

Every Drop Matters

Empowering Communities through Water

July 2013

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Empowered lives.
Resilient nations.

Editorial

Kushani De Silva, UNDP Sri Lanka

The “Pavithra Ganga” programme of the Ministry of Environment & Renewable Energy started in 1998 to promote best practices towards preventing water pollution in Kelani river and engaging communities through awareness and education. It was implemented by the Sustainable Development Unit of the Ministry. In 2012 the programme partnered with UNDP sponsored “Every Drop Matters (EDM)” initiative to work on the Kelani River Basin in partnership with the Ministry of Agriculture, Minor Irrigation, Industries & Environment (western province), Board of Investment (BOI), Central Environment Authority (CEA) and National Water Supply and Drainage Board (NWSDB). Private sector partners such as Coca-cola, Holcim, Orange, Expo Lanka, Singer & Mas Holdings have also joined with this initiative at present. Coca-cola is the leading partner of Every Drop Matters global partner.

EDM is an innovative multi-stakeholder participatory initiative to protect environment using “water as the central theme” to engage stakeholder communities. It focuses on “empowering communities” to maintain water quality in surface water bodies such as Kelani River by minimizing the potential pollution. EDM promotes knowledge and awareness on water quality and quantity and related health issues while promoting appropriate technologies and best practices among communities, schools and Local Authorities.

Promoting participatory decision making in conserving Kelani River is conducted targeting local authorities, the general public, school children & private sector partners. As a result, mechanisms for solid waste collection, water quality monitoring, water quality testing, reducing industrial pollution are being promoted while technological solutions such as bio gas production and recognizing champions prioritized.

A team with representatives from Ministry of Environment & Renewable Energy, Western Provincial Ministry of Environment, NWSDB, BOI, CEA, Local Authorities and UNDP along with relevant private sector partners working together towards conserving Kelani River basin which serves as the habitat for 25 % of Sri Lankan population.





KELANI RIVER FACTS

- The Kelani River is home to more than 25% of the Sri Lanka population.
- It provides about 80% of the drinking water to Greater Colombo
- Provides livelihoods to many via small, medium, and large scale industries, agriculture, and services.

“The three year project entitled “Empowering Communities through Water” aims to mobilize multiple stakeholders to protect the natural resources, beauty and quality of the Kelani River basin ecosystem.”



Partnering for Environmental Good Governance

Sri Lanka has more than enough regulations to protect the environment. However, the enforcement and compliance is the weakest link. Environmental technologies to prevent pollution of air, water and soil etc. are known for most cases. Oftentimes communities complain about the quality of water in rivers and streams associated health issues. Typically the local authorities and regulatory agencies are blamed for not providing the necessary services. Some of the citizen’s and institutions’ duties and responsibilities to safe guard the environment are also ignored.

The Every Drop Matters Sri Lanka (EDM-SL) is making a difference by engaging multiple stakeholder groups to come together and improve the environmentgovernance.The objective of EDM SL is touse innovative approaches and strategic entry points using “WATER” as the central theme. The objective of EDM SL is to use a watershed approach to address a multitude of environmental issues (agricultural, industrial and urban issues). The three year project under EDM entitled “Empowering Communities through Water” aims to mobilize multiple stakeholders to protect the natural resources, beauty and quality of the Kelani River basin ecosystem.

The Kelani River land use is rapidly changing and the potential exists for environmental pollution to reach irreversible conditions, if the current land use practices continue. Socio economically,the Kelani River Basin is the home to more than 25% of the Sri Lanka population; provides about 80% of the drinking water to Greater Colombo and provides livelihoods to many via medium to large industries, agriculture and services.The project is creating the enabling environment for government agencies, private sector organizations, non-governmental organizations, schools, universities, and communities to work together towards sustainable environment management and also work as an integral part of the National ‘Pavithra Ganga’ programme of the Ministry of Environment and Renewable Energy.

As of July 2013, after eight months of implementation, the project has successfully engaged 14 local authorities in the Kelani River Basin, Ministry of Agriculture and Environment of the Western Province, Board of Investment, Central Environment Authority, and National Water Supply & Drainage Board. One important element of the programme is the endorsement by the private sector to partner with the project. Conservation and preservation of the quality of the Kelani River is everyone’s success story.



KEY ELEMENTS

- Local authorities provide the collection system to bring the sorted waste to a central location or put a sorting system in place.
- Private sector service providers take the responsibility for the proper disposal of the collected waste, free or at a nominal cost.
- Communities and volunteers understanding the importance and potential impacts of e-waste, CFL bulbs and unused medicine to ensure the sustainability of the system.

