

Polio Eradication: What Does it Take and Why Development Assistance Matters

October 2026

This standalone case study is linked to ISGlobal's report *The Cost of Not Knowing: Why Cuts to Development Assistance Put the EU's Health Security at Risk*.

Polio eradication is one of the most successful public health investments ever made. Since the Global Polio Eradication Initiative (GPEI) launched in 1988, an investment of over US\$20 billion has reduced global incidence by over 99% and spared an estimated 20 million people from paralysis. In addition, two of the three wild serotypes have been certified eradicated. India, once regarded as the place where eradication would fail, recorded its last wild case in 2011; the WHO South-East Asia Region was certified polio-free in 2014 and the WHO African Region in 2020. Wild transmission persists today in only two countries, Afghanistan and Pakistan.

This case study argues that these gains were neither accidental nor self-sustaining. They rested on sustained investment in vaccination, in surveillance

(from tracking paralytic polio cases to testing sewage) and in community engagement, much of it financed through development assistance, and that financing is now being reduced. The GPEI's 2026 budget has been cut by 30%, to US\$786 million against the US\$1.1 billion judged necessary, with non-endemic environmental surveillance cut by 34% and outbreak response by 26%. The United States ended its direct grants in 2025, the United Kingdom announced in March 2026 that it would end its GPEI funding, and Germany has almost halved its contribution. The risk is a resurgence: WHO modelling indicates that a collapse in eradication efforts could re-establish endemic transmission, resulting in up to 200,000 cases a year within a decade.

Europe is directly exposed. Environmental surveillance detected vaccine-derived

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*Photo: Polio Vaccination Campaign in Mae Sot, Tak Province, Thailand, January 2026.
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poliovirus in London in 2022 and in five European countries in 2024, and wild poliovirus type 1 in Hamburg in October 2025. None caused clinical cases, thanks to high population immunity, additional vaccination efforts, and working laboratory networks. Yet 11 of 29 responding EU/EEA countries have no environmental surveillance, and European donors are among those reducing support for the programmes that provide this kind of monitoring in endemic and

transit regions. Three messages follow. Eradication is achievable, even in the hardest settings. Its last stretch depends on delivery, surveillance and community-engagement funding that is now being cut. For Europe, those budgets should be a matter of health security rather than expendable aid.

1. The Disease, and the Decision to Eradicate it

“Because humans are the virus’s only natural reservoir, polio can theoretically be starved out of existence, following the precedent set by smallpox.”

Poliomyelitis is caused by a human-only enterovirus spread primarily through the faecal-oral route. Infection is largely invisible: roughly 70% of people show no symptoms, and 25% experience only mild, flu-like illness. However, in under 1% of cases, the virus invades the central nervous system, destroying motor neurons and causing **acute flaccid paralysis (AFP)** —a condition that permanently disables two-thirds of affected patients and kills 5–10% when respiratory muscles fail.^{1,2}

This 1-in-200 paralysis ratio makes clinical cases the mere tip of an epidemiological iceberg. Because asymptomatic individuals shed the virus for weeks, poliovirus **can circulate silently within a community for months** before a single paralysed child arrives at a clinic. Consequently, symptom-based tracking is a blunt instrument; detecting outbreaks early relies heavily on environmental surveillance, such as testing sewage.^{2,3}

Eradication therefore rests on two distinct pillars: **vaccination** to block transmission, and **surveillance** (AFP tracking and sewage testing) to map the virus. Neither works in isolation. Yet, both run on the same fragile financing.^{3,4,5} The campaigns, outbreak response, surveillance, and laboratory networks that eradication depends on are financed through the **Global Polio Eradication Initiative (GPEI)**, implemented by WHO, UNICEF and Gavi, and funded by voluntary contributions from public and private donors. **After decades of maintained support, its 2026 budget has been cut by 30%**, with the reductions falling hardest on key functions: environmental surveillance (–34%), outbreak response (–26%) and operations in endemic settings (–18%).

Because humans are the virus’s only natural reservoir, polio can theoretically be starved out of existence, following the precedent set by smallpox. Since the **GPEI** launched in 1988, over US\$20

1 World Health Organization. Poliomyelitis. Fact sheet. Geneva: WHO; 2 April 2025. Accessed August 2026. Available from: <https://www.who.int/news-room/fact-sheets/detail/poliomyelitis>

2 European Centre for Disease Prevention and Control. Factsheet about poliomyelitis. Stockholm: ECDC; updated 18 November 2025. Accessed August 2026. Available from: <https://www.ecdc.europa.eu/en/poliomyelitis/facts>

3 Nathanson N, Kew OM. From emergence to eradication: the epidemiology of poliomyelitis deconstructed. *Am J Epidemiol.* 2010;172(11):1213–1229. PMID: 20978089

