POLIO GLOBAL ERADICATION INITIATIVE

ANNUAL REPORT

2013

World Health Organization

Rotary

CDC

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Cover photo: A child proudly displays his fingermark, proving he has been vaccinated against polio. © Rotary International/J.M. Giboux

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EXECUTIVE SUMMARY

The Polio Eradication and Endgame Strategic Plan 2013–2018 (Endgame Plan), developed in 2013, lays out an updated vision for the Global Polio Eradication Initiative (GPEI). This Annual Report looks back on the progress achieved against the Endgame Plan in 2013 and early 2014, and outlines the strategic and operational adjustments which are driving the programme in 2014.

The true heroes of polio eradication: a vaccinator protects a child from lifelong polio paralysis. © UNICEF Syria/2013/ Omar Sanadiki

From Plan to Implementation

In early 2013, the GPEI launched the Endgame Plan, a comprehensive approach to securing a lasting polio-free world by 2018. By early 2014, important progress had been achieved against all four of the ambitious objectives set out in the Plan.

Objective 1: Poliovirus detection and interruption

Polio – a disease which once paralyzed more than 1000 children a day (prior to 1988) – paralyzed just over one child a day in 2013 - over 400 million children were vaccinated during 224 campaigns in 43 countries.

The three endemic countries restricted the virus to fewer regions than ever before, even as the programme faced serious challenges in reaching children. And, for the first time in the history of the GPEI, in 2013 all cases caused by a wild virus were due to a single serotype, type 1. Wild poliovirus type 3 has not been detected anywhere in the world since a case was reported in Nigeria with onset of paralysis in November 2012.

However, the fragility of this progress was underlined when polio re-emerged in five previously polio-free countries in 2013. Outbreaks in the Middle East, the Horn of Africa, and Central Africa (centred around Cameroon) reinforced the urgency of ending transmission in any infected area.

Identifying and mitigating risks

In 2014, the Global Polio Eradication Initiative's programme of work is guided by a new risk register. This register, updated monthly, identifies major risks to the achievement of each of the four objectives of the Endgame Plan and assesses their potential likelihood and impact. A mitigation plan is then put in place and monitored by the Polio Steering Committee and reported to the Polio Oversight Board.

A fundamental challenge in 2013 was the fact that insecurity, targeted attacks on health workers and/or a ban by local authorities on polio immunization resulted in a deterioration in access in Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa (KP), in Pakistan; in Borno, Nigeria; in parts of the Syrian Arab Republic; and, in parts of south-central Somalia. Chronically poor implementation of activities remained a critical challenge in other priority areas, most notably in Kano, Nigeria.

These risks to the vaccination of children in known polio-affected areas are compounded by gaps in polio surveillance and the continued threat of new international spread of wild poliovirus into highly vulnerable areas and populations.

In March 2014, India, and the entire South-East Asia Region, joined the Regions of the Americas, Europe and the Western Pacific in being certified polio-free. Together these four regions account for 80% of the world's population.

In 2014, the programme is closely tracking areas at particular risk of re-infection and has established a list of 'high risk' countries particularly vulnerable to polio outbreaks. Furthermore, on 5 May 2014, the Director-General of the World Health Organization (WHO) declared the international spread of polio to be the second-ever Public Health Emergency of International Concern (PHEIC). A set of Temporary Recommendations on vaccination of travelers were put in place under the International Health Regulations (2005) to address this PHEIC.

Objective 2: Immunization systems strengthening and OPV withdrawal

The GPEI and Gavi, the Vaccine Alliance, initiated a joint programme of work in 2013 to support the strengthening of routine immunization systems in ten priority countries. Five criteria were finalized for gauging readiness for the eventual switch from trivalent OPV to bivalent OPV.

The Strategic Advisory Group of Experts on immunization (SAGE) finalized its policy recommendations on how to best introduce one dose of inactivated polio vaccine (IPV) into the routine immunization schedules of OPV-using countries. And, in early 2014, UNICEF announced an IPV procurement price of €0.75 per dose (approximately US$ 1 at current exchange rates) for Gavi-eligible countries.

Objective 3: Containment and certification

By end 2013, all WHO Member States had identified and created an inventory of laboratories and facilities storing WPV infectious and potentially-infectious material with the exception of two countries in the Eastern Mediterranean and 37 countries in the African Region.

In the Region of the Americas, a Commission for the Confirmation of Polio-free Status in the Americas has been re-constituted. In the Region for Africa, the Regional Certification Committee was re-constituted.

Objective 4: Legacy planning

Consultation was started in 2013 with governments and other stakeholders on the legacy of polio eradication – to ensure that the knowledge, capacities, processes and assets created by the GPEI continue to benefit other public health programmes after the completion of the eradication effort.

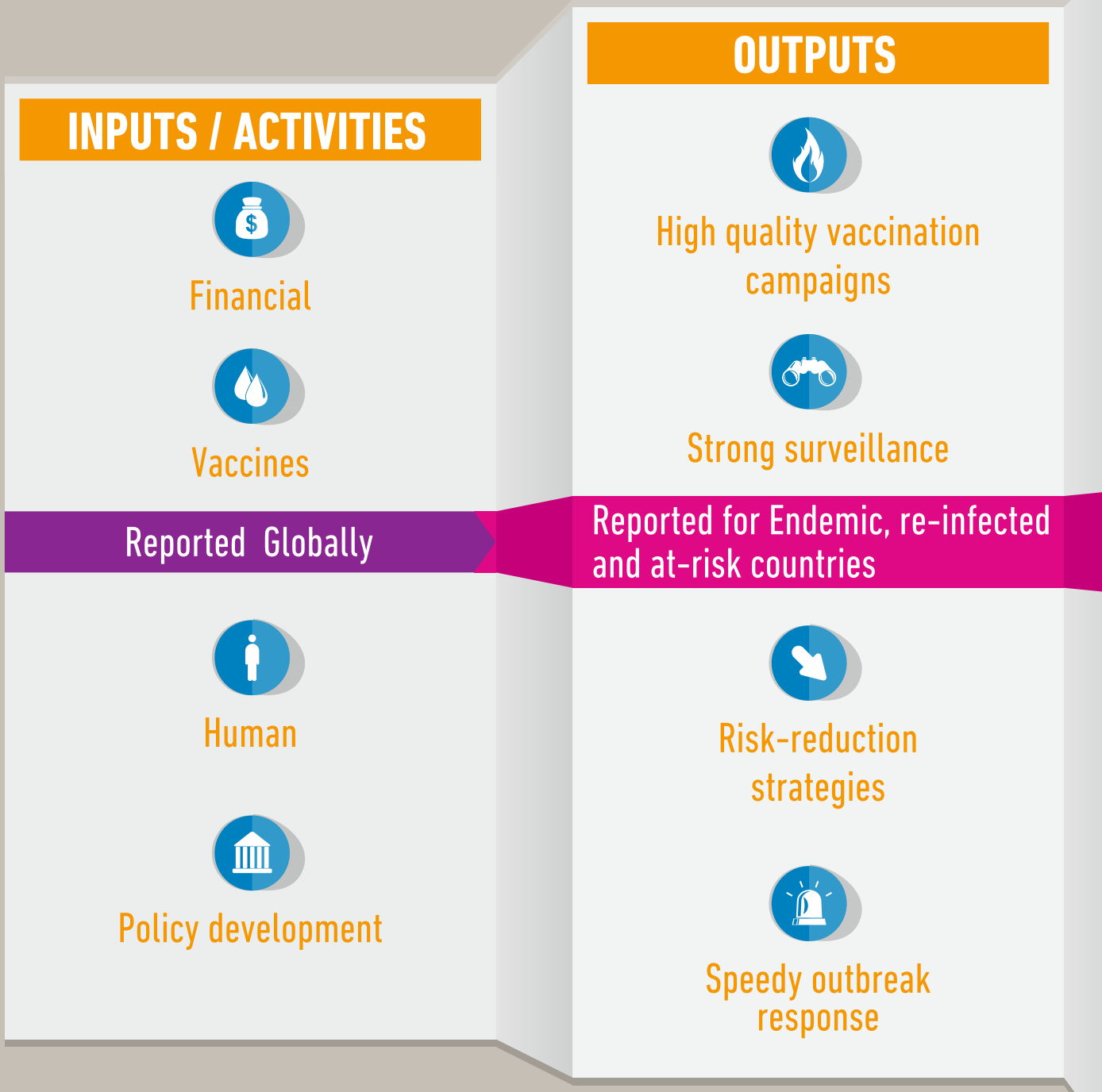
Financing the Endgame Plan

On 25 April 2013, the new Endgame Plan was unveiled at the Global Vaccine Summit in Abu Dhabi. In an extraordinary display of confidence and support, global leaders, donor nations and polio-affected countries pledged more than US$ 4 billion towards the projected US$ 5.5 billion cost over six years. They also called upon the donor community to commit, up front, the additional US$ 1.5 billion needed to fully resource the Plan.

New monitoring framework: work in progress

Measuring progress towards a polio-free world

A monitoring framework was developed to measure progress against the key objectives of the Polio Eradication and Endgame Strategic plan 2013-2018. Developments in 2013 and feedback from stakeholders has enabled further refinement of this monitoring framework to better capture the outcomes, outputs and activities needed to ensure polio eradication, with a clear results chain, and indicators at each level of the framework. The refined monitoring framework is now being used to track progress and is featured in a semi-annual donor report.



OUTCOMES

High population immunity

Reported for Endemic, re-infected and at-risk countries

High virus detection capacity

Low risk of re-introduction

IMPACT

A polio-free future for children everywhere

POLIO GLOBAL ERADICATION INITIATIVE

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2013 ANNUAL REPORT

OBJECTIVE 1 | POLIOVIRUS DETECTION AND INTERRUPTION

In 2013, the Global Polio Eradication Initiative (GPEI), bolstered by programmatic improvements and unprecedented global commitment, moved ever closer to a polio-free world.

The programme made important progress toward the Endgame Plan's first objective of stopping transmission of polioviruses. The three endemic countries restricted the virus to fewer regions than ever before, even as the programme faced serious challenges to reaching and vaccinating children. At the same time, outbreaks occurred in five previously polio-free countries, reinforcing the urgency of ending transmission in these final reservoirs.

In 2013, there were 416 wild poliovirus cases in eight countries, compared to 223 cases in five countries in 2012. This increase was largely due to outbreaks in countries that had previously stopped polio transmission, as a result of international spread of polioviruses from Nigeria into the Horn of Africa, and from Pakistan into the Middle East - with cases in the Syrian Arab Republic, which in 2014 spread further to Iraq. Wild poliovirus originating from Pakistan was also detected in environmental samples collected in Israel and West Bank and Gaza Strip. A polio outbreak was detected in October 2013 in Cameroon and in early 2014 spread further into previously polio-free areas of the country and to neighbouring Equatorial Guinea.

For the first time in the history of the GPEI, in 2013 all cases caused by a wild virus were due to a single serotype, type 1. The most recent WPV3 case dates back to November 2012, from Nigeria. Cases due to circulating vaccine-derived poliovirus type 2 declined by 4% compared to 2012.

In Nigeria and Afghanistan, wild poliovirus declined from 2012 to 2013 by 57% and 62% respectively. By contrast, in Pakistan, cases rose by 60% in 2013, compared to 2012, with the majority of cases reported from Federally Administered Tribal Areas (FATA) and Khyber Pakhtunkhwa (KP), in Pakistan.

