

INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

NATURE-BASED SOLUTIONS IN ACTION



6th-7th March
2025

CONFERENCE TEAM

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**Name in alphabetical order*

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**EXECUTIVE
SUMMARY**

INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

Nature-based Solutions in Action

The “International Climate and Biodiversity” conference, co-organized by the Hong Kong Institute of Landscape Architects (HKILA) and the International Federation of Landscape Architects (IFLA) Asia Pacific Region (APR), in collaboration with the Hong Kong Green Building Council (HKGBC), is scheduled for March 6-7, 2025. This event serves as a crucial platform for addressing climate change and biodiversity loss, emphasizing the role of landscape architects in promoting sustainable practices and Nature-based Solutions.

As environmental challenges escalate, the conference aims to demonstrate how landscape architects lead efforts to mitigate climate impacts and enhance biodiversity. It will feature innovative projects and provide a forum for practitioners, scholars, and policymakers to engage in dialogue, share insights, and explore collaborative opportunities.

The agenda includes four key sessions:

Session 1 - Policy, Governance and Strategy: This session will focus on the frameworks needed to implement effective environmental policies.

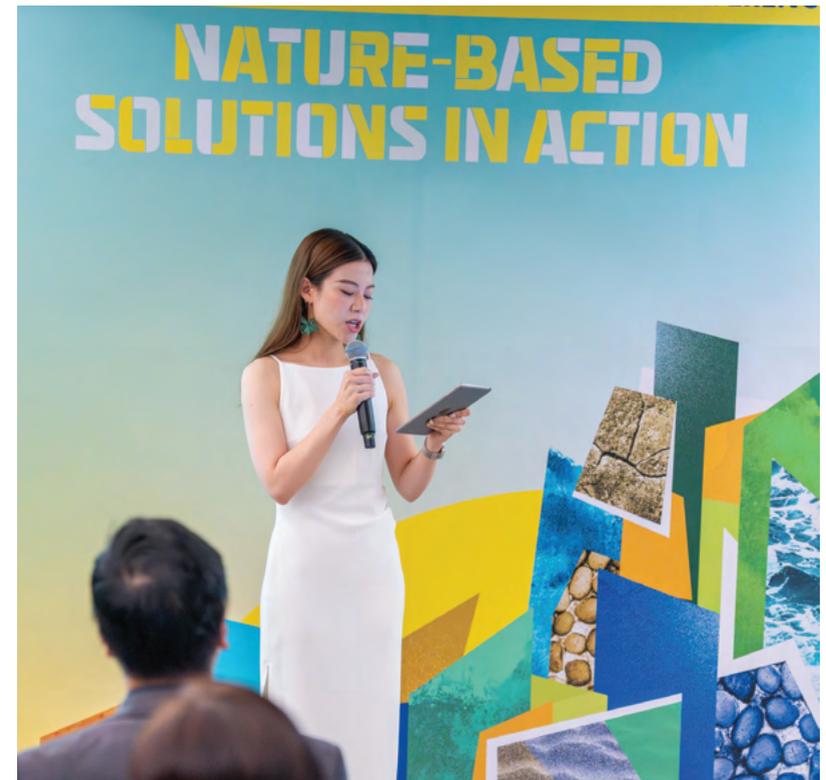
Session 2 - Youth, Empowerment and Mainstreaming: Highlighting the critical role of the next generation, this session will engage young voices in discussions on sustainable futures.

Session 3 - Nature-based Solutions in Action: Participants will examine successful case studies that illustrate the practical applications of Nature-based Solutions.

Session 4 - Urban Biodiversity and Ecological Restoration: This session will address strategies for enhancing urban ecosystems and restoring ecological balance.

Keynote speeches from leading experts will enrich discussions, offering diverse perspectives on effective strategies. The conference will highlight the importance of cross-boundary collaborations, integrating various disciplines and stakeholders to foster environmental resilience.

As the event concludes, participants will reflect on insights gained and the networks established, reinforcing a shared commitment to advancing Nature-based Solutions. The conference presents a unique opportunity for landscape architects and allied professionals to engage in meaningful conversations, ultimately driving impactful changes to address climate change and biodiversity loss, ensuring a sustainable future for all.





DAY 1
OPENING REMARKS

OPENING REMARKS

IFLA IS ALL OF US HKILA

BRUNO MARQUES

Established in 1948, the International Federation of Landscape Architecture (IFLA) is the only international non-governmental organisation representing landscape architects worldwide. While IFLA has committed to promoting environmental resilience, sustainability and stronger communities, Dr. Marques believes that Nature-based Solutions and landscape architecture could be the way forward for the global environmental and societal challenges. Dr. Marques calls for a collaboration between the landscape architecture profession and other disciplines to cope with the challenges and the widespread effects they brought.



Dr. Marques draws attention to the six pillars IFLA would continue to focus on to remain impactful globally:

- Climate action and biodiversity - focus on reducing carbon emissions and preserving ecosystems through sustainable design.
- Health, wellbeing, and Nature-based Solutions - emphasize urban green spaces to offer therapeutic and rehabilitative outcomes for diverse population.
- Community participation - promote inclusive, locally responsive designs that address community needs and landscape changes.
- Technology and evidence-based design - leverage data and innovation to create effective, sustainable design solutions.
- Food security - integrate innovative strategies to ensure sustainable food production for more liveable and inclusive cities.
- Traditional knowledge and indigenous practices - incorporate local knowledge related to the natural environment to nurture the landscape towards a sustainable future.

By working together with organisations such as the United Nations (UN) and allied professions, collective strengths could be leveraged to address critical challenges and advance the shared goals.

He invites all to join the upcoming IFLA World Congress in Nantes, France on 10-12 September 2025 to foster professional knowledge exchange and advocate landscape architecture's leadership in sustainable design.



Dr Bruno Marques

President of the International Federation of Landscape Architects (IFLA)



OPENING REMARKS

WELCOMING SPEECH

CHRIS TIDSWELL

What an incredible and fantastic International Climate and Biodiversity Conference: Nature-based Solutions in Action! Firstly, I would like to thank Ms Bernadette Linn, Secretary for Development, HKSAR, the Honourable Tony Tse Legislative Council Member, The Hong Kong Tourism Board who has supported the event, and the Hong Kong Green Building Council as our collaborating organisation and all the other supporting organisations and thank you!

The International Climate and Biodiversity Conference: Nature-based Solutions in Action has showcased excellence in our landscape architectural profession. I personally would like to thank the speakers, panellists, moderator and all that helped pull this hallmark event together. Nature-based and Biodiverse places are not finished on the day they are installed. They require ongoing management and care to create a mosaic of connected biodiverse spaces. In Australia we often look to the aboriginal people who are the indigenous people of Australia—the true custodians of Australia and our vast Country. The aboriginal people are some of the oldest living people in the world—this is proof that nature-based processes stand the test of time!

If we care for the country we are using Nature-based Solutions!



Chris Tidswell

President of International
Federation of Landscape Architects
Asia Pacific Region (IFLA APR)

OPENING REMARKS

OUR COMMITMENT TO SUSTAINABILITY

BERNADETTE HON-HO LINN

The conference theme, “Nature-based Solutions in Action,” underscores the profound role that nature can play in addressing global challenges—challenges brought about by climate change, biodiversity loss, and environmental sustainability. The theme rightly reminds us that we need innovative, sustainable, and inclusive approaches to development, where nature is not merely a backdrop but our active partner in creating a healthier and more liveable environment.

Hong Kong occupies a unique position in the global context. We take pride in our landscape. Beyond the densely populated urban centre, forty percent of our land is designated as country park, and another fifteen percent is green belt outside the country park.

Our strategic planning study, which we call Hong Kong 2030+, provides us with a future planning framework to conserve, restore, and manage our environment and ecosystems to address social, economic, and environmental needs while benefiting human well-being and biodiversity. In essence, we are seeking Nature-based Solutions.

Despite the packed conference schedule, I encourage our guests to take the opportunity to explore our city while you're in town. Discover the beautiful coastal walks and nature trails, enjoy island hopping—we do have many islands—and be amazed by the diversity of our green and blue spaces. I wish this conference every success.



