

GLOBAL POLIO ERADICATION INITIATIVE

2022
ANNUAL REPORT



**GLOBAL POLIO
ERADICATION INITIATIVE**

**ANNUAL REPORT
2022**

Global Polio Eradication Initiative: Annual Report 2022

ISBN 978-92-4-008775-0 (electronic version)

ISBN 978-92-4-008776-7 (print version)

Published by the World Health Organization (WHO) on behalf of the Global Polio Eradication Initiative.

© World Health Organization 2023

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Global Polio Eradication Initiative: Annual Report 2022. Geneva: World Health Organization; 2023. Licence: [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Front cover photo: © Nozim Kalandarov

Back cover photo: © Andrew Esiebo

Contents

Contents	iii
Acronyms	v
Our collective endeavour (mantra)	vi
Executive summary	vii
Polio eradication strategy 2022–2026 Goal I	1
Southern area of Khyber Pahktunkhwa, Pakistan – A focus on seven polio-endemic districts	1
Afghanistan – intensifying efforts in the eastern region	3
Focus on success in 2023	5
Polio eradication strategy 2022–2026 Goal II	7
2023: A critical year for polio eradication efforts in north-western Nigeria	14
Enabling environment	17
Preparing for the post-certification world	18
Gender in polio eradication	21
International support for the global eradication effort	23
Contributions in 2022	24
Annex	27
Key performance indicators of the Polio Eradication Strategy 2022–2026: Delivering on a promise	27



Acronyms

AFP	Acute Flaccid Paralysis
cVDPV	Circulating vaccine-derived poliovirus
ERC	Expert Review Committee for Polio Eradication and Routine Immunization
GCC	Global Commission for the Certification of the Eradication of Poliomyelitis
GPEI	Global Polio Eradication Initiative
nOPV2	Novel oral polio vaccine type 2
NPEAP	National Polio Emergency Action Plan (Nigeria)
RI	Routine Immunization
SIA	Supplementary immunization activity
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WPV	Wild poliovirus
WPV1	Wild poliovirus 1

Our collective endeavour

(MANTRA)

Vaccines and vaccination together prevent disease and save lives!

As the saying goes: “Vaccines are a triumph of science, but their full potential is only realized through vaccination.” What does this mean in practice, and why should it be a collective focus to attain a world entirely free of polioviruses?

In the journey towards a polio-free world, having a plethora of accessible vaccines and vaccine delivery methods is a privilege. They include various formulations of oral polio vaccines, inactivated polio vaccines, combination vaccines, and more. The world waited in desperation for safe and effective COVID-19 vaccines in 2020, and humanity breathed a collective sigh of relief when these vaccines finally became available and began to be rolled out around the globe. It was yet another reminder of the benefit and value of vaccines, which are perhaps the most effective and cost-effective tools to combat infectious diseases. Their value is undeniable.

The mere existence of vaccines, however, isn't sufficient. Even the best vaccines in the world are not beneficial unless they reach the children they are intended for. It is a stark reminder that vaccines are a shield against disease; vaccination is the act of raising that shield.

A question often asked is why polio persists in some parts of the world. The reasons are manifold, ranging from political and societal issues to operational challenges and cultural barriers. But at its core, the persistence of polio boils down to this: not enough children in certain areas have been vaccinated. If they had been, the poliovirus would not find susceptible hosts, and its circulation would cease. The medical and technical solutions required exist; the challenge lies in their effective application.

That is why the collective mantra should echo the sentiment that “vaccines and vaccination together prevent disease and save lives!” Regardless of the type of polio vaccine used, the overriding priority must be to identify and vaccinate those children who remain unvaccinated or under-vaccinated. By locating and vaccinating the last remaining unvaccinated child, the world can achieve a polio-free world.

Remember: vaccines are a triumph of science, but their full potential is only realized through vaccination. Together, they improve and save lives!

Executive summary

The year 2022 may well go down in history as the year of contrasts in the global effort to eradicate polio. At first glance, with polio detections in such places as New York and London and an increase in cases in Pakistan, it may seem that the effort was backsliding. And while any detection of any poliovirus is a setback, particularly in areas where the disease had long been gone, like south-east Africa, a deeper analysis reveals a more encouraging story: 2022 saw some of the most significant progress in the history of the Global Polio Eradication Initiative (GPEI) and prepared the global polio effort for a unique opportunity to achieve success in 2023.

During the year, endemic wild poliovirus transmission in both Pakistan and Afghanistan became increasingly geographically restricted, with fewer virus lineages remaining active. The bulk of circulating vaccine-derived poliovirus type 2 cases also became more restricted to subnational geographies in just seven countries, deemed by the GPEI to be the remaining consequential geographies. In addition, emergency outbreak response efforts to the unexpected appearance of wild poliovirus type 1 in south-east Africa continued to gain momentum.

These areas also overlapped with some of the highest proportion of zero-dose children, i.e. those children who are unvaccinated. All in all, the aim remains clear: operationally, to reach zero-dose children in the most consequential geographies, in a handful of countries.

The new novel oral polio vaccine type 2 (nOPV2) continued to be rolled out at an accelerated pace, with approximately 545 million doses administered by the end of 2022. Though “coverage is king”, nOPV2 is not a silver bullet; as with any vaccine, it is only as effective as the proportion of children it actually reaches.

The first year of the [Polio Eradication Strategy 2022–2026](#) very much put the new COVID-19 reality into operational context. In addition to adapting polio operations to the new strategy, cross-programmatic integration was clearly accelerated by the COVID-19 pandemic. Polio staff around the world continued to contribute to the COVID-19 response and immunization recovery efforts, together with the introduction and administration of COVID-19 vaccines, as highlighted in this report, giving further evidence of the value of the polio network and its work to align its priorities with broader public health efforts,

notably global vaccine and immunization strategies. It also speaks to the importance of effectively embedding the widespread polio eradication infrastructure in other programmes, to ensure that it will continue to benefit broader public health, emergency and pandemic response activities long after the disease is gone.

Throughout 2022, the programme saw tremendous displays of global support, at the World Health Assembly, the Rotary International Convention in Houston, United States of America, and the G7 and G20. Perhaps the most significant signal of support came at a global GPEI pledging moment at the World Health Summit in October 2022 in Berlin, co-hosted by the Government of Germany, where global leaders, both public and private, generously pledged US\$ 2.6 billion to the effort.

The year 2023 is critical for the GPEI. It is the target year for interrupting all remaining chains of poliovirus transmission globally. It is also the year to develop a new vision for mainstreaming polio assets and infrastructure that will go beyond 2023, supported by tailored action plans to enhance core capacities in countries. A unique epidemiological opportunity exists in 2023 to eradicate the remaining chains of endemic wild poliovirus transmission. Key to success must be adapting operations to reach the remaining under-immunized or unimmunized children in the seven most consequential geographies. To this effect, the Independent Monitoring Board will conduct a review in 2023 to assess how the programme is progressing towards meeting its objectives. The analysis will be evaluated by the Polio Oversight Board, for corrective actions as necessary.

Success can be achieved, through strong continued global collaboration. As fellow polio eradicator, friend and GPEI vaccinator, Sadiya from Kano, Nigeria, said when she addressed the global gathering at the pledging event in October: “Together, we can end polio in the world. I will try my best. I hope you will too.”

The world must heed Sadiya’s words and follow her example, with everyone doing their best as well. Together, let us end polio.

Polio eradication strategy 2022-2026

Goal I

Permanently interrupt all poliovirus transmission in endemic countries

Endemic wild poliovirus type 1 (WPV1) transmission in 2022 was more restricted than ever before in history, setting the stage for successfully interrupting these remaining strains of transmission by the end of 2023. The transmission of wild poliovirus (WPV) was very localized geographically and primarily restricted to a few districts of Nangarhar and Kunar provinces in eastern Afghanistan, and southern parts of Khyber Pakhtunkhwa province in Pakistan.

