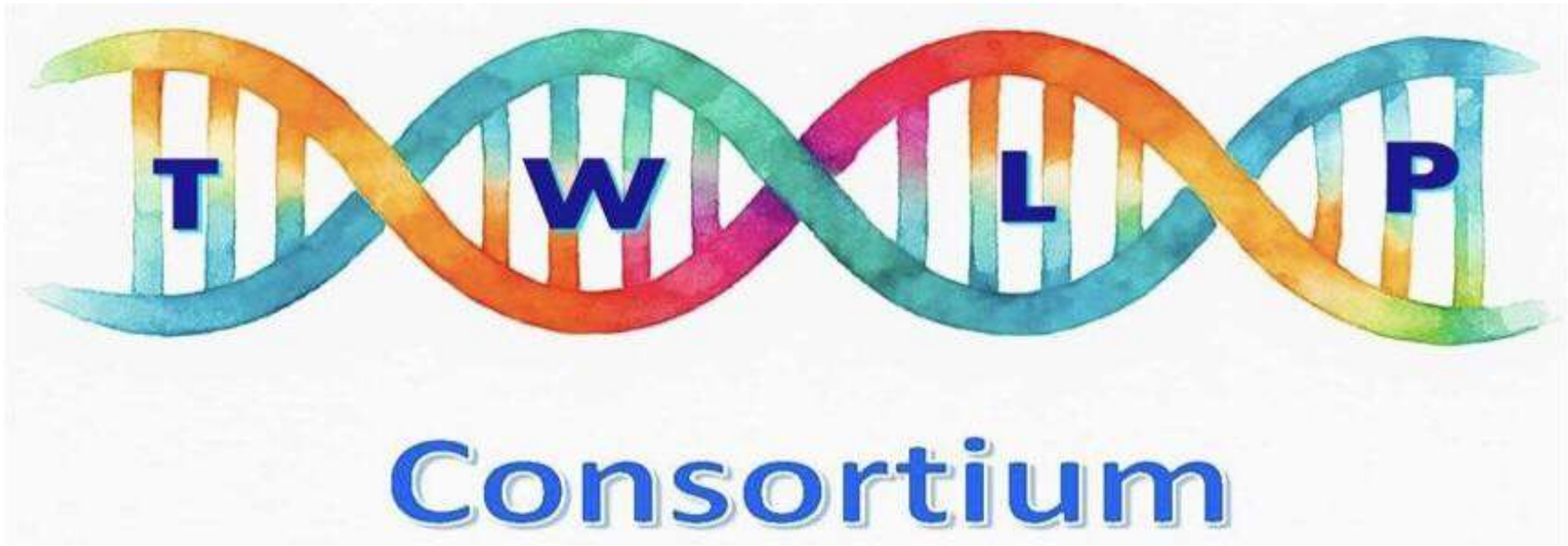


Seminar Series Title: “ Water Spirit for Soul of the Cities ”

Pathways to Transformative Progress for

Architects & Engineers

Prof. Dr. Swe Swe Aye

Co-Founder of the TWLP Consortium,

Founding Member and Patron of MGBS

(15 March 2026)

Seminar Series Title: “ Water Spirit for Soul of the Cities “

“Pathways to Transformative Progress for Architects & Engineers”…

We explored five important themes in the “Pathways to Transformative Progress for Architects & Engineers”; viz:

(1) Architects: integrate water into design philosophy.

(2) Engineers: innovate circular water solutions.

(3) Policymakers: incentivize stewardship in building codes

(4) Citizens: act as daily water stewards

(5) Thinking for our Society: Green societies are not only zero-carbon but also water-wise.

These themes address pressing challenges for Architects & Engineers such as Integration, Innovation, climate change, sustainability, and the evolving needs of society & societal Benefits

Architects: Integrate water into Design Philosophy

*Architects are the dreamers of our built environment. Your designs shape not just skylines, but the rhythms of daily life. Do not treat water as a utility that comes later, hidden behind walls and beneath floors. Instead, let it be part of your design philosophy itself.