Bernadette Hon-ho Linn, JP

Secretary for Development of Development Bureau, The Government of HKSAR



OPENING REMARKS

COLLABORATIVE APPROACHES TO CLIMATE AND BIODIVERSITY

PAUL CHAN

Welcome to the IFLA APR and HKILA International Climate & Biodiversity Conference. We are honored to have over 130 participants joining in-person and more than 100 online, including many from overseas. For those coming from abroad, a warm welcome to Hong Kong.

As a profession that explores the interaction between humans and nature through design and planning, landscape architect is uniquely positioned to help cities respond to climate change and biodiversity loss. However, addressing these complex, multidimensional challenges requires stronger cross-border and cross-disciplinary collaborations. With this vision, HKILA actively reaches out for collaborative opportunities, both locally and globally.

The theme of this conference, Nature-based Solutions in Action, highlights the urgent need for nature-positive development. Scientists warn that human-induced environmental changes have destabilized the planet's self-regulatory system. Recognizing this, I am pleased to share that HKILA has taken initiatives such as collaborating with WWF-Hong Kong to incorporate NbS into the 1,000-hectare San Tin Technopole master plan and establishing an urban mini-forest with CEDD's support. The MoUs officiated today with WWF-Hong Kong and KFBG further underscore our commitment to fostering nature-positive solutions.

I extend my gratitude to IFLA APR, the Hong Kong Tourism Board, HKGBC, over 30 supporting organizations, sponsors, experts, and our dedicated organizing committee. I wish you all a fruitful exchange and an enjoyable stay in Hong Kong. Thank you.



Paul Chan

President of the HKILA

Chair of Working Group on Climate Change and Biodiversity, IFLA APR

INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

NATURE-BASED SOLUTIONS IN ACTION

F UNDERSTANDING
G CEREMONY

INTERNATIONAL CLIMATE AND BIODIVERSITY
CONFERENCE 2
NATURE-BASED
SOLUTIONS IN
ACTION

MEMORANDUM OF UNDERSTANDING
SIGNING CEREMONY



2
MEMORANDUM OF
UNDERSTANDING
SIGNING
CEREMONY



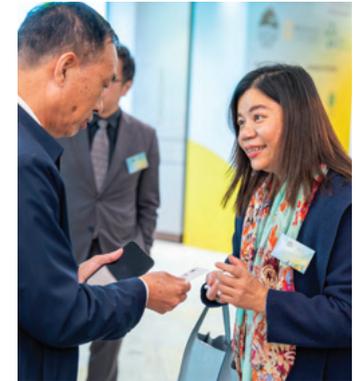
The Memorandum of Understanding (MoU) Signing Ceremony took place on 6th March, 2025, featuring key representatives from the World Wide Fund for Nature Hong Kong (WWF-Hong Kong) and Kadoorie Farm and Botanic Garden (KFBG). The MoUs were signed by:

- **Paul Chan, President of HKILA,**
- **Nicole Wong, CEO of WWF-Hong Kong,** and
- **Dr Stephan Gale, Head of Flora Conservation Department of KFBG,**

emphasizing their commitment to fostering collaboration.

The MoUs aim to align WWF-Hong Kong's focus on conservation and sustainable practices with KFBG's dedication to preserving native plant species and promoting sustainable agriculture with HKILA's expertise in landscape architecture in productive partnerships. The event was witnessed by Hon Tony Wai-chuen Tse, BBS, JP, LegCo Member for the Architectural, Surveying, Planning and Landscape Functional Constituency, and Mr Chris Tidswell, President of the International Federation of Landscape Architects Asia Pacific Region (IFLA APR).







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KEYNOTE SPEECHES

KEYNOTE SPEECH

CLIMATE POSITIVE DESIGN

Going Beyond Neutral

PAMELA CONRAD

Our world is grappling with complex challenges, including climate change, biodiversity loss, and socioeconomic inequality. Those that plan, design, and engineer our communities and ecosystems have a pivotal role in shaping solutions that promote future resilience.



Courtesy: Climate Positive Design



YouTube Campus Expansion, San Bruno, California, USA. Courtesy: CMG Landscape Architecture. Image Credit: Jeremy Bittermann

In this keynote, internationally recognized landscape architect Pamela Conrad shared insights into addressing these crises through tangible approaches. She introduced Pathfinder 3.0, Climate Positive Design Toolkit strategies, and highlighted project examples emphasizing Nature-based Solutions. This session offered tools and guidance for integrating ecological, social, and economic benefits into projects while contributing to global efforts to combat climate and biodiversity challenges.



Pamela Conrad

Founder and Executive Director of Climate Positive Design

Faculty Design Critic in Landscape Architecture, Harvard University Graduate School of Design

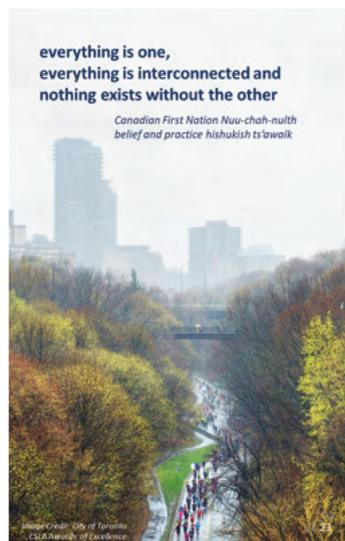
KEYNOTE SPEECH

SUSTAINING NATURE IN A RAPIDLY CHANGING WORLD

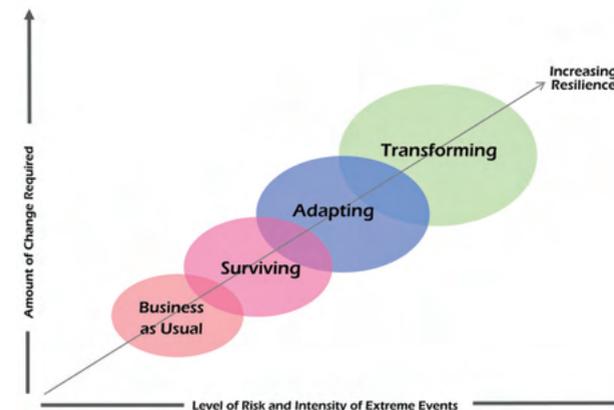
The Role of Landscape Architects

COLLEEN MERCER CLARKE

It has been more than a decade since the world first began to wake up to the risks and impacts of a changing climate. Early predictions of the pace of change have been proven conservative, as severe weather events hammer the globe and sea levels are rising faster than anticipated. Coupled with that there is a growing concern for the worldwide collapse of biodiversity. IFLA has been working on advancing knowledge and improving resilience to climate change since 2015. Partnering with other international organizations, dedicated volunteer landscape architects throughout the world seek out the latest science to aid in the transition of communities and environ-



Maude Barlow – a great Canadian leader said “Every now and then in history, the human race takes a collective step forward in its evolution. Such a time is upon us now as we begin to understand the urgent need to protect the Earth and its ecosystems from which all life comes.”



As the world warms and changes, we will have to adapt and change our way of thinking, building, maintaining to TRANSFORM society, using adaptation resources to ensure our communities and environments are better equipped to face future changes – more resilient and sustainable.

ments. IFLA supports the advancement of ecosystem-based planning and Nature-based Solutions as core elements of sustainable design and management. Our profession recognizes the rights of nature, and the complexities of reliance between human and natural societies. There are many challenges to current business practice. Working with creative interdisciplinary teams, new ideas, new policies and new practice will better prepare our world for the changes to come.



Dr Colleen Mercer Clarke

International Federation of Landscape Architects (IFLA) Special Envoy to the IUCN

Senior Advisor, Adaptation and Biodiversity, the Board of the Canadian Society of Landscape Architects (CSLA)

NATURE-BASED SOLUTIONS

Policy context, definition and implementation

LIETTE VASSEUR



The concept of Nature-based Solutions (NbS) has become a buzzword across the world. But what is it? The United Nations Environmental Assembly, in 2023, adopted this definition: “Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits”. In 2020, IUCN launched the Global Standard for NbS to ensure the credibility of NbS projects.



