

Kiribati

Project for Reconstruction of the Nippon Causeway Grant Aid (January 2017 - April 2019)

The “Nippon Causeway,” which was so named to express the gratitude of the people of Kiribati to Japan, is a 3.4-kilometer highway constructed by Dai Nippon Construction through a grant aid project for the Construction of the Batio-Bairiki Causeway and Fisheries Channel in 1985.

This causeway is the only land route on the Tarawa atoll, the capital of Kiribati. The route connects Besio Island in the southwestern end, which has an international port, to the slender region of small islands that stretches to North Tarawa, and has played an important role as a lifeline for the people. However, problems such as partial road damage became more serious due to aging and waves at high tide over many years. Therefore, this two-and-a-half-year reconstruction project was started in January 2017 to rebuild the road with the help of Dai Nippon Construction.

The road surface became higher after the reconstruction, and a wall of sufficient height was installed on the side facing the open sea with tossing waves. This resulted in lowering the risk of traffic cut-off due to large waves. The project also improved road safety by widening the road and installing streetlights and signs in consideration of pedestrian safety. Furthermore, electric wires, water pipes, and telephone lines that were previously buried in the ground were put in concrete boxes that run along the road. This improved the sustainability and durability of these infrastructures and also reduced the risks posed to the structure of the road by maintenance work.

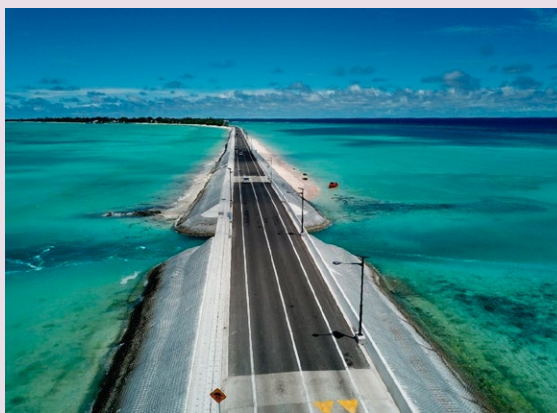
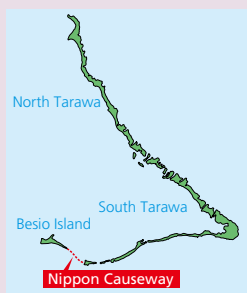
In these ways, the Nippon Causeway that was rebuilt through the reconstruction project represents “building resilience against



The causeway before reconstruction, affected by waves at high tide (Photo: JICA)

natural disasters,” as set forth in the “G20 Principles for Quality Infrastructure Investment” adopted in 2019. In addition, as an economic and social infrastructure that embodies adaptation to climate change and the “Build Back Better” philosophy

advocated in disaster risk reduction frameworks, it is expected to contribute to the social and economic development of Kiribati for many years.



The causeway after reconstruction (Photo: Dai Nippon Construction)

Bangladesh

Humanitarian Assistance Program for People Fleeing Myanmar Japan Platform (JPF) (October 2017 - (ongoing))

In August 2017, people from Myanmar fled to Bangladesh to escape violence in northern Rakhine State in Myanmar. Thus, approximately 900,000 people including people from Myanmar who had previously evacuated to Bangladesh currently live in the camps of Cox's Bazar in Bangladesh*.

Japan Platform (see page 130), which was established to carry out emergency humanitarian aid through tripartite cooperation among NGOs, the government, and civil society and private sector in Japan, launched the "Humanitarian Assistance Program for People Fleeing Myanmar". Since October 2017, after the mass influx of displaced people into Bangladesh, a total of 11 Japanese NGOs have provided assistance to displaced persons in a wide range of sectors under this program. The sectors of humanitarian assistance include water and sanitation, food and non-food item distributions, shelter construction, health and medical care, and protection of women and children. Eight of these NGOs are still working in the field.



Displaced children from Myanmar drawing water from a well installed by AAR Japan (Kutupalong refugee camp, March 2018) (Photo: AAR Japan)



A JADE staff member distributing sanitary kits to a displaced woman (Photo: JPF)

Under this program, Association for Aid and Relief, Japan (AAR Japan), is supporting the improvement of the water sanitation environment by installing toilets, bathing spaces, and wells in the refugee camp, and approximately 4,700 households are using these facilities. AAR Japan also operates shelters where women and children can spend their time and interact in a safe environment. As of August 2019, there were approximately 200 women and 200 children using these shelters.

Japan Agency for Development and Emergency (JADE) provided support to improve the sanitation conditions of displaced women and increase their dignity, through distributing sanitary kits and providing health education sessions. The assistance was provided to 4,300 female beneficiaries.

When natural disasters and conflicts occur around the world, Japan will continue to provide effective and efficient emergency humanitarian assistance that matches local needs, by utilizing the strengths of Japanese NGOs.

*Source: OCHA "JRP 2019 funding update – 30 September 2019"

Colombia

Economic and Social Development Programme (Strengthening the system and capacity for removal of anti-personnel landmines) Grant Aid (June 2017 - October 2020)

In Colombia, the government and the Revolutionary Armed Forces of Colombia (FARC) reached a peace agreement in 2016 to end a domestic conflict that lasted over half a century. The anti-personnel landmines that were buried during this conflict caused more than 11,000 casualties. It is said that even after reaching the peace agreement, landmines are said to remain buried in the areas that extend over more than half of the cities in the country.

In view of this situation, Japan provided seven demining machines manufactured by Nikken Corporation and a mobile container for storing maintenance and management tools for demining machines. In addition, Nikken, the Cambodian Mine Action Centre (CMAC) in Cambodia, and the Lao National Unexploded Ordnance Programme (UXO Lao) in Laos implemented joint training on operation and maintenance of demining equipment in Japan, Cambodia, and Laos, for a total of 17 members of the Colombian Humanitarian Demining Brigade, consisting of members from the National Army of Colombia and staff of the Ministry of Defense. This enabled Japan to pass on the technology by transferring it through CMAC and UXO Lao to Colombian government officials, in what can be seen as a concrete example of “triangular cooperation” where Japan and developing countries transcend regions to support other developing countries.

Operational training was also conducted in Colombia for 30 members of the same team. These efforts are expected to strengthen the Colombian government's anti-personnel mine clearing capabilities

and operations. This program will accordingly encourage the return of internally displaced people who had been forced to abandon their land due to the fear of landmines, and enable local residents to use the recovered land for farming. In this way, it is expected to lead to the realization of a society where people can live with peace of mind.



Colombian Humanitarian Demining Brigade and CMAC personnel conducting operational training using CMAC-owned Nikken demining machines (Photo: CMAC)

Guatemala

Community-based Maternal and Child Health Improvement Project (Phase 1 and 2)

Grant Assistance for Japanese NGO Projects (March 2018 - (ongoing))

Public
nomination

Among all 22 departments of Guatemala, Quiché shows the lowest rate of childbirth assisted by health-care workers, and marks the highest rate of traditional birth attendant (TBA)-led home deliveries in the country at 60.7%*. However, it is difficult to deal with heavy bleeding and risky deliveries during a home birth, and has become a cause of high rates of maternal and neonatal mortality. Therefore, AMDA-MINDS (AMDA Multisectoral and Integrated Development Services), one of Japan's NGOs for international cooperation, started a project to improve maternal and child health in March 2018 in the city of San Bartolomé Jocotenango, a city with the highest needs in Quiché. This project is aimed at identifying risks at an early stage with prenatal care, and taking appropriate measures before falling into emergency situations.

In this project, AMDA-MINDS committed foremost to train 70 TBAs, who have earned the immense trust of communities where traditional culture is deeply rooted. This training allows the TBAs to understand the danger signs during pregnancy and childbirth and the importance of prenatal care, and to convey such knowledge to pregnant women. The training for 262 health volunteers including men was also implemented to protect expectant and nursing mothers with support from all the community members. Before the training started, women needed their husband's permission just to undergo medical examinations. Now, since the training helped men to understand the importance of prenatal care and transporting women in danger to a hospital immediately, some women were transferred at an early-stage. AMDA-MINDS also conducts reproductive health

training for elementary and junior high school students to prevent adolescent pregnancy and delivery. The training gives an opportunity for students to learn about the human body system and pregnancy, and to make their own life plans. These efforts are leading to healthier family planning and safer pregnancy and childbirth in the future.



A TBA (far left) and two AMDA-MINDS personnel (seated at right) making a door-to-door visit to a pregnant woman's home. They are providing advice on the woman's lifestyle and danger signs during pregnancy. (Photo: AMDA-MINDS)

*Source: Encuesta Nacional de Salud Materno Infantil, ENSMI 2014-2015

Mozambique

Emergency Grant Aid for Three Countries in Southern Africa affected by Cyclone Idai (April 2019 - October 2019)

On March 14, 2019, one of the largest cyclones in history hit the central part of Mozambique, which caused the loss of more than 600 precious lives. In the immediate aftermath of the disaster, damage caused by river flooding and lightning strikes received attention, but afterwards, a large-scale outbreak of cholera occurred in evacuation centers, causing a secondary disaster that made people suffer in the disaster areas.

Cholera is a disease that spreads including through water contaminated by *Vibrio cholerae*. The spread of cholera can be prevented by improving the water and sanitation environment in the affected areas.

Japan decided to provide \$9.85 million to Mozambique in response to the damage caused by the cyclone, out of which \$1.7 million was allocated to UNICEF.

In April, UNICEF Mozambique organized a cholera rapid response team that implemented a strategy to provide water and sanitation measures, including the distribution of water purification agents and a sanitation awareness campaign, to the cholera patients' households and neighboring residents living inside a radius of 50 meters within 48 hours of patients being transported to the cholera treatment center. These measures were based on data stating that the risk of infection is 36 times higher within 50 meters of a cholera patient's household, and had seen prior success in Haiti and Zimbabwe. At this time, Mr. MORITA Tomohiko, a Japanese official working at UNICEF

Mozambique, was also one of the members of the cholera rapid response team. He also worked with the provincial governments, as well as the U.S. Centers for Disease Control and Prevention (CDC), which was actively working in those areas, to contribute to contain the spread of cholera in disaster areas.



Teaching Cholera outbreak countermeasures to residents in the affected areas
(Photo: UNICEF Mozambique)

Guyana and Commonwealth of Dominica

Project for Strengthening Women's Disaster Management Capacities in Guyana and Dominica (through UNDP)

Grant Aid (Partnership with UNDP) (June 2018 - June 2021)

Public nomination

The Republic of Guyana located on the north coast of the South American continent, and the Commonwealth of Dominica, a small island nation in the Caribbean Sea, are heavily impacted by climate change and have been subjected to many natural disasters. In fact, Dominica was seriously damaged by Hurricane Maria in 2017. Moreover, although approximately 90% of the populations of Guyana and Dominica live in coastal areas, they are facing the difficulties of coastal erosion and flooding caused by the rise of sea levels due to global warming. Climate change has become a major challenge that threatens the people and territory of the two countries.

In 2018, Japan began to provide assistance in partnership with UNDP to stabilize livelihoods and strengthen disaster response capabilities, mainly for women who are particularly vulnerable in times of disaster in remote and coastal areas of disaster-prone Guyana and Dominica. Through this cooperation, disaster risk reduction capacity in a total of 1,400 communities (around 20,000 households) is being strengthened through the development of an early warning system for natural disasters. Moreover, the stabilization of livelihoods through enhancing opportunities for micro-grant mechanisms and establishing information sharing and collaboration systems between communities through participation in workshops are being promoted.

For example, a participatory agrometeorology workshop was held to teach how to choose means of livelihood, including selecting appropriate agricultural crops and livestock based on weather information (past data and future forecast) according to each region.

Such efforts have strengthened the capacity of both representatives of women who live in inland and coastal rural areas of Guyana that are vulnerable to flooding and drought, as well as leaders of the Ministry of Agriculture. Based on the experience they gained from the workshop, some women started planting vegetables in their home gardens. There were about 450 participants of the workshop in the first year of the project, and the number of participants has continued to increase steadily thereafter.



A woman who started a vegetable garden in her home after joining a participatory agrometeorology workshop (Photo: UNDP Guyana)

Tajikistan

(1) Promotion of Inclusive Education for Children with Disabilities in Dushanbe

(2) Promotion of Inclusive Education (IE) for Children with Disabilities in Hissar

Grant Assistance for Japanese NGO Projects

((1) January 2014 - February 2017, (2) June 2017 - (ongoing))

In Tajikistan, many children with disabilities are unable to attend school or receive education that is considerate of their disabilities due to traditional thinking about children with disabilities and inadequate school admissions systems. In order to deal with this situation, the Association for Aid and Relief, Japan (AAR Japan), as the only Japanese NGO operating in Tajikistan, has been implementing projects from 2014 with the aim of promoting “inclusive education” that enables all children, regardless of whether or not they have disabilities, to study at mainstream schools in their communities while receiving consideration for the characteristics and/or disabilities of each child.

Initially there were some people opposed to admitting children with disabilities to schools. However, understanding towards inclusive education gradually spread by promoting various initiatives, such as



Learning sign language in an equipped resource class for children with disabilities (Photo: AAR Japan)



A student with disabilities and her mother using the renovated entrance ramp with a donated wheelchair (Photo: AAR Japan)

development of barrier-free renovations of schools, establishment of resource classes for children with disabilities where they can receive appropriate learning support and occupational therapy, training for teachers, and awareness-raising activities for parents and community residents. Today, many children with disabilities are enrolled in schools, and even parents of children without disabilities are saying that it is a good thing that children with disabilities are now able to attend schools with their children and that their children have become more kind and considerate of others.

In the capital city of Dushanbe, a total of 230 children with disabilities have been able to attend schools through a three-year project. Even after the completion of the project, a group of local people there opened the country's first cafe where children with disabilities are able to work. In this way, these initiatives and support for children with disabilities have been steadily taken up by the local people and are expanding.

Papua New Guinea

Assistance to the Papua New Guinea Defence Force Military Band Dispatch of JICA expert on Capacity Development of the PNG Military Band (March 2017 - March 2019) Grant Assistance for Cultural Grassroots Projects (August 2017)

Public
nomination

In November 2018, Papua New Guinea hosted the Asia-Pacific Economic Cooperation (APEC) Summit for the first time as the chair in its capital, Port Moresby. On the occasion of the gala dinner, the Papua New Guinea Defence Force (PNGDF) Military Band performed to welcome heads of states upon their arrival at the venue. When Prime Minister Abe and his wife arrived, the Japanese children's song "Furusato" was performed to welcome them.

Japan has been providing assistance to the PNGDF Military Band since it was established in January 2017. As part of Japanese assistance to the government of Papua New Guinea, which served as the APEC Chair in 2018, Japan supported the Military Band to help them perform at a series of APEC events. When the Military Band was first formed, most of the members could not read a musical score, and it was their first time even holding wind instruments. However, through Japan's assistance, the Military Band drastically improved their skills, and became capable of performing at official APEC events in less than two years.



The Military Band performing at the Japanese Ambassador's residence in Papua New Guinea (Photo: JICA)

Since January 2017, training teams of the Japan Ground Self-Defense Force (JGSDF) Central Band were dispatched to Papua New Guinea over ten times to provide music lessons for several weeks.

Moreover, in March 2017, Mr. MIZUSHINA Katsuo, a JICA expert and a former leader of the Japan Air Self-Defense Force Central Band, was dispatched to Papua New Guinea to provide technical assistance on performance in coordination with the training provided by the JGSDF Central Band teams for two years. A set of new musical instruments was also provided through the Grant Assistance for Cultural Grassroots Projects, and a set of used instruments was donated by Sendai Ikuei High School, which has a sister school in Port Moresby. In addition, the Japanese government held a nationwide composition contest in Japan and presented the Military Band with "March Port Moresby," a march to be performed at APEC official events. This march is still played at various official events.

Through the support from Japan, the Military Band actively continues to perform while regularly receiving music lessons from the JGSDF Central Band even after completion of the JICA expert dispatch period. In October 2019, the Military Band was invited to Sydney to participate in the Royal Edinburgh Military Tattoo, a showcase for military bands from around the world.

As can be seen from the fact that the tremendously improved Military Band is loved by the people of Papua New Guinea, as well as expanding its fields of activity, it is considered as one of the achievements of Japanese assistance on human resource development.



JICA expert Mizushima giving instructions to the Military Band on their performance (Photo: JICA)

Myanmar

Enhancing Comprehensive School Safety in Collaboration with Community in Hinthada Township

Grant Assistance for Japanese NGO Projects (March 2018 - (ongoing))

Public
nomination

The Nabegon village, located in the Hinthada Township of Myanmar, has been flooded for months in the rainy season when the water level of the neighboring Ayeyarwady River rose. There was no safe shelter from flood waters although the water level could reach as high as two meters, and the old wooden building of the local school, which was easily affected by floods, made it often impossible to continue classes.

In response, SEEDS Asia, a non-profit organization engaged in capacitating people and communities to be more resilient to disasters, constructed a "school-cum-shelter" made with reinforced concrete and equipped with raised floors to ensure continued education opportunities and protection of the village residents during floods. This facility is intended to be used as a center for educational and community activities in normal daily life, and is designed to maintain spaces for conducting classes while accommodating evacuees when a flood hits the village. The facility's basic concept of ensuring the health and safety of children while being disaster-resilient, as well as serving as a local disaster management hub, derives from the reconstructive primary schools once built in Japan as part of the reconstruction



The completed school-cum-shelter (Photo: SEEDS Asia)

projects following the Great Kanto Earthquake of 1923. Moreover, furniture such as unused desks, chairs, and blackboards donated by Tamba City, Hyogo Prefecture, due to a decline in

its population of schoolchildren, is now being used in Nabegon primary school. Volunteers gathered from all over Japan for the cleaning and transportation of the furniture from Tamba, and new relationships between the children of Tamba City and children of Nabegon village

were established through the exchange of video letters. Additionally, donations by citizens of Japan and Myanmar enabled the installation of a ramp for easier access by the elderly and children with lower limb disabilities to the facility.

In order to make effective use of this facility, SEEDS Asia set up a village disaster management committee consisting of 41 teachers and local residents. In this fiscal year, capacity building training is being carried out each month targeting Nabegon village as well as its surrounding 12 villages. This training aims at enhancing the disaster response capacity of the villages including with the cooperation of Kyoto Municipal Takakura Elementary School, which has a school management council operated by the community, and introducing good practices and the mechanism of collaborative activities between the school and its community.



Children of Nabegon village primary school studying with the school furniture donated by Tamba City in Hyogo Prefecture (Photo: SEEDS Asia)

Senegal

Project for Improvement of Irrigated Rice Productivity in the Senegal River Valley (PAPRIZ2)

Technical Cooperation (April 2016 - March 2021)

Rice is one of the staple foods of Senegal, which is a leading rice consuming country in West Africa. However, domestic rice production has not kept up with demand, and the country faces the challenge of improving its self-sufficiency rate.

Japan has been continuing its cooperation for supporting the improvement of rice self-sufficiency in Senegal, and to date, has been implementing a number of rice cultivation projects, particularly in the Senegal River valley in northern Senegal, where more than 70% of the country's domestic rice is produced.

Under this project, which has been implemented since 2016, Japan has cooperated closely with related organizations such as the Ministry of Agriculture and Rural Equipment and other central ministries and agencies to support the formulation of a medium- to long-term master plan for rice cultivation in the Senegal River valley. The Master Plan has been highly recognized by the Government of Senegal because it included reviews of agricultural development and technical



Instructing a women's group in the department of Dagana on the operation of a rice-polishing machine in September 2018 (Photo: JICA)



Conducting waterway compaction work as part of a farmer-participatory construction work in the department of Podor in January 2018 under the guidance of SAED (National Company of Development and Exploitation of Land in the Delta of Senegal River, and Faleme Valleys) extension officers who had received the leader's training on maintenance and management under PAPRIZ2 (Photo: JICA)

assistance in the Senegal River valley and recommendations for the Government, and emphasized the importance of ownership by the Senegalese side in the formulation process. Moreover, the Master Plan has greatly contributed to Senegal's rice cultivation policy, through its incorporation into the country's national rice development plan.

Furthermore, Japan is providing technical supports to improve rice productivity and quality in the departments of Dagana and Podor, which are especially active in rice cultivation in the Senegal River valley. Specifically, Japan is implementing community-based cooperation to achieve (1) appropriate maintenance and management of irrigation facilities, (2) efficient dissemination of rice cultivation techniques and introduction of suitable seed cultivation methods, (3) improvement of the quality of rice polishing, moisture management for paddy and polished rice, and other appropriate post-harvest treatment, (4) enhancement of the quality of agricultural machinery servicing, and (5) promotion of double-cropping. JICA experts dispatched from Japan to Senegal who go to the fields together with local farmers and provide technical assistance have gained a great deal of trust from the people who are involved in agriculture in these communities.

Bangladesh

Project for Livelihood Support to Bangladeshi Smallholder Farmers and Food Assistance to Displaced People from Myanmar

Grant Aid (Partnership with WFP) (January 2019 - January 2021)

Bangladesh has achieved remarkable economic growth in recent years. One of its important industries is agriculture, which accounts for around 40% of the country's total labor force and a large proportion of GDP. Meanwhile, it is necessary for small-scale farmers, who account for approximately 11 million out of approximately 40 million people living in poverty in Bangladesh, to secure cash income, and thus to improve their livelihoods by growing cash crops.

Moreover, since August 2017, many displaced persons have flowed into Cox's Bazar in southeastern Bangladesh from Rakhine State in Myanmar, and more than 900,000 people are still living in evacuation shelters. It is said that the diets of roughly half of the displaced persons are below the international poverty line^{*1}, and the nutritional conditions of displaced persons have been in a critical state in terms of not only amount, but also lack of dietary balance. Thus, urgent improvement is needed.

In response to this situation, Japan began to provide support in partnership with WFP from 2019 to transfer cultivation technologies for crops such as mung beans to small-scale farmers, and to provide assistance to enable displaced persons from Myanmar to purchase mung beans produced by small-scale farmers with electronic food distribution cards (E-vouchers^{*2}). Grameen euglena and euglena Co., Ltd., which have been engaged in the cultivation of mung beans using Japanese agricultural technology in Bangladesh since 2014, are transferring the technology in partnership with WFP.

Through this cooperation, approximately 2,000 kg of mung beans have been provided to the camps for displaced persons by December 2019. Moreover, it is expected that the livelihoods of small-scale farmers and the nutritional conditions of displaced persons will be



A displaced person purchasing mung beans at a grocery store in a camp for displaced persons where E-vouchers can be used (Photo: WFP)

improved through the training of around 2,000 people regarding techniques for cultivation of crops such as mung beans. Furthermore, users of the E-vouchers have said that it has enabled them to purchase beans, vegetables, and various other foods, and that the mung beans they ate for the first time were delicious. These voices from the E-voucher users show the achievement of this assistance.

^{*1} The World Bank sets the international poverty line at \$1.90 per day.

^{*2} A system that allows people to purchase food from grocery stores using prepaid cards.

Mongolia

- (1) Project for the Construction of Mongolia-Japan Teaching Hospital
Grant Aid (May 2015 - July 2019 (Completed))
- (2) Project for the Establishment of Hospital Management and
Medical Services at the Mongolia-Japan Teaching Hospital
Technical Cooperation Project (March 2017 - (ongoing))

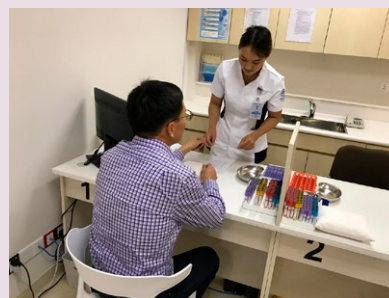
In Mongolia, young medical staff including doctors and nurses who have just graduated from university often engage in medical care service soon after their graduation without receiving sufficient clinical training and practical guidance, particularly those working in the countryside. The Mongolian National University of Medical Sciences, which is Mongolia's only national university for medical science, produces more than 90% of the country's medical personnel. While its education system has worked well, it was not adequate enough to serve as a center of practical education and research for students, as it did not have a university hospital.

In response to these circumstances, the Mongolia-Japan Teaching Hospital, the country's first university hospital, was constructed through grant aid from the Japanese government. The hospital is expected to provide advanced medical services and enhance the development of human resources as a center for high quality medical personnel training and research, contributing to the improvement of the health conditions of the Mongolian people.

In addition to the construction of the hospital, the Government of Japan has started a technical cooperation project supporting the



The Mongolia-Japan Teaching Hospital, constructed through grant aid (Photo: JICA)



A blood test being taken inside the finished hospital

Mongolian National University of Medical Sciences to operate and manage the new hospital properly from the preparatory phase of the hospital's opening. Experts from Japanese medical organizations including the medical department of Tokushima University, Ehime University, and other institutions, which have long-standing relationships with the Mongolian National University of Medical Science, have been taking a leading role in the guidance. The Mongolia-Japan Teaching Hospital has introduced Japanese-style patient-centered medical services and established the country's first patient support center, which alleviates the patients' and their families' concerns and offers consultations.

In October 2019, the operation of the hospital began with the start of outpatient care, and the hospital is preparing to set up an inpatient ward and an emergency service facility. Japan will continue to provide technical assistance to the hospital until all functions can be amply exerted to meet the high expectations of the Mongolian people toward the hospital.

Cambodia

Project for Realization of Sustainable Life Environment through mainly the Teaching Practical Environmental Education in Teacher Education College (TEC) Grant Assistance for Japanese NGO Projects (November 2018 - November 2019)

In Cambodia, rapid development in recent years has caused social problems in such areas as forest conservation, animal and plant protection, proper treatment of waste and drainage, and proper use of pesticides and chemical fertilizers. Meanwhile, the loss of the lives of many intellectuals including teachers during the period of the civil war from the 1970s to the early 1990s resulted in a shortage of human resources in the field of education.

In this project carried out by Nature Center Risen, a Japanese non-profit organization, at the Teacher Education Colleges (TEC) in Phnom Penh and Battambang province, it is expected that publishing textbooks for environmental education and developing human resources who can teach environmental education will lead to the spread of the environmental education practiced in Japan throughout Cambodia. Environmental education will actually be conducted as a general education subject worth one credit (30 hours per year) in the teacher training curriculum, and the teachers' capacity and quality of environmental education are expected to improve. Positive impressions offered by teachers include, "I also tried practicing environmental education at home and realized that it is a field directly connected to our lives."

In addition, this project implements environmental education at an eco-school in Battambang province for elementary school students and publishes environmental education books. This makes it possible to learn the importance of environmental conservation from early childhood,

and such initiatives are expected to contribute to the building of a sustainable society and the improvement of the living environment. (The photo on page 145 shows how children receive practical environmental education, feeling the connection between the nature of Japan and Cambodia by pretending to be migratory birds.)



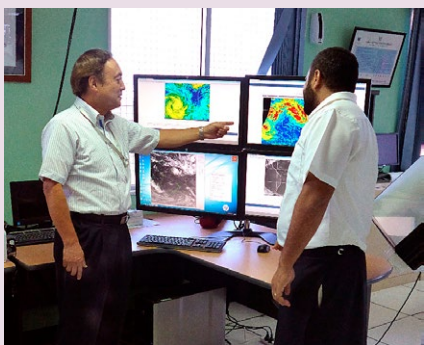
Teachers at a Teacher Education College making handmade environmental education materials using plants from the schoolyard as specimens (Photo: Nature Center Risen)

10 Pacific Island Countries*¹

Project for Reinforcing Meteorological Training Function of FMS Technical Cooperation Project (December 2014 - December 2018)

Since visiting the Fiji Meteorological Service (FMS) as a short-term expert in 1993, JICA expert Mr. KUROIWA Koji has been assisting in the field of meteorology in Oceania for 27 years. Utilizing the knowledge and experience he gained working at the Japan Meteorological Agency and the World Meteorological Organization (WMO), he has not only provided technical guidance to the meteorological stations in Oceanian countries, but also closely assisted the meteorological bureaus of those countries for many years, making it his life's work to act as a bridge between these meteorological bureaus and related organizations and companies, including JICA, the Japan Meteorological Agency, the WMO, other donors, and observational equipment manufacturers.

This steady assistance has borne fruit. FMS, which had limited facilities and human resources at the start of the cooperation, is now recognized by WMO as the hub of cyclone observation and forecasting in Oceania, and is contributing significantly to disaster risk reduction in the region. Moreover, FMS is scheduled to receive WMO accreditation as a center for training meteorological personnel in Oceania as well as a center for calibrating*² meteorological instruments.



Expert Kuroiwa, who has contributed to the capacity building of FMS and the meteorological bureaus of Pacific Island Countries for over 25 years (Photo: FMS)



FMS personnel explaining how to calibrate meteorological observation equipment to the staff of meteorological bureaus of various Pacific Island Countries during the regional training conducted by FMS (Photo: Expert Kuroiwa)

The “Project for Reinforcing Meteorological Training Function of FMS,” which was implemented over a four-year period starting in 2014, is one example of FMS-based capacity building of meteorological departments in Oceania. Under this project, firefighters in Nauru, which was the only country in Oceania that did not have a meteorological bureau, acquired weather observation and forecasting techniques through the training conducted by FMS, and the country began its first surface weather observations in December 2018. A former firefighter who took a leading role in this launch expressed his gratefulness for the assistance. “It was a difficult task to launch a new meteorological bureau, but the FMS personnel and JICA experts always helped and encouraged us.”

*1 The 10 countries are Fiji, Kiribati, Tuvalu, Vanuatu, Nauru, Tonga, Niue, Cook Islands, Samoa, and Solomon Islands.

*2 Calibration: Checking the current status (accuracy, functions, operation) of measuring instruments. This work is necessary in order to obtain accurate data.

Cuba

Economic and Social Development Programme (Provision of garbage compactors) Grant Aid (March 2017 - March 2020)

Cuba's capital city, Havana, has recently become a tourist destination that attracts people from all over the world, with classic cars crossing the streets of Old Havana, and its colorful colonial architecture. On the other hand, there has been a long-standing garbage issue in Havana, including Old Havana, with more than 1,800 tons of waste produced per day as of 2016. However, in the same year, the city had only 30 Chinese-made waste collection vehicles operating 24 hours a day, and they were not able to keep up with the pace of waste generation.

Against this background, Japan decided to provide Japanese-made garbage compactors through a grant aid project to solve the garbage issue in Havana, and by August 2019, all 100 vehicles arrived and were presented to Cuba. One of the features and advantages of Japanese garbage compactors is their ability to turn in a small radius, which enables them to enter the narrow alleyways of Old Havana to collect garbage. The waste collection with these Japanese garbage compactors is greatly improving Havana's urban environment. The vehicles can be found all around the city, and are now coming to be recognized not only by residents but also by tourists. People in Havana have remarked that the garbage is being collected more often than before, the vehicles are useful not only for the garbage issue but also for measures against infectious diseases, and that city beautification is

progressing thanks to the Japanese garbage compactors.

In November 2019, Havana was in a festive mood, marking the 500th anniversary of its founding. It is expected that Japan's strong presence will be shown by making the city more beautiful through its provision of garbage compactors.



A Japanese garbage compactor provided through the project operating in Old Havana (Photo: Japan International Cooperation System (JICS))

Ecuador

Math Olympics held at Elementary Schools in Quito JICA Volunteer Program (Senior Volunteers) [Primary School Education] (January 2016 - January 2019)

In June 2018, the Quito City Math Olympics was held for the first time, with participation of 3rd to 7th grade elementary school students, in cooperation with the education bureau of Quito City, Ecuador's capital, nine of the city's elementary schools and the JICA Ecuador Office. All students of the nine schools, totaling 5,699, participated in the preliminary round, and the representatives from each school, totaling 320, participated in the finals.

It all started a year and a half earlier, right after Mr. SATO Daisuke, a JICA Senior Volunteer, began his assignment in Ecuador. An officer of the Quito Education Bureau requested him to hold a Math Olympics in the city to motivate students to study mathematics. Mr. Sato did not, however, immediately respond to Quito City's request because he believed that the highest priority for motivating students was to elaborate and improve the teaching methods. He first conducted a total of 60 research classes at nine elementary schools in Quito City, and after feeling that the classes had become more fruitful, he decided that it was time to hold the Math Olympics.

The questions at the competition were created after in-depth discussions with other volunteer members in the education sector. They



Mr. Sato at the occasion of the Math Olympics (preliminary round) (Photo: JICA)



The award ceremony (the Math Olympics logo is on the back wall) (Photo: JICA)

chose basic questions for the preliminary round and advanced ones for the finals that test children's ability to tackle practical questions. The time duration for the final stage examination of certain grades was 75 minutes, which was almost 35 minutes longer than their ordinary classes. This was quite challenging for maintaining concentration, but every child worked hard to focus on the questions. Mr. Sato said that it made him feel reassured that the children's learning attitudes and motivation were gradually changing.

In addition, the competition provided individual awards at the finals and group awards based on the preliminary round so as to let all children feel good about participating. At the award ceremony, there were bright smiles on the faces of not only the award-winning children but also their mathematics teachers.

Some advanced students earned higher scores than expected. The education bureau of Quito City intends to continue the Math Olympics, and in fact, the 2nd Math Olympics were held in June 2019. This event is expected to lead to the improvement of education in the country.

Jordan

Project for the Construction of the Petra Museum

Cultural Grant Assistance (March 2014 - April 2019) / Technical Cooperation Project
(November 2015 - March 2020)

The UNESCO World Heritage Site of Petra, a huge area of ruins of the ancient Nabataean Kingdom* city surrounded by rocky mountains and also known as a filming location for the movie “Indiana Jones and the Last Crusade,” is the largest tourist destination in Jordan with approximately 800,000 people visiting each year. However, it faces numerous challenges. For instance, local residents were not familiar with the history or lives of the ancient people. The systems for preserving and managing archaeologically valuable relics excavated from the ruins were insufficient, and the opportunities to exhibit them were also limited.

Japan decided to build a new museum adjacent to the entrance to the Petra ruins through the Cultural Grant Assistance in order to improve the situation, stimulate tourism in the Petra region, and promote the development of the local community. Japan has also provided assistance for the museum's opening through the “Project for Community-based Regional Tourism Development in Petra Region.” This is a JICA Technical Cooperation Project aimed at the development of human resources to run the museum and take on the



The Petra Museum (Photo: JICA)



Visitors viewing exhibits inside the Petra Museum (Photo: JICA)

comprehensive development of the Petra area.

In April 2019, the Petra Museum opened with the attendance of Crown Prince Hussein. Currently, approximately 300 relics from the Stone Age are displayed in the museum, and 6 video clips and 22 touch panels produced through Japanese technical cooperation provide visitors with various information. These have resulted in allowing not only visiting tourists but also local residents and students to learn about the history and nature of Petra, as well as the people that lived in the era of the Nabataean Kingdom. The Petra Museum is expected to contribute to the promotion of tourism—one of Jordan's main industries—and become a center for educational activities aimed at deepening understanding of the country's history and culture as well as preserving cultural heritage.

* It is a kingdom of the Nabataeans, which achieved the height of prosperity around 2,000 years ago and flourished through trade particularly in Petra.

Due to rapid population growth and concentration of major industries, the urban area of Abidjan, the city with the largest economy in Côte d'Ivoire, has expanded in a disorderly way, leading to chronic traffic congestion and other urban problems. In response, from February 2013 to November 2014, Japan implemented the "Project for the Development of Urban Master Plan in Greater Abidjan (SDUGA)," a technical cooperation project to assist in developing Abidjan as a sustainable city. The Urban Master Plan in Greater Abidjan formulated by the project indicates priority projects such as policies for appropriate urban utilization and an urban transportation design for 2030. In March 2016, the government of Côte d'Ivoire positioned the Urban Master Plan in Greater Abidjan as the official city plan for the country. The Plan has been highly valued not only by Côte d'Ivoire, but also other donor countries and international organizations. Various development donors, including the United States, France and the African Development Bank (AfDB) are implementing priority projects identified by the Plan.

Japan has since continued to provide assistance toward the realization of the Plan, and the "Project for Improvement of the Japan-Ivorian Friendship Intersection" is one of them. This grant aid project achieved the grade separation of the targeted intersection, which is located at a transportation hub that connects the airport, the port, and the business district. Full-scale construction began in 2017,

and the first phase of construction completed by the end of 2019. Furthermore, in the second phase of construction, JICA plans to build a bidirectional flyover that will facilitate two-way traffic between the city center and the suburbs, allowing the passage of more vehicles.

By significantly reducing traffic congestion in Abidjan, the project is expected to strengthen the city's role as a hub in West Africa and further increase its economic vitality.



The Japan-Ivorian Friendship Intersection under construction (Photo: JICA)

Kenya

Ngong Road Safety Workshops

JICA Volunteer Program (December 2018 - March 2019)

Chronic traffic congestion in Nairobi, the capital of Kenya, is a major obstacle to the economic growth of the country. In order to improve the situation, Japan has been assisting projects* for expanding and upgrading of Ngong Road, the most congested one in Nairobi, and has been contributing to easing city traffic since 2012.

At the same time, as a result of the increase of the traffic speed due to the improvement of road conditions, the risk of traffic accidents, particularly for children going to schools near to Ngong Road, has been increasing. Pedestrian crossings, traffic signals and signs were installed under the Project for Dualling of Nairobi-Dagoretti Corner Road C60/C61, however, it is difficult to deliver proper treatment to traffic accident victims since emergency medical service is underdeveloped in Kenya. Approximately 13,000 people have died every year due to traffic accidents in the whole country. Appropriate measures should be taken promptly.

In order to improve this situation, a group of interested members of the Japan Overseas Cooperation Volunteers and the JICA experts in transport policy in Kenya, together with Kenyan staff from the National Transport and Safety Authority, planned and held a road safety workshop for the teachers of elementary schools located along the road in December 2018. In addition, in March 2019, in response to a request from the teachers of one of the elementary schools participating in the workshop, they also held a workshop for the children at the school.

One of the volunteers told that, as a result of the workshop run with the teachers, children who had answered "Time to cross!" when shown a yellow traffic light at the beginning came to understand the



A teacher explaining a traffic signal at a traffic safety workshop for children (Photo: JICA)

importance of looking both ways before crossing the road, something taken as a given in Japan. Going forward, Japan will continue to promote not only infrastructure development, but also assistance with the people in Kenya.

* "Project for Dualling of Nairobi-Dagoretti Corner Road C60/C61" (grant aid project) was implemented from 2012 to 2018. "The Project for Dualling of Nairobi-Dagoretti Corner Road C60/C61 (Phase 2)" scheduled from 2018 to 2020 is currently under implementation.

Thailand

Community-based Comprehensive Elderly Care Project in Chonburi Province, Thailand -Project in Saensuk Municipality as a Pilot Area- JICA Partnership Program (Special Category of Local Government Type) (January 2016 - December 2018)

Aging population is becoming a serious problem not only in Japan and other developed countries, but also in developing countries that are growing economically. In such developing countries, aging is progressing more rapidly than in developed countries, and there is a need to develop human resources in caregiving and nursing for elderly people. Thailand is a typical example. Despite already becoming an aging society in 2014, and seeing the proportion of its population aged 65 or over rise to 10.7% by 2017, the country is still extremely deficient in caregiving personnel and inadequate in human resources development.

The Saku region, located in the eastern part of Nagano Prefecture, has been actively engaged in rural and regional medical care since around 1947, and has developed a comprehensive local system that provides care for the elderly. After students from Saku University began holding international nursing seminars at Burapha University in the municipality of Saensuk in Chonburi province in southeastern Thailand in 2014, the two universities started academic exchanges. This further developed into an exchange between the municipality of Saensuk and the city of Saku, and the project began in 2016. Saku City office partnered with hospitals and caregiving facilities in the city to receive and train nurses and health volunteers (the Thai equivalents of Japanese home care workers and caregivers) from Saensuk and dispatched short-term experts from Saku to Saensuk to conduct trainings.

Health volunteers started to conduct home care visits while respecting Thai traditions such as local temple assemblies and family-provided elderly care. Another goal of the project is for the nurses who were trained in Saku to become the key persons in Saensuk who will contribute to the establishment of a local nursing and caregiving system.

Through these activities, health volunteers in Saensuk have

improved their ability to develop community activities as well as their care worker's skills, and the frequency of home care visits has increased significantly from once per week before the project started to four times per week after its commencement, contributing to the improvement of the situation of elderly care. In addition, these activities have provided an opportunity for stakeholders in Saku to reconsider the home care system in the Saku region through experiencing the spirit of mutual help and mutual assistance between neighbors in Thailand. Also, the "technology transfer of the Saku city health care model to Thailand" has become widely known and is well received in Japan and abroad. It is expected that the Saensuk model will spread throughout Thailand in the future.



Health volunteers in Saensuk, who have learned Saku's care techniques, helping a local elderly man rehabilitate (Photo: Ms. Ratana Chuklin, Project Assistant)