

CTBUH 2010

World Conference - INDIA

Remaking Sustainable Cities in the Vertical Age

Post Conference Review

Jointly Organized by





Council on Tall Buildings and Urban Habitat

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Published by

The Council on Tall Buildings and Urban Habitat
© CTBUH 2010

Printed and bound in Mumbai by:

Pixyl Print & Production

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ISBN 978-0-939493-32-6

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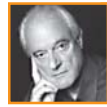
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Introduction

A brief introduction and general overview

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Speakers & Session Chairs

Alphabetized listing of all 77 conference speakers and 21 session chairs

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Presentations

Reports on the three plenary and 21 themed sessions over three days with some of the world's most renowned speakers:

P1: Remaking Tall Sustainable Cities in the Vertical Age

P2: The Remaking of Mumbai

P3: The Future of Tall Buildings

Day 1 Highlights: Remaking Tall Sustainable Cities in the Vertical Age

Day 2 Highlights: Urban Planning for Mumbai: Plans, Proposals and Problems

Day 3 Highlights: The Future of Tall Buildings

8



Social Events & Networking

Attendees had many opportunities for networking at the conference social events and breaks:

Welcome Reception

Conference Dinner

Exhibition

Networking Lunches

20



Technical Tours

Five tours were organized giving attendees the opportunity to see some of Mumbai's most notable high-rise buildings and construction sites:

Palais Royale

Dharavi

C- Ward

Kanchanjunga Apartments

South Mumbai Cultural Tour

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Statistics, Feedback & Attendee List

The conference in numbers, including overall attendance statistics, delegate feedback received after the conference and a full list of attendees

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Video Highlights DVD & Presentations CD

A Video Highlights DVD profiles some of the more memorable messages from the conference, including footage and summaries of all presentations.

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Plenary 3: The Future of Tall Buildings

The Ecoskyscraper: Critical Regionalist Considerations

Dr. Ken Yeang, Director, Llewelyn Davies Yeang, London and T. R. Hamzah & Yeang, Kuala Lumpur

TAIPEI 101: Greening the World's Second Tallest

Cathy Yang, Assistant Vice-President, Taipei Financial Center Corporation, Taiwan

Skyscraper: View from the Outside, on High

Alain Robert, Skyscraper Spiderman, Paris

Session Chair: *David Scott, Vice Chair, CTBUH, New York*

The final day's plenary was a platform for new ideas and concepts in eco friendly urban planning while taking care of individual buildings with regards to sustainability. A unique perspective on tall buildings by international spiderman Alain Robert got rave reviews from the construction fraternity as it was an out-of-the ordinary layman's view on tall buildings.

Dr Ken Yeang's presentation on moving beyond accreditation and engineering while designing tall buildings was undoubtedly one of the most inspiring presentations of the conference. He made clear that green buildings should not be just about innovative engineering but broader concepts of urban planning should be included. A tall building should not be just a stack of concrete, but designed like a vertical city. It's important to integrate urban planning programs in the sky to create sustainable buildings and cities.

His presentation spoke briefly on the idea of vertical urban design and the ecological nexus where he propagated the notion of integrating biotic and abiotic components and connecting them to the ground to create a network of green urban spaces. The idea of a landscaped ecobridge is fascinating and if urban planners could incorporate it in their plans it would not only improve the ecosystem but also preserve the diversity of

all animal species present in the locality. His concept of connecting green spaces from the top of the building to the underground and the vicinity was very refreshing and captivating.

His ecodesign concept of integrating the grey (roads, etc), blue (drainage, water bodies, etc), red (buildings, etc) and green (natural environment) infrastructure while considering the regional environment critically in a urban plan and in fact flipping the master plan vertically did appear to many as the future of urban design in this 21st century.

Cathy Yang's presentation on 'Greening the World's Second Tallest: Taipei 101' focused on the efforts taken by the building corporation to technically upgrade itself so as to acquire the LEED green building certificate and be an example of ideal sustainable design and symbol of Taiwan's standing in the world. She spoke about the latest techniques like using glass curtain wall to avoid direct heat and motion sensors for some lights during off hours to save on electricity. The building has provided window blinds, an



Dr Ken Yeang explained the concept of eco infrastructure and how to integrate sustainability in planning.



Cathy Yang from Taipei Financial Centre Corporation spoke on greening the world's second tallest building.



Alain Robert notoriously known for climbing tall buildings gave an adventurous view on modern day architecture.

energy management control system, rain harvesting, grey water system, recycling station, and garbage sorting and garbage collection system. Efforts are being taken to educate the tenants about the correct usage of this green design by organizing socio-cultural events.

The corporation saved up to US\$1,987,675 in the last two years due to its efforts to use sustainable technology and the tower is a fine example of a developer's corporate social responsibility.

Alain Robert's was the most entertaining presentation during the entire conference as his frank talk and tryst with the law and tall towers had everybody in good spirits. Being a human spiderman, climbing tall buildings is his passion and he has

“ The corporation saved up to US\$1,987,675 in the last two years due to its efforts to use sustainable technology and the tower is a fine example of a developer's corporate social responsibility. ”
-Cathy Yang

and agreeing to imprisonment for a few days amusing. Alain criticized architects for using slippery materials like marble and glass for building facades and not designing grooves spacious enough for his fingers so that his ascent could become easier!

Question and Answer Session

Q: How was a large amount of land made available for the construction of Taipei 101 in the heart of the city?

Cathy Yang: The Taipei city government put together three parcels of land to make Taipei a financial center.

scaled the heights of around 80 tallest towers in the world! His video of climbing the Petronas Tower in Malaysia was heart throbbing and his story of not getting legal permissions

Also, this is a new area and most of the land belongs to the government. In fact, after the Taipei 101 project, the whole area started to develop and it's now the CBD of Taipei.

Q: You have climbed nature and mankind. Which of the two do you prefer? And what next do you wish to climb?

Alain Robert: I thrive on adventure and climbing nature or mankind, both are very challenging and different from each other. It is not possible to tell you which one is better! And I have also climbed bridges including the Golden Gate, Harbour Bridge, Brooklyn Bridge, etc!

Q: How can non mechanical vertical transport in a skyscraper be made more interesting?

Ken Yeang: In one of my buildings in Singapore I have designed a spiraling ramp and wrapped it around the tower. It's more than a kilometer in length and has a park wide enough for vegetation. It's landscaped and a refreshing walkway for all.



Ken Yeang's masterplans integrate urban planning programs vertically in the sky to create sustainable built environments.

Dharavi

Of all the technical tours that set off around Mumbai, it was perhaps the tour of Dharavi that captured the imagination of many of the conference delegates. In part this was fuelled by the debate and discussions surrounding how to appropriately redevelop slum areas that acted as a continuous theme throughout the conference. Known as 'India's largest slum', Dharavi lies in the center of Mumbai and is home to one million residents in an area of just 0.7 square miles. It is one of the densest and most populated places on earth.

First stop of the tour was the Matunga Labour Camp Daycare Center. Here delegates listened intently to a presentation about the future of Dharavi, and in particular the challenge of surveying the district (a challenge that has taken a number of years to complete). It was then off to explore Dharavi itself, with delegates walking through the seemingly never ending labyrinth of narrow lanes, hardly wide enough for two people to pass, with electricity wires hanging precariously overhead. The streets themselves are a hive of activity, with children running and playing, people chatting in informal meeting places, food being prepared and sold and black smoke rising from potter's kilns. There are also thriving cottage industries, with an estimated 15,000 single-room factories in the district, many centered on the business of recycling. Nothing is considered waste in Dharavi, as the delegates found for themselves upon a short visit to a diaper recycling center! However, many were left to marvel at the intensity of recycling, as the tour passed residents sorting and collecting plastic bottles, cardboard, old shoes, textiles, car batteries, computer parts, plastic bags and wire hangers. Perhaps the most memorable scene from the tour occurred when del-

egates were led along the top of a short stretch of water pipe, located in a ditch of waste and garbage. As the delegates walked tentatively along the pipe, children struggling to carry water teetered the other way. Small, tightly packed shacks backed right up to the edge of the ditch and goats roamed freely in the garbage below. In the distance children laughed and played in the waste. In many ways, this scene summed up the disparity of Dharavi; happy, smiling children, a vibrant and electric street life full of color, with a strong sense of community, but a frightening lack of infrastructure and basic sanitation. However, it was also apparent that Dharavi is not a 'slum' in every sense. Whilst the buildings are certainly ramshackle, they are constructed of concrete and brick and seem permanent rather than the temporary huts one might expect. Children return home in the afternoon smartly dressed in school uniform, and there is no begging on the streets. It may seem incredible, but the annual turnover of industry here is \$650million.

It is interesting to note, that due to Dharavi's prime location in the heart of Mumbai between two main suburban rail lines, it has become a hot piece of real estate. The state government has plans to redevelop and transform the district into a 'modern township', complete with shopping complexes, hospitals and schools.



A goat grazing on a field of trash.



Delegates walk along water pipe.



Hanging washed clothes on electrical cables.

C - Ward

The technical tour to the C-Ward was an unforgettable experience for many of the tour delegates. The C-Ward is one of Mumbai's high-density zones and one of the largest and oldest trade markets in the city. The area houses people of different religions, ethnicities, trades, etc. in a cohesive yet dynamic fabric giving weight to the true meaning of secular India. Delegates found the perceived planning of the C-Ward very interesting, with streets often merging to form large congregation areas commonly converging on a religious building at its core. Different streets specialized in different trades, with an informal land-use/zoning-pattern clearly observed. Residential use occupies the floors above the commercial space. Historically, as trade flourished, the density of both residential and commercial activity increased in this area without adequate increase or improvement of the infrastructure. Thus, even though basic amenities and services are provided by the municipal government and other organizations, it was clear to delegates that there are not enough to facilitate this overcrowded district.

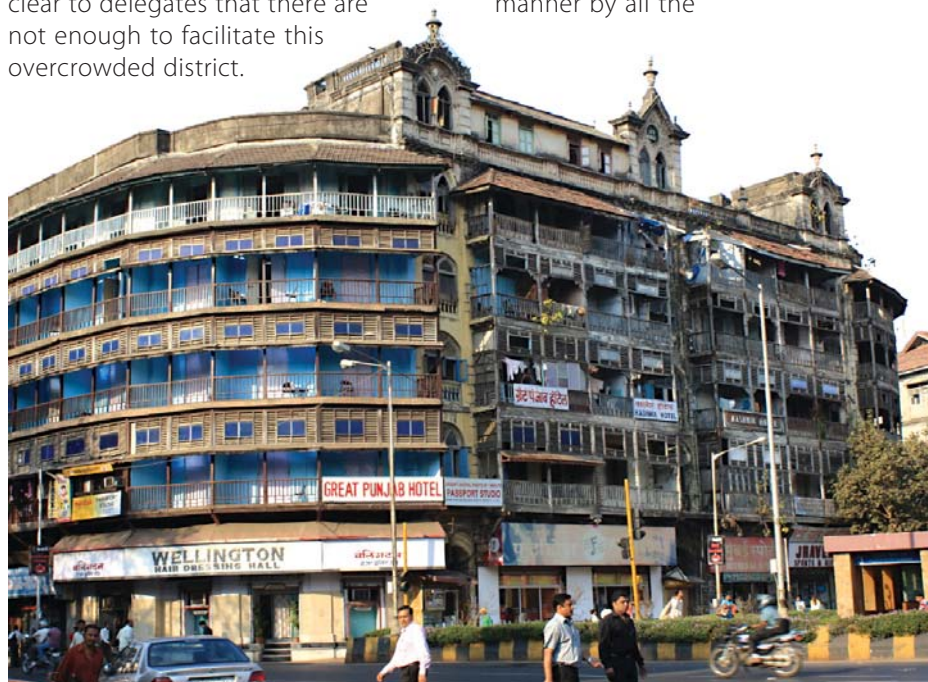
A number of things can be pointed out that need immediate attention in this area: congestion, inhumane living conditions, vehicular and pedestrian circulation, dilapidated buildings, non-sewage disposal, and a rent control act to name a few. As already mentioned, the living conditions in the area are inadequate, however, the charisma of this area lies in its density. Any plans for redevelopment need to be sensitive to this issue, and not strip it down to be like any other part of the city, lest it lose its character. Thus, the herculean task of redeveloping this district is a sensitive one, and needs to be carried out in a smooth manner by all the



Delegates on a walking tour in a narrow lane of C-Ward.



View at Bora Mosque.



The main road leading to C-Ward with colorful shop signs.

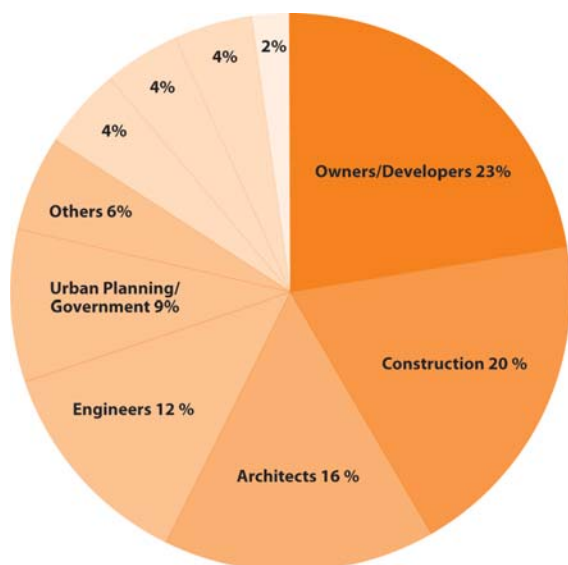
agencies involved, both government and non-government, such that the lifestyle of the people improves as a whole, while the area maintains its character and vigor.

Travelling on foot through the streets of the C-Ward was the best way to experience the area. Updates on the C-Ward redevelopment plan from the Remaking of Mumbai Federation representatives and interactions with the local people helped all the delegates connect with the area. Apart from the streets which gathered most of the attention, areas like the community schools, courtyards, religious buildings, etc. were also fascinating in their planning and use of space. Due to this vibrancy of spaces and people, the C-Ward can well be called a 'city within a city'.

Conference in Numbers:

Number of Days:	3	Technical Tours:	5
Number of Speakers:	77	Sponsors:	10
Delegates Attending:	1067	Promotional/Media Partners:	28
Countries Represented:	26	Exhibitors:	27
Organizations Attending:	490		

Attendee by Profession:

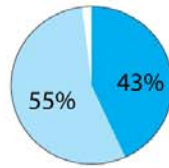


Profession	Attendees
Owners/Developers	220
Construction	179
Architects	154
Engineers	119
Urban Planning/Government	83
Others	58
Cost Consulting/Project Management	40
Associations	40
Press	38
Academics	22
Students (not shown in chart)	114
Total Number of Attendees	1067

Companies most represented:

Organization	Attendees	Organization	Attendees
Lok Group	24	Fortune Consultants	6
Saifee Burhani Upliftment Trust	16	Godavari Paints	6
Cisco India	13	Nina Concrete Systems	6
Illinois Institute of Technology	13	Schindler Elevator	6
Shree Ram Urban Infrastructure	13	Sheth Fabricators	6
KONE Elevators	11	Skidmore Owings & Merrill	6
Larsen & Toubro	11	The Indian Institute of Architects	6
Mumbai Housing & Area Dev. Authority	10	Thornton Tomasetti	6
PERI	9	Ashtech India	5
Alumayer Group	8	Kemrock Industries & Exports	5
Dow Corning India	8	KPMG	5
K Raheja Corporate Services	8	MM Project Consultants	5
Mumbai Met. Redevelopment Agency	8	Rizvi College of Architecture	5
ITC (Indian Tobacco Company)	7	Samsung C & T Corporation	5
Sir J.J. College of Architecture	7	Shree Vaishnav Alloys	5
Arihant Construction Co.	6	TEKLA	5
Builders Association of India	6		

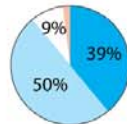
Did the conference fulfill your reason for attending?



■ Yes- Completely	43 %
■ Yes- Mostly	55 %
□ No	2 %

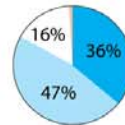
Delegate Experience:

I gained new knowledge and insights.



■ Strongly Agree	39 %
■ Agree	50 %
□ Neutral	9 %
■ Disagree	2 %
■ Strongly Disagree	0 %

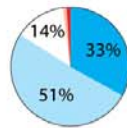
The quality of my work will be enhanced as a result of this conference.



■ Strongly Agree	36 %
■ Agree	47 %
□ Neutral	16 %
■ Disagree	1 %
■ Strongly Disagree	0 %

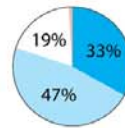
Speakers:

The speaker line-up was excellent.



■ Strongly Agree	33 %
■ Agree	51 %
□ Neutral	14 %
■ Disagree	1 %
■ Strongly Disagree	1 %

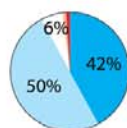
The presenters were stimulating in delivery.



■ Strongly Agree	33 %
■ Agree	47 %
□ Neutral	19 %
■ Disagree	1 %
■ Strongly Disagree	0 %

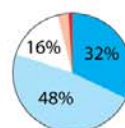
Event Quality:

The conference was well organized and coordinated.



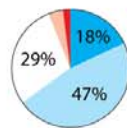
■ Strongly Agree	42 %
■ Agree	50 %
□ Neutral	6 %
■ Disagree	1 %
■ Strongly Disagree	1 %

The exhibition was useful and informative



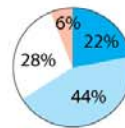
■ Strongly Agree	32 %
■ Agree	48 %
□ Neutral	16 %
■ Disagree	3 %
■ Strongly Disagree	1 %

Networking opportunities with other delegates were appropriate.



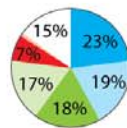
■ Strongly Agree	18 %
■ Agree	47 %
□ Neutral	29 %
■ Disagree	4 %
■ Strongly Disagree	2 %

The amount of interaction with the presenters was sufficient.



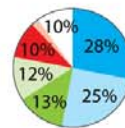
■ Strongly Agree	22 %
■ Agree	44 %
□ Neutral	28 %
■ Disagree	6 %
■ Strongly Disagree	0 %

How did you learn about the conference?



■ Advert - Indian Press	23 %
■ Word of Mouth	19 %
■ CTBUH E-Newsletter/Email	18 %
■ From a CTBUH Leader/Member	17 %
■ CTBUH Website	7 %
■ CTBUH Journal	1 %
□ Other	15 %

Possible Future Locations.



■ Shanghai	28 %
■ Singapore	25 %
■ London	13 %
■ Abu Dhabi	12 %
■ Beijing	10 %
■ Qatar	2 %
□ Other	10 %

Delegate Feedback

"Organization and pre-conference assistance was helpful and thorough."

-Fritz King, Tyrens, Stockholm



"Excellent teamwork. All the plenary sessions were good and informative."

-Zoeb Bootwala, Remaking of Mumbai Federation, India



"Super experience! Hoping to be associated with CTBUH and ROMF."

-Akhil Aryan, India

"It was very well organized and coordination was super. Delegates got every penny back from the conference."

-Prem Ramnani, Unity Infra Projects, India



"Technical Tours were a great idea – Good way to break up a 3-day event."

-William Maibusch, Turner Construction International, Qatar



"Thank you for the energizing CTBUH Conference, I was pleased to be part of it."

-Mark Garland, *Lewis Builds, Canada*



"I personally have felt the power of knowledge gathering and the depth in which the brains were interacting."

-G. Rathinavelu, *Trac Technologies, India*



"One of the best organized and coordinated conference that I have attended."

-Maharaj Singh Satsangi, *SCPC Associates, India*



"As a student it was very inspiring. Thank you for this wonderful conference!"

-Aeva Hioz, *Student, India*



"Excellent organization! Coordination of 1,000+ delegates was a mammoth task and was very well organized and managed."

-V. Chandrasekhar, *India*



About the CTBUH

The Council on Tall Buildings and Urban Habitat, based at the Illinois Institute of Technology in Chicago, is an international not-for-profit organization supported by architecture, engineering, planning, development and construction professionals, designed to facilitate exchanges among those involved in all aspects of the planning, design, construction and operation of tall buildings

Founded in 1969, the Council's mission is to disseminate multi-disciplinary information on tall buildings and sustainable urban environments, to maximize the international interaction of professionals involved in creating the built environment, and to make the latest knowledge available to professionals in a useful form

The CTBUH disseminates its findings, and facilitates business exchange, through many outlets including: the publication of books and reports; organizing international conferences; maintaining an extensive website and tall building databases; the management of special task forces/working groups; and the publication of the CTBUH Journal

The Council is the arbiter of the criteria upon which tall building height is measured, and thus the title of "The World's Tallest Building" determined. CTBUH is the world's leading body dedicated to the field of tall buildings and urban habitat and the recognized international source for information in these fields



Council on Tall Buildings and Urban Habitat

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About RoMF

The Remaking of Mumbai Federation (RoMF) is an association formed by over 50 associations and NGOs. The federation has over 16,000 stakeholders; tenants and landlords as members. The federation's main objective is to find solutions to the redevelopment of inner city areas of various cities in the country. To begin with, it chose Mumbai, where over 25 million people are living under the shadow of death in over 32,000 old and dilapidated buildings. It proposes to redevelop them in an inclusive, win-win and self financing manner. The federation is working to develop these cessed houses by deliberate planning procees by increasing and augmenting infrastructure to meet the requirements of this modern economic capital of India and transforming horizontal urban spaces to tall buildings with lots of open spaces, amenities and play grounds. This entire process will then result in altering Mumbai into a world class city which will become a role model for the development of other cities in India.



Remaking of Mumbai Federation

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