© IUCN Global Standard for NbS™ (2020)

The 8 criteria underline the importance of nature to address societal challenges (e.g., food / water security, climate change) at the large scale, with the engagement of local communities to ensure sustainable and equitable outcomes. The self-assessment of the Standard allows for the evaluation of projects and determines whether they are effectively NbS. Many may in fact only be Nature Climate Solutions when they only tackle mitigation using a forest plantation with no societal challenges to address for the community. In urban centres, NbS has a lot of potential. As I mentioned: “Designing cities with buildings and cars for today’s economic need is utopia. Planning cities for Nature and People brings peace, happiness, health and resilience for future generations”.



Dr Liette Vasseur

UNESCO Chair on Community Sustainability, Brock University, Canada

Deputy-Chair, Commission on Ecosystem Management of the International Union for Conservation of Nature (IUCN)

CHAMPION NATURE-BASED SOLUTIONS IN DEVELOPMENT OF HONG KONG

MICHAEL FONG



Planting day on 14 Feb 2025.

The Civil Engineering and Development Department (CEDD) is committed to advancing infrastructure construction and land supply projects that support Hong Kong's sustainable growth. We integrate Nature-based Solutions (NbS) in our projects for achieving co-benefits to the nature and people. Over the past 20 years, CEDD has made significant strides in environmental protection and sustainability, exemplified by the following examples:

Nature-based Solutions in Action:

1. Soil Erosion Control Planting Programme: Since the 1980s, CEDD has restored degraded lands, planting over 100,000 plants in areas like Tuen Mun Trail, Lam Tin Black Hill, Shui Chuen O and Needle Hill.



2. Greening Master Plan (GMP): CEDD redefined the cityscape with planting of about 8.73 million plants in 8.73 million plants across 18 districts, enhancing livability.
3. Urban Mini-forest Initiative: In collaboration with the Hong Kong Institute of Landscape Architects, CEDD has piloted native mini-forests in Fanling North New Development Area.
4. Eco-shorelines: Our eco-shorelines in Tung Chung East and Siu Ho Wan enhance marine biodiversity while providing coastal protection.
5. Stormwater Management: The Tung Chung West New Town Extension project incorporates a sponge city concept to manage stormwater, restore local ecology and mitigate flood risk.

CEDD's Long Valley Nature Park exemplifies our commitment to connecting people with nature. Our ongoing collaboration with academia aims to develop a Hong Kong-based NbS Guideline, reinforcing our dedication to building a world-class sustainable and resilient Hong Kong for living, working and playing.



Michael Fong, JP

Director of Civil Engineering and Development Department, The Government of HKSAR

NATURE-BASED SOLUTIONS IN ACTION

Srilalitha
alakrishnan



Dr. Bosco Chan

Dr. Vincent
Teng

MODERATOR



Prof. Christine Loh,
SBS, JP, OBE,
Chevalier de l'Ordre
National du Merite

Chief Development Strategist
NUS

4

SESSION 1

POLICY, GOVERNANCE
AND STRATEGY



SESSION 1

POLICY, GOVERNANCE AND STRATEGY



PANEL MODERATOR

Prof Christine Loh, SBS, JP, OBE

Chief Development Strategist, Hong Kong
University of Science and Technology

WORDS FROM THE MODERATOR

Moderating this panel was a timely opportunity to reflect on Hong Kong's growing recognition of nature as a core element of sustainability. Biodiversity is finally becoming a priority in infrastructure planning and design, signalling a positive mindset shift. The Kunming-Montreal Biodiversity Framework has helped to raise awareness of the urgent need to halt biodiversity loss, while the annual climate change COPs have reinforced the message that climate and nature must be addressed together. These high level international developments are also driving change in finance and investment, which is increasingly exploring Nature-based Solutions as vital to corporate and government policy strategies. Our panel, with participants from Hong Kong and Singapore – APAC's two leading international financial centres – was especially useful. There is much to learn from each other in how to do things better for nature-positive outcomes in big and small scales.

SHAPING A NATURE-POSITIVE FUTURE

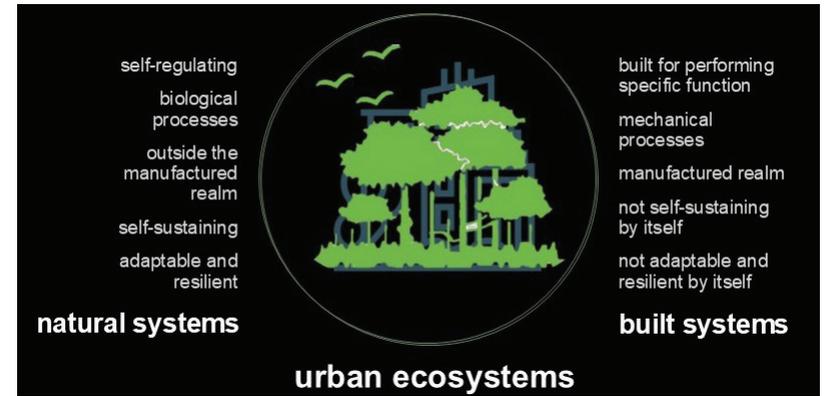
Reaction to Action

SRILALITHA GOPALAKRISHNAN

Shaping a nature-positive future requires fundamentally rethinking how cities are planned, designed, and experienced. In the face of accelerating climate change, biodiversity loss, and urban densification, this approach shifts the focus from conventional, human-centric development models toward life-centric systems, where urban environments function as dynamic, integrated ecosystems. At the heart of this vision is recognising that nature is not merely an amenity but a critical ally in climate regulation and urban resilience. Natural ecosystems currently absorb more than half of global greenhouse gas emissions, highlighting their essential role in mitigating climate impacts. Singapore's successful transformation as a sustainable model for urban ecological innovation is underlined by integrating nature into the urban fabric through strategies like skyrise greenery, blue-green infrastructure,



Extensive urban greenery with high-quality landscape design as an essential tool for harnessing "ecosystem services" - provisioning, regulating, socio-cultural, supporting and economic services.



Ecological and anthropogenic systems are mutually dependent and beneficial.

and multifunctional landscapes. This allows dense urban centres to become ecologically resilient and socially inclusive. Innovations such as Dense and Green Building Typologies, Sustainable Integrated Districts (SIDs), and Digital Twins exemplify how data-driven design can optimise the environmental and social performance of urban systems. These models promote connectivity across scales—from buildings to entire districts—supporting both biodiversity and human well-being.

Achieving a nature-positive future requires a systems-based approach that bridges policy, science, and practice. It also demands a redefined role for landscape architects as integrators of ecological knowledge, urban strategy, and design innovation—working collaboratively to shape cities that are sustainable, regenerative, adaptive, and thriving for all life forms.



Dr Srilalitha Gopalakrishnan

President, Singapore Institute of Landscape Architects (SILA)

Associate Director (Research), Future Cities Laboratory Global Singapore-ETH Centre

URBAN BIODIVERSITY IN HONG KONG

Current Status and Opportunities

BOSCO CHAN

The world is currently facing a severe biodiversity crisis; according to WWF's Living Planet Report, global wildlife populations have experienced a staggering 73% decline in the last half century. This alarming trend is also evident in Hong Kong, where our latest study indicates that one in four assessed terrestrial species are at risk of local extinction. One of the major culprits is urbanisation, with projections suggesting that 70% of the global population will live in cities by 2050. Consequently, it is imperative that we revolutionise the design and management of urban green spaces so that our cities become nature positive.



Urban green spaces are vital to the wellbeing of city dwellers



Some of Hong Kong's threatened wildlife can be found in our urban parks - this is a Red-billed Starling at high risk of local extinction.

Within cityscapes, urban blue-green spaces such as parks, have demonstrated their capacity to serve as surrogate habitats for wildlife and facilitate wildlife movement between fragmented habitat patches, often supporting biodiversity exceeding expectations. Urban parks in Hong Kong are known to support rare birds, but most parks still fall short of being ideal wildlife habitats in their design and management practices, presenting ample opportunities for adopting urban Nature-based Solutions that benefit both humans and biodiversity. Moving forward, we must mainstream the design, enhancement and management of our urban parks as a key strategy to safeguard our unique biodiversity amidst ongoing urban development plans.