Endemic Countries: Progress and Challenges

The proportion of children who received polio vaccine in the endemic countries increased in 2013 compared to 2012. National polio eradication emergency action plans drove operational improvements in many districts where performance, i.e. coverage during supplementary immunization activities (SIAs) had historically been poor. As a result:

- In Afghanistan, cases declined by 62% in 2013 compared to 2012 (14 compared to 37). Cases overwhelmingly occurred in Eastern Region and were mainly linked to cross-border transmission of poliovirus from neighbouring Pakistan
- Cases in Nigeria declined by 57% from 2012 to 2013 (from 122 to 53). Of note, of Nigeria's 53 cases, only six were reported since September, despite the traditional 'high season' for poliovirus transmission
- Pakistan was the only endemic country where cases increased, from 58 in 2012 to 93 in 2013. 76 of these are from FATA and KP

The major challenges faced in 2013 include:

- The bans on immunization campaigns in North Waziristan, FATA, and the continued targeting of vaccinators in KP and high-risk areas of Karachi, Sindh in Pakistan
- Ongoing military operations in Khyber Agency (within FATA) of Pakistan
- Insecurity in Eastern Region, Afghanistan and Borno, Nigeria
- Inability to access all children in key areas of south-central Somalia
- Active conflict in Syrian Arab Republic
- Chronic gaps in programme performance in Kano state, Nigeria

NIGERIA

A health worker vaccinates a Nigerian child against polio. © UNICEF/L. Andriamasinoro

Situation analysis and main challenges

The attainment of a polio-free Africa is realistically achievable in the near-term – success in Nigeria holds a major key to this.

Nigeria made significant progress in reducing the number of cases due to wild poliovirus (WPV), restricting geographic spread, reducing the number of children missed during vaccination campaigns, and reducing the genetic clusters of wild poliovirus transmission to four (compared to 12 in 2011 and eight in 2012). These improvements are the result of massive efforts by both the government and partners, and the establishment of national and state polio Emergency Operations Centres to fully implement the National Emergency Action Plan.

Despite these improvements, critical challenges remain. The country continues to be affected by co-circulation of both WPV1 and cVDPV2, and subnational surveillance gaps, meaning undetected circulation in some areas cannot be ruled out, as confirmed also by continued isolation of VDPVs from environmental samples in states not reporting polio cases.

Polio transmission is now primarily sustained due to substantial gaps in the quality of Immunization Plus Days (IPDs) activities in low-performing high-risk and very high-risk Local Government Areas (LGAs) of Kano state; and, compromised access to children in insecure areas of Borno state.

In the early part of 2014, strong progress was being seen, with a significant reduction in the number of cases,

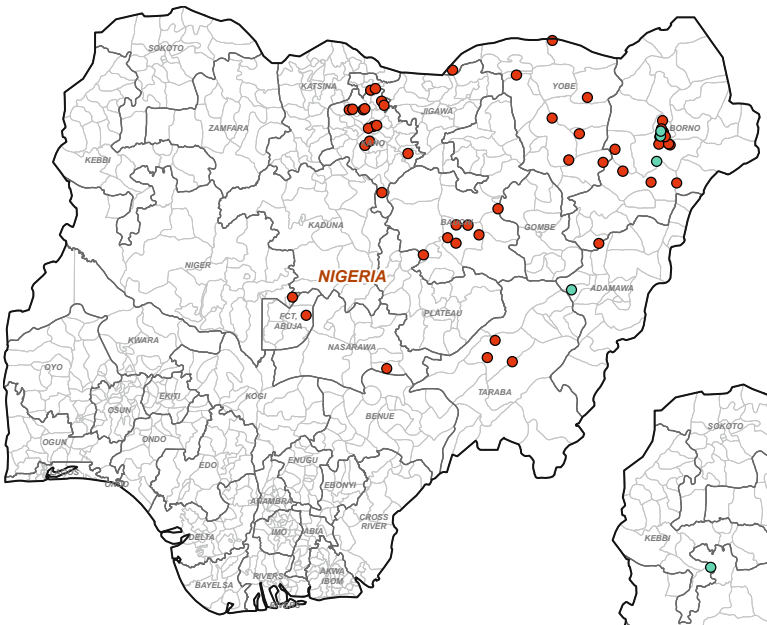
increase in children vaccinated and further decrease in infected areas. The quality of SIA improvements throughout continues to be verified through increased and more reliable use of Lot Quality Assurance Sampling (LQAS).

An accountability framework is being implemented to increase accountability both by partner agencies and government, for programme performance.

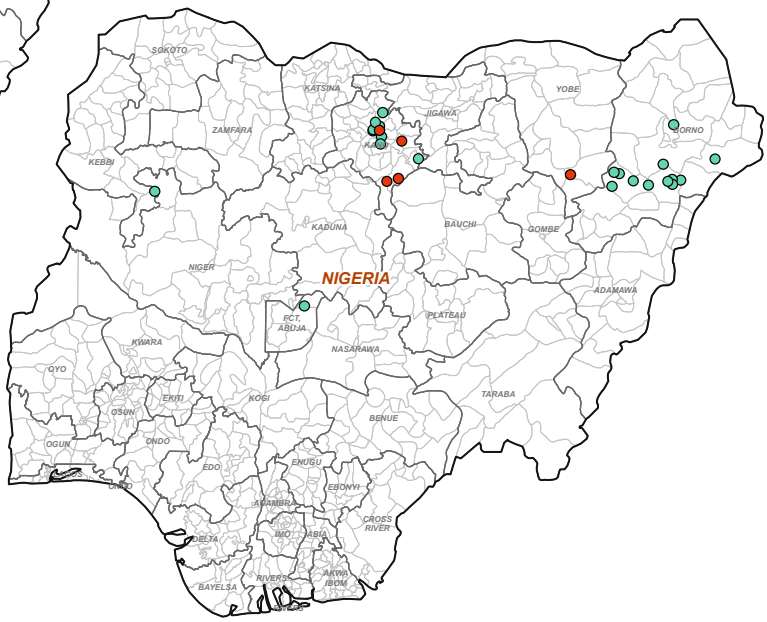
To more rapidly build population immunity, particularly in hard-to-reach and inaccessible areas, IPV was added in mid-2014 for the first time to OPV campaigns.

To increase community engagement and vaccine acceptance, health camps are regularly being established to offer OPV alongside other health interventions.

Polio cases 2013



Polio cases Jan-June 2014



- Wild Polio Virus Type 1
- Circulating Vaccine Derived Polio Virus Type 2

Subnational surveillance sensitivity

NPAFP RATE

>=4.0	2.00 - 3.99	1.00 - 1.99	<1

STOOL ADEQUACY

>=90	89.99 - 80.00	70.99 - 70.00	<70

2014 priorities and activities to address main challenges

Insecurity in some areas, remaining operational gaps in parts of Kano and waning political commitment are the major risks to the programme in 2014.

In 2014, the focus in Nigeria is on reaching more children in high-risk areas of Kano and in insecure areas of Borno while ensuring that children in polio-free areas remain protected. An aggressive vaccination campaign strategy needs to be implemented, using a tailored mix of trivalent OPV and bivalent OPV to address the circulation of both WPV1 and cVDPV2.

An upsurge in technical support is assisting the country to fill residual surveillance gaps and environmental surveillance is being expanded. Critically, ownership and oversight is also being strengthened at the local and national levels in order to minimize disruption in the lead-up to the country's elections scheduled for early 2015. The Independent Monitoring Board has advised the President of Nigeria to bring together political candidates from all levels and all parties, together with traditional and religious leaders, to pledge their support for polio eradication ahead of the forthcoming election, "to protect the polio eradication program from disruption and politicization, returning it to its humanitarian role in saving the lives of Nigerian children".

PAKISTAN

Two drops for life: protecting children everywhere. © UNICEF/NYHQ2011-0183/Zaidi

Situation analysis and main challenges

Pakistan is the only endemic country to see an increase in cases in 2013 compared to 2012. Cases increased by 60% (from 58 cases to 93 cases). Of Pakistan's 93 cases in 2013, 60 had onset of paralysis between September and December. This trend continued into the first half of 2014, with 88 cases reported by end-June.

Additionally, the country is affected by a persistent circulating vaccine-derived poliovirus type 2 (cVDPV2) outbreak (since August 2012), resulting in 45 cases in 2013 and 16 cases in 2014 (by end-June).

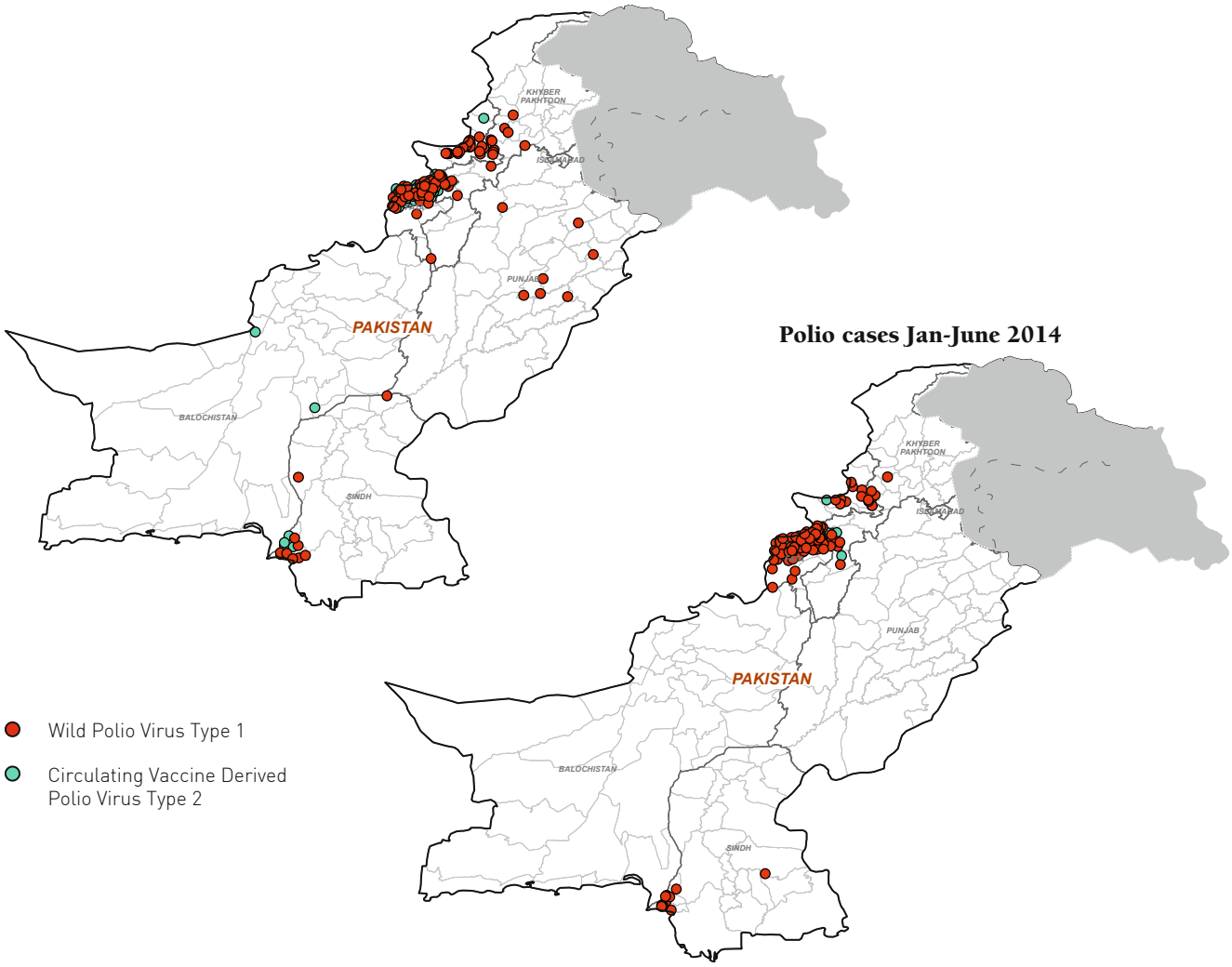
Despite the increase in cases, wild poliovirus transmission continues to be geographically restricted in the country, thanks to the implementation of the national emergency action plan. Traditional reservoir areas such as northern Sindh, southern Punjab and Quetta, Balochistan, are largely free of indigenous transmission.

