



GREEN BIOPHILIC
LIVING LTD



Harvest from the **Biophilia** Gathering

From the first African Biophilic Conference and Expo
held at Safari Park hotel on May 15th and 16th 2025.

*Harvested with gratitude by our Biophilia 2025
Conference Rapporteurs:*

1. Morris Mucheru: Rapporteur General
2. Brenda Agwacha: Rapporteur
3. Angela Chege: Rapporteur



Executive summary

The first-ever Biophilic Africa Conference and Expo, hosted by Green Biophilic Limited (GBL), marked a historic step in promoting nature-integrated design across Africa. Held at the iconic Safari Park Hotel in Nairobi, Kenya, the two-day event brought together designers, policymakers, investors, educators, health experts, and thought leaders from across Africa and beyond.

The conference aimed to bridge the gap between African traditions and modern design, while promoting biophilia as a climate action tool, cultural identity anchor, and public health enhancer. Participants explored innovations in architecture, sustainable materials, spirituality in design, policy, education, and technology integration through keynotes, panel sessions, interactive workshops, and a soft course launch.

Key Highlights:

- I. Over 7 expert panels, including themes on:
 -  **Biophilia & Health**
 -  **Technology**
 -  **African Spirituality**
 -  **Policy**
 -  **Children's Learning Spaces**
- II.  Launch of **Africa's first Nature-Centered Design course** integrating traditional African architecture with biophilic principles.
- III.  **Cultural emphasis** on reconnecting with **indigenous wisdom, ancestral building practices, and nature-based learning.**
- IV.  Showcased **sustainable materials** such as **rammed earth, mycelium, and bamboo.**
- V. Addressed **policy gaps and urged bottom-up approaches** to green standards.
- VI. Emphasized **cross-sector collaboration, decolonizing design thinking, and using biophilic principles to address climate change, mental health, and identity.**

Key Highlights:

VII. Panelists from 5 plus countries including;



VIII. 150 plus delegates stemming from



IX. 100 plus companies and organizations represented from both public , private and Non-governmental entities.

X. 2 online educational courses launched

Special Recognition:



The organizing team, for their dedication, creativity, and unwavering belief in the power of nature-centered designs. Making this gathering not only possible but truly meaningful. Thank you for planting the seeds of change and bringing the vision of biophilia to life.



We extend our deepest appreciation to **Nashon Okowa**, our Strategic Event Advisor, whose insight, guidance, and unwavering support were instrumental in shaping the vision and execution of this event. Your clarity, strategic mind, and commitment to excellence helped anchor the entire experience.



The conference culminated with a strong commitment by participants to implement, scale, and champion biophilic practices across sectors, setting the tone for a regenerative and human-centered built future in Africa.

01: background

The Biophilia conference and Expo is an initiative of Green Biophilic Limited, a company that carries the vision of being a leading force in African Biophilic Design that aims at inspiring global communities including consultants in the built, hospitality, education and health industries among others to embrace biophilic living, green initiatives and climate action for a healthier planet.

The Company, under the leadership of Ms. Wangui Mwangi, seeks to create and promote deep connection between nature and human well-being in the built environment by bringing nature's serenity, harmony and vitality into indoor spaces that eventually reflect the beauty and interaction with nature.

they are involved in:

- **Biophilia and Green Building Consultancy**
- **Create awareness on the topic through African Biophilic Design Content Creation.**
- **Offer online Biophilic courses.**
- **Engage in discussions and Interactive sessions and workshops**
- **Green Building Consultancy**
- **Creation of sustainability and green models for companies.**



The Conference aims to initiate the discussions on African Biophilic design as well as examine case studies of how this concept has been included in design as well as showcasing cutting-edge biophilic design, sustainable materials, and technology-driven wellness solutions through the exhibition from different suppliers, vendors as well as the stakeholders in the built environment space.

From AI-powered sustainability to nature-based learning and culturally rooted architecture, the event will explore innovative ways to integrate nature into modern spaces for well-being, sustainability, and cultural preservation.

02: Conference Objectives & Expected Outcomes:

The conference aims to achieve the following objectives:

- Introduce Biophilia to a Wider Audience & Bridge the Knowledge Gap:

Many people feel connected to nature but don't recognize it as biophilia. This expo will break down the science, research, and benefits of biophilia in a way that resonates with everyone—from professionals to everyday individuals. Showcase how biophilia is already present in African traditions, architecture, and daily life, making it accessible and relatable.

- Launch Africa's First Nature-Centered Design Courses of Biophilia:

Officially introduce GBL's Nature Centered Design course. An introductory course covering biophilia, greenbuilding & traditional African architecture as a climate action mitigation tool.

- Show the Economics of Biophilia: The Business Case for Investors & Developers

Demonstrate how biophilic design leads to increased property value, energy savings, improved health, and market demand, making it a profitable investment.

- Enhance African Culture in Architecture, Schools & Learning Spaces

Reconnect African Indigenous knowledge systems with modern biophilic design, ensuring architecture and learning spaces reflect cultural identity, sustainability, and community well-being

- Promote Biophilic Design as a Climate Action Strategy

Showcase how biophilic urban planning, green infrastructure, and nature-based solutions can help African cities and buildings become climate-resilient.

- Foster Business Growth & Industry Collaboration

Create a platform for architects, designers, policymakers, and investors to drive biophilic-driven real estate, sustainable interiors, and eco-friendly products.

02: Conference Objectives & Expected Outcomes:

- Inspire the Future of Biophilic Architecture & Interior Design

Showcase biophilic African cities, nature-integrated homes, and regenerative urban spaces, proving that modern development can honor tradition while embracing sustainability.

- Showcase Sustainable & Regenerative Materials

Highlight eco-friendly African materials such as earth, bamboo, and stone, emphasizing their durability, sustainability, and cultural significance.

- Drive Policy & Investment in Green Building & Biophilic Solutions

Engage government leaders, corporate investors, and developers to support biophilic policies, tax incentives, and certification programs that drive adoption at scale.