Southern area of Khyber Pakhtunkhwa, Pakistan – A focus on seven polio-endemic districts

Since January 2021, all WPV1 cases from Pakistan have been reported from just seven polio-endemic districts in the southern area of Khyber Pakhtunkhwa province (out of a total of 171 districts, nationwide), with a target population of around 1.1 million children aged under five years. These districts, and reaching the remaining under-vaccinated

Afghanistan & Pakistan: WPV1 situation from January to June 2022



and zero-dose children therein (those who are unvaccinated), hold the key to success in the country. The percentage of WPV1-positive environmental samples in Pakistan decreased from 8% in 2021 to 4% in 2022¹. However, the periodic detection of WPV1 from sewage water samples in areas outside of the southern area of Khyber Pakhtunkhwa demonstrated the continued risk of transmission. Nevertheless, endemic WPV1 during the year was more geographically restricted than at any point in the past.

The genetic biodiversity of virus transmission is a key indicator for epidemiologists in order to examine the transmission patterns of individual virus lines or families. And here the news during the year was also extremely encouraging: in 2020, the country was affected by 11 separate and individual chains of transmission of virus families. This was reduced to four in 2021 and, in 2022, only a single chain remained. This means the strategy implemented in the country successfully knocked out most of the individual virus lines.

In September 2022, Pakistan experienced catastrophic flooding that impacted more than 33 million people and submerged one third of the country under water.



¹ Data in Pakistan National Emergency Operations Center (NEOC), 2022.

In the face of this tragedy, and despite being affected themselves, polio staff supported the broader relief efforts² while adapting polio operations to ensure that the eradication effort could continue unabated. Long-time polio eradicator and WHO Regional Director for Polio Eradication for the Eastern Mediterranean Dr Hamid Jafari said: “Rarely have I seen such commitment and dedication than I have seen in Pakistan – from national leaders, to health workers, right to the mother and father on the ground. They are making a huge difference to people’s lives, which goes far beyond the effort to eradicate polio.”

In December 2022, a high-level delegation led by GPEI Polio Oversight Board Chair Dr Chris Elias, WHO Regional Director for the Eastern Mediterranean Dr Ahmed Al-Mandhari and UNICEF Regional Director George Laryea-Adjei visited Pakistan during a nationwide vaccination campaign. After meeting with women health workers, provincial and national polio coordinators and even the prime minister, the group concluded that there is unprecedented support and commitment³ to ending polio in the country in 2023.

Afghanistan – intensifying efforts in the eastern region

Forming a joint epidemiological block with Pakistan, in Afghanistan also, an in-depth epidemiological examination revealed an extremely positive picture.

Following the political changes affecting the country in 2021, access to all children in Afghanistan continued to improve, including to more than 3.5 million children who had not been reached for almost five years, as did vaccination coverage and disease surveillance, putting the programme on a strong footing, albeit against a tragic backdrop of a severe and acute humanitarian crisis and political instability.

Here, too, as in Pakistan, a virological analysis confirmed strong progress. Of the country’s 34 provinces, just one remained active with

² Pakistan polio infrastructure continues support to flood relief, while intensifying eradication efforts [website]. Geneva: World Health Organization; 2022 (<https://polioeradication.org/news-post/pakistan-polio-infrastructure-continues-support-to-flood-relief-while-intensifying-efforts-to-eradicate-polio>, accessed 4 July 2023).

³ Pakistan at excellent momentum to end polio, says global delegation [website]. Islamabad: Pakistan Polio Eradication Programme, National Emergency Operations Centre; 2022 (<https://www.endpolio.com.pk/media-room/media-releases/2229-pakistan-at-excellent-momentum-to-end-polio-says-global-delegation>, accessed 4 July 2023).



A woman vaccinator during a polio campaign in Afghanistan

© WHO / Sini Ramo

endemic transmission: Nangarhar province in the eastern part. Also as in Pakistan, the biological diversity confirmed this improvement: affected by eight separate transmission chains, in 2022 Afghanistan remained affected by just one. Such epidemiological and virological markers, incidentally, are identical to what epidemiologists observed during the endgame strategies in other previous global WPV reservoirs, notably Egypt, India and Nigeria, all giving hope that these remaining two endemic countries are on the right track.

Despite this progress, challenges remained, in particular in finding and vaccinating remaining zero-dose children in Nangarhar. At the same time, operations continued to be adapted to local realities, including working within the broader humanitarian context. Following the country's devastating earthquake in June, polio teams sprang into immediate action to both support the broader emergency relief effort⁴ and adapt polio operations. In response to a local decree to suspend female workers from national and international nongovernmental organizations, the GPEI strongly reiterated its commitment to supporting all health workers on the frontline and, in particular, the essential role played by women in both national and global eradication efforts.

Focus on success in 2023

Intensified eradication efforts in both countries continued to optimize and adapt operations to achieve success in 2023, geographically focusing and prioritizing resources to the known remaining endemic areas. Overseen by national and subnational emergency operations centres to coordinate operations, including in the broader humanitarian activities, the countries continued to be supported by the GPEI Hub in Amman, Jordan, as well as by comprehensive political and technical assistance throughout the region, including the WHO Regional Committee and the ministerial Regional Subcommittee on Polio Eradication and Outbreaks.

⁴ Polio teams support response to devastating earthquake in Afghanistan [website]. Geneva: World Health Organization; 2022 (<https://polioeradication.org/news-post/polio-teams-support-response-to-devastating-earthquake-in-afghanistan>, accessed 5 July 2023).

Both programmes will focus on responding in emergency mode to each virus detection, including outside the endemic zones, to prevent the re-establishment of transmission. Specific risk categorization, by district, will help further shape efforts, concentrating on:

- endemic zones/districts
- outbreak response zones/districts
- very high-risk areas – risk reduction zones
- all other districts – maintenance zones.

Planning for success: Zeroing in on the districts most at risk⁵

RISK CATEGORY 1	RISK CATEGORY 2
<p><u>ENDEMIC ZONES/DISTRICTS</u></p> <ul style="list-style-type: none"> • continued improvements in supplementary immunization activity (SIA) quality • new strategies to reach zero-dose children, focusing on areas with the highest proportion of missed children • further strengthening of disease surveillance and resumption of SIAs in areas previously inaccessible • increased and tailored social behavioural change activities. 	<p><u>OUTBREAK RESPONSE ZONE/DISTRICTS</u></p> <ul style="list-style-type: none"> • immediate implementation of high quality outbreak response • public health emergency mode • outbreak readiness in areas considered at highest risk for the re-establishment of transmission.
RISK CATEGORY 3	RISK CATEGORY 4
<p><u>VERY HIGH-RISK AREAS / RISK REDUCTION ZONES</u></p> <ul style="list-style-type: none"> • minimum of three large-scale preventive SIAs conducted in the next 6–8 months • strengthening of surveillance, including continued expansion of environmental surveillance. 	<p><u>ALL OTHER DISTRICTS / MAINTENANCE ZONES</u></p> <ul style="list-style-type: none"> • comprehensive maintenance programme, including full participation in national immunization days.

⁵ Conclusions and recommendations by the Technical Advisory Group Meeting for Pakistan and Afghanistan, Doha, Qatar, 1-4 June 2023 (<https://polioeradication.org/wp-content/uploads/2023/08/Meeting-Report-of-the-Technical-Advisory-Group-on-Polio-Eradication-in-Afghanistan-and-Pakistan-June-2023.pdf> July 2023).