“The model initiative collected 15 kg of polythene, 42kg of e-waste, 30 kg of PET (Polyethylene terephthalate) and 59 CFL bulbs within a three hour period.”



A Model Waste Management Programme: Cradle to Grave

Current practices of unscientific land filling of mixed waste management have become an environmental hazard with extensive public health and safety implications. Already signs such as skin infections, dengue, increase in cancer rates, and other unidentified diseases are taking the quality of life away from people while adding an enormous burden on national budgets. Long-term impacts on surface and ground water and soil pollution are not known.

Typical mixed waste consists of:

- Recyclable material: paper, glass, plastic, metals, fabrics, cloths & batteries...
- Biodegradable waste: food and kitchen waste, green waste, paper (can be recycled)...
- Inert waste: construction and demolition waste, dirt, rocks & debris
- Electrical and electronic waste (E-waste) - electrical appliances, TVs, computers, screens...
- Composite waste: waste clothing, Tetrapacks, waste plastics such as toys...
- Hazardous waste including most paints, chemicals, light bulbs, fluorescent tubes, spray cans, fertilizer
- Toxic waste: pesticides, herbicides, fungicides
- Medical waste: unused medicine, needles, infectious waste...

The EDM Sri Lanka project works with fourteen Local Authorities in the Kelani River Basin area with the overarching objective of improving the environmental quality of the Kelani River Basin.

A pilot waste management programme was conducted in the Biyagama local authority area on the World Water Day (March 22, 2013) to establish the procedure, approach and to learn how to mobilize different stakeholder groups to manage three types of wastes, namely, used CFL bulbs, Electronic Waste (E-Waste) and unused medicine.

The companies having facilities to dispose different types of wastes, namely, PET bottles, polythene, unused medicine, e-waste, and CFL bulbs, participated along with volunteers from private companies such as Coca Cola, Holcim, Metropolitan, Orange, and staff of the Biyagama Pradesheeya Sabha.



EMPOWERING COMMUNITIES

- 14 selected Local Authorities from 3 provinces in the Kelani River Basin area.
- 13 Local Authorities that are already working with the *Kelani Pavithra Ganga* programme of the Ministry of Environment were invited to participate in a workshop.
- Bio gas unit with a volume of 34m³ was established at the Mawaramandiya Weekly Fair in Biyagama to generate power for lighting purposes.
- The BiyagamaPradeshiya Saba shared the costs after realizing the potential of this project.

Closing the Loop: Zero Waste in a Local Market Place

There is a large number of local markets (also called '*pola*') in the Kelani River Basin – the river that provides 80% of the drinking water to the greater Colombo area. These markets (daily or weekly), established and managed by local authorities, attract local buyers looking for household needs and traders selling vegetables, fish, meat and other household items. The majority of the solid and liquid wastes generated by these markets are organic in nature. Typically, valuable organic waste is dumped along with other mixed municipal waste in open spaces, resulting in threats to the river and ground water resources.

Considering the value and the need to develop a sustainable model to use valuable organic market waste productively, the EDM Sri Lanka project on "Empowering Communities Through Water" in the Kelani River Basin carried out a feasibility study in one of the market places, namely, the Mawaramadiya Weekly fair in the Biyagama Local Authority area.

Based on past experience, the choice solution to process and use market waste was the generation of "Biogas" using a continuous feed biogas system where the degradable waste material such as waste water, vegetable waste, fish waste & sewage are turned into gas (for cooking and lighting) and liquid fertilizer. The residents of the area were initially skeptical about the potential, especially the potential use of the facility to process different waste generated. The political and local authorities supported by the project with past experience were able to diffuse the myths and successfully move the project forward.

The project also conducted awareness on the potential benefits of biogas generation and as a result, many organizations including the Board of Investment (BOI) and a number of local authorities are interested in replicating this task.





HIGHLIGHTS

One of the key activities of the Project is to target school children. In collaboration with the national “Pavithra Ganga Programme” (Clean River Programme) of the Ministry of Environment and Renewable Energy, the project started the student activities on 22 May 2013 at BombiriyaMahaVidyalaya in the Kaduwela local authority area with three schools.

“A demonstration of water quality aspects of Kelani River and water testing with practical session was conducted by National Water Supply & Drainage Board.”

Empowering School Children on Environment Management: Water Quality Awareness

One of the key activities of the EDM Sri Lanka sponsored “Empowering Communities through Water” is to empower school children. In collaboration with the national “Pavithra Ganga Programme” (Clean River Programme) of the Ministry of Environment and Renewable Energy the project started its student activities on 22 May 2013 at BombiriyaMahaVidyalayain the Kaduwela local authority with students from three schools. Approximately 150 students participated in this awareness along with the teachers.

Resource persons from Ministry of Environment, Central Environment Authority & National Water Supply & Drainage Board, Zonal Education Office-Sri Jayewardenepura & UNDP discussed Kelani River Basin ecosystem services and the challenges it faces with agricultural, industrial and urban development, mainly focusing on the Kelani River water quality. A demonstration of water quality was conducted by the staff of the National Water Supply & Drainage Board (NWSDB).

The Principal of BombiriyaMahaVidyalaya, Mr De Silva,highlighted that this awareness programme will be the initiation of a systematic approach on the Kelani river basin conservation. He also advised to encourage students to engage in this venture by using the knowledge and data in in-class assignments.

The project plans to spread the awareness approach in a number of other schools in the Kelani River Basin. The overarching objective is to involve school children to improve the public awareness on the sources of pollution in the Kelani River, health and long-term socio-economic impacts and ways to minimize the pollution additions through best practices. Students are expected to serve as a conduit to carry the same messages to the communities.





Engaging Industries on Environmental Sustainability

The Kelani River Basin is not only the home for 25% of Sri Lankans but also the backbone of the Sri Lanka industrial economy as it provides the base for a large number of industries, both Government and Private. The sizes of industries range from small and medium to the two large Industrial Zones located in Biyagama and Seethawaka. Therefore the pollution potential in the Kelani River Basin is extremely high and addressing the factors that can create irreversible damage to the basin ecosystem is of paramount importance.

“Communities and local authorities believe that most of the industries in the Kelani River Basin area are discharging polluted water in to the river”

The EDM Sri Lanka project engaged approximately 50 companies at a consultative workshop held on the “World Water Day 2013”. Participants were invited to share their thoughts and experiences regarding particular issues with the river that need to be addressed.

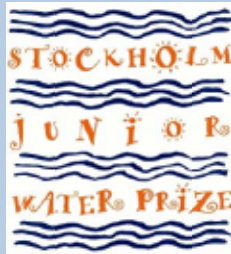
The consultative session was participated by the Deputy Minister of Disaster Management, and senior staff members of Ministry of Environment, industry officials, and UNDP. One of the key outcomes of the workshop is the support pledged by a multitude of industries to the project in terms of partnerships to support water activities in the Kelani River Basin.

This initiative will help resolve a number of conflicts between the industries, local authorities and communities living near the industries. The project intends to organize a series of sessions to bring the different stakeholders together around identified issues so that collective efforts to address the environmental problems can be developed and joint implementation is made possible.



Kids' Corner!

Stockholm Junior Water Prize



Join in if you are:

- A student researcher between 15 and 20 years of age (Preferably Advanced Level students).
- Involved in an innovative research project in water-environment field (water resources management, conservation, protection, etc.) with the final report ready by mid May 2014.
- Eager to participate in a fully sponsored international competition to be held in Stockholm, Sweden in August 2014.
- Ready to compete for the prestigious "Stockholm Junior Water Prize" International Competition and for the cash award of Rs 500,000/=. The winners will receive a Diploma of Excellence
- Able to present your project in English.
- A maximum of 3 members in a Project Team.
- Winner of the National team will receive a gift worth Rs. 100,000/=.

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Register before 15th September 2013

HEY KIDS! DO YOU KNOW... KELANI RIVER BASIN IS...

- 146 KILOMETERS LONG
- 26% SRI LANKAN POPULATION RESIDES IN THIS AREA
- COVERS 3 OUT OF 9 PROVINCES
- INDUSTRIAL, URBAN AND AGRICULTURAL ISSUES

USES:

- 80% WATER SUPPLY TO CAPITAL CITY COLOMBO,
- LAND USE FOR TRANSPORT, FISHERIES, WASTE DISPOSAL, SAND MINING, HYDRO POWER GENERATION, AGRICULTURAL AND URBAN USE

SO YOU SEE, THAT IS WHY IT'S IMPORTANT TO KEEP EVERY DROP OF KELANI RIVER CLEAN...

Concept and Design by : Kushani De Silva, Shema Godakumbura & Dinika Godakumbura

POLLUTION TERMINATORS

EMPOWERING COMMUNITIES THROUGH WATER...



Empowered lives. Resilient nations.