- Encourage Nature-Based Learning & Awareness

Advocate for biophilic education in schools, integrating sustainability, cultural traditions, and experiential nature-based learning into curricula.



03: Conference Topics:

The following topics were covered in the event:

- **Understanding Biophilic design and its future.**
- **The Future of Biophilic Design:**
Innovations in Architecture & Interior Spaces
- **Sustainable Products and Materials:**
The Role of Nature in Green Building.
- **The Intersection of Technology and Biophilic Design**
- **Biophilic Design for Health and Wellness:**
A Holistic Approach to Well-being
- **Reconnecting Children with Nature:**
Teaching African Culture and Sustainability in Schools.
- **Spirituality, Nature, and Architecture:**
Designing Sacred and Culturally Rooted Spaces.

04: Conference Sessions:

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OPENING REMARKS:

The session was called to order at 9:30am followed by the singing of the national and the East African anthems. Thereafter, prayers were offered by both Christian and Islamic faith leaders, followed by Introductory remarks as follows:

- **Remarks by Mercy Wanjala, Sales & Marketing manager, Safari Park Hotel:**

Welcomed the participants as the Co-host of the first African Biophilia Conference and Expo. She noted that the hotel's design, keeping in line with the theme of the conference, has been done and constructed using biophilic principles.

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04: Conference Sessions:

- She identified 6 pillars of biophilic design that have been used in the design, planning and construction of the hotel:

- 1. Natural shapes and forms through organic curves*
- 2. Use of Natural materials in the construction.*
- 3. Inclusion of Natural patterns and processes.*
- 4. Use of Symmetry, repetition & rhythm in nature in design.*
- 5. Inclusion of Green landscapes and Water features.*
- 6. Use of Natural light through grand windows.*

- She mentioned that sustainability was a key component in the operational structure of the hotel. She noted that part of the Hotel has been set aside for tree planting in an attempt to make the spaces green and promote natural landscapes.

- She indicated that the Hotel was also involved in tree planting activities in partnership with the Directorate of Criminal Investigations as part of their outreach as well as neighbouring schools and the local community.

- She emphasized the Hotel's commitment in the implementation of the biophilic principles not just within the hotel but also working with the neighbouring communities through outreach programmes.



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- Remarks by Ms. Wangui Mwangi, Founder & CEO – Green Biophilic Limited:

- She started by appreciating the attendees and encouraged them to actively participate in the discussions and dialogues about the topic with the view of improving spaces through inclusion of biophilic design principles.
- She then narrated her journey as an Interior Designer, struggling with the missing link between nature and design. She then noted that biophilic concepts and principles were not new concepts, but concepts that were implemented by the ancestors as a way of life.
- She observed that in Africa, the African people appreciated nature and lived in harmony with it. She likened her story to that of the bamboo tree, from the seedling phase to the actual growth and flourishing of the tree. She also encouraged the participants to be creators of a new earth with biophilia in mind for this and future generations.
- As an active participant and champion for Biophilic design, she mentioned articles that she had written and shared on different platforms from LinkedIn to the Kenya Green Building Society as well as opportunities to give Ted talks on the topic.
- She went on to recount her interaction with Mercy Wanjiku, the Project Manager, and Mr. Wahinya, sharing how she introduced the idea of launching an online course. Together, they supported the development of her vision not only to introduce the course, but also to organize an exhibition and host a Biophilic Conference. She had initially intended to unveil this vision at the Blue Earth Summit in London, where she had been invited to speak, but was unfortunately unable to attend.
- She reflected on the challenges she encountered in bringing her vision to life, including limited financial resources to fund the conference. Despite these obstacles, her passion and determination remained unwavering in the pursuit of the dream

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- She appreciated the Principal Secretary from the State Department. for Public Works – Hon. Joel Arumonyang, Chief Designer at the Interior and Graphic Design Department, CHANGE TO DESIGN DEPARTMENT, Mr. Graham Teede from Australia who was her mentor, Mrs. Mercy Wanjala – General Manager Safari Park Hotel, Mr. Ted Otieno, Mr. Nashon Okowa and all the delegates and participants from all around the world.

- She then concluded by giving an invitation to the participants to engage in the conversation once again as well as the presentations and join into the movement that has begun with experts giving their professional input on the topic and an opportunity to grow in African Biophilic Design.



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04: Conference Sessions:

- Insights by the Hon. Joel Arumonyang HSC, Principal Secretary from the State Department. for Public Works:
- Hon. Arumonyang acknowledged the Parents for Wangui Mwangi and appreciated their support in seeing the vision come to a reality.
- He further confirmed his unwavering support for the passion to implement biophilic principles in the design of public spaces, an initiative, he noted, Ms Wangui has taken up seriously as a professional in the built environment.
- He acknowledged Wangui's effort in promoting biophilic living as a young professional, one that resonated with the President's plan on developing the creative economy agenda as one in the built environment space.
- He acknowledged that the concept of biophilia is not a new concept but one that the ancestors implemented in their day to day living with and in harmony with nature. He added that biophilia is the inherent desire of human beings to connect with nature and that man doesn't live in isolation.
- He went on and encouraged participants to learn from the different professionals both locally and internationally present in the conference, who have successfully implemented these principles in their projects. He acknowledged that there still was a challenge that existed in reviving the concept and moreover how it can work hand in hand with the emerging technological trends.
- He challenged the participants to explore ways to collaborate with nature in order to maintain and promote good thermal comfort levels, water sensitivity, energy efficiency and healthier mental status in urban areas. He indicated that when we fight for nature, nature fights for us.
- He indicated that collaboration with nature also has a very important role in the fight against climate change by promoting natural light, greenery, airflow and organic materials that would lead to a better quality of life and also promoting low emission of greenhouse gases as part of fighting for the global climate initiatives in the building sector.

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- He noted that the Affordable Housing Projects can borrow a lot from the initiative, by targeting all the built professionals and sensitizing them on the topic. He further emphasized on the several significant achievements from the State department which have been achieved in the last one year, as part of championing the global climate initiatives:

A] Vice chair of the Intergovernmental Council for Building and Climate (ICBC).

B] Development of the National Decarbonization Roadmap for the building sector (2026-2040)

C] Development of Green Building regulations that incorporate the natural based solutions into the building standards.

D] Led key conversations on the Building and Public Infrastructure Development during the African Climate Summit.

E] Representing the country at the Global Alliance for Buildings and Construction (GlobalABC) - a UNEP affiliated Organization supporting Climate actions in Buildings.

D] Representing Kenya as a member of the Global Coalition of Disaster Resilient Infrastructure, which consists of 55 member States aimed at mitigating climate impacts, promoting resilience and integrating nature-based solutions into infrastructure development.

E] Member to other international coalitions such as the Buildings Break-through Initiative, pledging to achieve near-zero emissions and resilient buildings by 2030.

- He committed to developing Policy in regards to the inclusion of Biophilic Design in public policy and in the implementation of building projects with the aim of creating human centered buildings and buildings that not only shelter but also nurture.

- He then proceeded to declare the conference open and again encouraged the participants to engage and commit to be involved in the growth of this movement.

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04: Conference Sessions:

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PANEL 01: INNOVATIONS IN ARCHITECTURE AND INTERIOR SPACES

Panel Moderator: Angela Mumbi

Panelists:

1. Nuria Muñoz Arce – Interior Designer, Educator & Regenerative Practitioner (Spain)
2. Watetu Gachoki – Urban Planner, GRI Professional & IFC EDGE Expert
3. Victor Obiero – Senior Commercial Interior Designer

Introduction:

The facilitator introduced the topic on the role that Architects and interior designers have in promoting connecting people with nature through design.

She further introduced the Panel and began the discussion:



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04: Conference Sessions:

I. NURIA MUÑOZ ARCE

- Clarified that her passion was creating spaces that promote healing and teaching people.

- She noted that Biophilic design was a doorway to healing and wholeness noting that biophilia in spaces promotes the connection between people and nature.

- She highlighted some notable measurable outcomes occasioned as a result of biophilic design inclusion:

1. Reduction of cortisol by 12%

2. Boost productivity by 50%

3. Hospital patients heal 8-5% faster

4. Trust and empathy fostered by Natural moments.

5. Physical, emotional, intellectual, financial, spiritual, psychological and occupational well beings are enhanced by nature.

- She acknowledged that a biophilia space may initially cost money but has longer lasting effects that are positive.

- She took note of the times that the ancestors lived in light of biophilic lifestyles. She noted that they interacted positively and in harmony with nature making reference to Mesopotamia and other early civilizations. She indicated that it was not a new design principle, but one that existed and needs to be included in design.

- She noted that good design is collaborative and not an individual attempt to create spaces. She noted also that one can design and shape spaces that shape people, promote healing and encourage interactions with nature.

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II. WATETU GACHUKI

- She acknowledged that her role as an urban planner is to provide and plan for spaces where people interact with nature. An area she said that professionals have failed to address since pedestrians haven't been provided for space to walk.
 - She noted that her passion comes from the desire to correct the poor planning done with minimal spaces provided for people to walk. She champions for people centered and sustainable cities that are energy efficient.
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III. VICTOR OBIERO

- Acknowledged that there were a lot of opportunities to incorporate biophilia that professionals in the built environment can take advantage of.
 - He noted the sale of potted plants were affordable options and low hanging fruit that the homeowners can include in their indoor spaces, designing bigger openings such as windows to allow natural lighting and ventilation for Architects and Interior designers, use of local manufacturers who are locally available materials that are affordable that the built professionals can include in the design.
 - He encouraged the use of low budget items and design strategies in achieving biophilia in indoor spaces. He noted that this will ensure that small steps are taken towards the more grand approaches in biophilic design by both the homeowner and consultants.
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THE PANEL ALSO IDENTIFIED SOME COMMON MYTHS IN BIOPHILIC DESIGN.

– **MS. NURIA** noted that any green items placed in indoor spaces is seen as biophilic design which is not the case and referred to as green washing. She noted that biophilic design goes beyond putting plants indoors and planting trees but also promoting species that help users interact with nature and promote the connection with nature and what it offers.

– **MS. WATETU** noted that green washing is looked upon as the business of making money and increasing sales of “biophilic and green building items and certification” ignoring the principles of making humans connect with nature and eventually creating toxic and clashing environments.

– **MR. VICTOR** noted that biophilic design encourages productivity in the workspace. He encouraged clients and consultants to promote and include biophilia in the work spaces. He further noted that the inclusion of curves into a space, which are more free flowing and natural forms can change the mood and feel of a space.

– **MS. NURIA** commented on the research that showed that only 11% office spaces have achieved a commendable level of the inclusion of biophilic environments and thus having a positive effect on the work output of the users of the space. She noted with concern that not many see this as an important but expensive matter and thus ignore creating positive and productive biophilic environments.



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PANEL 02: SUSTAINABLE PRODUCTS AND MATERIALS

Panel Moderator: Kai Njeri – Regenerative Systems Thinker and Designer
Topic: What does it take to construct a Biophilic Africa?

Panelists:

1. *Amrish Shah – Founder & Principal, Urban Green Consultants (UGC)*
2. *Mtamu Kililo – CEO, MycoTile*
3. *Roberta Vasic (United Kingdom) – Regenerative Systems Architect, VOID Studios*
4. *Sekitoleko John Lee (Uganda) – CEO, Megcom Eco Build International, Rammed Earth Consultant*

Introduction:

The moderator began the session by giving a bio of each of the panelists and then giving them the floor to introduce themselves further whilst giving insight to their areas of expertise. Sekitoleko, who is a rammed earth expert from Uganda, highlighted the importance of rammed earth as not only sustainable material, but also a way of going back to our roots. This is the way our ancestors built, and we need to change the narrative that soil is 'a poor man's material'.



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AMRISH shared his background in green consultancy where he has 13+ years of experience and 100+ projects in Kenya and across Africa. He also emphasized on exploring and going back to the older ways of building, making reference to buildings built back in the 1600s and their structural integrity.

