

# JICA's WORLD

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A healthcare worker wearing a blue protective suit, mask, and gloves is attending to a young child lying on a white cloth on the ground. The child is wearing a blue and white patterned diaper and has a pink band on their wrist. The background is a rough, outdoor surface.

## Borderless Cooperation in Fight against Infectious Diseases



# Borderless Cooperation in Fight against Infectious Diseases

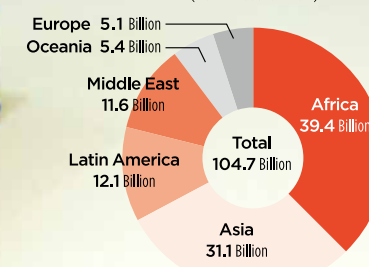
Last year's outbreak of Ebola Virus Disease (EVD) in West Africa is still fresh in our memory. EVD used to affect limited areas in Africa such as tropical forests. However, improved transport infrastructure increased the traffic of people and the pathogen was brought to urban areas, which allowed the disease to spread quickly. Cases of dengue fever, which affects over 100 million people annually across the globe, especially in Southeast Asia and Latin America, were confirmed in Japan last year for the first time in 70 years. In today's world that is changing constantly due to globalization and global warming, Japan is becoming more and more concerned by infectious diseases.

In developing countries, infectious diseases still take away many lives. HIV/AIDS, tuberculosis and malaria, called the three major infectious diseases, kill more than 3 million people annually in developing countries. Emerging infectious diseases such as EVD and re-emerging infectious diseases also need our attention. The World Health Organization (WHO) designates 17 infectious diseases with inadequate preventive measures,

such as dengue fever and leprosy, as Neglected Tropical Diseases (NTDs) and estimates the number of those suffering from NTDs to be over a billion.

The need to fight infectious diseases on a global scale was addressed in the latest "Development Cooperation Charter", the guideline for Japanese Official Development Assistance (ODA). Japan provides technical assistance for establishing policies and guidelines, improving information collection and analysis skills and reinforcing prevention, examination and treatment, as well as financial assistance for providing vaccines. Utilizing advanced know-how to prevent new infectious diseases from unknown pathogens is also important. In cooperation with the Japan Agency for Medical Research and Development (AMED), JICA encourages Science and Technology Research Partnerships for Sustainable Development (SATREPS), a program in which researchers from Japan and developing countries work together for three to five years. As infectious diseases continue to diversify, Japan's flexible and thorough assistance is becoming of greater importance in the world.

Japan's Grant Aid on Health and Medical Sector  
(From FY2006 to FY2014)



※ Unit: Japanese Yen (JPY)

Japan Overseas Cooperation Volunteers  
Dispatch on Three Major Infectious Diseases Sector  
(From FY2006 to FY2014)

HIV / AIDS	218 persons
Malaria	30 persons
Tuberculosis	1 person





Researchers of Noguchi Institute watching pathogen. From endemic diseases to three major infectious diseases, research in the affected area will protect the whole world.

## Terror Broke out Suddenly Establishing a Network for Prevention in our Entire Society

**T**he largest Ebola outbreak in history started at the end of 2013. What can Japan do with countries in Africa to confront this disease? We followed the Japanese cooperation which covers from front-line treatment to local health policies.

### A HOSPITAL WITH INSUFFICIENT EQUIPMENT AND MANPOWER COURAGEOUSLY ACCEPTED PATIENTS

While Liberia celebrated the end of Ebola outbreak in May and continues to stay at zero transmission of the Ebola Virus Disease (EVD), Sierra Leone is in its turn on the verge of conclusion. In Guinea, on their side, the vaccine trial is ongoing in hope and fear. Relatively calm summer seems to promise the end of Ebola crisis in the near future, but the nothing is over for medical personnels.

"Over 100 patients suspected for Ebola died while I was working in a clinic near Monrovia", said Nicholas Blidi, who had worked for Clara Town State Clinic as a director until last summer. As there were no medical doctors permanently stationed in the medical center where Blidi was working, at the peak of the epidemic the staff was unable to check if the patients were infected or not due to confusion. Blidi, who is a nurse, appealed to his colleagues and told them that "the role of medical workers is to respond to God's call and serve people" and continued to accept patients, when the staff was afraid of being infected with Ebola.

