THE MONTHLY SWITCH

A monthly newsletter published by the EEPEx Project of the Industrial Technology Institute — a project funded by the European Union Switch Asia Programme for Sri Lanka

Welcome to the November - December 2010 issue! We hope you find this bulletin a useful source of information.

Vol. 2 No. 5

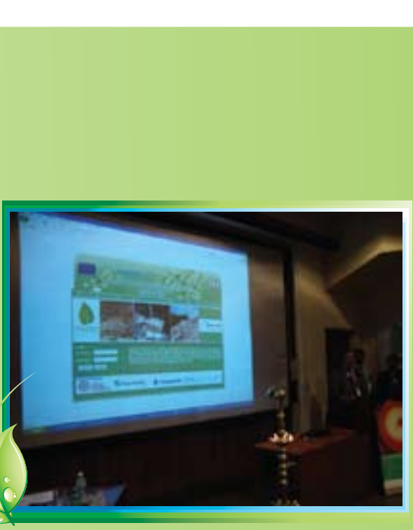
EEPEX Launches Innovative Waste Materials Exchange System "WasteX" for industries

The EEPEx project launched a national Waste Materials Exchange System "WasteX" on 8th December 2010 at the ITI auditorium. The launch event was attended by a distinguished gathering of over 85 including representatives from the EU Delegation to Sri Lanka & Maldives, Ministry of Industry & Commerce, CEA, Holcim Lanka, members of the press, industry, waste management companies, project partners including ITI, Megaskills Research UK and CCC.

The launch event was coordinated by the Project Office, Megaskills Research and CCC.

WasteX facilitates the exchange of industrial waste amongst waste generating organisations, and between waste generating and waste management organisations in Sri Lanka. WasteX provides detailed information on industrial waste material available to enable viable waste collection, management, re-use and recycling.

WasteX is based an open source web based system. It was developed by Megaskills Research UK. The system incorporates best practices from similar was exchange sites in EU countries, Asia and USA. Substantial indigenous design input was provided by experts at ITI including a Sri Lankan industrial waste hierarchy.



A first in Sri Lanka, WasteX enables industrial organisations to dispose of their industrial waste more efficiently.

Guests at the launch included: Mr. Asela Iddawela (GM Geocycle, Holcim Lanka), Mr. K H Muthukudaarachchi (Deputy Director General CEA), Mr. Asitha Seneviratne (Addl Secretary, Ministry of Industries & Commerce), Mr. Willy Vandenberghe (Head of Operations EU Sri Lanka & Maldives), Prof. V Kumar (Chairman ITI), Dr. A M Mubarak (CEO/Director ITI), Mr. H S Premachandra (EEPEx Project Director)

Events

- Training on energy Management and Funding Mechanisms - 27 January 2011
- Second Mission by IVL - 31 January to 10 February 2011
- Third Mission by IFF - Starting from 21 February 2011

Vital Facts

The EU SWITCH-Asia funded Project EEPEx aims to encourage Sri Lanka's export sector enterprises and their support service providers across the value chain, to adopt environmentally friendly production practices and technology. The project commenced in March 2009 and will be implemented over a period of 42 months.

The project targets industries such as Ceramic, Rubber, Plastic, Leather, Footwear, Tourism and supporting industries like construction, service stations & packaging.

SRI LANKA
ECO PARTNER
EU SWITCH-ASIA

EEPEx Project

Enhancing Environmental Performance of Export Sectors

WasteX has user-oriented features including:

- Free User registration by waste generating companies and waste management companies
- Placing advertisements for waste material "available" or "wanted"
- A comprehensive waste material classification and sub-classification system developed by ITI
- Waste material description in terms of classification, location, quantities, contaminants, frequency etc.

Target Groups of WasteX include:

- Waste management companies including waste collectors and recyclers
- Industrial waste generating organisations like enterprises, government entities and eWaste organisations

For further information please visit: www.wastex.lk or contact Mr. Thilina Pitigala
email: thilina@megaskills.com

Photo 4 Mr. Randeewa Malalasooriya from Geocycle Holcim Lanka, explaining a point about hazardous waste management and disposal solutions offered by Geocycle.

Chief Guest Mr. Willy Vandenberghe (Head of Operations EU Delegation's 1st Counsellor & Head of Operations) launching the WasteX system. Also in picture (left to right): Mr. Thilina Pitigala (IT Engineer, Megaskills), Dr. Channa Gunawardena (Director, Megaskills UK) & Mr. Gerry Suraweera (Industry Coordinator, Ceylon Chamber of Commerce).

