E02 Expands Outreach and Services with JICA Assistance

The Kaduwela to Kadawatha section of Colombo Outer Circular Expressway (E02) is the latest transport sector project financed by JICA towards enhancing economic development of Sri Lanka. JICA provided financing for both the Kottawa-Kaduwela and Kaduwela-Kadawatha sections of the E02 toll expressway. The Road Development Authority under the Ministry of University Education and Highways implements the Outer Circular Expressway project.

The first section of E02 was opened to the public earlier with a major interchange at Kottawa and a temporary interchange at Kaduwela east (Kotalawala), which is now part of the main Kaduwela interchange. In order to provide better access to the expanding administrative capital, an additional interchange was constructed subsequently in Athurugiriya.

The Outer Circular Expressway extends the Southern Expressway (E01) northwards from Kottawa Interchange. The E02 will also allow vehicle speed up to 100km/h, similar to E01, of which 66km were financed by JICA. Once the 3rd section from Kaduwela to Kerawalapitiya is completed, the Outer Circular Expressway will link Southern Expressway and Colombo Katunayake Expressway. It will then act as a North-South artery for Colombo bypassing the inner city area, thereby easing traffic congestion in the city.

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Project News

To construct the section from Kadowula to Kadawatha, JICA provided concessionary loans to the value of JPY 37,406 million under Special Terms for Economic Partnership with an interest rate of 0.2% and 40-year repayment period. This section includes 8.9km of 4-lane expressway, two interchanges (Kadowula and Kadawatha) including toll plazas and facilities, and a 6-lane expressway bridge across Kelani River in Kadowula. The 2 outer lanes of the bridge have been designed to be accessible to traffic outside the expressway, as a further measure of easing congestion on the Kadowula bridge upstream. Located in close proximity to Biyagama EPZ and Sapugaskanda Industrial zone, the K2 is also expected to improve freight transportation to and from these zones.

In order to enhance the expressway use and operation, JICA also provided grant assistance to establish Intelligent Transport System (ITS) facilities on the expressway network. The 940 million JPY worth grant included traffic counters and rain gauges for data collection, traffic monitoring and control center for data monitoring and management, and Variable Message Signboards (VMS) at roadside and access roads for information dissemination. These facilities are now operational between Kadowula and Godagama.

In addition to financing nearly 50% share of the operational expressways in Sri Lanka, JICA is also financing the second new Kelani Bridge for easing congestion at Peliyagoda, the northern entry point to Colombo city. JICA’s recent assistance to transport sector in Sri Lanka include technical cooperation to formulate the urban transport master plan for Colombo metropolitan area and feasibility study for monorail system.

Outer Circular Expressway – Phase II consists of viaducts in the flood-prone areas

ITS control center in Gelanigama
Water for the Needy at Beruwala

JICA will provide Rs. 108 Mn grant to Sri Lanka to construct a 2,000 cum pre-stressed concrete ground reservoir at Beruwala, as a pilot demonstration project for the National Water Supply and Drainage Board.

This is the first time that the construction of the pre-stressed tank with the air dome is being undertaken in Sri Lanka, although it is common in Japan. They are quick to construct, uses minimum land, is cost effective and are highly durable. The construction of the tank is expected to be completed within a six months period. The project will ensure technology transfer by providing training in Japan to engineers of the Water Board so that they can design and construct PC tanks with the air dome technology in future.


Project Area: Beruwala, Aluthgama and Bentota coastal towns in the Kalutara district of the Western Province.

Project Benefits: About 192,000 residents of Beruwala, Aluthgama and Bentota will receive 24/7 supply of pipe born safe water with 15,000 new connections.

Issue to be Addressed: currently only 17,000 consumers can receive pipe born water supply/per day: Beruwala: 12 hrs; Aluthgama: 4 hrs; Bentota: Few hours on alternate days. Dug wells are saline and existing wells are located close to septic tanks.

The Need: To increase the current storage capacity of 1350m³ at Beruwala by additional 2000m³
Replanting Coconut to Regain Rural Livelihoods

JICA Project rehabilitates the North

Coconut trees are multifunctional and a sustainable food crop with many uses for every part of the tree. The decades of war decimated this much used tree that grew in plenty on the rich arable lands in Northern Sri Lanka. As a major component of JICA’s Rural Livelihood Development Project, replanting of coconut trees commenced in Puthukkudiyiruppu in the Mullaitivu district in 2012. The aim is to ensure sustainable livelihoods for the resettled farmer families in the emerging Kilinochchi and Mullaitivu districts.

JICA is one of the major partners for resettlement and rehabilitation of conflict areas in Sri Lanka. This five year technical cooperation project includes many components such as construction of agriculture wells in addition to the provision of coconut seedlings, papaya plants, etc. for cultivation.

JICA has established a coconut oil processing factory in Iranapalai in the Puthukkudiyiruppu area. The women of the district have been trained to use the machinery in the factory. Coconut oil with its regained place in the market is a much-valued commodity used not only for cooking but also in cosmetics. It is a nourishing hair oil used daily by Sri Lankans, who attribute many health-giving qualities to it.

From time immemorial coconuts have been part of the Sri Lankan lifestyle. It is used daily in food preparation with its milk in curries, the scraped coconut in salads, chutneys and sweets, the oil in frying and the husks in the fireplace. Sri Lankans have made use of every part of the tree for domestic as well as industrial use. The dried leaves are woven and used in thatching roofs of rural houses and the production of coir rope from the fibre of coconut husks is a cottage industry. The flower buds grace many religious and celebrative occasions and an endless stream of products and artifacts are produced from every part of the tree.
JICA’s focus on environmental issues has become more intense recently, in parallel with the increasing challenges to the environment brought about by climate change. Over the last few decades, JICA has intervened on various occasions to support the Government of Sri Lanka’s initiatives to safeguard the environment. A strong advocate of sustainable development JICA sees solid waste management and sewerage as a very important component of environmental protection.

JICA, under its development cooperation scheme is currently implementing multiple programs for solid waste management in Sri Lanka. These include working on ways to improve waste landfill sites, waste recycling and composting, monitoring water quality of major water bodies, data collection on solid waste management for improving and developing current techniques, raising awareness of issues and the compilation of a Strategic Master Plan for the Sewerage Sector.

Improving Waste Landfills

JICA is implementing a five-year project in cooperation with the National Solid Waste Management Support Center (NSWMSC) to manage landfills in the country titled, “Development of Pollution Control and Environment Restoration Technologies of Waste Landfill Sites, Taking into Account Geographical Characteristics of Sri Lanka.”

Organic Fertilizer Project at Kundasale, Kandy

Producing organic fertilizer by recycling garbage and the related primary verification survey will produce good quality organic fertilizer at a screw type composting plant that is being constructed at Kundasale, Kandy.

The Project for Monitoring the Water Quality of Major Water Bodies

This Technical Cooperation project by JICA aims to build and strengthen the capacity of the Central Environmental Authority (CEA) and its regional branch offices in the Kelani river basin, on water quality management.

Data Collection Survey on Solid Waste Management in Sri Lanka

A five member JICA mission conducted a data collection survey on Solid Waste Management in Sri Lanka, from August 2015 to February 2016, at the request of the Central Environment Agency.

JICA Volunteers’ role in solid waste management activities

Japanese volunteers attached to local authorities have been
Mr. Keisuke Ikuta, JOCV, with school children in an environment cleaning activity in Matale

actively supporting solid waste management and have complemented programs conducted by relevant host institutions at grassroots level.

**Organic Composting by the Takakura Method**

JICA introduced the Takakura method, which is a fast, easy and cheap organic waste composting method that produces compost in two weeks using local microorganisms as accelerators.

**Kandy City Waste Water Management Project**

The project scope includes the construction of a Wastewater Treatment Plant (14,000 m³/day capacity); the main pump house and supply of operation and maintenance equipment; establishment of a sewerage collection system, and providing connections and facilities for the densely populated low-income areas of Kandy.

The Project for the Strategic Master Plan under Sewerage Sector

JICA is supporting the preparation of a strategic Master Plan for the sewerage sector to:

- Compile a National Sewerage Master Plan for Sri Lanka under the Sewerage Sector.
- Prepare a City Sewerage Master Plans for prioritized cities.
- Conduct Feasibility Studies for the selected cities.

Capacity development in the sewerage sector.

**Waste Water Treatment Plant using Ozone Oxidation Method for Milco Digana Factory**

This verification survey intervention will improve the wastewater management capacity of the Milco Factory at Digana by adopting the Ozone Oxidation method using Swirling Jet technology.
Sri Lanka Streamlines Weather Tracking

JICA builds sustainability into weather reporting

During the last half a century over 90 percent of the natural disasters that the island has suffered from were weather related calamities such as floods, droughts, landslides triggered by heavy rainfall, lightening and strong cyclonic winds. Cumulatively calculated the number of people in Sri Lanka who have been affected by these weather related disasters is a staggering 13 million. The need to predict and issue accurate weather forecasts and warnings and/or alerts is a critical need as extreme climate related natural hazards are becoming more frequent with global warming.

JICA in cooperation with the Department of Meteorology (DoM) is now implementing “The Project for Improving Meteorological Observation, Weather Forecasting and Dissemination” in Sri Lanka. The project commenced in September 2014 to achieve the overall goal of disseminating information by DoM that will be well utilized by the public and the disaster related organizations.

It goes without saying for the information to be relevant and useful to the target audience it has to be accurate and timely. “Accuracy invariably depends on the precision of observation equipment used to collect data,” says Dr. Masahito Ishihara, JICA Volunteer Senior Expert. He is in Sri Lanka on a two-year assignment with the DoM. “Equipment needs to be calibrated according to international standards, and the project has taken several steps to improve the maintenance and calibration capability of the DoM.”

The project is preparing new manuals containing measuring parameters and methodology for periodic maintenance and calibration of observation equipment. In addition rules for observing and recording data is being revised, new standard instruments to calibrate equipment is being procured and Dr. Ishihara has commenced a training program for staff at DoM.

The vertical tripod like structure on the grounds of the DoM is an Automatic Weather Stations (AWS) and collects data every 10 minutes and contributes to improving the weather observation capacity. The project has installed such 38 AWSs across the island and 28 of these are currently active.

The project aims to strengthen the meteorological data communication network by transiting from the unstable VSAT satellite communication system to the IP-PVN system operated through ground communication networks. This includes the implementation of the connecting tests to ensure communication line stability and training of DoM staff as well as implementing the technology transfer and support for the transition.

In another effort to bring Sri Lanka in line with other

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countries the project will procure a new binary data format GTS message switching system as recommended by the World Meteorological Department.

Dr. Ishihara also explains four other efforts by the project to bring improved forecasting and an understanding of weather patterns to mitigate disasters in Sri Lanka.

Of these, the first is to shift from qualitative forecasting done at present to quantitative forecasting. This will entail the use of Grid Point Values and the Numerical Weather Prediction (NWP) using the observation date of the AWSs. NWPs use mathematical models of the atmosphere and oceans to predict weather based on current weather conditions.

The second effort will be a review of the criteria for advisory/warning of impending disasters to improve them. The changes will make it possible to give warnings for specified areas of the island for heavy rainfall, strong winds and lightening.

Updating the DoM website to a more dynamic animated website is also in the project plans. This will enable the visualization of textual information, provide easy to see weather information, advisories and warnings and make the website compatible to be accessed by smartphone users. Training of DoM staff to upload information and products as well as in switching over to the new system will also be carried out by the project.

Additionally, it is heartening to learn that annually 30,000 school children make visits to the DoM. A Japanese expert team is working within the project to produce animated cartoons to teach school children disaster awareness and how best to respond during a calamity.

Producing the daily, monthly, and seasonal forecasts issued by DoM involves a whole complex procedure. Data sets are gathered through 24/7 observations; online satellite maps of Japan that shows the weather patterns around Sri Lanka are reviewed (these get updated every 10 minutes) and comparison are made with previous data sets. The experience and skill of staff comes into play when it comes to interpreting the data to make accurate forecasts.

The Japanese Consultant Team consists of 6 Japanese experts and Dr. Ishihara is the resident long-term expert. Two short-term experts from the Japan Meteorological Agency (JMA) visit 4 times a year for two weeks to work with the project, strengthening the relationship between DoM and JMA.
Achievements of Two 20 Year-old JICA Projects

The Dental Hospital in Peradeniya and the Mahaweli System C Demonstration Farm are two examples of successful Japanese interventions in Sri Lankans.

**Dental Hospital (Teaching), Peradeniya**

A Japanese grant aid project in 1998, upgraded the Dental Hospital (Teaching) in Peradeniya, constructing new physical facilities and providing modern equipment for teaching, patient care and research. “This hospital is an invaluable gift from the Japanese people to Sri Lanka and we are still using 20 year old equipment with care to cater to the patients as well as the students of the Faculty,” says Prof. W M Thilakaratne, Dean and Professor of Oral Pathology, Faculty of Dental Sciences.

In addition staff members, academic and non-academics were trained in the proper use of the facilities through a complimentary Technical Cooperation project. The treatment of more than 80,000 out patients per year provides teaching and learning opportunities for the faculty. It is the only hospital running under the Ministry of Higher Education in Sri Lanka. “We are proud to say that no other hospital in Sri Lanka provides similar dental services,” said Prof. Thilakaratne.

**Mahaweli System C Demonstration Farm**

The second example is the Mahaweli System C Demonstration Farm in Dehiattakandiya, Mahiyanganaya. The experimental and demonstration farm and research centre was set up in Unit 1 of Block 302, system C in the existing Mahaweli Ganga Development Project area. Unit 1 is considered to be the most suitable of all designated development area for paddy cultivation and thus the most appropriate for experiments on and extension of improved rice production technology. The Grant Aid Programme of the Japanese Government constructed and provided facilities for the Pilot Demonstration Farm in System C of the Accelerated Mahaweli Programme. Further, the project undertook the rehabilitation of the vital irrigation system necessary to increase the yield and the income of farmers.

The Japanese expert’s knowledge is still valued and applied at the farm and most of the current senior officers were trained under this project. “The farm provides 100 percent guaranteed quality rice seeds to meet the entire demand of the Mahaweli system of paddy farming,” said Mr Sudu Banda ex counterpart of the project and Deputy Director of Agriculture, Mahaweli Authority of Sri Lanka. “Sri Lanka’s first rice processing machine was established under this project,” he added.

Currently the farm is running as an agricultural training center and 3 batches with a total of 120 students have already completed their training and received National Vocational training level 4 (NVQ4) certificates. The aim of the training centre is to upgrade the level of teaching to NVQ5 level.
Ms. Yoko Kawase is a marketing specialist attached to the Palmyrah Development Board in Jaffna since August 2014, as a JICA Volunteer. She provides technical instructions to the board as well as to the small-scale producer groups. She focuses on improving the quality of the end products, promoting new innovative inventions and maintaining attractive sales outlets.
JICA Issues Landslide Mitigation Project Review

JICA’s Technical Cooperation for Landslide Mitigation Project commenced on the 14 October 2014. A massive landslide on October 29, 2014 in Koslanda in the Badulla district resulted in an aerial survey for the first time in Sri Lanka. In addition the project conducted a field survey in November and interviews with the affected persons and related local governments in February 2015.

Dr. Asiri Karunawardena, Director General National Building Research Organisation presented the findings in a paper titled “Disaster Management in Sri Lanka” at the International Sabo Symposium 2015 in Sendai.

The 6 months review report of the project is now available on the Internet at: http://www.jica.go.jp/srilanka/english/office/topics/150624.html.

Helping Hands for the Disabled in Anuradhapura and Ratnapura

Over the years many JICA volunteers have enthusiastically supported and conducted several programs for the differently-abled in Sri Lanka. Two such volunteers are Ms. Aiko Kodaira, a volunteer physiotherapist who works in Anuradhapura and Ms. Serena Echizen, who works with differently-abled children at the Child Guidance Center (CGC) in Ratnapura.

Ms. Kodaira’s administers physiotherapy and conducts physical exercise programs for the elderly and the young. Several local volunteers have learned basic skills from her and are able to assist others in need of such help.

Ms Echizen supports CGC services such as a pre-school for differently-abled children, conducting games, physical exercises, and story telling. She has recently introduced Japanese 5s principles aimed at creating a better work environment at the CGC.
Fun and Learning at JICA Children’s Day

JICA Sri Lanka office opened its doors to the children of staff members on 25 August 2015, and the day turned into a fun filled learning experience for them. The children were free to observe the working environment and sit and twirl around in their parent’s chairs. Senior staff members were at hand to answer any questions they had.

The children also visited the JICA funded project at the Meteorology Department and they were briefed on how the daily weather forecasts were compiled.