

# February 2021- February 2023 Lebanon Green Building Council Accomplishments and Achievements Board -8

President: Pierre Dammous; Vice President: Rima Sorour; Secretary: Khalil Saabi; Treasurer: Nada Tfaily; Accountant: Marcel Mansour; Board Member: Afif Naseem; Board Member: Youssef Ghantous



# President letter Eng. Pierre Dammous

There are too many varieties of activities to be done in order to promote the green culture in the construction field.

Volunteer, researchers and lobbying activists are needed to increase Legal regulation within the Construction Permit.

Our "Vision " at LGBC shall be beyond any expectation, brilliant peoples are invited to collaborate for a shiny future to help in the reconstruction of our country.



# **LGBC General Updates**

- 2021 Fresh graduate/ students' free membership category
- 2021 Granted membership to regular members
- LGBC general assembly meeting- election Board 2021-2022



### **MEMBERSHIP**

- Corporate, 17/ Regular, 51/ Students, 17
- 16 Meetings for Lebanon GBC Board of Directors
- Meeting with LGBC Former Presidents, Vice Presidents and Founding members.



# Lebanon GBC Membership in International Organizations

- World Green Building Council (WGBC), Emerging Member, Member since 2011
- World Energy Council (WEC), Lebanon Committee Honorary Member since 2013
- United Nations Global Compact (UNGC), Lebanon Network Participant since 2015
- Building Efficiency Accelerator (BEA), Partner since February 2019
- Global Waste Cleaning Network(GWCN), member since April 2021
- One Click LCA Ltd, supporter since, June 2021

# **Certificate of Membership**

This certifies that for the period going from 01 April 2021 to 31 March 2022

Lebanon Green Building Council (LGBC)

is a registered member of

#### **Global Waste Cleaning Network**

An international non-profit network comprised of NGOs, educational institutions, and private and public companies, that are active and interested in environmental issues related to the management and reduction of waste in the world, and the conservation of the oceans, coastlines, lands and atmosphere.

GWCN is registered as a CIO in England and Wales under charity number 1192372.

Member Ref: GWCN/M/21.118

Ing Grangwork Enda

Linus Ayangwoh Embe Chief Executive Officer Gwch Gwch

www.gwcnweb.org

Roger Gahlar

Dr. Roger Achkar Director General



## COLLABORATION

- Lebanese Standards Institute (Libnor)-NLTC 207 Environmental Management Committee, 2009 – Present
- Lebanese Standards Institute (Libnor) -NL TC 205 Building Environment Design, 2015- Present
- Cool Up Programme- Advisory Committee, September 2022- present



# **ENDORSER and SUPPORTER**

Supporting partner of The
Exclusive Community
Platform, an initiative by
The Exclusive, World Elite
Solutions and supported by
the Ministry of Industry,
May 2021



# One Click LCA Ltd, supporter since June 2021

One Click LCA Planetary is free to use, global embodied carbon software that helps construction industry professionals like you to calculate and benchmark embodied carbon impacts and material efficiency of your building designs





ENDORSER FOR THE GLOBAL NET-ZERO ACTION 2021 - A PLATFORM TO UNDERSTAND PRACTICAL APPROACHES IN MANAGING CARBON AND TRANSITION TO NET-ZERO EMISSIONS ECONOMY (8 - 11 JUNE 2021, VIRTUALLY);

ENDORSER FOR THE 4TH CITIES 4.0 CONFERENCE 2021, 21st - 22nd SEPTEMBER 2021 (VIRTUAL);

10 % ticket discounts for LGBC members in good standing







# **PROJECTS**

#### ARZ Green Building Rating System – ARZ 2.0

An updated version of ARZ 1.0 BRS is currently being developed to become a fully Web Based Rating System for New and Existing s

Lebanon GBC, applied as a co-applicant to Lot1 of the call, in partnership with CEDRO, ON GOING

- Progress and meeting deadlines (by Project Manager Dr. Riad Assaf).
- Group of engineers from LGBC members enrolled
- Steering committee of 4 board members (PIERRE DAMMOUS, YOUSSEF GHANTOUS, RIMA SOROUR, NADA TFAILY)









BUILDING A GREENER TOMORROW

Green Buildings · Smart Cities · Healthy Communities

#### **ARZ 2.0 GBRS**

#### **Green Building Rating System**

Sustainable living in a sustainable environment



www.arzrating.com

#### ARZ 2.0 What for?

ARZ 2.0 GBRS (Green Building Rating System) is a comprehensive assessment tool that:

