SRI LANKAN CONSULTING ENGINEER

Newsletter of the Association of Consulting Engineers, Sri Lanka
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A Member Association of
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of Consulting Engineers

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KEEP IN TOUCH WITH THE ASSOCIATION OF CONSULTING ENGINEERS, SRI LANKA

Council Meetings and Activities

Four council meetings were held since issuance of the News letter for the second quarter. The discussions were held on following items.

- Adjudicator Training Programme
- Journal
- AGM & Annual Technical Sessions
- Seminar on EPC Contracts
- Public Lectures
- Membership Directory
- Corporate Plan
- TCDPAP Conference 2012 in Sri Lanka
- FIDIC Conference in New Delhi
- Liaison with Professional & Government Institutions
- ACESL Website

Seminar on 'Design Built/ EPC/ Turnkey Contracts'

This seminar was held on 1st October 2010, organised by ACESL. It attracted participants from many sectors of private and Government institutions. The organisers were privileged to have Eng. Prof. Ananda Jayawardena, President Elect, IESL, as the Chief Guest. In his opening address he covered many useful aspects pertaining to Engineering Consultancy in Sri Lanka and thereby gave a very good boost to the discussions that followed. The much experienced Eng. Conrad Tissera, who kindly accepted the invitation to make introductory remarks on the theme of the day did much justice by sharing his wide knowledge on the subject. After Tea Break, the sessions continued with presentations by:

1. Eng. Nihal Rupasinghe, Chairman, CECB on ñEPC Contractsò.
2. Eng. Dr. Mervyn Gunasekera, President, ACESL,on ñ Challenges in the EPC Application in Local Construction Industryò.
3. Eng. Prasanna Weerasinghe, former Chief Engineer, Ports Authority, on ñBOT/Client Concessioner, Consultant, Contractor Concernsò
4. Mr. H. D. Chandrasena, Past President, Institute of Quantity Surveyors on ñRole of the Engineer in Design Built Contractsò.
5. Eng. J. Karunaratne, Addl. General Manager, CECB, on ñModel EPC Contractorò.

   With the help of handouts, the audience was able to keep a good track of the subject being discussed and after session Q&A made the subject under discussion all the more valuable.

   The seminar ended with a Vote of Thanks by the Secretary, ACESL.

The event was sponsored by,

- Nawaloka Construction
- International Construction Consortium (Pvt) Ltd.
- N & E Engineering Ltd
- RN Construction (Pvt) Ltd

Journal

The ACESL Journal 2010 is to be published in conjunction with the AGM due in December 2010, and all members are kindly requested to send in their contributions before 15th November 2010 the latest. Member Firms are also kindly requested to encourage their staff to submit even articles jointly prepared by their staff, so as to give a wider coverage of the aspect of engineering consultancy in Sri Lanka.

Annual Technical Sessions and Annual General Meeting.

Annual Technical sessions & the Annual General Meeting will be held on 14th December 2010 at the Auditorium of the Royal Ceylon Golf Club.
The tentative programme is,
1400-1730 hrs. - Technical Sessions

The Theme of the Technical Sessions, **'Entrepreneurship & Marketing of Consultancy Services'**
Eminent personnel on this specialization will make presentations at the sessions

1730-1830 hrs. - Annual General Meeting

1830-1930 hrs-

- Award of membership certificates to new members
- Launching of ACESL Website
- ACESL Journal 2010
- Members Directory

1930 hrs. Get-together & Dinner

Enrolment of New Members

Following Engineers were enrolled as members since July 2010.

Membership No.	Name
110	Eng. EPUS Karunaratne
111	Eng. JADGEK Jayatilleke

SUSTAINABLE DEVELOPMENT THE CHALLENGES FOR ENGINEERS

It took almost three decades for the Sri Lankan engineer to get used to the concept of sustainable development which was the ultimate criteria that determined the system designs technology.

More than the engineersô self initiated initiative to master such issues it is the condition imposed by the lending agencies such as the World Bank and the Asian Development Bank through the EIA process that made the engineers to respond to the sustainability requirements A non engineering parameter such as social impact criteria, for example, had to be catered for in his design approach.

