

## Gavi, the Vaccine Alliance

### Statement on Environmental Sustainability

Vaccines save lives and have a long-lasting effect on societies and the environment. As a preventive intervention, immunisation averts significant future environmental and healthcare costs associated with the diseases prevented. The Intergovernmental Panel on Climate Change recognises that immunisation is among the most effective measures to reduce vulnerability to climate change.<sup>1</sup>

Nevertheless, resource scarcity, environmental degradation and climate change are issues of concern because they disproportionately affect people in the countries that Gavi supports. Gavi's investments in immunisation can help countries prepare for and mitigate the effects of environmental change. At the same time, Gavi also aims to mitigate the adverse environmental impact of its programmes and operations.

#### Gavi's approach to environmental risk preparedness

Populations in a number of Gavi-supported countries are vulnerable to climate variability. Annual or seasonal weather phenomena like El Niño<sup>2</sup> exacerbate health risks through the increased probability of extreme weather conditions. Higher temperatures and more rainfall can lead to a heightened risk of outbreaks of vector-borne and water-borne diseases such as yellow fever and cholera. It can also cause population displacement and damage to infrastructure, resulting in poor sanitation and hygiene and increasing the spread of other communicable diseases such as diarrhea, meningitis and measles.

Global climate change not only worsens annual weather patterns and their effects, but can also affect the epidemiology of these infections, spreading them beyond the regions where they were historically endemic and potentially further increasing the risk of epidemics. Gavi is helping lower-income countries introduce several vaccines against diseases that are worsened by these shifting weather patterns, including measles, meningitis, yellow fever, rotavirus and cholera. Gavi also works to bring improved or new vaccines to the market so that countries can continue to meet these challenges.

Climate change also risks disruption of existing immunisation programmes in the resource-constrained settings of Gavi-supported countries. Gavi engages in a number of activities that could support adaptation to climate change. This includes monitoring the impact of climate variability as part of broader risk assessments to determine how vaccines should be deployed, monitoring environmental risks within countries, and strengthening vaccine-preventable disease surveillance capacity regionally and in countries.

---

<sup>1</sup> The Intergovernmental Panel on Climate Change was finalised in 2014 and notes that exacerbation of existing health problems will affect those most vulnerable to climate change: <http://www.ipcc.ch/report/ar5/wg2/>

<sup>2</sup> El Niño (the oceanic component, with its cold phase counterpart, La Niña) and the Southern Oscillation (the atmospheric component) are together a regularly occurring fluctuation in the oceanic-atmospheric system that significantly affects temperature and rainfall patterns worldwide: <http://www.who.int/globalchange/publications/factsheets/el-nino-and-health/en/>

## Gavi's approach to reducing environmental impact

The development, production, procurement, delivery, and disposal of vaccines and related products incur their own environmental costs. To minimise these consequences, Gavi works with partners and countries to implement approaches that aim to reduce environmental impact.

As an Alliance, with regard to vaccine production and procurement, Gavi relies on the environmental sustainability standards and policies of its implementing partners as they relate to its mission. WHO sets technical standards that guide Gavi-supported programmes, such as the prequalification<sup>3</sup> process for vaccines, which requires manufactures to adhere to Good Manufacturing Practices including maintenance of environmental controls, prevention of contamination and disposal of hazardous waste. UNICEF requires suppliers to adhere to the environmental and social principles of the UN Supplier Code of Conduct.<sup>4</sup> Manufacturers' corporate environmental management systems should comply with national and global commercial standards for environmental performance.

Additionally, Gavi's Alliance model maintains a lean operating structure based in two locations, which drives efficiency in resource use by leveraging existing partner infrastructure (including staff and operations). The Gavi Secretariat also requires any supplier of goods and services to comply with internationally recognised standards related to the environment and seeks to minimise travel as much as possible by promoting flexible work location arrangements and the use of video-conferencing and other technology.

Inefficient supply chains in countries can contribute to overconsumption of energy and production of unnecessary waste. Gavi promotes cold chain equipment improvements within countries' immunisation supply chains, because effective and efficient cold chain equipment means vaccines can not only reach more people, but it also reduces waste in the supply chain. Gavi's Cold Chain Equipment Optimisation Platform<sup>5</sup> supports countries to upgrade to energy-efficient cold chain equipment, such as solar refrigeration, which reduces reliance on greenhouse-gas-emitting fuels such as kerosene.

With Gavi support, countries are introducing an increasing number of vaccines. New technologies, like combination vaccines (such as pentavalent vaccine), can minimise waste by reducing the number of injections needed. Paired with a switch to multi-dose vials, this can help reduce the total number of syringes and vials transported through the supply chain. Gavi also encourages countries to have immunisation waste management plans compliant with WHO standards.<sup>6, 7</sup> These plans are monitored as part of Expanded Programme on Immunization reviews and also annually reported in the WHO/UNICEF Joint Reporting Form.

---

<sup>3</sup> WHO prequalifies the vaccines which Gavi procures based on a set of standards on quality, safety, and efficacy: <http://apps.who.int/prequal/>

<sup>4</sup> UNICEF procures the majority of vaccines for Gavi-supported countries, and requires manufacturers to adhere to the UN Supplier Code of Conduct: <https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct>

<sup>5</sup> The Cold Chain Equipment Optimisation Platform offers countries access to modern, high-performing equipment capable of making their cold chains more efficient. <http://www.gavi.org/support/hss/cold-chain-equipment-optimisation-platform/>

<sup>6</sup> WHO has created guidelines for countries on immunisation waste management: [http://www.who.int/water\\_sanitation\\_health/publications/hcwm/en/](http://www.who.int/water_sanitation_health/publications/hcwm/en/)

<sup>7</sup> The Effective Vaccine Management (EVM) initiative helps countries to improve their supply chain performance [http://www.who.int/immunization/programmes\\_systems/supply\\_chain/evm/en/](http://www.who.int/immunization/programmes_systems/supply_chain/evm/en/)

---

*Gavi carefully weighs the potential trade-off between supporting an intervention that could reduce negative environmental consequences against other critical priorities. As an example, auto-disable (AD) syringes improve the safety of vaccine administration by reducing the risk of disease transmission or contamination of the vaccine. However, they also have a larger waste profile than reusable syringes. Gavi supports AD syringes because of the important safety benefits, and provides technical assistance to countries to develop policies to manage the associated waste safely and sustainably. Today, 95% of Gavi-supported countries have national policies on immunisation waste management.*

---

## Looking forward

The 2030 Agenda for Sustainable Development and the Paris Agreement<sup>8</sup> are driving a stronger global focus on mitigating the impact of climate change and supporting sustainable resource management and consumption. Countries and multilateral institutions are coming together to support action to reduce the impact of and build resilience to environmental change.

In the 2016-2020 strategic period, Gavi aims to reach the most vulnerable populations with vaccines in the countries it supports to increase immunisation coverage and improve equity. Gavi will also review the benefits of taking a more comprehensive approach to environmental sustainability across the areas mentioned above.

For example, Gavi will explore options to more systematically assess the risk that climate change poses to immunisation programme outcomes, as well as approaches to manage such risks and strengthen resilience in countries' health systems and immunisation programmes. In order to reduce the environmental footprint of its programmatic investments as well as its operations, Gavi will assess key opportunities for reducing greenhouse gas emissions, promoting resource efficiency, and increasing recycling and other proper disposal of waste material. This could include working with partners to help reduce countries' immunisation waste profiles and improve supply chains, as well as to promote 'greener' production and procurement of immunisation products. Gavi will also conduct an internal environmental audit of corporate policies and practices and calculate its corporate environmental footprint as a baseline for future interventions.

Gavi will apply a strategic focus taking into account the level of influence it can exert on partners and stakeholders, and consider environmental sustainability alongside other priorities that underpin its mission, such as the need to maintain high levels of quality or safety in vaccine provision.

---

<sup>8</sup> In December 2015, 195 countries convened in Paris at a climate conference to adopt a legally binding global climate agreement: [http://ec.europa.eu/clima/policies/international/negotiations/paris/index\\_en.htm](http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm)