2018 International Tech4Dev Conference

UNESCO in Technologies for Chair Development: Voices of the Global South
27-29 June 2018 | SwissTech Convention Centre | EPFL, Lausanne, Switzerland

Breakout Sessions and Event: EVE03-HAB, Habitat

Thursday 28 June, 2018: 14.00 – 15.30 hrs

Chair:

Dr. Soumen Maity
Technology and Action for Rural Advancement
B-32 Qutub Institutional Area, New Delhi 110016, INDIA

Prof. Fernando Martirena
EcoSur, CIDEM
Universidad Central de Las Villas, P.O. Box 54830, Santa Clara, CUBA

Background Note

Cement is one of the most used materials, contributing 5-8% to global GHG emissions. However, there still lies a large potential of improvement in terms of emissions and resource use. The reduction of clinker through use of supplementary cementitious material appears to be the best path of improvement. A new cementitious system that emerged in Cuba and India, supported by Switzerland, can considerably reduce the amount of clinker currently used in cement. The basis of the new cement, called LC3, is the synergy between calcine clays and waste limestone in Portland blended cement system, which enables up to 50% of clinker substitution. The new cement can reduce 25-30% of carbon emissions. The introduction of this technology will have a high impact in developing countries to augment their infrastructure needs in an environment friendly manner. It is expected that LC3 will contribute to the sustainable growth in countries through a strong participation of the private sector.

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Agenda of the Breakout Session

14:00 – 14.10 hrs: Keynote	Role of cement in housing programs in developing countries: The academic-public-private partnerships *(Dr. Soumen Maity, TARA, New Delhi, India)*
Regional Interventions	
14.10 - 14.20 hrs: Latin America	Grassroots applications in housing. Expanding in Latin America through Technology Resource Centres. *(Prof. Fernando Martirena, UCLV, Santa Clara, Cuba)*
14.20 – 14.30 hrs: Asia	Large scale housing delivery solutions in India *(Ms. Srijani Hazra, Development Alternatives, New Delhi, India)*
14.30 – 14.40 hrs: Latin America	Reconstruction experiences in Haiti and Ecuador – The role of materials *(Dr. Kurt Rhyner, Ecosur, Riobamba, Ecuador)*
14.40 – 14.50 hrs: Africa	Process innovations in Malawi to accelerate quality housing delivery *(Peter Schramm, GIZ, Lilongwe, Malawi)*
14.50 – 15.00 hrs: The Business Case	Innovations in incentivising low carbon technologies *(Dr. Urs Heierli, MSD Consultant, University of St. Gallen, Switzerland)*
15.00 – 15.30 hrs: Moderated Panel Discussion	
29th June: 10.00 – 11.00 hrs:	Technical Tour of LMC lab at EPFL (Pre-registration required)

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Speaker Profiles

14:00 – 14.10 hrs: Keynote

Role of cement in housing programs in developing countries: The academic-public-private partnerships
(Dr. Soumen Maity, TARA, New Delhi, India). Email: smaity@devalt.org

Dr. Soumen Maity holds a PhD in Materials Science from Central Glass and Ceramic Research Institute (CSIR). After a brief stint in CSIR, he joined Development Consultant Limited, Kolkata and was instrumental in managing a R&D Group on developing low cost building materials. During this period, he had set up two start-up companies, producing studio potteries and alternate building materials. Presently he is with TARA (Development Alternatives Group) leading the Innovation-Incubation-Multiplication value chain. His current sectors of interest are industrial waste utilisation, resource efficiencies of small scale technologies, alternate building materials and technologies in producing them and water purification systems. He has also successfully transferred home grown Indian technologies to Asia and Africa supporting them in development process.

14.10 - 14.20 hrs: Latin America

Grassroots applications in housing. Expanding in Latin America through Technology Resource Centres.
(Prof. Fernando Martirena, UCLV, Santa Clara, Cuba). Email: fmartirena@ecosur.org

Prof. Dr. José Fernando Martirena Hernández graduated from Civil Engineering in, Cuba in 1983 and received a PhD in Construction Technology, La Habana in 1988. In 2004 Professor Martirena was awarded a Habilitation (Dr.Sc.) in Building Materials, La Habana. Professor Martirena is Head of the Group for Building Materials at the Universidad Central de las Villas, Santa Clara, Cuba, and consultant to various international institutions -- among them the International Network for the

Sustainable Habitat (EcoSur) and RILEM. He is a Fellow of the Alexander von Humboldt Foundation, Germany, and recipient of the Cuban Academy of Science National Prize (2005, 2012) and several UN-HABITAT decorations. The focus of his work is the pursuit of sustainable binders that are suitable for developing countries. Pro. Martirena has more than 25 years of experience in low cost housing projects in many developing countries.

14.20 – 14.30 hrs: Asia

Large scale housing delivery solutions in India

(Ms. Srijani Hazra, Development Alternatives, New Delhi, India). Email: shazra@devalt.org

Srijani is an Architect by profession, practicing ecologically sensitive and energy efficient building material application and habitat design. She has received her degree in Master of Architecture (M.Arch) with specialization in Sustainable Architecture from CEPT University, Ahmedabad and Bachelor of Architecture (B.Arch) from Sushant School of Art and Architecture, Gurgaon.

At Development Alternatives, she is leading the Sustainable Habitat Program focusing on ecosystem creation for delivery of housing needs. She is involved in developing appropriate and affordable rural house designs for semi-arid and mountain region. She has been involved in mason training program and building material entrepreneurship model to build capacity on new construction technologies. Her key interest lies in demonstrating on ground and thus advocating policy initiatives for sustainable design strategies with special focus on usage of building materials and construction technologies for different housing ownership models.

14.30 – 14.40 hrs: Latin America

Reconstruction experiences in Haiti and Ecuador – The role of materials

(Kurt Rhyner, Ecosur, Riobamba, Ecuador). Email: sofonias@ecosur.org

Prof. Dr. Kurt Rhyner is the coordinator and founding member of the EcoSur network as well as grupo sofonias, a Swiss based non-profit organization active in various countries. He is an architect and involved in the conception of projects, analysis of technologies and materials appropriate to the specific conditions of developing countries. He has been active in researching and developing local small scale production and use of materials for popular housing in Latin America and Africa for more than three decades. As hands-on project manager and associate of research centers and universities he has covered the span from earth construction to the early experimental work that lead to the development of Low Carbon Cement. Use of ecological and economical construction materials and technologies resilient to earthquakes and other natural phenomena, specifically in post-disaster situations, is his specialty.

14.40 – 14.50 hrs: Africa

Process innovations in Malawi to accelerate quality housing delivery

(Peter Schramm, GIZ, Lilongwe, Malawi). Email: peter.schramm@giz.de

Peter Schramm graduated as an architect from the University of Stuttgart in 1994. After working for several years in Germany as an architect and project manager he decided in 2002 to resume concentrating on environmental friendly construction with focus on developing countries which he had already done during his studies. Since 2007 he is working in Malawi in a partnership with Centre for Community Organisation and Development (CCODE) for the German Cooperation in the fields of low cost housing, slum upgrading and environmental friendly building material production technology.

14.50 – 15.00 hrs: The Business Case

Innovations in incentivising low carbon technologies

(Dr. Urs Heierli, msd GmbH, Bern, Switzerland). Email: urs.heierli@msdconsult.ch

Urs Heierli studied Economics at the University of St. Gallen. He specialized in "International Trade and Developing Countries" and graduated with a Ph.D thesis on "Trade regimes and development in Colombia". He was founding member of SKAT, The Swiss Resource Centre and Consultancy for Development in St. Gallen and was then posted for 12 years as Country Director of SDC, Swiss Agency for Development and Cooperation, in Bangladesh and India. Since 2003 he started his own consulting company, msd GmbH, "Markets, Sustainability and Development" in Berne. He wrote several publications on market-based approaches for development, namely "Poverty Alleviation as a Business" with Paul Polak. He is also lecturer for development cooperation at the University of St. Gallen.