MTAMU is an architect who is keen on exploring how far materials can be pushed and believes in designing buildings that are rooted in cultural context and that are environmentally conscious. He shared how this led him to establishing MycoTile and researching how agricultural waste, specifically mushroom mycelium, can be used in building. Currently, they have rolled out mycelium for insulation whilst researching how to use it in other applications such as tiles and building blocks.

ROBERTA gave insight to regenerative systems being all about cellularity. That our buildings are subjected to life cycles. She posed the question, what does it mean to be a good ancestor? And explored the notion that part of being a good ancestor, of leaving a good legacy can be expressed through buildings, and the materials we use. That ecological preservation needs cultural preservation, and our buildings need to reflect this by incorporating ancient building practices.

Discussion Points:

1. Challenges and lessons learnt with regards to sustainable materials and their implementation

– The discussion centered on the lessons, challenges and possible solutions when it comes to the adoption of sustainable products and materials in the built environment. Some of the key challenges were:

a. Mindset – *there is a common misconception that sustainable materials such as rammed earth are 'poor materials'. There needs to be a change in mindset by making people understand that to tackle climate change, we need to shift systems. And a big part of this is embracing sustainable materials.*

b. Policies – *the lack of policies is a big hindrance, and if we keep waiting on policies to first be implemented, then the traction and assimilation of alternative materials will be very slow.*

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c. Doubt – especially when using rammed earth as the primary building material. A way to address this is by doing lots of testing and learning from cycles of nature because ramming produces a sort of ‘stone’ that is durable. Involvement of local communities whilst using the local and natural materials ultimately honors both the earth and the community.

2. Policy change works best when the approach is bottom up. What does this look like in this space?

- The panel discussed having a bottom-up approach when it comes to pushing for policies and having them implemented. Africa possesses a key opportunity in that the environment is very volatile and allows for experimentation in terms of methods and materials. We therefore need to identify allies and change the narrative by finding solutions, testing, implementing and having concrete executed projects which then can be used to push for policies that support the movement to be put in place.

Other key action points highlighted were:

a. Messaging is key – Sustainability, sustainable materials need to be framed and communicated as a business advantage (with all its benefits highlighted) and not as an added cost.

b. Aspirational projects to show people how this can be practically implemented, with bit size information geared to show the common mwananchi how they can incorporate this themselves.

3. Closing remarks:

The importance of embracing sustainable materials was reiterated. It was said that in the industrial revolution, we shifted to innovation being connected to bigger and grander, but this has brought us to this place of climate crisis. We need to move away from using invasive materials such as concrete and steel and go back to creating buildings that are the epicenter of life. Looking into how they will decay, how they thrive in nature and what the materials we use leave behind. And to always ask ourselves what it means to be a good ancestor.

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Audience Questions:

1. How sustainable materials can fit into informal settlements and how the materials perform in terms of cost:

- The use of sustainable materials is a solution-based approach that is and should be geared to giving power back to the community, by not only using local natural materials, but also by empowering the local community through labor force and information and therefore making it an affordable approach.

Another response highlighted that as much as local materials are good, we need better testing and prototypes to show to different stakeholders that these materials are durable and safe.

2. How have you influenced policy to push for uptake in terms of using mycelium and other materials:

- The CEO of MycoTile highlighted how this being a new technology in the market, they did their own testing then developed standards with supporting data internally which they then presented to Kenya Bureau of Standards for approval.

- It was also added that there is great potential for alternative and sustainable materials. Innovation, testing and implementation needs to be pushed in the built environment until the use of such materials becomes the norm.



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PANEL 03: SPIRITUALITY, NATURE & ARCHITECTURE

Panel Moderator: Githaka Karuri

Panelists:

1. *Samuel (Sanjotz) Thuo – Sensory Architect*
2. *Kainyu (Kai) Njeri – Regenerative Systems Thinker & Designer*

Introduction:

The evening session begun on a calm note of getting to understand nature, which is also a teacher from right before life is brought to interact with the physical life the design begun from the womb which is an amazing figure that designers need to emulate by knowing that there is a birth and the rebirth of what has been left by reclaiming the original works of creating as in the original work of creation by the creator himself the center of it all. For so long, it was mentioned that architects and designers have been drifting away from original mother nature.

The session moderator guided the discussions as follows:



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1. Definition of the term sacred space- as defined by Kai, one of the panelists,

- As the quality of presence that an individual comes into in a space as well as humanity going into a space. This was noted that it can be viewed in different ways depending on what the individual perceives as affected by internal and external awareness by the sense of seeing, touching, listening, smelling and taste.

2. How design is done to interact with the senses.

- The participants were taken through an activity which involved getting to hear the sound traveling through the skeletal system in the human body. This was noted as the whole system interconnected to the other which architect Thuo made a response that architecture and design is the reconciliation of humanity to the built environment which creates a link to mother nature.

- His words were echoed by Kai, who highlighted that the womb was the original architectural design. It acts as our first home which is a space that interacts with the senses after birth to the earth. She linked it to the "birth forest" like having enough light, rooms that permit sounds to pass through which increases the oxytocin that is so essential to the sensory part of humans that mostly is lowered due poor architectural design.

3. How do we design to awaken sense and not only functionality?

- Spiritually, the sequence begins with nature, a sense to create the presence of the occupants where by in most cases that is altered and in some cases, design turned out to be just function where by the built environment is just about function without considering the users of the space, what is their way of doing things, whether their culture and tradition is blending well with what they would wish to experience once they interact with such spaces. Thus, it ends up into a misplaced design that disconnects people from nature.

- Though cultures vary from one community to the other, the creation in design should be the presence of shadows that creates a connection to nature, having a story to talk about right from birth, the sound of the birds, the blooming flowers, unlimited textures which re-engage directly with nature flawlessly according to Architect Samuel Thuo.

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4. How do natural rhythms and cycles act as inspiration for Architecture?

- With evolution in architecture, most of the design done is through the desire for humanity to control what nature dictates instead of embracing what nature gives. Design takes it away and becomes fearful to engage more with the nature inspired spaces.