Dr Bosco Chan

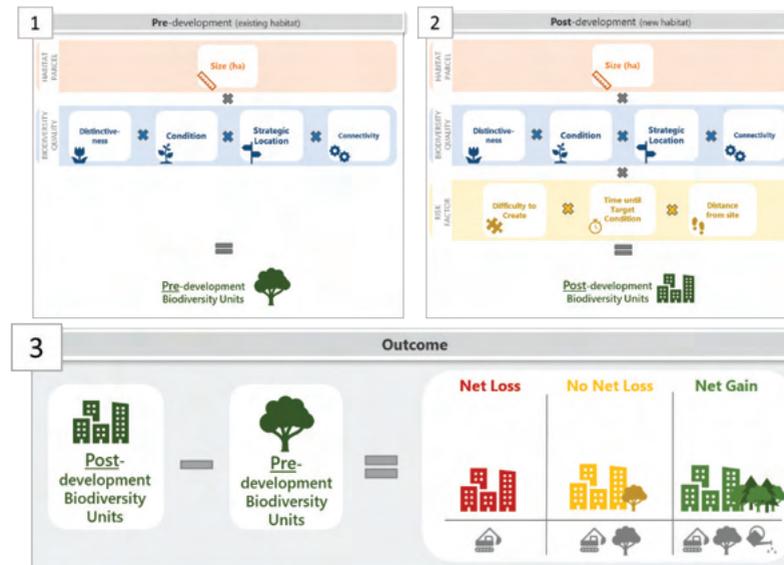
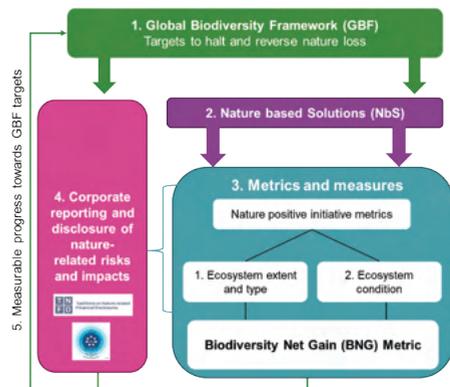
Director, Conservation,
WWF-Hong Kong

NBS IN CONTEXT OF POLICY, GOVERNANCE AND STRATEGY

VINCENT CHENG

NbS in Context of Policy, Governance, and Strategy

The nested framework of Nature-based Solutions (NbS) is reflected in its application in project design and corporate reporting. The Global Biodiversity Framework (GBF) establishes targets for ecosystem improvement and business disclosures. Nature-Based Companies (NBCs) utilize natural processes to support these GBF targets. To monitor progress, it is essential to measure the outcomes of NbS, with the Nature Performance Indicators (NPI) providing the necessary metrics. Biodiversity Net Gain (BNG) employs NPI metrics to ensure biodiversity improvements, while corporate disclosures regarding nature risks and impacts align with GBF objectives, facilitating measurable progress.



Principles & Metrics for Assessment

Many countries are incorporating NbS into their national climate strategies, highlighting the need for these initiatives to follow best practices. To meet the GBF targets, measuring NbS outcomes using key metrics—such as BNG, carbon sequestration, and climate resilience—is crucial. Encouraging corporations to adopt nature-positive practices within their value chains will further support these goals. Overall, the focus is on enhancing ecosystem services and natural capital to achieve meaningful biodiversity improvements.



Dr Vincent Cheng

Arup Fellow and Director of Climate and Sustainability Services, East Asia



INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

NATURE-BASED SOLUTIONS IN ACTION

MODERATOR



Ms. Kitty Tam

PANELISTS



Dr. Janet Chan



Dr. Fan Ning



5
SESSION 2
YOUTH,
EMPOWERMENT AND
MAINSTREAMING

SESSION 2

YOUTH, EMPOWERMENT AND MAINSTREAMING



PANEL MODERATOR

Kitty Tam

Programme Lead, Civil Exchange

WORDS FROM THE MODERATOR

This panel explored the implementation of Nature-based Solutions (NbS) in Hong Kong through actionable strategies spanning education, policy, and urban planning. It emphasised the importance of closing the gap between knowledge and action by fostering collaboration across sectors—turning environmental awareness into practical, place-based solutions. A key theme was the need for cross-departmental coordination, particularly the integration of education, environmental, and development policies to promote community well-being and climate resilience. Urban farming was highlighted as a powerful example of how NbS can support both ecological and social outcomes. The discussion also delved into cultural considerations, advocating for the co-management of green spaces to empower youth and engage local communities—ensuring these spaces are not only ecologically functional but also socially inclusive and resilient for the local community.

SESSION 2 - YOUTH, EMPOWERMENT AND MAINSTREAMING

CLIMATE EDUCATION AND YOUTH EMPOWERMENT

JANET CHAN

As the co-founder of HKU Climate Ambassador and Program Coordinator of HKU MSc Environmental Management, I shared how our Students as Partners (SaP) model transforms students into climate action leaders. By engaging undergraduates across all 10 HKU faculties—regardless of academic background—we spark a ripple effect through:

- Multi-layer partnerships: Collaborating with undergraduates, master's students, industry leaders, government units, private sector innovators, NGOs, and mentors.
- Hands-on training: Workshops, field trips (e.g., Tengger Desert restoration), and real-world climate action.
- 15+ student-led projects: Tackling biodiversity loss, food waste, green habits, and community engagement.
- Global impact: 8,995+ hours of climate action, 116K+ social media engagements, and partnerships with 11 organizations.

Why It Matters:

Our initial research shows significant improvements in students' climate action behavior and mitigation efforts. The SaP model isn't just theory—



it's scalable, flexible, and aligns with UNSDGs 4 (Quality education), 12 (Responsible consumption and production) and 13 (Climate action)

Mainstreaming Climate Action with Youth Empowerment:

To drive systemic change, we're embedding climate education into curricula and daily life by advocating for:

- Three pillars of Education for Sustainable Development (ESD): Knowledge (*about*), experience (*in*), and action (*for*) the environment.
- Policy integration: Partnering with schools, governments, and global platforms (e.g., UNESCO) to institutionalize climate literacy.
- Community-driven solutions: Bridging academia and grassroots initiatives to normalize climate action as a societal priority.

Gratitude & Vision:

Thank you, HKILA and IFLA, for this platform, and to our incredible team, partners, mentors and ambassadors!

As a mother and an educator, I firmly believe:

Youth are not just future leaders—they're today's changemakers. Sustaining our planet today ensures a thriving world for tomorrow's leaders. Let's empower them to turn sustainability into legacy!



Dr Janet Chan

Senior Lecturer, School of Biological Sciences, University of Hong Kong

Program Coordinator, MSc Environmental Management

Program Leader and Co-founder, HKU Climate Ambassador

SESSION 2 - YOUTH, EMPOWERMENT AND MAINSTREAMING

ENVIRONMENTAL EDUCATION

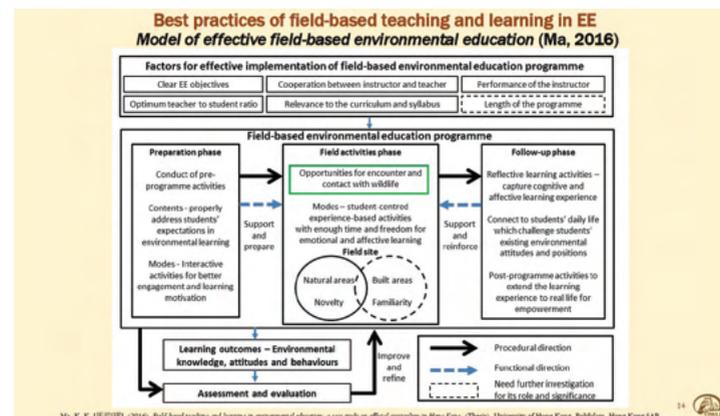
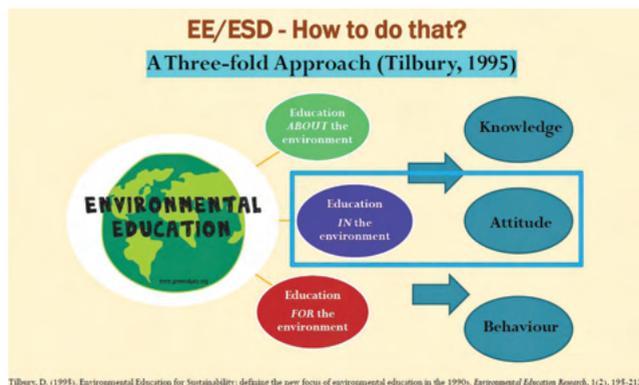
The Key to Sustainability

XONI MA

Achieving sustainability is crucial for biological conservation and tackling climate change. Environmental education should play a key role in society's journey toward sustainability, as we need to shift people's mindsets from being ego-centric to eco-centric.