Polio eradication strategy 2022-2026

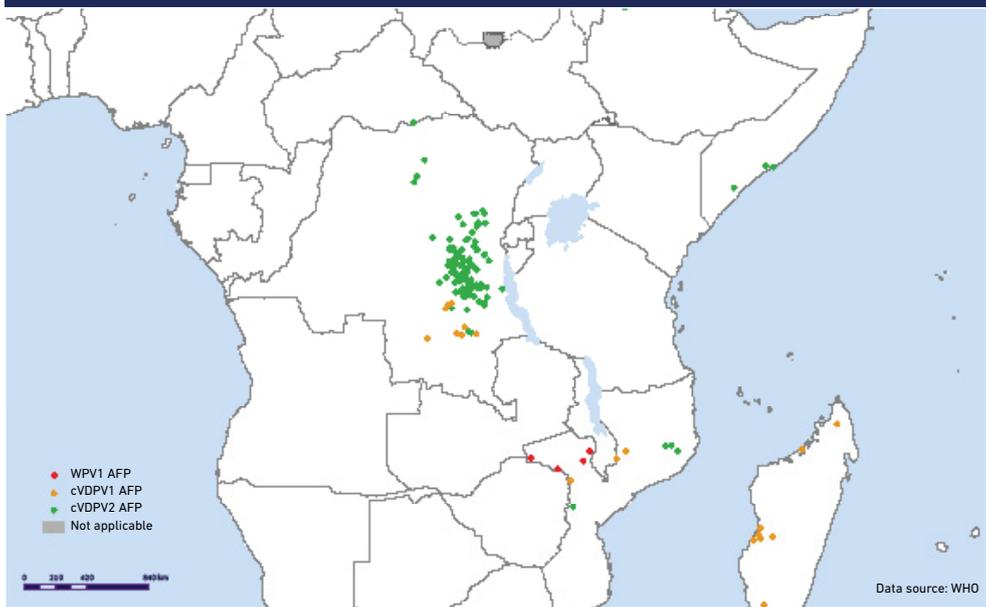
Goal II

Stop circulating vaccine-derived poliovirus transmission and prevent outbreaks in non-endemic countries

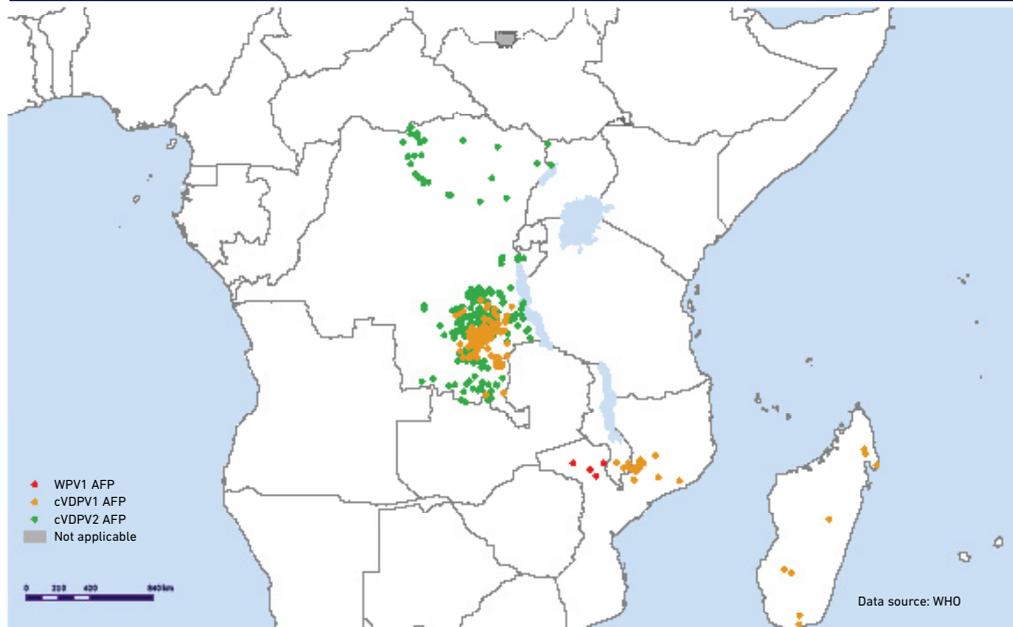
The year 2022 saw the high-profile detection of polio in areas that had been free of the disease for decades, including London, New York and Israel . Such detections of course cause concern and must be (and are being) appropriately managed. But more importantly, these events above all highlight the consequences if the world does not succeed in eradicating polio: the global resurgence of the disease.

Key to success is to focus on the most consequential geographies, which collectively accounted for 90% of all polio cases in 2022. These consequential geographies are seven subnational areas, all affected by different and complex humanitarian emergencies, and all concerned with a high proportion of under-immunized or unimmunized (zero-dose) children. Together with the two WPV1-endemic areas of eastern Afghanistan and southern Khyber Pakhtunkhwa, Pakistan, these locations are northern Yemen, south-central Somalia, north-western Nigeria, eastern Democratic Republic of the Congo, and Tete province, Mozambique.

Democratic Republic of the Congo & South East Africa: WPV1 & cVDPV1 situation from January to June 2022

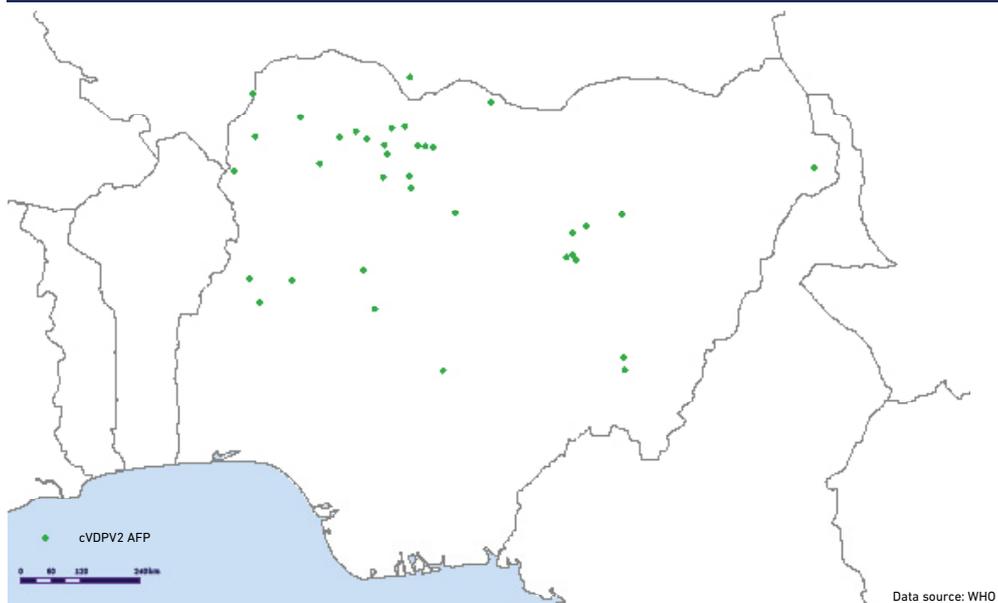


Democratic Republic of the Congo & South East Africa: WPV1 & cVDPV1 situation from July to December 2022



While the outbreaks in northern Yemen and eastern Democratic Republic of the Congo continued to expand at an alarming rate in 2022, the situation in northern Nigeria was far more encouraging. Nigeria accounted for two thirds of all global cases in 2021⁶, seeding outbreaks in 19 countries. In the second half of 2022, however, the decrease in new detections was dramatic, with just nine cases reported during that time.