Instead, the vast majority of polio cases in Pakistan in 2013, and every case in the first quarter of 2014, were reported in areas facing barriers to vaccination such as insecurity, attacks on health workers and a ban on polio immunization. The bulk of cases (both WPVs and cVDPV2s) are in infected areas of FATA and Khyber Pakhtunkhwa (KP). This has resulted in uncontrolled transmission of both WPVs and cVDPVs, and virus spread to polio-free areas within Pakistan and internationally.

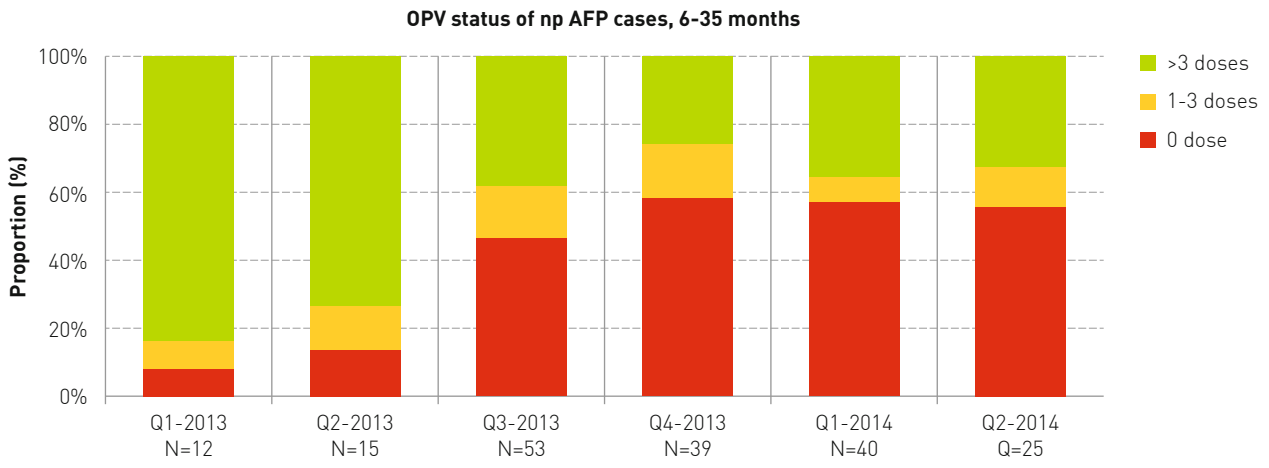
At the end of June 2014, FATA and KP represented the most infected area in the world, with 129 cases reported since September 2013 (out of a total of 241 cases worldwide in that period).

Targeted attacks on health workers in high-risk towns of greater Karachi, Sindh (Gadap, Baldia, Gulshen, Iqbal, Bin Qasim), and operational challenges in Quetta, Balochistan, has also resulted in a vaccination gaps among high-risk populations. Environmental samples taken from Quetta in 2014 have tested positive to virus genetically linked to virus detected in samples taken in December 2013.

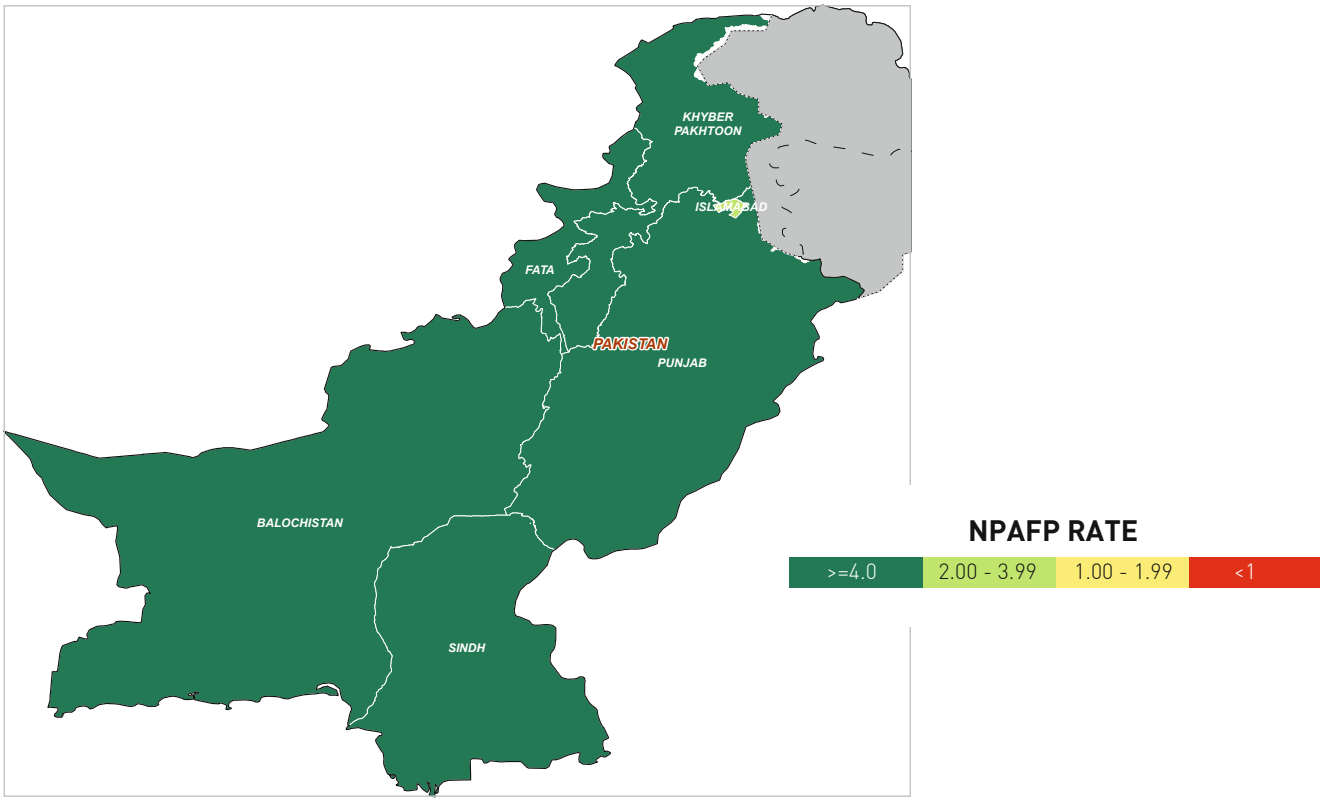
Polio cases 2013

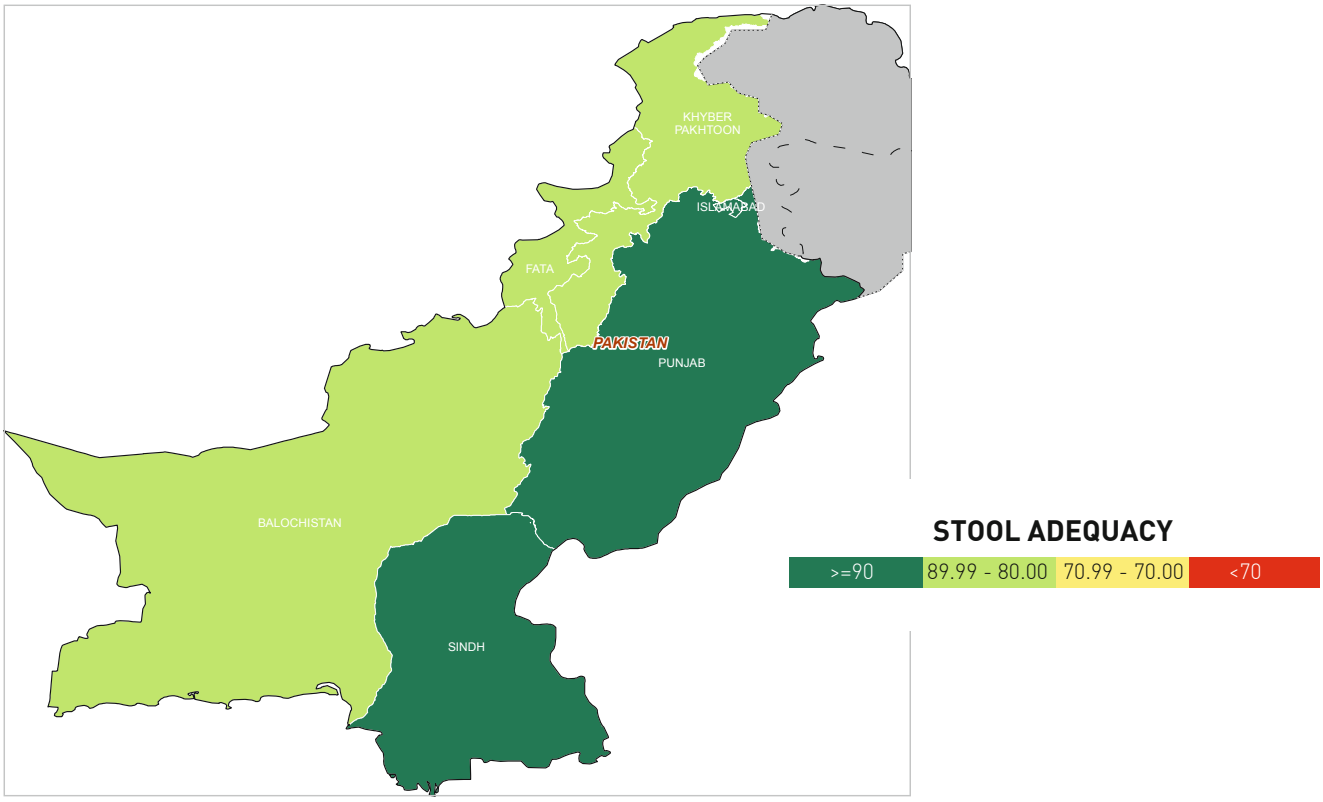


Declining vaccination coverage in FATA



Surveillance sensitivity





2014 priorities and activities to address main challenges

A major focus in 2014 is on finding ways to work around the barriers which, in 2013, prevented children from being reached with polio vaccine. For example, new, one-day vaccination campaign health drives are being implemented to reach populations in need with polio vaccine and other health interventions, and is now being expanded to central Khyber Pakhtunkhwa, Rawalpindi, and further to Karachi. Negotiating access to areas which are currently inaccessible to vaccinators will continue to be a key focus in 2014 and, in the meantime, vaccination at transit points is reaching children coming and going from FATA and other affected areas. The mass displacement of people from North Waziristan (which has been inaccessible to vaccinators for two years) is seen as both an opportunity and a challenge: while those displaced could potentially pass on the virus, the programme is now reaching previously inaccessible children – some for the first time.

Improving the reach and effectiveness of mass vaccination campaigns in accessible areas is also a priority. As part of this, the country is using a targeted mix of tOPV, bOPV and, where appropriate, IPV to put a stop to the transmission of both WPV and cVDPV. Multiple campaigns are being held in quick succession in order to rapidly boost population immunity, while social mobilization activities continue to boost population demand. In Khyber Pakhtunkhwa, the entire program has been rebranded to maximise impact on the ground. Polio vaccine is also increasingly being delivered as part of broader health packages.

Stemming the international flow of polio from Pakistan is another priority, and the country is currently implementing a series of Temporary Recommendations made by the WHO Director-General in May 2014 under the International Health Regulations (2005). As a further emergency measure, the Prime Minister's Monitoring and Coordination Cell for Polio Eradication is in the process of being strengthened. The renewed monitoring cell will bring together a multi-disciplinary and multi-stakeholder team to run the country's polio eradication program with the urgency required of an emergency operation, and will work in close collaboration with provincial task forces and emergency operations centres.