The most fundamental method for implementing environmental education is the Three-Fold Approach (Tilbury, 1995). Unfortunately, in Hong Kong's school education, we tend to focus on education about the environment, while neglecting education in the environment, which is essential for nurturing people's love for nature and developing a pro-environmental attitude.

Moreover, Hong Kong is rich in biodiversity, and we should better utilize these invaluable resources to implement outdoor environmental education, particularly in schools.



Environmental education is a professional discipline, and its design and implementation should reference research findings such as the "Model of Effective Field-Based Environmental Education" (Ma, 2016) to maximize the effectiveness of programs.

To advance the development of environmental education in Hong Kong, we should focus on five key aspects:

- Promoting outdoor learning,
- Mainstreaming environmental education in school curriculums,
- Developing professionalism within the sector,
- Conducting more research to understand the current situation and set visions and targets, and
- Encouraging collaboration and co-creation among various stakeholders in society.

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Dr Xoni Ma

Founder and Education Director, Outdoor Wildlife Learning Hong Kong

Adjunct Associate Professor, School of Biological Sciences, University of Hong Kong

Part-time Lecturer, Department of Curriculum and Instruction, CUHK

SESSION 2 - YOUTH, EMPOWERMENT AND MAINSTREAMING

FUN IS A LUXURY

NING FAN

Play is the right of children as stated in Article 31 of the UN Convention. Play is essential for building and enriching social life, cultural development, communication skills, empathy, problem solving techniques and resilient character build-up. Play could help to relieve stress from academic works as well as hardship in life, lead to happiness. In addition, children and youth could use these practical life skills outside academic world on creative activities and thus gain benefits on road to pursue their career or dreams on start-up.



In 2020, 275,000 children under 18 years lived in poverty. Their opportunities to innovative playing and different learning occasions are limited which turn out to be restricted job opportunities. This is an Health Equity issue. From experience of Health In Action who had served local working poor families, including ethnic minorities and new immigrants, we observed that their children lack of chances to get experiential learning in interactive and innovative way. There should be targeted policy specifically improve the early childhood experiences as part of education and poverty alleviation programs.

Play and innovative activities outside classroom, such as green environment or in public space could inspire youth to develop new idea on environmental and public health aspect, including wellness and sport will be the focus of future city development. Paradoxically, the mental health of our youth will be enhanced.



Dr Ning Fan

Founder of Health In Action

**SESSION 2 - YOUTH, EMPOWERMENT
AND MAINSTREAMING**

BUTTERFLY GARDEN PROGRAM

COLLEEN CHIU

The Butterfly Garden Program, initiated by the Fung Yuen Butterfly Reserve, is supported by the Agriculture, Fisheries, and Conservation Department (AFCD), the Chinese University of Hong Kong, the Shiu-Ying Hu Herbarium (Chinese University of Hong Kong), and the Hong Kong Institute of Landscape Architects.

This program is Hong Kong's first outdoor ecological education initiative, offering students and the community the opportunity to create their own Butterfly Gardens. Through the establishment of these gardens, participants can also attend lectures, workshops, field trips,



and training sessions, including administrative training. The program aims to educate people across Hong Kong and Shenzhen, providing a platform for them to develop their skills and interests while promoting conservation efforts for future generations.

The project seeks to create more ecological hotspots using the “Point-Line-Surface” concept in various areas of Hong Kong. By connecting these points, ecological stepping stones are formed, creating a comprehensive ecological network. This enhances butterfly populations and ensures that the entire city can benefit from increased biodiversity.

One of our projects, “Nature LINK 連繫自然,” involves the development of 10 butterfly gardens in shopping malls managed by Link Asset Management Limited. This initiative promotes community engagement by providing opportunities for the public to learn about ecological values and actively participate in the planting of these gardens. These butterfly gardens are designed to serve and benefit the residents living within the communities.



Colleen Chiu

Senior Project Manager (Nature Conservation),
Fung Yuen Butterfly Reserve,
Environmental Association





DAY 2
OPENING REMARKS



OPENING REMARKS

CALL TO ACTION

CATHE DESIREE S. NADAL

Welcome to the second day of the International Climate and Biodiversity Conference. Today, we continue exploring Nature-Based Solutions (NbS) as a powerful tool to address the urgent challenges of climate change and biodiversity loss.

Both Hong Kong and the Philippines share vibrant landscapes - lush hills, dynamic coastlines, and, in the case of the Philippines, one of the world's biodiversity hotspots, home to 70 - 80% of global plant and animal species. However, these regions face common threats: typhoons, sea-level rise, urbanization, deforestation, coral reef degradation, and extreme weather events. These challenges severely impact ecosystems, livelihoods, and the well-being of both humans and wildlife. In this climate emergency, NbS offers hope and a sustainable path forward.

Yesterday's discussions highlighted inspiring projects and climate actions from Hong Kong and beyond, demonstrating how NbS can reduce carbon footprints, mitigate urban heat islands, improve air quality, and provide habitats for biodiversity. Contributions from landscape architects, allied fields, youth initiatives, and even a medical doctor reflected the multidisciplinary potential of these solutions.

By fostering cross-border and cross-sector collaborations, the Asia-Pacific region can lead as a model for innovative, sustainable practices, with Hong Kong driving today's conversations. Together, we can amplify efforts to create a future where nature and humanity thrive in harmony. Let us learn, adapt, and act.



Dr Cathe Desiree S. Nadal

Secretary of International Federation of Landscape Architects Asia Pacific Region (IFLA APR)

OPENING REMARKS

WORKING WITH THE FLOWS OF NATURE

YIN-LUN CHAN

This conference on Nature-based Solutions is also one that is very much about international collaboration. Hong Kong is important in its geographic location serving as a junction between land and sea cultures. This makes it an ideal place to discuss international collaboration and solutions for combating climate change and other global challenges. Nature does not understand boundaries the way we do. It is not possible to stop a flying bird for a passport. Similarly, we cannot stop soil, water, and other natural elements from crossing national borders.

One of the founding myths of China tells the story of the Great Yu of the Xia dynasty. As the story goes, there has been long-standing attempts in trying to dam the Yellow River without success. The Great Yu proposed an alternative solution that diverted flows rather than trying to stop it. This approach highlights that working with nature, rather than against it, is crucial in the management of the natural dynamics of the environment.

As landscape architects, we are uniquely trained in designing with living elements. We understand societies as dynamic living systems, designing and working with communities and ecologies over time. The many experiences shared in this conference provide us with valuable tools to collaborate and work in harmony with nature in the contemporary world.