5. What lesson can be learnt from the birth center (birth forest)

- Bringing life is the early stage of existence of humanity which is a valuable and powerful moment and this is safe at the primary level which makes it impressive in architecture whereby birth spaces should emulate the womb experience that enables crouching, walking, inviting spaces and calm, which ensure thriving instead of surviving for the users. Designer Kai emphasized further, paying attention to the placenta holding the baby then the cord that brings in nutrients to exhausting of waste creating a interconnection controlling the activity thus a need to design with an aim to achieve nutritional value and a way of the waste which around the earth is a possibility to ensure that there is a connection of what is created empowering the ability of mother nature. For the soil is powerful as the first texture, plants as from birth and the human body is powerful, according to designer Kai.

Arch. Thuo highlighted the need for advocacy to research more on how senses are involved with architecture, carrying all the senses to allow people to impress themselves unconditionally.

6. What is the current state of urban areas?

- According to Arch. Thuo, the senses are deprived and where design needs to go and this is influenced by two major elements: the natural environment (offers a natural balanced sensory diet such as sight, smell, touch, taste and hearing). While the built environment where architects and designers use sensory deprivation design ideas, starving the users of the ability to sense especially how offices are built. The spaces that architects and designers should settle for should always call the people to always want to go back and give a sense of rest at the end of the day just like nature enables that naturally.

04: Conference Sessions:

Questions from the audience:

1. How has design been embraced to control changes in people with allergies.

- Thuo noted that inclusive design embraces the idea having to design to fit people with various condition for example people with hypertension, the design need to be toned-down as compared to their counterparts for in many years, design has been all about kind of climate and function and less attention on such individual where by they need to be paid attention to.

- There is need to be intentional in the design of education spaces and areas where people learn through apprenticeship, doing research and having archives where direct lessons can be learnt from as much as there is much documentation. There is a need to have realistic spaces that act as a mirror (kai).

- The session ended with a comment from Thuo, noting that there is a need for integration of spaces in order to facilitate the blending between mother nature and the built environment.

2. Story telling

- The session ended by participants engaging in a story telling session of an ant, which is a metaphor to stand for nature, being protected from any harm that may interfere with its ability to breathe its life to humanity.
- For nature to do a lot of chain activity it should not be attacked rather it should be natured throughout the seasons of the year.



Day 2

16TH MAY, 2025



Introduction:

The session was convened at 10:00 followed by a session on meditation then the singing of the National and East African Anthems. This was then followed by prayers conducted by the appointed Christian and Islamic representatives.

The MC took the participants through what was covered in the day before. Highlighting key take-aways from speeches given by both the Principal Secretary, State Department for Public Works and the Founder of Green Biophilic Limited, Ms. Wangui Mwangi.

A video was then played showcasing the vision that Wangui Mwangi had; talking about biophilia, its definition and significance in the ever changing world and how it significantly affects our lives from living in our homes to hospitals and schools. She also highlighted details about the course in Biophilic design and the importance that it has especially to the built environment consultants.

Introduction – Speech:

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DAY

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KEYNOTE ADDRESS: NASRA NANDA – KENYA GREEN BUILDING SOCIETY (KGBS)

- She started by appreciating the efforts done by Wangui Mwangi in starting the conversation and promoting biophilia within the built environment and encouraged the participants to engage and move and implement the principles in their homes and design work.
- She continued by introducing the organization she represents and the work they carry out. As an organization, she noted that they are committed to promoting sustainable building practices for a greener future. She further added that their mission was to lead the built environment transformation towards environmentally responsible, resource-efficient, and socially responsible structures.
- She indicated that Wangui Mwangi has been at the forefront of championing the inclusion of biophilic concepts and design in the built environment spaces. She highlighted the articles she has written and how the organization has encouraged its members that consist of Architects, engineers and planners to take up green building concepts that include biophilic design approach in their projects.
- She pointed to the trainings that they offer such as the EDGE training seminars that help the building professionals understand how they can design future proof buildings as well as advise clients on building designs that would be energy efficient and cost effective to them.
- She indicated that they work hand in hand with other professional bodies to achieve this vision. She noted associations like the Architectural Association of Kenya, Women in Real Estate, National Construction Authority among others that have committed to engaging in the green conversation. She also noted the involvement of the government in the development of the Green Building Regulations as well as the Safari Green rating tool that was under development to address the climate responsive measures in the built environment in Kenya and the greater East African region.



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- Finally she invited the participants to join the organization and learn more about sustainability in the built environment and how they can be involved in the movement of creating natural and built environments that work together for the good of the users in this and the next generation.

04: Conference Sessions:

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PANEL 04: OUR CHILDREN AND BIOPHILIA

Panel Moderator: Annie Ageza
Topic: Educate with Nature

Panelists:

1. *Dr. James Kioko – Director, Nairobi Waldorf School Trust*
2. *Fezile Wamukoya Mauncho – Healer & Educator*
3. *Maina Gichuki – Afrocentric Educator, Freedom Int’l Schools Africa*



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04: Conference Sessions:

DR. JAMES KIOKO WALDORF SCHOOL DIRECTOR

He gave his views on conducive educational environments with emphasis of including nature in the learning space.

- This, he noted, improved the capability of children to learn as they connect with nature at an early age. This, he added, would help them preserve nature.
- He explained that the design of the Waldorf school factored in the design with nature with the Architects working around the trees and landscapes (Natural), maintaining them and having them as part of the learning spaces. He encouraged the Architects to design outside the box in the designs of schools and make them more interactive.

FEZILE WAMUKOYA

Addressed the need for regenerative thinking by looking at the entire eco-systems that goes beyond the school.

- She noted that she had worked with homeschoolers with the aim of making an educational model that is spiritual, ecological and inclusive of the community, life centered and not student centered.
- She also noted that her model looks at how students can interact with nature and the community not just locally but beyond the borders.
- She gave her background at Kitovu that teaches writing, music and art, with an eclectic approach to education. She indicated that students learn about technology and how it can be a tool for reinforcing what they have learnt through research. She also mentioned that they have collaborated with the UN, promoting Music therapy and taking advantage of policy formulation in the education sector and community service.