However, clinic had only one non-contact thermometer for over 150 patients a day. As the clinic was in a poor region, supplies did not easily reach them. Sanitary conditions were poor and 80 percent of the houses in the region did not have toilets. Under such

severe conditions, medical workers at Clara Town State Clinic continued treating the patients based on their teamwork. "I told the locals to contact the hospital if they find two symptoms of EVD. Also, as a result of promoting the importance of handwashing for preventing Ebola, it has been taking root as a new health habit", he said.

In 2013, Blidi underwent training for perinatal, neonatal and pediatric medicine in Japan. He said that he could utilize his experience in Japan as a support when he led a team in the fight against Ebola. "Since the Ebola virus is transmitted through direct contact with infected blood, some medical workers did not want to attend delivery in which bleeding cannot be avoided", he said. Blidi continued to protect the town, using all his knowledge.

In addition to training from a long-term perspective, JICA also provides emergency training in response to the current outbreak of Ebola. In training which was conducted in Côte d'Ivoire in March 2015, JICA gave lectures and simulations about understanding the situation, regional control, and emergency treatment response during the period of outbreak of Ebola for French speaking African countries. JICA also simultaneously created a roadmap for measures to prevent Ebola in Côte d'Ivoire.

The people who led the training were the specialists, scholars and members of the emergency intervention team in the Democratic Republic of the Congo (DRC) who had experienced seven Ebola outbreaks in the past. "Steady preventive measures before the outbreak are important in the fight against Ebola in Africa", said Noriaki Ikeda, a JICA expert who serves as an advisor to The Ministry of Public Health of the DRC. Experts and international organizations in countries including Senegal, Togo and Mali participated in the training and have contributed to the collaboration and enforcement of countermeasures in those countries.

### THE OLDEST HIGH-LEVEL RESEARCH INSTITUTE IN WEST AFRICA

While JICA implements training to support medical personnel, who are fighting on the front line, and provides materials, Japan also focuses on establishing a backup system.

For Japanese, topics related to disease in Africa remind us of Hideyo Noguchi. Noguchi is a great



An informative banner in Kotoka airport, Accra. The airport is the air gateway of Ghana.

Blidi, in training in Ghana, will return to Liberia to help his people as medical staff.



He fought against Ebola in Liberia with his team during the outbreak.



Since its establishment in 1979, Noguchi Institute is the front runner of infectious diseases studies.



## INFECTIOUS DISEASES: GHANA

Level 3 Laboratory (P3 Lab), built in 1999 with JICA's aid. It is still one of the most important medical facility in the West Africa.



Prof. Ampofo is one of the key person of Ebola countermeasure in Ghana. The equipment in this room enables real-time analysis of the specimen.



A nurse visits a mother and her child for medical checkup 48 hours after the delivery. Community nurses maintain the health care of the village.



man known to most Japanese as a pioneer of Japanese medical scientists who contributed to improving public health in the world. Noguchi overcame serious burns on his left hand, traveled all over the world and devoted his life to research on a number of infectious diseases including syphilis and leishmaniasis in the beginning of the 20th century. His portrait is on the thousand yen note in Japan today.

Accra, the capital of Ghana, is where Noguchi was infected with yellow fever and died. Although we were told that Accra had become cooler since the rainy season had begun, the temperature was still at 35°C. As soon as we got off the plane, our glasses fogged up due to the difference in temperature and humidity. At the moment we entered the airport building, a panel with the sign of "Ebola Alert" came into sight. We were allowed to go to immigration only after an infrared camera confirmed that we did not have any fever.

Professor William Ampofo, Head of the Virology Department of the Noguchi Memorial Institute for Medical Research, University of Ghana (hereafter "Noguchi Institute") pointed out, "Ghana borders on Togo, Burkina Faso and Côte d'Ivoire and has much traffic of people from Ebola affected countries".

