Seventh Report

OCTOBER 2024

The struggle for progress

Does system strengthening always have to be slow?

POLIO TRANSITION
INDEPENDENT
MONITORING BOARD

Polio Transition Independent Monitoring Board

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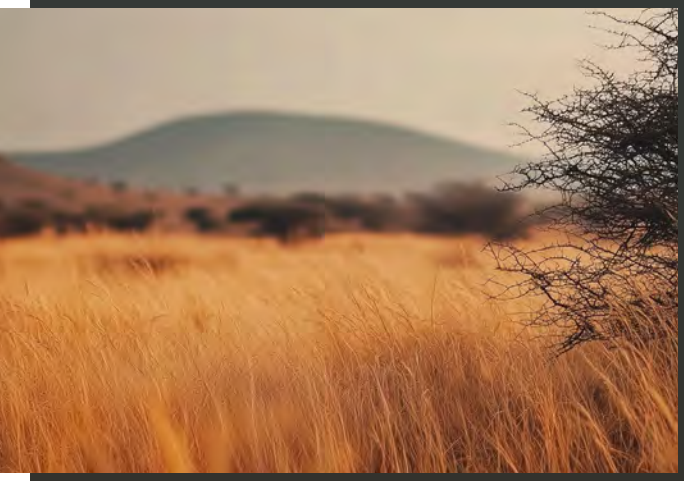
ORIGINS AND INDEPENDENT STATUS

The Transition Independent Monitoring Board (TIMB) was created in 2016 by the Global Polio Eradication Initiative (GPEI) to monitor and guide the process of polio transition planning. It has produced six reports, and this is the seventh. Following the World Health Organization (WHO) taking over the leadership and management of polio transition planning from the GPEI, the TIMB was reconstituted.

It is convened under terms of reference matched to the Strategic Action Plan on Polio Transition 2018–2023 that was received by the 71st World Health Assembly in May of 2018. The TIMB works closely, and has a common chair, with the Independent Monitoring Board (IMB) that has been evaluating the process of polio eradication since 2011 and has published 23 independent reports.

The TIMB's reports are entirely independent. No drafts are shared with WHO or other organisations prior to finalisation.

Timeliness and accuracy



The TIMB reports make reference to a wide range of country contexts and areas of global health beyond polio. In the entire scope of this work, there are diverse sources of evidence and data. Accuracy and interpretations of them may vary.

The TIMB is always pleased to consider making changes to the online version of the document when recipients of the report wish to highlight points of accuracy.

In between the TIMB's meeting and the publication of its report there will always be subsequent developments in polio epidemiology, in policy-making decisions and in the operating environment of polio transition countries. Where changes are major, they can lead to post-TIMB work to take account of them.

For this current seventh report, the arrival of a formal consultation draft of the first revision to the *Polio Post-Certification Strategy* in seven years and two months after the TIMB meeting, was a major and fundamental development. Post-hoc consideration of this has been necessary.

TIMB meeting in July 2024

The TIMB was asked by the GPEI to make its 23rd meeting, in July 2024, a joint meeting with the IMB. This report deals only with the TIMB's monitoring responsibilities. The IMB has recently produced its report: *The Long Goodbye: the poliovirus continues to resist extinction*. Readers of this TIMB report are encouraged to look at the 23rd IMB report to understand the overlaps and synergies in the strategic and operational aspects of the polio eradication and polio transition programmes.

The IMB/TIMB meeting itself comprised over 30 hours of detailed discussions with many valuable points and insights about the Polio Programme made by almost 100 people. In addition, through the year before the meeting, the TIMB's chairman and its small secretariat have had numerous discussions with individuals and groups who are involved in planning, delivering and funding the polio transition programme, as well as those who closely follow its progress.

To avoid the cumbersome terminology of calling the July 2024 meeting "the IMB/TIMB meeting", it is simply referred to in this report as "the TIMB meeting" for consistency with the scope and subject matter of the report.

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Introduction

The fundamental challenge in implementing polio transition is that, while the overall purpose is quite clear, the complexity involved in reaching consensus on its precise goals, on how best to implement them, and finding agreed ways to measure progress has led, over recent years, to a constant process of revisiting and resetting this key programme.

The TIMB was established to oversee the polio transition process and provide independent evaluations of progress and recommendations for meeting the challenges and helping to shape the programmes of work.

The TIMB has produced six extensive reports over the last eight years, each time seeking to help to unravel these complexities and particularly to urge the polio partners to reach firm decisions on governance, on the timing of transfer of functions currently managed by the GPEI to new management arrangements, and on the extent to which polio transition should have an explicit role in strengthening health systems at country level to enable them to deliver a polio-free world.

Polio transition should not be seen as an "exit strategy," where partners simply withdraw upon completion. Rather, it should be viewed as a maintenance and sustainability strategy designed to uphold the Polio Programme's achievements and maintain its assets so that eradication gains are protected and integrated within broader health systems.

Such a perspective creates a clear distinction between handing-off responsibilities and creating a continuum where immunisation, surveillance, emergency response and primary healthcare systems progressively take on these roles without abrupt funding or support cessation. It helps to provide a healthy challenge to the premise that transition marks a definitive end to GPEI's involvement and funding.

Early on in the concept of polio transition, it became clear that achieving the minimum requirement of ensuring sufficiently strong polio-essential functions within a country-led and funded post-GPEI world was far more complex than ever anticipated.

Part of the reason for this was the emergence of major global events of a very profound nature: the after-effects of the 2008 financial crisis, the COVID-19 pandemic and the repeated failures to meet any of the deadlines for interrupting wild poliovirus transmission in the 21st century so far.

The original World Health Assembly resolution, and the work of a heavily funded and tightly coordinated polio eradication programme, had been based on the assumption that the world would enter a new millennium free of the scourge of polio. It did not.

The other factor that started to push the polio transition programme off its intended path, and to cloud its original and inspiring polio legacy-orientated vision, was the difficult financial, geopolitical and environmental context of the countries that had been designated as priorities for transition work.

The fifth TIMB report, *Building stronger resilience: The essential path to a polio-free world* took particular care in trying to scope polio transition so that it captured both the polio epidemiology questions and the challenges of countries' fluctuating capacity to deliver the programme's goals. This report called for the polio transition process to be viewed and judged in three ways:

1) The strengths and weaknesses in organisation, governance and resource mobilisation.
2) The countries' political, socioeconomic and conflict context and operating environments.

3) The current strength and readiness of the public health system to deliver optimum levels of immunity, run a high standard of surveillance, and identify outbreaks early and close them down quickly and effectively.

This is a formidable task for the countries to take on and deliver to the high public health standard required.

Arguably, up until then, the polio transition work had concentrated on the first of the dimensions set out in the list above and less so on the second and third. Moreover, the early promise set out at the first TIMB meeting, that a polio transition programme, through the polio assets and expertise that it held, would be a catalyst for countries to speed up the development and strengthening of their entire health systems, seems now a forlorn hope.

Many countries, especially in sub-Saharan Africa, South Asia, and conflict-affected regions, are not yet ready to manage these functions independently. The challenge is further complicated by the extensive circulation of vaccine-derived poliovirus which is now causing much more paralytic polio than the wild poliovirus.

182 million

people are in **humanitarian need** within polio transition countries

Derived from the United Nations Office for the Coordination of Humanitarian Affairs (OHCA) Global Humanitarian Overview 2024.

Even had the polio eradication work, led by the GPEI, delivered its goals in line with its strategic deadlines for interrupting poliovirus circulation, the world would not have been on the verge of eradicating wild poliovirus without a well-managed transition phase.

The period between achieving interrupting circulation of all polioviruses, and sustaining a polio-free world, poses significant challenges without the complexity that has come to surround it. Even with country stability and funding, the process of transitioning country-led health systems is complex, as governments must integrate polio-related functions, into their broader health infrastructure.

At the heart of the concerns that were expressed strongly and consistently by a wide range of delegates at the April 2023 TIMB meeting was the perceived ambiguity surrounding the meaning and purpose of polio transition.

In its subsequent, sixth and most recent report, *Ambiguities and certainties: Meeting the diverse expectations of polio transition*, published in July 2023, the TIMB noted that, while the technical goals of polio transition are clear, the broader vision for it and why it matters are not always kept at the forefront of discussions.

The report argued that this lack of clarity creates a situation where many countries, particularly those with weak health systems, do not fully understand the significance of the transition or their role in ensuring its success.

As the GPEI begins to wind down, the TIMB has repeatedly expressed the fear that many national health systems will see the end of poliovirus circulation as a conclusion, rather than a handover of responsibility.

The transition seems to be misunderstood as merely a technical adjustment, rather than a fundamental shift in the responsibility for maintaining a polio-free world.

This misunderstanding stems, in part, from the way that polio transition has been communicated. The TIMB points out that for many stakeholders, the language of "transition" itself is confusing.

In public health, transition often implies a handover of specific functions from one body to another, but in this case, the transition also involves a much broader shift. It encompasses not just the transfer of technical tasks but the long-term responsibility for maintaining and strengthening health systems, immunisation coverage, surveillance sensitivity, and emergency preparedness.

At its meetings, the TIMB detected that, for staff close to the frontline, polio transition has very negative connotations. Mention of it can spark an emotional reaction. This is because it evokes the prospect of job losses and "pink slips".

The discussion of polio transition at the TIMB's past meetings has always captured not only the technical aspects of polio eradication, but also the broader philosophical and structural considerations that have shaped the programme's evolution over the years.

This seventh TIMB report, which follows the July 2024 meeting, assesses the current thinking of WHO and the polio partners on polio transition. It also judges the extent of progress with implementation.

WHO response to last TIMB recommendations

WHO response to last TIMB recommendations

WHO, as the leading entity responsible for this polio transition process, has responded to the recommendations of the last TIMB report. In this section, only the topic of the recommendation is set out. The full wording of each of the 10 recommendations can be found in the sixth TIMB report, *Ambiguities and certainties: Meeting the diverse expectations of polio transition.*

1. Rebranding polio transition for clarity

- **TIMB Recommendation:** One of the TIMB's key recommendations was to rebrand polio transition to clearly define both its polio and non-polio outcomes. This was a response to concerns about confusion over the purpose and scope of the transition, with many stakeholders unsure if the process was strictly polio-related or had broader health system implications.
- **WHO's Response:** WHO responded to this TIMB recommendation by pointing to its new strategic framework that focuses more on outcomes and the desired end-state.

While this is a helpful step in introducing more clarity to the meaning of polio transition, it does not entirely resolve many stakeholders' dissatisfaction with the lack of a strong operating model for transition.

2. Establishment of a new multi-partnership organisation

- **TIMB Recommendation:** A strong recommendation was for WHO to establish a new multi-partnership organisation to oversee the polio transition process, including donors and management teams, at global level.
- **WHO's Response:** WHO said that it found "little appetite" for setting up a new organisational structure. It does commit to working to establish a governance and accountability structure post-GPEI.

The TIMB remains concerned that the Polio Programme has not grasped the vital necessity of having a global mechanism to coordinate and drive forward strong polio-essential functions at country level. The programme has had seven years to make its mind up about this.

3. Workforce planning and salary discrepancies

- **TIMB Recommendation:** TIMB highlighted the need to address workforce issues, specifically resolving the large salary discrepancies between United Nations staff and government local employees working in polio transition-related roles.
- **WHO's Response:** WHO responded by allocating a low priority to this TIMB recommendation. It made clear that workforce development is integrated into broader organisational reforms under the General Programme of Work, the latest (14th) version of which sets a high-level road map for global health and will guide WHO's work in support of Member States and partners for the 4-year period 2025–2028.

The response does not provide explicit reassurance about the polio workforce.

4. Transferring outbreak management responsibility to WHO Health Emergencies Programme

- **TIMB Recommendation:** Another significant recommendation was for WHO to initiate the phased transfer of circulating vaccine-derived poliovirus outbreak management from GPEI to WHO's general Health Emergencies Programme, starting in 2024.
- **WHO's Response:** WHO points to ongoing strategic discussions between its Polio and Health Emergencies departments to transfer outbreak management responsibilities.

WHO is not according this recommendation a high priority. It is significant that the current outbreak response system is not operating as an emergency programme. It is difficult to believe that the involvement of the full-blown WHO health emergency function would not immediately transform these attitudes.

5. Data management and analytics capacity

- **TIMB Recommendation:** Strengthening data management and analytics was highlighted as essential for sustaining polio surveillance and broader health system monitoring.
- **WHO's Response:** WHO has responded by saying that data quality is a priority within the strategic framework and has worked with CDC to improve data systems.

It is disappointing that WHO has given this 5th TIMB recommendation low priority in its list of responses to TIMB's recommendations.

6. Monitoring and accountability framework

- **TIMB Recommendation:** TIMB stressed the need for WHO to develop a monitoring and accountability framework to track both programmatic performance and the progress of transition.
- **WHO's Response:** WHO introduced a new monitoring and evaluation framework that monitors both programmatic resilience and transition readiness. This new framework focuses on ensuring that countries meet performance benchmarks for immunisation, surveillance, and outbreak response.

WHO has made strides in aligning country-level reporting with this framework, although challenges in data consistency and reliability remain.

7. Resource mapping and financial sustainability

- **TIMB Recommendation:** Comprehensive resource mapping was recommended to assess the financial sustainability of polio functions, including the likelihood of country self-sufficiency and the funding needed to sustain polio-related functions beyond GPEI.
- **WHO's Response:** WHO has conducted budget and resource mapping as part of the GPEI mid-year review, WHO's Programme of Work, and other regional and country-level plans.

While this is a step forward, the funding outlook remains precarious, with many countries still reliant on international donors for essential polio functions. The identified gaps in funding, particularly in surveillance activities, emphasise the need for sustained financial commitment from both domestic governments and international partners.

There does not seem to have been any active and deep engagement of donors on this matter, as recommended by the TIMB.

8. Capacity and capability of essential immunisation systems to deliver all expected of them

- **TIMB Recommendation:** The TIMB asked that WHO, and its global immunisation partners, should review urgently whether essential immunisation will be able to deliver the outcomes required by the polio eradication and polio transition programmes on the timescales and to the standards necessary without additional targeted and sustained financial support.
- **WHO's Response:** In its response to this recommendation, WHO points to its strengthened engagement with GPEI, Gavi, and IA2030, particularly through initiatives like The Big Catch-Up for essential immunisation.

It is extremely disappointing to see that the WHO polio transition team allocated low priority to this TIMB recommendation, given the importance of essential immunisation to succeeding on interrupting poliovirus circulation and in subsequently delivering a polio-free world. It is such a vital question because the success or failure of the entire Polio Programme will depend on vaccination reach, coverage and immunity levels in the most difficult and underserved places in the world.

9. Compliance with global polio containment regulations

- **TIMB Recommendation:** The TIMB asked that WHO should initiate high-level discussions with governments not complying with the requirements of the *Global Action Plan for Poliovirus Containment* that deal with risk elimination by destruction.

- **WHO's Response:** WHO has provided reassurance that it has engaged with Member States at a high level to move forward the containment goals. China, Serbia and Australia have moved forward on their commitments. To date, only Romania remains an outlier.