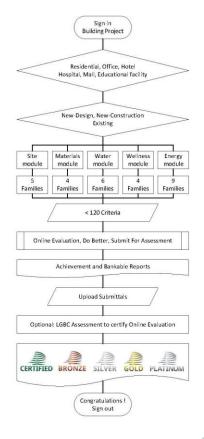
- Quantifies online the performance of buildings.
- Offers bankable reports.
- Offers reports to enhance the CSR (Corporate Social Responsibility) of a business.
- Is a friendly guide for the Architects and Engineers.
- Is a one-stop source for Architecture and Engineering students.
- Acts as a TPA (Third Party Assessor) for a fair and impartial building project evaluation.

#### ARZ 2.0 Product mission

The LGBC product ARZ 2.0 GBRS purpose is to help community individuals:

- To <u>understand</u> the basic requirements for a sustainable living in a sustainable environment using multiple means of communication.
- To give guidelines for a proper building <u>design</u> that responds to above basic requirements.
- To give guidelines how to <u>construct</u> above building respecting the basic requirements.
- To assure safety and healthy space for the people who <u>occupy</u> the building.
- To propose objective metrics to <u>evaluate</u> how much the building responds to sustainability requirements.

#### **ARZ 2.0 Process description**



www.arzrating.com



equirements.

much the building responds to sustainability

- To propose objective metrics to <u>evaluate</u> how
- To assure safety and healthy space for the people





### **ARZ 2.0 Training (four-day targeted workshop)**

### May 2021

Entitled 'Train-the-Trainers' under the EU funded/UNDP-CEDRO5/LGBC-ARZ 2.0 project: Advancing the ARZ Green Building Rating System (ARZ 2.0 GBRS) in collaboration with The Order of Engineers and Architects, Beirut.

The full news: https://lebanon-gbc.org/lgbc-launches-the-arz-2-0-advancing-the-arz-green-building-rating-system-gbrs/





# ARZ 2.0 workshops during 2022

In-person workshop by The Lebanon Green Building Council in collaboration with The Orders of Engineers and Architects, under the EU-funded/UNDP-CEDRO5/LGBC-ARZ 2.0 project,

entitled: ARZ 2.0 GREEN BUILDING RATING SYSTEM, Towards Net-Zero Communities www.arzrating.com The following topics were covered by Dr. Eng. Riad Assaf(ARZ 2.0 Project Manager):

- 1. The benefits of Green Building Rating Systems
- 2. The complete ARZ 2.0 GBRS: Process and Guidelines
- 3. ARZ 2.0 GBRS Experts Training
- 4. The ARZ 2.0 GBRS open web portal rating: Benefits and Methods
- 5. Future Revisions and Updates

The workshop was replicated throughout Lebanon in four different venues:

Presented by: Dr. Riad Assaf, Arz 2.0 Project Manager

#### At The Order of Engineers and Architects, Tripoli branch

**Tuesday October 11, 2022** 



Order of Engineers and Architects North in Tripoli
Scientific Committee







The Lebanon Green Building Council in collaboration with the Scientific Committee at the Order of Engineers and Architects Tripoli is pleased to invite you to attend the workshop under the EU-funded/ UNDP-CEDRO5/ LGBC-ARZ 2.0 project, entitled

# "ARZ 2.0 GREEN BUILDING RATING SYSTEM" Towards Net-Zero Communities

The following topics will be covered by Dr. Eng. Riad Assaf

1. The benefits of Green Building Rating Systems

2. The complete ARZ 2.0 GBRS: Process and Guidlines

3. ARZ 2.0 GBRS Experts Training

4. The ARZ 2.0 GBRS open web portal rating: Benefits and Methods

5. Future Revisions and Updates

As a pre-requisite to get the tiltle of ARZ 2.0 GBRS EXPERT, the intrested individuals are invited to register via link: https://www.arzrating.com/en/become-an-expert

Time: Tuesday 11th of October 2022 from 4.00 PM to 7.00 PM

Location: Conferences Room - Order of Engineers and Architects Tripoli









### At The Order of Engineers and Architects, Nabatieh branch Thursday October 20, 2022





### At The Order of Engineers and Architects, Zahle branch Friday October 28, 2022





### At The Order of Engineers and Architects, Saida branch

Thursday November 3, 2022





# II. ARZ PRESENTATION IN EGYPT: Project presentation in Egypt at RCREEE- CAIRO PREMISES

November 6, 2022





#### Launching the project on December 2022

For existing building, or new building in design or construction phase, any project's rating can be evaluated online for free.