* Imagine buildings that welcome the rain, collect it gently, and reuse it respectfully. Imagine public spaces where water is celebrated—fountains that recycle flow, gardens that thrive on harvested rain, courtyards where water is seen and remembered. Placing water at the heart of designs teaches society that this resource is sacred.

Architects: Multi-Functional Water

*To integrate water into a design philosophy, architects should treat it as a multi-functional element providing aesthetic, sensory, spiritual, and practical value. This includes:

-Incorporating water management systems holistically, addressing the full water cycle.

-Enhancing sustainability, functionality, and aesthetics.

-Using water features for calming sensory experiences.

-Designing resilient structures adapting to changing water cycles and potential floods.

-Creating urban environments harmonious with nature and responsive to environmental challenges.

Fig,(1)

Architects: Stormwater & Ambiance

* Stormwater Management: Green stormwater infrastructure (permeable surfaces, green roofs, bioswales) integrates water management into the landscape, capturing and filtering rainwater naturally.

*Creating Ambiance: Fountains, pools, and waterfalls add movement, light reflection, and calming sounds, reducing stress and promoting tranquility.

*Architects improve air and water quality, enhance aesthetics, and build communities resilient to environmental challenges.

Architects integrate stormwater into their design philosophy by treating it as a fundamental part of the landscape, not just an afterthought, to create sustainable and resilient urban environments. This approach uses the natural water cycle, managing rainfall runoff through features like green infrastructure, to mitigate environmental impacts and enhance the quality of built spaces.

Engineers: Innovate Circular Water Solutions

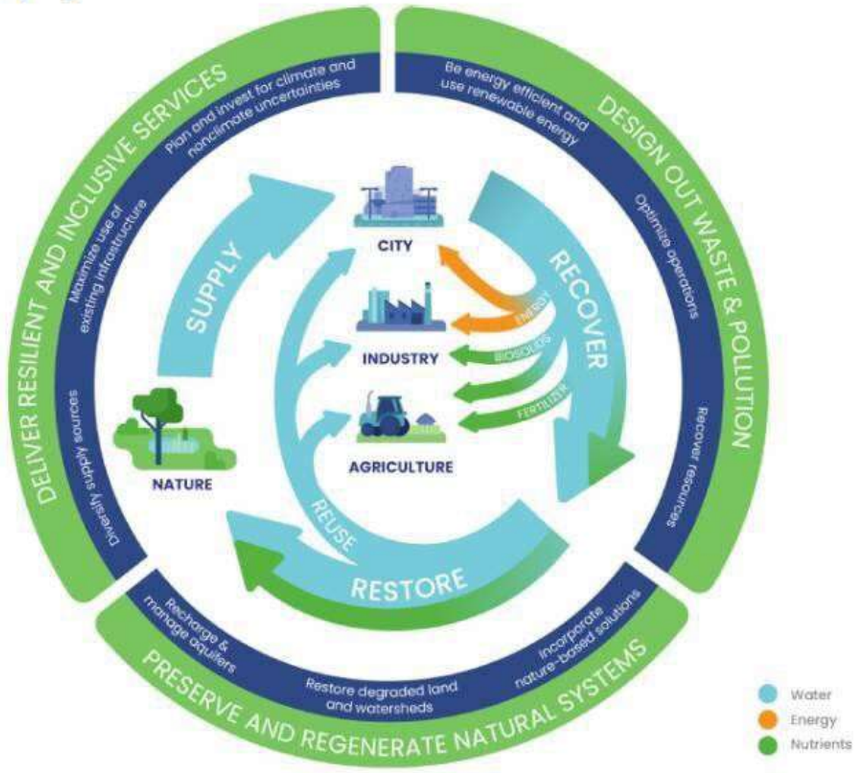
*Engineers are problem-solvers, builders of systems. Circular water solutions are needed—systems where water is used, cleaned, and returned repeatedly. Move beyond 'use and discard'. Design cities where wastewater becomes resource, desalination is efficient, and every drop serves multiple purposes. Industries can operate on closed water loops; communities can thrive in dry lands because engineers planned ahead.

