

# Be Prepared!

## Germany's contribution to partner countries' pandemic preparedness

### Why pandemic preparedness matters

In today's interconnected world, the outbreak of an easily transmittable infectious disease has the potential to turn into a pandemic affecting tens of millions of people and disrupting normal patterns of social and economic life worldwide. In the era of globalization, there is not a single country that is in a position – on its own – to protect itself against threats to public health. As a result, pandemic preparedness – the state of readiness to prevent, detect, report and respond to disease outbreaks – has steadily risen in importance as a topic for international cooperation in recent years.

The World Health Organization's International Health Regulations (2005) (IHR) are the framework for the management of public health emergencies ranging from disease outbreaks to natural disasters, chemical or nuclear events, or the accidental or intentional release of pathogens. The aim of the IHR is to ensure that such events are detected early and stopped at their source. Advance planning is the key to preparedness: the IHR requires that all states develop 'core capacities' in areas such as national legislation and policy, coordination, surveillance, response, preparedness, risk communication, human resources and laboratories. By maintaining these core capacities, individual countries not only protect themselves, but also contribute to the security of the international community as a whole.

The 2009 influenza A (H1N1) outbreak underscored how ill-prepared the international community was to confront the challenges of a sustained pandemic. Spreading rapidly across international borders, the 'swine flu' pandemic caused an estimated 284,500 deaths worldwide, more than half of which occurred in Africa and South East Asia.<sup>1</sup> Following the pandemic, the WHO called on partners to support measures to strengthen pandemic preparedness, especially in low- and middle-income countries where the need was greatest.

<sup>1</sup> Dawood FS et al. (2012). Estimated global mortality associated with the first 12 months of 2009 pandemic influenza A H1N1 virus circulation: a modeling study. *Lancet Infectious Diseases*, 12(9): 687-95.

As one part of its response to this call, Germany allocated €13.5 million to an innovative bilateral assistance programme, the German Pandemic Preparedness Initiative (PPI). The PPI was implemented between 2009 and 2013 by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development. It was designed as a temporary, demand-driven initiative to provide rapid and flexible technical support to partner countries to strengthen their pandemic readiness, in line with the IHR.

### Strengthening pandemic preparedness: examples of interventions

Proposals submitted to the PPI by organizations in German Development Cooperation partner countries showed that assistance was primarily needed in four areas:

- supporting the development of national pandemic preparedness plans;
- improving risk communication and health promotion;
- strengthening diagnostic capacity and surveillance; and
- increasing vaccine manufacturing capacity.

In response to the received proposals the PPI awarded more than €9.8 million in grants to organizations in 20 countries in Africa, Eastern Europe and Central Asia, and South East Asia.

#### National pandemic preparedness planning

National pandemic preparedness plans help to ensure that countries are ready to detect and respond to a range of public health threats. They outline the steps which should be taken during each phase of a pandemic in the areas of planning and coordination, situation monitoring and assessment, prevention and containment,



*A laboratory technician in Guinea tests samples for contagious diseases. The International Health Regulations require states to build core capacity in surveillance to ensure that disease outbreaks are detected early.*



Kindergarten children in Tashkent proudly show off their freshly-washed hands. Health promotion activities encourage the adoption of protective behaviours which can limit the outbreak and spread of infectious disease.

health system response and communication. Most WHO member countries have developed national pandemic preparedness plans, but these vary widely in terms of completeness. A number of countries have approached the PPI requesting technical assistance to improve their plans.

The PPI supported authorities in **Tajikistan** and **Burkina Faso** to revise their national preparedness plans and to bring the plans' contents to life through outbreak simulation exercises. These allowed stakeholders to practice their roles and to test coordination arrangements. The main focus in Tajikistan was on operationalizing the national plan at regional and district levels; in Burkina Faso the project concentrated on clarifying the roles and responsibilities of various governmental and non-governmental actors, including those outside the health sector.

The private sector also has a role to play in pandemic preparedness. In **Ghana**, the PPI supported the development of business continuity plans in organizations which deliver essential services. These plans describe measures which can be taken to reduce an organization's vulnerability to disruptions in emergency situations and to rapidly recover their data, facilities and assets following a crisis. Business continuity plans strengthen the resilience of private sector institutions and are an important part of a whole-of-society approach to pandemic preparedness.