AFGHANISTAN

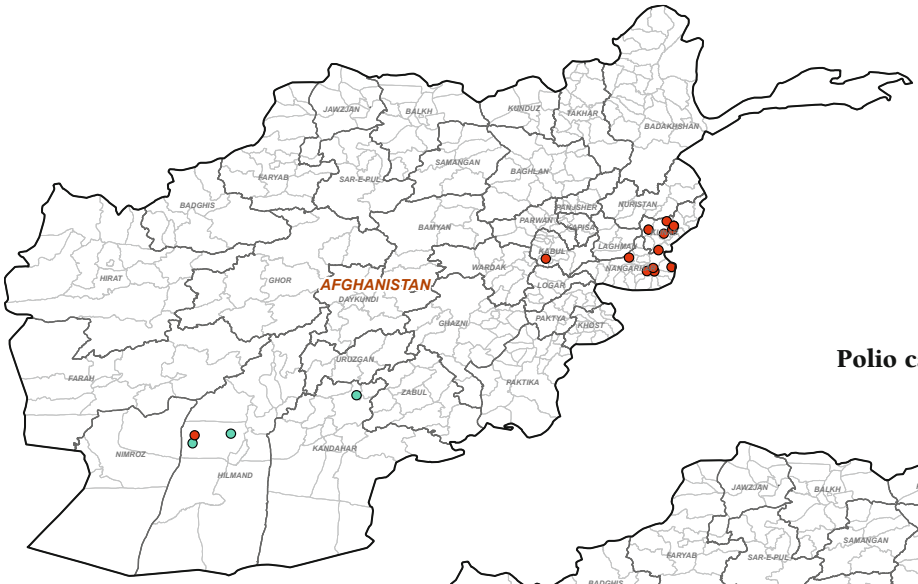
Child receiving polio vaccine. © WHO/ C. Black

Situation analysis and main challenges

Afghanistan achieved a 62% reduction in cases in 2013 compared to 2012, and the bulk of the country's cases were in the country's Eastern Region, linked to cross-border transmission with Pakistan. Significant progress has been achieved in the country's Southern Region, previously the main reservoir area in the country, where endemic transmission has been significantly curtailed.

The primary risks to Afghanistan's polio eradication effort relate to cross-border virus transmission with Pakistan, ongoing vaccination gaps in key areas of Southern Region and increasing operations in Eastern Region.

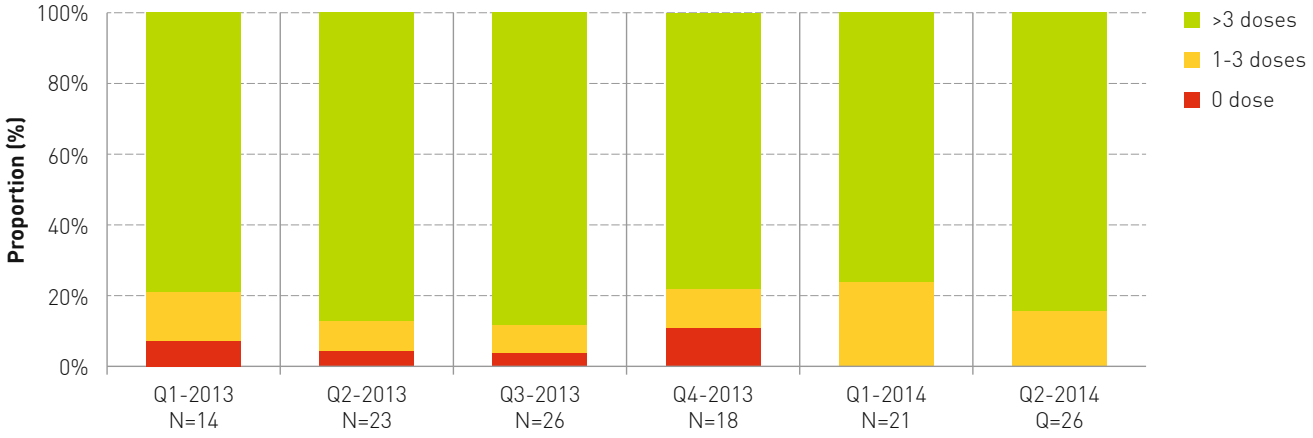
Polio cases 2013



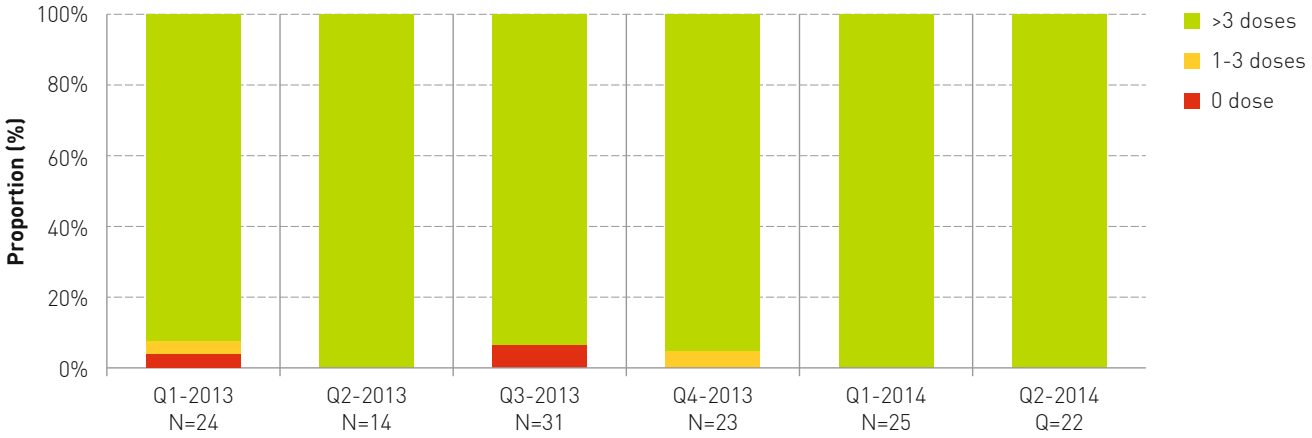
Polio cases Jan-June 2014

- Wild Polio Virus Type 1
- Circulating Vaccine Derived Polio Virus Type 2

OPV status of non-polio acute flaccid paralysis (AFP) cases in 11 low-performing districts (LPDs) in Southern Region



OPV status of non-polio AFP cases in Eastern Region



2014 priorities and activities to address main challenges

The number one priority in Afghanistan in 2014 is to interrupt residual endemic transmission in Southern Region. This will be achieved through a combination of training, social mobilization, strengthened SIA monitoring and a re-visit strategy to ensure that fewer children miss out during each and every vaccination campaign. Following suspension of immunization in March 2014 in parts of Helmand province, Southern Region, immunizations resumed in August.

At the same time, the country is working to guard itself against repeated reinfection from its polio-exporting neighbour, Pakistan. Management issues in Eastern Region are being addressed, while work is ongoing to more clearly identify and reach high-risk populations. Importantly, cross-border coordination with Pakistan is being reignited. Special strategies are focusing on reaching and immunizing refugees crossing the border from Pakistan's FATA region.

Finally, Afghanistan is focusing on protecting the polio-free status of the majority of the country. Disease surveillance is being strengthened and an aggressive mass vaccination campaign calendar is being followed (with buffers established to allow for potential disruptions during the election period). The country has also put in place a comprehensive outbreak strategy to respond to the confirmation of any polio case, anywhere and from any source, within four weeks.

Environmental surveillance, trialled on a small scale since September 2013, will be significantly expanded.

It will be critical to ensure the political transition in 2014 does not adversely affect the polio eradication efforts in the country.

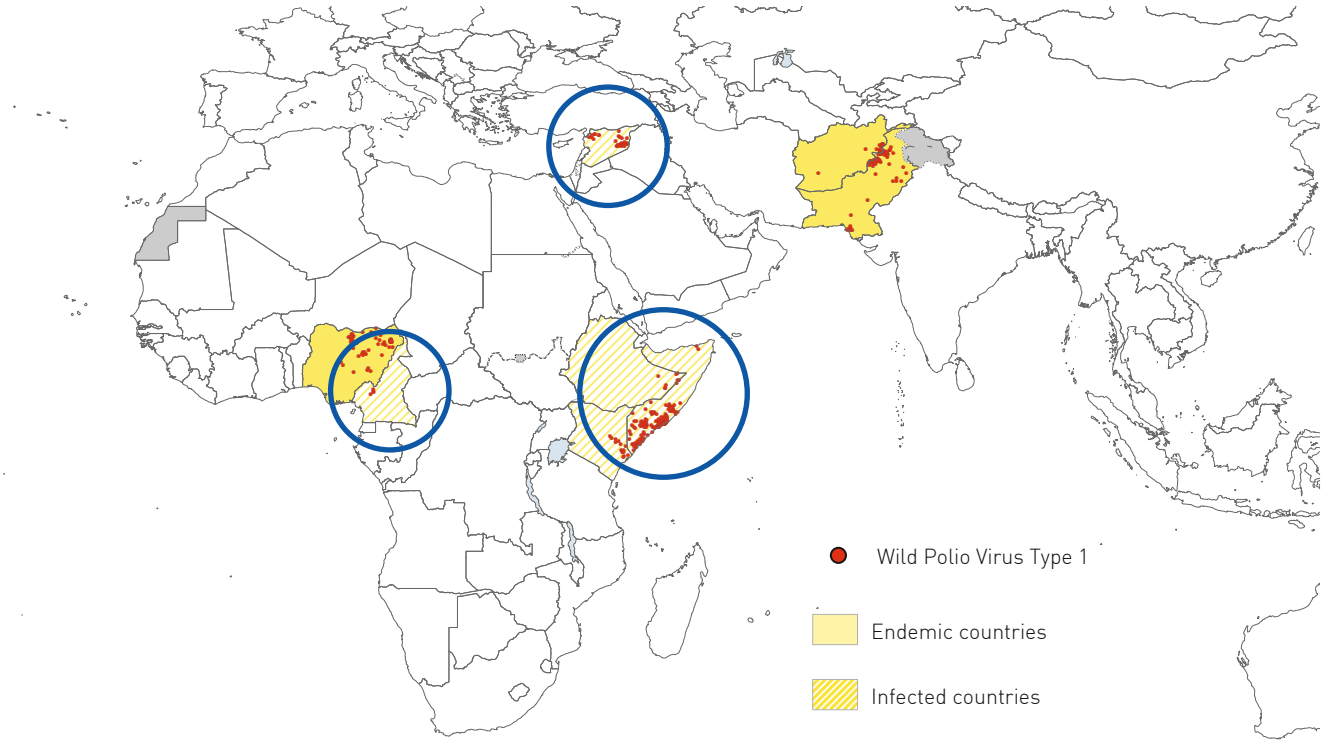
EFFECTIVE OUTBREAK RESPONSE

As of end-June 2014, outbreaks are ongoing in central Africa (with confirmed cases in Cameroon and subsequent cases in Equatorial Guinea), the Horn of Africa (with cases confirmed in Somalia, Ethiopia and Kenya) and the Middle East (with cases confirmed in Syria and subsequently in Iraq, and WPV1-positive environmental samples collected in Israel and West Bank and Gaza Strip).

Comprehensive regional emergency outbreak response plans are being implemented to rapidly stop all three outbreaks.

A major constraint in 2013 was the inability to access all children during outbreak response in key areas, notably south-central Somalia and some areas in the Middle East, including parts of Syria. Additionally, the risk to other areas across the region is extremely high, due to large-scale population movements associated with all three outbreaks (and in particular with the Horn of Africa and Middle East outbreaks).

Three outbreak areas - cases in 2013



Situation analysis and main challenges

Middle East

Syrian children are vaccinated against polio at the Za'atari refugee camp in Jordan. © Rotary International/J.M. Giboux

Following isolation of WPV1 of Pakistani origin in environmental samples in Egypt (in December 2012), Israel and the West Bank and Gaza Strip in 2013, polio cases due to this strain were confirmed in October in Deir Al Zour province, Syrian Arab Republic.

Within days of confirmation that wild poliovirus of Pakistani origin had found its way to Syria, Ministers of Health from across the region declared polio a regional public health emergency on 30 October. A multi-country strategic plan for the outbreak was developed to reach more than 22 million children multiple times across seven countries. This is the largest-ever polio immunization response across the Middle East, and includes vaccination for refugees registered living inside and outside of registered camps, as well as host communities.

WHO and UNICEF continue to coordinate with all humanitarian actors in all areas, whether government-controlled or contested, to ensure children are reached during outbreak response. Coverage in Syria continues to improve, from reaching approximately 2 million children during the first campaign in October, to more than 3 million children in March 2014. By end-June 2014, Syria had not reported a case since 21 January 2014, however the virus had spread to cause two cases in Iraq, the most recent of which had onset of paralysis on 7 April 2014. Phase I of the regional outbreak response has been concluded and a Phase II response is currently under way.

Cameroon and central Africa

In Cameroon, an outbreak first detected in October 2013 continued into 2014, with further cases and geographic expansion of infected areas. Due to continued poliovirus circulation in Cameroon, gaps in surveillance and an influx of vulnerable refugee populations from Central African Republic, WHO subsequently elevated its risk assessment of international spread of polio from Cameroon to very high.

In April 2014, confirmation of WPV1 cases in Equatorial Guinea was received, linked to the Cameroon outbreak. A positive environmental sample taken in Brazil in March 2014 was also found to be linked to virus found in Equatorial Guinea. Emergency outbreak response is ongoing in Cameroon and Equatorial Guinea, as well as neighbouring areas, notably Central African Republic, Gabon and the Republic of Congo.

Horn of Africa

Children in Somalia proudly show off their marked fingers confirming they have been vaccinated with OPV. © WHO/O. Mach

In May 2013, a WPV1 case was confirmed in Banadir, Somalia, the first case of polio in the country since 2007. The virus spread rapidly eventually causing 194 cases in Somalia, 14 cases in Kenya (none since July) and nine cases in Ethiopia in 2013. The outbreak continued into 2014, with an additional case confirmed in Ethiopia and four in Somalia.

Unprecedented outbreak response across the Horn of Africa rapidly built immunity levels, and stopped the transmission in its epicentre, Banadir. However, access to as many as 500 000 children in south-central Somalia continues to be restricted, and critical gaps in quality of outbreak response remain in Somali region of Ethiopia.

2014 priorities and activities to address main challenges

In the Horn of Africa in 2014, the cross-regional outbreak response continues, with a particular focus on increasing vaccination coverage among mobile populations. Efforts are also being directed at increasing the quality of vaccination campaigns in the Somali region of Ethiopia. The number of transit point vaccination teams is being scaled up, in particular around inaccessible areas of south-central Somalia, and there is continued emphasis on ensuring that high-risk polio-free populations (in South Sudan and Yemen, for example) will receive the protection of polio vaccine.

Phase II of the outbreak response in the Middle East is building on the gains achieved in the first phase. A particular focus of this second phase is on improving surveillance and on working with all humanitarian actors and UN agencies to reach the children who have continually missed out on previous campaigns. The tools and tactics developed to reach children affected by the Syrian crisis with polio vaccine will also increasingly be used to reach them with other crucial vaccines and health interventions. National consultants are being hired to help improve program performance despite insecurity in Iraq.

Meanwhile, in central Africa in 2014, lessons from the Middle East outbreak are being applied to bring countries and partner agencies together to fully implement comprehensive outbreak response activities, including focusing on reaching hard-to-reach areas and mobile populations. Subnational surveillance gaps will be recognized and remedied, and gaps in operational quality will be addressed through a comprehensive microplan training program.

In line with the recommendations of the Independent Monitoring Board in its May 2014 report, GPEI is strengthening outbreak response capacity. The first major task will be to substantially strengthen standard operating procedures to ensure the consistent quality of the response to any future outbreaks. A decision paper on the topic was endorsed by the Polio Oversight Board on 20 June 2014 which included a series of recommendations such as the management of outbreaks as a series of zones, defined by level of risk.

Mother and child in the Democratic Republic of the Congo, one of ten countries at high risk of polio outbreaks. © WHO/ C. Lamoureux

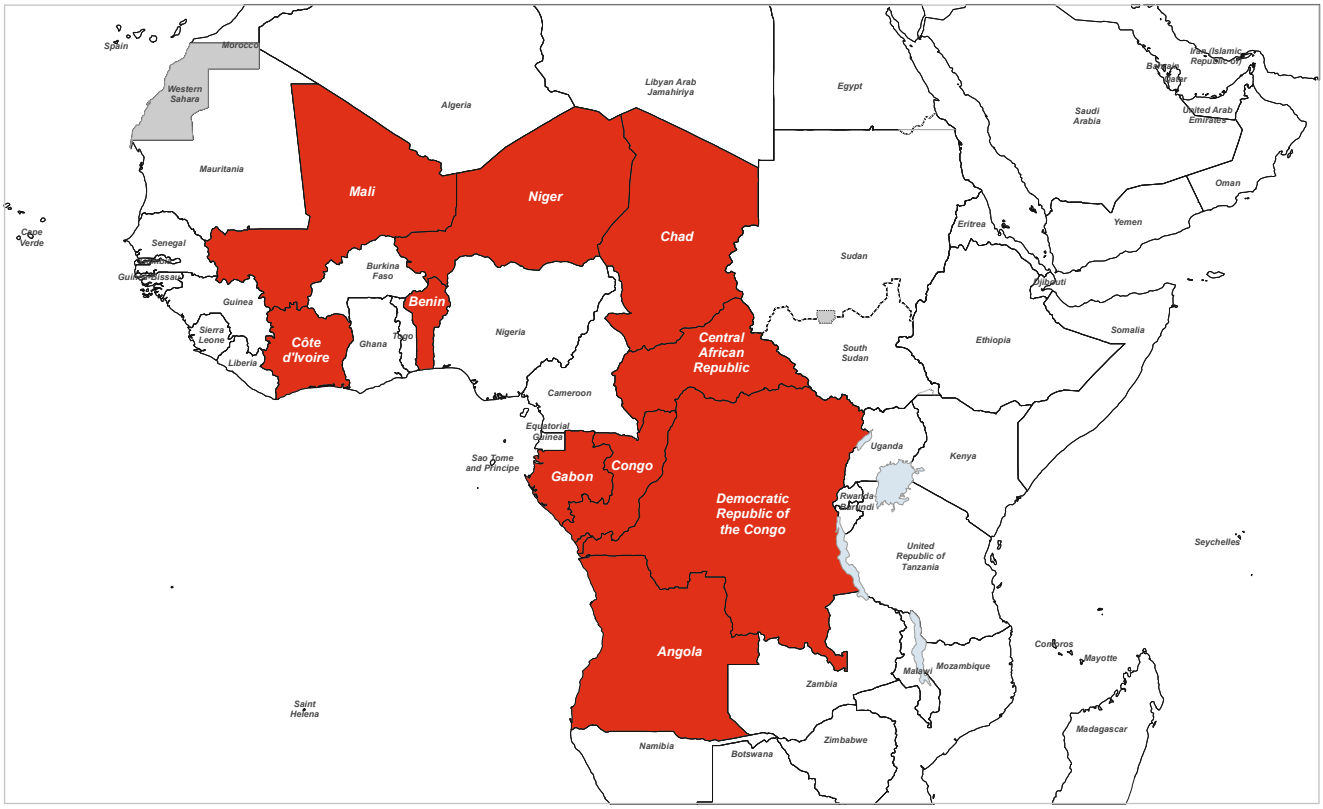
PROTECTING POLIO-FREE AREAS

Until polio has been eradicated from the remaining infected areas, outbreaks will continue to be an ever-present threat.

The GPEI partnership regularly reviews areas at particular risk of re-infection, based on historical evidence of poliovirus spread, geopolitical and socioeconomic linkages to infected areas, and overall population immunity levels. A list of 'high risk' countries particularly vulnerable to polio outbreaks has also been compiled, and measures implemented to address the risks. A support team will be designed for each new 'high risk' country and countries assessed to be at this higher level of risk will be prioritised for the allocation of global resources and efforts.

In addition, a set of Temporary Recommendations have been made by the WHO Director-General under the International Health Regulations (2005), effective as of 5 May 2014, to help limit international spread. Under these recommendations, all residents and long-term visitors to polio-exporting countries (as of end July 2014: Cameroon, Equatorial Guinea, Pakistan and Syria) should receive a dose of polio vaccine, and proof of vaccination, at least four weeks and up to 12 months before international travel. Other polio-affected countries are also advised to encourage vaccination of their travellers prior to departure.

'High risk countries' – countries particularly vulnerable to polio outbreaks



as of June 2014

NATIONAL AND REGIONAL SUPPORT

Meeting of Islamic scholars on polio eradication in March 2013. © WHO/Bassem JH

To address issues of inaccessibility, community leaders took the lead in building local and international support for polio vaccination in 2013.

Leadership from the Islamic community was most notable. In March 2013, a consultation of senior Muslim scholars took place in Egypt, convened by the Grand Imam of Al-Azhar, and established the Islamic Advisory Group for polio eradication. The group noted the religious duty of parents to protect their children from disease, reaffirmed the safety and quality of the vaccine, the impartiality and apolitical nature of vaccination campaigns, and the obligation to safeguard health workers. In December, prominent Pakistani religious scholar Maulana Sami-ul-Haq issued a fatwa urging parents to immunize their children.

In February 2014, the world's leading Islamic scholars, led by the Grand Imam of the Holy Mosque of Mecca, stated that protection against diseases is obligatory and admissible under Islamic Shariah, and that any actions which do not support these preventive measures and cause harm to humanity are un-Islamic. The scholars adopted the 'Jeddah Declaration' and a focused six-month Plan of Action to address critical challenges facing polio eradication efforts in the remaining polio-endemic parts of the Islamic world: a ban on vaccinations and lack of access to children in some areas, deadly attacks on health workers, and misconceptions by the community about mass vaccination campaigns.

Nurturing national ownership in 2014

The overriding priority in 2014 is to ensure that operations are significantly increased to reach those children who had remained inaccessible, and to continue to address chronic quality problems. At the same time, more focus will be on implementing additional measures to limit the renewed international spread of poliovirus.

Key to achieving this requires the full national ownership of the eradication programme in all infected countries, with deep engagement of all relevant line ministries and departments, and the holding of local authorities fully accountable for polio eradication activities. Accessing and vaccinating children in insecure and conflict-affected areas will in addition require the full engagement of relevant international bodies, religious leaders and other actors with influence in such settings. Collaboration with broader humanitarian efforts are being enhanced, and area-specific operational plans developed to address local risks and contexts.

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OBJECTIVE 2 | IMMUNIZATION SYSTEMS STRENGTHENING AND OPV WITHDRAWAL

Since mid-April 2013, GPEI core partners and Gavi, the Vaccine Alliance, have been coordinating work on objective 2 through the Immunization Systems Management Group (IMG). The IMG aims to use the complementary strengths of each agency to ensure that, in preparation for the removal of type 2 OPV from routine immunization schedules (i.e. the trivalent OPV to bivalent OPV switch) and eventual OPV withdrawal, inactivated polio vaccine (IPV) introduction is achieved in the context of existing vaccine introduction plans for other vaccines. At the same time, the IMG's work focuses on supporting the strengthening of routine immunization services in ten focus countries, through the use of polio-funded human resources and greater coordination between GPEI, Gavi and routine immunization programmes.

Supporting IPV introduction

Several critical global policies and processes were adopted in 2013 to support the introduction of at least one dose of IPV into routine immunization systems – an important strategy to mitigate risks associated with withdrawal of type 2 OPV. The Strategic Advisory Group of Experts on immunization (SAGE) issued its recommendation that all countries introduce at least one dose of IPV into routine immunization schedules before the end of 2015, ideally to be administered at or after 14 weeks of age, in addition to existing OPV doses. SAGE recommended that all countries which currently use only OPV should have an IPV introduction plan in place by end-2014.

The board of Gavi, the Vaccine Alliance, at its November 2013 meeting, approved support to IPV introduction for all 73 Gavi eligible and graduating countries. This support includes a streamlined application process, full support for one dose of IPV (with no requirement for co-financing) and a one-off introduction grant of $0.80 per child.

Furthermore, UNICEF Supply Division issued a tender for the purchase of up to 580 million doses of IPV, covering both Gavi and middle income country markets. The tender aimed to achieve affordable prices, appropriate packaging and presentation options, a sustainable supply and a healthy market. In February 2014, UNICEF announced a procurement price of €0.75 per dose (approximately US$ 1 at current exchange rates) in ten-dose vials for Gavi-eligible countries and a price of €1.49-2.40 per dose (approximately US$ 2.04-3.28 at current exchange rates) for middle-income countries. UNICEF also awarded volumes for five-dose vials at a price of US$ 1.90 per dose for both low- and middle-income countries, expected to be available from the fourth quarter of 2014.

Strengthening routine immunization

A joint programme of work was initiated with Gavi, the Vaccine Alliance, in 2013 to support the strengthening of routine immunization systems in the ten priority countries identified in the Endgame Plan, which contain most of the world's under-immunized children and have a substantial human resource infrastructure funded by the GPEI (Afghanistan, Angola, Chad, the Democratic Republic of the Congo, Ethiopia, India, Nigeria, Pakistan, Somalia and South Sudan). This programme of work capitalizes on Gavi, the Vaccine Alliance's investments in health systems strengthening and the substantial technical assistance deployed through the GPEI. In 2013, the immunization plans in six of these countries were reviewed and revised to align these resources (Chad, the Democratic Republic of the Congo, Ethiopia, India, Nigeria and Pakistan).

Preparing for the tOPV to bOPV switch

In 2013, the IMG continued preparatory work for the trivalent OPV to bivalent OPV switch. Five criteria were adopted for gauging readiness for the withdrawal of type 2 OPV globally as early as 2016:

1. Introduction of at least one dose of inactivated polio vaccine (IPV) in countries currently using OPV only;
2. Access to a bivalent OPV licensed for routine immunization;
3. Implementation of surveillance and response protocols for type 2 poliovirus (including constitution of a stockpile of monovalent oral polio vaccine type 2);
4. Completion of phase I poliovirus containment activities, with appropriate handling of residual type 2 materials; and
5. Verification of global eradication of WPV2.

The trigger for the trivalent OPV to bivalent OPV switch will be the absence of all persistent cVDPV type 2 for at least six months.

Type 2 outbreak response principles were endorsed by the SAGE in November 2013. It was decided that outbreak response should utilize both monovalent OPV type 2 and IPV to rapidly boost and establish population immunity around the outbreak response zone to prevent the emergence of cVDPV. The use of mOPV2 is needed to induce intestinal immunity among those who have not been vaccinated against type-2 previously.

2014 plans

All WHO and UNICEF regional offices have begun briefing countries on IPV introduction and routine immunization strengthening, including specific sessions on IPV introduction at EPI manager and regional working group meetings in early 2014. By mid-2014, 82 of 126 OPV-only using countries had plans in place for introduction of IPV in 2015.

In January 2014, a joint letter to the ministries of health of all OPV-only using countries was sent by the WHO Director-General, the UNICEF Executive Director, and, where applicable, Gavi, the Vaccine Alliance CEO, highlighting the importance of IPV introduction and outlining the SAGE recommendation on IPV introduction schedules and planning timelines. And, in June 2014, the Polio Oversight Board endorsed the provision of time-limited financial support to non-Gavi countries, based on level of need and risk of re-infection. Work continues to develop and license new products and approaches for inactivated poliovirus vaccine, which may contribute to further reductions in the cost of inactivated poliovirus vaccine for the medium-term (beyond 2018).

To support country decision-making and introduction planning, mapping of current regulatory status of IPV and regulatory processes in OPV-only using countries is under way. Work to assess cold chain capacity and readiness continues, with a focus on Tier 1 and 2 countries as well as potential early introducers. This work will help map out technical support needs and prioritization of efforts to ensure all countries can meet the requested timelines.

In addition, WHO is working to speed up the bOPV licensure process ahead of the tOPV-bOPV switch. This will involve a label change of bOPV in routine immunization programmes approved by the relevant national regulatory authorities and submission to WHO of a variation to the licensing file for WHO-prequalified bOPV. Subsequently, for all OPV using countries with their own licensure procedures, assistance will be made available by WHO for ensuring a timely switch from tOPV to bOPV for routine use.

Other ongoing work in 2014 in preparation for the tOPV to bOPV switch includes gathering data to verify the eradication of WPV2, cataloguing laboratory facilities handling and storing WPV2, expanding environmental surveillance for early detection of type 2 polioviruses and establishing a stockpile of 500 million doses of mOPV2.

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OBJECTIVE 3 | CONTAINMENT AND CERTIFICATION

It was a moment many had been waiting decades for: in March 2014, the WHO South-East Asia Region was successfully certified polio-free. Together, the four polio-free WHO Regions – the Americas, Europe, South-East Asia and the Western Pacific – account for 80% of the world's population.

No less important was the progress towards the laboratory containment of WPV. By the end of 2013, all WHO Member States had identified and created an inventory of laboratories and facilities storing WPV infectious and potentially-infectious material with the exception of two countries in the Eastern Mediterranean Region (Pakistan and Afghanistan) and 37 countries in the African Region. This is containment 'Phase 1' to prepare for the eventual containment of all wild and Sabin-derived live polioviruses, starting with containment of type 2 poliovirus in the context of the planned withdrawal of type 2 OPV (the 'tOPV to bOPV switch').

2014 Plans

The Global Commission for Certification of the Eradication of Poliomyelitis will be convened again towards the end of 2014 and will, in the context of preparations for the phased removal of OPV, review data from all six WHO regions to determine whether there is sufficient evidence to formally conclude that wild poliovirus type 2 (WPV2) has been eradicated globally.

The draft *Global Action Plan to Minimize Poliovirus Facility Associated Risk after Eradication of Wild Poliovirus and Cessation of Routine OPV Use (GAPIII)* outlines biorisk management requirements for handling and storing wild, Sabin and Sabin-derived polioviruses following type-specific eradication and sequential cessation of routine OPV use. A key objective for the agenda of work on poliovirus containment for 2014 will be to update *GAPIII* and align it with the risks, activities and strategies of the Endgame Plan, particularly with the phased removal of OPV timeline and the requirement for global access to IPV. The updated plan will be available for broad public consultation and specific consultation with vaccine manufacturers in 2014, with finalization expected by the end of the year.

The main objectives for polio-free certification for the second half of 2014 will be to assist the remaining countries in the WHO African Region to complete containment 'Phase 1' and progress towards regional certification in the Eastern Mediterranean and African Regions. A priority in all regions for 2014 will be to achieve and maintain certification-standard AFP surveillance to ensure the capacity to detect and respond to any cVDPV emergence following the planned phased removal of OPV.

In the Region of the Americas, a 'Commission for the confirmation of polio-free status in the Americas' has been re-established and a chairperson nominated; the new Commission is expected to initiate their review work in 2014.

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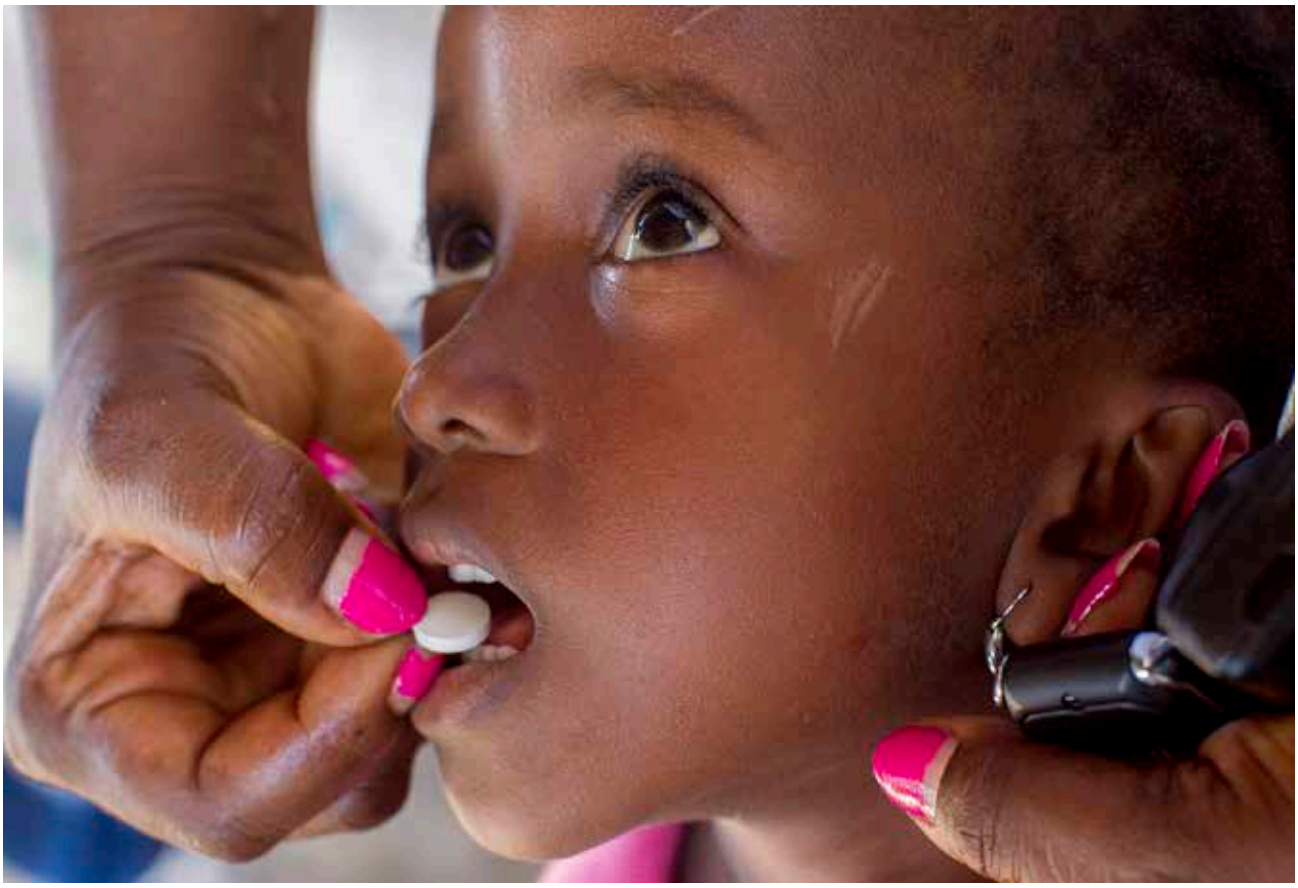
OBJECTIVE 4 | LEGACY PLANNING

The principle objective of the legacy planning work is to ensure that the investments made in the cause of polio eradication are built on to benefit other development goals, through a comprehensive programme of work to document and transition the GPEI's knowledge, lessons learned and assets.