"In response to the WHO warning of the Ebola outbreak in Guinea in March 2014, the National Tech-

nical Coordinating Committee (NTCC), in which the Noguchi Institute participates, developed a response plan for Guinea. The Noguchi Institute has become the center for monitoring and inspection", he said, and guided us to a bio-safety level three research facility (P3 Laboratory). "Since the laboratory was established by assistance from Japan in 1999, it has been the only experimental facility with a high level of safety in West Africa for a long time. This facility usually handles viruses such as bird flu and HIV and is ready to accept suspected infected samples from Ghana and neighboring Togo and Benin", he said. It has accepted about 150 samples and diagnosed them immediately. Fortunately, it undetected all of the six viral hemorrhagic fevers (VHFs) which are unique to Africa including yellow fever and Marburg virus disease, as well as Ebola virus. Professor Ampofo participated in the WHO medical team which was sent to Conakry, the capital of Guinea, and worked for eight weeks. "The atmosphere in the field was incredibly calm and I felt that those who fear it do not know the actual situation since they are far away. I also personally experienced the tragedies caused by the lack of understanding of the disease, including the tragedy in which eight members of the medical team who were implementing educational activities were killed by local people during my stay", said Professor



It happens that the activity takes form of educational activities in cooperation with local hospital. JICA is working with partners from different level of healthcare system.

Ampofo, looking back at his stay in Conakry. "Today, people can proactively transmit information thanks to the development of an information network. It is important not to spread incorrect information and to continue to face reality, along with improving people's access to medicine", he said.

### IMPROVING LOCAL HEALTH SYSTEM WHICH DETERMINES PREVENTION AND RESPONSE

Tsunenori Aoki, a JICA expert who serves as a policy advisor for local health in the Ghana Health Service, points out that the problem in countries where the outbreak of Ebola has spread this time is that the local health system for regional containment to prevent active virus transmission was not fully in place. "Virus containment can only be realized after a system starts functioning in which a health/medical worker who has direct contact with locals finds a suspected case in the region and contacts a hospital or administration as necessary", he said.

Since 2000, Ghana has developed a facility called CHPS in which two local public health nurses stay permanently and for 24 hours a day, with a ratio of one center per 1,500 residents. It provides local nurses who work with the locals to prevent and raise awareness about disease, and forms a pyramid

of services by establishing a state hospital and a county hospital for all ten states and 216 counties in the country. The region in which CHPS is functioning at the targeted level has not yet reached half of the country; however, it prepares for emergencies by further improvement and development of the National Health Insurance Scheme (NHIS) to decrease the cost burden for the patients.

"Unfortunately, such a healthcare system is not fully in place in the three Ebola-infected countries. Also, such a system cannot be completed in a single day even if they have a current outbreak. Nevertheless, Japan has steadily advanced measures to prevent future outbreaks by implementing training on Universal Health Coverage (UHC) and training for human resource development in cooperation with international organizations such as the World Bank and WHO", explained Aoki.

"The world is one village. Infectious diseases are not someone else's problem or 'the fire across the river'", was the warning we heard from all medical personnel in Ghana. Japan and Africa have progressed with cooperation at every level including local health, hospitals, research facilities, administration and human resource development. Continuing such steady efforts will be the largest 'breakwater' against severe infectious diseases including Ebola.



Aoki supports the development of healthcare system in the local authority.





Thai researcher working to develop antibody producing cells using human blood cells

## Remedy for Tropical Disease that Threatens Japan

**D**engue fever hit Japan last year for the first time in almost 70 years, and the number of patients increased to 160. However, many more people suffer from it around the world. To fight the disease, Japanese researchers stood up to the challenge of developing a remedy.

### PATIENT SPECIMENS – THE KEY FOR THE RESEARCH

In April 2015, workers in long-sleeved uniforms gathered with butterfly nets in Yoyogi Park, Tokyo. In order to prevent dengue fever which affected Japan last year, they captured mosquitos in the park to ex-

amine if they carried the dengue virus and prepare the necessary preventive measures before summer.