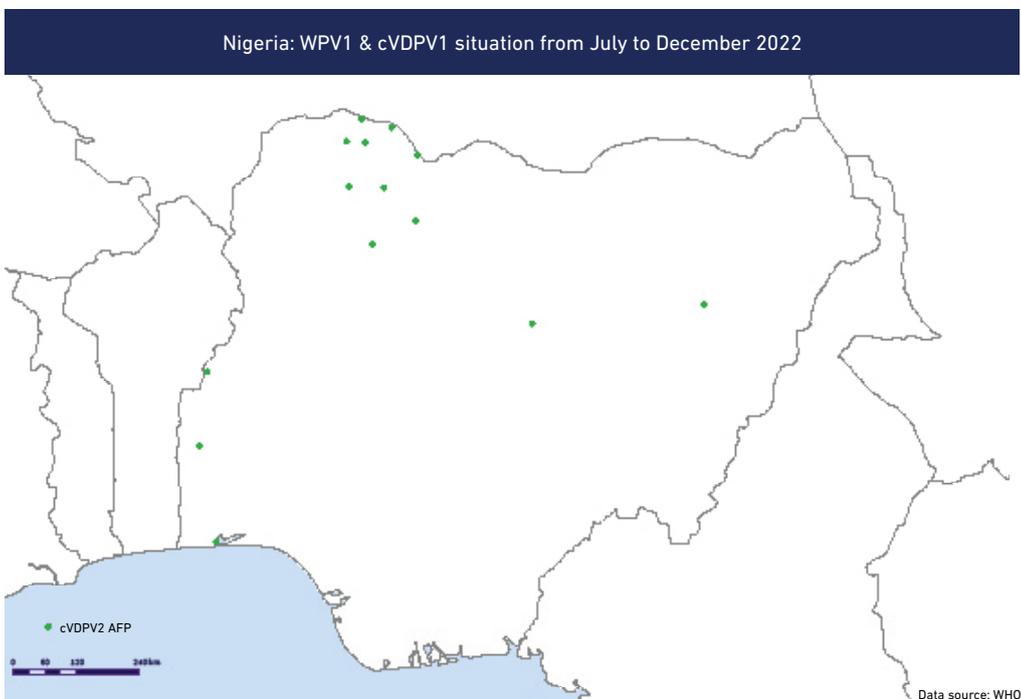
Nigeria: WPV1 & cVDPV1 situation from January to June 2022



⁶ Global circulating vaccine-derived poliovirus (cVDPV), as of 31 December 2023, available at: <https://polioeradication.org/this-week/circulating-vaccine-derived-poliovirus/>.

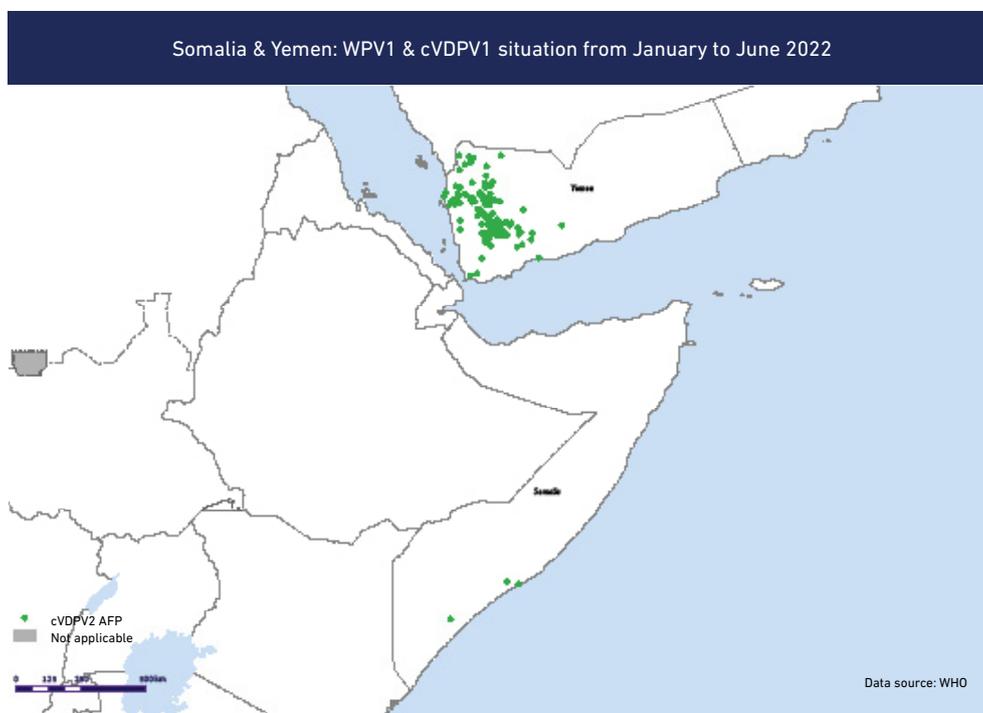
In November, the Government of Nigeria, with GPEI partners in attendance, hosted the Global Roundtable Discussion on cVDPV2 outbreaks, reviewing progress in outbreak response following the upsurge in cases in 2021. The group recognized efforts to reach zero-dose children in consequential geographies throughout the country, in particular with the novel oral polio vaccine type 2 (nOPV2), as well as Nigeria’s focus on strengthening routine immunization (RI) with bivalent oral polio vaccine and inactivated polio vaccine. Whichever strategy is used, however, the group cautioned that “coverage is king”. Any vaccine is only as good as the proportion of children it reaches.

In south-east Africa in the second half of 2022, a comprehensive Outbreak Response Assessment reviewed the regional response to both the WPV1 outbreak (linked to virus originating from Pakistan, with cases confirmed in Malawi and Mozambique) and circulating vaccine-derived poliovirus (cVDPV) outbreaks. Experts in the group noted the high-level comprehensive support and oversight of the outbreak response across the region, despite the competing and complex priorities.

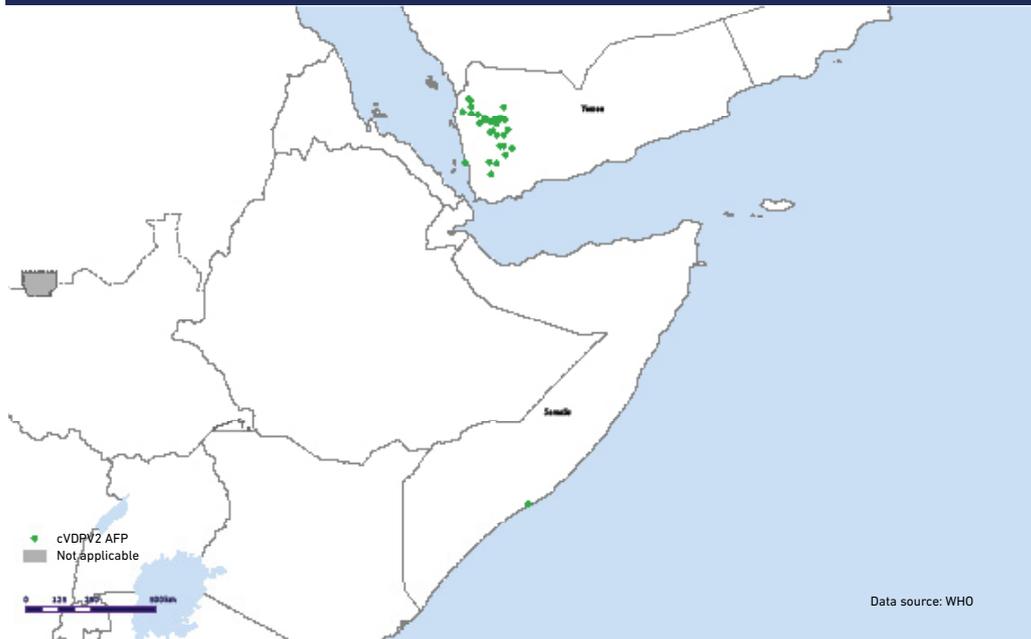


Both Malawi and Mozambique launched a series of rapid and aggressive outbreak response campaigns following the detection of the viruses. The quality of vaccination campaigns consistently improve with time under the oversight of emergency operations centres, which convened all partners. Even so, the group concluded that the outbreaks were not over. With simultaneous outbreaks of WPV1 and cVDPV types 1 and 2 affecting in particular Mozambique, the group put forward key recommendations and strategies, building on the momentum and knowledge gained over the past six months. These conclusions were further endorsed by the Africa Regional Certification Commission for Polio Eradication, which met in South Africa in December 2022.