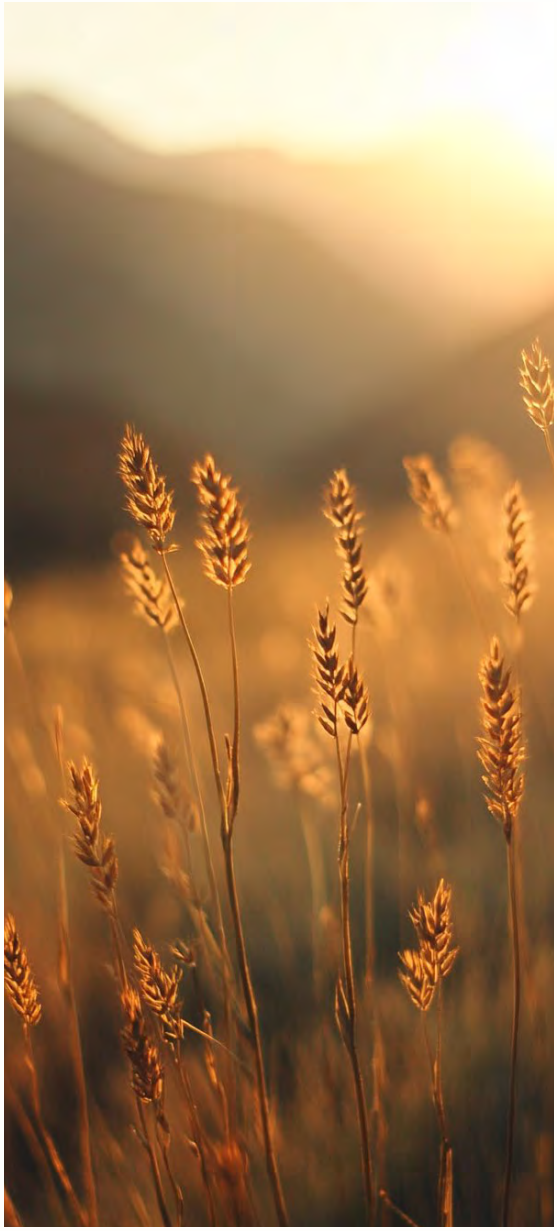
10. Alignment of polio eradication and polio containment timescales

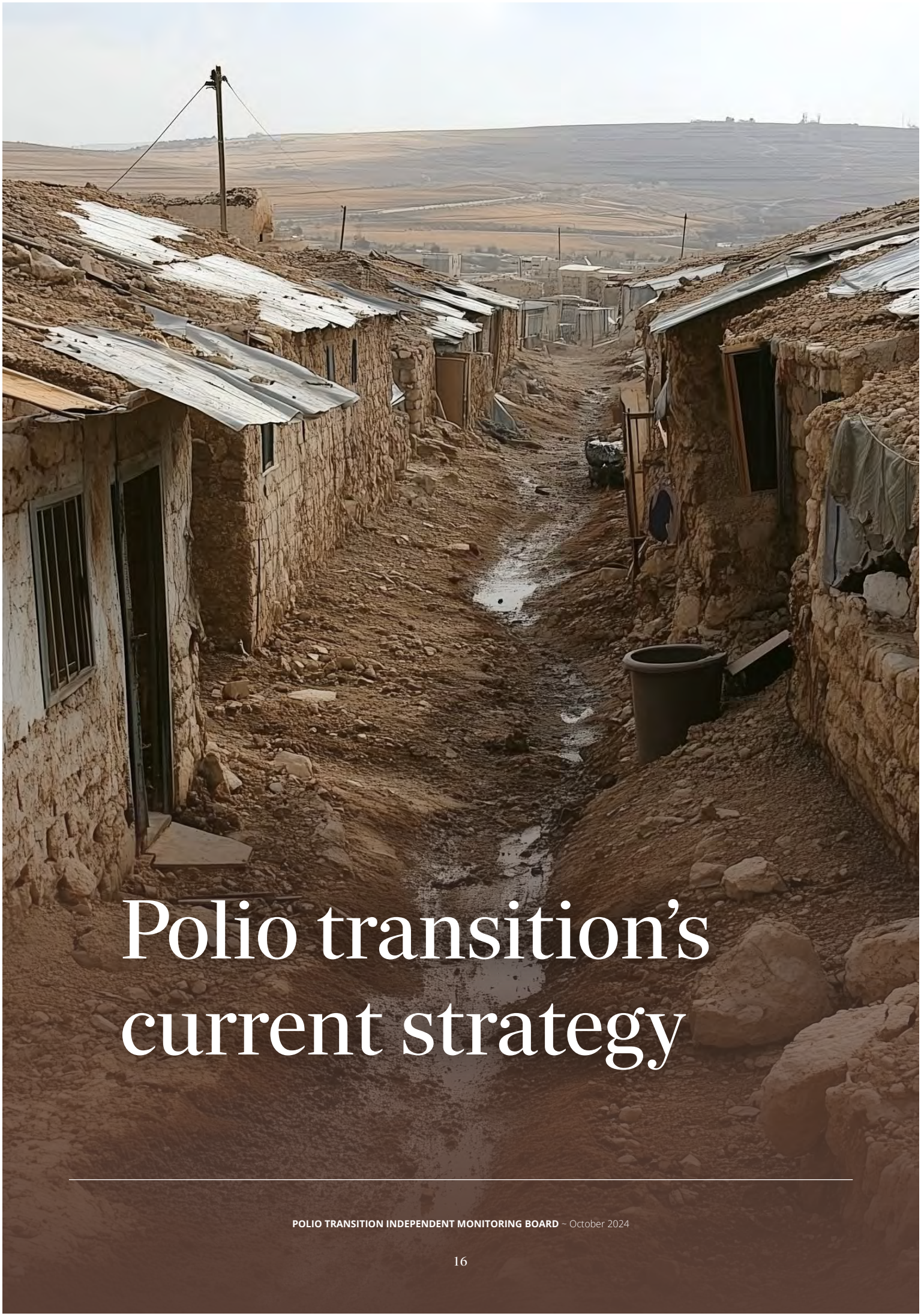
- **TIMB Recommendation:** TIMB urged that WHO should develop a roadmap for aligning the containment with eradication timelines, so that containment does not pose a risk when the world is ready to certify itself polio-free.

- **WHO's Response:** WHO reported that it is working internally and with GPEI partners to incorporate containment goals into strategic planning. The Global Certification Commission has recommended that facilities retaining poliovirus achieve full containment certification by the planned time for certification of eradication of wild poliovirus.

WHO and its partners have taken a selective approach in adopting the recommendations of the sixth TIMB report, as they have done with all earlier reports.

Moreover, the TIMB's report from 2023 indicates that WHO's progress on many past recommendations has been slow and uneven. While some actions have been taken, the implementation has often lacked the urgency and comprehensiveness that the TIMB believes is necessary to achieve a sustainable post-polio future.





Polio transition's current strategy

Polio transition's current strategy

One area where the polio transition programme has moved strongly forward, in response to the challenges in successive TIMB reports, and the constructive critique of donors, polio partners, civil society organisations and wider interests, is in producing a new strategic approach.

WHO has produced a new *Global Vision to use polio investments to build strong, resilient and equitable health systems* and a *Polio Transition Monitoring and Evaluation Framework* that aim to ensure that polio eradication is sustainable and supports countries in preparing for the post-certification period.

WHO's New Strategic Framework for polio transition

The framework is designed to act as a bridge between polio eradication and the post-certification period, focusing on ensuring that polio functions are fully integrated into national health systems.

There are two major shifts in this new framework.

First, there is an intentional move away from focusing on the process of transition towards monitoring key outcomes. This move addresses one of the criticisms of the earlier polio

transition plans, which were seen as overly focused on process without sufficient attention to measurable outcomes.

In response, the new framework includes key performance indicators that monitor both programmatic performance and the progress of transition readiness. These key performance indicators allow WHO to evaluate whether countries are maintaining high standards in areas like immunisation coverage, surveillance, and outbreak response as they anticipate moving out of GPEI support.

Second, the new strategy acknowledges that there is no single "end-state" for transition. In some countries, especially those with fragile health systems or high levels of external dependency, it may not be feasible to transition all polio functions to national governments in the foreseeable future. Therefore, WHO has introduced the concept of intermediate transition, whereby external support will continue in certain areas, such as surveillance and outbreak response, even as countries work towards greater self-sufficiency.

Many will see this as a pragmatic approach that recognises the diversity of contexts in which the transition is taking place. For some countries, full transition may be achievable in the medium term, while for others, continued external support will be essential to prevent the resurgence of poliovirus and maintain gains made through the GPEI.

New methodology for assessing polio transition

Another element of the strategic approach brings in a new methodology for assessment. This is a genuine attempt to introduce real rigour into what is at the heart of the original intent of polio transition in relation to encouraging country self-sufficiency. However, it comes with some technical density. Communicating it to the wide community of interest in polio transition will be an important task for the programme.

The approach has introduced a set of entry and exit criteria for determining which countries require continued support during the polio transition period. This framework is intended to guide decisions on when

countries are ready to assume full responsibility for managing polio-essential functions, and when they may need to continue receiving support.

The process for determining entry and exit from GPEI support is grounded in a scoring system that evaluates on a range of variables related to each country's capacity to manage polio-related functions and its overall health system resilience.

While the description of these criteria can seem highly technical and complex, they essentially serve two purposes:

- To identify which countries should continue to receive funding support ("entry criteria").
- To determine when countries can be classified as sufficiently prepared to exit from funding support ("exit criteria").

Criteria for making entry and exit judgements

These criteria are then organised into four thematic areas that reflect key elements of Polio Programme sustainability and broader health system functionality.

1. Polio-free status

- This area assesses the country's risk of poliovirus re-emergence and its level of dependence on GPEI resources. Countries with ongoing circulating vaccine-derived poliovirus transmission or a history of polio outbreaks in recent years are given a higher score, signalling that they need continued support. Countries with lower dependency on GPEI funding or those that have maintained polio-free status for multiple years are closer to exiting GPEI support.

2. Immunisation systems

- This section evaluates the country's immunisation performance, particularly focusing on inactivated polio vaccine and Diphtheria, Tetanus and Pertussis vaccine (DTP3) coverage rates. Countries with higher immunisation coverage are seen as more capable of

preventing polio resurgence and thus are candidates for exiting GPEI support. In contrast, countries with low immunisation rates, or a high number of zero-dose children (those who have not received any routine vaccinations), are flagged for continued assistance.

3. Emergency management and outbreak response

- Here, WHO assesses the country's capacity to manage public health emergencies, particularly polio outbreaks. Countries experiencing Grade 3 emergencies (large-scale humanitarian crises or severe disruptions to health systems) or those classified as fragile, conflict-affected or vulnerable are assigned higher scores, indicating that they are not yet ready to manage polio-essential functions independently.

4. Health system strength and financing

- This area evaluates the broader health system within each country, including its ability to fund and manage essential health services, such as immunisation and surveillance, without relying on GPEI funding. Countries with strong health systems and domestic budget allocations for polio-essential functions are seen as capable of managing post-polio certification needs and may exit GPEI support.

WHO is using a weighted scoring system that assigns scores to countries based on these criteria. Each thematic area has a maximum score, and the total possible score across all areas is 18 points.

The scoring system then generates thresholds.

Countries with a score of five or below are eligible for exit from support and move to a watch list. These countries have demonstrated that they have potential systems and resources to manage polio-related functions.

Countries with a score of above five will continue to receive support. These countries' immunisations systems, surveillance or outbreak response mechanisms require further strengthening before they can be fully transitioned out of assistance.

The criteria are updated regularly, taking into account recent changes in a country's epidemiological profile, health system performance and external factors like political instability or conflict.

Early application of new assessment methods

Early application of the new method has shown some shifts in country priorities based on the latest assessments.

For example: countries in the South-East Asia Region, including India, Bangladesh and Nepal, have exited the list of GPEI-supported countries, reflecting their strong performance in maintaining polio-free status and high immunisation coverage.

In contrast, several countries in the Africa Region, such as Guinea, Mozambique, Madagascar and Niger, have entered the list of countries needing support, as these regions of Africa continue to face great difficulties in maintaining high immunisation coverage and managing outbreaks of vaccine-derived poliovirus.

For someone not involved in the detail of this methodology and the calculations and judgements involved, it is helpful to view the entry and exit criteria as a risk assessment tool. Countries at higher risk of polio resurgence (due to low immunisation rates, high dependency on external funding, or ongoing conflict) will remain in the system and receive more support. Countries with stronger health systems and fewer vulnerabilities can transition out, but only after they meet the key thresholds.

In practice, this means that WHO and its partners are prioritising resources to where they feel they are most needed, while gradually reducing support to countries that can sustain polio-related functions on their own.

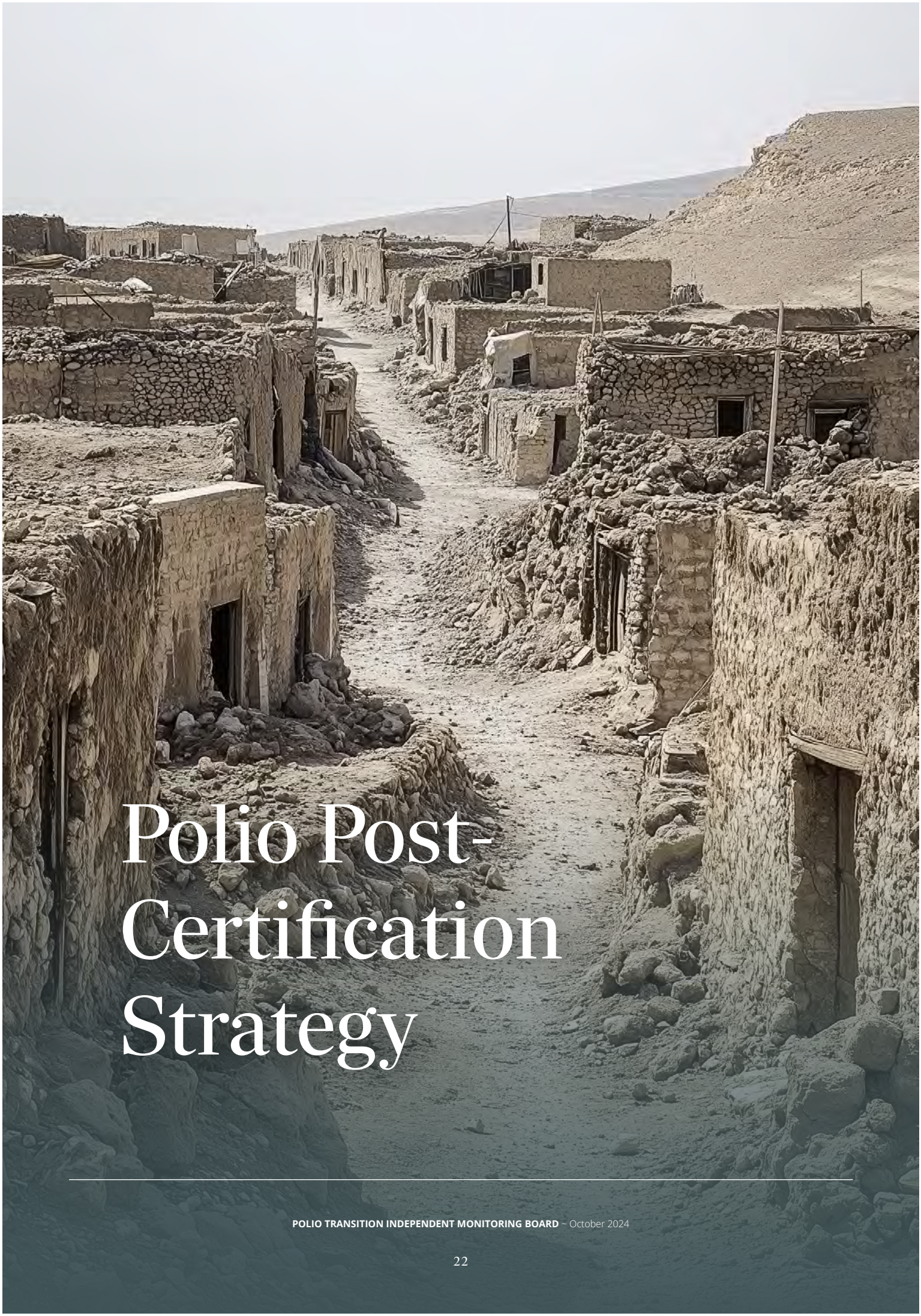
This appears straightforward and logical, but it is vital to have the depth of understanding of country realities, not just at national level but in subnational geographical areas, and the complex governance arrangements that are in place.