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MR MAINA SPEECH:

Noted that Freedom International schools with Afrocentric Education emphasizes in learning rooted in African identity ensuring that the children embrace their culture.

- He noted that the school encourages even African dressing with African attire on Thursdays with the school promoting local language teaching which is not restrained to a particular ethnic group.

- He mentioned that the School also teaches about minerals found in Africa and how the minerals can be used to develop Africa. Additionally, he pointed out that the students also looked at indigenous seeds found in Africa and the benefits of these trees. He noted culture and Nature have been factored in the education of the school.

On the area of Nature based Design of Schools, the Dr. Kioko commented as follows:

- **Dr. Kioko** noted that it takes resources to create nature based learning to allow for creativity and imagination as well as reflection which even affects longer concentration spans.

- He also noted that students are restricted to interact with technology. He noted that nature is considered therapeutic in the learning of special students. Social well being and a sense of belonging is developed in the students as part of social constructs while studying in nature based and designed schools.

On Technology as a learning tool, **Ms. Fezile Wamukoya** gave the following comments:

- She noted that computers were only for lessons and afterwards, students go outside to play and interact with nature. She then noted that the computers are only for research and regulated study.

- She noted that biomimicry as part of interaction with nature then the use computers for further research and engaging with the public through social media platforms. She encouraged parents to take advantage of nature and spend time with them taking walks as a way of embracing nature.

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- For collaboration, the use of Zoom to engage with people of different nations to further their education and not to abuse and use for recreational purposes.

- **Dr. Kioko** mentioned that they have hands-on subjects that force the children to be engaged and use their hands to create or work and less of their time using gadgets.

- **Mr. Maina** noted that the examples and questions set as part of the academic training are in line with the Afrocentric concepts. On Technology, he noted that there is a balance between Afrocentrism and Academic activities which are regulated to ensure responsible use of the facilities available.

- He also noted that the school promotes a cultural feel in the school by having huts and manyattas that are used as classrooms as a way of teaching the students about their culture.

- **Dr. Kioko** added that grade 3 students are involved in projects that include design and construction of spaces and buildings as part of their learning.

Audience Questions:

1. What is your role in decolonizing our minds from culture

- **Dr. Kioko** mentioned that they have festivals every season such as the planting festivals that help students identify the local planting as well as harvesting seasons.

- He noted that the challenge is mostly with the parents who are more inclined with the 4-wall classroom and academic setup than the cultural approach since they are products of the previous education system that is more performance based.

- **Fezy** noted that elitism is a major problem. She noted that schools are expensive, noting that there is a limitation even in classroom construction with a guideline of how to build classrooms. She also mentioned that it may also work against us if we single out african schools and education but to teach it as education and nature.

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- **Mr. Maina** noted that the mind 1st must be decolonized by helping them know their culture. He noted that the narrative that is there is that Europeans are better than Africans, which is not the case. He emphasized that Africans built the Pyramids as an example showing how Africans are not inferior but are more than able to go beyond the set expectations.

2. What are the local indices that can be used to check wellness

- **Ms. Fezile Wamukoya** indicated that one way to measure would be to measure brain activity or psychological tests to check on the progress.

- **Dr. Kioko** mentioned the use of observation to advise the teaching fraternity on how to educate and handle the students, especially the special needs students.



Recognition Speech:

- **ELIZABETH FREEMAN CALABRESE**, AIA . NCARB, LEED-AP, WELL AP/Faculty/- Mind Advisor , gave a speech on the topic noting her disappointment in the fact that colonization caused a lot of damage in the maintenance of nature and culture and urged the people to take initiative to promote biophilia and their culture as a way of going back to restore the connection between humanity and nature.



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REMARKS BY JULIAN ROZ: SENIOR BRAND STRATEGIST, CEO – MICH DIGITAL LTD

Julian began by introducing Mich Digital, which is a company geared towards scaling brand visibility for both organizations and individuals. She specializes in energetics and understanding what makes us who we are.

- She then delved into reality and challenged the audience to question what is real and what is not. Our eyes see only 1% of color, and out of the 11 billion bits of information that our brain processes at any given moment, it filters out 99% of this.

- Citing a study of non-verbal autistic kids that showed mothers being able to communicate with said children without speaking whilst in different rooms, she eluded that we have abilities beyond the physical. That nature isn't separate from us, and that universal energy and intelligence which originates in nature, connects everything.

- She mentioned how AI is a brilliant innovation and at its core, it mimics natural universal intelligence. She noted how we ignore the fact that our ancestors were way more advanced. They were able to tap into universal intelligence without technology or AI.

- She noted that Nature isn't just greenery. It is a conduit of universal intelligence. It aligns us to our identity and there is no separation between us and nature. Nature can speak back to us. Nature has solutions to relationships, healing and even business strategy. Giving an example where she touched the waters of Lake Victoria and proclaimed that she will have clients in every corner of the world where there is water, and this proclamation coming true with currently having 60% of her clients being global, she challenged the audience to tap into the frequency of nature.



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SOFT LAUNCH OF BIOPHILIC COURSE – ROY GITHAIGA: FOUNDER, MUDA DESIGN

Roy began by introducing himself and his design philosophy, where he is a built environment disrupter and passionate about sustainable design.

- He then gave an introduction of the biophilic course, which is curated for everyone due to the fact that we all interact with the built environment. He highlighted the three courses on offer:

- o Biophilic design fundamentals*
- o Indigenous knowledge in modern design*
- o Natural materials and techniques*



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PANEL 05: TECHNOLOGY AND BIOPHILIC DESIGN

Panel Moderator: Kai Njeri - Regenerative Systems Thinker and Designer
Topic: Balancing Nature and Innovation in the Built Environment

Panelists:

1. Charles Musyoki – Architect & Sustainability Researcher
2. Catherine Mungai – Senior Programme Officer, IUCN Kenya
3. Roy Githaiga – Founder, Muda Design

Introduction:

The moderator began the session by giving a bio of each of the panelists and then asking them to explain what they do, and the relevance of their work in relation to where technology and biophilic design intersect.