Draft Sector analysis and guidelines released for Construction, Tanneries, Footwear & Activated Carbon

International experts from Megaskills UK have released Draft Sector analysis and guidelines for Construction, Tanneries, Footwear & Activated Carbon sectors during the month of January 2011. These draft documents contain numerous analyses for the sector using data from the Baseline survey. Examples of analysis include: nature of business & facilities, production processes, compliance with environmental regulations, solid waste outputs & disposal methods, waste water outputs & disposal, energy use, water use, environmental impacts and environmental benchmarking. The documents also include draft recommendations for the sector in the form of best practice guidelines. These documents will be important tools to support future decision making by stakeholders for sustainable development of each sector.

Dr. Miriya Samarakoon (International Environmental expert - Megaskills UK) led the development of the analysis and guidelines with inputs from other Megaskills experts. The documents are currently being circulated amongst the ITI technical team, for further development in terms of specific subject areas and verification of data anomalies. The documents will also be updated in due course with analysis from the detailed assessment for each sector being done by ITI.

CCC inputs to the Project

The CCC team was involved in short listing suitable companies for Rubber and Plastic Sector industries which participated in the Baseline Survey conducted by Industrial Technology Institute and Megaskills Research UK.

The CCC team visited several industries to meet the company officials and to explain and to present the Cost Benefit Analysis that comprehensively explained the benefits to be gained by joining the Project. This effort has yielded satisfactory results. The CCC team played an important role in planning coordinating and organizing launch of Waste Exchange System (Wastex). The presentation of the event was done by the Industry Coordinator. The CCC team also proposed and organized of Project review and fast-track plan meeting at the SLAAS Auditorium and the fellowship that followed to create synergies among the Project Team. It has been observed that this fellowship has had a very good effect on the Project progress as most of the targets discussed and agreed have been achieved todate.

Missions by International Experts from Megaskills

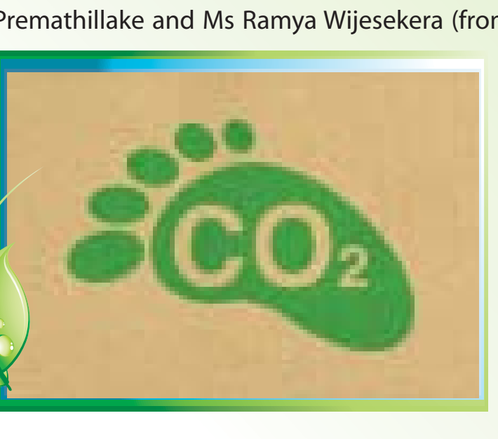
Dr. Channa Gunawardena (International Long Term Expert – Megaskills UK) undertook 2 project missions to Sri Lanka from 8th November to 13th December 2010 and from 27th December 2010 to 23rd January 20111. Dr. Gunawardena's missions included: joint work with the project office, PMC meetings, supervision of data entry by Megaskills staff, development & launch of the WasteX system, drafting of sector analysis/ guidelines for a further 4 sectors, circulation of a Carbon Footprinting case study, progress on the eco-labelling component and participation at numerous meetings including with project staff, the EU delegation, other Switch Asia projects and stakeholders. Dr. Gunawardena's next mission will be from 7th February 2011 onwards.

Carbon Footprinting

Carbon footprinting is a rapidly emerging management tool enabling organisations to assess their impact in terms of green house gas emissions and embark on carbon reduction programmes.

A comprehensive Organisational Carbon footprint case study has been developed for Lanka Wall Tiles PLC covering their 2 factories & main showroom facility. This highlights the total carbon footprint of the organisation and provides the carbon footprint according to various indices such as per employee, per unit of product. The case study identifies carbon footprint hotspots, remedial measures which can be undertaken and comparisons to international benchmarks. Carbon footprint case studies will also be developed for Ceylon Leather Products PLC and Polydime International during the months of February and March 2011.

The Carbon Footprint component of EEPEx is being coordinated by Dr. Channa Gunawardena and Dr. Miriya Samarakoon (of Megaskills Research UK) and Mr. Asanka Premathillake and Ms Ramya Wijesekera (from ITI). The carbon footprint component being implemented conforms to the ISO14064 standard for organisational Carbon Footprints. Forthcoming activities are being designed including 2 Training of Trainer workshops in from middle of May onwards on Product Carbon Footprinting and 2 Training of Industry Workshops.

