

# POLIO

IN THE

## AFRICAN REGION

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### Overview



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## — Intro

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The following content offers a comprehensive overview of the current status of the polio programme teams, highlighting their achieved progress, existing challenges, and the potential pathways for future development.

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# LABORATORY NETWORK

## AFRICAN REGION

### Overview

The Polio Lab Network in Africa is a critical component of the Global Polio laboratory network (GPLN), it plays a critical role in the detection and monitoring of polioviruses in the region. The polio laboratory network has made significant progress in Africa in recent years.

### Progress

The polio laboratories network in Africa consist of 16 World Health Organization (WHO) supported laboratories actively working towards achieving GPLN accreditation. A key focus of ongoing efforts is expanding the workforce while ensuring timely and high-quality services. Other than Zimbabwe, all polio laboratories are actively engaged in diagnosing polio from sewage samples. However, discussions are underway to establish an Environmental Surveillance laboratory in Zimbabwe, marking a significant advancement in the region's capabilities. Further, the laboratories have shown progress in critical areas, such as swift protocol adjustments to detect the novel oral poliovirus vaccine before its deployment in Supplementary Immunization Activities (SIAs). Laboratory personnel play a dynamic role in Outbreak Response Assessments (OBRA), actively contributing to recent assessments in countries including Tanzania, Ethiopia, Mozambique, and Zambia.

Successful refurbishment projects have been accomplished, exemplified by completing the Nigeria Ibadan Polio Lab refurbishment and establishing a substantial solar power facility at the Nigeria Maiduguri Polio Lab, both projects supported by the Bill & Melinda Gates Foundation (BMGF). The momentum for laboratory capacity strengthening persists through the provision of essential equipment, such as Real-time PCR Machines and Genetic Analysers, along with specific supplies and reagents across all 16 laboratories. Notably, working with WHO HQ, the Dubai Hub ensures a consistent and streamlined provision of laboratory supplies, facilitating operational excellence.

### Challenges

As the network expands its efforts, challenges emerge. One pressing challenge is managing an escalating workload with limited resources stemming from the rise in Environmental Surveillance (ES) sample collection sites, pilot testing of polioviruses through Direct Detection (DD), and expanding sequencing capabilities to some laboratories in the region. Enhancing lab facilities is another priority area, necessitating refurbishing some laboratories and reconstructing others that have seriously deteriorated. During the COVID-19 Pandemic, the network encountered significant stockouts due to heightened demand for laboratory supplies and the redirection of resources to address pandemic-related needs.

### Way Forward

To navigate these challenges and further progress, the network has outlined several strategic actions. Expanding and enhancing lab infrastructure, along with enhanced workforce, are paramount. This will require securing increased funding and support from both governments and international organizations. Ensuring the punctual delivery of supplies, including reagents and equipment for direct detection and sequence detections.

The network aims to finalize the recruitment of additional lab staff to effectively manage the heightened workload. Establishing central hubs in Ghana and South Africa for efficient supply stockpiling is a proactive measure, ensuring immediate supply availability for labs in the region. Furthermore, assistance will be provided for lab refurbishment in laboratories that have not yet received such support. The network is committed to facilitating isolate shipment from National polio labs to regional sequencing labs, facilitating comprehensive sequencing efforts.

In addition, the network will aid in the establishment of a new Environmental Surveillance laboratory in Zimbabwe, expanding the region's capabilities. Focused on operational efficiency, ongoing refurbishment projects, including those in Ethiopia and other regions, will remain a priority.



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# ENVIRONMENTAL SURVEILLANCE

## AFRICAN REGION

### Overview

Environmental Surveillance (ES) for polioviruses complements AFP surveillance and is a key tool in polio eradication efforts. This involves the collection and testing of sewage samples to detect the presence of polioviruses in the environment. While the main technique to monitor polio is through Acute Flaccid Paralysis (AFP) surveillance, ES provides extra information to fill in the gaps and improve our understanding. ES can help identify areas where poliovirus is circulating, even if no cases of acute flaccid paralysis (AFP) have been reported. In addition to poliovirus, ES can also detect other priority pathogens, such as hepatitis A and E, and can provide information on population immunity to vaccine-preventable diseases.