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- **Roy** started by sharing the meaning of his name, which means traditional witch doctor, emphasizing that we need to understand who we are to understand what we do. He started in the built environment as an architect, which opened the door to research in technology, sustainability and materials. He designs from a cultural lens, encompassing both individual and communal culture.

- **Charles** was propelled into exploring how technology can be integrated into sustainable building after he read the book Architecture without architects. His work has led him into the space of 3D printed earth which is a sustainable building technology that utilizes raw earth materials and advanced 3D printing technology to create eco-friendly structures.

- **Catherine**, a senior programme officer, focuses on nature conservation and nature-based solutions and how these can be integrated into the built environment and other spaces.

Discussion Points:

1. How the past and the present are meeting in terms of technology, and how do we make data and other resources accessible?

- The panel noted that there are three categories with respect to materials: appropriate materials, alternative materials and emerging materials. The appropriate and alternative materials encompass how such materials have been applied in the past and how they are being applied currently.

- Emerging materials bring to the forefront the need to explore the new materials, new technologies and how they can be implemented. But for this to be viable, there is need to understand the past (materials, building methods, technologies, rationale) in order to inform sustainable innovation and application.

- Sadly, they noted, the industry, especially when it comes to research, operates in silos where you can find different bodies, organizations and individuals researching the same thing but not having communication and access to information between them. We need to stop working in silos and make research open source and available to everyone.

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2. Nature-based solutions and how they can be incorporated into this space. A presentation was made highlighting what nature-based solutions (NBS) mean, its benefits and how it can be implemented. Key points of the presentation were:

- a. Nature based solutions are actions to protect, sustainably manage and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, while providing human well-being and biodiversity benefits.
- b. The societal challenges that NBS can address include: climate change, food security, water security, human health, socioeconomic development, ecosystem degradation and biodiversity loss.
- c. NBS efforts can only reach potential if scaled up and complementary approaches are explored. This could mean involving professionals in the built environment in spaces where nature conservation and nature-based solutions are being discussed, so that we can promote seamless integration of natural infrastructure and grey infrastructure.
- d. NBS should be applied culturally, and we should therefore embody an African approach that values indigenous knowledge, uses locally available materials and creates green economy jobs by co-creating with communities.
- e. The IUCN has an open source tool: Urban Nature Indexes (UNI), that comprises of 30 indicator topics across six themes that can help cities understand their impact on nature whilst monitoring progress accordingly.

3. Challenges and opportunities for synergy in the space of technology and biophilic design. Several challenges were identified. The key ones being:

- a. Accessibility of information – operating in silos is a key challenge that is faced in this space. The panelists agreed that we need to communicate a lot more. Use technology, research data and all the other resources available to us to come up with projects, innovations and prototypes that support biophilic design while having a focus on our local and contextual environment.

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b. Government issues and policies – Kenya has 7 climatic zones, 47 counties but 1 set of building standards and codes. This in itself is a problem, because different climatic zones require different guidelines, especially when it comes to how materials would react/respond in different climates, land use in different zones and the like. A good example of this as an issue is the fact that we have high rises in Karen, which is partly a swamp. So why not have specific building guidelines for the 7 zones in addition to the general building standards and codes.

4. Conclusion

The session was concluded with an invitation to explore next steps.

- How to bridge the gap of working in silos that was identified. Having all stakeholders involved in the different conversations being had in order to be more effective in carrying out this shared vision within the built environment and turn it into a thriving ecosystem.



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PANEL 06: POLICY, INVESTMENT & NATURE GOVERNANCE

Panel Moderator: Nashon Okowa

Topic: Balancing Nature and Innovation in the Built Environment

Panelists:

1. Etta Madette – Real Portfolio Manager & Founder, ZIMA-SHOUT
2. Kennedy Matheka – Deputy Director, National Building Inspectorate
3. Eng. Fawcett Komollo – President, Kenya Institute of Planners



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Biophilic design economical and social viability:

- The panel noted that there are Projects in the real estate sector that can be seen as an asset, a source of income which can be enhanced and made timeless due to the inclusion of biophilic design, connecting nature and the built environment.
- Climate responsive design, projects that respect nature, would ease the expenses related to insurance for buildings and maintenance cost within the built environment. It was noted that through biophilic design, buildings would survive longer.
- On Social viability, the panel noted that the community should embrace the past technology that had much lesser maintenance cost right from the initial phase and in the long run.
- The panel mentioned that the designing by nature would allow users to enjoy free material in Nairobi such as plants, natural light that create neutral natural systems.
- Industrialization & urbanization was noted to have led to the drift of what socially existed, which the panel acknowledged that it could still be revived noting its economic potential and by the professional and developers speaking one language.
- They further appreciated receiving the correct data, making the right decisions and putting an end to substandard building would assist the developers to make better finance decisions.
- **Etta** noted that some things that inhibit the inclusion of these design principles range from impatience, failed reinforcement, rushed construction work from both developers and consultants who do not follow the correct protocol. They noted that if regulations were followed and made practical, there would be an improvement on coordination and consultancy at the same time improving the design quality and inclusion of nature in design that goes beyond the 4 walls.

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- On the existing Legal framework the panel commented as follows:

- The panel agreed that allowing generative development can be encouraged through developing local and national laws, adoption of international laws in Kenya and the United Nations that promote green design and biophilic inclusion in the implementation of projects.

- Development of a framework that allows for global engagement in every sector with the end goal of building and construction that would lead to the development of a global community that can exchange ideas and grow the concept regionally and eventually globally.

- The panel noted that businesses can tap from the international channels, to get more project opportunities and international bids that businesses can dive into.

- It was noted that not much attention is paid on the local legislation and thus poor engagement and knowledge on government's ability.

- **Mr. Matheka** noted the harmonization of standards, would allow state actors and developers to tap into opportunities and reorganize to enable policies that would support the investment sector.

