Chairperson's Message

It is with appreciation that I take up the invite to give a message as the Chairperson of the Global Challenges in Construction International Symposium and it is with great pleasure that I welcome all participants to the event.

As an event where global experts and students in construction gather to exchange views and findings, I believe this symposium is timely, discussing relevant and important topics. The theme of ‘Global Challenges in Construction’ was aptly chosen as Sri Lanka, having come out of a civil war, is poised to further develop.

Its infrastructure. In having understood the need to position ourselves in the global market, we questioned ourselves ‘How should we meet the inevitable challenges?’ I am sure that all participants from around the world will look forward to identifying challenges and understanding how to face them: unraveling the answers.

In acting as a platform for knowledge sharing, it also offers Sri Lankan professionals and academics to meet specialists from overseas. In conducting the event, I believe CIOB, the professional body for builders in Sri Lanka who work to inspire educate and train builders and professional in Sri Lanka, will receive international exposure which they richly deserve. The event is also strengthened by the research excellence of its organizing partner, the Department of Building, Economic and Management of the University of Moratuwa; who too will stand to gain much in the academic field.

President's Message

The Ceylon Institute of Builders (CIOB) is pleased to organise the ‘Global Challenges in Construction International Symposium’, together with the CIB Netherlands and the University of Moratuwa, Sri Lanka. CIOB with its roots in the year 1961 has a solid history of acting as the professional body in the building and construction industry in the island. Hence, we are honoured to be part of this symposium that would help industry stakeholders develop an understanding of challenges faced by the global industry, while having an opportunity to expand their international network.

Invitations for the symposium have been extended to professional and academic participants from over 30 countries, thereby bringing in various inputs from across the globe. Companies developing technologies to circumvent or meet these issues are expected to provide new insights. And leading academics and students have been invited to enlighten the audience on recent scientific findings. Therefore I strongly believe that our invitees would find the symposium to be of great significance.

I would also like to take this opportunity to mention ‘Construction Expo 2012’, which will be held in June, 2012 at the BMICH, Colombo. It would be the first, largest international construction event to be held in Sri Lanka. I invite companies who are interested in adopting new technologies and innovations to come and visit Construction Expo 2012.

Let me thank the ministries and professional institutions who have helped us in organizing the ‘Global Challenges in Construction Industry International Symposium’. I am much grateful to CIB Netherlands and the University of Moratuwa who have been an integral part of organizing team.

Arch. Prof. Chitra Weddikkara
FIA(SL), ARAIA, FIOS, RICS, AIGS
Chairperson Global Challenges in Construction International Symposium

Dr. Rohan Karunaratne
B.Eng(India), T.Eng. (CEI), MIE(Lon.), MBA (UK), Ph.D(U.S.A), FIIM(HK)
President, the Ceylon Institute of Builders (CIOB)
SECRETARY’S MESSAGE

It is indeed a privilege to be part of the organizing committee of an international symposium that would stand as a milestone for most of its participant countries, including host country Sri Lanka. The symposium will bring together professionals and academics from around the world to discuss and present papers on issues that we all in the global construction industry have come to find as challenges.

I should first extend my sincerest appreciation to the International Council for Research and Innovation in Building and Construction (CIB), the global body that stands for the development of the industry, for their solid guidance in organizing this event.

I would like to express my gratitude to the Building Economics and Management Research Unit (BEMRU), the research arm of the Department of Building Economics at the University of Moratuwa, Sri Lanka for their unwavering support. Their valued academic input will strengthen the local input of symposium, and I hope that its participants too will gain from the knowledge transfer.

I would also like to thank Ministry of Construction & Engineering Services, Housing & Common Amenities, Ministry of Economic Development, Ministry of External Affairs, Ministry of Labour & Labour Relations, Ministry of Land & Land Development, Senior Ministry of National Resources with other national bodies such as Institute of Engineers of Sri Lanka, Chamber of Construction Industries Sri Lanka, Federation of Chamber of Commerce & Industries of Sri Lanka, Organization of Professional Association, Institute of Quantity Surveyors of Sri Lanka and other construction related Professional bodies, the management of BMICH, the management of Cinnamon Grand Hotel for the assistance provided.

CO-PARTNER’S MESSAGE

It is with great pleasure and enthusiasm we write this message and extend my warm welcome towards all delegates from Sri Lanka and abroad who participate W107 World Construction Symposium and Construction Expo 2012 at B.M.I.C.H and Cinnamon Grand Hotel between the periods from 28th June to 01st July 2012 organized by the Ceylon Institute of Builders in collaboration with International Council for Research and Innovation in Building and Construction (CIB).

Sri Lanka after the emergence from the period of brutal terrorism of three decades was able to achieve many objectives surpassing many other countries in the region. Today our nation is breathing with peace and harmony and with the development of the country. Sri Lanka National economy has started to boom and rapid development is happening all over the country. Construction industry has shown a considerable improvement in all sectors concerned.

World Construction Symposium 2012 will be an international platform to exchange the views and experiences on various issues related to construction industry for both local and International delegates, who will carry back memories of creating new skills technology and learning for the development of the construction industry.

Eng. Saliya Kaluarachchi
B.Sc(Eng), MBA, C.Eng(MIESL), MCIOB, MIIM
Symposium General Secretary

Sagara Gunawardena
Co-Chairman, Symposium organizing committee and Treasurer of Ceylon Institute of Builders

Kalana Alwis
Co-Chairman, Symposium organizing Committee and Director of Ceylon Institute of Builders
Global Challenges in Construction Industry

The construction industry of most developing countries face the issues of chronic resource strategies, lack of technology and low technology experience. Culture affects construction projects, firms and sites. Globalization’s impact as the involvement of international finances help implement major infrastructure projects, job opportunities and technology transfer while the competition among the foreign entities lower project costs. The down side to globalization is that most local firms have no large funds to bid for private projects and they lack technical expertise to under-take foreign funded projects. Soil erosion, drought, flooding, salinization, alkalisation, aridity, rapid loss of forest cover are common environmental problems. Speedy and unorganized urbanization lead to air pollution while putting pressure on old or solid waste management systems.

Each country faces a unique set of challenges in their construction industry. The adaptation of the industry to meet these issues have taken place over the years and the methods practiced have become solidly established. Knowledge transfer between countries on such methods can help each other identify methods they can apply in their day-to-day challenges faced.

The need to conduct honest environmental analysis and adhering to standards goes a long way in the reputation of the contractor and suppliers as well as the long term cost effectiveness of the project for the project owner. The source of material, its use, processors conducted, machines used and designs implemented, discarding of waste and maintenance be should be included in early decision making. Hence the life-cycle perspective, from beginning-end should be considered to prevent or reduce environment pollution in all forms, before, during and after project. It is also important that students be taught on the platform of sustainability.

All stakeholders of the industry should concentrate on how to develop their energy management processors, where a large amount of cost savings can be made. The stakeholders’ collaboration at the planning stage could result in energy optimized lighting, heating and ventilation systems, thereby reducing long-term running costs of the building and reduced emission of heat and energy wastage. Energy Management in construction is a relevant topic for preventing global warming.

The construction industry continues to evolve with changes in socio-economic scene, the world of architectural designs over time as well as environmental challenges and requirements. Learning from those who have experienced any of the above, and being prepared helps any country in the world, i.e. be it facing a tsunami, earthquake, need for new engineering feats or the need to use basic resources during a repressive economy: the construction industry should be prepared. Continuous learning facilitates this process. The learning of new concepts, techniques and tools: the adoption of know how helps the industry develop and sustain.

The construction industry most often employs traditional, proven methods that have over many years provided solid solutions. But the need for innovative practices and robotics in construction is increasing with the increase in complexity of modern projects and their urgency. Innovative design elements could offer shorter times spans and cost effectiveness. Robotics too is making way into the construction industry, though at a slow pace. The side-by-side development of the IT, Robotics and the Construction industry will surely prove to be mutually beneficial.

Efficient purchasing of labor, material and equipment offers project owner with lowered costs. It is important to have in place procedures that will deliver value for money: from the early procurement of long-lead items, through labour and material management, material flow, warranty fulfillment, return of material to expediting orders. Procurement management is a large subject area in construction industry alone.
Extensions

- One to One meeting with Designers, Architects, Consultants & Contractors etc
- Meetings with Government Ministries, Authorities & Institutions etc
- Meeting with other Professionals Institutions
- Networking

INFRASTRUCTURE DEVELOPMENT – PROJECTS FOR THE PERIOD 2011 TO 2017

A booming economy and a rapidly growing Country

Sri Lanka today is making vast strides in all spheres with the economy being one of the most vibrant in the South Asian Region. The Island is considered the hub for ports and is a destination with enormous investment growth. With the end of the war, the attention towards infrastructural growth has been enormous with the government and non-state actors playing a major role in the development projects. New highways have been built and ports have come up in key locations of the country, the roads and irrigation system has also received major uplift. The country is witnessing an era of rapid growth will continue towards the end of this decade and the growth goes hand in hand with the need for quality construction service providers for both macro and micro tasks.

A booming economy and a rapidly growing Country

Constructor of Expressways & Highways - 05 Projects

Widening of Highways
Reduction of Traffic Congestion

Expressways, highways & bridges

Colombo-Katunayake Expressway (25km)
Southern Expressway part 2, Gall to Matarā
Outer Circular Highway (26km)
Colombo - Kandy Highway (90km)
North Central Province Roads
Puttalam Anuradhapura Road
Kandy Jaffna (A-9) Road
Puttalam Trincomalee (A-12) Road
Katunayaka-Padeniya - Anuradhapura (153.3km) Highway

Water supply & drainage 19 projects

Jaffna Peninsula Water Supply & Sanitation
Ruhunupura Water Supply Development
Alawwa-Polgahawela Integrated Water Supply Project
Wanadurupenne Ella Water Supply Project
Kalu Ganga Water Supply Project Phase I Stage II & Non Revenue Water Reduction in Colombo City
Greater Kandy WS - Phase I Stage II

Buildings

SAARC Cultural Centre in Hambantota
Pasikoda Hotel Developments
Shanwilla Hotel
New Customs Headquarters
Hambantota Port Administration Building Complex
Shenron Hotel in Colombo
Sethsiri, Stage II
Redevelopment of Bambalapitiya Flats
Sambuddha Jayanthi Building Complex
Move n’Pick Hotel
Celestial Residences
Lotus Tower
Symposium Programme

Guests Arrivals - 27th & 28th June 2012
- Receiving at Airport
- Airport to Hotel transfer
- Receiving at Hotel

Symposium Opening - 28th June 2012
Venue: Cinnamon Grand Hotel
- Registration
- 7.00 p.m Presidential Dinner & Cocktail(by invitation)
- Country paper Presentations by delegates

Symposium Inauguration - 29th June 2012
Venue: BMICH
- 8.30 a.m Leave Hotels & Proceed to BMICH
- 9.00 a.m Guests arrival at BMICH
- 9.30 a.m Inauguration - Chief Guest Hon. President Mahinda Rajapakse, People Republic of Sri Lanka
- 10.30 a.m Visit the Exhibition
- 12.00 Noon Leave BMICH to Cinnamon Grand Hotel
- 12.30 p.m Lunch at Cinnamon Grand Hotel

Conference Day 1 - 29th June 2012
Venue: Cinnamon Grand Hotel
- 1.30 p.m Conference Commencement
- 1.45 p.m Key Note Address by invited Guest Speaker (Main Ballroom)
- 2.30 p.m Tea Break
- 3.00 p.m Conference Sessions (Parallel)
  1. Committee Room ‘A’ (70 Seats)
  2. Committee Room ‘B’ (70 Seats)
  3. Committee Room ‘C’ (70 Seats)
- 6.00 p.m Day Closes
- 7.00 p.m Cultural dinner at Mount Lavinia Hotel

Conference Day 2 - 30th June 2012
Venue: Cinnamon Grand Hotel
- 8.30 a.m Opening Address by invited Guest Speaker (Main Ballroom)
- 9.30 a.m Conference Sessions (Parallel)
  1. Committee Room ‘A’ (70 Seats)
  2. Committee Room ‘B’ (70 Seats)
  3. Committee Room ‘C’ (70 Seats)
- 11.00 p.m Tea Break
- 11.30 a.m Conference Sessions (Parallel)
  1. Committee Room ‘A’ (70 Seats)
  2. Committee Room ‘B’ (70 Seats)
  3. Committee Room ‘C’ (70 Seats)
- 1.00 p.m Lunch Break
- 2.00 p.m Conference Sessions (Parallel)
  1. Committee Room ‘A’ (70 Seats)
  2. Committee Room ‘B’ (70 Seats)
  3. Committee Room ‘C’ (70 Seats)
- 3.30 p.m Tea Break
- 4.00 p.m Conference Sessions (Parallel)
  1. Committee Room ‘A’ (70 Seats)
  2. Committee Room ‘B’ (70 Seats)
  3. Committee Room ‘C’ (70 Seats)
- 6.00 p.m Conference Concludes
- Presentation of participation Certificates
- 7.00 p.m Farewell Dinner at Cinnamon Lakeside Hotel

Special Spouses’ Programme
Day 2 - 30th June 2012
Special one day programme is on offer to all accompanying spouses which include a city tour and shopping at leading shopping arcades with unbelievable discounts specially offered to WCS delegates.

Conference Tour - 1st July 2012
Day Excursion to Galle
- 7.00 a.m Leave Hotel & Proceed to Galle
- Lunch at Chaaya Tranz Hikkaduwa
- 9.00 p.m Return to Hotel

Registration Detail
Symposium Registration Detail
Early Bird discount before 31st May 2012
CIOB, the professional body for builders in Sri Lanka, is a strong network of Engineers, Architects, Surveyors and similar allied professions who work to inspire, encourage, educate and train students, builders and professionals in the country. The institute welcomes young entrants and mature professionals with or without a background in construction to achieve professional level careers in the industry. They are provided with a well structured development programme that eventually lead to gaining corporate membership of the Institute.

CIOB works with local institutes, professional bodies and Government ministries to develop business opportunities and upgrade the construction industry, expanding its horizons in contributing to the economy. It also provides feedback to the government on their policies affecting the industry while working with the Government to provide appropriate solutions to the problems affecting the industry. Taking the Sri Lankan construction industry to the world, CIOB collaborated with international partners and organisations. Acting as the facilitator for national events, delegations as well as organizer of locally held international events, CIOB endeavours to uplift the standards of the Sri Lankan Construction Industry.

www.ciob.lk

CIB

International Council for Research and Innovation in Building and Construction, also known as CIB, acts as a global network for international corporations and information exchange in building and construction research and innovation.

CIB collaborates with organisations around the world supporting the development of the industry, while facilitating international knowledge transfer on topics of interest.

It covers the technical, economic, environmental, organizational and other aspects of the built environment during all stages of its life cycle. CIB addresses the process of basic and applied research, documentation and transfer of research results, as well as the implementation and actual application of the results.

Established in 1953, CIB has now has over 5000 experts around the world. Approximately 500 of its individual members and member organizations hold a research, university, industry or government background and active in all aspects of research and innovation.

www.cibworld.nl

University of Moratuwa - Department of Building Economics

Building Economics and Management Research Unit (BEMRU), the research arm of the Department of Building Economics (DoBE) at the University of Moratuwa, Sri Lanka, specializes in research in Building Economics and Management in the country as well as internationally.

Established in 1990 under the headship of Professor Chitra Weddikkara, the unit’s specialization has strengthened through collaboration with other organizations and institutes in the industry. BEMRU continues to develop and maintain close links with leading research institutes from around the world.

http://www.ent.mrt.ac.lk/web/
Symposium Organizing Committee

Co-Chairpersons: Mr. Sagara Gunawardena
Mr. Kalana Alwis

Organizing Committee Members

Advisors - Prof. Chitra Weddikkara
Administration Director - Dr. Rohan Karunaratne
Logistics Director - Eng. Saliya Kaluarachchi
Publication and Technical Director - Mr. Ruwan De Silva
Eng. Jayakish Tudawe

Social and Recreation Directors - Mr. Ranji Hewage
Eng. Ashoka Randeni

Event Directors - Eng. Mega Kularatna
Mr. Mahanama Jayamanne
Mr. Sudath Amarasinghe
Dr. Tissa Meepe
Eng. Walter Perera
Mr. I. D. Wijeratne

Associated Event

The international exhibition - Construction Expo 2012 (CE2012) at the Bandaranaike Memorial International Conference Hall (BMICH) in June 2012. An event organised by the CIOB and LECS (Lanka Exhibition & Conference Services (PVT) Limited).

International Strategic Partner

Singapore Institute of Building Limited

CLIO Secretariats - Mr. Cyril De Silva
Mr. Rohana Balasuriya
Mr. Samantha Abeywickrama

Associated Institutions

Institute of Engineers, Sri Lanka (IESL)
Institute of Quantity Surveyors Sri Lanka (IQSSL)
Chamber of Construction Industry (CCI)
Organisation for Professional Associations of Sri Lanka (OPA)
Federation of Chambers of Commerce and Industry of Sri Lanka (FCCISL)
The Singapore Institute of Building Limited

State Ministries

Ministry of Construction, Engineering Services, Housing and Common Amenities
Ministry of Economic Development
Ministry of Industry & Commerce
Ministry of Labour & Labour Relations
Ministry of Land and Land Development
Scientific Committee Chairs

Chair: Dr. Sepani Senaratne, University of Moratuwa, Sri Lanka
Chair: Dr. Yasangika Sandanayake, University of Moratuwa, Sri Lanka

Scientific Committee Members

Dr. Vasantha Abeysekara, University of Southern Queensland, Australia
Prof. Dilanthi Amaratunga, University of Salford, United Kingdom
Dr. Harsha Cabral, President’s Counsel, Sri Lanka
Dr. Kapila Devapriya, University of Moratuwa, Sri Lanka
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Dr. Keith Skelton, Scott Wilson Ltd, Sri Lanka
Dr. Ben O. Uwakweh, North Carolina A&T State University, United States of America
Prof. Dayantha Wijesekara, Tertiary and Vocational Education Commission, Sri Lanka

Conference Secretariat

Miss. Chandanie Hadiwattege, University of Moratuwa, Sri Lanka
Miss. Saranga Gunawardena, University of Moratuwa, Sri Lanka
Miss. Pabasara Wijeratne, University of Moratuwa, Sri Lanka

CIB, W - 107 Working Commission Coordinators

Prof. P.M.D. Rwelamila
Prof. Alfredo Serpell
Dr. Ben Obimero Uwakweh
**Over View**

Sri Lanka has a tropical in other words, hot and humid climate and full of sunny blue skies. Its position between 5 and 10 north latitudes endows the country with a warm climate, moderated by ocean winds and considerable moisture that feels the comfortable more and more. The mean temperature ranges from a chilly low of 16°C in Nuwara Eliya in the Central Highlands, where even frost may occur for several days in the winter, to a high of 32°C in Trincomalee on the northeast coast. The average yearly temperature for the country as a whole ranges from 28 to 30°C.

Although Sri Lanka maintains its lovely warm and tropical climate year-round, the island does experience mild changes in rainfall. The rainy monsoon season takes place from October to January. During the rest of the year there is very little precipitation, and all living creatures must conserve precious moisture. May, June, and July are probably the hottest months of the year and a great time to hit the beach and soak in the sun.

Sri Lanka is known as the “Pearl of the Indian Ocean”, it is 65,610 km² in area situated close to the Southeast corner of the peninsula of India. Despite its relatively small size, Sri Lanka possesses a high level of biodiversity.

Sri Lanka’s population is approx. 21,283,913 (July 2011 est.). Ethnic groups include Sinhalese 73.8%, Sri Lankan Moors 7.2%, Indian Tamil 4.6%, Sri Lankan Tamil 3.9%, other 0.5%, unspecified 10% (approximately). While the religious breakdown is approx. Buddhist 70%, Muslim 7.6%, Hindu 7.1%, Christian 8%, unspecified 7.3%. Languages used: Sinhala (official and national language) 74%, Tamil (national language) 18%, other around 8%. English is commonly used in government and is spoken competently by about 10% of the population.

**Hotel accommodation:** five star hotels to boutique hotels spotted around the country

**Attractions & Activities**

**Accommodation**
- Golden Beaches spotted with Holiday Resorts.
- Adventure sport: Ballooning, Mountaineering
- Water Sports (White water rafting, Surfing, Kite surfing, diving, whale watching, water skiing)
- Golf holidays - Colombo, Nuwara Eliya, Trincomalee
- Hill country - visiting Kandy and little England (Nuwara Eliya) with temperature gradually reducing as you go up country to approx. 14°C, waterfalls, horse riding, holidaying in cool climate, reservoirs, botanical gardens, historical sites
- Rainforests and Safari
- Archeological and religious sites
Colombo is Sri Lanka’s bustling capital, with plenty of attractions and places to stay. The Fort district in the north is the place for department stores, airline offices and banks; it also houses the colonial district and the president’s residence. Galle Face Green is the seafront park on the eastern side of the city. In the east is the colourful Pettah bazaar district, selling fruit, vegetables, meat, gems, gold, silver, brass and tin objects and much more.

Other attractions include: the National Museum, the Art Gallery (specializing in portraiture and local art); the city’s many mosques and Buddhist and Hindu temples, and Dehiwala Zoo. A range of accommodation, great food and the best shopping can be found throughout the city.

On Colombo and other Sri Lankan destinations, check out the official Sri Lanka Tourist Board website:

[www.srilankatourism.org](http://www.srilankatourism.org) and [www.lonelyplanet.com](http://www.lonelyplanet.com)
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