This can mean that all is not as it seems in an overview assessment which does not incorporate deep field knowledge, including reliable soft intelligence.

41.7 million

internally displaced people are within polio transition countries

Derived from Norwegian Refugee Council data, beginning of 2024.



Polio Post-Certification Strategy

Polio post-certification strategy

The GPEI has an extant agreed strategy setting out the action required to cover the period from interruption of poliovirus transmission to reaching a polio-free world.

The *Polio Post-Certification Strategy* has quite a long history. It was first developed and endorsed by the GPEI Polio Oversight Board in January 2018 and noted at the Seventy-first World Health Assembly in May 2018.

The *Polio Post-Certification Strategy* is nearly seven years old and has not been updated and revised until now.

There are two probable reasons for its low programmatic profile.

Firstly, the duration of continuing circulation of both wild and vaccine-derived poliovirus has been much longer than thought possible for the third decade of the 21st century. Stopping this has been the immediate priority with longer-term planning of less importance.

Secondly, the key dilemma in moving forward with a robust strategy for the post-certification period has been the failure to agree on a governance and accountability arrangement to succeed the GPEI.

After the TIMB meeting, a revised *Polio Post-Certification Strategy* was released for stakeholder consultation. The earlier work on this was contained only in a slide deck seen by the IMB and TIMB.

It is now set out in a 64-page document as a formal first draft.

This is a crucial document for polio transition planning. Since the strategy was not ready for consideration at the TIMB meeting, it is considered here.

One of the central concerns discussed during the TIMB meeting was the operational and epidemiological risks associated with the post-certification period. The *Polio Post-certification Strategy* is designed as a 10-year strategy, with three key stages: pre-cessation, post-bivalent oral polio vaccine cessation, and a final stage where full containment of poliovirus is the goal.

During these stages, the highest risks include potential outbreaks of vaccine-derived polioviruses, incomplete immunisation coverage, and gaps in surveillance systems.

The *Polio Post-certification Strategy* defines the global technical standards or core set of activities needed to sustain a polio-free world. The work is being led by the GPEI and WHO's polio transition team in consultation with polio partners and other stakeholders.

The *Polio Post-Certification Strategy* is organised around three central goals:

1) Protecting populations from poliovirus by maintaining high immunity levels.
2) Detecting and responding to any poliovirus event through robust surveillance systems.
3) Containing polioviruses in laboratories and facilities to prevent accidental releases.

The first goal aims to protect populations from vaccine-derived polioviruses and other forms of poliovirus reintroduction by maintaining high levels of immunity. This involves the eventual synchronised global withdrawal of bivalent oral polio vaccine, which is necessary because continued use of live-attenuated vaccines can lead to vaccine-associated paralytic poliomyelitis and circulating vaccine-derived polioviruses.

Once bivalent oral polio vaccine is withdrawn, countries will rely on the inactivated polio vaccine. However, achieving high levels of immunity before bivalent oral polio vaccine cessation and sustaining them afterward is crucial to preventing the poliovirus's re-emergence.

The *Polio Post-Certification Strategy* foresees that key activities under this goal will include implementing vaccination campaigns to boost immunity in countries with low essential immunisation coverage, and supporting countries to ensure access to affordable and effective polio vaccines, particularly inactivated polio, through long-term procurement and market-shaping activities.

The *Polio Post-Certification Strategy's* second goal of detecting any re-emergence of poliovirus and responding rapidly to prevent outbreaks assumes that, even after eradication, there will be a risk that poliovirus could silently circulate in under-immunised populations or be reintroduced through laboratory accidents. Surveillance systems, which are already critical to polio eradication, must be sustained and integrated into broader health surveillance systems.

The *Polio Post-Certification Strategy* outlines the need for:

- Acute flaccid paralysis surveillance and environmental surveillance to detect poliovirus in both humans and the environment.
- Maintaining laboratory networks capable of testing for poliovirus and ensuring that countries are prepared to respond quickly to any detected outbreaks.
- Ensuring readiness to respond to outbreaks through stockpiles of vaccines and antiviral treatments.

The third goal of containing polioviruses is focused on ensuring that all facilities that continue to handle poliovirus, such as laboratories and vaccine manufacturers, adhere to strict containment protocols. The risk of accidental poliovirus release from a laboratory or facility poses a serious threat to global health.

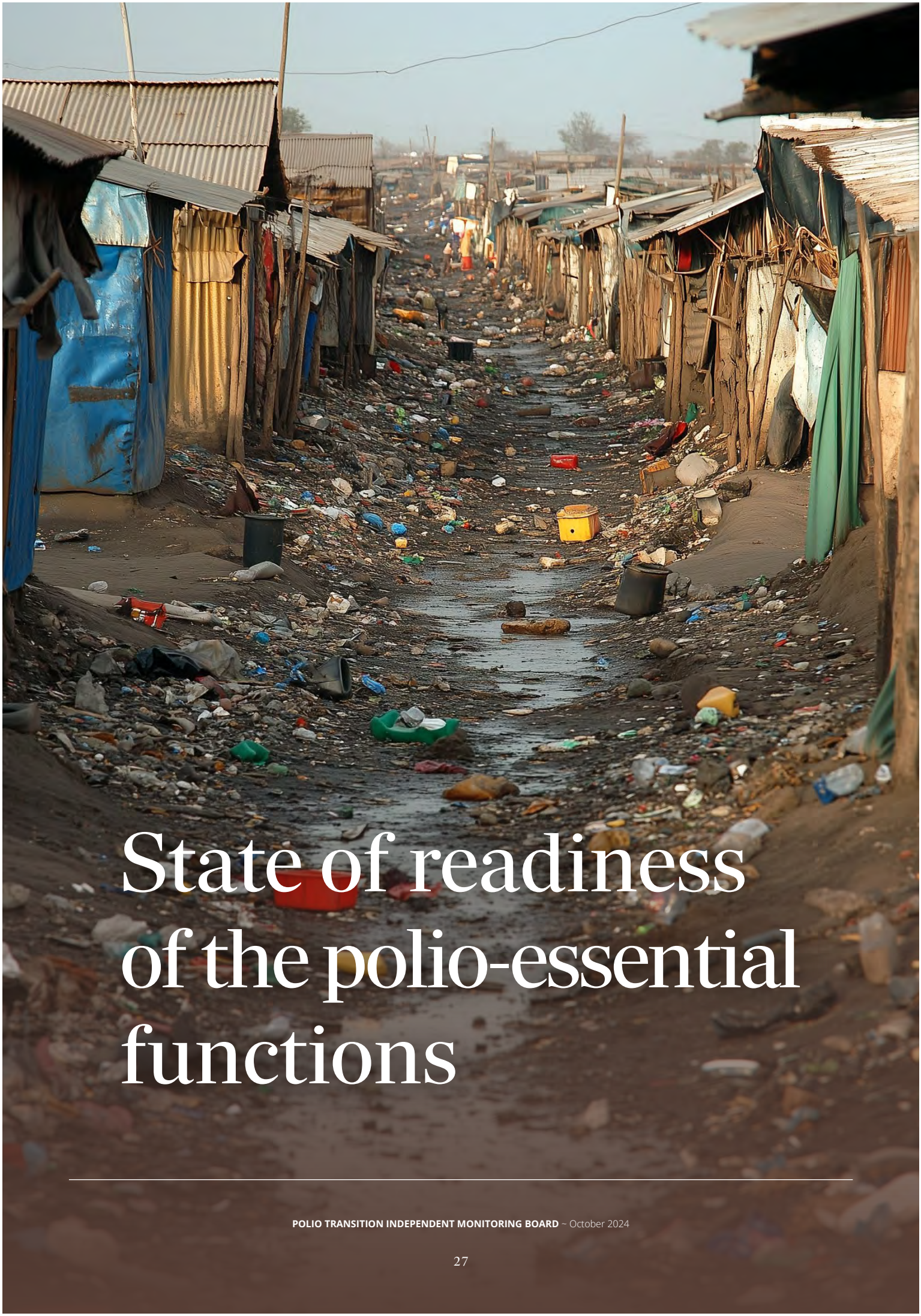
The *Polio Post-Certification Strategy* aims to reduce the number of facilities handling poliovirus globally, ensuring that only a few highly secure facilities retain poliovirus materials for research or vaccine production. It

also seeks to establish stringent monitoring systems to oversee compliance with containment protocols.

The *Polio Post-Certification Strategy* reiterates the well-established risks and challenges of the period between interruption of poliovirus circulation and declaration of a polio-free world.

It also puts forward options to resolve long-standing uncertainties about the nature and design of global health governance and accountability arrangements to oversee and manage this period, notwithstanding that national ownership is a key element of the strategy.

Future global governance models are being considered, including various centralised and decentralised approaches.



State of readiness of the polio-essential functions

State of readiness of the polio-essential functions

Polio transition is at a critical juncture. As polio-affected and polio- vulnerable countries face the reality of the GPEI winding down, it is imperative that the functions established during the polio eradication journey are not only maintained, but further developed as they are effectively integrated into national health systems.

The performance of the polio transition process, based on various indicators, has shown some progress, but also exposed huge challenges based on the delivery capacity and capability of the countries, as well as their complex operating environments.

The situation is made even more complex by the stubborn continuation of circulation of both the wild and vaccine-derived poliovirus. This was never the context in which polio transition was supposed to be taken forward when the original concept was developed in 2016. It was designed as an after-the-event process.

The ongoing battle to eliminate the polioviruses helps to prime the technical elements of the Polio Programme's work at country level and hopefully creates learning for later when the pressure to transfer responsibility to countries becomes less negotiable.

Essential immunisation

Drawing on the presentation and performance data from the WHO and TIMB reports, the current state of polio transition performance can be evaluated through the lens of immunisation coverage, surveillance sensitivity, and outbreak response capabilities, as well as biosecurity and containment.

In this section of the report, the descriptions of the future management and governance of the polio-essential functions are made on the assumption that the previous planning, which mostly fell to the leadership of WHO teams, will be followed through. The final version of the Polio Post-Certification Strategy may involve the establishment of a new global multi-organisation entity (so-called "GPEI-lite"). If this happens the management and leadership of the various functions may be different. Rather confusingly, the Strategy re-introduces the concept of "future owners" without indicating how accountability would work.

There is a clear expectation on the part of polio stakeholders, donors and observers that essential immunisation systems will be strategically deployed to help stop poliovirus circulation in polio-affected and polio-vulnerable areas and fulfil the first step in the full polio eradication process.

The task to follow this, for essential immunisation systems, in a world without the GPEI, will be to build enough polio immunity to stop the poliovirus returning. Most of the responsibility for this will devolve to the leadership of WHO's essential immunisation team, working with Gavi, UNICEF and other global partners and with the countries themselves. This is a formidable challenge, with current doubts as to how precisely it will be systematically and effectively managed.

The TIMB meeting heard a wide range of opinions and concerns about the current and future role of essential immunisation in securing a polio-free world.

Many are viewing the status of essential (also referred to as "routine") immunisation programmes through the lens of how they are impacting current immunity levels against polioviruses, including both wild poliovirus and circulating vaccine-derived poliovirus.

Strategic progress with essential immunisation

The immunisation landscape has evolved dramatically over the past five decades, expanding from targeting six vaccine-preventable diseases in 1974 to over 13 globally by 2024, with a life-course approach to vaccination now recommended.

The main strategy for protecting populations from these diseases is Immunization Agenda 2030 (IA2030), which was endorsed by all WHO member states in 2020. It serves as the current global framework guiding the establishment of new delivery systems and strengthening and shaping existing ones. Its aim is to ensure that no one is left behind, including those in fragile and conflict-affected settings.

59%

of the world's zero-dose children are in polio transition countries

WHO and UNICEF (WUNIEC database)
Zero-dose: consistently missed and did not receive any vaccine in 2023

Key goals are:

- **Reduction of zero-dose children:** One of the primary goals of IA2030 is to halve the number of zero-dose children (those who receive no essential vaccinations) by 2030. This goal remains a major focus, as zero-dose children are highly vulnerable in poliovirus outbreaks and to other vaccine-preventable diseases.
- **Post-pandemic immunisation recovery:** The COVID-19 pandemic resulted in a major fall-off in performance of essential immunisation programmes. IA2030 prioritises the recovery of immunisation systems, aiming to restore coverage to pre-pandemic levels.
- **Integration of services:** IA2030 emphasises the integration of immunisation services within primary health-care systems to ensure a resilient approach to reaching all populations with essential health services, including vaccination.

However, the COVID-19 pandemic's impact has been severe, and as of 2024, the IA2030 impact goals remain largely off-track, except for the successful introduction of new vaccines.

Several regions, particularly Africa and the Eastern Mediterranean, continue to struggle with essential immunisation coverage, leaving immunity gaps that are certainly capable of causing future outbreaks of poliovirus.

Data released in 2023 by WHO and UNICEF (WUENIC) paints a sobering picture. While there have been positive developments in some areas, overall progress has stagnated, and key indicators suggest that global immunisation coverage has not fully recovered from the setbacks caused by the pandemic.

Specifically:

- **Zero-dose children:** The number of zero-dose children globally increased by 600,000 from 2022 to 2023, reaching 14.5 million. This figure remains 1.7 million higher than in 2019, the last pre-pandemic year. Most zero-dose children live in fragile, conflict-affected and vulnerable settings, which further complicates reaching them with essential immunisation services.
- **DTP levels:** Coverage with this triple vaccine remains flat compared to 2022, and the number of under-immunised children (those who receive only one or two doses but not the full series) is also higher than in 2019. This is a critical gap, as DTP coverage is a key marker of the overall health of immunisation systems, and its stagnation highlights the difficulties in restoring essential immunisation services.
- **Africa Region:** The Africa region has made some progress, with coverage with the first dose of the DTP vaccine returning to 83%, its 2019 level. However, it remains the region with the lowest overall coverage. Despite this, there has been a decrease in the number of zero-dose children in Africa, from 7.3 million in 2022 to 6.7 million in 2023, indicating a positive trajectory.
- **Eastern Mediterranean Region:** Coverage in this region, particularly in conflict-affected countries, remains low and has even declined due to ongoing instability. Countries such as Yemen, Syria and Afghanistan are amongst those struggling to maintain immunisation services; the risk of polio outbreaks is particularly high in these settings.
- **Inactivated polio vaccination coverage:** Global coverage of the inactivated poliovirus vaccine has decreased slightly from 84% in 2022 to 83% in 2023. This drop is concerning, as several countries, particularly in Africa and parts of Asia, continue to have low coverage. This creates pockets of vulnerability where poliovirus can attack.

- **Low-performing countries:** Seven countries, including Angola, the Democratic People's Republic of Korea (DPRK), Guinea, Papua New Guinea, Somalia and Yemen, have inactivated polio vaccine coverage below 50%, which is dangerously low for preventing polio.
- **Hexavalent vaccine introduction:** A new hexavalent vaccine (which combines inactivated polio vaccine with other key vaccines) was prequalified by WHO in March 2024. This vaccine is expected to reduce the complexity of immunisation schedules and improve coverage by delivering protection against six diseases with fewer injections. Countries eligible for Gavi support, including those with high polio risk, are being encouraged to apply for the switch to the hexavalent vaccine. However, it is vitally important that countries do not hold back from using the current inactivated polio vaccine in the several years it will take to scale-up supply of the hexavalent vaccine.

The Big Catch-Up initiative

Launched in 2023, The Big Catch-Up is a programme of coordinated global action aimed at accelerating the recovery of immunisation levels that were severely damaged by the COVID-19 pandemic. It is designed to catch up on missed vaccinations, restore coverage to pre-pandemic levels, and strengthen essential immunisation systems to ensure long-term sustainability.

The Big Catch-Up focuses on three key objectives:

1. **Catch-Up:** Targeting children who missed essential vaccinations during the pandemic, particularly zero-dose and under-immunised children.
2. **Restore:** Rebuilding immunisation coverage to at least 2019 levels, with the aim of further strengthening systems to meet 2030 targets.
3. **Strengthen:** Reinforcing essential immunisation programmes, including the introduction of new vaccines and integrating immunisation with other essential health services.