- For the help of an ARZ 2.0 expert, visit <a href="https://www.arzrating.com/en/experts">https://www.arzrating.com/en/experts</a>
- To download ARZ 2.0 Leaflet, visit <a href="https://www.arzrating.com/en/leaflet">https://www.arzrating.com/en/leaflet</a>
- To download ARZ 2.0 Guideline, visit <a href="https://www.arzrating.com/en/user-guidelines">https://www.arzrating.com/en/user-guidelines</a>
- For more information, contact us by visiting <a href="https://www.arzrating.com/en/contact">https://www.arzrating.com/en/contact</a>

Meeting with OEA Nakib of Tripoli Mr. Bahaa Hareb, by Dr. Riad Assaf and Eng. Afif Nassim January 2023



# LGBC SOCIAL ACTIVITIES



Launching LGBC Cultural campaign, March 2021(On going)

LGBC casual online networking and social gathering, April 2021

Launching and supporting WGBC RECYCLING CAMPAIGN, October 2021

(On going)

#### Visit to member <u>Adib dada project</u>: Beirut's RiverLess Forest extension in Sin el Fil!", <u>November 2021</u> by Afif Nassim, Manal Al Ayoubi, Marcel Mansour







As part of LGBC participation in Walk2COP27 activities; A "Nature Walk" was organized.

LGBC

| lebanon green building council a children council children childre

It included a trip to Horsh Ehden Nature Reserve, in partnership with Horsh Ehden Nature Reserve and Harley Owner Group (HOG - Lebanon Chapter).

The activity was sponsored by ZMERLY&CO, October 2022

Organized and executed by: Afif Nassim, Rima Sorour, Nada Tfaily





# NATURE WALK



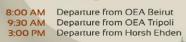


Lebanon Green Building Council Horsh Ehden Nature Reserve Harley Owner Group HOG

#### **OCTOBER INVITE YOU FOR** 23-2022 A WALK IN NATURE

Join us for Welcoming & Breakfast Planting of trees

Hiking





**Trip to Baskinta - Mount Lebanon**, in partnership with the Architects Association at the Order of Engineers and Architects in Beirut and ESTIDAMA Alhayat, included visiting "Modern Architectural Heritage Projects" as well as an environmental responsive design project, "PASSIVE DESIGN HOUSE \_LIFEHAUS-BASKINTA", **November 2022** 

LGBC

Organized by: Rima Sorour







#### **PASSIVE DESIGN HOUSE**

LIFEHAUS 9:00 am 4:00 pm

#### **BASKINTA** VISIT

INVITATION

05 NOV 2022

#### **Architects Association** Order of Engineers & Architects - Beirut

YOU ARE INVITED TO A UNIQUE TRIP You will be visiting Architectural Heritage Projects as well as a Passive Design Project.

Partners
Green Buildings & Sustainability Committee - OEA Lebanon Green Building Council ESTIDAMA Alhayat

#### CHARGE

09:00 am Departure From OEA - Beirut 10:30 am Visit Shakhroub (Mikhaeel Neaimeh)

11:00 am Visit Modern Heritage Architecture Monastery of St Michel Jamil Haddad house Michel Ayoub house

01:00 pm Visit Lifehaus 02:00 pm Brunch - Snack

02:30 pm Departure From Baskinta

Visit of the Lifehaus, by Architect Nizar Haddad, a passive sustainable self-sufficient house, designed to lower the carbon footprint using upcycled, and local natural materials conciliating ancestral building techniques, and cutting edge eco-friendly architectural solutions. A combination of tradition, and modern scientific knowledge.

Georges Haddad, the father of Nizar Haddad, is a veteran Lebanese architect renowned for being among the pioneers who introduced modern architecture to Lebanon. In 1956 Georges Haddad launched his architectural firm alongside other celebrated men in the field including Gregoire Serof, Khalil Khoury, Nicolas Bekhazi, Assem Salam.