- In trying to understand whose fault it was in the poor execution of planning, the panel looked at the Planners role and the challenges they faced. The following was highlighted in their discussion:

- Planning and defending policies is a gap in planning in Kenya.

- Unimplemented laws that have not been enforced by the relevant enforcement agencies in the counties.

- Development control policy not fully developed that require more effort from counties in the partitioning of zones and having proper allocated guides that would control the development program.

- Noted that without planning and enforcement there is danger of shifting blame from consultants to developers to the regulator, with no one willing to take responsibility.

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- **Fawcett** noted that there is need to encourage accountability by putting the right people to take care of the major gaps in planning to bridge the gap (**Fawcett**)

- **On leadership, the panel gave the following comments:**

- The panel emphasized that the development for Africa as a beautiful land speaks louder due to its natural resources. They noted that mechanical and artificial mechanisms brought in by organizations usually cause developments to drift from their natural responsive designs.

- They took note that nature is not outside of us but that it is important for developers and consultants to consider the ancestral path in connecting with nature.

- **Alexandria** further added that human systems should be an expression and voice of nature incorporated in business decision making. (Alexandria)

- **How do we reclaim spirituality in Kenya?**

- The panel agreed that designing in urban areas without losing the identity would allow the spirituality aspect not to be compromised.

- Space owners and developers engage professionals in order to get the value of consultancy.

- **Etta** noted that there should be encouragement in Designing for efficiency such as the adoption of solar energy, biophilic design inclusion that would help in the preservation of culture as well as spirituality.

- Promoting initiatives that conserve and aim to bring back African culture in spaces and nature.

- **Fawcett** added that the continuous education of the varying architecture inspired by the African communities would help in conserving the culture and encourage biophilic design adoption.

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- The team noted the following as challenges in reinforcement of these principles:
- Affordable housing implementing agencies that may not want to adopt these principles due to cost.
- Poor delivery process of some building projects from consultants to the developer.
- Time required for maturity may be long and thus discouraging to the developers.
- Availability and cost of the local material & inclusion of the local community in the process may be a challenge.
- Professional speaking louder taking charge of the discussions that may not align with the desires of the planners and physical planners.

Conclusion

The panel agreed on the following as a way forward:

- Raising different African voices higher and act starting with the low hanging fruit and eventually snowball into bigger action points.



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PANEL 07: BIOPHILIC DESIGN FOR HEALTH AND WELLNESS

Panel Moderator: Kai Njeri-Regenerative Systems Thinker and Designer

Panelists:

1. *Levi Morgan Mutta – Managing Director, Lemorgan Designs*
2. *Jaime Velasco – Director Urko Sanchez Architects*
3. *Cheryl Mwangi – Counselling Psychologist*
4. *Dr. Sylvia Vosevwa – Epidemiologist & VP, KMA Nanyuki Division*

Introduction:

The panel discussed how psychology, human behavior and the way people act can be traced back to how they are connected to their roots creating a sense of thriving and belongingness which relates to bringing the out spaces into the inside.



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They noted why it was important to adopt biophilic design:

- It offers inclusive design (biophilic design)
- It gives back to the community
- First interaction of health begins at home, breaking down and understanding aspects of nature incorporated in architecture.

The panel also noted how biophilia and public health intersect. They noted the following:

- Biophilia aligns with primary prevention-reducing health expenditure in the long run.
- It provides green spaces that motivate people to work out
- It promotes advocacy in disease prevention strategy.

They also noted what the essence of biophilia is:

- It's all rounded choices.
- It enhances environments that heal the whole community at large.
- Promotes consuming what is healthy for healing, which comes from within.
- It was noted that what is done in the environment matters, for biophilia cannot exist by itself, thus the need for nutrients, balance diet from nature.

The panel also identified practices that should be brought back. They took note of the following:

- Spaces are the primary influences of life.
- Wellness is a continuous regulation and nature helps greatly with this to the users.
- To ensure the spaces delivered to clients hits a major percentage of what is required to meet the standards.
- Functional spaces should exist that not only house the users but promote healthy living and connection with nature.
- Borrowing and fusing the ancient knowledge which promoted better biophilic harmony with the users then.

Conclusion

- Ensuring wellness and well being ensures all spaces are blended in with mother nature; promoting that important connection between spaces and nature.

CALL TO ACTION: Moving Forward as Biophilic Leaders

To ensure that the momentum from this groundbreaking event leads to lasting impact, we urge all stakeholders to take action in their areas of influence:

1. Adopt Biophilic Design Principles

- Architects, interior designers, and urban planners should integrate biophilic design elements—natural light, ventilation, organic materials, sensory-sensitive spaces—into every new project.
- Create human-centered environments that promote wellness and sustainability.

2. Enroll in the Nature-Centered Design Course

- Join the GBL course offerings in biophilic fundamentals, indigenous knowledge, and natural building techniques.
- Equip yourself or your organization with tools for regenerative design.

3. Policy Engagement

- Collaborate with local and national authorities to push for green building codes, nature-based zoning, and incentives for sustainable construction.
- Support the creation of customized building regulations by climatic zones.

4. Institutionalize Biophilic Learning

- Schools and educational institutions are encouraged to adopt nature-based learning models and design culturally grounded learning spaces.
- Support curriculum reforms that include African ecology, sustainability, and spirituality.

5. Join the Movement

- Partner with Green Biophilic Limited or related organizations in research, pilot projects, or event sponsorship.
- Be part of the Biophilic Africa Network for continuous learning, idea exchange, and regional impact.



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**Let this not be a moment, but a movement.
Let's reconnect with nature, reclaim our
cultural heritage, and reshape Africa's
future one biophilic space at a time.**

FINAL WORDS:

After the two day event, the conference came to a close with the participants committing to engage and further develop networks and spaces for interaction on the said topic with the desire to see more designs inspired by nature and designs that connect both the user and nature as was the case in African culture.

“Inclusion of Biophilic Design aims to create human centered buildings and buildings that not only shelter but also nurture.” Hon. Joel Arumoyong, Principal Secretary State Department for Public Works.

Thank you