The initiative targets 35 priority countries, many of which are also at high risk for polio outbreaks. These countries have received substantial support, including 190 million doses of vaccines and technical assistance for microplanning and operational improvements.

In the context of polio-specific activities, The Big Catch-Up seeks to integrate polio vaccines into its broader immunisation programmes using polio social mobilisers and leveraging GPEI infrastructure to identify and vaccinate missed children.

The initiative emphasises the co-delivery of bivalent oral polio vaccine alongside other antigens during catch-up campaigns, particularly in high-risk countries. Ten countries have been approved to receive bivalent oral polio vaccine through The Big Catch-Up, with a special budget earmarked for this.

The immediate future

Once poliovirus transmission is stopped, maintaining high levels of population immunity through essential immunisation systems will be critical to sustain polio-free status and prevent re-emergence.

While progress has been made in recovering from the pandemic's impact, major challenges remain for essential immunisation systems, and will need to be addressed in the coming years. They include:

- **Population growth:** In regions like Africa, rapid population growth will place additional strain on already fragile health-care systems. Immunisation services must expand to keep pace with growing birth cohorts.
- **Geopolitical instability:** Conflict and instability, particularly in the Eastern Mediterranean Region and parts of the Africa Region will continue to hinder immunisation activities. The engagement of humanitarian organisations to deliver essential immunisation goals will be paramount if vaccines are to be delivered in these challenging environments. Their close relationship with the affected governments will also be a key factor in making strategic decisions, as well as designing the best operating models.

- **Misinformation and trust:** The rise of misinformation about, and mistrust of, vaccines, exacerbated by the COVID-19 pandemic, poses a growing threat to immunisation programmes. This is likely to be a dominant feature of vaccination delivery in the years ahead. Building trust through community engagement and transparent communication will be crucial.

There is also a need to recognise the broader context of vaccine competition and security in countries. With the introduction of new vaccines like Human Papilloma Virus and malaria vaccines, national health systems are under increasing strain to meet diverse immunisation needs within limited budgets. This reality complicates efforts to sustain polio transition, as resources are stretched across multiple vaccination campaigns. Greater integration of polio activities within whole-of-government disease control strategies would be beneficial.

The value of essential immunisation partnerships

WHO is the lead agency and accountable body for coordinating and ensuring the delivery of polio transition and hence the essential immunisation element of it.

At global level, strong partnership is vital. It is well-established that WHO seeks to work very closely with Gavi, and with UNICEF, in achieving its polio transition goals. This partnership is not always as effective as it should be because of a range of mismatches between the organisations' policy and decision-making mechanisms; their planning cycles; their board and governance structures and functions; their funding flows; and their operating models at regional and country level.

Gavi provides extensive support to over 57 countries annually, including both vaccines and health system strengthening initiatives. Gavi's funding, which exceeds $2 billion annually, is key to ensuring the smooth delivery of essential immunisation services. Its work is central to both the immediate and the long-term goals of polio eradication.

Gavi's support goes beyond the provision of vaccines and technical assistance. It includes crucial health system components like cold chain equipment, health-care worker training, and the integration

of immunisation services with primary health-care systems.

Gavi's contribution to polio eradication specifically includes the provision of vaccines, including inactivated polio vaccine, through co-delivery with other essential immunisation services.

This was repeatedly referred to in the TIMB meeting as: "One of the lowest-hanging fruits" of integration between Gavi and the GPEI. By ensuring that oral polio vaccine and inactivated polio vaccine are included in Gavi-funded campaigns alongside other vaccine-preventable disease immunisations, Gavi strengthens the routine immunisation platforms that are critical for reaching zero-dose children and underserved communities.

This integration is not without its challenges. National health systems, particularly in fragile and conflict-affected settings, often struggle with the added burden of multiple simultaneous immunisation campaigns. In some countries, there are numerous campaigns, including for polio, measles, yellow fever and other diseases. This can overwhelm already overstretched health systems. A more coordinated, streamlined approach is needed to ensure that these campaigns are integrated into essential immunisation schedules rather than being treated as separate, stand-alone programmes.

Gavi's engagement focuses on addressing the underlying systemic issues that prevent immunisation coverage from improving. This includes bolstering national immunisation programmes; ensuring proper logistics for vaccine delivery; improving planning, communication, and coordination; and strengthening health systems to make immunisation services more resilient. The key to long-term success is achieving both immediate returns (reaching more unvaccinated children) and longer-term sustainability through integrated and efficient health systems.

Gavi has been working to ensure that polio eradication is embedded within countries' broader immunisation strategies. This integration is critical not only for maintaining polio-free status but also for enhancing overall health system resilience. A recent example is the approval by Gavi's board for increased support for the hepatitis B birth dose which provides a potential opportunity for co-delivery with the first dose of the oral polio vaccine given to newborns. This co-delivery approach not only improves vaccine coverage but also helps optimise health system efficiency by reducing the need for multiple immunisation visits.

The national immunisation strategies, supported by Gavi, are designed to be fully budgeted, five-year plans that provide a comprehensive view of immunisation needs, identify funding gaps and coordinate the efforts of all relevant stakeholders.

The role of interagency coordinating committees which exist in many countries is also very important. They bring together different health sector actors to ensure a unified approach to immunisation.

In order to deal with the ongoing circulation of wild and vaccine-derived polioviruses, while at the same time creating a lasting platform for the actions to generate a polio-free world, the Polio Programme's focus must shift. It cannot concentrate on integrative delivery only sufficient to eliminate the polioviruses. It needs to move towards a broader emphasis on building immunity within populations.

The original goal of the polio eradication initiative was not just to stop poliovirus transmission, but to strengthen routine immunisation and primary care. Over the years, however, the focus has shifted, and the programme has become narrowly centred on stopping the virus at all costs.

89%

coverage with IPV1 in oral polio vaccine-using countries **without** vaccine-derived poliovirus circulation

72%

coverage with IPV1 in oral polio vaccine-using countries **with** vaccine-derived poliovirus circulation

WHO and UNICEF (WUNIEC database, 2023)

IPV1: first dose of inactivated polio vaccine

Polio outbreaks as a health emergency

In a post-certification landscape, where the GPEI will be phased out, the focus will shift towards maintaining vigilance and rapidly extinguishing any potential outbreaks. It is assumed that WHO's general health emergencies function will assume this critical responsibility, taking over from the GPEI to respond effectively to poliovirus outbreaks. In this context, the WHO has strengthened the global architecture for health emergency prevention, preparedness, response and resilience.

The approach will focus on the specific ways in which WHO's emergency infrastructure is positioned to detect, verify and respond to poliovirus outbreaks, post-certification, while highlighting the anticipated challenges and necessary strategies to ensure the success of this transition.

One of the most significant developments in global health has been the update of the International Health Regulations in 2024, which inter alia redefines the role of countries and the global health community in responding to polio events. The 2024 version of these regulations mandates countries to report any poliovirus event, including both wild and vaccine-derived polioviruses, marking a critical shift in how the world will manage polio in the post-certification period.

WHO's *Emergency Response Framework*, also revised in 2024, plays a complementary role by outlining how WHO will respond to vaccine-preventable disease emergencies.

This Framework ensures that there is no deflection of responsibility or gaps in response. Technical teams and emergency responders will work in concert to address the event and maintain high-level monitoring until the outbreak or transmission is fully contained.

For decades, the GPEI has coordinated polio eradication policy-making, strategic decision-making and action at global, regional, country and subnational levels. This has made it the leading body to address outbreaks.

Transitioning from a specialised, disease-focused initiative for dealing with emergencies to a more general health emergencies function is complex. It will require consideration of WHO's current

mechanisms, which are designed to respond to a broad spectrum of health emergencies. While the infrastructure developed for other global health emergencies, such as COVID-19 and Ebola, will serve as the foundation for future poliovirus outbreak responses, there must be targeted adaptations and specific readiness for polio re-emergence.

Emergency response architecture

WHO's approach to health emergencies has been fundamentally shaped by lessons learned during serious disease outbreaks, epidemics and pandemics. A key takeaway from these experiences has been the importance of maintaining a specialised capacity to deal with specific diseases, even after their transmission is interrupted. The example of mpox, following the eradication of smallpox, demonstrates the necessity of preserving technical knowledge and response capabilities. Similarly, WHO will need to ensure that polio-specific expertise and resources are available to manage outbreaks in the future.

WHO's readiness to handle poliovirus outbreaks hinges on its capacity to act quickly and effectively under this framework. It enables the coordination of multisectoral responses, including deploying resources, logistics and technical expertise, to affected areas within days of an outbreak being reported. The goal is to contain and extinguish poliovirus outbreaks as quickly as possible, preventing them from spreading and escalating into public health emergencies.

The ability to detect poliovirus outbreaks quickly will rely heavily on the strength of national surveillance systems.

WHO's Incident Management System

Once an outbreak is confirmed, it is envisaged that WHO's Incident Management System will be activated to coordinate the response. This system brings together key stakeholders, including national governments, regional WHO offices, and partner organisations such as UNICEF and Médecins Sans Frontières, to deliver a coordinated and effective response.

The system allows for a graded response depending on the severity of the outbreak:

- **Grade 1:** A limited response, handled at the national level.
- **Grade 2:** A medium response, requiring regional support.
- **Grade 3:** A full-scale, all-hands-on-deck response involving global coordination.

This graded approach ensures that resources are allocated appropriately, based on the scale of the outbreak. For polio, which is a notifiable disease under the International Health Regulations, even small outbreaks will receive a coordinated response, with WHO deploying specialised teams to manage the situation.

Surge workforce and resource mobilisation

One of the key challenges for the health emergencies function in the post-certification era will be ensuring that a skilled workforce is available to respond to poliovirus outbreaks. There is currently a Global Health Emergency Corps, which brings together nine existing networks of health professionals, including the Global Outbreak Alert and Response Network and the International Association of National Public Health Institutes. This workforce will be critical in providing the surge capacity needed for outbreak response.

In addition to mobilising personnel, WHO will also need to leverage its existing mechanisms for resource allocation. The role of the Contingency Fund for Emergencies needs to be considered. In other health emergencies, this fund, combined with national and regional resources, ensures that countries have the necessary tools to control outbreaks without delay. However, ensuring long-term sustainability will depend on continued global commitment to funding polio eradication.

Leadership and country ownership

Without clear leadership and accountability structures, there is a risk that polio-outbreak response could become fragmented or under-resourced.

Finally, the there is a clear need for country ownership. While WHO will provide the technical and financial support needed to respond to outbreaks, the ultimate responsibility lies with national governments. Countries must be fully engaged in the process, and fully recognise that their health systems must be able to detect, report and respond to poliovirus events. Building this capacity is ultimately the most challenging area for managing polio emergencies once the GPEI is gone.

Surveillance

As has been made clear repeatedly throughout this report, the journey towards a polio-free world does not end with the cessation of poliovirus transmission in the polio-endemic and polio-outbreak countries.

A robust, well-coordinated, and highly sensitive surveillance system is paramount to maintaining low levels of polio circulation and responding rapidly to any re-emergence of the poliovirus in the post-certification period.

Earlier TIMB reports have referred to surveillance as the "poor cousin" of vaccination. Traditionally, polio surveillance has received less money, less developmental attention and less emphasis in discussions. Beyond those directly involved in the Polio Programme, it is viewed as a back-office function that has always been there and always will be there. Yet, the infrastructure and staffing of polio surveillance has cross-subsidised and provided infrastructure for other vaccine-preventable diseases. It has also stimulated a vital network of diagnostic and specialist laboratories.

Its continuity of funding into the long term is by no means guaranteed.

Legacy of polio surveillance development: a global health good

Since its earliest meetings, the TIMB has seen the polio surveillance assets, both tangible and intangible, as a global public health good, second only in importance to getting rid of polio itself in the legacy of the 30-years of polio eradication work and funding.

The TIMB constantly encouraged the GPEI to develop a plan for comprehensive integrated communicable disease surveillance.

Much of the work that has been taken forward has focused on surveillance for vaccine-preventable diseases and is anchored in the architecture the principles of Immunization Agenda 2030, the *Polio Post-Certification Strategy*, and updated International Health Regulations.

Surveillance in a post-polio world will depend on the seamless integration of these frameworks to detect and respond to any potential poliovirus event—whether it is the reappearance of wild poliovirus itself or of circulating vaccine-derived poliovirus.

While much of this future surveillance infrastructure is still taking shape, the foundational pillars are already in place, albeit requiring further refinement.

Wider vaccine-preventable disease surveillance

The overarching aim of Immunization Agenda 2030 is to ensure that vaccine-preventable disease surveillance is fully embedded within global immunisation systems.

Specifically, two of the strategic priorities emphasise the need for comprehensive, coordinated surveillance that extends beyond polio to encompass all vaccine-preventable diseases. This model integrates essential immunisation surveillance with disease-specific goals, ensuring that countries maintain high sensitivity in detecting polio even after eradication.

The surveillance network will not only track polio but will also monitor diseases such as measles, neonatal tetanus, meningitis, diphtheria and others.

This comprehensive approach, integrated across multiple disease occurrences, is designed to ensure that any resurgence of poliovirus is detected quickly, regardless of the specific disease model operating within a country.

One critical point raised is the need to differentiate surveillance models depending on the disease. For example, surveillance for polio, which has an eradication goal, will differ from that for measles (with a regional elimination goal) or cholera (focused on outbreak detection and response). Despite these differences, eight core surveillance functions will remain constant across all models: governance, programme management, workforce capacity, logistics, laboratory infrastructure, supervision, monitoring and evaluation, and coordination.

These functions are the bedrock of surveillance and must be explicitly designed to fit each country's needs and must be tailored to maintain high sensitivity for polio detection while remaining integrated with broader vaccine-preventable diseases surveillance.

Human resources and country ownership

An essential aspect of this surveillance framework is the reliance on skilled human resources. Experienced personnel form the backbone of any successful surveillance system. These professionals, many of whom have been trained over decades, possess the expertise needed to "smell out" outbreaks or unusual events—an ability that cannot be easily replicated or replaced.

For example, in the early days of the COVID-19 pandemic, polio-funded staff were instrumental in the surveillance response. This emphasises that surveillance systems must remain flexible and adaptable, with personnel capable of shifting between disease-specific responses as needed. In many countries, polio-funded surveillance teams are already performing essential functions beyond polio, and this model will be critical in the post-polio world.

Strong country ownership is also a critical factor in ensuring the long-term success of surveillance systems. Local surveillance officers, in coordination with WHO and UNICEF personnel, play a central role in tracing and vaccinating children missed during immunisation campaigns. This level of cooperation, coordination and country leadership is essential for the sustainability of surveillance systems, post-certification.

Polio events, whether environmental detections or actual cases, will hopefully be uncommon, but the infrastructure must be sensitive enough to detect even a single occurrence.

After certification, the process of surveillance will begin with the detection of a potential event, which will trigger a comprehensive outbreak response funded by external resources. Once the event is addressed, responsibility will shift back to ongoing surveillance systems, which will continue to monitor for any signs of transmission re-emergence.

The importance of maintaining this systematic, real-time surveillance cannot be overstated. Stopping surveillance, or reducing its intensity after an event has been controlled, would leave the world vulnerable to a resurgence.

The costs of surveillance

The financial requirements for maintaining polio surveillance in the post-certification period are substantial. A 2020 estimate presented to the TIMB predicted a need for $3 billion in external funding over 10 years, with $2.6 billion allocated to country-level support. While these figures may need to be updated, the reality is that polio surveillance – particularly in a post-certification world – will remain a significant financial burden.

WHO has since developed a surveillance costing tool, which has been applied in countries like Nepal and Ethiopia to estimate the economic costs of vaccine-preventable disease surveillance. In Nepal, the cost of such comprehensive surveillance was calculated at $0.18 per capita per year, while in Ethiopia it was $0.70 per capita per year. The largest cost driver in both countries was skilled human resources, reinforcing the critical importance of maintaining trained personnel.

Challenges and opportunities

Despite the comprehensive vision laid out for post-certification polio surveillance, challenges remain. In many countries, particularly those with weaker health systems, there are barriers to coordination between WHO, UNICEF and local governments. These barriers, which often exist even within WHO country offices, need to be addressed to ensure smooth operation of surveillance systems.

There is, too, the need for flexibility in surveillance design. A one-size-fits-all approach will not work, as countries differ widely in their health system capacity, resources and surveillance needs. Some countries will require only a light-touch approach, while others will need more intensive support. This variability must be built into the global strategy for surveillance in the post-polio period.

The success of post-polio surveillance is a shared global responsibility. Maintaining polio eradication is in everyone's interest, as the failure of surveillance in one country could quickly lead to a global resurgence. The future of polio surveillance lies in strong country ownership, well-trained human resources, and flexible, well-funded surveillance systems that are capable of detecting and responding to any poliovirus event.

These systems must be integrated within broader vaccine-preventable disease surveillance to ensure long-term sustainability and effectiveness in a post-polio world.

Surveillance quality and orphan viruses

The current presence of orphan viruses in specific countries highlights critical gaps in polio surveillance and vaccination programmes.

The identification of orphan viruses suggests that poliovirus strains have been circulating undetected for a period, sometimes for several years. This late detection indicates that the surveillance system is not capturing all circulating polioviruses promptly.

In 2024, orphan viruses were found in each of the polio-endemic countries and across Africa, notably with the highest concentration in Nigeria.

The average circulation time of 1.74 years for these orphan viruses is concerning. It means that these viruses have been spreading for nearly two years without being detected, which could allow them to infect more individuals and potentially mutate further.

Early detection of orphan viruses should trigger a rapid response to contain their spread. This includes targeted vaccination campaigns, public health interventions, and thorough epidemiological investigations to trace and interrupt transmission chains. Continuous genetic monitoring of circulating viruses is crucial to understanding the evolution of the virus and update vaccines and treatment strategies accordingly.

In preparing for the period in which wild and vaccine-derived poliovirus circulation has been interrupted, the Polio Programme must recognise that it is not building on a uniformly strong system of surveillance. Much more needs to be done. This could involve increasing the frequency and geographic coverage of sampling, improving laboratory capacities, and ensuring the timely reporting and testing of samples.

Biosecurity and containment

WHO has developed a robust policy framework for biosecurity and containment, essential to ensuring that polioviruses do not re-emerge once they are eradicated. The GPEI's *Polio Eradication Strategy 2022–2026, Delivering on a Promise* emphasises that, after the global interruption of poliovirus transmission, ensuring the complete containment of polioviruses in laboratories and other facilities will be vital.

This is particularly critical in laboratory and vaccine manufacturing settings, where the risk of accidental release of polioviruses could have a catastrophic impact in the period after poliovirus circulation has been stopped.

WHO's containment strategy primarily involves ensuring that polioviruses are securely stored in laboratories and vaccine manufacturing plants, with stringent protocols in place for their handling. These measures include the certification of Polio Essential Facilities, where research on the virus can be conducted under tight biosecurity measures. There are, however, many other technical protocols and guidance that have been progressed under the supervision of an expert committee.

WHO's actions to secure poliovirus stocks in certified facilities, limit access to the virus, and ensure stringent biosecurity protocols are fundamental to preventing outbreaks, post-eradication.

The topic of biosecurity and containment in polio transition has been tracked by the TIMB and covered in its earlier reports. The TIMB has made recommendations to try to speed up progress in this important area.

A key element in this endeavour is balancing the critical need for the stringent containment of polioviruses with maintaining essential research capacities, a tension that is becoming increasingly apparent as scientists voice concerns about the unintended consequences of these containment measures.

Despite the necessity of containment, the scientific community has expressed significant concerns about the impact of WHO's policies on essential polio research. There are fears that the speed of tightening of biosecurity measures, while necessary for long-term

eradication, is inadvertently stifling critical research that could accelerate the eradication timeline and improve response to vaccine-derived outbreaks.

This is particularly problematic in the context of developing new vaccines, such as novel oral polio vaccines types 1 and 3, which will be vital eradication tools essential for both interrupting transmission and preventing future outbreaks. It is also necessary for production or further development of inactivated polio vaccine and the new hexavalent polio vaccine.

Research that once required moderate biosecurity measures now demands the use of high-containment facilities akin to those used for more dangerous pathogens, such as Ebola. These facilities are costly to maintain, and many laboratories, particularly in lower-resource settings, lack the capacity to meet these stringent standards.

Furthermore, the process of gaining approval to handle polioviruses in a research setting has become increasingly bureaucratic, leading to delays in crucial research projects.

Some scientists argue that the timing of these containment measures is misaligned with the current epidemiological reality. While WHO is rightly concerned about containing polioviruses within laboratories, poliovirus continues to circulate widely in communities across Africa and parts of Asia, particularly in conflict-affected and hard-to-reach areas.

In addition, the containment policies are also affecting the development of non-infectious vaccines, such as virus-like particles, which do not require the use of live poliovirus. These vaccines represent a potential future solution for post-eradication immunisation, but their development has been hampered by a lack of access to polioviruses for comparison in neutralisation assays. In this context, some researchers argue that loosening containment measures in carefully controlled environments could expedite the development of these new vaccines.

The balance between containment and research

The key challenge in this debate is finding the right balance between biosecurity and research. WHO's

containment policy is essential for preventing laboratory-related outbreaks of poliovirus, a real concern given past incidents where live polioviruses have been accidentally released into the environment. However, overly restrictive policies risk slowing down the development of critical tools, such as novel oral polio and other vaccines, which are essential for achieving eradication.

The scientific community suggests that WHO might consider a more flexible approach to containment, one that allows for critical research to continue while still maintaining a high level of biosecurity. This could involve designating certain laboratories with advanced biosecurity capabilities as authorised research hubs, where scientists can access polioviruses for essential research. These laboratories would operate under strict oversight, ensuring that containment standards are met while also facilitating the continued development of necessary vaccines and therapies.

Polio-related integrated care development

Polio-related integrated care development

The integration of polio-essential functions into broader national health systems is an important milestone on the road to a polio-free world and, of course, it is also the main desired outcome of polio transition. It signifies the shift in focus from vertical polio-specific programmes towards embedding polio-related services, such as immunisation and surveillance, into countries' broader health infrastructure.

There is a second, and very GPEI-specific, intention of developing and promoting integration and that is to support the drive to finish the job of ending global circulation of both wild and vaccine-derived polioviruses.

This is partly about raising levels of polio immunity in the places where this is most necessary (e.g., those with high numbers of zero-dose children), as well as embedding the oral polio vaccine into broader public health service delivery. The latter is generally beneficial, but is essential – and sometimes the only option – where there is strong community hostility to the Polio Programme.

In July 2023, the GPEI launched a renewed push to accelerate the development of its integration function. The strategy that emerged from this renewed effort included assessing current integration activities, developing inventories of these activities at the country level, and determining priorities based on both stakeholder input and GPEI's overarching goals.

The strategy focuses on four key areas: campaign-based activities, essential immunisation strengthening, multi-antigen campaigns and integrated service delivery.

The main thrust of integration is not just to administer polio vaccines, but to deliver multiple health interventions. For instance, it aims to give oral polio vaccine with other antigens like measles, and with other health products that are popular with communities such as vitamin A supplementation, and deworming treatments. This strategy helps maximise the reach of campaigns, improving overall health outcomes while continuing polio vaccination.

Furthermore, the focus on integrated service delivery, as part of polio transition, offers an opportunity to address some of the broader health inequities that exist in many countries. By delivering additional services, such as nutrition and water and sanitation, alongside polio vaccines, health workers can help address some of the underlying drivers of poor health outcomes in vulnerable communities. Integrated service delivery is particularly important in countries with high levels of poverty and malnutrition, where children are at greater risk of falling through the cracks of the health system.

Despite progress, there are still significant challenges to creating enough of a critical mass of integration activities to really boost polio immunity levels. A key challenge is the lack of visibility of campaign schedules, both for polio and other antigens, which makes it difficult for local partners to plan integrated campaigns effectively. This weak coordination can also lead to missed opportunities for multi-antigen campaigns, where polio vaccines are administered alongside other essential vaccines.

Some of the barriers to progressing effective integration in the polio context are discussed in the most recent IMB report which arose from the same meeting as this report.

Additionally, there is still a lack of alignment on what qualifies as integration, with some partners unaware of, or resistant to, the idea of fully integrated campaigns. Operational barriers, such as the belief that multi-antigen campaigns require a year of planning or will reduce campaign quality, have also contributed to a slow uptake of integration. Funding transparency is another issue, with many partners lacking clarity on where funding for integration activities is being allocated.

1509

reported cases of congenital rubella syndrome in 2023 in the three WHO regions with polio transition countries;

+278%

percentage **increase since 2018.**

WHO data

Role and value of civil society partners in the integration process

As outlined in the GPEI integration strategy, the involvement of key global health partners is essential to the successful integration of polio-essential functions.

There is a clear need for stronger collaboration between these partners, especially in financing and operational planning. While such partnerships are quite strong at the global level, there are gaps in coordination at country and regional levels. In particular, there is a need for better alignment between Gavi's immunisation programmes and the Polio Programme's work on integration. Gavi is a key player in ensuring that countries have the resources needed to maintain essential immunisation systems. Strengthening this partnership is a top priority for the GPEI integration plan.

This is again a subject that attracted a great deal of comment and concern at the joint IMB and TIMB meeting and is discussed in the IMB report.

Civil society organisations are playing an important role in closing service gaps in polio-affected and polio-vulnerable countries.

They are vital players in the global health ecosystem more generally because of their deep understanding of community needs. Their ability to tailor messages to specific populations makes them especially effective in building credibility and trust within communities. Furthermore, civil society organisations can push governments to take action, advocate for policy changes, and ensure accountability. The strong networks they have with the media, their peers and local stakeholders enable them to amplify their advocacy efforts.

The Civil Society Working Group on Polio Integration and Transition was established in 2018 as a platform for information sharing and coordination among civil society stakeholders. It serves as a bridge between them and other partners involved in polio transition, facilitating the exchange of ideas and best practices, and offering a forum for discussions on challenges at the field level. Monthly calls and webinars are held to ensure that civil society organisations remain aligned with the global agenda while contributing their local insights and capacities.

There are very concrete examples of how civil society organisations have contributed to polio integration and transition:

- In the Democratic Republic of the Congo, the organisation VillageReach helped to secure annual provincial budgeting for immunisation by developing a legal framework and advocating for a provincial edict. The organisation also engaged the media to raise awareness about the government's past polio commitments.
- In South Sudan, IHO convened stakeholders to advance transition planning and worked with local authorities to create a task force for polio transition planning.
- In Nigeria, the Vaccine Network for Disease Control (VNDC) established strategic partnerships with private organisations to integrate health services, using a whole family approach, which emphasises the importance of providing health-care services to all family members in a holistic way.

In Afghanistan, organisations like the Afghan Red Crescent Society and the UNFPA (the United Nations sexual and reproductive health agency) have taken important steps to integrate polio immunisation into broader health services, leveraging existing community health structures to reach remote populations.

The positive attitude of such models of delivery lies in their community-driven nature.

Community mobilisation work, led by Health Shuras and Family Health Action Groups, enhance local ownership of health initiatives, making services more sustainable and accepted by the population.

The impact of these integrated health approaches has been significant. In the south of Afghanistan, for instance, over 223,000 children have received oral polio vaccine doses, and nearly 14,000 previously missed children have been reached.

Civil society organisations have been instrumental in advocacy at both national and community levels. In the Democratic Republic of the Congo, 18 civil society organisations advocated for increased funding for polio transition, and used media platforms, including television and radio, to build public pressure on the government to deliver on its immunisation commitments.

Similarly, in Ethiopia, stakeholders have been mobilised to ensure that polio transition plans were prioritised by government authorities. A civil society organisation was also involved in capacity-building for frontline health workers, ensuring they were prepared for both emergency preparedness and outbreak response.

In Somalia, the Far-Reaching Integrated Delivery (FARID) project is a critical initiative aimed at increasing population immunity and addressing broader health needs in the country, particularly in access-challenged districts in the south-central region.

It has:

- Reached over 10,800 people through health camps, covering 1,385 villages, with 74% of these villages being in access-challenged areas.
- Delivered 638,960 doses of routine vaccines, vaccinating 125,825 zero-dose children, a major milestone in improving population immunity.

Additionally, the health camps provided 188,688 maternal health consultations, 231,548 nutrition services, and 416,745 general medicine consultations, ensuring comprehensive health-care coverage for vulnerable populations.

The FARID project has highlighted several key lessons, including the importance of integrated services in hard-to-reach areas, where communities

are more receptive to polio immunisation when it is bundled with other essential health services. Community trust and respect for local leadership structures were critical in overcoming barriers and ensuring service delivery.

VNDC Nigeria is at the forefront of integrating polio eradication efforts with broader health services in the country. This organisation operates with a focus on women, adolescents and children, addressing both health and socioeconomic development challenges.

In a country where over two million children are considered zero-dose, integration has become critical to ensuring that health interventions are both effective and sustainable.

One of the most significant roles of CSOs in this transition period is to ensure the integration of polio functions into the broader health system. This includes:

- Sustaining polio vaccination coverage even as the disease is eradicated, ensuring that zero-dose children are continuously reached.
- Integrating polio resources into essential immunisation programmes, ensuring that the infrastructure, expertise and personnel developed during polio eradication are used for other health services such as COVID-19 response, nutrition, and maternal health.

Gender

Gender has not had a high profile in Polio Programme policy discussions and in service operating models. This is changing and it urgently needs to change.

Local gender norms play a decisive role in determining access to children, decision-making around health care, and refusals of vaccinations. These norms, therefore, must be carefully understood and addressed in the design of the polio eradication and transition programmes. They can be deeply entrenched and play a major role in shaping access to public health services.

In many communities, decisions about whether or not a child will be vaccinated rest largely with male heads of households, while women are responsible for child-rearing and health care at the household level. This division of roles means that even when women are present in the public health workforce, men may ultimately reject vaccination.

In socially and religiously conservative areas, these gender norms make it particularly difficult for male health workers to engage effectively with households. Women may not open the door to male vaccinators or health workers, thus preventing the immunisation of children when men are absent from the home.

The capacity of the polio workforce must be seen in the light of gender concepts and how they can be integrated into programme delivery. Public health services must be gender-responsive, not gender-blind. This means that planning and decision-making at the country level must account for gender-specific barriers to access. Programmes that treat gender as merely symbolic or as a box to tick for donors are unlikely to succeed in significantly improving access to vaccinations or other health services.

One of the critical challenges is the assumption that increasing the number of female health workers alone will automatically lead to better access. While it is vital that female health workers are the mainstay of key parts of the public health workforce, in patriarchal societies, where men ultimately make the decisions, the presence of women vaccinators alone is insufficient. Male decision-makers must be engaged directly through social and behavioural change communication activities. Without engaging these male figures, even with female health workers on the frontlines, children may remain unvaccinated due to refusals from male heads of households.

Despite some gains, the overwhelming number of refusals in key polio-affected and polio-vulnerable areas still come from male heads of households. This points to the continuing challenge of addressing gendered power dynamics in decision-making.

Engaging men directly – particularly fathers and male community leaders – must be an essential component of any gender-responsive strategy. The success of using male social mobilisers to engage with fathers and male elders in regions where male authority dictates health decisions is one way forward. In these areas, male mobilisers are able to have critical conversations about the importance of vaccination, appealing to cultural and religious values to advocate for the health of children. This can help to reduce refusals and increase trust in the vaccination process.