### Progress

As at the end of 2022, 38 countries were conducting environmental surveillance. **Expansion of environmental surveillance** in the African Region continues in 2023 with initiation in four additional countries, (Eswatini, Mauritius, Seychelles and Zimbabwe) and 14 additional sites **integrated into the network**. Currently, a total of 42 countries are conducting polio ES implementation across the region.

In a bid to further optimize ES performance in the Region, **reviews were conducted in Mali and Zambia**. Two new sites were identified and integrated into the network in Mali. The **ES team plans for the second half of 2023** include conducting review missions to Angola, the Democratic Republic of Congo, Nigeria, Rwanda, Tanzania, Zambia and Zimbabwe.

A **methodical approach to optimize ES performance** in the African Region was adopted in 2022 and has been applied during missions to 25 countries to enhance effectiveness. This approach encompasses the strategic closure or reconfiguration of underperforming sites to improve enterovirus isolation.

**Sample transportation remains a major challenge**. Innovative alternatives are being proposed to countries to overcome this and has led to a significant improvement in the proportion of samples reaching the lab from 53% in 2022 to 72% as at Q2 2023.

An extensive **ES capacity-building** initiative was executed, benefiting sample collectors, supervisors, and national teams. The training effort encompassed 510 personnel from 2022 to Q2 2023. Adoption and utilization of electronic data tools to improve ES efficiency continues to gain traction, rising from 40% in 2022 to 66% as at Q2 2023



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### Key Figures

**41** Countries implemented ES in the first half of 2023

**502** ES sites were in operation

**4400** ES samples were collected in the first half of 2023

**50%** of ES sites had  $\geq 50\%$  EV isolation rates

**95%** of ES samples received at the lab were in good condition

**71%** of ES samples reached the lab within 3 days of collection

### Challenges

Several challenges have been identified concerning ES in the African Region. The selection of appropriate sites to establish ES, especially in countries with open drains, is a major challenge. In addition, transporting samples from collection points to designated polio labs requires innovative methods to meet deadlines.

Other challenges to ES include regular data reviews to optimise site performance and a need to constantly engage in advocacy efforts with governments and partners to secure consistent support, capacity building, and research.

### Way Forward

**Field review missions** to optimise ES performance in priority countries have been planned for 2023. These include Angola, Nigeria, Rwanda, South Africa, Tanzania, Zimbabwe, Benin, Burkina Faso, Chad, Democratic Republic of Congo, Central African Republic and Burundi. These countries will be prioritised based on **quarterly ES desk reviews** published in conjunction with the quarterly **ES bulletins**. Monitoring of KPIs and ensuring high-quality ES sites, data, and laboratory performance, remote support will be provided where field reviews are not possible.

**Integrated surveillance training** to build the capacity of country teams in the AFRO Region has been planned for September and October 2023. Technical and human resources will be strengthened by engaging and training in-country ES consultants to support 10 countries and their subregions.

# Geographic Information Systems (GIS)

## AFRICAN REGION

### OVERVIEW

Geographic Information Systems centre aims to improve public health through the practical application of GIS and mobile technological solutions to provide timely, corroborated and reliable data and geospatial information products to support polio eradication efforts, health emergencies and other public health initiatives.

### TOOLS

- **Mobile data collection tools:** collecting and analysing data in real-time.
- **Dashboard and reporting tools:** visualise and analyse data from multiple sources.
- **Geospatial analysis tools:** analyse and map data related to disease outbreaks, immunisation coverage, and other public health indicators.
- **Data sharing platforms:** share data and information across different organisations and stakeholders.

### UTILIZATION OF TOOLS

- **Surveillance:** mapping and tracking the spread of diseases, including polio, and identifying areas at high risk of outbreaks to target interventions.
- **Immunization coverage:** mapping immunization coverage to target immunization campaigns and improve coverage rates.
- **Outbreak response:** providing real-time data on the location and spread of outbreaks, tracking performance and identifying missed communities.
- **Information management:** analysing data from a variety of sources, including demographic data, health facility data, and disease surveillance data, to drive interventions and decision-making and target interventions.
- **Accountability:** a mechanism to strengthen data validation and verification and ensure efficient monitoring and overall responsibility.

### PROGRESS

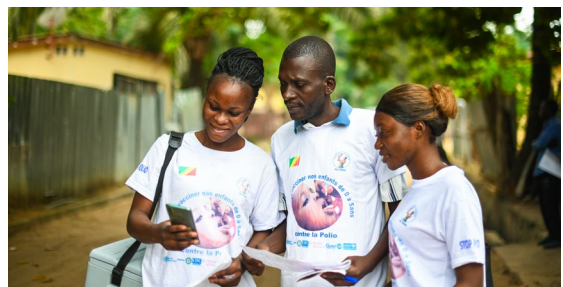
- The GIS Centre, funded by the Bill and Melinda Gates Foundation (BMGF) since 2017, has strengthened its infrastructure and conducted region-wide capacity building trainings for MoH GIS focal points, providing them with smartphones and laptops.
- The Rapid Response Team (RRT) Hub was developed as a “One Stop Shop” to provide accessible information and data supporting outbreak response efforts within the AFRO Region.
- Established a network of GIS focal points across the African region and equipped them to support polio eradication efforts, enabling efficient data management and analysis for targeted interventions.
- Provision of key hard-and-software to public health stakeholders, including ministries of health, such as Smart TV screens and software licensing support.
- Utilized GIS for baseline data production, micro-planning, and field activity tracking, facilitating comprehensive and efficient public health initiatives.
- The GIS Centre has successfully implemented various digital platforms to enhance surveillance, including the AVADAR project for community-based surveillance and Integrated Supportive Supervision (ISS) for active case finding and routine immunization.
- eSURV (Electronic Surveillance), an mHealth (mobile health) solution to enhance active searches conducted by government surveillance agents using mobile phones in health facilities and the community; and,
- A new eSURV Companion App, a map-centric application that will provide real-time insight for surveillance officers to view the status and location of all active surveillance sites.
- Utilized polio program solutions (eSURV/ISS) to create tools and dashboards for COVID-19 response, improving data-driven decision-making during the pandemic.
- Collaborated with and supported other disease areas, such as NOMA disease surveillance and mapping schistosomiasis prone areas.
- Using the existing GIS Centre infrastructure, a regional GIS working group was formed with representatives from regional office clusters. It aligns with the AFRO Workstream and facilitates streamlined GIS and mobile technology support across all clusters through various workstreams.

### CHALLENGES

- Limited funding and resources to meet the needs of all countries necessitated prioritising country support for outbreak response and surveillance. This has hindered the Centre's ability to expand some of its programs to support the utilization of solutions such as the Geospatial tracking system, which requires the procurement of smartphones for use during outbreak response campaigns.
- The COVID-19 pandemic has disrupted health systems and affected the Centre's operations.

### WAY FORWARD

- The Centre plans to continue strengthening partnerships and collaborations with technical and financial partners.
- Capacity building for data-driven analysis, reporting, decision-making, and performance measurement will be a priority.
- The Centre will maintain a multi-platform geospatial technology strategy and adapt to new innovations.
- Staff training on GIS, mHealth, and business intelligence (BI) tools will be provided.
- Participation in regional and international conferences will be pursued to strengthen the Centre's network and staff capacity.
- Work with other clusters through the newly established GIS working group to streamline the use of GIS and mobile technological solutions across the various clusters.



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# CAPACITY BUILDING

## AFRICAN REGION

### Overview

The Capacity Building team strives to cultivate preparedness, leverage Geographic Information System (GIS) for informed decisions, enhance laboratory infrastructure, and refine outbreak response mechanisms. The training's objective is to support the eradication of polio while establishing a robust public health framework capable of addressing a wide range of health emergencies.

### Progress



#### Labs Training

- 8 Lab technologists from 5 regional labs trained in Sequencing using the MinION platform
- 13 Lab technologists from 13 regional labs benefit from ITD/Refresher and KingFisher Duo training.
- 30 lab data managers from 14 countries updated on ES/AFP lab consolidate data and surveillance data management
- 8 Lab technologists from 4 regional labs trained on DDNS training
- 33 collectors/Supervisors and surveillance officers trained on ES in Mali
- 23 collectors/Supervisors and surveillance officers trained on ES in Eswatini
- 22 collectors/Supervisors and surveillance officers trained on ES in Seychelles

#### Preparedness Training

- 23 Surveillance officers trained to constitute a pool of GPEI coordinators

#### Geographic Information System Training

- 20 IT personnel, data manager and epidemiologist in-country capacity Strengthened in the use of GIS GTS and mobile solutions in DRC
- 35 vaccinators/supervisors In-country capacity Strengthened in the use of GIS and GTS during Campaign in DRC
- 44 surveillance officers, Biostatisticians from WHO and MoH were involved in the Training of trainers workshop on the eSURV Companion App in Gabon
- 47 surveillance officers, Biostatisticians from WHO and MoH, were involved in the Training of trainers workshop on the eSURV Companion App in Uganda.

#### Polio Outbreak Response Simulation Exercise conducted in:

- Namibia
- Gabon
- Burundi
- Lesotho

#### Trainings held by month:



#### Vaccine Safety Training

- In-person training of experts and causality assessment Burkina Faso
- Virtual training on AEFI surveillance focusing on nOPV2 active case search and causality assessment of AFP post-nOPV2 to members of the National AEFI Committee, representatives from the National Regulatory Authority and Ministry of Health of 6 countries
- All countries are oriented on using Vigiflow and AEFI data sharing into VigiBase during sessions during Outbreak Response training for campaigns.
- Training of WHO data managers on safety data management to support in-country safety data monitoring in West Africa
- Contribution to developing a platform to allow in-country management of serious AEFIs and collaboration among National AEFI Committees of different African countries and beyond.

#### Next steps

- Country training on SOPS
- Training of actors in project management
- Training of surveillance focal points
- Leadership training
- Online Training Module Course on Surveillance
- Continue capacity building on lab data management and laboratory
- Training on the shipping of infectious substances
- POSE in Equatorial Guinea

