



Long-Term Development Projects

IANPHI's long-term projects help public health systems in low-resource countries respond to modern public health challenges, improve outcomes, and support healthy populations and strong economies. These intensive multi-year engagements develop and strengthen national public health institutes (NPHIs), moving them forward on a continuum from those least developed to those with a comprehensive and coordinated scope of public health responsibilities.

Bangladesh: *Strengthen disease surveillance and outbreak response in Bangladesh*

Bangladesh has limited ability to get accurate data quickly from its 400-plus local disease reporting sites and integrate it at the sub-national and national levels. This three-year project will address that deficit, so that the country's Institute of Epidemiology, Disease Control and Research (IEDCR) can track potential outbreaks and emerging threats that typically show up first in far-flung locations. IEDCR will enhance its capacity for real-time disease intelligence by expanding its innovative web-based information gathering and evaluation system to the local level. The project will lay the foundation for noncommunicable disease surveillance and a national laboratory network. Given IEDCR's strong leadership and capacity, substantive relationships with national and international partners, and potential for linkages with its new Field Epidemiology and Laboratory Training Program (FELTP), this project will be a model for countries in Asia and Africa with similar pressing needs to expand evidence-based decision making.

Ethiopia: *Transform research institute to NPHI*

Lack of an emergency preparedness plan for its 75 million citizens and a lack of critical laboratory equipment has constrained Ethiopia's ability to respond to public health threats from water, food, and drug-related toxins. Ethiopia's Minister of Health made it a top priority to develop the Ethiopian Health and Nutrition Research Institute (EHNRI) into a comprehensive NPHI. IANPHI supports the creation of an emergency operations center and enhanced laboratory capacity to detect disease outbreaks. Project partners and collaborators include WHO, which has offered expertise on emergency response preparedness planning; the U.S. CDC,



which has based its FELTP at EHNRI and is providing technical assistance on emergency preparedness; and the Association of Public Health Laboratories, which is actively involved in strengthening laboratory components. IANPHI members from Norway and the Netherlands will provide technical assistance and training. Perkins+Will, a U.S.-based architectural firm, is designing the new emergency operations center.

Ghana: *Create a new Ghana CDC*

Ghana has worked for several decades to build a national primary health care network and has developed substantive capacity at the Ghana Health Service and the School of Public Health in research, surveillance, monitoring and evaluation, and other public health functions. IANPHI is working to develop and fund a strengthened and streamlined public health system through a new "Ghana CDC" that will better respond to health threats and address the major causes of death and disability in the country. It will link and strengthen maternal and child health, surveillance, vaccine and immunization coverage, lab capacity, health promotion, environmental and occupational health, and training. IANPHI will assess current public health capacity, facilitate development of a strategic framework for health, and help implement and fund a redesigned, expanded public health system.

Guinea-Bissau: *Transform the national public health system by creating a new NPHI*

Civil war has destroyed the public health infrastructure of Guinea-Bissau. IANPHI, with technical assistance from

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Brazil's FIOCRUZ, led efforts to bring together the country's disjointed public health system into a new NPHI that links its National Laboratory of Public Health, the Bandim Health Project (field epidemiology), the Ministry of Health's epidemiology unit, and the National School of Public Health. With IANPHI support, the ministry has renovated the partially destroyed headquarters and national lab (pictured on front). The new institute in Guinea-Bissau will strengthen core public health functions including laboratory science, data collection and analysis, disease outbreak monitoring, and training. As the first donor to the new institute, IANPHI has leveraged funds from the World Bank, WHO, and the governments of Brazil, China, and Portugal, which have provided lab equipment, phones, computers, generator fuel, library materials, and human resource consultation.

Mozambique: *Establish a comprehensive NPHI to strengthen public health delivery*

Mozambique has some of the world's poorest health outcomes and highest rates of HIV-AIDS, TB, malaria, and infectious diseases. Following discussions with IANPHI, Mozambique intends to transform the country's National Institute of Health (NIH) into a comprehensive NPHI focusing on collecting data to inform public health decisions. That will require significant organizational, human resource, and infrastructure changes. Without a central reference lab or adequate human resources, NIH cannot quickly identify major disease threats or outbreaks nor contain them. IANPHI is partnering with Brazil's FIOCRUZ, and architects HDR CUH2A's Design 4 Others to help Mozambique strengthen disease monitoring and outbreak investigation, create a formal system to collect and analyze health data to promote evidence-based decision making, and build a coordinated system of public health laboratories, including a new reference laboratory. The U.S. CDC in Maputo will oversee \$9 million in budgeted PEPFAR funding.

Morocco: *Establish the Morocco NIPH to improve public health systems and outcomes*

Morocco faces multiple public health burdens: infectious diseases, high maternal mortality rates, a growing incidence of noncommunicable diseases, and risks posed by environmental toxins. Inadequate laboratories and surveillance as well as a lack of technical and research expertise hinder evidence-based decision making. Based on input from IANPHI-funded workshops and public health experts from the U.S. and Norway, Morocco's National Institute of Hygiene is exploring creation of a new NPHI that would monitor, assess, and respond to health threats. Envisioned is an institute responsible for environmental health, non-communicable diseases, poison control, pharmacovigilance,

maternal child health, and research. The NPHI would coordinate public health functions, enhance technical expertise (including new laboratories and training), and strengthen surveillance and health information. Pilot surveillance projects under consideration include assessments of environmental hazards, maternal mortality, and tobacco and other NCD health risks. Morocco also is exploring several partnerships: a twinning program to help build applied research capacity, laboratory design by architecture firm Perkins+Will, and creation of an FELTP by the CDC.

Nigeria: *Build Ability to Quickly Identify and Treat MDR-TB*

Africa's most populous country has a high prevalence of HIV, TB, and HIV-TB co-infection, but with IANPHI grants, leveraged by other donors, Nigeria now is building national capacity to identify or treat drug-resistant TB strains and reduce deaths. The Nigerian Institute for Medical Research (NIMR)—one of the first to conduct national surveys using the new WHO-approved Hain Assay—found that 6.1% of patients had organisms resistant to both INH and rifampin-resistant MDR-TB. Partners, including the U.S. CDC, South Africa's National Institute of Communicable Diseases, Hain Lifescience, and the Harvard School of Public Health, have donated instruments to perform liquid cultures, a power generator, a vehicle to transfer samples, lab expansion, and training. In the third year of IANPHI funding, NIMR will continue to strengthen its public health capacity through collaborative efforts to expand MDR-TB surveillance and training. The project is a model for other developing countries and has attracted the attention of WHO and its efforts to eliminate TB around the world.

Tanzania: *Add new capacity to monitor and prevent NCDs*

The burden of noncommunicable diseases (NCDs) is increasing, but limited data collection exists for NCDs and risk factors such as tobacco use. IANPHI is working with the National Institute for Medical Research (NIMR) in Tanzania to develop strategies that will allow NIMR to take on major new responsibilities in NCD surveillance and control and possibly layer NCD surveillance onto existing infrastructure for infectious diseases. A pioneer in Africa in establishing the national Integrated Disease Surveillance and Response System for infectious diseases, NIMR now plans to be a forerunner on the continent in the field of chronic disease surveillance. Work is in progress to begin facility- and community-based surveillance in pilot projects, complemented by development of prevention efforts. NIMR leaders expect to gain valuable experience through this project that can be applied to other NPHIs hoping to add NCD functions. Partners in this project are Finland's THL and architects HDR CUH2A's Design 4 Others.