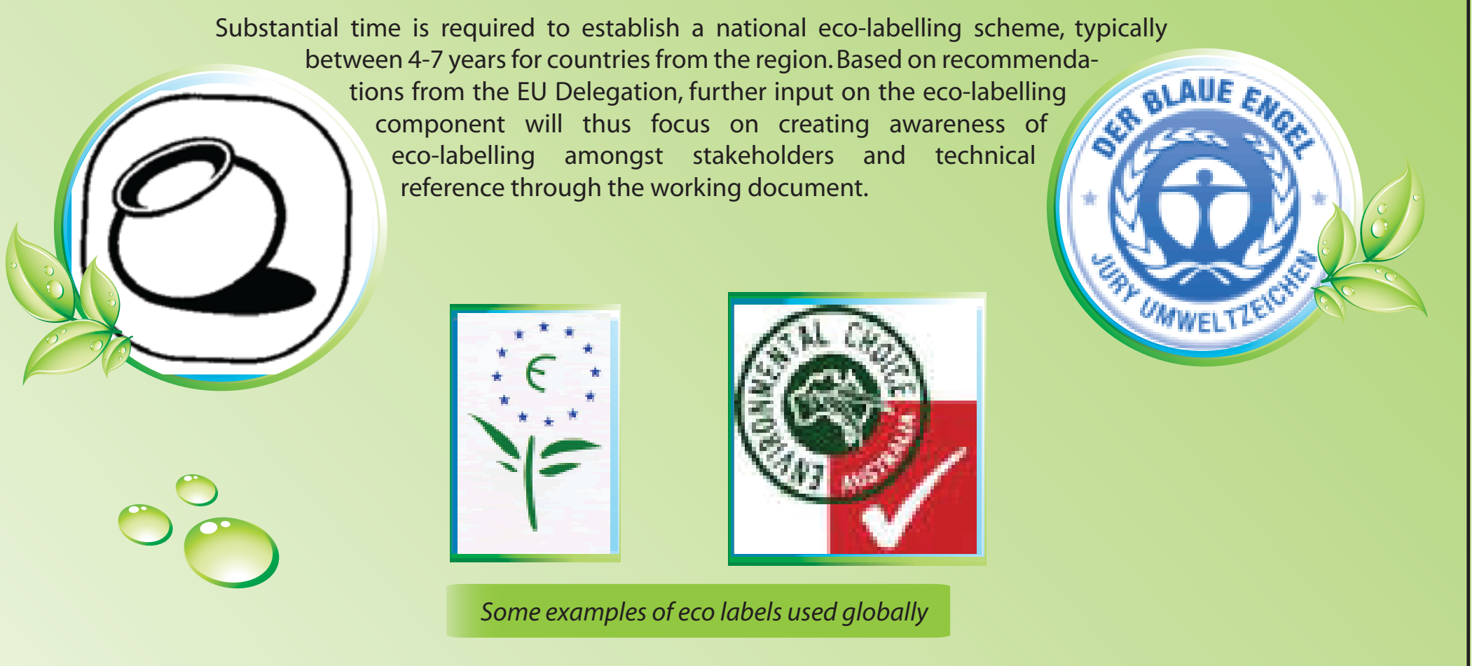


Eco-labelling

International experts from Megaskills Research (Dr. Miriya Samarakoon and Dr. Channa Gunawardena) have developed a working document for establishing a National eco-labelling scheme in Sri Lanka. The working document provides background about international eco-labelling (EL) standards & existing schemes, frameworks for setting up eco-labelling schemes and detailed criteria for setting up a pilot scheme for the tourism sector of Sri Lanka. The working document is based on ISO14024 standards for eco-labeling in particular Type 1 schemes which are voluntary, multiple criteria based and third party verified.

The working document builds upon discussions held with numerous stakeholders including the CEA and Ministry of Industries and Commerce and Project Director Mr. HS Premachandra.

Substantial time is required to establish a national eco-labelling scheme, typically between 4-7 years for countries from the region. Based on recommendations from the EU Delegation, further input on the eco-labelling component will thus focus on creating awareness of eco-labelling amongst stakeholders and technical reference through the working document.



Some examples of eco labels used globally

Environmental Information Systems (EIS)

The EEPEX project is developing an Environmental Information System (EIS). The EIS is being developed by international and local experts from Megaskills Research with design inputs from the ITI technical team.

The EIS will consist of data from:
- the Baseline Survey of around 600 industries from the target sectors (completed)
- a detailed assessment of 250 companies from the target sectors (in progress)

The EIS will provide data, statistics and information at sector and multi-sector level to support decision making and planning by stakeholders for the target sectors of the project.