Mobilisation work can also focus on creating support groups for mothers and building the capacity of female religious leaders to influence community behaviour.

Sex-disaggregated data are a crucial missing link in understanding these gender dynamics. Without data that distinguishes between boys and girls in vaccination coverage and refusals, programmes are unable to effectively target interventions. In some regions, local practices may prioritise boys over girls for health care access, reflecting a "golden child" phenomenon. In contrast, in other regions, girls may be vaccinated when female health-care workers are present, but boys are neglected due to the absence of male counterparts to engage with male heads of households. This gender-sensitive lens is essential for tailoring interventions in these communities and for ensuring that children of both sexes receive vaccinations.

For example, in parts of Afghanistan, local gender norms prohibit even recording the names of females in immunisation counts, which illustrates the challenge of gender-neutral microplanning that fails to account for gender barriers.

Despite attempts to record data, the gender norms are so powerful that basic information about female children is often omitted from official records. This reflects a profound gap between global standards and local realities, where even public health professionals are constrained by local gender expectations.

Yet, in the Central African Republic and the Democratic Republic of the Congo, there have been promising efforts, such as using sex-disaggregated attendance sheets for team training and ensuring that data on sex differences are available.

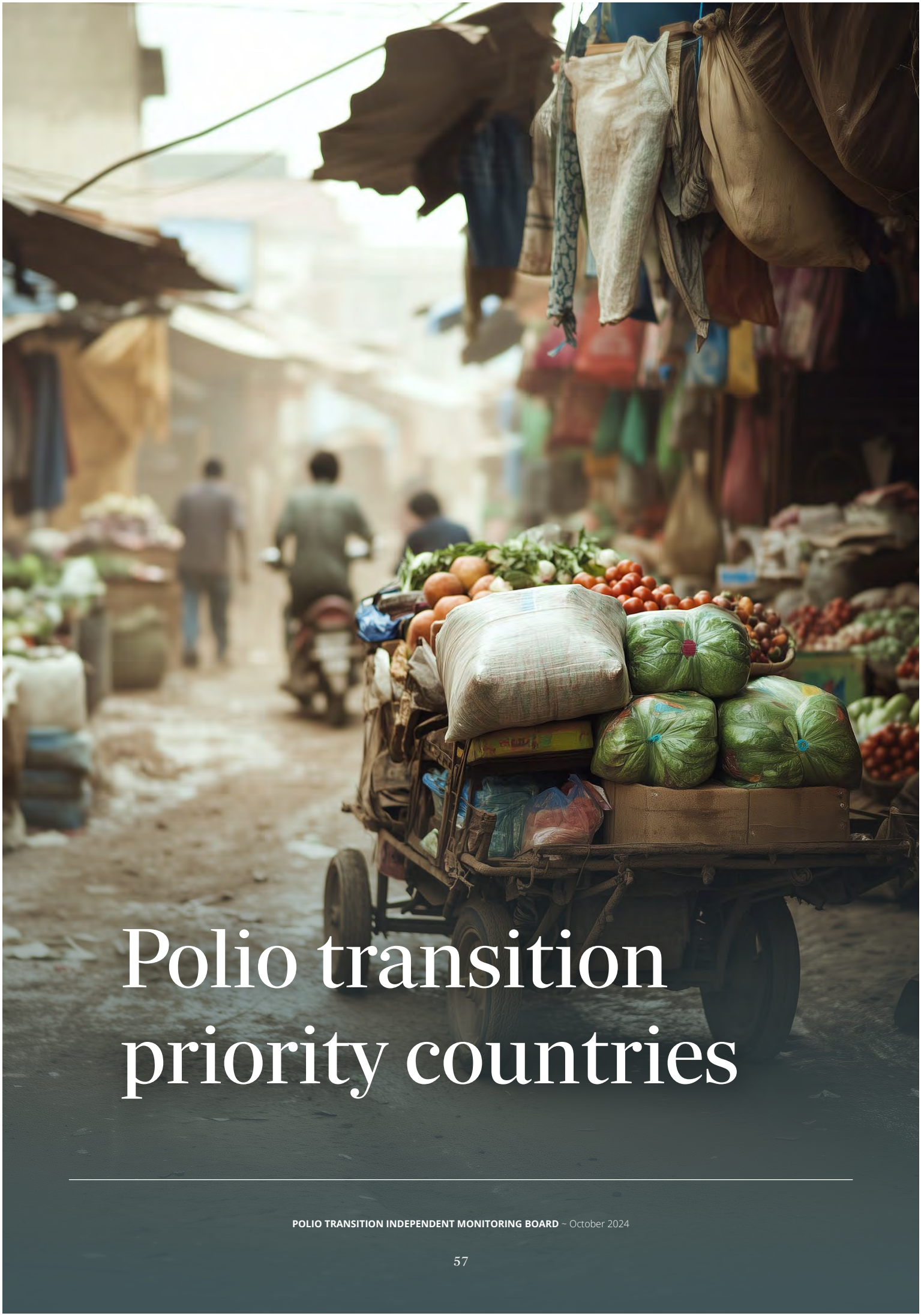
However, even when data are collected, there is often no follow-up analysis to ensure that it informs decision-making. This points to a wider problem of underutilisation of data in guiding health interventions.

The lack of gender-disaggregated data has important implications for programme planning and evaluation. Without age- and sex-specific data, it is nearly impossible to accurately assess the reach and effectiveness of polio vaccination campaigns for both boys and girls. Ongoing under-reporting of female children, particularly in regions where local norms dictate that girls remain hidden from public records, creates a significant blind spot for Polio Programme planning, leading to discrepancies in vaccination coverage.

Practical solutions could involve localised training programmes that emphasise the importance of collecting and using gender-specific data. The GPEI could establish clearer guidelines on how to integrate these data into national and regional planning work, ensuring that programmatic adjustments are made where gender gaps are identified.

Addressing the systemic problem of gender-based violence and vulnerability must also be a priority for the Polio Programme and its partners. For example, in areas of conflict, women workers often face dangerous conditions, travelling long distances on foot, sometimes unpaid for months, and yet they are crucial to the success of the programme. The Polio Programme's push to increase the ratio of female frontline health workers in areas like Pakistan, Nigeria and Afghanistan has exposed many of these women to gender-based violence and harassment, which compounds their vulnerability.

It is vital to overcome the structural barriers to the role of women in the workforce. The challenges faced by female health workers can be formidable, particularly in regions with high levels of insecurity and conflict. Despite these risks, they are critical to the success of vaccination campaigns, particularly in communities where women are not permitted to interact with male health workers.



Polio transition priority countries

Polio transition priority countries

WHO's polio transition team has undertaken an assessment of the polio transition countries using their new assessment methodology.

Very few countries are close to being able to deliver the polio essential functions to the required standard to maintain a polio-free population in the post-certification period. Even fewer are able to pay for the staff and infrastructure necessary.

50%

of the **world's most neglected population displacement crises** were in polio transition countries

Derived from Norwegian Refugee Council data, 2023.

Many countries are apprehensive about polio transition because they view it as a withdrawal of support rather than an evolution toward sustainable health infrastructure. They are looking for sustained technical and financial input to preserve polio eradication gains.

Indeed, some country governments have said that they do not have the technical or financial capacity to takeover polio assets, and want WHO to continue managing the polio network as it is viewed as impartial and producing outputs independent of politics.

As has been the case for some considerable time, other countries are involved in national or regional armed conflicts, are facing economic embargos, polio outbreaks, natural disasters, refugee crises, and political instability. These countries are heavily reliant on external technical and financial support. Their capacity is far too depleted to ever be able to takeover polio functions and assets.

Insights are provided by looking hard at the country realities.

For example, Nepal seemed to be on track to absorb many of the polio-essential functions. The country has had external support for its surveillance system for 25 years and there were firm plans for this to be taken in-house.

The government is not now able to do this. Although there is strong political commitment, the Ministry of Finance has cut the Ministry of Health's budget two years in a row by a third.

The health system is struggling to provide basic services that the government at the national level has to maintain. It had to borrow from other maternal and child health programmes just to pay for its essential vaccines. So, there is no way presently that the country will be able to pick up the cost of additional functions required as part of polio transition. There is no current Ministry of Finance intention to make money available to absorb the polio-essential functions.

Even the previous polio transition budget plans were selective. They mostly covered the costs of the vaccines and sustaining immunity levels, but did not include surveillance officers.

Surveillance in Nepal is challenging in any case because the health system is decentralised. People are

hired not just nationally, but provincially and municipally. This has not been factored into any budgets. Moreover, in order to increase the number of staff, or to create a cadre of surveillance officers, government rules require a human resources survey, which must determine the need and all the parameters of proposed new positions. The resulting report has to be cleared by multiple ministries. The TIMB was told that a similar exercise for tertiary care employees is still circulating for comments, three years after it was published.

So, even with the intention of staffing up for surveillance, for disease outbreak preparedness and for global health security, a presence on the ground is at least two years away, even if the money could be found.

Bangladesh has long been regarded as one of the strongest countries for successful polio transition, yet despite an excellent track record on vaccine coverage, problems are emerging. In particular, there are vacant positions in the essential immunisation programme and concerns about possible declining vaccination rates in the near future. This is further compounded by increasing urbanisation, and vaccine refusal, as well as other factors.

In recent months Bangladesh has been struck by major political and social upheaval. The country is still returning to normal after this. There are some ongoing security concerns, but it is not clear how much that has disrupted essential immunisation and other public health services. There was also major flooding in September 2024 due to monsoon rains. Restoring the main institutions in the country under its interim government will be vital to the continuity of health services and population attitudes towards those that the government provides, including essential immunisation.

Such context is critical as it reflects broader systemic issues that can undermine progress.

Some countries have health systems that are heavily weighted to urban areas with a marked lack of infrastructure and health-care workers in rural communities.

Governance problems, such as corruption and inefficiency, often limit health sector performance.

In countries that have had major conflicts and seemingly recovered and stabilised, there are frequently localised pockets of ongoing conflict that affect not only health care access, but also polio-essential functions like surveillance and essential immunisation. Anti-government elements will often turn communities against government-provided services, make them generally mistrustful of the protective effect of vaccination or whip-up explicit anti-vaccination attitudes.

The commitment to own and foster integration is strong in some countries. For example, Iraq and Libya have now fully integrated polio-essential functions into their national health systems and normal funding from outside for their surveillance systems and immunisation.

The at-risk countries, especially those with persistently low immunisation coverage, will continue to require close monitoring and assistance.

The most fragile, conflict-affected, vulnerable countries will need external financing and partner staff in-country for the foreseeable future. There is no getting around that reality.

In fragile and conflict-affected countries, where health systems are often weak and fragmented, Gavi has adopted a more nuanced approach, providing tailored support to ensure that immunisation services reach even the most vulnerable populations. This includes working closely with civil society organisations and humanitarian agencies to deliver vaccines in hard-to-reach areas, as well as supporting countries in building the necessary infrastructure to sustain immunisation coverage in the long term.

Conclusions

Conclusions

The original commitment made by the World Health Assembly was to create a polio-free world. It was a broader and more inspiring goal than interrupting transmission of the poliovirus. At the point when wild and vaccine-derived poliovirus have not been detected for two years, the polio partners will take their first steps to complete a momentous and historical task that will have, by then, only been partially accomplished.

Polio transition was established eight years ago to plan and execute this second phase of polio eradication.

The minimum expectation and requirement was that polio transition would deliver a strong and sustainable set of polio-essential functions (including surveillance, essential immunisation and emergency outbreak response) that would be present in a country-based, country-led and, largely, country-funded post-GPEI world.

It was also a stated priority that other public health programmes cross-subsidised by polio should not lose out or be weakened through the transition.

Additionally, at the foundation of the polio transition programme, there was a bold aspiration that the opportunity would be used to strengthen health systems more broadly, working towards universal health coverage.

For a time, the vision for polio transition remained somewhat simplistic and linear compared to the more complex reality that has emerged.

The dynamics of poliovirus circulation changed unexpectedly, driven by factors such as repeated failures to deliver an eradication-standard Polio Programme in the endemic countries, continued widely-dispersed vaccine-derived polio outbreaks, cross-border transmission, and the

challenges of reaching zero-dose children in conflict-affected or hard-to-reach regions.

The Montreux planning watershed

On 13-14 November 2018, in Montreux, Switzerland, WHO convened a high-level stakeholder event entitled *Supporting Polio Transition in Countries and Globally: A Shared Responsibility.*

This meeting was of major significance because it came after a period of uncertainty in which the GPEI was passing leadership of polio transition to WHO. Many stakeholders had claimed that a vacuum of inaction had formed around polio transition.

Montreux was regarded as a watershed because, following on from the World Health Assembly-endorsed action plan a few months earlier, the gathering sought to clarify the scope of polio transition's ambition, to give a simple and clear situation report and to identify actions that could immediately be taken to make progress.

Bearing in mind that it is six years since that meeting, it is valuable to revisit the assessment of the status of polio transition at that time.

This is how the state of readiness in the three key WHO regions was described in November 2018:

AFRICA REGION

The most recent case of wild poliovirus in Africa was detected in Nigeria in August 2016. It is expected that the region will be certified polio-free by 2020. So far in 2018, there have been 41 cases of type 2 vaccine-derived polio and 29 samples isolated from environmental surveillance. Seven countries are vulnerable, with low immunity, so there is a risk of importation of wild poliovirus from polio endemic countries. Countries in the region have varying capacities in surveillance and immunisation, and many have problems of accessibility due to insecurity. Six out of seven priority countries have endorsed transition plans, with a transition investment case developed in the remaining country, Nigeria. Challenges include: low government commitment, competing priorities for existing resources, a need for integration between programmes at regional level, and other simultaneous transition processes (e.g., Gavi).

EASTERN MEDITERRANEAN REGION

Transmission of wild poliovirus is ongoing in Pakistan and Afghanistan, with an increase in cases in Afghanistan in 2018 compared to 2017. In Afghanistan, the situation is complicated by security risks and inaccessibility of populations. While the transition process is intended to start one year after the detection of the last virus, Afghanistan has already developed a framework for transition planning. Sudan and Somalia are among the 16 global priority countries for transition and their transition plans are awaiting finalisation. Somalia is a complex emergency with a weak infrastructure and large numbers of children (up to 250,000) living in inaccessible areas. Because of their complex emergency situations, Syria, Iraq, Yemen, Libya have been added as regional priorities for transition. A polio asset mapping has been completed in all four countries and transition plans are to be developed in 2019. Pakistan may develop a framework along the lines of Afghanistan and there is a need for continued engagement with emergency and immunization programmes and donor partners.

SOUTH-EAST ASIA REGION

The Region was certified polio-free in 2014 and has sustained high levels of population immunity. The last case of type 2 vaccine-derived polio in the Region was detected in Myanmar in late 2015. National Transition Plans have been developed in five countries and the government has endorsed the plan in Bangladesh. There is high-level joint WHO and Ministry of Health commitment at Regional and country levels for transition planning. In-country governing mechanisms through Interagency Coordination Committees (ICC) have been put into place. There is a need to create opportunities at the global level for engagement with Ministries of Finance and Planning and advocacy with donors/partners for mid-term financing.

While the Montreux meeting concluded with cautious optimism for the prospects of progressing polio transition, what has happened since 2018 gives few grounds for that optimism.

The areas of concern in many of the polio transition countries – lack of ownership, denial that the money would ever disappear, conflict, inaccessibility, poor governance, patchy essential immunisation coverage, resource limitations and low population polio immunity levels – featured in the Montreux discussions, but were regarded as relevant to a small number of countries. Arguably, many more countries are affected by these stressors today than in 2018.

Transmission of wild poliovirus in Pakistan and Afghanistan was described in Montreux as "ongoing" with an increase in cases in 2018 compared to 2017. The situation six years on is similarly "ongoing" with an increase in cases in 2024 compared to 2023.