Engineers, you are the problem-solvers, the builders of systems. The world looks to you not only for innovation but for practical wisdom. The time has come for circular water solutions—systems where water is used, cleaned, and returned, again and again. No longer can we afford a “use and discard” mindset.

You have the power to design cities where wastewater becomes resource, where desalination is efficient and renewable, where every drop serves more than one purpose.

Engineers: Circular Economy & Technology

Fig. (1a) THE WICER FRAMEWORK



*Engineers apply circular economy principles:

-Treat all water sources as valuable.

-Integrate smart technologies and nature-based solutions.

-Design infrastructure for integrated water management.

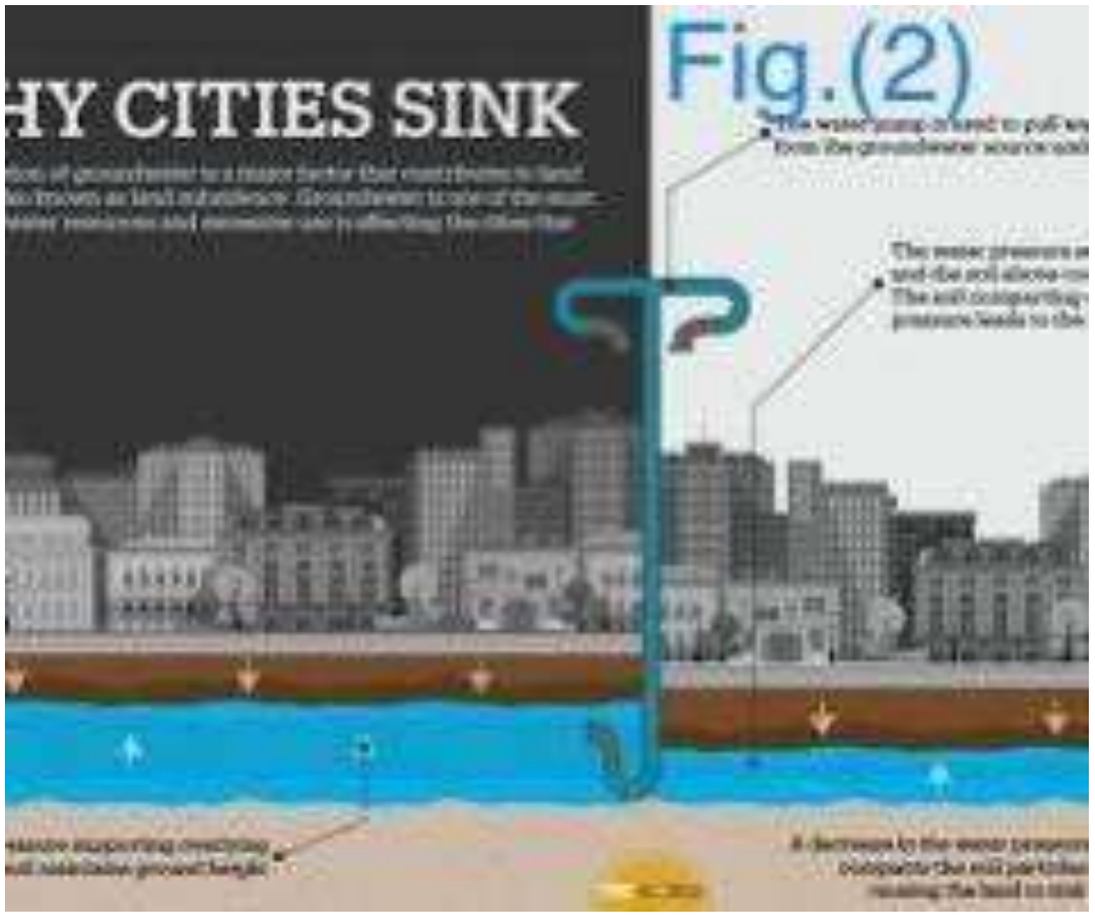
-Develop technologies for water purification and resource recovery.

-Collaborate across industries to foster sustainable practices.