Over 100 million people are affected by dengue fever annually across the globe, especially in tropical areas; approximately 250,000 fall gravely ill and can pass away in the most unfortunate cases. However, no effective preventive vaccine or remedy exist, and the only treatment is to rest well. Japanese researchers have been trying to develop a remedy since 2009, long before dengue fever affected Japan.

However, this research project faced a barrier. “Because of risks including bioterrorism, carrying a pathogen from one country to another is difficult, even for research,” explains Dr. Kazuyoshi Ikuta, then a professor at Osaka University Research Institute for Microbial Diseases. Cases of dengue fever were still unknown in Japan and specimens of local patients were thus unavailable, but an antibody of recovered dengue patient’s origin was expected to be highly effective for both prevention and treatment. Thailand, where tens of thousands of people are affected by dengue fever annually, was selected to be the center for the research so that pathogen data was easily available. Dr. Ikuta emphasizes the reasons to work with Thailand: “Japan has a strong relationship with Thailand due to previously assisting in establishing



Capturing mosquitos in Yoyogi Park, Tokyo, to prevent dengue fever (Photo courtesy of Tokyo Bureau of Social Welfare and Public Health)



Japanese and Thai officials gathered regularly during the project to check its progress



**Left:** Japanese experts demonstrating to Thai researchers

**Right:** Laboratory at Mahidol University was established with Japanese assistance. About 20 people worked on the project.

the Thai National Institute of Health and cooperating in research concerning HIV/AIDS. Thailand also conducts research on infectious diseases with European countries and the United States, and plays a leading role in Southeast Asia.” Japan and Thailand thus started a joint research project as part of the Science and Technology Research Partnerships for Sustainable Development (SATREPS) by JICA and the Japan Science and Technology Agency (JST).

### LEAD TO THE WORLD’S FIRST CHALLENGE

The project also worked to improve technology in Thai research institutes and engaged many local researchers. Dr. Ikuta, the chief-advisor, visited Thailand monthly to check the progress and teach about technology and research. He says creating a sense of teamwork was difficult at first because the research was conducted in 2 centers: the National Institute of Health and Mahidol University. “They initially had different attitudes towards the research. So we made a website where each center could present their progress, helping them have a sense of rivalry while still being a team.” He communicated actively with local researchers and emphasized the importance of teamwork.

The most important process in the research was

making an antibody using the blood samples of dengue fever patients. “We had to do aseptic manipulation for many months to prevent the cells from being contaminated by bacteria, which was a very difficult process.” Apart from Dr. Ikuta, research scientists from Osaka University Research Institute for Microbial Diseases also participated to demonstrate techniques to local researchers who started to acquire them little by little. After repeated experiments, local researchers finally succeeded in creating an antibody that could contain the dengue virus for both prevention and treatment.

The Japanese manufacturer that participated in the project with Osaka University is negotiating with overseas pharmaceutical companies that are interested in the research results to produce the world’s first medicine for dengue fever. Dr. Ikuta says, “Infectious diseases now move beyond developing countries because of changes in the world such as globalization, urbanization and global warming. Japan cooperating in research and building relationships with other countries is important in order to cooperate with them in case of a domestic outbreak.”

The day may soon come when advanced Japanese technology will be a savior for patients of dengue fever that continues to spread across the globe.





Dr. Hirao instructing the way to read a chest X-ray

## Developing Human Resources for Anti-Tuberculosis Measures around the World

**T**uberculosis is a disease which exhibits flu-like symptoms but it can be life-threatening if left untreated. An institute in Japan has continued its efforts for over 50 years to eliminate tuberculosis that is still prevalent in the world.



A photo of a training session in 1965. Dr. Tadao Shimao, the lecturer in this photo, still works as an instructor today.

### TUBERCULOSIS IS A WIDESPREAD DISEASE IN THE WORLD

Today, it is said that about one third of the world population is infected by tuberculosis (TB). Although the mortality rate itself has declined, according to the estimates in 2013, out of 9 million patients who actually developed TB, 1.5 million died from the disease, and 3.3 million have not even had proper diagnosis or medical treatment. TB patients are mostly found in developing countries, particularly in Asia and Africa. TB is also listed as one of the issues to be tackled in the Millennium Development Goals, a common goal for international society in the area of development.