**MONASTERY OF** SAINT MICHEL

#### JAMIL HADDAD







# **PUBLICATIONS AND COMMUNICATIONS**



E-meeting with Paulina Pisarek, a Sustainable Development Officer at Global Affairs
Canada, discussing ARZ Building rating system and other green initiatives, April 2021
Interview – to discuss GCF Lebanon Initiative – with BASE – Basel Agency for Sustainable
Energy, April 2021
Interview with. Suzanne Menhem, a member of the Lebanese Development Network team in
implementing an EU project in Lebanon entitled: Mediterranean Youth, NEETs and Women
advancing Skills, Employment and Awareness in the Blue and Green Economy, June 2021
Sharing, joining and supporting World Green Building Week campaign #BuildingResilience
for Climate, People and Economies, September 2021
Interview with Alex Ray from Lebanese policy and research organisation Triangle, topic
discussed how building codes can contribute to renewed consumption and economic patterns as
well as environmental and social outcomes, October 2021
☐ Sharing, joining and supporting BuildingToCOP26 campaign by WGBC, November 2021



- ☐ Supporting Walk2COP27, through Nature Walk to Ehden, and Green Workshop with the of Engineers and Architects, October 2022
- Walk2COP27 is based around a virtual journey from Scotland (COP26) to Egypt (COP27).
- Sharing, joining and supporting **World Green Building Week campaign**, Theme BuildingForEveryone and putting people back at the heart of the built environment, **September 2022**
- E-meeting with GAME, GAME works to empower youth through street sport and street culture activity, June 2022
- Transmitting ARZ2.0 guidelines and the Leaflets to WGBC and Mena GBC for promotional purpose among GBC.



#### WE'VE PLEDGED OUR SUPPORT





#### Listing Lebanon case in sustainability- Aytou project by E. Marcel Mansour in World Green Buildin Council (WGBC) case studies report, November 2021

To check the whole document, you may visit https://lebanon-gbc.org/lebanon-case-in-sustainability-aytou-project/

#### 3.3.2 Economic Value Retained **Through Material Banking**

Reducing waste in the construction process - both by sourcing re-used materials at point of construction. and by returning functional materials to the market at end of life point, offers financial opportunity versus standard building construction



Business as usual in many geographies today is that excess building materials - both surplus in the construction process to those available at end of life stage - end up additional financial value as a as waste148. The US Environmental Protection Agency found that total waste from constructionrelated projects was double that of municipal waste from households and businesses140. As much as 32% of landfill waste comes from the construction site, with 13% of materials delivered to a construction site being sent directly to landfills without having been used150. However, sustainable building efforts can help the construction industry substantially reduce waste generation151

With the transition to a circular economy, buildings, infrastructure and the materials that create them are considered reusable assets, with lasting value. Flexibly designed buildings become banks of valued materials, able to be extracted without damaging or degrading the material and facilitating reuse in another project - thereby slowing resource use to a pace that is sustainable for the planet. Materials banking represents a source of resource to be realised once the building reaches the end of its use For example, re-using asphalt and concrete has been shown to save up to 25% on material costs152.

For the asset owner, realising maximum value depends on choosing the right materials and construction techniques that are low cost to dismantle, reuse and recycle. This approach can also be applied in a similar way to existing assets. For example, if the building is examined in advance with the goal of capturing value at the end of its use, the owner

will be aware of the materials that have potential value and how they should be dismantled to preserve it. With this approach, financial value is embedded within the fabric of the building, to be accessed at point of deconstruction.

STUDY



#### Mansour Residences, Aytou Village, Lebanon



- Mansour residences are three residential houses that have been built in Aytou Village,
- Built at an altitude of 1,100m using 'Design for Life' principles the development included a range of sustainability strategies to optimise material efficiency, such as structural waste reduction and reuse of excess materials, extended material life span due to use of durable concrete and local stone facade cladding, plus energy efficiency measures leading to reduction in CO, emissions





- Through these interventions, the project demonstrates optimal financial value at the residential scale: the residences were 8% cheaper than similar projects due to waste reduction and reuse of excess materials, and present a 12% cost reduction due to energy and material optimization and circular design
- The project also contributes to local resilience measures with features such as a water harvesting system, that can store up to 460m3, plus over 100 trees that both contribute to biodiversity and to feeding residents. This case study demonstrates that sustainability principles can be implemented in all climates, geographies and typologies - and the business case benefits experienced at both large and small scales.