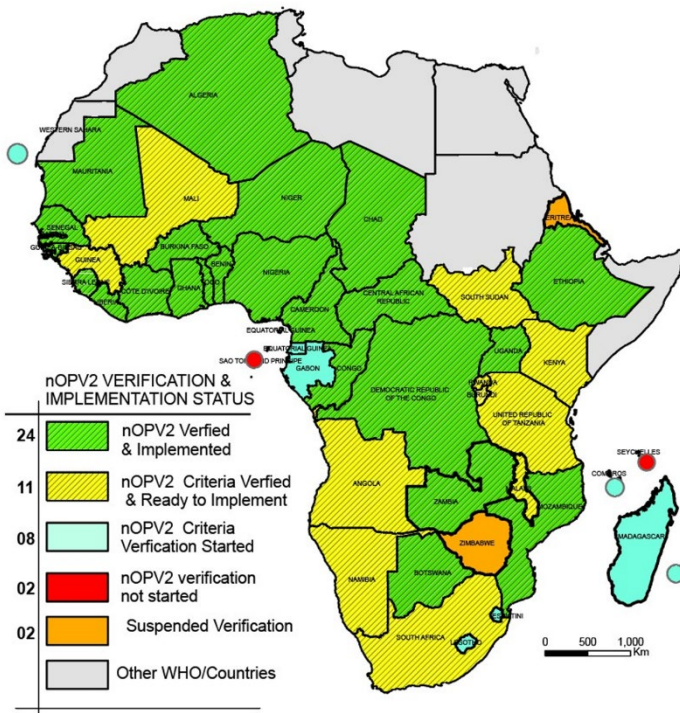
# Novel OPV2 Use Readiness

## AFRICAN REGION

### OVERVIEW

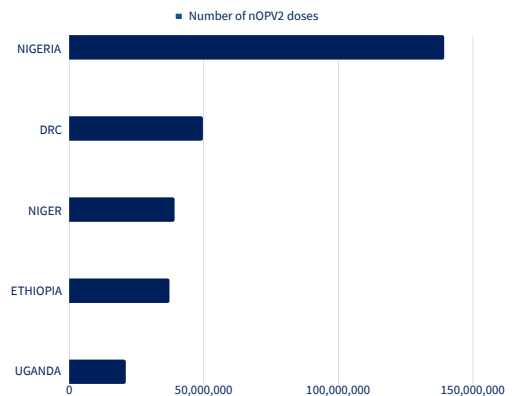
nOPV2 stands for Novel Oral Polio Vaccine type 2. It is a next-generation version of the type 2 monovalent oral polio vaccine (mOPV2) developed to more sustainably address the evolving risk of circulating vaccine-derived poliovirus type 2 (cVDPV2). The development of nOPV2 started in 2011, and through a WHO Emergency Use Listing (EUL) recommendation, the vaccine began its field rollout in March 2021. All countries wishing to use nOPV2 for outbreak response must meet 16 readiness requirements to ensure they are prepared to use the vaccine and monitor its performance in the field. These requirements cover:

-   
 national and regulatory approvals
-   
 cold chain and logistics
-   
 surveillance
-   
 safety
-   
 advocacy, communication and social mobilization



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### Top 5 Utilizers of nOPV2



### ACHIEVEMENTS

- **35/47** Member States have already met the requirements.
- Over **95%** of the vaccine used to date has been in African countries.
- **24** countries have conducted campaigns using nOPV2.
- **385 637 855** doses administered across the region as of 10 July 2023.
- As per The Strategic Advisory Group of Experts on Immunization (SAGE) guidance, all countries in the African region are to continue to prioritise the use of nOPV2 for cVDPV2 outbreak response.
- nOPV2 is on track to be fully licensed and WHO pre-qualified by the end of 2023.

### CHALLENGES

- Rate of submission of verification documents for nOPV2 use (12 countries still pending verification).
- Delays in collection and transmission of safety data in countries.
- Delays in the preparation and processing of safety budgets in countries.

### WAY FORWARD

- Accelerate readiness verification in remaining countries especially in Southern and Central Africa where cVDPV2 risk is increasing.
- Maintain funding and technical support for safety surveillance
- Continue to increase the capacity to monitor the genetic stability of the vaccine by increasing whole genome sequencing capacity

# CERTIFICATION

AFRICAN REGION

## Overview

WHO Regions are eligible for certification following the **absence of indigenous WPV** from any country in that region, for a period of at least three years, from any source in the presence of certification-standard surveillance. Certification is conducted on a regional basis, by the respective Regional Certification Commissions (RCCs). Five of six WHO Regions have been successfully certified as free of indigenous wild poliovirus.

WHO Region of the Americas	1994
WHO Western Pacific Region	<b>2000</b>
WHO European Region	<b>2002</b>
WHO South-East Asia Region	<b>2014</b>
<b>WHO African Region</b>	<b>2020</b>
WHO Eastern Mediterranean Region	<b>Endemic</b>

## Achievements

- Eradication of indigenous wild polioviruses, from 75,000 annual cases across the continent in 1996, to the last detected case in 2016.
- April-May 2016 - successful withdrawal of trivalent OPV from routine immunization programmes (switch from trivalent OPV to bivalent OPV).
- As a prelude to this switch: The introduction of inactivated polio vaccine (IPV) into routine EPI programmes in countries of the Region.
- Establishment of the Africa Regional Polio Outbreak Rapid Response Team.
- Use of technologies and innovations in surveillance and immunization campaigns.
- August 2020, the certification of the region as indigenous wild polio-free by Africa Regional Certification Commission (ARCC) marked a turning point in the fight against polio in the African region.
- The successful introduction in 2021 of nOPV2 for use in the fight against variant poliovirus type 2.
- Multi-country synchronized immunization campaigns organized across the region.

## Challenges

- Continued outbreaks of both circulating variant poliovirus types 1 and 2, particularly in north-western Nigeria, eastern Democratic Republic of the Congo, Tete province in Mozambique, and Madagascar.
- The detection in 2022 of an imported wild poliovirus type 1 in Malawi and Mozambique resulted in setbacks.
- The COVID-19 pandemic in 2020 and 2021 adversely affected routine and supplementary immunization coverage, leading to increased outbreaks of polio and other vaccine-preventable diseases in many countries.
- Delays in improving surveillance quality.
- Vaccine supply constraints and inadequate funding for outbreak response.
- Insecurity which limits the implementation of activities.