In 2018, by November, there had been 41 cases of type 2 vaccine-derived polio and 29 positive environmental samples. By a roughly comparable time of year in 2024, there had been 94 vaccine-derived polio cases and 115 positive environmental samples. Many more countries are affected in 2024 than were in 2018.

Worse, by the time the mishandling of the 2016 "switch" (withdrawal of trivalent oral polio vaccine and replacement with the bivalent) had played out, 53 countries were infected or reinfected with type 2 vaccine-derived poliovirus. Overall, more than 3,300 children had been paralysed across 43 countries.

There can be no doubt that this has greatly increased the challenge, and worsened the medium-term prospects of a successful polio transition.

There was a commitment at Montreux to hold a follow-up meeting, but that never happened. Leadership for polio transition in WHO changed hands and this led to a period of internal discussion. Then, the COVID-19 pandemic arrived and added further complexity for both polio eradication and polio transition.

After the main wave of the pandemic had passed, and polio eradication functions were restored, polio transition work also resumed. There was then a further organisational change that brought polio transition into WHO's Polio Department.

Looking back to Montreux, it is probably fair to say that there has been little real progress in polio transition since then.

Impact of new strategic framework on country readiness

In the earliest meetings of the TIMB, the GPEI reported that it was supporting a $10 million start-up programme for countries to prepare polio transition plans. The work was commissioned from paid consultants who visited the countries and began to work with ministries of health to put together the plans.

From then on, the main presentation at each TIMB meeting was from the GPEI, showing progress with each country's polio transition plan. The results were presented as a traffic light chart, with green shading representing completion of an element of the planning process, red depicting no progress and amber partial implementation. Over these early years, the chart began to shift strongly towards green, creating a feeling of buoyancy and momentum amongst the GPEI attendees.

The approach became problematic for the TIMB in formulating its independent assessments. The TIMB plan to make visits to each of the priority countries became impossible because of the arrival of the COVID-19 pandemic. Field visits by the experts on the Board would have given a clearer understanding of progress. Short country presentations at TIMB meetings were not enough to provide the quality of insight required, nor to validate the information being provided.

The TIMB began to gather information in discussion with those who attended its meetings while the chairman and its small secretariat spoke to wider groups and individuals with detailed country knowledge.

In the pre-pandemic years of the TIMB's work it became clear that the traffic light charts that were being relied upon to judge progress had very limited value as an assessment tool.

The TIMB heard from multiple sources that there was little country ownership of polio transition. Many countries did not really believe that the GPEI funding that they had relied upon for decades to cross-subsidise aspects of their public health systems would really disappear. Few ministers of health and senior ministry teams were actively involved in the planning. Most significantly, since a key goal of the process was to secure country self-sufficiency, senior ministry finance teams were hardly involved at all.

Thus, the progress reports on country plans, captured in traffic light charts and forming the centrepiece of GPEI presentations to TIMB meetings, began to have an unreal air.

Unreal became surreal when the GPEI leadership seemed bemused that the board it had set up was directing recommendations towards it. The TIMB was told that the GPEI could not

say who was responsible for receiving and implementing its recommendations. That task would fall to "future owners" of the polio transition programme.

During 2023 and 2024, the polio transition programme has released the *Global Vision to use polio investments to build strong, resilient and equitable health systems* and the *Polio Transition Monitoring and Evaluation Framework*. The two important shifts of emphasis compared to what has gone before in the polio transition programme – moving away from process monitoring to outcome assessment, and acknowledging that many countries might need continued partner support post-eradication – represent improved clarity of purpose.

With WHO's current shift to a new strategic framework, presentation of assessments of progress with polio transition via traffic light charts has come back into vogue.

While the new traffic light charts are a better monitoring tool than their predecessors, the fundamental difficulty is that the shortfalls in performance are not actionable. Without an accountability structure and operating model, then the work being done is largely observational.

The first use by WHO of new key indicators to judge programmatic performance and milestones for transition readiness showed varying progress across different regions and countries.

Many countries are far from financial sustainability and still heavily dependent on donors, WHO and GPEI for managing polio-essential functions. Gaps and weaknesses have been identified in all three regions.

The WHO South-East Asia Region was judged to be the most on track regarding programmatic indicators, followed by the Eastern Mediterranean and Africa Regions, particularly in immunisation coverage, surveillance, emergency management, and outbreak response.

The South-East Asia Region has always been reported as further ahead of the other regions with countries like India and Bangladesh described as "poster children" for polio transition.

Though the leading countries in the South-East Asia Region have absorbed some costs of polio infrastructure, even they are now struggling to complete the transition because of changing economic circumstances. Few countries within the three regions seem to have a real appetite to take over transition funding for polio. Nor, indeed, do they have any great interest in talking about so doing.

Also, some governments are concerned about quality assurance monitoring. They like the relative independence of this being an external activity, recognising that an in-house function is at risk of data manipulation.

The greatest difficulty for the polio transition programme has always been, and remains, enabling countries to take over and fund the polio assets, infrastructure and staff so that polio-essential functions are delivered to a high standard.

It has been a long-term struggle for national governments to fund their health systems to deal with the many priorities that they face. This was greatly exacerbated by the impact of the COVID-19 pandemic on health budgets directly and on the countries' wider economies. In addition, external international aid levels have been falling. Also, more countries carry the burden of heavy external debt repayments.

Aside from finding the money to pay for polio, the other challenges faced by most polio transition countries are formidable.

The health systems of the polio priority countries vary greatly. In many, they are very severely under-capacitated, particularly in rural and remote areas, with a lack of infrastructure and health-care workers. Urban centres are often better served, but, overall, access to good quality health care even in the towns and cities is usually very limited.

$443.5 bn

paid by low- and middle-income countries **to service their external debt,** a record level. This diverts payments away from health and other critical areas.

World Bank. International Debt Report, 2023.

There is ongoing conflict in a substantial proportion of the countries and this severely constrains health-care access. Immunisation coverage tends to be very low, and often there is disruption of vaccination campaigns, particularly within insurgent-controlled areas. In some countries, usually at a subnational level, corruption and political instability limit effective governance.

Then there are a small number of polio priority countries that are so fragile in governance terms, so lacking in basic infrastructure and so economically weak that they are entirely reliant on international aid. The prospect of this changing for such countries in the near future is bleak.

Above all, the striking feature of the polio priority landscape is how quickly the country context can change. The emergence of conflict, natural disasters, political instability, disease outbreaks and epidemics and the influx of displaced populations fleeing conflict or persecution can all rapidly downgrade the planning assumptions and capacity to fulfil, or even progress, polio transition.

Strategic clarity, cohesion and communication

The distinction between the new Post-Certification Strategy and the polio transition vision and strategic framework is not obvious.

The Post-Certification Strategy defines the intention of polio transition planning as: "a world in which polio investments are sustained and used to build strong, resilient and equitable health systems, where all countries:

1) remain polio-free;
2) minimise the burden and eliminate vaccine-preventable diseases
3) rapidly detect and control disease outbreaks."

Country readiness seems to be regarded by the Polio Post-Certification Strategy as a fixed milestone, whereas, in reality, it is not a static concept, but rather a fluid and evolving process.

Communicating this more nuanced understanding would support countries in setting realistic goals whilst also helping to secure continued international funding and technical support where needed.

On reviewing the two approaches, it could be argued that the polio transition strategy undertakes more measurement and assessment of country preparedness. Whereas the Polio Post-Certification Strategy does not describe a role in advising on how individual countries should integrate polio-essential functions into their individual health systems.

However, ultimately the two strategies both aim to deliver high polio immunity; rapid detection and response to new emergences; strong biosecurity and containment; and country ownership of these and other polio-essential functions.

Indeed, the blurring of lines between the two strategies is likely to be confusing for countries. The countries had been repeatedly told it is a very high priority for them to deliver polio transition in line with the World Health Assembly resolution and regular high level progress reports. It will also be disconcerting for the many stakeholders who, for a long time, have been regularly involved in discussions on the progress of the polio transition programme, and played their part in advancing it.

Neither the polio transition strategy, nor the Polio Post-Certification Strategy, are convincing on how the necessary change will be achieved with respect to: the level of human resources required; the overall funding and resource mobilisation needed; how delivery responsibilities will be shared between organisations; the design of governance and accountability arrangements; and how performance will be managed.

It is debatable whether there is any justification for maintaining two separate strategies covering much of the same ground, managed by different programmes with separate budgets. To do so reinforces the negative perceptions of "transition" as a long- term process with ill-defined end-points and no substantial management functions. Polio transition was a concept that has seemed unclear to many and has not proved motivating at country level and to staff.

Addressing the realities of delivery capacity and capability

There are already major challenges in delivering each of the polio-essential functions to a standard that will allow a polio-free world to be secured.

It is essential to have a system-level capacity and capability to

achieve and sustain a high level of population polio immunity for long enough to ensure that polio due to wild and vaccine-derived poliovirus does not return after certification to any country or subnational jurisdiction.

The immunity level must also reach a high point where it is safe to withdraw the bivalent oral polio vaccine from use; although immunity levels are key to this, there will be many other factors involved in implementing this second "switch".

Currently, even the path to certification is not clear since neither poliovirus type has been stopped from circulating and many countries are still affected by, or highly vulnerable to, polio. High polio immunity levels are not being achieved across either of the two wild polio-endemic countries nor in key districts within them. Neither are such levels being sustained to protect countries across Africa which collectively have been affected by a huge burden of polio caused by vaccine-derived polioviruses.

The recently published 23rd IMB report has urged the Polio Programme to adopt a policy of adding many more preventive polio vaccination campaigns to its current operating model, which is based only on targeting consequential geographies. Shortage of resources and vaccine have been major factors in vaccination policy decisions over the last year in particular.

If high polio immunity levels cannot be achieved and sustained now, then even if transmission of polioviruses is interrupted, it is unlikely to be enough to provide a platform to build the strength of resilience needed for the post-certification period.

Essential immunisation programmes are the backbone of work to stop poliovirus transmission and sustain polio-free status in the post-certification era.

Currently, immunisation coverage levels are low in many of the polio-affected and polio-vulnerable geographies, particularly at subnational levels.

Strengthening them, especially in high-risk areas, will be essential to maintaining proper levels of immunity and preventing future outbreaks.

Birth doses of oral polio vaccine are not commonplace. Yet, other vaccine programmes (e.g., BCG, hepatitis B) give birth doses. It would be relatively straightforward for polio to combine with them.

A long-standing problem for the Polio Programme in achieving the goals of both polio eradication and polio transition, is that there is currently no global or regional performance management mechanism for moving the coverage of essential immunisation up to higher levels rapidly.

Polio, through the GPEI organisational model, has been extremely focused, historically, on all the requirements for reporting, surveillance and responding to outbreaks. WHO's essential immunisation function is not structured like that. It does not have sustainable financing for raising essential immunisation coverage to the level required quickly enough.

Gavi has taken over funding for WHO polio staff and functions in a limited number of geographies, but will not extend to routinely funding WHO or UNICEF immunisation positions. Its mandate is to work directly with governments.

Some of the biggest polio transition priority countries, such as Nigeria and India (the two countries with the largest number of zero-dose children), are in the process of being transitioned out of Gavi funding. So, these countries will be underfunded to deliver the Gavi-eligible vaccines.

Many low-income countries are now almost fully reliant on Gavi to uphold their immunisation services.

There is a disparity between national immunisation coverage data and the reality on the ground, especially in countries with fragmented health systems. The limitations of existing global data, such as WHO/UNICEF Estimates of National Immunization Coverage (WUENIC) are widely referred to. Such data may paint an overly optimistic picture.

For example, the TIMB was told that Pakistan's WUENIC data suggested 80–90% coverage for inactivated polio vaccine, a figure, said one delegate to the TIMB meeting, that "seemed to come from a different planet" when compared to the actual situation on the ground.

This disconnect highlights the need for subnational estimates and more granular data, especially in countries driving polio outbreaks and global spread. Again, this is a vital missing element in the tools needed to strive for rapid performance improvement.

For many, this represents a call to action to improve the validation of data in polio-endemic or high-risk countries, ensuring that the global community has a more accurate picture of where immunisation gaps remain. There is a particular need for additional scrutiny in countries like Pakistan, Afghanistan and parts of Africa, as they continue to see poliovirus transmission despite reporting suggesting that they have high immunisation coverage levels.

Although a seemingly technical matter, the way in which immunity is assessed is vital. The main focus for polio transition should be country readiness and polio-essential function maturity. An overemphasis on the poliovirus epidemiology benchmarks risks the polio-free period after interrupting transmission and certification being unsustainable.

Surveillance is also an absolutely key determinant of successfully reaching a polio-free world.

Staffing this part of the programme well is very important and in some areas there is high staff turnover. The majority of surveillance medical officers are funded externally by donors, but as WHO consultants, not so often as country government employees. They are WHO consultants who are doing the active surveillance for polio. Most also do surveillance for measles, rubella and other vaccine-preventable diseases. They were part of the COVID-19 response, as well as being involved in other emergencies such as cholera and Ebola. This is an important group of staff who must be retained yet they are heavily dependent on external donor funding.

It is not clear who will retain, maintain and develop this essential workforce into the future, and who will pay. Many current skilled surveillance officers do not want to leave WHO and go to work for governments. Lower government salaries are just one factor in this.

It is simplistic to think that surveillance staffing can be assured by listing them in country

transition plans as part of an overall budget for operational costs, including, for example, the requirement for transport of stool samples.

To establish a surveillance group and hire staff of the appropriate level is an entirely different matter. Moreover, setting up new human resources in ministries of health often takes years to get approval. Few current country polio transition plans include hiring people.

The use of acute flaccid paralysis surveillance continues to decline across the world. Yet only a small proportion of most countries is covered by environmental surveillance, certainly few more than 10%. In the post-certification phase, the ability to monitor silent transmission in remote areas, where there is no environmental surveillance, will be vital.

Many countries are restricted in choice of laboratory reagents, cell lines and test kits. It is important that such decisions and purchases are standardised across all laboratories and it is not clear that this is happening at present.

These are all important considerations, some granular, some very strategic, in determining whether key polio essential functions can be delivered to a high standard over a prolonged period of time.

Countries must also have the capacity to respond to the high-priority polio health emergencies. It is assumed that WHO's Incident Management System will be used for polio outbreaks, just as it is for other emergencies. Certainly, a strengthened approach is needed. The long-standing difficulty in creating an emergency culture in the GPEI for dealing with vaccine-derived poliovirus is one of the major factors stopping Africa being cleared of poliovirus.

The process of the containment of poliovirus has not had a high profile in high-level polio strategy meetings, but excellent work has been done behind the scenes, some very technical, but other work with countries directly has also been vital.

The deterioration of the poliovirus epidemiology introduces a tension between the need to progress the implementation of containment policy and avoiding a situation where necessary research and innovation opportunities are lost. Such initiatives are still needed to interrupt poliovirus circulation and secure a polio-free world. There is evidence that some research funders do not wish to support work that is seen to go against the global push for very few polio-active facilities. This tension is another by-product of polio eradication and polio transition getting out of sequence because of repeated failures of the delivery of goals to stop poliovirus circulation.

There is great complexity involved in transitioning polio eradication functions to broader health systems and the need for sustained political, financial and operational commitment from countries and global health partners.

Most of the polio transition countries, including the small proportion who have maintained a uniformly high level of performance on polio-essential functions, are facing difficulties

in maintaining polio surveillance and immunisation coverage amidst declining health sector budgets.

The financial support from external donors is crucial to continuing this work. As countries struggle to transition to full national ownership of polio-related functions, finding sustainable domestic resources will be essential. Yet, in some countries, the national budget for health is already stretched thin, with polio programme funding often competing with other urgent health needs.

Making harm reduction an explicit programme goal

As the world moves towards the post-certification phase, the importance of increasing the inactivated polio vaccine coverage is paramount. Inactivated polio vaccine, when administered alongside other vaccines as part of a comprehensive immunisation schedule, can help restore community trust and reduce the fatigue associated with repeated oral polio vaccination campaigns. This transition is essential, not only for polio eradication, but also for strengthening overall immunisation programmes that protect against other vaccine-preventable diseases.