4 World Health Assembly. Resolution WHA41.28: global eradication of poliomyelitis by the year 2000. Geneva: World Health Organization; 13 May 1988. Accessed August 2026. Available from: https://polioeradication.org/wp-content/uploads/2016/07/19880513_resolution-2.pdf

5 Gavi, the Vaccine Alliance. Inactivated polio vaccine (IPV) support. Geneva: Gavi. Accessed August 2026. Available from: <https://www.gavi.org/our-work/vaccine-portfolio/inactivated-polio-vaccine>

billion in investment has reduced global incidence by more than 99%. Five WHO regions are now certified wild-poliovirus-free, sparing an estimated 20 million people from paralysis. Today, wild transmission persists in only two countries: Afghanistan and Pakistan.^{6,7}

Eradication efforts are guided by the **WHO Polio Eradication Strategy 2022–2026**, framed around two key goals^{8,9}:

Goal One: Permanently interrupt all poliovirus transmission in endemic countries

Poliovirus has three distinct serotypes. Serotypes 2 and 3 were certified eradicated in 2015 and 2019 respectively. Only wild poliovirus type 1 (WPV1) remains, confined to a single epidemiological block comprising Afghanistan and Pakistan. While cases are near historic lows, the two countries face starkly different hurdles¹⁰:

- **Pakistan:** Struggles with campaign quality, vaccine hesitancy, and access, reporting 31 WPV1 confirmed cases and 661 positive samples in 2025 across half of its districts.
- **Afghanistan:** Operational restrictions pose a structural threat. Authorities banned house-to-house vaccination in late 2024, forcing static site rounds that miss younger children, while barring female health workers in key regions. 21 confirmed WPV1 cases and 94 positive samples were reported in 2025, but lower sample

counts in Afghanistan also might reflect surveillance barriers rather than interrupted transmission.^{11,12,13}

Goal Two: Stop circulating vaccine-derived poliovirus (cVDPV) transmission and prevent outbreaks in non-endemic countries

Paradoxically, a serotype eradicated in the wild over a decade ago is now the dominant cause of global paralysis. In 2025, 228 of the 246 reported circulating vaccine-derived cases (cVDPV) were Type 2. This occurs when the live, attenuated virus used in oral vaccines persists in under-immunised communities, eventually mutating back into a neurovirulent strain. The GPEI strategy commits to ending vaccine-derived transmission by 2028.¹¹ However, the 2028 deadline was set in a strategy adopted before the 2026 budget was cut by 30%. Whether it remains realistic is a question about financing as much as about vaccines.

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- 6 Global Polio Eradication Initiative. Historical contributions. Geneva: GPEI. Accessed August 2026. Available from: <https://polioeradication.org/donors-financing/historical-contributions/>
 - 7 Africa Regional Commission for the Certification of Poliomyelitis Eradication. Certifying the interruption of wild poliovirus transmission in the WHO African region on the turbulent journey to a polio-free world. *Lancet Glob Health*. 2020;8(10):e1345–e1351. doi:10.1016/S2214-109X(20)30382-X
 - 8 Global Polio Eradication Initiative. Polio Eradication Strategy 2022–2026: delivering on a promise. Geneva: GPEI; 2022. Accessed August 2026. Available from: <https://polioeradication.org/wp-content/uploads/2022/06/Polio-Eradication-Strategy-2022-2026-Delivering-on-a-Promise.pdf>
 - 9 Global Polio Eradication Initiative. GPEI Action Plan 2026. Geneva: GPEI; October 2025. Accessed August 2026. Available from: <https://polioeradication.org/wp-content/uploads/2025/10/GPEI-Action-Plan-2026.pdf>
 - 10 Global Polio Eradication Initiative. Polio this week: country updates as of 29 July 2026. Geneva: GPEI. Accessed August 2026. Available from: <https://polioeradication.org/about-polio/polio-this-week/>
 - 11 World Health Organization. Statement of the forty-fourth meeting of the Polio IHR Emergency Committee. Geneva: WHO; 4 March 2026. Accessed August 2026. Available from: <https://www.who.int/news/item/04-03-2026-statement-of-the-forty-fourth-meeting-of-the-polio-ih-er-emergency-committee>
 - 12 Shetty D, Anderson S. Polio eradication imperiled by \$2.3 billion funding gap. *Health Policy Watch*. Geneva; 24 May 2025. Accessed August 2026. Available from: <https://healthpolicy-watch.news/polio-eradication-imperiled-by-2-3-billion-funding-gap/>
 - 13 Global Polio Eradication Initiative. From Kabul to Kandahar: inside Afghanistan's first polio campaigns of 2025. Geneva: GPEI; 12 June 2025. Accessed August 2026. Available from: <https://polioeradication.org/news/from-kabul-to-kandahar-inside-afghanistans-first-polio-campaigns-of-2025/>

2. The Vaccine Dilemma: OPV, IPV, and the 2016 Switch

“155 countries executed a synchronised two-week switch in April 2016, replacing trivalent OPV with a bivalent formulation covering only types 1 and 3.”