## Priorities

Complete the implementation of a multi-country outbreak response to the imported WPV1 detected in southeast Africa. Accelerate response to variant poliovirus outbreaks.

Speed up the implementation of the routine immunization recovery plan following the COVID-19 pandemic.

Strengthen poliovirus detection by intensifying AFP surveillance and expanding environmental surveillance.



# TRANSITION

## AFRICAN REGION

### Situation highlights

The extraordinary reach of the polio eradication programme in the African Region has created a wealth of knowledge and an extensive network and infrastructure, which underpins many other health initiatives.

The polio transition process aims to repurpose this network and infrastructure to maintain a polio-free Africa and strengthen broader health priorities, especially essential immunization, disease surveillance and emergency preparedness and response, under the leadership of national authorities.

The post-2023 polio transition approach is tailored to local context and epidemiology and is closely monitored to maintain the quality of polio essential functions and ensure sustainable financing.



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### Transition progress

- 2017** ● Seven priority countries (Angola, Cameroon, Chad, The Democratic Republic of Congo, Ethiopia, Nigeria, and South Sudan), with the majority of polio programme assets, develop polio transition multi-year plans of action.
- 2017-2019** ● GPEI resources decline in countries leading to the polio ramp-down.
- 2020** ● Declaration of the African region polio-free for the indigenous wild poliovirus type 1, hope for the implementation of polio transition.
- 2022** ● The Global Polio Eradication Initiative continues to support 10 high-risk countries and response to all ongoing outbreaks. WHO has increased support for the remaining 37 countries to sustain polio functions (surveillance, lab, immunization) and HR.
- 2023** ● Development of a 2024/2026 Regional Strategic Plan underway

### Polio transition planning post-2023

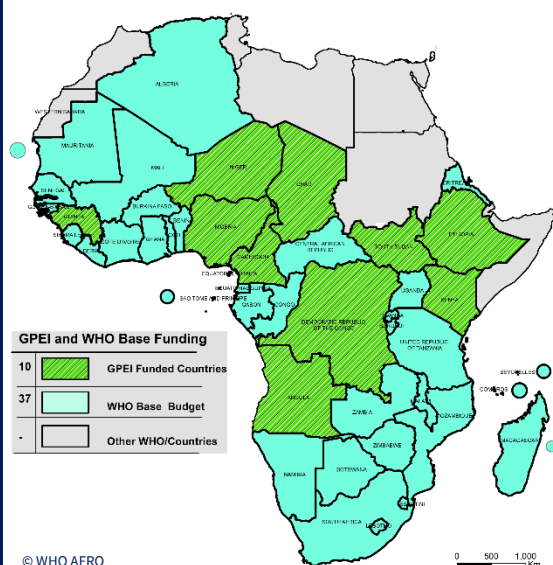
In 2023, the Strategic Action Plan for Polio Transition (2018 – 2023), the global framework for transition, comes to an end. This represents an opportunity to adjust the transition to fully align with evolving polio epidemiology, the current political and economic climate, and the changing public health architecture following the COVID-19 pandemic.

The African Region is developing a 2024/2026 Regional Strategic Plan to direct transition efforts beyond 2023. This aims to ensure that the polio transition serves the public health priorities of national governments in the region and contributes to strengthened primary health care. The Plan will align with aims of the new GPEI Polio Eradication Strategy and the Global Vision for Polio Transition.

### Sustaining polio functions

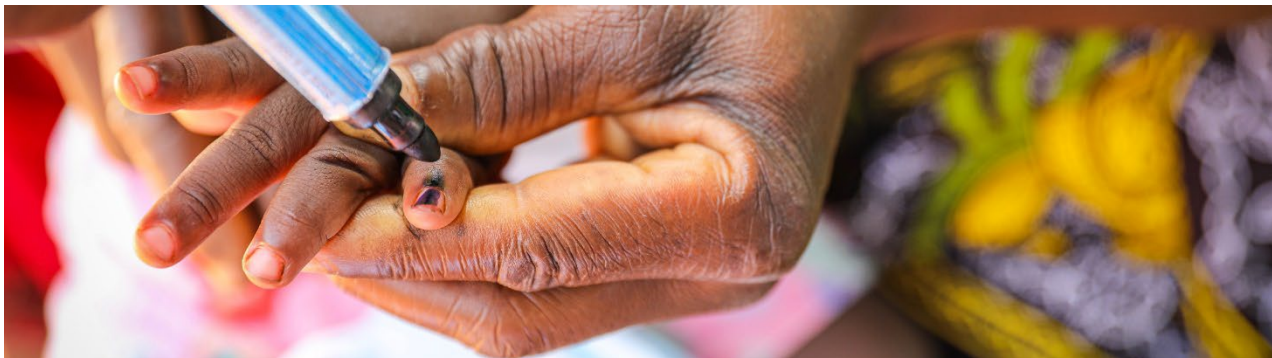
The African Region is pursuing polio transition using a two-phased approach:

- 10 high-risk countries (Angola, Cameroon, Chad, Democratic Republic of Congo, Ethiopia, Nigeria and South Sudan, Guinea, Kenya and Niger) continue to receive support from the GPEI to 2026.
- 37 lower-risk countries supported by WHO through flexible funds to sustain the essential polio functions, including poliovirus surveillance, routine immunization, and outbreak preparedness & response, as part of overall PHC strengthening.



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- **Mozambique**  
Capacity building of MoH staff at national and subnational levels and support for surveillance supervision. COVID-19 training for health workers (Training Of Trainers conducted for 60 central and provincial staff).
- **Central African Republic**  
National consultants deployed in field offices (Bangassou, Bambari, Bouar, Kaga Bandoro) to support surveillance (IDSR), immunisation and outbreaks response (VPD, polio).
- **Mali**  
16 consultants deployed in districts with insufficient disease surveillance to swiftly detect and respond to suspected AFP cases.
- **Tanzania**  
13 National Integrated Active Search teams deployed to 38 districts with suboptimal disease surveillance performance.
- **Sierra Leone**  
8 National Surveillance Officers, 5 Partner Agency Staff, 32 District Surveillance Officers and 1673 Health Facility surveillance staff trained on AFP/VPDs surveillance and conducting regular integrated supervision.
- **Uganda**  
WHO provided technical support and resources to support active surveillance for vaccine-preventable diseases, including poliovirus, e.g., detect a measles outbreak in Lamwo and Kiryandongo districts.

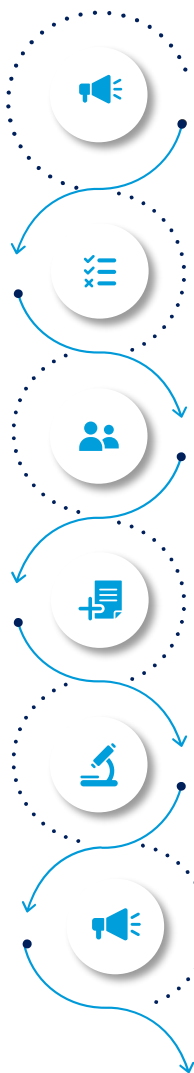


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## RECOMMENDATIONS

### Ensuring Effective Polio Detection and Outbreak Response

We encourage you to do everything possible to ensure timely, high-quality campaigns, and strong surveillance, including prompt shipment of samples. Any delays in detecting polio or an outbreak response campaign can result in more paralysed children and continued spread within countries and the African region.



#### »» Public health emergency declaration

Ministry to declare a polio emergency and designate a government Incident Manager to lead the polio response.

#### »» nOPV2 Readiness

All member States should make every effort to expedite and maintain their nOPV2-use readiness by completing all necessary requirements

#### »» Polio Emergency Operations Centre

Countries can establish a polio emergency operations centre made up of government and GPEI partners, which meet to review the polio epidemiology and surveillance data, campaign preparedness, and troubleshoot any operational bottlenecks.

#### »» Comprehensive Response Plan

Countries can develop a comprehensive preparedness and response plan that includes intensified routine immunization, surveillance strengthening, and polio house-to-house campaigns.

#### »» Surveillance

Surveillance should include acute flaccid paralysis (AFP) surveillance and environmental surveillance. Both are needed to detect all polioviruses quickly.

#### »» Advocacy

Incorporating strong advocacy and fostering consensus-building among all relevant stakeholders to ensure the success of each one of these efforts.