### ANTI-TUBERCULOSIS MEASURES NEED A LONG-TERM EFFORT

In 1963, The Research Institute of Tuberculosis, Japan Anti-Tuberculosis Association in Kiyose, Tokyo started TB prevention training and accepting trainees from developing countries in cooperation with JICA, in order to strengthen the TB infection control in their countries. The trainees who gathered there for training this time were from 12 countries such as Kenya, Myanmar and Afghanistan. In these countries, TB is still a serious problem as there are cases of childhood TB and also the cases of co-infection, in which HIV-infected individuals develop TB due to weakened immune system caused by HIV, leading to high risks of losing their lives.

Japan also has experienced the fight against TB in the past. TB is a curable disease today if one takes medication properly; however, it was only 50 years ago that TB was called “Bokoku-Byo”, a disease that destroys the country, taking lives of a great number of people.

“However, the number of patients dramatically



Field trip to Airin district, Osaka. The Chairman of Osaka Public Health Association explained control of medicines in a facility to support reconstruction of livelihoods of people who are homeless

declined by the beginning of the 1980s. This was achieved by the efforts of both public and private sectors in prevention as well as early detection and treatment. While the government focused on anti-TB measures in both aspects of policies and budget allocation, the private sector established branch offices of the Anti-Tuberculosis Association in every single prefecture”, explained Dr. Norio Yamada, head of the Center for International Cooperation and Global TB Information in The Research Institute of Tuberculosis.

The contents of the training are determined in the discussions with the experts from World Health Organization (WHO), Ministry of Foreign Affairs and Ministry of Health, Labour and Welfare, so that the participants can learn the latest trends in the world’s anti-TB measures as well as basic knowledge and experience of Japan which can be applied to health programs.

“It can sometimes take several decades for an individual to develop TB after infection. This is why we need long term efforts to reduce the number of people actually developing TB. Furthermore, it is important to implement countermeasures along with international approaches to meet today’s needs”, explained Dr. Susumu Hirao, the supervisor of the training.

### SUPPORTING TRAINEES’ DAILY LIVES THOROUGHLY

As the participants have only completed the first five days out of three months of their training period, their presentations on the current situation of TB in their own countries seemed somewhat awkward. Dr. Hirao thoroughly guided the participants, starting from the methods of presentation.

TB poses different issues in different regions. For example, even in the same country, TB can spread more easily in cities, while people in rural areas have less access to healthcare facilities. In order to take effective measures against such complex issues, taking international targets of the times into consideration, participants are expected to acquire comprehensive skills to analyze problems, formulate measures, monitor and evaluate anti-TB projects. Therefore The Re-



The participants were divided into small groups and each group had a presentation on the method of anti-tuberculosis measures

search Institute of Tuberculosis offers thorough guidance including tutorials or field trips to other regions.

Dr. Samung, one of the participants from the National Centre for Tuberculosis and Leprosy Control in Cambodia, said, “When I go back to my country, it will be my turn to spread the knowledge. I want to utilize what I’ve learned through the training in Japan to save the lives of children”.

Another feature of this training is a thorough support for the participants. Support is provided in daily lives including the guide in using public transportation and finding halal food groceries for Muslim trainees. In addition, the Mayor of Kiyose also introduced Japanese culture and volunteer workers offered Japanese classes.

“It is such a pleasure to find our former participants again in the field of TB prevention projects in the world. I hope that they leap beyond the area of TB and become personnel who can lead the whole healthcare sector in the future”, Dr. Yamada said with a smile.



The participants experienced Japanese calligraphy in a Japanese language class taught by volunteer workers in Kiyose City



# Rising to the Challenge Together!

Institutions such as international organizations, companies and NGOs play a crucial role in preventing infectious diseases on a global scale. Here are our partners who are working together with JICA to solve health care problems.



## Bringing measles-rubella combined vaccine to Vietnam

### Kitasato Daiichi Sankyo Vaccine Co.,Ltd.

Vietnam has been promoting vaccination against infectious diseases as part of the National Immunization Promotion Plan since 1981. The Center for Research and Production of Vaccines (POLYVAC), Vietnam's public corporation, has been receiving Japanese assistance since 2003 and established a measles vaccine production facility. Production started in 2009 in cooperation with The Kitasato Institute (now Kitasato Daiichi Sankyo Vaccine Co.,Ltd., a group company of Daiichi Sankyo Co.,Ltd. Hereinafter, Kitasato Daiichi Sankyo Vaccine).

On the other hand, many people were not vaccinated against rubella, which led to an epidemic in 2011. Establishing domestic vaccine production became urgent. Having previously completed the technical transfer for measles vaccine, JICA then started technical assistance to produce a measles-rubella combined vaccine in cooperation with Kitasato Daiichi Sankyo Vaccine in May 2013. Kitasato Daiichi Sankyo Vaccine dispatched specialists from Japan, and also welcomed Vietnamese participants to Japan and conducted training on production and quality control. Dr.Tomio Lee, the project's vice director, says, "Participants' enthusiasm to acquire new technology and their diligence made the training go

smoothly."

Last year's measles outbreak in Vietnam was contained thanks to the quick and high-volume provision of high-quality and safe measles vaccine produced by POLYVAC as a result of the previous technical transfer. "We are glad that a domestically-produced vaccine could contain the outbreak, in cooperation with World Health Organization (WHO). We wish to further strengthen the relationship with the Vietnamese government and POLYVAC and contribute to preventing infectious diseases and developing Vietnam," emphasizes Dr.Lee.

The technical transfer project for the first domestically-produced measles-rubella combined vaccine is moving forward for its implementation in Vietnam. Through public-private partnership, Japanese technology is helping Vietnam to prevent infectious diseases.



Training on aseptic manipulation, a method to keep the tools aseptic



The project's progress and problems were discussed at a meeting with related organizations from both countries



## Innovation and polio eradication

### The Bill & Melinda Gates Foundation

Polio, also called polio or infantile paralysis, primarily affects children under five years old and paralyzes one out of 1000, sometimes leading to death. Effective treatment still awaits discovery and vaccination is important to prevent polio.

The World Health Organization (WHO) encourages polio eradication and the number of polio patients in the world has been decreasing. The number of polio-affected countries, which was 125 in 1988, is now three: Afghanistan, Nigeria and Pakistan. Japan has been providing vaccines and related materials around the world, including for these three countries.

Considering the large amount of funds required for this kind of assistance and infusing private sector money in developing countries, JICA and the Bill & Melinda Gates Foundation established Loan Conversion. Through this system, Japan supports polio eradication in affected countries with Japanese ODA Loans. If the results are successful, the Gates Foundation repays the loans in place of the affected countries' governments.

The first assistance started in 2011 in Pakistan where the

infection was then spreading. Japan made a limited loan of 500 million yen and assisted in providing vaccines and conducting wide vaccination campaigns. As a result, the vaccination rate increased and the affected area became limited. The Gates Foundation then decided to repay the loan.

Since last year, Nigeria has been receiving support. In addition to financial assistance for vaccination campaigns, Japan is also dispatching experts to provide training on maintaining inspection equipment at the Nigeria National Polio Laboratory. No new infections of the natural strain poliovirus have been confirmed in Nigeria between January and the end of August 2015; the fight against polio is entering the final phase.



Marking the finger with a special marker to distinguish vaccinated children



Child being vaccinated against polio in Pakistan



# • TRENDS •



## Japan

### Tanaka spoke about Japan's Proactive Contribution to Peace



**O**n July 27, JICA President Akihiko Tanaka spoke at the Brookings Institution, a Washington, DC think tank, about Japan's "Proactive Contribution to Peace" and its meaning in development cooperation. Brookings' David Dollar, a senior fellow within the John L. Thornton China Center, commented. Tanaka engaged with the audience on questions posed in a discussion moderated by Richard C. Bush III, the Director of the Center for East Asia Policy Studies at Brookings.

Tanaka introduced Prime Minister Abe's strategy of "Proactive Contribution to Peace," stressing that development cooperation has been and will continue to be important for contributing to peace proactively. He spoke of how JICA responsible for implementing Japanese Official Development Assistance, works to promote stability and

President Tanaka speaks at Brookings.

peace. He covered JICA support for reconstruction in Afghanistan and Iraq, peace building in South Sudan and post-earthquake assistance in Nepal, JICA's response to the Syrian refugee crisis and JICA's role in the Mindanao peace process. Based on JICA experience, he concluded that four main project types are best to secure lasting peace: projects that raise expectations for the future, provide benefits to all stakeholders, develop human resources and institutional capacities, and show a long-term vision and commitment to the people.

The Q&A portion of the discussion allowed Tanaka to elaborate on the importance of JICA extending soft loans to finance social sector projects, including support for Universal Health Coverage in Kenya, for contributing to peacebuilding through reducing social vulnerability. He also touched upon good practices of assisting fragile states and collaboration between JICA and related agencies in China.



## Uganda

### Survey and road improvements in Gulu, Northern Uganda



**A**JICA project for Improving Municipal Roads in Gulu, the commercial center of Northern Uganda, will improve roads and help economic revitalization. A survey recently completed in the grant aid project to improve 8.5 kilometers of main roads and repair drainage ditches in the city of 154,000 will help people to move and goods to flow, contributing to peacebuilding and economic growth. Construction will begin in September 2016.

Gulu, where peace was recently restored, is attracting people and goods, becoming a distribution center for South Sudan. The traffic on main roads doubled from 2012 to 2015. Roads are problematic, asphalt on shoulders gouged; cars, motorcycles and pedestrians are unable to pass safely. In the rainy season drainage ditches overflow; pass-

Because of unimproved sidewalk, pedestrians have to walk along a road by avoiding obstacles.

ing is difficult; sanitation is problematic. National highways are being built in all four directions.

The survey covered roads, traffic, topography and rainfall. Discussions with the city and Gulu District concerned street width and design including sidewalks and drainage ditches. Connections to national highways and assistance provided by other agencies were carefully considered. The survey revealed that nearly all intersections in Gulu have seen fatalities; accidents frequently occur. Eliminating potholes will increase speeds and accidents. Predicting car, motorcycle and pedestrian movement, and adopting a design encouraging safety is necessary. Solutions include roundabouts and slightly raised pedestrian crossings.

The Uganda and Gulu governments will begin preparations to ensure that project construction can begin smoothly, including relocating electric poles, checking and moving water pipes and adjusting other related projects.



## Malaysia

### JICA supports work system for persons with disabilities in Malaysia



**I**n August, JICA's 10-year project in Malaysia, "The Project to Support Participation of Persons with Disabilities," came to an end. The project provided support for a new system to boost the participation in society of persons with disabilities.

Specifically, the project focused on two aspects: one called "Support for Employment of Persons with Disabilities (helped by a Job Coach)," to create a working environment for employees with disabilities and support their retention in the workplace. The other is "Disability Equality Training (DET)," to promote hiring of persons with disabilities and deepen companies' understanding of persons with disabilities as clients.

The project started by fostering experts called job coaches who mediate problems to help per-

A job coach, left, instructs a staff member with intellectual disabilities at a Shell gas station.

sons with disabilities adjust to their workplace. The project also nurtured trainers who train job coaches. As a result, more than 650 persons with disabilities have found jobs. Some Low Cost Carriers are holding periodic DET to promote employment for people with disabilities and to improve services for customers with disabilities.

Malaysia has started passing on this know-how to other countries through JICA's projects and other initiatives, and now Malaysian job coach trainers are conducting programs in China and Jordan. Furthermore, some of the trainers of DET facilitators have established consulting firms and extended their field of activities to neighboring countries.

For the future, to be able to organize these activities on its own, Malaysia's Department of Social Welfare is taking the initiative in its preparations. JICA plans to continue its cooperation with Malaysian authorities as well as its fostered personnel in areas including projects in other countries.

## Voices

FROM THE FIELD



## Dao Thi Khanh

Program Officer, Head Unit, JICA Vietnam Office

Dao Thi Khanh majored in the Japanese language at Vietnam National University in Hanoi. As her teacher was a JICA Japan Overseas Cooperation Volunteer, Khanh knew about JICA as a university student. After graduating in 2001, she started working as an assistant for the capacity building project of Bach Mai Hospital in Hanoi constructed by JICA's grant aid. Observing the activities of Japanese specialists at the hospital, she thought, "I wish I would share the achievements of Japan's assistance with more Vietnamese people", and she applied to JICA for employment in 2009.

Khanh is mainly in charge of the health and medical care sector including projects concerning measures against infectious diseases and preventive medicine. "My job requires specialized knowledge of medical care, and it is not always easy, but I am happy to work again with Japanese specialists and the people at Bach Mai Hospital," Khanh says.

What left a strong impression on Khanh is the project on technical transfer for vaccine production. Japan had been providing Vietnam with polio

and measles vaccines since the 1990's, and later on, transferred the technology for producing measles vaccine to a local public corporation. Vietnam thus became capable of producing measles vaccine complying with the regulations of the World Health Organization (WHO). However, as there were some cases of side effects from vaccinations for another disease, fewer children receive vaccine. As a result, measles prevailed in Vietnam and killed more than 130 children last year. Khanh invited the media to the production field of measles vaccine in order to emphasize the safety of vaccination in cooperation with specialists of JICA and WHO. The vaccination rate was improved by the effect of the coverage, which contributed to control the disease.

"There are many lessons that can be learned from Japan's assistance such as the attitude toward craftsmanship and the way of working. My goals are to share the technology and knowledge in the sector of medical care and to deepen the friendship between Japan and Vietnam".



# GHIT-Funded New Drug Development

Peter J. Hotez

Professor, Baylor College of Medicine / Founding Dean of the National School of Tropical Medicine

Neglected Tropical Diseases (NTDs) that I have been researching are seventeen diseases that are mainly prevalent among the poor. It is estimated that over one billion people worldwide have these diseases. As the name suggests, however, the world has paid little attention to these diseases and failed to take sufficient measures. The biggest problem with NTDs is that they result from poverty including a poor hygienic environment and can also cause poverty itself at the same time. When the diseases spread to the productive-age group, the national labor force declines and rising out of poverty becomes much harder.



I have been interested in studying these tropical diseases since I was twelve because of my dream to become a scientist and my desire to help those who suffer. After graduating from Yale University, I got my Ph.D. at Rockefeller University and my M.D. at Weill Cornell Medical College. As a researcher, I have been studying and developing remedies and vaccines for NTDs. Thanks to support from the European Union (EU), I have achieved several successes such as the world's first-ever development of a vaccine for hookworm disease prevalent in Asian and African tropical regions. However, many other tropical diseases without effective vaccines still remain. Now I am deeply committed to the study of Chagas' disease, one such disease.

There are two approaches for addressing NTDs: a short-term approach of providing mass treatment and R&D, which is important as a long-term approach. I have high expectations for the roles the Global Health Innovative Technology Fund (GHIT Fund) will play in this R&D area. The GHIT Fund, which is jointly sponsored by the Japanese government, Japanese pharmaceutical companies and the Bill & Melinda Gates Foundation, is Japan's first public-private partnership in the global health area that invests in developing new drugs for NTDs and other infectious diseases. This system is particularly significant for measures against NTDs whose infection is concentrated among the poor. The system

drastically reduces development periods and costs through close and active cooperation among pharmaceutical companies, universities and research institutes compared to when pharmaceutical companies single-handedly conduct R&D. JICA with its network with many countries will also play an ever-more-important role in promoting public-private partnerships.

To inform more people about these tropical diseases, I wrote a book about NTDs two years ago. This year, the Japanese version has been published, which I am very happy with. Japan, which has sophisticated technologies and excellent findings in medical research, can be a leader in next-generation R&D through the GHIT fund.

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**Cover:** A medical staff member cleans the body of a girl with Ebola at a medical facility in Liberia. ©John Moore/Getty Images

**Photo on pages 2-3:** A Ghanaian staff member studies a tropical disease at Noguchi Memorial Institute for Medical Research in Ghana



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