During the months of November and December progress was made on the following aspects of EIS development:
- Completion of baseline data entry activities by MGS Sri Lanka
- Development of an EIS working document, giving examples of possible analysis based on the ceramics baseline data
- Circulation of EIS working document amongst the project team and stakeholders (CEA, EDB, Ministry of Industries/Commerce, Holcim Lanka and industry associations)
- EIS design workshop1 held on 26th November 2010 to discuss the data analysis requirements of stakeholders and the project team.

The next steps of the EIS component will include:
- Submission of sample data for detailed assessment (Ceramics sector) by ITI experts
- Development of a prototype EIS database and interface using the Ceramics sector
- Feedback from users
- Piloting of EIS prototype amongst stakeholders and the project team

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Detail Assessment Progress

Energy Audits – another important area covered under the EU SWITCH-ASIA funded EEPEx project

The EU SWITCH-ASIA funded EEPEX project aims to encourage Sri Lanka's export sector enterprises and their support service providers across the value chain, to adopt environmentally friendly production practices and technology. One of the key activities of the EEPEX project is to carry out detailed energy audits covering almost all the industrial sectors it deals with and ITI (the lead partner of the project) energy team plays the key role in this exercise.

The need for energy conservation has assumed paramount importance due to rapid growth of process industries causing substantial energy consumption in operations. Global energy crisis as well as high cost of fuels resulted in more activities to conserve energy to the maximum extent.

Energy expenses stand for a major part of operating and production costs of many energy intensive process industries. These industries can achieve significant cost savings by investing in energy saving measures. Moreover, reducing the carbon footprint by saving energy will help in enhancing the environmental performance of the industry.

It is interesting to note that investments in energy efficiency improvements have a much shorter payback period compared to other investments.
Industrial energy audits are instrumental in revealing the details of the facts described above. An energy audit is a systematic analysis of energy flow in a process and is a part of an overall energy management exercise. It seeks opportunities to reduce the amount of energy input to a system without negatively affecting the outputs. However, it should be noted that energy audits don't save money and energy for industries unless the recommendations are implemented.
The IT team conducted an Energy audit at a leading coconut shell based product manufacturing company, whish can be described as a nergy intensive industries in Sri Lanka. The industry meets its energy requirements through two main types of energy supplied by four main sources, namely,

Type	Source
Electricity	National grid
	Stand by diesel generator
Thermal energy	Furnace oil
Waste heat	Recovered from charcoal manufacturing

An energy audit carried out by the ITI energy team comprising of Eng. Thilak Gunasekara, Vijitha Jayasinghe, Chinthan Manorathne, and Sabree Akram, at this activated carbon plant, located at Giriulla, has revealed substantial potential for energy efficiency improvement. Key areas identified are good housekeeping, proper maintenance of plant & equipment, process improvement and modifications and, especially the recovery of waste heat from activated carbon manufacturing process.

The audit focused on detailed study and analysis of electrical and thermal energy consumptions of the whole plant and identify opportunities for energy efficiency improvements.

It was observed that there is a great potential for saving energy and reducing the carbon footprint at this company. All the opportunities indicated, are based on the thorough analysis of the observations, data gathered and measurements carried out during the energy audit.

Recommendations for improving energy efficiency included,

- Improve the power factor at peak load
- Fix compressed air leaks
- Replace present compressed air system with an alternative system
- Reduce excess air levels of boiler
- Fix live steam leaks
- Insulate bare valves, flanges and pipes
- Recover waste heat from rotary kiln exhaust
- Recover product in powder form from kiln exhaust

