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**MINISTRY OF
CONSTRUCTION AND
URBAN DEVELOPMENT
OF MONGOLIA**

EVENT REPORT

INTERNATIONAL FORUM ON “SUSTAINABLE BUILDING ERA”



**ULAANBAATAR, MONGOLIA
15 JUNE, 2023**



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BACKGROUND

Sustainable building (also known as green construction or green building) refers to both a structure and the application of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from planning to design, construction, operation, maintenance, renovation, and demolition. Four elements of a sustainable building are: increased energy efficiency, selected materials, increased efficiency of water usage both in and outside of the building, improved air quality, which improves the health and productivity of inhabitants. Mongolian National Construction Association (MNCA) NGO uniting more than 160 largest construction companies, who are the major investors, real-estate developers and owners, construction assemblers, blueprint designers and architects, building materials' manufacturers, and suppliers. The MNCA NGO cooperates closely with local and domestic, foreign and international organizations in country and abroad, among of which is International Federation of Asia and Western Pacific Contractors Association (IFAWPCA), where we became the Member in 2015 and the Board member in 2018.

International Federation of Asian and Western Pacific Contractors' Associations (IFAWPCA) 42nd Mid-Term Meeting held in the Capital city Ulaanbaatar, Mongolia for the first time during 14-17 June, 2023.

As a Host of the IFAWPCA's 42nd Mid-Term Meeting, the MNCA in joint collaboration with the Ministry of Construction and Urban Development of Mongolia and IFAWPCA organized the International Forum on "**Sustainable Building Era**" within the framework of this event at the Mongolian National Chamber of Commerce and Industry (MNCCI) with active participation of over 150 sectoral delegates, experts, and decision-makers of domestic and foreign government, academic institutions, associations, private sector, and projects.





THE INTERNATIONAL FORUM
**SUSTAINABLE
BUILDING ERA**

ORGANIZERS:



СЭПБИТЭ ХӨТ
СЭРГЭЭГЭЭНИЙ
ХАМ

OBJECTIVE

The objective of the Forum was to introduce state policy and construction and urban development sector Mongolia, share knowledge and best practices of renewable energy solutions, earthquake risk and prevention methods in Mongolia, show capacity, development of Mongolian Construction companies to IFAWPCA members. The forum organized with the following two sessions and EXPO of construction companies of Mongolia.

❖ SESSION 1: RENEWABLE ENERGY'S SOLUTIONS

- BUILDING • GREEN • SOLAR • PLUS ENERGY
- GREEN TRANSITION-A HOLISTIC ENERGY STRATEGY APPROACH OF A MUNICIPALITY
- FINANCING THE GREEN BUILDING

❖ SESSION 2: THE EARTHQUAKE RISKS AND THEIR SOLUTIONS

- EARTHQUAKE RESPONSES, MEASURES, AND PREVENTION METHODS IN MONGOLIA AND EARTHQUAKE KNOWLEDGE ON A GLOBAL SCALE
- RESEARCH ON SEISMIC-PROOF BUILDINGS AND THE INTERNATIONAL TRENDS IN EARTHQUAKE RESISTANCE DESIGN OF STRUCTURES

OPENING SESSION



42ND IFAWPCA
MIDTERM EXECUTIVE BOARD MEETING
MONGOLIA
2023



THE OPENING SESSION

started with the
Welcoming remarks by:

MR. N.BAYARSAIKHAN,
President, Mongolian
National Construction
Association (MNCA)

Mr.N.BAYARSAIKHAN
PRESIDENT, MNCA



MR. TS.DAVAASUREN,
Member of the Parliament
and Minister of
Construction and Urban
Development (MCUD),
Mongolia, represented by
Mr. D.Batzorig, from the
MCUD

MR. TS.DAVAASUREN,
MEMBER OF THE
PARLIAMENT, MINISTER
OF CUD, MONGOLIA,
REPRESENTED BY
MR. D.BATZORIG,
MCUD



THE INTERNATIONAL FORUM

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ORGANIZERS:



ORGANIZERS:



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OPENING SESSION



MR. RABI SINGH,
PRESIDENT, IFAWPCA AND
FEDERATION OF CONTRACTORS'
ASSOCIATIONS OF NEPAL (FCAN)

Mr. Rabi Singh congratulated the MNCA for Hosting this Forum that aimed to support the international cooperation, collaboration, and better working relationships among its IFAWPCA's members and other public-private partnerships in Mongolia towards the future sustainable construction industry through exchange of knowledge on construction contracts, public-private partnerships, and sustainable building era.

KEYNOTE SPEECH



KEYNOTE SPEAKER

MR. E. BATBOLD
DIRECTOR-GENERAL,
DEVELOPMENT POLICY, LAND
AFFAIRS, URBAN
DEVELOPMENT DEPARTMENT,
MINISTRY OF CONSTRUCTION
AND URBAN DEVELOPMENT
(MCUD, MONGOLIA,

Mr. E. Batbold presents introduction in Construction and Urban Development policies pursued in Mongolia with its detailed information. He stated: “Mongolia has 156.4 million hectares of land and most of that land or around 73% of it used for Agricultural purpose and 96.1% only for livestock pasturing purpose”.

Also, he shared the details on fluctuation of construction and overhaul work performance, where the private companies increased by 45%, the public organizations decreased by 55%, and the organizations jointly operating with foreign companies slightly decreased by 3.9%, compared to 2022.

He shared an update information of the current progress on revising the Law on Construction and following standards and norms. Furtherly, he explained the vision and future projects of the MCUD related to Sustainable Green Development with anti-pollution vision. Mr. E. Batbold introduced the progress of issuance buildings' certificate and energy certificate for buildings; function of digital system of metering the greenhouse system.

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SESSION 1:



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RENEWABLE ENERGY'S SOLUTIONS

OVERVIEW

Sustainable building refers to both a structure and the application of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle.

The purpose of this session is to share knowledge of renewable energy, its solutions, green transition and financing of green buildings.



THE INTERNATIONAL FORUM

SUSTAINABLE BUILDING ERA

ENHANCE UNDERSTANDING ON RENEWABLE ENERGY AND GREEN BUILDINGS

Reduce greenhouse gas emissions by conserving the resources, improving a long-term durability of the buildings for sustainable building era's development

Understand the benefits of the Green buildings, bring them into reality, and share the best practices of the sustainable building era

ORGANIZERS:



SESSION 1:



MR. UWE FICKENSCHER
CEO AND FOUNDER OF ARCHITEKTUR+
BBW EXPERT

In his presentation Mr. Uwe Fickenscher discussed building is into a changing process and its progress. A change is necessary and urgent. He reminded that building is not only basic need for the human being and it is our third skin that belong to us. He mentioned about the fast growing new currency which is CO₂ that is connected to the industry. Explained how the CO₂ affecting our daily lifestyle and how we can earn and fined for processing the CO₂ as well. He stated that construction industry is in charge of more than 50% CO₂ emission and 60% of the waste production as well and shared his idea of 3 steps to decrease the percentages of CO₂ emission and waste production.

Later on he shared his own vision on the latest ideas with the examples from 1919 and 1970 as well and showed how is Green-Solar-House can change the environment and turn into a much better and much modern place which is today. Lastly Mr. Fickenscher mentioned about learning more about Green-Houses and noted that Mongolia is the of big changing process. Also he mentioned about how the climate is similar to California and how lucky that Mongolians traditional houses, and how Mongolians can embrace those and find new solution to the CO₂ emission.

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SESSION 1:



**MR. GERHARD
MEINDL**
SHAREHOLDER AND
CHIEF SALES
OFFICER OF ES-
GEHT! GMBH AND
COORDINATOR R&D
OF SWW
WUNSIEDEL GMBH

Mr. Meindl started his speech with some questions to the audience hearing their how and why zero emission energy future will become reality mentioning the Public-Private-Partnership (PPP). He explained his vision on how he can make the zero emission energy into reality sharing his own experiences and studies with the delegates. In his middle of the speech he explained how energy used to be generated and how it is nowadays and how it can change depending the circumstances and innovative technologies. He showed ongoing projects on various cases of the energy recourse such as H₂, heat and O₂ based energy producing project with approximate upcycle of

2700 ton H₂ and also Hydrogen central stepstone project which can help to upcycle into energy from the factories, cars and from many other resources as well. Lastly he talked about previous experiences and mentioned modern Improved grid stability and balance with decentralized assets and flexibility aggregation. Also explained how the Electrical car can change the upcycling or becoming a valuable part of the grid. Shared his vision of the future generation plant into building becomes a generation (storage) balancing unit and how grid can manage to fully integrate with local businesses as well.



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SESSION 1:



MS. A.UNDRAA
PRESIDENT, GREEN BUILDING
COUNCIL, MONGOLIA

Ms. Undraa presented the Environmental, Social and Governance (ESG) metrics the importance of green cities, shifting trends in green building, financing, importance of ESG in business, including the building sector. She explained the previous experiences of the Corporate Social Responsibility (CSR), current business core change due Greenhouse gas emission. She discussed about Green cities which are highlights the Green Building as more important. Around 70% of the global energy consumption and 75% of Emission are from the Urban cities and nowadays cities are getting more vulnerable to climate impacts.

According to the United Nations, 70% of World Population will be living in cities. The International Energy Agency estimates that while 71% of Greenhouse gas emissions are coming from cities, this number may go up to 76% by 2030 without interventions. She mentioned that the cities with Green building vision has the more sustainable environment and it is becoming more trendy; and Green building can suit well to the extreme climate of Mongolia. At the end of her presentation she highlighted that public spending and procurements is crucial for the successful implementation of NetZero strategies by governments.

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SESSION 2:



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EARTHQUAKE RISKS AND THEIR SOLUTIONS

OVERVIEW

Disaster preparedness consists of a set of measures undertaken in advance by governments, organizations, communities, or individuals to better respond and cope with the immediate aftermath of a disaster, whether it be human-induced or caused by natural hazards.

The main purpose of this session is to introduce with earthquake risks of Mongolia, their solutions and international lessons.



THE INTERNATIONAL FORUM

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RAISE AWARENESS OF THE SOCIETY FOR MORE EFFICIENT APPROACH DURING THE CRISIS AND DISASTER

Have a better legislation and regulations of the construction industry and implement in accordance with newly revised Law on Construction of Mongolia

Learn and share previous domestic and international experiences and implement the best possible solution

SESSION 2:



MR. J. DAMDINSUREN
COLONEL AND HEAD,
INFRASTRUCTURE AND
EARTHQUAKE DEPARTMENT,
NATIONAL EMERGENCY
MANAGEMENT AGENCY (NEMA),
MONGOLIA

Col. Damdinsuren introduced earthquake status of Mongolia, a total over 2100 earthquakes of magnitude of 3.0-7.0 points. He showed active cracks located in Mongolia with latest details of earthquake magnitude and repetitions. He explained about the Earthquake and Building Industry. Earthquake can lead to such as violent shaking, loud noise, dust, reduced visibility, and poor air quality, landslides, repetitive tremors, cracks of the land, soil water discharge and etc.

He mentioned about the second hazard, which includes an emergence of chaos, shortage of much needed supplies, spread of diseases and etc.

He talked about evacuation system, management and shelters of Ulaanbaatar city.

Col. Damdinsuren introduced about the international lessons such earthquakes in past times which had a huge impact on crisis management and construction industry as well such as Earthquake in Japan, Haiti, and lately occurred in Turkey.

He mentioned about Legislation and regulations related to earthquake disaster in Mongolia, and statistics about the non-resistant, resistant, buildings, which needed to be retrofitted in Ulaanbaatar.

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SESSION 2:



MS. DR. TS.TSOGGEREL SENIOR LECTURER, MONGOLIAN UNIVERSITY OF SCIENCE & TECHNOLOGY (MUST)

Ms. Dr. Tsoggerel introduced about her joint research with the JICA international of Japan aim on current status of the earthquake resistant buildings in Mongolia cooperating. She mentioned about the result of the damage evaluation of buildings due to the Khustai earthquake (Mw7.8). Results shows that 48% of Urban areas and 81% of the Ger district are are not resistant. The collaborative research with Japan had shown, event of strong motion at the Emeelt near Ulaanbaatar city caused a damage around 3.4 billion USD which equals to 26% of the Mongolian GDP. She mentioned about the seismic evaluation of existing buildings in Ulaanbaatar and ongoing projects, including Department of Urban planning and Development, National

Emergency Management Agency and JICA of Japan. Only 944 buildings out of 1844 are assessed as resistant to earthquake as 2022.

Dr. Tsoggerel introduced about the lessons from domestic and international cases as well as Sendai framework for the Disaster Reduction 2015-2030. The international future trend for earthquake disaster risk reduction should include Sustainable Development Goal's cooperation and investment to preparedness not only for human damage but also for reduction of economic loss. Another important thing is establishment of reliable common damage prediction model for disaster risk evaluation.

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EVENT GALLERY:





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