### Risk communication and health promotion

In the field of public health, risk communication refers to the process of conveying information about potential health risks, including the level of the threat, its significance and potential implications, and the actions which are being taken to manage it.

For risk communication to be successful, the public needs to have trust in the institutions and individuals responsible for managing public health emergencies, and in the recommendations which they issue. There also needs to be trust between the authorities who develop the messages and those who convey them to the public: the media. In **Ukraine** the PPI supported an innovative project to improve the working relationship between the Ministry of Health and the media, so that the public would receive accurate and relevant information about disease outbreaks and preventive behaviour.

Health promotion has a more general role to play in educating people about potential health risks and encouraging the adoption of certain preventive behaviours. In **Indonesia** the PPI supported the development of a 725 square meter interactive exhibit called 'Combating Contagious Diseases,' which aims to increase knowledge about infectious diseases and their prevention among the general population. Since 2012, the exhibit has been visited by over 300,000 school children, their teachers and parents at the main science and education centre in Jakarta.

In **Uzbekistan** and **Cambodia**, the PPI has supported projects which seek to improve personal hygiene among pre-school and school-aged children as a way to prevent the emergence and spread of infectious diseases. The Uzbek project, which included the development of a training curriculum for educators and nurses and a popular book for young children called 'Water Droplet,' not only promoted important life skills, but also strengthened cooperation between the health and education sectors in the country. The project in Cambodia, which integrated a focus on pandemic preparedness into the regional Fit for School programme, has been included by the Southeast Asian Ministers of Education Organization as a best practice in its course on disaster risk management.

### Diagnostic capacity and surveillance

The rapid detection and prompt assessment of disease outbreaks requires the existence of a well-organised and sensitive disease surveillance system capable of sounding an early warning about new risks. Surveillance systems which produce complete, timely and scientifically sound data can be challenging to establish and maintain, particularly in resource-constrained or conflict-affected settings.

The WHO Regional Office for Africa and its member states have adopted the Integrated Disease Surveillance and Response strategy, which uses a single surveillance infrastructure to gather information about multiple diseases. The PPI strengthened this approach in **Togo** through a project which integrated influenza into the country's existing disease surveillance system. A national influenza reference laboratory was established in Lomé, and district-level Influenza Focal Points were trained in how to detect potential influenza cases, how and when to report cases, and how to care for suspected cases of infection.

Poor infrastructure represents an enormous logistical challenge to disease surveillance in many low-income countries. In **Burkina Faso, Democratic Republic of Congo, Guinea, Mali and Senegal**, the PPI supported a project to improve the control of Viral Haemorrhagic Fever outbreaks by moving frontline diagnostic technology into the field, closer to the origin of outbreaks. Health care workers from remote areas were taught how to use a simple, yet sensitive front line assay that increases local diagnostic capacity by removing the need for samples to be transferred long distances to laboratories for testing.

In **Pakistan**, where the national disease surveillance system was fragmented, the PPI supported the establishment of the Pakistan Laboratories Network. Five high-quality, high-volume laboratories now collate information about laboratory-confirmed cases of specific communicable diseases in a central database. The data



Technicians at the Institute of Vaccines and Medical Biologicals in Vietnam are trained in adjuvant vaccine production. Expanding vaccine manufacturing capacity in low-income countries helps to increase the independence from imported vaccines.

generated by the network link directly with national and regional epidemic response centres, which monitor and forecast threats of communicable disease outbreaks.

### **Increasing vaccine manufacturing capacity**

Immunization is one of the most powerful and cost-effective of all health interventions. The capacity to develop and deploy influenza vaccines worldwide is therefore a critical element of pandemic preparedness. Yet due to limited production capacity for influenza vaccines in low-income countries, there is insufficient global production capacity to ensure adequate quantities of pandemic influenza vaccine. By means of the Global Pandemic Influenza Action Plan to Increase Vaccine Supply, WHO has been working since 2006 to decrease the shortfall between the projected demand for a pandemic vaccine and projected production capacity. One strategy has been to increase vaccine manufacturing capacity in developing countries through more widespread use of adjuvants, agents added to a vaccine which have the potential to expand the number of available doses.