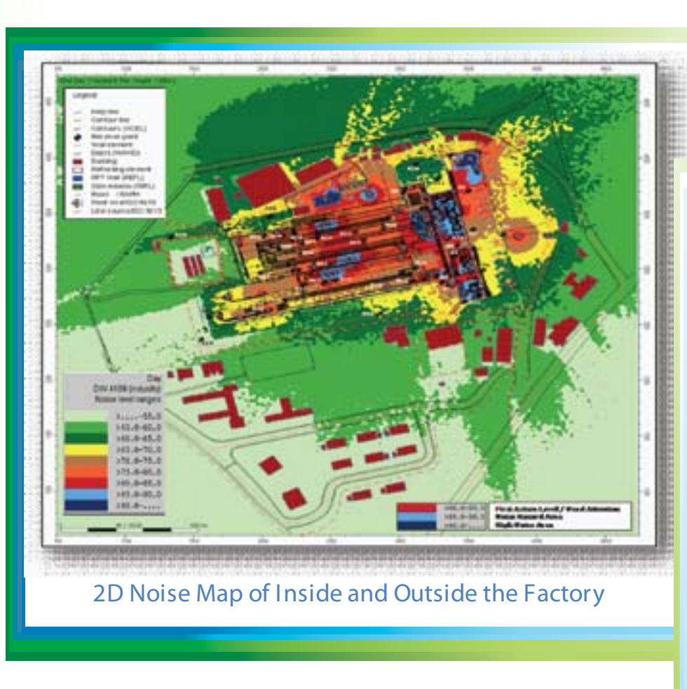
During the energy audit…………

Noise, Vibration and Air pollution

The Noise, Vibration and Air pollution control experts of the EEPEX team conducted measurements and studies on Ambient Air Quality, Non Point Source PM, VOC Measurements, Noise Measurements, Air Dispersion Modeling, and Noise Mapping/Modeling. 62 such reports were compiled with recommendations to improve the existing situation in the companies

Environmental Review Report was also prepared for a leading manufacturer of ceramic glazed floor tiles

Case Study at the Glazed Ceramic floor tile Manufacturing Company



2D Noise Map of Inside and Outside the Factory

2D Noise Map of Inside the Factory

Training on Energy Management & Funding Mechanisms

A training programme on Energy Management & Funding Mechanisms was held on 27 January 2011 at the Industrial Technology Institute. Mr. M W Leelaratne and Mr. Thilak Gunasekera - Energy Experts of the EEPEx Project, Mr. M M R Padmasiri of the Sustainable Energy Authority (SEA) and Mr. Nalin Karunathilake of the DFCC Bank presented lecture sessions on

- Understanding Energy Utilization and Energy Cost
- Energy Auditing and energy Management
- Case Study - Benefits of Improving Energy Efficiency in an Industry
- Funding industrial Energy Management Initiatives
- Financial Mechanisms for Industrial Energy Efficiency projects

Over 5 participants from ITI and 35 from the industry participated in this training.

Project Partners

Lead Partner:

The Industrial Technology Institute is a wholly owned institute of the Government of Sri Lanka and functions under the jurisdiction of the Ministry of Science and Technology. It aims to be a regional centre of excellence in Scientific Industrial Research for national development, by conducting innovative R&D and provide internationally competitive technical services to accelerate industrial development for the benefit of the people of Sri Lanka.

The Ceylon Chamber of Commerce

The Ceylon Chamber of Commerce (CCC) is a confederation of Trade Associations, Regional and Sectoral Chambers of Commerce and Industry, Bilateral Business Councils and Employer Organizations in Sri Lanka which was established 170 years ago. The CCC is considered as the premier Chamber in Sri Lanka and conducts the internationally recognized Tea and Rubber Auctions among their other activities.

megaskills

Megaskills Research (MGS), United Kingdom is a research & consultancy services group bringing together world-class expertise in socio-economic development, management systems and institutional strengthening. Key sectors of focus include:

| Agriculture & Food | Environment | Tourism | Education
| Governance | Enterprise development (including trade & export) | Health

Megaskills' focus is on building long-term relationships with clients & partners by addressing problems in a sustainable manner. Their expertise is supported by widespread experience gathered from developing situations across both Europe and Asia.

Fraunhofer
IFF

The Fraunhofer Institute for Factory Operation and Automation IFF is partner for clients from small and medium-sized enterprises, industry, research and government. Together with their clients, the institute develops and optimizes solutions in the fields of logistics, virtual engineering, automation and plant engineering.

IVL Swedish Environmental Research Institute

IVL Swedish Environmental Research Institute is an independent research body that has been involved in the development of solutions to environmental problems on behalf of the business sector and the community, since 1966. IVL deals with environmental issues from a holistic perspective with the aim of contributing to sustainable growth.

Become an Eco-Partner !

Key Contacts -

Dr. A.M. Mubarak
Project Advisor and Director/CEO - ITI
(T) 2379802, (e) dir_ceo@iti.lk
URL: www.iti.lk

Mr. H.S. Premachandra
Project Director, EEPEx Project of EU Switch Asia
(T) 2379860, (e) premeuswitch@iti.lk
URL: www.eepex.iti.lk

Mr. Gerry Suraweera
Industry Coordinator
(T) 2379861, (e) gerryeuswitch@iti.lk
URL: www.eepex.iti.lk

EEPEx Project Office
P.O. Box 787,
363, Bauddhaloka Mawatha
Colombo 07, Sri Lanka
(T) 2379861, (F) 2379861
(e) euswitch@iti.lk, URL: www.eepex.iti.lk

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