To support the achievement of Goal Two of the [Polio Eradication Strategy 2022–2026](#), a detailed global surveillance action plan for 2022–2024 aimed at improving the timeliness of detection of any polioviruses from any source was begun. Its implementation will be monitored by the Global Commission for the Certification of the Eradication of Poliomyelitis (GCC). At the same time, nOPV2 continued to be rolled out at an accelerated pace, with approximately 545 million doses administered by the end of 2022⁷. The full licensing and prequalification of nOPV2 remained on track for the end of 2023.



⁷ Data in WHO Headquarters, December 2022.



cVDPV emergence continued to be curbed

Although, at first glance, country maps still highlighted outbreaks of cVDPV type 2, a deeper analysis revealed that progress to curb these strains continued:

- more quickly stopped outbreaks: 19 of 29 outbreaks confirmed in 2021 were successfully stopped within 120 days;
- an increase in geographic concentration of poliovirus: the number of infected districts continued to be reduced;
- a decline in affected countries: the number of countries affected by such strains was significantly lower in 2022 than in 2021;
- greater focus on the most consequential geographies: the bulk of new cVDPV outbreaks were from these areas;
- a more effective outbreak response: through nOPV2 use, no breakthrough transmission occurred in 20 of 28 affected countries;
- a decline in cases: most importantly, in early 2023, the number of new cases reported with cVDPVs globally was approximately 50% compared to the previous year; and
- the intensified roll-out of nOPV2 on a large scale: approximately 545 million doses of nOPV2 were administered in 26 countries by the end of 2022.

Independent Monitoring Board

The Independent Monitoring Board continued to provide an in-depth analysis and guidance on the global eradication effort. The group put forward key strategic recommendations at a meeting in 2022. Conscious that 2023 is the target year for interrupting all remaining polio transmission, the Board will conduct an extraordinary independent review of the programme's implementation in mid-2023 to evaluate progress towards Goals One and Two of the [Polio Eradication Strategy 2022–2026](#), and to identify areas where corrective action plans are required. Outcomes of the group's assessment will be presented to the GPEI Polio Oversight Board in October 2023.

At the same time, the global effort to eradicate polio remains a Public Health Emergency of International Concern, as per the conclusions of the Emergency Committee under the International Health Regulations (2005) on the international spread of poliovirus. Countries infected with poliovirus or that remain vulnerable to reinfection are subject to temporary recommendations issued by the Emergency Committee. In 2022, the Emergency Committee convened on a quarterly basis to continuously assess evolving epidemiology; 29 Member States actively participated in these meetings, including countries such as Israel, Ukraine, the United Kingdom, the United States of America and, of course, the remaining WPV-endemic countries, Afghanistan and Pakistan.

Rolling out the novel oral polio vaccine type 2

The roll-out of the GPEI's tool to more sustainably stop transmission of cVDPV type 2 – nOPV2 – expanded considerably in 2022, with 12 additional countries completing the country readiness verification process to use the vaccine under the WHO Emergency Use Listing, and 14 deploying it for the first time for outbreak response. Since the vaccine's first field use in March 2021, more than 545 million doses had been used for outbreak response by the end of 2022 in a total of 26 countries.

Although some new emergences linked to nOPV2 were expected given the scope and scale of its use, all available clinical and field evidence continued to demonstrate the vaccine's enhanced genetic stability compared with monovalent oral polio vaccine type 2, as well as a significantly lower risk of reverting to forms that can cause paralysis. Close monitoring of safety, effectiveness and genetic stability continued throughout nOPV2 use under the Emergency Use Listing procedure, and full licensing and WHO prequalification of the vaccine remained on track for the end of 2023.

The supply constraints that surfaced in late 2022 were improved. While new, unanticipated outbreaks could lead to unexpected increases in demand going forward, the GPEI reported it expects to have access to between 600 and 650 million doses of nOPV2 for 2023, which is more type 2 vaccine than has ever been deployed by the programme in a single year. The GPEI supported the manufacturer, Bio Farma Indonesia, to expand production capacity, and worked to engage a second manufacturer to diversify and further strengthen nOPV2 supply in 2024.

2023: A critical year for polio eradication efforts in north-western Nigeria

A key priority in 2023 to end both wild and cVDPV poliovirus transmission around the world will be to focus on the most consequential geographies, where children are at the highest risk of encountering and spreading the virus. A total of 90% of all new polio cases worldwide were concentrated in these geographies in 2022⁸. North-western Nigeria is one of these seven subnational areas that now hold the key to global polio eradication success.

Compared to other most consequential geographies, in Nigeria increased efforts yielded positive results in 2022. The country's main historical transmission chain, the Jigawa lineage, which was responsible for the majority of cases and international spread, appeared to have been effectively halted. At the same time, new cases continued to decline in the second half of the year. As a result, the virus was confined primarily to specific regions in the north-west. This presents a distinctive opportunity for Nigeria in 2023, according to the Expert Review Committee for Polio Eradication and Routine Immunization (ERC), the independent technical group advising the country on its eradication efforts.

The ERC put forward key recommendations aimed at interrupting the transmission of cVDPV2 and maintaining Nigeria's wild-poliovirus-free certification status along with the entire WHO African Region. Nigeria developed a comprehensive National Polio Emergency Action Plan (NPEAP) to address the risks of cVDPV2 and to ensure the country's and the entire region's wild-poliovirus-free certification status is maintained, within the context of the political transitioning process, the impact of COVID-19 on the national economy and increasing concerns of insecurity affecting surveillance and vaccination reach. Led by the health ministry's National Primary Health Care Development Agency and supported by GPEI partners, including Nigerian civil society and Rotarians in the country, efforts intensified to fully implement the NPEAP.

The ERC noted that the proposed activities for 2023 were contingent on three critical factors: the global stockpile of nOPV2 and bivalent oral polio vaccines, constraints in financial resources, and a smooth political transition to drive political commitments at subnational levels.

⁸ Data in WHO Headquarters, December 2022.



During a vaccination campaign in Kano, State Nigeria

© WHO / Andrew Esiebo

Given the impact of cVDPV2 over the last few years, there should be limited room for complacency to reach the finishing line for the interruption of these strains. The ERC, therefore, called on all partners to support the implementation of the NPEAP for 2023.

The conference also highlighted some of the achievements of the fight against polio in Nigeria. The year 2022 recorded an almost 90% decline in cVDPV2 cases, reduced from 415 cases in 2021 to 47 in 2022 (with a further significant drop in the second half of the year, accounting for only 12 of these cases)⁹. The quality of supplementary immunization activities improved, especially in the last quarter of 2022, and the surveillance gaps were narrowed at subnational levels. RI coverage also improved from 33% in 2016 to 56% in 2023¹⁰, and COVID-19 vaccination was also optimized to improve demand generation.

The ERC made recommendations in nine thematic areas to fully implement the NPEAP, including continuing to strengthen surveillance, mitigate risks due to inaccessibility and insecurity, build a more resilient RI programme, assure solid vaccine management and advocate for a polio-free Nigeria.

In conclusion, 2023 is a critical year for polio eradication efforts in north-western Nigeria and other most consequential geographies. The global community must continue to support these efforts to ensure that no child is left behind and a polio-free world is finally achieved.

⁹ Global circulating vaccine-derived poliovirus (cVDPV), as of 31 December 2022, available at: <https://polioeradication.org/this-week/circulating-vaccine-derived-poliovirus/>.

¹⁰ Conclusions and Recommendations of the Nigeria Expert Review Committee on Polio Eradication and Routine Immunization, February 2023.

Enabling environment

With the programme's increased focus on the most consequential geographies to interrupt WPV transmission and stop cVDPV outbreaks, polio transition efforts accelerated in 2022, aligned with polio epidemiology. Over 50 countries transitioned out of GPEI support, with essential functions for immunization, disease detection, and outbreak preparedness and response integrated into WHO's immunization and health emergency programmes. The backsliding of immunization coverage due to the COVID-19 pandemic, with an increase in the number of under- or unvaccinated children, underscored the need to integrate polio functions into the delivery of immunization and primary health care services, especially in fragile settings. A strong focus was also placed on maintaining sensitive poliovirus surveillance as part of broader disease surveillance, which is necessary for the global certification of polio eradication. Lessons learned from this process continued to be used to inform future transition efforts. Looking forward, the GPEI will also assess the potential risk that climate change could pose to the programme, and will start to identify ways to both reduce the programme's impact on the environment and build a climate resilient programme.

To build strong and resilient health systems that are able to detect and respond to polio outbreaks, transition efforts must be continued alongside polio eradication. In several countries, innovative approaches were adopted to safeguard vital polio assets and use them as part of resilient health systems. In Iraq, Somalia, Sudan and Syria, progress was made in 2022 towards the operationalization of integrated public health teams. These aim to expand and institutionalize the work already undertaken by polio teams on essential immunization, disease surveillance and broader public health efforts. In the WHO African Region, polio functions were integrated in a horizontal manner, with a primary health care lens that aligns with the overall needs of national health systems. At the global level, efforts continued to align transition planning with key global health strategies, including the [Immunization Agenda 2030](#) and Gavi, the Vaccine Alliance's five-year (2021–2025) strategic plan (Gavi 5.0).

In mid-2022, an independent evaluation of the WHO Strategic Action Plan on Polio Transition (2018–2023) recognized the progress so far and recommended actions for the next phase of transition, building on lessons learned. A key recommendation was to develop a new strategic framework for polio transition, aligning stakeholders on a renewed global vision, regional action plans to operationalize this new vision, and a revised monitoring and evaluation system to track progress. This presents an important opportunity to adjust transition efforts in line with the [Polio Eradication Strategy 2022–2026](#) and to ensure that the transition process is sustainable, carefully planned and country-led, and lays the groundwork for the implementation of the polio Post-Certification Strategy.

At the same time, the [GPEI's Gender Equality Strategy 2019–2023](#) continued to identify and address gender-related barriers to immunization. This is integral to the [Polio Eradication Strategy 2022–2026](#), which sets clear goals to strengthen gender responsiveness as a key factor for achieving polio eradication. The programme's commitment to gender-responsive programming closely aligns with the [Immunization Agenda 2030](#) and the gender policy of Gavi, the Vaccine Alliance.

And, in particular as a result of the COVID-19 pandemic, cross-programmatic integration was accelerated. In places where the polio programme was present, polio staff contributed to the COVID-19 pandemic response and immunization recovery efforts, including the administration of COVID-19 vaccines.

Preparing for the post-certification world

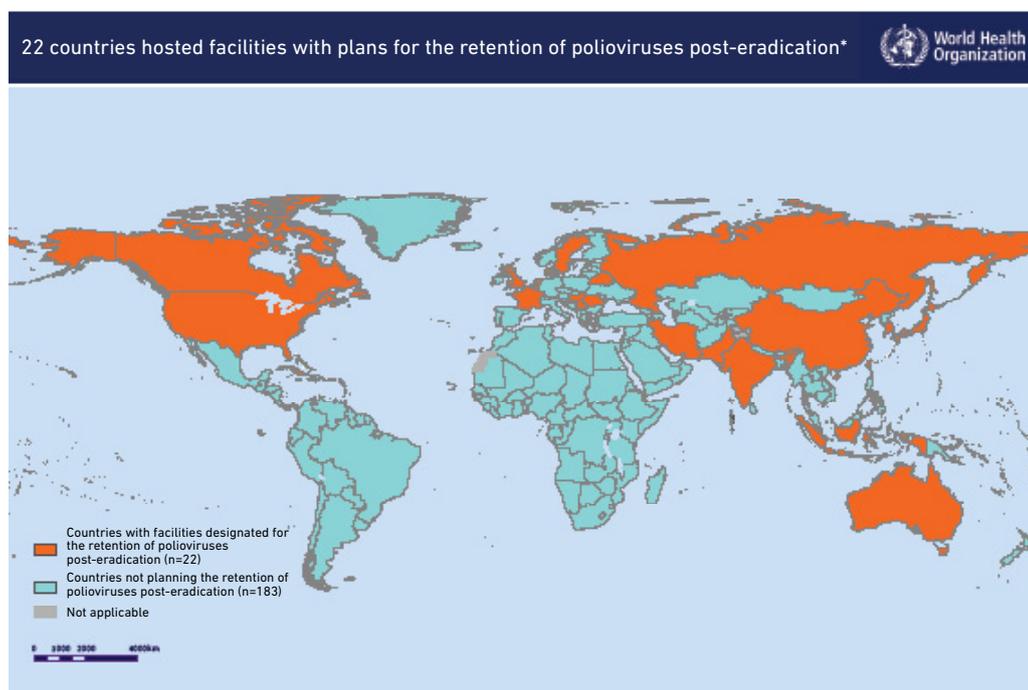
Containing poliovirus

Through World Health Assembly resolution WHA71.16 (2018) on poliomyelitis – containment of polioviruses, Member States committed to accelerating progress towards poliovirus containment certification, signalling a universal intent to achieve the goals set out therein. While progress made in 2022, it was not universal or fast enough. High-level advocacy, including targeted outreach by the Director-General with Member States, was initiated to ensure the rapid implementation of activities as outlined in resolution WHA71.16.

In June 2022, the GPEI published a dedicated global poliovirus containment strategy as well as an associated action plan, workplan, and monitoring and evaluation framework for 2022–2024.

The fourth edition of the WHO Global Action Plan for Poliovirus Containment (GAPIV) was released in July 2022, following its endorsement by the Containment Advisory Group. Reviews of the corresponding containment certification scheme and the guidance relating to minimizing risks for facilities collecting, handling or storing materials potentially infectious for polioviruses are similarly under way.

The detection of WPV type 3, through environmental surveillance in the Netherlands in 2022, underscored the risk of working with poliovirus materials and the need for robust biorisk management measures in poliovirus-retaining facilities to protect workers from infection and prevent the reintroduction of poliovirus into communities.



* Includes WPV1, 2 and 3; VDPV1, 2 and 3; OPV1, 2 and 3; Sabin 1, 2 and 3 or a combination of thereof.

Data: as of 20 november 2023
Source: WHO

Cessation of oral polio vaccine and certification

Following the successful eradication of WPVs globally, the use of all remaining oral polio vaccine in RI programmes will end in order to eliminate the risk of vaccine derived polioviruses. In June 2022, the GCC met to review the global criteria for poliovirus certification.

Recognizing the programme advances in genomic analysis and the widespread use of environmental surveillance in many countries, the GCC concluded that the traditional approach to the certification of eradication, namely requiring evidence of three years without detection of polioviruses from any source, may no longer be justifiable to verify the absence of WPV transmission. Instead, the GCC recommended the adoption of a more flexible approach to certification, whereby traditional surveillance indicators are considered in a broader geopolitical, area-specific context.

At the same meeting, the GCC initiated its evaluation of concrete criteria for the eventual validation of the absence of vaccine-derived polioviruses, including the necessary timelines that might be needed without detection of cVDPV from any source, following the global cessation of the use of oral polio vaccines in RI programmes.

Gender in polio eradication

Gender equality within the GPEI continues to be a key enabling factor in the eradication of polio. Work in implementing the [GPEI Gender Equality Strategy 2019-2023](#) continued throughout 2022. Between August-September 2022, the GPEI conducted a robust mid-term evaluation of the strategy. The purpose of the evaluation was to assess progress achieved against the objectives of the Gender Equality Strategy. The mid-term evaluation supported the extension of the Strategy until 2026 which was approved by the POB in October 2022.

Recommendations from the mid-term review of the [GPEI Gender Equality Strategy](#) continue to inform the programmatic decisions on gender mainstreaming and gender equity strategies continue to be mainstreamed throughout GPEI key processes. The Gender Mainstreaming Group (GMG) is now fully functional and has representation of all GPEI partners. A key task of the GMG is to support the allocation of funds based on gender action plans. One key example in 2022 is the application of an Integrated Outbreak Analytics (IOA) approach in DRC which uncovered gender related barriers as some of the reasons behind the recorded low immunization uptake within campaign activities. The findings from the analysis will continue to inform future campaigns in the country. In addition, endemic countries were able to move forward with action plans derived from the regional and country-specific Gender Analysis they conducted in 2021 and 2022.

GPEI leadership remains key to successfully mainstream gender throughout the programme. In June 2022 as part of a multi-day retreat, Strategy Committee Members held a “Gender Mainstreaming Deep-Dive workshop”. The workshop facilitated a critical and communal reflection on some of the aspects of implementing the [GPEI gender equality strategy](#). Participants were able to share good practices from the different GPEI objectives from their own agencies. Additional training sessions and workshops across all levels of the partnership have continued ensure gender is seen as a key tactical aspect of operations. One capstone effort is the Female Frontline Worker Co-Design Initiative (FLW) in Pakistan, which focuses on integrating the voices of those women at the forefront, whose insights, experience, and motivation are so critical to the reaching eradication. The GPEI Gender Champion Initiative continued to use the voices of global leaders to spotlight the role of gender in polio, immunization and

overall global public health initiatives. New Champions that joined the initiative in 2022 included, H.E. José Manuel Albares Bueno, Minister for Foreign Affairs, European Union and Cooperation, Spain and Dr. Rochelle Walensky, Director of the U.S. Centers for Disease Control and Prevention. The GPEI's 2022 high-level, global pledging moment in Berlin, also included H.E. Minister Schulze delivering remarks on gender equality, and a video that featured female health workers.



Female vaccinator during a National polio vaccination campaign in Somalia
© WHO / Siyaad Mohamed / Ildoog

International support for the global eradication effort

The global political will to eradicate poliomyelitis remains strong, as demonstrated by the high-level commitments to polio eradication made during the World Health Assembly, the Rotary International Convention, the G7 Leaders meeting, the Commonwealth Heads of Government Meeting and the G20 Development and Health Ministers meetings, as well as at the global pledging moment held at the World Health Summit in Berlin, Germany.

At this event, held on 18 October 2022 and co-hosted by the Government of Germany, global leaders pledged US\$ 2.6 billion in funding towards the [Polio Eradication Strategy 2022–2026](#) (in addition to the approximately US\$ 800 million already on hand for 2022), an important first step in securing the full US\$ 4.8 billion needed to ensure the successful implementation of the strategy. Additional commitments have been made since then by new and existing partners, including through the European Investment Bank.



In addition, at its December 2022 meeting, the Gavi Board extended the Gavi eligibility and co-financing exemptions for inactivated polio vaccine in support of polio eradication efforts. While more resources must still be mobilized, Rotary International's efforts are especially appreciated, for its ongoing work in helping secure both public and civil society commitment to this effort.

The poliovirus is cornered to just a few high-risk geographies, but there is no room for complacency. Continuing to invest in polio eradication could save the world over [US\\$ 30 billion in health care cost savings](#)¹¹ this century, compared to the cost of just controlling polio.

More than 3000 scientists, physicians and global health experts released the "2022 Scientific Declaration on Polio Eradication", endorsing the 2022–2026 strategy and calling on donors to stay committed to the goal of eradication and to ensure the GPEI is fully funded.

Contributions in 2022

The GPEI is grateful for the generous contributions from donors in 2022, which helped to immunize more than 370 million children¹² against polio and strengthen the health emergency and pandemic preparedness response systems needed to tackle COVID-19 and future health threats. The continued, long-standing support of the GPEI's donors is critical to achieving a polio-free world.

¹¹ GPEI Investment case: <https://polioeradication.org/wp-content/uploads/2022/04/GPEI-Investment-Case-2022-2026-Web-EN.pdf>.

¹² Data in WHO Headquarters, December 2022.

DONORS	AMOUNT
G7 COUNTRIES & EUROPEAN COMMISSION	
USA*	US\$ 136 571 249
Canada	US\$ 62 721 154
Germany	US\$ 39 601 946
United Kingdom	US\$ 24 390 244
European Commission	US\$ 21 756 245
Japan	US\$ 5 775 591
Sub-total:	US\$ 290 816 429
NON-G7 OECD COUNTRIES	
Australia	US\$ 5 036 937
Luxembourg	US\$ 1 027 695
Spain	US\$ 159 744
Türkiye	US\$ 20 000
Sub-total:	US\$ 6 244 376
OTHER DONOR COUNTRIES	
United Arab Emirates	US\$ 17 427 126
Monaco	US\$ 54 348
Malta	US\$ 31 024
Liechtenstein	US\$ 25 694
Sub-total:	US\$ 17 538 192
PRIVATE SECTOR / NON-GOVERNMENTAL DONORS	
Bill & Melinda Gates Foundation	US\$ 439 453 910
Rotary International	US\$ 150 838 513
His Highness Sheikh Mohamed Bin Zayed Al Nahyan	US\$ 24 000 000
National Philanthropic Trust / Private Philanthropists	US\$ 16 700 970
United Nations Foundation	US\$ 1 667 470
Vitality	US\$ 320 665
Al Abdulla Family	US\$ 180 000
Kasta Technologies	US\$ 72 503
Sub-total	US\$ 633 234 031
MULTILATERAL SECTOR	
UNICEF Regular and Other resources	US\$ 5 000 000
Sub-total:	US\$ 5 000 000
DOMESTIC RESOURCES	
Egypt	US\$ 2 636 900
Sub-total:	US\$ 2 636 900
GRAND - TOTAL	US\$ 955 469 928

* For Fiscal Year 2022, Congress appropriated US\$ 178 million for the polio eradication activities of the US CDC and US\$ 75 million for USAID. For more information, please see <https://polioeradication.org/financing/donors/historical-contributions/>.

Annex

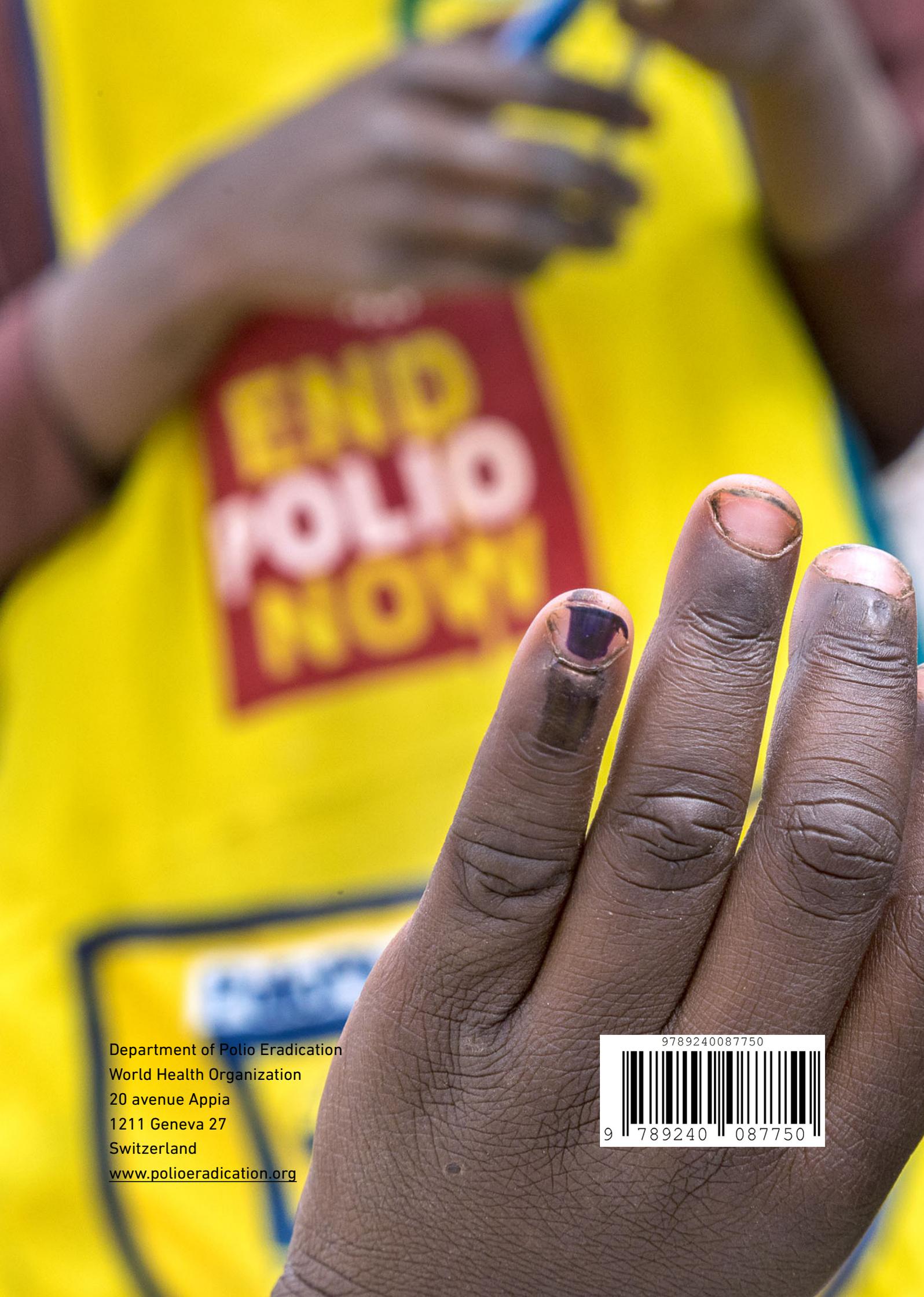
Key performance indicators of the Polio Eradication Strategy 2022–2026: Delivering on a promise