155

children harmed by paralytic polio in non-endemic polio transition countries **in 2024 so far**

Good population coverage with two doses of IPV would have prevented estimated **90%** of this harm, three doses estimated **99-100%.** Unlike oral polio vaccine, protection is for several years. No global performance management systems or powers currently exist to operate at speed and scale to block harm to children in this way.

WHO data.

Even more importantly, inactivated polio vaccine can be deployed so as to protect children against paralysis even in the presence of circulating poliovirus in their communities.

Such a harm reduction strategy has not formed part of the Polio Programme's thinking. Surely it is possible to rapidly and progressively raise coverage levels to protect children in key polio-affected and polio-vulnerable areas. Two doses achieves 90% protection, three doses is even more effective. That protection is believed to last for several years.

The scope and foundational potential of integrated delivery systems

The GPEI has continued with a largely oral vaccine, vertically-delivered, campaign-orientated operating model. Certainly, it has shifted to incorporating more integrated service methods of various designs to deliver polio vaccination, but many stakeholders feel that, until recently, easy opportunities for integration have not been taken.

At this stage of the Polio Programme, with the political and monetary stakes so high, the GPEI's stance seems to be to invest its precious time and resources only where there is a clear and direct pay-off for polio. For example, if there is a pool of susceptible children near an outbreak zone, it likely will invest in some sort of integration activity.

Integration is a theme that is fully discussed in the 23rd IMB report, but it is clear that the GPEI's recent integration initiatives have largely focused on helping to achieve the two goals of interrupting poliovirus transmission.

Generally, the scope and quality of integrative activities so far have not been at a level to make progressive and sustainable improvements in essential immunisation programmes to benefit the resilience-building needed for the post-certification period.

This should be a key function of the current integration plan that the GPEI Strategy Committee is taking forward.

This is a particularly complex process because countries often lack the capacity to absorb the costs of surveillance officers and immunisation staff, many of whom are currently funded by external sources.

Stronger linkages with: measles and rubella activities; programmes for other vaccine-preventable diseases; global health security; and pandemic response

provide potentially accessible platforms for polio immunity to be built up systematically. Such collaborations may attract money and investments in a more sustainable way. They could meet the aspirations of many donors to target multiple areas of global health need.

The integration of polio vaccines into broader immunisation initiatives, the use of new tools such as the hexavalent vaccine, and the continued support from special projects like The Big Catch-Up will be critical in achieving a polio-free world. However, challenges such as population growth, geopolitical instability and misinformation must be addressed to ensure long-term success.

At the same time, there is a need for better alignment between polio-specific initiatives and broader health programmes. For example, more intentional, coordinated planning is badly needed between Gavi and WHO at both the global and country levels. This is particularly important for taking all available opportunities to co-deliver vaccines during routine campaigns and leveraging existing polio infrastructure for other health priorities. This is another issue dealt with in greater depth in the 23rd IMB report.

Civil society organisations can play a critical role in maintaining immunisation coverage and responding to polio outbreaks, especially in regions where formal government structures are weak or absent. They also have the unique capacity to operate in fragile and conflict-affected areas, where governments either lack the reach or the trust of the local population.

At the global level, it has been difficult for the TIMB and the IMB to gain traction for its view that truly progressive activity on integration would involve strengthening primary health care systems or broadening leadership for public health. This would be big-picture beneficial change affecting many countries. No one disputes it, but it is largely not seen as immediate polio business.

The TIMB learned that the World Bank's experience includes the broader challenge of transitioning from external health assistance to domestic financing, particularly in low-income countries.

While financial sustainability is a critical component of the transition process, programmatic sustainability is equally important. This involves integrating previously donor-funded programmes into government systems so as to ensure that surveillance activities, human resources and vaccine procurement are effectively managed within the existing public health infrastructure.

After the sunset

One of the central concerns raised by participants at the TIMB meeting was that the governance structure of GPEI, which, despite its historical success in driving polio elimination, now appears resistant to the types of reforms needed to address the current complexities of the programme.

There is a growing realisation that the Polio Programme, initially designed to control a communicable disease, may no longer be equipped to handle the multi-dimensional challenges of the final stages of polio eradication. These challenges are not solely epidemiological, they also involve human factors, such as community trust, political engagement and the integration of polio vaccination within broader health systems.

The GPEI's governance structure has enabled a command-and-control approach that has been successful in driving focused, high-pressure activities that have pushed oral polio vaccine coverage higher. However, this same structure has also created significant barriers. A centralised governance model, which has relied heavily on a top-down approach, has been effective in much of its work, but has led to long-term systemic weaknesses.

The local health workers and community leaders – who have the most intimate knowledge of the on-the-ground realities – have too often been sidelined in favour of a one-size-fits-all approach.

The GPEI became a supplementary immunisation programme, not one orientated primarily towards building immunity with a variety of tools. However, the hallmark of the Polio Programme in the GPEI-era has been strong mechanisms of accountability, assessment and performance management with a clear line of sight from global, to regional, to country, to district level.

From the time of its very first meeting, the TIMB has argued that there should be a successor governance model to manage the world through to polio-free status.

The GPEI partners have repeatedly stressed the need to recognise that its organisation will dissolve as part of the long-term polio eradication strategic plan. They continue to use the metaphor "sunset" to communicate this hard reality.

Some kind of coordinated, accountable global organisation using the tools of performance management needs to extend to post-certification to oversee and manage the withdrawal of bivalent oral polio vaccine, but also to ensure that polio immunity is built up over time and that poliovirus emergences are rapidly identified and extinguished. In so doing, countries need to be helped to deliver these strong essential functions themselves.

A proper multi-agency body with all partners and donors involved and with a dedicated funding base and clear objectives would be able to move progressively to strengthen all polio-essential functions needed, post-certification.

Until recently, those leading the polio transition programme, the GPEI and donors, have not been willing to countenance such an idea. Indeed, the key polio partners have sat on the fence for seven years. The stated reason is that a multi-agency entity is unnecessary. The unstated reason seems to be that some donors do not want to be locked into funding for a lengthy period after circulation of the two types of poliovirus has been stopped.

This has led to uncertainty about the continuity of donor funding after wild poliovirus circulation has ceased and after the vaccine-derived poliovirus has been eliminated. Many polio stakeholders do not know what will happen at that point. Others believe that the polio transition and post-certification plans now being developed within the GPEI will be handed over by exiting major donors to what are being described as "future owners".

The Post-Certification Strategy has defined the future owners as to include: national governments (ministries of health and finance), non-governmental organisations, technical advisory groups (the Global Commission for the Certification of Poliomyelitis Eradication, the Strategic Advisory Group of Experts on Immunization), global immunisation and other public health partnerships (Gavi, the Measles and Rubella Initiative), donors and the current implementing partners of the GPEI.

After interrupting poliovirus transmission, there are perhaps 50 countries that will need to be assessed on a regular basis: what is their immunity level? What is

the vaccine strategy for each of them? It is a big project.

The GPEI's infrastructure, particularly its extensive networks of trained personnel and its surveillance capabilities, will be invaluable in the coming years. These assets must be preserved and adapted to serve broader health system needs, ensuring that countries remain vigilant against the potential resurgence of polio.

While there are many platforms in place to absorb GPEI's functions, such as Gavi's and WHO's emergency response systems, these platforms lack the financial scale and capacity that GPEI has provided.

This creates a potential vacuum that must be addressed if polio eradication is to be sustained, post-certification.

The shift in global health financing towards social impact investors and venture philanthropy offers new opportunities for funding, but also presents challenges in aligning priorities and ensuring that polio remains a global health priority.

To address these challenges, there is a pressing need for a more coordinated approach to financing, with donors and global health organisations working together to create sustainable funding streams for polio and other health interventions.

A key theme at all TIMB meetings since the board was established is the missed opportunity to integrate polio eradication work into broader primary care and community health systems. Discussions often cited examples of successful community-based health models, such as those used in Nepal and Cuba, where community health workers play a key role in ensuring that every child is vaccinated, not just for polio but for a wide range of preventable diseases.

These models offer different governance thinking and emphasise the importance of community oversight and local engagement in driving health outcomes. This local empowerment contrasts sharply with the GPEI's top-down approach, which tends to often overlook the critical role of local actors in ensuring long-term success.

As part of the Polio Oversight Board's discussion of the Polio Post-Certification Strategy, it will make a firm recommendation in 2025 on the governance and management arrangement to succeed the GPEI.

Giving priority to gender inequity

The TIMB finds that while there have been important strides in implementing the GPEI's Gender Equality Strategy, more work is needed to mainstream

gender considerations at each level of the Polio Programme. This includes ensuring that all decisions, whether at the country level or within the Polio Programme's leadership, are informed by a gender-diverse perspective. Only by doing so can it overcome the entrenched gender barriers that continue to limit access to vaccines in the most vulnerable regions.

Gender equity is not merely an add-on to the polio eradication and polio transition work, but a critical component of its success. Addressing local gender norms, engaging both men and women in public health delivery, and using sex-disaggregated data are all vital steps towards achieving the goal of eradicating polio and successfully delivering a polio-free world. However, these strategies must be tailored to the specific cultural and social dynamics of each region, ensuring that gender-responsive approaches are integrated into the fabric of the programme itself.

Without reliable, actionable data, gender equity goals remain aspirational rather than achievable.

The changing landscape of global health and polio

The world is seeing a shifting burden of health crises. By 2030, 85% of the world's poorest people will live in fragile, conflict-affected countries. In these 35 or so countries, which are characterised by weak governments and permanent fragility, polio continues to exploit instability.

Fragile, conflict-affected countries now account for the majority of child and maternal mortality. Although overall child mortality has decreased globally, the remaining deaths are increasingly concentrated in these vulnerable places.

The challenge for the Polio Programme, and indeed global health programmes more broadly, is to reset and adapt to this changing reality.

This represents a new frontier for the Polio Programme, particularly in its transition and polio post-certification planning and implementation.

11

polio transition countries **in the bottom 15** of 190 countries ranked for political stability

World Population Review 2024.

Recommended action

Recommended action

1. Amalgamate the polio transition and post-certification planning work streams

Given that the new draft *Polio Post-Certification Strategy* seems to be occupying most of the same ground as polio transition, some may wonder why it took seven years to revise. Indeed, it could be argued that its earlier progression would have provided a more efficient way of handling the further stages of polio eradication and obviated the need for a special polio transition programme. Other system strengthening activities that polio transition aspired to could have been handled by WHO's mainstream management functions.

Recommended action 1.

The polio transition programme and the Polio Post-certification Strategy should be merged into a single stream of work. This would be best achieved by basing future planning for delivering action to achieve a polio-free world on the Polio Post-Certification Strategy. The governance structure and stakeholder participation for this work will have to be revised so it does not continue to be so GPEI-centric. The Post-Certification Strategy will also need to be broadened to cover country capacity and capability. Residual aspirations for polio transition to strengthen health systems should be handled by relevant WHO departments. It would be better not to use "polio transition" branding after the merger.

2. A modern and dependable entity to manage the world to polio-free status

At the point that poliovirus circulation is stopped, the promise of 1988 is not yet fulfilled. It is difficult to believe that the post-certification process leading to a polio-free world can be successfully delivered without accountability, performance management, dedicated resources and a cohesive multi-organisational governance structure. The TIMB has repeatedly advocated for such an approach, but been ignored. Now the Polio Programme appears to be considering it.

Recommendation 2.

A properly constructed, accountable global body, working with countries, needs to be put in place to lead and performance-manage the post-certification phase of polio eradication. As a recognised programme with that purpose, donors would be enabled to put money into it. Without it, donor confidence to invest is in doubt. It must be a much wider partnership than the current GPEI.

3. Reduce further harm to children by an emergency initiative to rapidly increase inactivated polio vaccine coverage

There is no dispute that poliovirus circulation is an emergency, but the role of vaccination in a health emergency needs fresh thinking. It is no longer enough simply to "go after"

the virus. Community protection should be an additional important dimension of the response. Also, in any public health emergency a priority should be to protect people from further harm or death from the hazard that they are exposed to. The inactivated polio vaccine has been viewed solely through its relevance to raising polio immunity and ultimately enabling the use of oral polio vaccine to cease. It has not been seen as an urgent immediate intervention to protect children from harm (i.e., paralytic polio). As a result, children are being paralysed and dying unnecessarily.

Recommended action 3.

The Polio Programme should build the concept of protection and freedom from harm into its operating model, not simply stopping the poliovirus from circulating. Giving children the inactivated polio vaccine as an emergency intervention will prevent much harm and death from paralytic polio. Immunisation systems have not delivered this harm reduction, otherwise there would not have been as many as 3,000 cases of polio in Africa over the last eight years.

4. Clear definition and engagement now of "future owners" of the Polio Programme

Currently the GPEI is playing a lead role in determining the strategy, rules and operating model for the post-certification period. Under present thinking, the GPEI will not be there to implement or modify its plan. Implementation will be for what are being called future owners. More diverse partners (e.g., the development banks), as well as ministries of finance and planning, need to be involved in discussions about what it will take to achieve country readiness and preparedness to absorb some or all of the polio-essential functions.

Recommended action 4.

The engagement of a wider range of stakeholders and experts to take the Polio Programme forward should start now, well ahead of proposals for a new governance structure.

5. The vital need for age- and sex-disaggregated data

There is firm resistance to creating age and sex-disaggregated data, especially in countries and areas where local norms restrict access to girls or boys. This resistance reflects a broader challenge in the Polio Programme: while there are global directives and commitments to address gender disparities, in practice, many regions and countries do not yet collect the data necessary to evaluate whether these disparities exist. The absence of sex-disaggregated data has rendered it difficult to gauge whether interventions are making meaningful progress.

Recommended action 5.

The reporting of age- and sex-disaggregated data should be made mandatory by the GPEI. Pockets of low immunity through this deficit is an unacceptable programme weakness.

6. The need to reduce gender-based violence in the programme

Much greater attention should be given to the protection and timely payment of female health workers. Despite their critical role in reaching children for vaccinations, their safety and livelihood are often neglected. This involves working closely with local communities to provide security measures and fair compensation, ensuring that women are not put in harm's way as they work to eradicate polio.

Recommended action 6.

The Polio Programme needs to consider not only increasing the number of female health workers, but also ensuring that they are protected from violence and exploitation. particularly in high-risk areas. A further broad-based review should be undertaken to look openly and fearlessly at this problem and come up with an early report to address the root causes.

7. Valid measures of population polio immunity

Coverage data do not equal immunity. They are unreliable. Some measure of functional immunity is required, especially for assessing the post-certification landscape and preparing for the withdrawal of bivalent oral polio vaccine.

Recommended action 7.

The tools for assessing polio immunity should be formally reviewed and action recommended to strengthen and improve them. Currently the methods are particularly weak and there is no sense that urgent work is underway to strengthen surveillance systems. Given the seriousness of the polio situation created by the 2016 switch from trivalent to bivalent oral polio vaccine, this ability to detect will be of momentous importance once bivalent oral polio vaccine is withdrawn.

8. Balancing containment and research needs

As WHO and global partners move closer to eradicating polio, they must also consider how to support essential research in the post-certification era. Without ongoing research into vaccines and other preventive measures, the world risks being ill-prepared for the challenges of maintaining a polio-free status, particularly in regions with fragile health systems and ongoing transmission risks.

While biosecurity and containment are non-negotiable aspects of the polio eradication strategy, the Polio Programme must also address the concerns of the scientific community. A balanced approach that secures poliovirus stocks while allowing for critical research is essential for ensuring that the global health community remains equipped to respond to any future challenges in the journey towards a polio-free world.

Recommended action 8.

A high-level meeting should be organised between the research community and the containment team. The purpose would be to listen and take account of leading scientists' views.