Two vaccines are approved against polio, and the technical differences between them dictate the strategy for global eradication. The **Oral Polio Vaccine (OPV)** uses a live-attenuated virus that replicates in the gastrointestinal tract, generating local mucosal immunity. An OPV-vaccinated child stops shedding the virus, effectively breaking the chain of transmission. Conversely, the **Inactivated Polio Vaccine (IPV)** confers strong systemic immunity that prevents paralysis, but it induces minimal mucosal immunity; an IPV-vaccinated individual can still carry and pass on the virus. While high-income regions rely exclusively on IPV, eradication in endemic settings remains achievable only through OPV.^{14, 15}

However, the live-attenuated nature of OPV introduces a significant epidemiological risk. In rare cases, it causes **Vaccine-Associated Paralytic Poliomyelitis (VAPP)** directly in recipients (~4.7 cases per million births). More critically, in under-immunised communities, the attenuated vaccine strain can circulate continuously for months or years, accumulating point mutations until it regains neurovirulence and transmissibility. The resulting **circulating vaccine-derived polioviruses (cVDPV)** do not stem from manufacturing flaws, but rather

from insufficient vaccination coverage. Consequently, the only vaccine capable of halting viral transmission is also the only one capable of seeding a new outbreak, making the ultimate withdrawal of OPV the most delicate phase of eradication.¹⁶

To resolve this risk following the eradication of wild Type 2 poliovirus (WPV2), 155 countries executed a **synchronised two-week switch** in April 2016, replacing trivalent OPV with a bivalent formulation covering only types 1 and 3. Residual cVDPV2 was expected to burn out within six months, but severe global IPV supply shortages between 2016 and 2019 left cohorts of children in high-risk districts entirely unprotected against Type 2. Subsequent outbreak response campaigns using monovalent Type 2 OPV frequently seeded new cVDPV2 lineages wherever campaign coverage was suboptimal.¹⁷

To break this cycle, the **Novel Oral Poliovirus Vaccine Type 2 (nOPV2)**—a genetically engineered strain stabilized against neurovirulent reversion—was deployed in 2021 and fully prequalified by the WHO in December 2023. While modeling indicates nOPV2 produces roughly 75% fewer breakthrough VDPV outbreaks than its predecessor, it remains vulnerable to low campaign

¹⁴ Hird TR, Grassly NC. Systematic review of mucosal immunity induced by oral and inactivated poliovirus vaccines against virus shedding following oral poliovirus challenge. *PLoS Pathog*. 2012;8(4):e1002599. doi:10.1371/journal.ppat.1002599

¹⁵ European Centre for Disease Prevention and Control. Assessing the risk to public health of multiple detections of poliovirus in wastewater in the EU/EEA. Rapid risk assessment. Stockholm: ECDC; 30 January 2025. Available from: <https://www.ecdc.europa.eu/en/publications-data/multiple-detections-poliovirus-wastewater-eueea>

¹⁶ Platt LR, Estivariz CF, Sutter RW. Vaccine-associated paralytic poliomyelitis: a review of the epidemiology and estimation of the global burden. *J Infect Dis*. 2014;210(Suppl 1):S380-S389. doi:10.1093/infdis/jiu184

¹⁷ Ramirez Gonzalez A, Farrell M, Menning L, Garon J, Everts H, Hampton LM, et al. Implementing the synchronized global switch from trivalent to bivalent oral polio vaccines: lessons learned from the global perspective. *J Infect Dis*. 2017;216(Suppl 1):S183-S192. doi:10.1093/infdis/jiw626

coverage. Outbreak data confirms that technological refinements in vaccine design cannot fully offset reductions in

campaign delivery and environmental surveillance investment.^{18,19, 20}

TABLE 1.
Currently used poliovirus vaccines.

Vaccine type	Inactivated (IPV)	Oral (Sabin OPV)	Novel Oral (nOPV2)
Pathogen state	Inactivated virus	Live attenuated	Live attenuated, genetically modified
Primary immunity	Systemic (IgG) - Prevents paralysis	Mucosal (IgA) - Intestinal immunity	Mucosal (IgA) - Intestinal immunity
Transmission impact	Low - Recipient can still carry and shed the virus	High - Intercepts and breaks community spread	High - Intercepts and breaks community spread
VAPP risk (individual)	No risk	Low - 4.7 per million births	Ultra-low
cVDPV risk (population)	No risk	Moderate - Can revert to neurovirulence in low-coverage areas	Low - 75% lower reversion risk than Sabin OPV

Source: ISGlobal, compiled from references 14 to 20.

3. The Product of Sustained Investment: India and Africa

“India declared its final wild poliovirus case on 13 January 2011, and the WHO South-East Asia Region was certified polio-free in 2014. This milestone demonstrated that eradication was achievable even under extreme population density and poor sanitation, shifting the primary constraint from technical feasibility to sustained donor funding.”

India was long regarded as the setting where global polio eradication would fail. In 2009, the country **accounted for half of all global cases** (741 across nine states), heavily concentrated in Uttar Pradesh and Bihar. These northern states combined **high population density, seasonal labor migration, and poor sanitation** with exceptionally **low routine immunisation** coverage, standing

at 53% in Bihar and 40% in Uttar Pradesh, against a national average of 66%.²¹ Compounding these structural vulnerabilities was deep-seated **vaccine hesitancy**. In underserved areas of western Uttar Pradesh, false claims that repeated campaigns were covert sterilisation operations led to widespread community refusal.²²

To overcome this barrier, the Indian government and international partners

18 Global Polio Eradication Initiative. GPEI press release on nOPV2 prequalification. Geneva: GPEI; December 2023. Accessed August 2026. Available from: <https://polioeradication.org/news/gpei-press-release-on-nopv2-prequalification/>

19 Namageyo-Funa A, Greene SA, Henderson E, Traoré MA, Shaukat S, Bigouette JP, et al. Update on vaccine-derived poliovirus outbreaks — worldwide, January 2023–June 2024. MMWR Morb Mortal Wkly Rep. 2024;73(41):909–916. doi:10.15585/mmwr.mm7341a1

20 Peak CM, Lyons H, Voorman A, Gray EJ, Cooper LV, Blake IM, Hawes KM, Bandyopadhyay AS. Monitoring the risk of type-2 circulating vaccine-derived poliovirus emergence during roll-out of type-2 novel oral polio vaccine. Vaccines (Basel). 2024;12(12):1308. doi:10.3390/vaccines12121308. Available from: <https://www.mdpi.com/2076-393X/12/12/1308>

21 Centers for Disease Control and Prevention. Progress toward poliomyelitis eradication — India, January 2009–October 2010. MMWR Morb Mortal Wkly Rep. 2010;59(48):1581–1585.

22 Coates EA, Waisbord S, Awale J, Solomon R, Dey R. Successful polio eradication in Uttar Pradesh, India: the pivotal contribution of the Social Mobilization Network, an NGO/UNICEF collaboration. Glob Health Sci Pract. 2013;1(1):68–83. doi:10.9745/GHSP-D-12-00018

shifted focus from pure delivery mechanics to **community-led engagement**. National Immunization Days scaled up to reach 172 million children under five per campaign, using a workforce of 2.3 million vaccinators alongside targeted subnational rounds.²¹ While the oral vaccine itself represented a fraction of the budget (roughly US\$0.10–\$0.15 per dose), **delivery logistics**—cold-chain transport, laboratory infrastructure, surveillance, and personnel—absorbed the vast majority of resources. The critical breakthrough came via the Social Mobilization Network (SMNet), established by UNICEF, the National Polio Surveillance Project, Rotary International, and civil society partners. The SMNet recruited and trained thousands of local women from high-risk neighbourhoods to conduct household visits, track immunisation status, and partner with local religious leaders. Although resource-intensive, the network increased coverage rates in formerly resistant, low-income communities above district averages.^{22, 23}

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In **Africa**, continental efforts initiated under the 1996 “Kick Polio Out of Africa” campaign faced two major disruptions originating in northern Nigeria. In 2003, immunisation boycotts triggered by distrust of federal authorities and disinformation in northern states halted vaccination for a year, fuelling viral resurgence and re-infecting previously polio-free countries across West and Central Africa. Later, in 2016, following a period of undetected circulation in conflict-affected regions of Borno State, four wild cases surfaced a year after Nigeria had been removed from the endemic list. Armed insurgency had rendered large areas inaccessible to health personnel, disabling surveillance.²⁵

The response required a multi-country operational pivot. Health ministers across the Lake Chad basin declared a subregional emergency, deploying over 190,000 health workers to immunise 116 million children across 13 nations in a single week. By integrating satellite GPS tracking, SMS surveillance, and specialised security-negotiated outreach, the number of unreached children in Borno fell by 89% between 2016 and 2020. On 25 August 2020, the WHO African Region was officially certified free of wild poliovirus.⁷

²³ UNICEF Supply Division. Oral polio vaccine (OPV) price data. Copenhagen: UNICEF; updated 5 December 2025. Accessed August 2026. Available from: <https://www.unicef.org/supply/documents/oral-polio-vaccine-opv-price-data>

²⁴ World Health Organization Regional Office for South-East Asia. WHO South-East Asia Region certified polio-free. New Delhi: WHO SEARO; 27 March 2014. Accessed August 2026. Available from: <https://www.who.int/southeastasia/news/detail/27-03-2014-who-south-east-asia-region-certified-polio-free>

²⁵ Jegede AS. What led to the Nigerian boycott of the polio vaccination campaign? PLoS Med. 2007;4(3):e73. doi:10.1371/journal.pmed.0040073

4. Where Europe Stands Now

“Since 2022, surveillance in Western Europe has shifted from clinical tracking to environmental monitoring. Between February and July 2022, London wastewater testing detected Type 2 poliovirus in roughly 20% of samples, with 17% meeting the criteria for vaccine-derived strains.”

Europe’s historical relationship with polio reveals a recurring pattern: imported virus meets localised pockets of unimmunised populations. What has changed over time is not how the virus spreads, but how rapidly health systems detect its presence. For three decades, detection occurred only after paralysis appeared. An outbreak of Wild Poliovirus Type 3 (WPV3) in the Netherlands in 1992–93 caused 71 cases (59 paralytic, two fatal) concentrated almost entirely within a religious community that rejected vaccination. Genetic analysis linked the strain (96.7% similarity) to a virus isolated in India that year. Similarly, in 2010, Tajikistan recorded 463 laboratory-confirmed cases imported from India, which subsequently spread into Russia, Turkmenistan, and Kazakhstan.^{26, 27, 28}

Ukraine illustrates how administrative and social breakdowns create structural vulnerability within Europe. By 2015, three-dose coverage had plummeted to 15%, leaving an estimated 1.5 to 1.8 million children susceptible. This decline was driven by two main factors. In 2008, a teenager died shortly after receiving a measles-rubella (MR) vaccine during a mass campaign. Although the WHO and public health officials established that the death was

unrelated to the vaccine, sensationalist media coverage sparked widespread panic. Additionally, restrictive legislative rules and inefficient government procurement processes between 2012 and 2014 caused routine state orders for vaccines to stall or go unfulfilled. As a result, two children in Zakarpattia suffered from paralytic polio caused by circulating vaccine-derived poliovirus type 1 (cVDPV1) in August 2015.²⁹ Alarms were raised and coverage subsequently recovered, but another cVDPV1 case emerged in Rivne in 2021 alongside 19 asymptomatic infections. The catch-up campaign launched on 1 February 2022 was interrupted within weeks by the Russian invasion. Coverage dropped again to 72% that year before campaigns funded by international assistance raised it back to 89% by 2025.³⁰

Since 2022, surveillance in Western Europe has shifted from clinical tracking to **environmental monitoring**. Between February and July 2022, London wastewater testing detected Type 2 poliovirus in roughly 20% of samples, with 17% meeting the criteria for vaccine-derived strains. The UK Health Security Agency declared a national incident and offered an additional inactivated vaccine dose to all London children aged one to nine.

²⁶ Oostvogel PM, van Wijngaarden JK, van der Avoort HG, Mulders MN, Conyn-van Spaendonck MA, Rümke HC, van Steenis G, van Loon AM. Poliomyelitis outbreak in an unvaccinated community in the Netherlands, 1992–93. *Lancet*. 1994;344(8923):665–670. doi:10.1016/S0140-6736(94)92091-5

²⁷ Yakovenko ML, Gmyl AP, Ivanova OE, Ereemeeva TP, Ivanov AP, Prostova MA, Baykova OY, Isaeva OV, Lipskaya GY, Shakaryan AK, Kew OM, Deshpande JM, Agol VI. The 2010 outbreak of poliomyelitis in Tajikistan: epidemiology and lessons learnt. *Euro Surveill*. 2014;19(7):20706. doi:10.2807/1560-7917.ES2014.19.7.20706

²⁸ Centers for Disease Control and Prevention. Outbreaks following wild poliovirus importations — Europe, Africa, and Asia, January 2009–September 2010. *MMWR Morb Mortal Wkly Rep*. 2010;59(43):1393–1399.

²⁹ European Centre for Disease Prevention and Control. Rapid risk assessment: outbreak of circulating vaccine-derived poliovirus type 1 (cVDPV1) in Ukraine. Stockholm: ECDC; 2 September 2015.

³⁰ Global Polio Eradication Initiative. Circulating vaccine-derived poliovirus in Ukraine. Geneva: GPEI; 2021. Accessed August 2026. Available from: <https://polioeradication.org/news/circulating-vaccine-derived-poliovirus-in-ukraine/>

No clinical cases occurred.³¹ Two subsequent events highlight the value—and limits—of this environmental warning system:

- The 2024 multi-country cVDPV2 outbreak: The N1E-ZAS-1 lineage, which emerged in Nigeria in 2020 and spread across 15 African nations, was detected in Barcelona wastewater in September 2024. Within three months, related strains appeared in Poland, Germany, the UK, and Finland, totalling 34 detections across 16 cities. European isolates differed from known relatives by 13 nucleotides, indicating nearly **a year of undetected global circulation** and genetic changes consistent with a restored capacity to cause paralysis.³²
- On 6 October 2025, a wastewater sample in Hamburg tested positive for Wild Poliovirus Type 1 (**WPV1**) matching a cluster circulating in Kandahar, Afghanistan. This marked the first detection of wild poliovirus in German wastewater since environmental monitoring began, in a country where the last domestic wild case occurred in 1990.^{33, 34}

Neither event resulted in clinical cases. Protection across the region relies on an average EU/EEA three-dose coverage rate of 94%. High coverage with inactivated polio vaccine (IPV) protects populations against paralysis; however, because IPV does not induce mucosal gut immunity, it **cannot prevent the virus from circulating silently** among vaccinated individuals and reaching unimmunised pockets. Furthermore, aggregate coverage figures mask regional risks: national rates vary from 78% in Romania to 99% in high-coverage states, while certain German regions report coverage below 60%. Despite these risks, 11 of 29 responding EU/EEA member states **maintain no environmental surveillance** for poliovirus, leaving significant blind spots across the continent.¹⁵

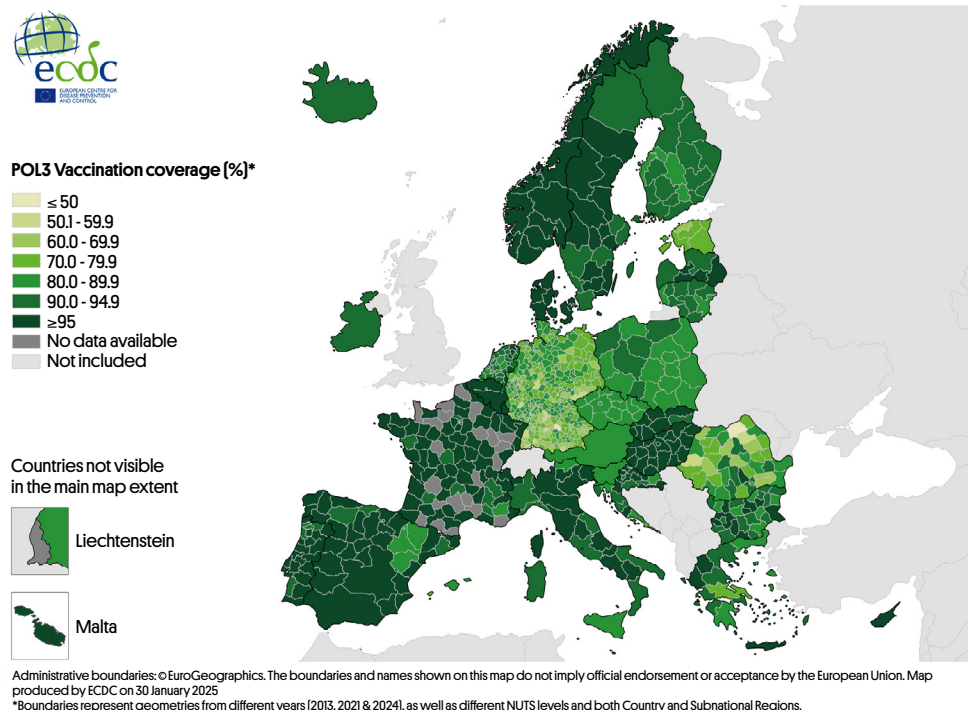
31 Klapsa D, Wilton T, Zealand A, Bujaki E, Saxentoff E, Troman C, et al. Sustained detection of type 2 poliovirus in London sewage between February and July, 2022, by enhanced environmental surveillance. *Lancet*. 2022;400(10362):1531-1538. doi:10.1016/S0140-6736(22)01804-9

32 Huseynov S, Saxentoff E, Diedrich S, Martin J, Wiczorek M, Cabrerizo M, Blomqvist S, Jorba J, Hagan J. Notes from the Field: detection of vaccine-derived poliovirus type 2 in wastewater — five European countries, September–December 2024. *MMWR Morb Mortal Wkly Rep*. 2025;74(7):122-124. doi:10.15585/mmwr.mm7407a4

33 Böttcher S, Kreibich J, Wilton T, Saliba V, Blomqvist S, Al-Hello H, et al. Detection of circulating vaccine-derived poliovirus type 2 (cVDPV2) in wastewater samples: a wake-up call, Finland, Germany, Poland, Spain, the United Kingdom, 2024. *Euro Surveill*. 2025;30(3):2500037. doi:10.2807/1560-7917.ES.2025.30.3.2500037

34 Robert Koch Institute. Wild poliovirus type 1 detected in wastewater sample in Hamburg. *Epid Bull*. 2025;46:10-12. doi:10.25646/13559. Available from: <https://www.rki.de/EN/Topics/Infectious-diseases/Diseases/Polio/wpv1-in-wastewater.html>

FIGURE 1.
Coverage with three
doses of polio-
containing vaccine at
subnational level, EU/
EEA, 2023, France, 2022.
Reproduced from
ECDC.¹⁵



Source: Data submitted to WHO through eJRF and/or to ECDC.

5. Financing the Fight Against Polio, and What Is at Stake

“The withdrawal of traditional sovereign funding has created an unprecedented deficit in global health security.”

Polio eradication is financed through two distinct, co-dependent financial architectures. The **Global Polio Eradication Initiative (GPEI)** — implemented by the World Health Organization (WHO), UNICEF, and Gavi— finances non-routine infrastructure, including mass campaigns, outbreak response, surveillance personnel, and laboratory networks, using voluntary contributions from public and private donors. Parallel to this, **Gavi, the Vaccine Alliance**, pools donor funds to support routine national immunisation schedules and drives prices down by aggregating demand, financing delivery of IPV in routine health systems. Gavi does not finance the oral vaccine used in campaigns; UNICEF buys that against the GPEI envelope, paid for by the same donors. Following a 2013 board mandate, every Gavi-supported country introduced a first dose of IPV by

2019 to help bridge the immunity gap opened by the 2016 oral vaccine switch. However, weak routine health systems left severe blind spots. Globally, full IPV schedule completion stands at 74% (60% in Africa), with 54% of zero-dose children living in fragile or conflict-affected zones. Because Gavi’s polio allocation sits within GPEI’s overall resource requirements alongside WHO and UNICEF envelopes, **both legs compete for funds** within a shrinking Official Development Assistance (ODA) pool.^{6, 10, 23}

The withdrawal of traditional sovereign funding has created an unprecedented deficit in global health security. Between 1988 and 2024, public financing for GPEI has been anchored by four major state donors: the United States (~22.6% of historical funding), the United Kingdom (~8.5%), Germany (~3.6%), and Canada

(~3.5%). The simultaneous contraction of aid budgets across key sovereign capitals has dismantled that foundation. The **United States** terminated direct bilateral grants in 2025, withdrawing US\$133 million annually from GPEI, US\$100 million from WHO polio operations, and a US\$131 million UNICEF distribution grant, while pulling technical staff from the Centers for Disease Control and Prevention (CDC) and USAID. Concurrently, the **United Kingdom** has progressively reduced its ODA envelope, announcing in March 2026 that it would end its GPEI allocation altogether, alongside its contributions to the Pandemic Fund. **Germany** has similarly executed sweeping cuts through its Federal Ministry for Economic Cooperation and Development (BMZ), reducing its yearly GPEI contribution to US\$27 million from a prior US\$43 million as part of wider reductions to its global health budget across 2025 and 2026. As public funding for GPEI has ranged between US\$206 million and US\$402 million in the past decade, these severe cuts threaten to dismantle the primary operational engine driving eradication.^{35, 36, 37, 38}

This combined retrenchment leaves **Canada** as the largest remaining sovereign donor maintaining active multi-year core pledges, despite accounting for just 5.5% of historical contributions. GPEI attributes this systemic shortfall to a broader collapse in bilateral development assistance, aligned with OECD projections showing global health aid dropping to twenty-year lows.

This funding withdrawal exposes a profound **policy paradox for Europe**:

German and British aid reductions took effect directly alongside the detection of circulating vaccine-derived poliovirus in London sewage treatment works in 2022 and wild poliovirus type 1 in Hamburg wastewater in October 2025. European capitals have treated global polio eradication as an act of discretionary foreign aid rather than core domestic health security. By curtailing environmental surveillance and campaign support in endemic and transit regions, European states increase the probability of unmonitored viral importations back into their own under-vaccinated urban pockets.³⁶

To adjust to these shortfalls, the GPEI was forced to downsize its 2026 operational plan by 30% (US\$314 million), reducing its annual budget to US\$786 million against the US\$1.1 billion judged necessary. Crucially, these reductions hit core tracking mechanisms hardest: non-endemic environmental surveillance was cut by 34%, outbreak response by 26%, and endemic operations in Afghanistan and Pakistan by 18%. This retrenchment illustrates the **three structural vulnerabilities** now undermining the eradication strategy.^{9, 12, 39}

First, the programme suffers from **severe budget reductions** that directly impair field capacity at the precise moment viral importations threaten non-endemic zones.

Second, the funding base has become dangerously **concentrated in private philanthropy**. As traditional sovereign donors curtail their allocations, actors like the Gates Foundation and Rotary International have moved to fill the void, providing the vast majority of

³⁵ Fletcher ER. USAID and CDC halt of support to global polio eradication threatens worldwide campaign. Health Policy Watch. Geneva; 7 February 2025. Accessed August 2026. Available from: <https://healthpolicy-watch.news/usa-id-and-cdc-halt-of-support-to-global-polio-eradication-efforts-threatens-worldwide-campaign/>

³⁶ Global Polio Eradication Initiative. Governance. Geneva: GPEI. Accessed August 2026. Available from: <https://polioeradication.org/who-we-are/governance/>

³⁷ Foreign, Commonwealth & Development Office. Official Development Assistance (ODA) programme allocations 2026/27 – 2028/29: Written statement - HCWS1425. UK Parliament: Written questions, answers and statements. 2026 Mar 19. Available from: <https://questions-statements.parliament.uk/written-statements/detail/2026-03-19/hcws1425>

³⁸ Winny A. UK cuts imperil polio eradication. Global Health NOW. 2026 Apr 27. Available from: <https://globalhealthnow.org/2026-04/uk-cuts-imperil-polio-eradication>

³⁹ Thompson KM, Kalkowska DA. An updated economic analysis of the Global Polio Eradication Initiative. Risk Anal. 2021;41(2):393-406. doi:10.1111/risa.13665

recent pledging commitments. A 38-year-old global health mandate now relies disproportionately on a handful of non-state entities whose commitments carry no statutory obligations or electoral accountability.¹¹

Third, the **strategy lacks long-term financial predictability**. Dependent

entirely on voluntary, non-assessed contributions, campaign planning and surveillance networks are forced to adapt to fluctuating year-to-year resource envelopes rather than sustained epidemiological requirements, making multi-year eradication planning inherently fragile.

6. Conclusions

“Current European health security relies directly on overseas tracking and containment operations. Wastewater monitoring, genomic sequencing of virus strains, and targeted immunisation campaigns in endemic zones operate as an integrated system. Although some of them are catalogued primarily as foreign development assistance, these mechanisms function as the primary filter against viral re-introduction into European populations.”

The return on polio investments is illustrated by silent surveillance events in recent years. When a vaccine-derived strain emerged in northern Nigeria—a known risk of oral vaccine deployment—it circulated undetected for nearly a year. Upon reaching five European countries within three months, it resulted in zero clinical cases. High population immunity across the EU/EEA prevented clinical disease, while established laboratory networks traced the origin and route of transmission. In October 2025, wild poliovirus type 1 (WPV1) from Afghanistan was similarly detected in Hamburg wastewater without clinical incidence. These outcomes represent the baseline function of preventive health infrastructure: absorbing potential importations without secondary transmission or clinical burden.

This dynamic creates a **persistent valuation problem for public finances**. Expenditure on disease eradication purchases the prevention of future outbreaks, a benefit that generates no visible domestic results or tangible accounting footprint. Economic assessments estimate the incremental net benefit of the GPEI at US\$28 billion (in 2019 dollars), revised down from earlier estimates

of US\$40–50 billion due to extended timelines and higher inactivated vaccine costs. Because these benefits consist of averted cases in foreign jurisdictions, they remain **politically vulnerable** during domestic budget reconciliations.³⁹

As a result, non-endemic environmental surveillance faced a 34% reduction in the 2026 GPEI budget—the deepest proportional cut across all operational areas. This occurred alongside broader global health reductions, including Gavi’s 2025 replenishment closing at US\$9 billion against an \$11.9 billion target. Taken together, these cuts impact the capacity to see a problem and the capacity to prevent it, in the same year. Since 1988, international cooperation and expenditure has reduced poliovirus incidence by over 99%, eradicated two of the three wild serotypes, and spared an estimated 20 million people from paralysis. However, population immunity and surveillance networks require continuous maintenance. World Health Organization modelling indicates that a collapse in eradication efforts could lead to a re-establishment of endemic transmission, resulting in up to 200,000 cases annually within a decade. Financially, **donor states face a binary choice between completing**

eradication or funding perpetual, variable outbreak response.^{40, 41}

India showed that community-level transmission can be broken, through its Social Mobilization Network. The **same engagement is currently required** across Afghanistan, Pakistan, and persistent outbreak zones in Africa, but budgets behind it have shrunk.²² Unlike vaccines and cold chains, community engagement leaves no asset behind, which is why it is usually cut first.

Current European health security relies directly on these overseas tracking and containment operations. Wastewater monitoring, genomic sequencing of virus strains, and targeted immunisation campaigns in endemic zones operate as an integrated system. Although some of them are catalogued primarily as foreign development assistance, these mechanisms function as the primary filter against viral re-introduction into European populations.

⁴⁰ Gavi, the Vaccine Alliance. World leaders recommit to immunisation amid global funding shortfall. Geneva: Gavi; 25 June 2025. Accessed August 2026. Available from: <https://www.gavi.org/news/media-room/world-leaders-recommit-immunisation-amid-global-funding-shortfall>

⁴¹ World Health Organization. Poliomyelitis. Health topics. Geneva: WHO. Accessed September 2026. Available from: https://www.who.int/health-topics/poliomyelitis#tab=tab_3

How to cite this document:

García-Vaz C, Olmo Suárez-Llanos C, and Diago-Navarro E. **Polio Eradication: What Does it Take and Why Development Assistance Matters**. Barcelona Institute for Global Health (ISGlobal). Series: Preparedness and Response. October 2026.

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