The PPI, in cooperation with the Vaccine Formulation Laboratory at the University of Lausanne in Switzerland, supported technology transfer projects to establish laboratory-scale adjuvant manufacturing platforms at state-owned companies in **Vietnam** and **Indonesia**. Through these projects, partner institutions in both countries have significantly enhanced capacity in the application of modern vaccine production technologies and have become less reliant upon vaccine imports.

## **Unique features of the German contribution to pandemic preparedness**

A number of features have distinguished the German Pandemic Preparedness Initiative and made it an important complement to other efforts in the field of pandemic preparedness.

### **A comprehensive approach**

The PPI has supported a wide range of projects which have contributed to building the core capacities required by the IHR. Rather than focusing narrowly on a particular aspect, the PPI has funded projects which span the entire range of preparedness. In the area of risk communication, the PPI has gone beyond the provisions of the IHR to include a focus on health promotion. These projects have raised people's awareness of measures which prevent infectious disease outbreaks and reduce their spread.

### **Responding to the specific needs of partners, within a whole-of-society approach**

The greatest demand for support from the PPI came from national governments, including ministries and disaster management agencies. Yet in all the measures implemented, the PPI sought to promote a whole-of-society approach. Participants in project activities often represented a wide range of stakeholders, including multiple government ministries and agencies, private sector companies, and civil society organizations.

### **Contributing to health systems strengthening**

All projects supported by the PPI shared a common orientation on health systems strengthening. By concentrating its assistance on measures which reinforced and improved the functioning of national structures, the PPI contributed to ongoing efforts to strengthen health systems and make them more sustainable.

### **Sharing lessons learned and promoting networks**

The results of the PPI's work have been shared widely, both within German Development Cooperation and with other interested groups through conferences and professional networks, thereby allowing promising approaches to be replicated or adapted by other countries and programmes. This publication has been developed to bring the PPI's experiences and lessons learned to an even broader audience.

To download the full version of this report, go to [www.german-practice-collection.org/en/links/other-gdc-related-publications/be-prepared](http://www.german-practice-collection.org/en/links/other-gdc-related-publications/be-prepared)

## Recommendations

Based on PPI's experience, the following recommendations may be useful for other public and private organizations that consider investing in the timely area of pandemic preparedness:

- **Concentrate on planning as the essential core of pandemic preparedness.** National pandemic preparedness plans are the overarching framework uniting all other aspects of pandemic preparedness. Ideally, they should be closely aligned with both national health plans and disaster control plans. They should be updated regularly to reflect experience gained in previous outbreaks and emergencies. Simulation exercises provide much needed opportunities for stakeholders to test the practicability of national plans in inter-pandemic periods.
- **Support integrated approaches to disease surveillance which rely upon a common infrastructure.** The experience of the PPI has confirmed that support for the Integrated Disease Surveillance and Response strategy is essential for strengthening health systems as a whole, because it promotes the use of a single surveillance infrastructure to gather information about multiple diseases.
- **Treat risk communication and health promotion as core capacities for pandemic preparedness.** In self-assessments of their core capacities, World Health Organization member countries often assign themselves low marks for their skills in the area of risk communication. This suggests that greater attention needs to be paid to risk communication as a tool for promoting health, both under normal circumstances and in times of crisis. Attention must also be paid to harnessing the powerful capacities of social media to enhance risk communication.
- **Continue technology transfers as a way to expand vaccine manufacturing capacities in low- and middle-income countries.** Projects which expand vaccine manufacturing capacities, in line with the strategies being pursued by WHO through the Global Pandemic Influenza Action Plan to Increase Vaccine Supply, do much to strengthen low-income countries' access to influenza vaccines. When domestic production is increased, countries become increasingly independent of vaccine imports.
- **Focus attention beyond the health sector and promote intersectoral collaboration in all pandemic preparedness measures.** All investments in the area of pandemic preparedness should be grounded in a genuine commitment to intersectoral collaboration. While the health sector will be the logical home for many interventions, certain approaches – such as those pertaining to risk communication and health promotion – can be taken up by sectors other than health. Pandemic preparedness is relevant across sectors and resilience is greatly enhanced when actions in support of preparedness are not limited to the health sector alone.

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