A deworming pill is given to a child during a polio vaccination campaign. A key component of the legacy planning process is to ensure that polio resources can be used to deliver other crucial health measures. © Rotary International/A. Henson

In 2013, the GPEI established the legacy planning working group to manage the development of legacy planning. This group, reporting to the Polio Steering Committee, currently has representatives from each of the core GPEI partners, but will consider expanding its membership as the work develops. The work plan developed by this group outlines the timeline for consultations and evidence base development that will feed into the key deliverable of the work: the Global Legacy Framework. The intention is to report this document to the World Health Assembly in May 2015. This approach was shared with the Polio Partners Group for their input in November 2013.

In addition, in late 2013, the GPEI sought the views of Member States on the development of the legacy planning work through the WHO Regional Committee Meeting (RCM) process, asking for input on three potential scenarios for legacy planning:

1. Programme closure, with documentation and dissemination of lessons and knowledge but no further utilization of GPEI assets and resources;
2. Programme closure with transition of GPEI lessons, assets and resources to benefit existing national, regional, global priority programmes; and
3. Programme closure with establishment of a new initiative that would utilize the lessons, assets and resources of the GPEI.

Although not all RCMs were able to fit discussion of legacy into their agendas, the Regional Committee for Africa indicated a preference for scenario two in order to preserve and benefit from the GPEI's legacy.

2014 Plans

Consultations

More in-depth consultations will be launched by the legacy planning working group during 2014. The purpose of these consultations will be to seek input into the overall direction of the legacy planning work, to understand how stakeholders view the capabilities of the programme and its knowledge and to steer the legacy working group in directions that could be of benefit to other health priorities.

As part of these consultations, the legacy working group will engage with health initiatives and financiers who have already expressed an interest in the polio legacy. This includes the World Bank and the MDG Health Alliance which have both expressed interest in exploring potential benefits of using polio resources beyond polio eradication. Other development initiatives, including those involved in efforts to strengthen health systems and routine immunization, will also be consulted.

Detailed legacy planning with countries will, in general, not take place until the global legacy framework has been developed (May 2015), not least because a guiding principle of the legacy work is not to distract countries from eradication efforts. However, there are countries with significant polio resources that could benefit from a transition of these resources to benefit other health priorities. The GPEI will, where appropriate, work with countries to develop transition plans. This work will be undertaken in conjunction and coordination with ongoing efforts under Objective 2 of the Endgame Plan to strengthen routine immunization using polio resources and knowledge.

The GPEI will also consult a selection of countries and individuals from polio-free regions. The lessons and knowledge of those that have eradicated polio and kept their countries polio-free will be an important contribution to the overall base of knowledge that the polio programme can share with other initiatives, countries and donors. Extensive mapping of assets and resources will be conducted.

Document lessons learned and capabilities

An important aspect of many of the consultations will be to present, discuss and refine the GPEI's initial thinking on the 'Lessons Learned' over 25+ years of the eradication initiative, and also the programme's 'Capabilities'. The legacy working group is putting together reporting on both aspects and will be sharing drafts for input with stakeholders, as and when they are developed. A notable achievement of the GPEI has been the ability to reach underserved communities with life-saving interventions.

Develop a Legacy Framework

The outcomes of the consultations and the documentation of lessons and knowledge will feed into the development of a draft global legacy framework. The framework will be designed to bring together all aspects of the legacy work, outline consensus on polio legacy, give indication of how polio resources and knowledge can benefit other health priorities and be a resource to countries in their own legacy planning.

Plan Long-Term Resourcing, including Staff

The legacy planning work will both feed into and be dependent on the long-term human resources planning of WHO and UNICEF – the two GPEI partners employing the most staff in the GPEI. Legacy planning will need to take into account the outcomes of resource planning (including staffing) for three discrete periods of the initiative, requiring different levels and focus of staffing and other resources:

1. Up to interruption of transmission (targeted for 2015);
2. Certification (2018/19); and
3. Beyond certification.

This will include the mainstreaming of essential functions into ongoing structures beyond eradication. Once these plans have been developed, those involved in legacy planning at the global, regional and country levels will be in a stronger position to plan the eventual transition of resources to other priorities as part of legacy planning.

FINANCING THE ENDGAME PLAN

World leaders stand in support of polio eradication at the Global Vaccine Summit in Abu Dhabi in April 2013 (Bill & Melinda Gates Foundation/J. Ose)

On 25 April 2013, the new Endgame Plan was unveiled at the Global Vaccine Summit in Abu Dhabi. In an extraordinary display of confidence and support, global leaders, donor nations, private philanthropists and polio-affected countries pledged more than US$ 4 billion towards the plan's projected US$ 5.5 billion cost over six years. They also called upon the donor community to commit, up front, the remaining US$ 1.5 billion needed to fully resource the Plan.

On 25 June 2013, Rotary International and the Bill & Melinda Gates Foundation announced an extension of their existing fundraising partnership. Under the new agreement, announced in Lisbon during the 2013 Rotary International Convention, the Gates Foundation will match, two-for-one, every new dollar Rotary commits to polio eradication up to $35 million per year through 2018. This followed the announcement, on 30 May 2013, by then Australian Prime Minister Julia Gillard and Foreign Minister Bob Carr, of an additional AUD$ 80 million towards the Plan, starting in 2015 (a pledge that was renewed by current Prime Minister Tony Abbott at Rotary's 2014 annual convention in Sydney in June 2014).

Throughout the remainder of 2013, the top priorities for the Initiative were to work with partners to convert the pledges into signed agreements and cash disbursements, and to secure the remaining US$ 1.5 billion. As of 1 February 2014, US$ 1.83 billion has been confirmed and US$ 3.13 billion pledged, reducing the overall gap for the 2013-2018 period to US$ 563 million.

The Polio Partners Group (PPG), co-chaired by the Canadian Ambassador and Permanent Representative to the United Nations in Geneva and the United Nations Foundation, continued to play a critical role in engaging development partners to ensure the necessary political commitment and financial resources to reach the goal of polio eradication. Two PPG meetings were held in 2013 at the Ambassadorial/senior official level, where stakeholders reviewed the implementation of the Plan and the current funding situation.

Contributions

In the South East Asia Region: Bangladesh (US$ 10 million) and **Nepal** (US$ 0.67 million) remained committed to co-finance activities in 2013, and partly as a result, saw their region certified polio-free in March 2014. As part of its increasing ownership of the polio eradication programme, the Government of **India** in 2013 undertook the funding costs for the procurement and distribution of polio vaccines and covered a wide range of operational costs. **In the Eastern Mediterranean Region:** For the first time, the Government of **Pakistan** also ensured significant financing of its programme by securing a loan from the Islamic Development Bank for up to US$ 227 million for 2013-2015. The principal amount of the loan will

be repaid by the Federal Government, while the interest payments will be paid by the Bill & Melinda Gates Foundation, provided loan conditionalities are met. Additionally, **Yemen** (US$ 2.96 million) and **Egypt** (US$ 1.74 million) co-financed their activities in response to the ongoing outbreaks in the Horn of Africa and the Middle East. **In the African Region: Nigeria** provided approximately US$ 23 million further to President Goodluck Jonathan's 2011 pledge made at the Commonwealth Heads of Government Meeting in Perth to provide up to US$ 30 million annually in 2012 and 2013. **Angola** provided US$ 6.54 million to fund its operations costs and to sustain its polio-free status.

Through its partnership with the Bill & Melinda Gates Foundation, the **Al Ansari Exchange** provided US$ 1 million to UNICEF for activities in Afghanistan.

Austria continued its long-standing support and provided US$ 64 000 to UNICEF for the outbreak response in Syria. Austria has contributed US$ 3.28 million since 2001.

Australia's new government approved the release of AUD$ 15 million as part of its 2011-2014 commitment of AUD$ 50 million and, at the Rotary International Convention in Sydney in June 2014, Prime Minister Tony Abbott made a renewed, AUD$ 100 million pledge for activities from 2014-2018. This pledge takes Australia's total funding commitment to AUD$ 130 million for the Endgame Plan, on top of US$ 17 million contributed prior to 2011.

The **Bill & Melinda Gates Foundation** provided an additional US$ 363 million in 2013 funding through supplemental grants to WHO and UNICEF as well as third party funding for the World Bank buy-down for Nigeria and Pakistan.

Brunei Darussalam provided US$ 50 000 as part of its second multiyear commitment of US$ 150 000 for the period 2011–2013. The Sultanate's total contribution for the period 2008–2013 is US$ 300 000. Brunei's funding was complimented by a contribution from SCB/Brunei through an innovative partnership with local schools called the "Polio Points Initiative", which went to assist UNICEF's social mobilization activities in Pakistan.

Canada disbursed approximately C$ 80 million for Afghanistan, Nigeria, sub-Saharan Africa and global activities against the new Endgame Plan, as part of multi-year arrangements under the Muskoka Initiative for maternal and child health and its C$250 million Vaccine Summit Commitment. Above and beyond its Vaccine Summit commitment, an *additional* C$ 1 million in humanitarian funding was contributed for Somalia to support the Horn of Africa outbreak. Canada, the fifth-largest public sector donor to the GPEI, has provided more than US$ 400 million by end-2013.

The **Central Emergency Response Fund (CERF)** responded quickly to funding appeals for the Horn of Africa outbreak, providing at total of US$ 4.65 million for WHO and UNICEF activities in Kenya, Somalia and Yemen. CERF has provided US$ 10.21 million to date. Other UN Humanitarian funds supporting the Horn of Africa and Middle East outbreaks included the **Emergency Response Fund for Yemen** (US$ 50 000), the **Emergency Response Fund for Syria** (US$ 50 000) and the **Common Humanitarian Fund for South Sudan** (US$ 623 000).

In addition to its role as a spearheading partner, the **US Centers for Disease Control & Prevention (CDC)** provided funding for OPV, operational costs and programme support to UNICEF and WHO. In December 2011, CDC activated its Emergency Operations Center (EOC) to scale-up CDC polio eradication activities in an emergency response mode for increased technical and management assistance in polio eradication priority countries. CDC continues to dispatch its epidemiologists, virologists and technical officers to assist polio-affected countries in implementing polio eradication activities. US Congressional appropriations to CDC for polio eradication in its 2013 fiscal year totaled US$ 105.49 million, of which US$ 85.71 million was allocated to WHO and UNICEF.

At the Vaccine Summit, His Highness General Sheikh **Mohammed bin Zayed Al Nahyan**, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces pledged a donation of AED 440 million (US$ 120 million) to support efforts to eradicate polio over the next five years, of which US$ 12 million was disbursed for Somalia and South Sudan to support the Horn of Africa outbreak response. The Crown Prince has provided US$ 29 million, including US$ 17 million in 2011 for Afghanistan.

Estonia made a contribution of €20 000 to UNICEF to support activities in Afghanistan. This is the second contribution for Estonia.

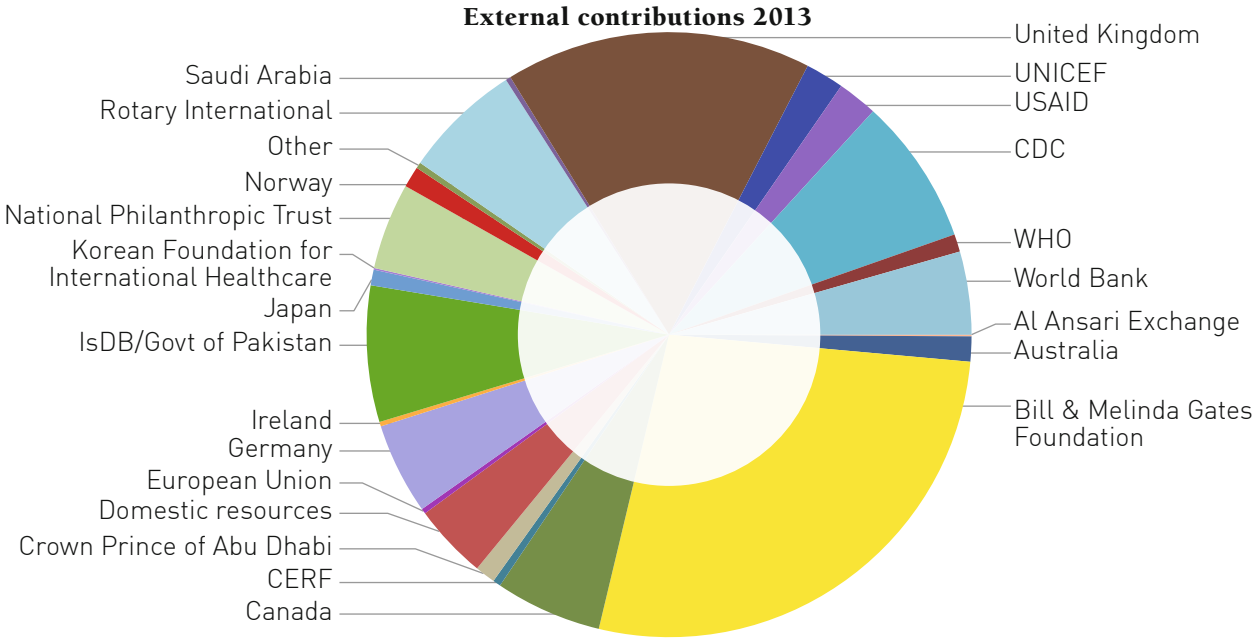
The **European Commission through ECHO** released €2.3 million to UNICEF to support Ethiopia, Kenya and Somalia activities as part of the Horn of Africa outbreak response. The European Commission is the sixth largest

public-sector donor to the GPEI, with contributions totaling US$ 227 million.

Finland provided US$ 534 000, the final installment of a three-year 10:1 matching grant with Rotary International for activities in Afghanistan, bringing its total support to US$ 2.63 million.

Global Polio Eradication Initiative Financing in 2013: US$ 1.1 billion in contributions

The GPEI provides regular updates on the status of pledged funds and new commitments both through the Financial Resource Requirements publication and through its website, www.polioeradication.org.



Germany released €31.5 million for Nigeria as part of its multi-year commitment to the GPEI. This represents the final €11.5 million from Germany's 2009-2012 €100 million commitment and the first €20 million from its 2013-2017 €100 million commitment announced in January 2013. Germany was the first G8 country to announce a multi-year pledge against the new Strategic Plan. An additional €5 million was announced at the Vaccine Summit, bringing Germany's pledge for 2013-2017 to €105 million. Germany also responded to the Horn of Africa and Middle East outbreaks, providing €5.0 million and €4.1 million respectively. Additionally, in July 2013, the German federal cabinet endorsed a comprehensive new plan to help strengthen global public health and global public health policy, which singles out polio eradication as a priority. Rotary International presented in July its Polio Eradication Champion Award to Dirk Niebel, then Minister for Economic Development Cooperation. This most prestigious of Rotary's awards had previously already been bestowed on Chancellor Angela Merkel. Germany's total contributions to the GPEI have reached US$ 472 million, making it the third largest public sector donor.

Further to the US$ 227 million loan taken by the Government of Pakistan to fund its eradication programme, the **Islamic Development Bank** disbursed US$ 80.43 million to WHO and UNICEF for OPV, campaign operations, surveillance and social mobilization.

In advance of the Vaccine Summit, in April 2013, the International Development Committee of the Council of Ministers of the **Isle of Man** agreed to provide £30 000 a year for the next three years to support the GPEI. The funds will go to the Rotary Club of Douglas and onwards to Rotary International.

At the Vaccine Summit and under its EU Presidency, **Ireland** announced €5 million in support of the new Strategic Plan and disbursed €2.9 million for activities in 2013/2014. This was Ireland's first multi-year contribution since 2008 - a strong demonstration of Ireland's renewed commitment to a polio-free world.

Japan continued to demonstrate its strong commitment to polio eradication. In 2013, Japan provided more than US$ 9.14 million via UNICEF for polio eradication efforts in six countries, namely Chad, DR Congo, Niger, Nigeria, Pakistan and Somalia. The assistance covered procurement of OPV, reinforcement of cold chain, capacity building, and operations costs. WHO also received US$ 100 000 for research activities related to new polio vaccines, bringing Japan's total contributions for 2013 to US$ 9.24 million. Japan is the fourth largest public sector donor to the GPEI, with contributions totaling more than US$ 470 million. The Government of Japan, together with JICA and the Bill & Melinda Gates Foundation, are moving ahead with a "JICA loan conversion" scheme for Nigeria, following the successful introduction of the scheme for Pakistan in 2011.

For the third year in a row, the **Principality of Liechtenstein** provided US$ 25 000, bringing its total support to US$ 80 000.

The **Korean Foundation for International Healthcare (KOFIH)**, a specialized organization under the South Korean Ministry of Health and Welfare, officially joined the fight against polio. In its first grant to the GPEI, the Foundation provided US$ 1 million towards surveillance activities in Nigeria. This grant was made possible by the Community Chest of Korea.

Luxembourg contributed US$ 700 000 as part of a multi-year commitment covering the period 2009–2013. Luxembourg is the second largest per capita contributor with a total of US$ 15.06 million.

Monaco remained the GPEI's largest per capita contributor and released €150 000 as part of its multi-year agreement for 2011–2013 for activities in Niger. The Principality also provided an additional €100 000 for Niger, thus tripling its support from the previous year. Monaco's total funding for polio eradication activities in Niger is over US$ 1.19 million.

Through the **National Philanthropic Trust**, private philanthropists and high net worth individuals released a portion of their Vaccine Summit pledges, totaling US$ 51.20 million.

Norway continued to provide critical unspecified contributions to the GPEI. In 2013, the country provided, not only US$ 8 million as part of its multi-year commitment for 2012-2013, but also an additional US$ 9 million to support IPV introduction, bringing its total contributions to US$ 110.80 million.

Rotary International, in addition to being a spearheading partner of the GPEI, is also the second largest private sector donor. In June at its annual convention, Rotary International announced a pledge of up to US$ 175 million to be matched by the Bill & Melinda Gates Foundation, 2:1 which could raise an additional US$ 350 million. In 2013, Rotary disbursed US$ 69.90 million to the GPEI, including two emergency grants at the start of the Horn of Africa and Middle East outbreaks. By 2015, Rotary International will have contributed more than US$ 1.3 billion.

WHO and UNICEF signed memorandums of understanding with the Saudi Fund for Development allowing for the transfer of the final US$ 15 million tranche of the Kingdom of **Saudi Arabia's** US$ 30 million commitment to ending polio. In 2013, the Fund released US$ 3 million to support countries in the Horn of Africa as well as Pakistan and Afghanistan. Saudi Arabia's support to the GPEI until 2015 totals US$ 34.16 million.

The **Slovak Republic** contributed €10 000 to UNICEF for activities in Afghanistan. This is the Republic's second contribution for Afghanistan, bringing its total support to US$ 53 000.

For the first time in over a decade, **Switzerland** signed an agreement with WHO for US$ 1.895 million over three years to strengthen surveillance systems at the sub-national level in the African Region. As surveillance staff are a vital component of the district-level health system, the grant also includes management training in selected countries. This brings Switzerland's total support to US$ 3.67 million.

At the Vaccine Summit, the **United Kingdom** announced a pledge of up to £300 million for 2013-2018 as part of its support towards the new Plan. As part of that pledge, WHO signed a multi-year agreement for £238 million with the United Kingdom's Department for International Development (DFID), who disbursed £100 million for 2013/2014. DFID also provided specified support to WHO and UNICEF for the Horn of Africa outbreak, totaling £11.8 million. The United Kingdom is the second largest public sector contributor with total contributions of US$ 1.3 billion until 2018.

In response to the Middle East outbreak, the **UAE Red Crescent Society** provided US$ 720 000 to UNICEF to immunize children in Syria.

In 2013, spearheading partner **UNICEF** continued to see polio eradication as a priority and provided significant funding to its country offices. In total, UNICEF provided more than US$ 37.73 million for

polio eradication activities through several channels: US$ 15.0 million for OPV from the discretionary core funding, and US$ 22.73 million for OPV and staff costs from country offices core resources (Board approved budget) and UNICEF National Committees.

The **United Nations Foundation (UN Foundation)** continued its support of the GPEI's resource mobilization efforts, as co-Chair of the Polio Partners Group (PPG) and in facilitating support from the United States as well as non-traditional donors The UN Foundation's total support for the GPEI is US$ 43.61 million. The UN Foundation is also engaged in working with private sector organizations and individual donors to mobilize resources and support, particularly through its Shot@Life campaign.

The US Congress in its fiscal year 2013 allocated US$ 37.3 million to the **United States Agency for International Development (USAID)** for polio eradication activities. US$ 25.65 million was disbursed to WHO and UNICEF to support social mobilization, surveillance and laboratory activities, outbreak response and monitoring in priority countries.

An innovative financing mechanism with the **World Bank**, commonly referred to as "IDA buy-downs", was developed to allow the use of credit issued by the International Development Association (IDA), the concessionary lending arm of the World Bank, for OPV procurement. Third-party donor funding (provided by the Bill & Melinda Gates Foundation, CDC, Rotary International and the UN Foundation) is used to "buy-down" IDA credits and turn them into grants. In 2013, US$ 39 million was disbursed under the buy- downs for Pakistan and Nigeria. The total amount of support committed under this mechanism, called "the World Bank Investment Partnership for Polio", is US$ 411.92 million. In addition, the World Bank provided a grant of US$ 10 million for OPV for Afghanistan.

ACRONYMS AND ABBREVIATIONS

AFP	Acute flaccid paralysis
BMGF	Bill and Melinda Gates Foundation
bOPV	Bivalent oral polio vaccine
CDC	US Centers for Disease Control and Prevention
cVDPV	Circulating vaccine-derived poliovirus
EAP	Emergency Action Plan
EB	Executive Board
EPI	Expanded Programme on Immunization
FATA	Federally Administered Tribal Areas (Pakistan)
FRR	Financial Resource Requirements
GCC	Global Commission for the Certification of the Eradication of Poliomyelitis
GPEI	Global Polio Eradication Initiative
GPLN	Global Polio Laboratory Network
IHR (2005)	International Health Regulations (2005)
IMB	Independent Monitoring Board
IPV	Inactivated polio vaccine
KP	Khyber Pakhtunkhwa (Pakistan)
LGA	Local Government Area
LQAS	Lot Quality Assurance Sampling
mOPV	Monovalent oral polio vaccine
NCC	National Certification Committee
NID	National Immunization Day
OPV	Oral polio vaccine
POW	Programme of Work
RCC	Regional Certification Committee
SAGE	Strategic Advisory Group of Experts on immunization
SIA	Supplementary immunization activity
SIAD	Short Interval Additional Dose
SNID	Subnational Immunization Day
TAG	Technical Advisory Group
tOPV	Trivalent oral polio vaccine
UNICEF	United Nations Children's Fund
VAPP	Vaccine-associated paralytic polio
VDPV	Vaccine-derived poliovirus
VPD	Vaccine-preventable disease
WHA	World Health Assembly
WHO	World Health Organization
WPV	Wild poliovirus
WPV1	Wild poliovirus type 1
WPV2	Wild poliovirus type 2
WPV3	Wild poliovirus type 3

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