# LGBC social media pages, we are growing! share to spread our green vision:

Face book;

https://www.facebook.com/LebanonGBC/

Instagram;

https://www.instagram.com/lebanon.green.building.council/

LinkedIn; <a href="https://www.linkedin.com/in/lebanon-gbc-173bo4bb/">https://www.linkedin.com/in/lebanon-gbc-173bo4bb/</a>

Twitter; <a href="https://twitter.com/LebanonGBC?s=08">https://twitter.com/LebanonGBC?s=08</a>





# LGBC WEBINARS TWO Awareness and Educative Series of Webinars



- Waste management and education by Rania Al Jamal, July 2022

- General introduction to Green Buildings, and two case studies (IC School and M1

Building) by EcoConsulting- Mohammad Mortada, July 2022







## LEBANON GBC AT CONFERENCES/ EXHIBITIONS /VISITS

**Participation in Lebanon** 





**30TH OF MARCH 2021** AT 6.00 PM BEIRUT TIME STREAMING LIVE ON OEA FB PAGE WWW.FACEBOOK.COM/OEABEIRUT

#### COP21

ASME

#### **ARE HEAT PUMPS** THE FUTURE OF HEATING ?!

... AND LET'S TALK ABOUT HYDROGEN BOILERS





HASSAN CHEHADE SENIOR MECHANICAL ENGINEER KHATIB AND ALAMI MODERATOR



JEAN HUGENELL

TRAINING MANAGER DE DIETRICH HEAT PUMP TECHNOLOGY FOR HEATING AND HOT WATER PRODUCTION, SOLAR INTECRATION TO HEATING SYSTEMS, USING INTELLIGENT CONTROL FOR OPTIMIZATION OF ENERGY



**CLAUDE FREYD** CROUP REGULATORY INTELLIGENCE LEADER

**BDR THERMEA GROUP** UNIQUE OPPORTUNITIES FOR HYDROGEN IN THE ENERGY TRANSITION?





















#### **Participation Abroad/Virtual**

#### LEBANON GBC AT CONFERENCES / EXHIBITIONS /VISITS









3rd The Middle East & Africa Green Building Congress, Virtual congress, 22-23 March 2021, Intervention by Eng. Rabih El Fadel WGBC ongoing net meetings. WorldGBC 2021 Annual General Meeting and Online Networking Event 5 October 2021 GBCs' Partnership - EmiratesGBC MENA Green Building Awards, November 2021 **Jury members** from LGBC: Rima Sorour, Hana Alamuddine, Nada Tfaily **PERIODIC MEETINGs with WGBC "GBC University"** Participation in UNESCO virtual workshop entitled *Online Arab States Regional High-level* Workshop on Nature-based Solutions (NBS) for hydro-meteorological hazards, November 2021 Presentation by Pierre Dammous" ARZ Building Rating System" application in Lebanon and in region

Partnership - EmiratesGBC MENA
Green Building Awards, November 2022

Jury members from LGBC: Rima Sorour Al Housseiny, Hana Alamuddine, Nada Tfaily, Wael Zmerly, Riad Al Abed, Diana Ghosn

■ WorldGBC 2022 Annual General Meeting, Leadership Summit Attendance-London, June 2022, by Aram Yeretzian



LGBC President, Pierre Dammous was invited for a symposium "COOL UP" prepared by LCEC and UNDP at Istanbul, ARZ 2.0 was introduced in auxiliary meetings.

COOL UP activities were addressed for upscaling Sustainable cooling dealing with friendly Ozone Refrigerants, September 2022

By Pierre Dammous, Riad Assaf, Wael Zmerly and Youssef Ghantous





□ PERIODIC MEETINGs with WGBC and MENA GBC committee, By Pierre Dammous, Sara Ayyach



As a continuation of the work done in 2020 on the SRG (Sustainable Reconstruction Guidelines) for the WGBC MENA region, where the LGBC wrote the heritage section of the guidelines, in 2022 the LGBC, represented by Hana Alamuddin was given the task of:

Co-writer and context editor of Final checklist, digital content and Executive summary report.

The report is now published at: https://worldgbc.org/sustainable-reconstruction-recovery-framework/ and for more information: https://worldgbc.org/efficient-resource-utilisation/





#### **LEBANON GBC AT UNIVERSITIES & SCHOOLS**

#### The Green Apple Day

**Green Apple Day Of Service,** LGBC collaborating with Dar Al-Handasah for the 7<sup>th</sup> year- Team The passive cooling competition event for <u>Lebanese American University</u> at DAR premises, <u>August 2021</u>

Green Champion 29th at Lycee Verdun. Two student teams competed for the Sustainability Movement Green Champion Award, group of LGBC member participated as jury, April 2021

Team leader & Organizer; Ibrahim Kronfol (Dar), June and October 2022







### Participation in the **environmental day organized by Lycée Nahr Ibrahim School March 2022, by Afif Nassim, Youssef Ghantous**



#### MOU signing with Al Balamand University, January 2023



#### WE ARE GRATEFUL FOR OUR CORPORATE MEMBERS



# **SORPORATE MEMBERS**



































#### WWW.LEBANON-GBC.ORG

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