OBJECTIVE	KEY PERFORMANCE INDICATORS	2022 RESULTS			
		Q1	Q2	Q3	Q4
Strategy level progress indicators					
Goal 1	Permanently interrupt all poliovirus transmission in endemic countries				30
Goal 2	Stop cVDPV transmission & prevent outbreaks in non-endemic countries				666
1. Create urgency and accountability through advocacy to generate greater political will					
Assessment at objective level 1: on track	1.1.1. Percentage of newly affected outbreak countries that declare a national public health emergency upon outbreak confirmation	73%	67%	82%	80%
	1.1.2. Percentage of previously inaccessible districts made accessible through negotiation/agreements. PAK		100%	100%	
	1.1.2. Percentage of previously inaccessible districts made accessible through negotiation/agreements. AFG	62%	76%	80%	75%
	1.1.3. Meetings of the national task force on polio eradication (chaired by the head of government or Prime Minister) convened each year to review progress and address challenges- PAK	0	1	3	3
	1.1.3. Meetings of the national task force on polio eradication (chaired by the head of government or Prime Minister) convened each year to review progress and address challenges- AFG	0	0	0	0
	1.2.1. Percentage of vacant medical officer and vaccination staff positions in polio high-risk districts PAK				
	1.2.1. Percentage of vacant medical officer and vaccination staff positions in polio high-risk districts AFG		3%	2%	1%
	1.2.2. The provincial task forces (chaired by chief ministers / chief secretaries in PAK and governors in AFG) review the number of missed children and quality of operations after each NID/SIAs and ensure corrective actions. PAK		100%	100%	100%
	1.2.2. The provincial task forces (chaired by chief ministers / chief secretaries in PAK and governors in AFG) review the number of missed children and quality of operations after each NID/SIAs and ensure corrective actions. AFG		100%	100%	
	1.3.1. Percentage of outbreak countries making financial contribution to outbreak response	13%	9%	15%	23%
2. Generate vaccine acceptance through context-adapted community engagement					
Assessment at objective level 2: partially achieved	2.1.1. Percentage of all SIAs where awareness was >90% of all households	44%	45%	50%	58%
	2.2.1. Percentage of female FLWs in priority subnational areas - PAK				
	2.2.1. Percentage of female FLWs in priority subnational areas - AFG		20%	21%	14%
	2.2.2. Percentage of missed children in priority subnational areas in endemic countries-PAK	2%	2.4%	1.9%	2.3%
	2.2.2. Percentage of missed children in priority subnational areas in endemic countries - AFG	4%	5.6%	4.7%	4.8%
	2.3.1. Qualitative demonstration of the use of locally designed and implemented solutions to improve community engagement in polio				

no results were reported off track partially achieved/at risk on track

OBJECTIVE	KEY PERFORMANCE INDICATORS	2022 RESULTS				
		Q1	Q2	Q3	Q4	
3. Expedite progress towards eradicating polio and reducing zero dose children through expanded integration efforts and unified partnerships						
Assessment at objective level 3: at risk	3.1.1.	Percentage of zero dose children in polio high risk area(s) PAK	●	4%	●	4.7%
	3.1.1.	Percentage of zero dose children in polio high risk area(s) AFG	●	●	●	●
	3.2.1.	Percentage of polio priority subnational geographies where joint or collaborative investment is taking place by Gavi and GPEI	●	●	●	●
	3.2.2.	Percentage of planned VPD SIAs that co-deliver bOPV and another antigen (in endemic settings: co-deliver bOPV with VPD SIAs in addition to polio SIAs - PAK	●	100%	●	66%
	3.2.2.	Percentage of planned VPD SIAs that co-deliver bOPV and another antigen (in endemic settings: co-deliver bOPV with VPD SIAs in addition to polio SIAs- AFG	●	50%	33%	25%
4. Improve frontline success through changes to campaign operations						
Assessment at objective level 4: partially achieved	4.1.1.	Microplanning that include updated information and that were actually implemented, PAK	●	●	●	●
	4.1.1.	Microplanning that include updated information and that were actually implemented, AFG	●	●	●	82%
	4.1.3.	Percentage of female vs male 0 dose AFP cases (proxy indicator)	●	0.3%	0.3%	0.4%
	4.1.4.	Percentage of outbreaks stopped within 120 days of confirmation	9%	28%	29%	91%
	4.2.1.	Percentage of countries implementing OBR R1 within 28 days of outbreak confirmation	0%	6%	11%	20%
	4.2.2.	Percentage of districts that have funds available at least 72 hours prior to the SIA start	14%	●	62%	100%
	4.3.1.	Percentage of countries at high risk for cVDPV2 verified for nOPV2 use	74%	81%	83%	87%
	4.3.2.	Doses of nOPV2 administered (released) as a % of total type 2 vaccine used for outbreak response	90%	94%	93%	92%
5. Improve detection and response through sensitive surveillance						
Assessment at objective level 5: at risk	5.1.1.	Percentage of districts with population under 15y >=100,000 in priority countries achieving npAFP rate of =2/100,000	86%	88%	86%	87%
	5.1.2.	Percentage of ES sites in priority countries meeting sensitivity threshold of at least 50% samples positive for enterovirus	42%	42%	45%	48%
	5.2.1.	Percentage of priority countries achieving stool adequacy targets overall and disaggregated by sex- Female	87%	83%	77%	80%
	5.2.1.	Percentage of priority countries achieving stool adequacy targets overall and disaggregated by sex- Male	87%	87%	84%	83%
	5.2.2.	Percentage of AFP cases and ES samples in priority countries with final results reported within 35 days of onset for AFP cases or ES sample collection - WPV	86%	62%	40%	56%
	5.2.2.	Percentage of AFP cases and ES samples in priority countries with final results reported within 35 days of onset for AFP cases or ES sample collection - cVDPV	5%	1%	0.9%	1.2%

● no results were reported ● off track ● partially achieved/at risk ● on track



END
POLIO

Department of Polio Eradication
World Health Organization
20 avenue Appia
1211 Geneva 27
Switzerland
www.polioeradication.org

