Yellow Fever (YF), an acute viral haemorrhagic disease transmitted by infected mosquitoes, has recently re-emerged as a major international public health threat. Despite the availability of safe and effective vaccines since 1950, YF results in 170,000 severe cases and 60,000 deaths yearly on the African continent alone. Owing to limitations in surveillance detection systems and nonspecific symptoms often mistaken for another illness, most YF cases go undetected and are therefore underreported.

The disease predominantly affects people in Africa and the Americas, where the virus is endemic. However, that could change rapidly owing to evolving global trends such as increased urbanization, population mobility and changing work environments (e.g., mining, construction). For example, in 2016, 962 cases were confirmed in linked outbreaks in Angola and the Democratic Republic of the Congo; 11 of these were workers infected in the region who then traveled to China. These were the first cases ever confirmed in Asia, illustrating that YF could easily be spread internationally by travelers including tourists and workers at greater risk of exposure.

In 2017 WHO established the Eliminate Yellow Fever Epidemics1 (EYE) Strategy to improve detection and outbreak preparedness and response. The aim of this coordinated, global framework is to end YF epidemics by 2026.

EYE was developed through a collaboration between national governments, WHO, Gavi, the Vaccine Alliance and UNICEF, with contributions from partners including vaccine manufacturers, research institutions, the US Centers for Disease Control and Prevention, NGOs and the Bill and Melinda Gates Foundation. Partners share a common vision and strategy to eliminate YF through concerted action, including prevention, preparedness and response to emergency situations, as endorsed by SAGE and the Gavi board.

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1 Strategic document available from: http://apps.who.int/iris/bitstream/handle/10665/272408/9789241513661-eng.pdf?ua=1.
EYE incorporated experience with control programmes into a global approach with a common goal. A plan that defines clear roles and responsibilities is being developed for the period 2019-2021.

The EYE strategy supports 40 developing countries to be self-reliant in the prevention of and response to YF epidemics, 27 in Africa\(^2\) and 13 in the Americas.\(^3\) It aims to protect at-risk populations, prevent international spread, and contain outbreaks rapidly. Aligned with WHO’s 13th General Programme of Work, EYE empowers countries to promote health, keep the world safe and serve the vulnerable. The approach also contributes to achievement of Sustainable Development Goals 1, 3 and 10. The efforts of a coalition of partners, each with unique value, are key to EYE’s success. Gavi, the Vaccine Alliance, and UNICEF are core partners, along with WHO, in providing managerial, technical and financial support. Vaccine manufacturers ensure sufficient vaccine availability at affordable prices. Scientists lead the development of new strategies to better characterize the global risk of YF and to confirm infections more rapidly through new tests. Local officials and organizations in major urban centers are critical to disease surveillance and control. EYE’s uniqueness also lies in part in its ability to bring-in non-traditional partners, from the mining industry for instance, into a global public health effort.

Most importantly, in developing the EYE approach, partners built on lessons learned from other disease control programmes, including previous YF initiatives, and agreed on competencies for success. First, the partners recognized the importance of long-term commitment and strong political engagement at global, regional, and country levels, supported by continuous advocacy. Further, clear accountability, strong monitoring, and better tools and practices were identified as important. In addition, EYE partners and implementors agreed to ensure synergies with other health programmes and sectors. Finally, there is a specific focus on ensuring the availability of a global supply of affordable vaccines such that when demand surges a mechanism is in place to prevent a shortfall in supply.

To implement the strategy at scale and have greater impact at country level, EYE needs sustainable, targeted funding that can be used flexibly within the EYE work plan. Currently, no dedicated funding exists, and current contributions are not yet at scale. Efforts are underway, however, to shift YF control financing from one primary donor to multi-partner, multi-year commitments that provide greater sustainability and predictability. This will be essential for increasing both global and country-level efforts.

**Impact**

Since its inception in February 2017, the EYE coalition has demonstrated several notable achievements. First, more than 130 million doses of YF vaccine have been delivered to protect more than 108 million people in Africa. Second, country engagement and ownership have improved; countries at highest risk have developed multi-year plans of action, with 14 having three-year plans focused on EYE priority activities.

Major epidemics have been curbed in Brazil, Nigeria, Congo and Ethiopia, and outbreak control activities and large-scale preventive mass campaigns have been undertaken in several African countries. On the global level, the YF vaccine supply situation has increased and is used for both preventive and outbreak control activities. The implementation of new mechanisms for optimal engagement with the private sector, particularly the mining industry, will be a major step forward to preserve global health security.

An inclusive approach that builds on partners’ strengths and unique value within a comprehensive plan of work with clear targets is key to effective collaboration. The EYE collaboration is proving this to be true by demonstrating greater efficiency, a reduction in duplication and stronger ownership.

**Conclusion**

WHO’s engagement has been pivotal for the launch of the EYE strategy globally. The EYE coalition is a promising model for other disease or health issues.

The EYE strategy is comprehensive and broad in scope with a long-term outlook and based on lessons learned. EYE’s robust governance is anchored in inclusive partnerships that go beyond the traditional global health landscape and include the private sector. The multi-partner, multi-year work plan and associated accountability matrix are essential tools that provide a clear framework for engagement and leverage the comparative advantage of each partner. The success of the EYE coalition is due to strong and well-coordinated partnerships.

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\(^2\) The 27 high-risk countries in Africa are: Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Cote d’Ivoire, DRC, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mali, Niger, Nigeria, Senegal, Sudan, South Sudan, Sierra Leone, Togo, Uganda.

\(^3\) The 13 high-risk countries in the Americas are: Argentina, Bolivia, Colombia, Ecuador, Guyana, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela.