0.00	$0.00	$0.00
	TOTAL	$3.35	$0.00	$0.00	**$3.35**
	Tentative Funding				
		$0.00	$0.00	$0.00	**$0.00**
	TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.52***	***$3.03***	***$1.57***	***$5.12***
	WHO	***$0.52***	***$2.29***	***$1.57***	***$4.38***
	UNICEF	***$0.00***	***$0.74***	***$0.00***	***$0.74***
	Funding Gap (inclusive of tentative funding)	***$0.52***	***$3.03***	***$1.57***	***$5.12***
	WHO	***$0.52***	***$2.29***	***$1.57***	***$4.38***
	UNICEF	***$0.00***	***$0.74***	***$0.00***	***$0.74***

UNICEF Social Mobilization	**Requirements**	**$1.74**	**$4.26**	**$0.26**	**$6.26**
	Confirmed Funding				
	BMGF	$1.52	$0.00	$0.00	$1.52
	Sweden	$0.11	$0.00	$0.00	$0.11
	TOTAL	**$1.63**	**$0.00**	**$0.00**	**$1.63**
	Tentative Funding				
	TOTAL	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	Funding Gap (exclusive of tentative funding)	***$0.11***	***$4.26***	***$0.26***	***$4.63***
	Funding Gap (inclusive of tentative funding)	***$0.11***	***$4.26***	***$0.26***	***$4.63***
SUMMARY	**TOTAL REQUIREMENTS:**	**$26.91**	**$32.95**	**$11.71**	**$71.57**
	TOTAL FUNDING GAP (exclusive of tentative funding)	***$0.99***	***$32.95***	***$11.71***	***$45.65***
	WHO	***$0.52***	***$19.98***	***$9.03***	***$29.53***
	UNICEF	***$0.46***	***$12.97***	***$2.68***	***$16.11***
	TOTAL FUNDING GAP (inclusive of tentative funding)	***$0.99***	***$32.95***	***$11.71***	***$45.65***
	WHO	***$0.52***	***$19.98***	***$9.03***	***$29.53***
	UNICEF	***$0.46***	***$12.97***	***$2.68***	***$16.11***

** includes start up costs as well as staff costs*