Hardly on the heels of this reorientation the engineering community is called upon to face the challenges arising from the climate change consequences. While the engineers of the developing countries are saddled with evolving adaptive technologies those in the advanced countries have to rethink in terms of alternative energy sources including the nuclear option which was loosing its credibility due to its long term risks in terms of the waste disposal. In the London FIDIC conference, held recently, the sustainability concept was enlarged to cover climate change consequences as well .The history of civilization is punctuated by technological breakthroughs and achievements. Once again the world at large is looking forward to the engineering community to save them from the unprecedented and unpredictable disasters that are intensifying at an alarming rate. The overall consensus at the FIDIC conference was that the engineers must rise up to the occasion and find ways and means of exerting themselves with politicians who do not seem to understand the grave dangers arising from inaction.

In Sri Lanka the weather pattern changes are already discernible. A recent study carried out by the Centre for Environmental Justice in various parts of the country reveals that the dry and wet seasons for agriculture cannot be predicted easily. Agriculture produces are decreasing. The rainfall intensities had increased and the monsoon shifted backwards. Experts on meteorology pointed out that the dry zone in Sri Lanka is engulfing the wet zone.

In the water resources sector springs are observed to be drying up. In rivers such as Kelani, Kaluganga and Nilwala salinity intrusions that are already undermining the good quality water are bound to progress further upstream of the rivers. Recent studies carried out in Kelani and Nilwala under the patronage of EEC confirm this. The salinity intrusion not only affects the domestic water supplies but also salinise the fresh water aquifer in the surrounding regions. During

floods all the paddy fields in the flood plains are damaged due to salinity spread. In the coastal areas such as Kallady in Baticaloa, the sandy aquifer in weligama and the Jaffna peninsula the fresh water lens is bound to become thinner both due to the sea level rise and shortfall in rainfall thus reducing the storage available for abstraction. If there were to be two consecutive droughts (consequent droughts is one of the likely scenario under climate change conditions) water will be extremely scarce in most parts of the island.

The hydro electric and other reservoirs which were designed and built based on the flow duration curves will not be meeting the probable targets. The drinking water supply projects particularly the surface water sourced ones will not be able to meet their planned supplies. The ground water sourced projects which rely on annual recharge will have similar short falls.

The agriculture sector, next to the water resources sector, will have devastating disruption not only in reduced food production but dislocation of the livelihood of the farming population.

Though the developing countries like Sri Lanka did not contribute to the green house gases build up we have to face up the devastation like any other country on earth. Even today if the advanced countries start reducing the emissions the situation will get worse before it starts improving. We should start getting prepared to adopt ourselves.

Some suggested random reoriented technical approach mainly in the water resources sector are given below:

- Review the designs approach which was based on past hydrological records.
- Instead of building large centralized reservoirs think of more smaller reservoirs decentralized to meet local needs with feasible small scale power generation.
- Evaluate the feasibility of feeding channels from reservoirs to potential aquifer strata to enhance ground water storage.
- In the hilly terrain catchments contour bunds to be built and enhanced flood plains to be constructed to delay the river flows to the ocean. Reforestation of the catchments areas also to be carried out to delay the overland and groundwater flows into the rivers.
- Prevent salinity intrusion upstream of rivers by building Salinity Barriers.
- Disaster management centers should be reinforced with additional facilities. For example the number of toilets and bathrooms of schools should be increased since schools are very often used as disaster centres.
- Sewerage systems should be decentralizedð number of small systems instead of one large system
- Toilets cistern should be redesigned to have varying flows
- In evaluating projects for implementation, similar to the EIA requirements, a summary of quantum of carbon emission should be made compulsory ð the **CARBON FOOT PRINT**. For example a vehicular transport project will produce more carbon compared to a railway project. This exercise by itself is not significant since our contribution is not even 0.1% of the total emission. Nevertheless it will create an awareness about carbon computing methodologies among our local engineers. It will also enhance transfer of carbon reduction technologies from the advanced industrialized countries to the developing countries

By: Eng. K. Suntheralingam,
Immediate Past President-ACESL,
Managing Director -Environmental Engineering Consultants.

Seminar on

'Design Built/EPC/Turnkey Contracts'

Lighting the Traditional Oil Lamp

Inauguration of the Seminar

Eng. Conrad Tissera delivering the keynote speech

Eng. Prof. Ananda Jayawardena Chief Guest addressing the gathering

Some of the Participants

Welcome address by Eng. Dr. P Mervyn Gunasekera- President ACESL