Dr Yin-Lun Chan

Vice President, The Hong Kong Institute of Landscape Architects

Head, Department of Design and Architecture, Technological and Higher Education Institute of Hong Kong



與自然和諧共生的
城市綠色發展範式
Urban Green Development Paradigm
Coexistence Between Humanity and Nature

李雄
副董事長，北京林業大學教授 副校長
LIXIONG
Landscape Architecture Professor & Vice President, Beijing Forestry University



NATURE-BASED SOLUTIONS IN ACTION



HONG KONG INSTITUTE OF LANDSCAPE ARCHITECTS
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INTERNATIONAL CLIMATE AND BIODIVERSITY

NATURE-BASED SOLUTIONS IN ACTION

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KEYNOTE SPEECHES



FROM ONE TO MANY NATURES

Integrating Urban Nature Visions to Support Nature-Based Solutions in Australia

MARIA IGNATIEVA



Park Gleisdreieck, Berlin, Germany. Example of the Fourth (spontaneous) Urban Nature

Urban nature and ways of protecting, designing, and even mimicking natural processes are the most popular themes inspiring humanities and natural science studies in different disciplines. Scope and the interpretation of urban nature are influenced by specific disciplines (e.g. ecology, geography, conservation biology, or social sciences) and research that links theory and practice (e.g., urban design and planning, landscape architecture, etc.) when dealing with nature design and conservation. One Nature Approach is common among geographers, urban planners, and urban designers. Four Natures vision is introduced by European



Design with native plants. Perth, Australia

ecologists. Landscape architecture is based on the concept of three natures but by the end of the 1990s included spontaneously growing plants (Fourth Nature) as a part of the design strategy. Australia and New Zealand's vision of Nature-based-Solution (NBS) entirely refers to the use of native nature with the aim of restoration and conservation of native ecosystems. NBS means practicing inter- and transdisciplinary approaches in all types of urban natures and implementing different innovative practices driven by natural processes (e.g., water cycles, plant succession, biodiversity). Delineation of nature is an attempt to understand the complexity of landscapes and the relationships between humans and nature. Acknowledging the full spectrum of urban natures and adopting common terminology and concepts in planning and policy could facilitate more effective collaboration and enable more effective and efficient implementation strategies by practitioners, policymakers, and other stakeholders.



Dr Maria Ignatieva

President of International Network Urban Biodiversity and Design (URBIO)

Professor of Landscape Architecture, University of Western Australia School of Design

KEYNOTE SPEECH

BIOPHILIC DEVELOPMENT

A Paradigm Shift Towards Harmonizing Our Environment and Fostering Social Reconciliation

ARIYA ARUNINTA



NbS As a Biophilic Approach

In an age characterized by extensive Anthropogenic challenges, Biophilic development presents a powerful framework for creating sustainable and harmonious environments. This presentation delves into this paradigm shift, emphasizing the integration of natural elements to enhance both ecological integrity and human well-being. We will explore the ontological dimensions of biophilic design, illustrating how reconnecting people with nature fosters a profound understanding of



our interconnectedness with ecosystems, thereby nurturing a sense of place and identity. The role of Nature-Based Solutions (NbS) as essential strategies within biophilic development is not only addressing environmental issues such as climate resilience and biodiversity loss but also contributing to social equity by promoting inclusive communities. We investigate how biophilic development and NbS can serve as catalysts for transformative change, guiding us toward a sustainable future for both humanity and the Earth.

Final takeaways include the need for a paradigm shift towards biophilic development, a deeper understanding of urban ontological landscapes, and innovative approaches in landscape planning and design.



Dr Ariya Aruninta

Professor,
Department of Landscape Architecture,
Chulalongkorn University

Head of Healthy Landscape and
Biophilic Planning (HeaL-BiP RU)

CONSTRUCTING A CHINESE URBAN GREEN DEVELOPMENT PARADIGM FOR THE HARMONIOUS COEXISTENCE BETWEEN HUMANITY AND NATURE

構建人與自然和諧共生的中國城市綠色發展範式

XIONG LI

The development of National Garden Cities in China is a key policy instrument promoted by the Ministry of Housing and Urban-Rural Development to drive high-quality urban development. Since its inception in 1992, the initiative has evolved over more than three decades into a standardized and systematic evaluation mechanism. It has become an important platform and strategy for municipal governments at all levels to advance ecological civilization, improve living environments, enhance urban functionality, and elevate the overall quality and competitiveness of cities.



Significant achievements have been made in terms of the number of cities involved, urban greening, green space development, ecological benefits, and social outcomes. Through the integrated concepts of Garden Cities, Park Cities, and Garden-like Cities, China is promoting green, high-quality urban development. This approach represents a new path and paradigm for urban construction rooted in the harmonious coexistence of humanity and nature, offering Chinese wisdom and solutions to global ecological governance.

*Original text in Chinese.



Prof Xiong Li

Vice President of Beijing Forestry University

Vice President and Chairman of the Education Work Committee of the Chinese Society of Landscape Architecture (ChSLA)

KEYNOTE SPEECH

UPDATING THE HONG KONG BIODIVERSITY STRATEGY AND ACTION PLAN

SIMON CHAN

The presentation on “Updating the Hong Kong Biodiversity Strategy and Action Plan” highlighted Hong Kong’s ongoing efforts in biodiversity conservation and the update for the city’s Biodiversity Strategy and Action Plan (BSAP). Despite its urban appearance, Hong Kong boasts diverse habitats supporting a wealth of biodiversity. The importance of these habitats to the city’s well-being and prosperity was underscored, emphasizing the fundamental role of biodiversity as the foundation of healthy ecosystems and essential building blocks for a more sustainable future.

The successful implementation of the first BSAP, with actions in conservation, mainstreaming biodiversity, knowledge enhancement, and community involvement, was highlighted. Notable achievements included the designation of new marine and country parks, species conservation measures, and projects promoting knowledge sharing and community awareness. Building on the foundation and experience from the first plan, the Hong Kong Government is currently in the process of updating



the BSAP with four identified strategic areas: nature conservation, deepening mainstreaming, capacity building, and collaborative partnering. The update will consider emerging concepts like nature-based solutions, given their potential to address societal challenges while benefiting biodiversity and social well-being through ecosystem protection and restoration initiatives. An upcoming public consultation seeks involvement from all stakeholders and the community, to collectively guide the future development of Hong Kong towards a more sustainable, liveable, and biodiverse city.



Simon Chan

Assistant Director (Conservation) of
Agriculture, Fisheries and Conservation
Department, The Government of HKSAR

INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

NATURE-BASED SOLUTIONS IN ACTION

MODERATORS

Mr. Stephen Suen
Secretary for the Environment and Natural Resources, Government of the Hong Kong Special Administrative Region

Mr. Patrick Ho
Secretary for the Environment and Natural Resources, Government of the Hong Kong Special Administrative Region

Mr. Ken So
Secretary for the Environment and Natural Resources, Government of the Hong Kong Special Administrative Region

Mr. [Name]
[Title]

MODERATOR

Prof. Wong
[Name], GBS, JP
Secretary for the Environment and Natural Resources, Government of the Hong Kong Special Administrative Region



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SESSION 3
NATURE-BASED SOLUTIONS IN ACTION

SESSION 3

NATURE-BASED SOLUTIONS IN ACTION



PANEL MODERATOR
Prof Kam-sing Wong GBS, JP

Former Secretary for the
Environment, Hong Kong Special
Administrative Region Government

Chairman, Wu Zhi Qiao (Bridge to
China) Charitable Foundation

WORDS FROM THE MODERATOR

The session was on “Nature-based Solutions (NbS) in Action”. The panel speakers included local representatives from landscape architecture, green group, and real estate developer, plus an experienced expert on ecological restoration from Macao. The presentations demonstrated how various examples of NbS to help fight climate change and biodiversity loss were applied in Hong Kong, Macao, and other areas in Asia. The panel discussion further deliberated on how to promote NbS in action. The Northern Metropolis was highlighted as one of the most suitable new development areas in Hong Kong for applying NbS in view of its geographical challenges and development stage. Last but not least, one of the key messages shared by both panellists and audience was the urgency to have more passionate persons caring about the urgency of biodiversity conservation and climate actions.

CORPORATE SUSTAINABILITY STRATEGY ON ADDRESSING CLIMATE-NATURE NEXUS

PATRICK HO

In his presentation, Patrick shared that nature and biodiversity are emerging risks for businesses, necessitating strategic management and investment. The Taskforce on Nature-related Financial Disclosures (TNFD) provides a globally recognized framework for companies to assess, manage and disclose nature-related risks and opportunities, aiming to shift financial flows toward nature-positive outcomes, aligning with the Kunming-Montreal Global Biodiversity Framework.



Taikoo Square at Taikoo Place



Taikoo Square at Taikoo Place

Using Swire Properties as a case study, Patrick shared how the Company has implemented a corporate sustainability strategy to address the key drivers of nature change, in the areas of decarbonization, energy and water efficiency, resource & circularity, sustainable procurement, and biodiversity assessment and management. At the building level, the launch of Taikoo Square at Taikoo Place exemplifies this strategy with the addition of over 70,000 sq ft of green space, enhancing urban biodiversity through native plant species selection and creating new green corridors for wildlife. This nature-based solution improves the microclimate, increases rainwater retention, and enhances air quality, promoting climate resilience and community well-being. By integrating such solutions into new projects, Swire Properties aims to further enhance urban biodiversity and support the climate-nature management for driving sustainable development.



Patrick Ho

Head of Sustainable Development,
Swire Properties Limited

COMMUNITY INVOLVEMENT IN NATURE-BASED SOLUTIONS IN HONG KONG

KEN SO

Nature-based Solutions (NbS) is a growing trend to tackle various societal and environmental issues. In addition to the application of nature-related practices, community involvement in the NbS projects is equally important for successfully delivering the social benefits.

Taking the Long Valley and Ho Sheung Heung wet farmland habitat conservation project supported by the Countryside Conservation Funding Scheme as an example, community stakeholders have been engaged by consultation, participation and capacity building, so that stakeholders can be involved in the project in different stages with



Eco-agriculture course for the public members.



different roles. Examples of the engagements include consulting the concerns and expectations raised from the local stakeholders to prioritize and formulate the conservation plan, training up residents as eco-tour guides, improving the return and effectiveness of farming, and participating in conservation works.

With the strong community engagement, the project has been successfully run for 20 years and with great support from various parties. Nevertheless, time is required to build up the relationships with stakeholders and handle different views from them, requiring more open discussions. Respecting stakeholders' views, keeping close communication, and being transparent are the keys to resolving the challenges.



Ken So

Chief Executive, The Conservancy Association

MACAO'S ECOLOGICAL RESTORATION EFFORTS IN THE FACE OF ENVIRONMENTAL CHANGE

澳門在應對環境變遷中的生態修復

KUN-FONG LEONG

This presentation explores how Macao strives to strike a balance between development and environmental protection, embracing the vision of harmonious coexistence between humans and nature.

It highlights that two-thirds of Macao's current land area has been reclaimed from the sea. While land reclamation has provided critical space for social and economic development, it has also led to ecological degradation and habitat loss.

With a forward-looking approach, Macao has embarked on ambitious wetland ecological restoration projects, creating a series of ecological restoration successes. Techniques such as pit composting, root-ball wrapping, construction of ecological ponds, and the installation of eco-islands have been employed. Additionally, ecological corridors have been opened for aquatic species, and green buffer zones have been established to provide shade and reduce noise, further enhancing habitat quality and biodiversity.

**Original text in Chinese.*



Kun-Fong Leong

President of Macao Association for Ecological Study



**NATURE-BASED
SOLUTIONS
IN ACTION**



INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

NATURE-BASED SOLUTIONS IN ACTION

PANELISTS

Dr. Billy Hau

Dr. Stephan Gale

Ms. Marine Thomas

MODERATOR

Prof. Matthew Pryor

Associate Dean, Faculty of Architecture, HKU

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SESSION 4
URBAN BIODIVERSITY
AND ECOLOGICAL
RESTORATION

NATURE SOLUTIONS IN ACTION

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SESSION 4

URBAN BIODIVERSITY AND ECOLOGICAL RESTORATION



PANEL MODERATOR

Mathew Pryor

Associate Dean, Faculty of
Architecture, The University of
Hong Kong

WORDS FROM THE MODERATOR

In a truly inspiring final panel, four exceptional local speakers, with different disciplinary perspectives, addressed the practical challenges inherent in implementing biodiversity enhancement projects and Nature-based Solutions in a high-density environment such as Hong Kong. In their diverse fields, they each spoke about how policy and strategy might best be translated into actual projects through: setting relevant and achievable ecological targets; defining clear and actionable standards and techniques for materials and methods; adopting a grounded site-specific approach based natural processes and existing environmental conditions.

Personally, I have long been concerned about the very significant gaps between policy and the implementation of genuine Nature-based Solutions on the ground. I was greatly encouraged to hear the passion and insight of all four speakers both in raising these concerns so articulately and in proposing effective mechanisms that would ensure authentic and sustained improvements in urban biodiversity and ecological restoration in Hong Kong.

CARBON SEQUESTRATION AND BIODIVERSITY IN URBAN FORESTRY IN HONG KONG

BILLY HAU

Humanity faces two critical threats to its long-term survival: global climate change and rapid biodiversity loss. Research by WWF shows a 73% decline in the Living Planet Index from 1970 to 2020, primarily due to human activities like habitat degradation, overconsumption, pollution, and invasive species. Biodiversity loss disrupts ecosystem functions essential for the planet's well-being and undermines crucial services needed for sustainable human development. The future urban forestry strategy should prioritize addressing both urban biodiversity and climate adaptation.



Insect hotels, a growing trend in urban landscapes in Europe in response to the global decline in insects, should be seriously considered for implementation in Hong Kong.



Fung Shui Wood is an important cultural and natural heritage of Southern China. If it is properly incorporated into urban landscape features, it could significantly enhance urban biodiversity and climate benefits.

Tree species that were found to be good for storing carbon in Hong Kong

Fung Shui Wood species		Secondary Forest species	
<i>Aphananthe cuspidata</i>	滇糙葉樹	<i>Castanopsis fissa</i>	殼莖錐
<i>Bischofia javanica</i>	秋楓	<i>Cinnamomum parthenoxylo</i>	黃樟
<i>Canarium album</i>	白欖	<i>Engelhardia roxburghiana</i>	黃杞
<i>Castanopsis faberi</i>	羅浮錐	<i>Machilus chekiangensis</i>	浙江潤楠
<i>Castanopsis lamontii</i>	鹿角錐	<i>Machilus gamblei</i>	黃心樹
<i>Cinnamomum camphora</i>	樟	<i>Machilus pauhoi</i>	刨花潤楠
<i>Cyclobalanopsis edithiae</i>	華南青岡	<i>Schima superba</i>	木荷
<i>Endospermum chinense</i>	黃桐	<i>Syzygium hancei</i>	韓氏蒲桃
<i>Machilus chekiangensis</i>	浙江潤楠		
<i>Machilus chinensis</i>	華潤楠		
<i>Pygeum topengii</i>	臀果木		
<i>Schima superba</i>	木荷		
<i>Sterculia lanceolata</i>	假蘋婆		

Potential carbon storage tree species for Hong Kong in urban forestry.

Urban forestry, achieved through the strategic planting of tree patches and corridors in cities, serves as a nature-based solution to societal challenges, provides wildlife habitats and stores some carbon. A study by HKU and the Conservancy Association, sponsored by HSBC, revealed Hong Kong's forests' substantial carbon storage capacity, emphasizing the importance of large trees in supporting wildlife and carbon storage. This research underscores the significance of planting large trees in urban areas to promote carbon sequestration and biodiversity conservation. In addition to selecting tree and plant species that benefit urban wildlife, integrating artificial habitats like bat and bird boxes and insect hotels in small urban landscape features can further support biodiversity without causing disturbances to the public.



Dr Billy Hau

Programme Director of MSc Environmental Management, Principal Lecturer of School of Biological Sciences, Assistant Dean (TPG), Faculty of Science, University of Hong Kong

EMPHASISING NATIVE BIODIVERSITY FOR ECOLOGICAL FUNCTION IN FOREST RESTORATION

STEPHAN GALE

The planting of native species – that is, those that occur naturally in a given locality – is conventionally seen as the preserve of scientifically-driven, landscape-scale habitat restoration projects that have the conservation of rare or threatened plants at their core. Even for these sorts of projects, sourcing native species may be challenging. In contrast, urban greening projects have traditionally sought bold, readily available (and thus mass produced) ornamental and inevitably exotic plants that are a ‘known quantity’ in terms of performance, maintenance, cost and risk. Regulations put in place by government may even stipulate, one way or another, that non-native species be selected for the built environment. With increasing interest in so-called nature-based solutions (NbS) on the part of policymakers, urban planners and landscape architects, however, these pre-conceived notions are being cast aside.



KFBG has more than 20 years' experience in managing land, soil and forests for native biodiversity. The principles learned through this work are instructive for the restoration of plant-based ecological function in other terrestrial settings, including the urban environment.



By shifting away from common, mass-produced, non-native species that offer little ecological value to our cities, it will be possible to create attractive, biodiverse communities that can genuinely convey Nature-based Solutions.

From an ecological perspective, there is a singular value to selecting native species: when planted in mixes that are at least to some degree analogous to natural communities (in terms of species diversity and composition), locally adapted plants have the potential to interact with other biotic and abiotic components of the environment in a self-organising, self-sustaining manner, thereby fostering ecological function. Ecological function is a property of ecosystems within which natural processes – pollination, seed dispersal, soil development, nutrient cycling, water cycling, germination, recruitment, species turnover, death and decomposition, to name a few – happen of their own accord. Ultimately, these processes are the very definition of NbS and, if genuinely implemented, they offer the opportunity for ecological resilience (to climate change, for example).

Native biodiversity should therefore be preferentially selected for greening projects that aspire to convey ecological outcomes. As urban planners, landscape architects, ecologists and horticulturalists increasingly come together to this end, attention must be turned to ensuring quality native plants become more widely available and that they are well cared for once planted. Such an approach is actively encouraged by The Global Biodiversity Standard (TGBS), a new, site-based certification scheme that places native biodiversity and ecosystem services at the heart of ecological restoration. KFBG became a regional hub of this framework in 2024.



Dr Stephan Gale

Head of Flora Conservation
Department, Kadoorie Farm and
Botanic Garden

ELEVATING RESTORATION STANDARDS WITHIN THE NBS FRAMEWORK

Perspectives for HK Marine Ecosystems

MARINE THOMAS

Humans rely on natural systems for essential needs like air, water, and food. With over 80% of wildlife lost, we are disrupting the balance that sustains us, threatening our existence. But this can be reversed. We must choose to protect and restore biodiversity as “Nature-based Solutions” (NbS) that leverage natural systems to address the societal challenges we face.

The success of NbS depends on protecting or restoring functioning ecosystems, which are themselves fueled by biodiversity. Urban planners and landscape architects can significantly contribute to solving the biodiversity and climate crisis by prioritizing ecosystem function in their designs. Conversely, neglecting this focus leads to poorly implemented NbS, wasting resources and failing to deliver necessary solutions.



Healthy oyster reefs, like the ones that used to populate the coastlines in western waters of Hong Kong, need a minimum 30% coverage and 50 live oysters per m2 to be considered a “functioning” ecosystem. Functioning oyster reefs provide huge benefits for ocean health, including enhanced water quality, fish production and biodiversity.

To advance, we must foster cross-sector collaboration by involving specialized ecologists early in the planning process, develop NbS guidelines with rigorous ecological objectives, and adjust project frameworks for long-term adaptive management, recognizing the complexities of ecosystem restoration.

Because we lack standards, eco-shoreline projects in Hong Kong risk falling short in creating functioning ecosystems. For example, shell cages alone are not self sustaining, they provide limited benefits compared to living shellfish reefs that can regenerate. If we do not aim to create functioning systems “eco” aspects will eventually disappear. This highlights a need for better understanding of local marine ecological systems in project design.



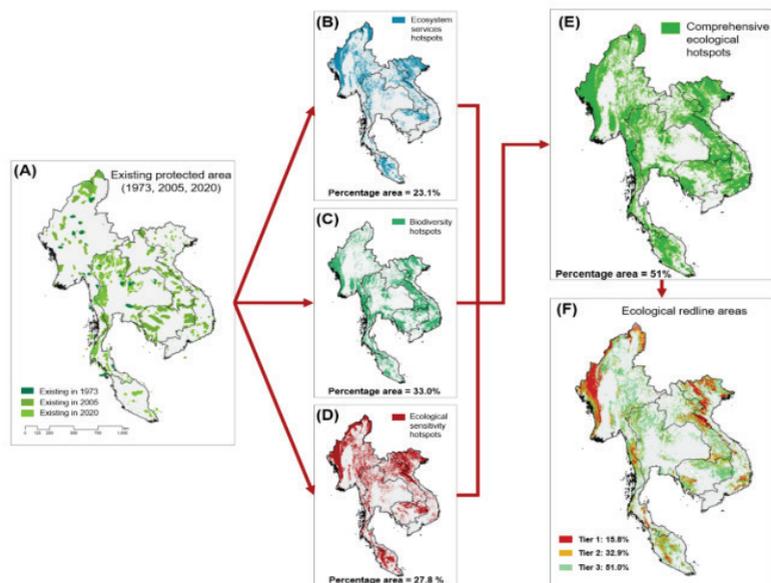
Marine Thomas

Associate Director of Conservation,
The Nature Conservancy (TNC)

HOW TO EFFECTIVELY IMPLEMENT NATURE- BASED SOLUTIONS

ALICE HUGHES

NBS provides an opportunity to both restore habitats, and to meet future climate goals. However, whilst NBS programs have proliferated in recent years, many of these projects lack the standards needed to be successful, and thus despite their prominence, typically show mortalities of 80-97% of trees within three years. Counteracting these expensive, and frequently ineffective programs requires clear definitions, better standards and monitoring and certification for these types of initiative to ensure compliance in existing programs and to prevent the abuse



of the term. Furthermore, a mitigation hierarchy should be applied. At present getting funds to preserve existing habitat is far more challenging than getting funds to “plant trees” (even if these trees generally die). Given the importance of intact habitat, the numerous benefits from intact systems, and the greater losses of soil carbon (i.e. drying and burning of peat if peat-forests are cleared) we need to prioritise existing habitats far better. Opportunities do exist, but ensuring an empirical basis is essential, and applying approaches such as Ecological Conservation Redlines, or minimally looking for synergies with biodiversity priorities is essential.

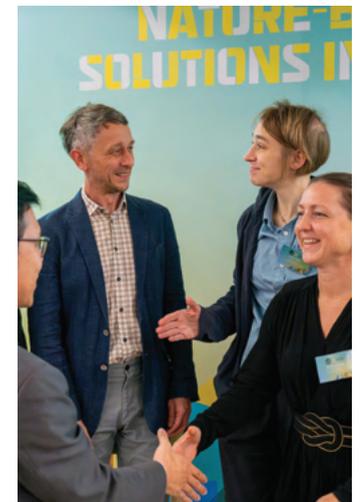


Dr Alice Hughes

Associate Professor, School of
Biological Sciences, University of
Hong Kong

President of INTECOL

Chief Editor, Climate Change
Ecology





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CLOSING REMARKS



CLOSING REMARKS

BENNI PONG

On behalf of the HKILA and IFLA Asia Pacific Region, I would like to express our gratitude to the honourable speakers, moderators, guests and participants. Your presence has made this event a successful one.

Landscape Architecture is experiencing a significant paradigm shift. Landscape architects now play a vital role in creating urban environment that is beneficial to health, social well-being as well as biodiversity through the implementation of Nature-based Solutions (NbS). In this conference, we have discussed NbS through the lens of “Policy, Governance and Strategy”, “Youth, Empowerment and Mainstreaming”, “NbS in Action” and “Urban Biodiversity and Ecological Restoration”. I have learned a lot from these fruitful discussions and I hope you share my thought.

But set aside all these, the key in this conference is to provide a platform for exchange of ideas and future collaborations. The environmental catastrophes of today’s world - from climate change to biodiversity loss - requires design and planning professions to synthesize interdisciplinary knowledge and offer innovative solutions. To put it in a plain word: we simply cannot do it alone. It is crucial for cross-disciplinary cooperation among professions in order to build a nature-positive urban environment.

And amid all the momentums built, I hope our dialogues would not stop after today. And we look forward to working with you on practical intervention in the future.



Benni Pong

Vice President

The Hong Kong Institute of
Landscape Architects

INTERNATIONAL CLIMATE AND BIODIVERSITY CONFERENCE

NATURE-BASED SOLUTIONS IN ACTION

PANELISTS

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MODERATOR

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Faculty of Architecture, HKU



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