-Goal: recover resources from wastewater and reduce waste.

Engineers innovate circular water solutions by applying circular economy principles to water management, treating all water sources as valuable resources to be reused and recycled, and integrating smart technologies and nature-based solutions into urban and industrial water systems. This involves designing and building infrastructure for integrated water management, developing technologies for water purification and resource recovery, and creating partnerships across industries to foster sustainable practices and meet regulatory requirements.

Engineers: Groundwater Depletion & Urban Planning



Groundwater depletion

Groundwater depletion causes cities to sink by land subsidence when excessive extraction of water from underground acquirers compresses the surrounding soil, creating empty spaces within the land's structure. This process, often called aquifer compaction is a significant factor in the sinking of many urban areas, accelerating the effects of sea-level rise and increasing the risk of flooding and infrastructure damage.

Policymakers: Incentivize Stewardship

*Policymakers hold levers of scale. Create incentives for water stewardship. Update building codes so water recycling/conservation are foundational. Reward innovators, support those who conserve, hold accountable those who waste. Policy teaches society; when rules reflect respect for water, citizens follow, industries adapt, architects and engineers can lead boldly. To our policymakers, you hold the levers of scale. Your choices shape what is possible for millions. I say to you: create incentives for water stewardship. Update building codes so that water recycling and conservation are not afterthoughts, but foundations.

Reward those who innovate, support those who conserve, and hold accountable those who waste. Policy is a powerful teacher. When the rules of society reflect respect for water, citizens follow, industries adapt, and architects and engineers have the support they need to lead boldly.

Policymakers: Financial & Policy Tools

Policymakers: incentivize stewardship in building codes To our policymakers, you hold the levers of scale. Your choices shape what is possible for millions. Create incentives for water stewardship. Update building codes so that water recycling and conservation are not afterthoughts, but foundations. Reward those who innovate, support those who conserve, and hold accountable those who waste. Policy is a powerful teacher. When the rules of society reflect respect for water, citizens follow, industries adapt, and architects and engineers have the support they need to lead boldly.

Citizens: Act as Daily Water Stewards

Citizens: act as daily water stewards.And now, my fellow citizens—never believe that your role is small. Progress does not come only from grand designs or government action. It comes also from the habits of ordinary people, lived out day by day. Every time you turn off a dripping tap, you show respect. Every time you collect rainwater, every time you choose plants that need less water, every time you teach a child not to waste—you are shaping culture.

Citizens: Act as Daily Water Stewards

*Understand your local watershed.

*Educate yourself and others about water value and processes.

*Conserve water at home and work; reduce plastic waste.

*Properly manage eavestroughs and storm drains to prevent flooding and pollution.

To be a daily water steward, educate yourself on your local watershed, make conscious daily choices to conserve water at home and work, volunteer for local water quality initiatives, and use your voice to advocate for responsible water management with local leaders. You can protect local water sources by participating in water quality monitoring, reducing plastic use, and supporting organizations dedicated to clean water.

Citizens: Community Involvement

*Urban Greening: Developing green spaces, community gardens, and sustainable infrastructure to enhance well-being and biodiversity.
*Organizations: Non-profit entities like Myanmar Green Building Society (MGBS) to promote Green Buildings for sustainability through education and knowledge sharing.

Get Involved in Your Community Volunteer: Participate in local environmental groups or conservation authorities that conduct activities like planting vegetation along shorelines, removing pollutants, or engaging in community water quality monitoring.

Green Societies: Zero-Carbon & Water-Wise

*Green societies are often seen as zero-carbon. True sustainability is also water-wise. Cherish waters, build with them, engineer with them, govern with them, and live daily respecting them. Societies that honor water endure and flourish.

I want to leave you with this final thought. When we talk of green societies, we often speak of zero-carbon futures. And that is right, for the climate must be protected. But let us not forget—true sustainability is not only carbon-wise, it is water- wise.

A society that cherishes its waters, that builds with them, engineers with them, governs with them, and lives daily in respect of them—such a society will not only endure, it will flourish.

Thinking for our Society: Green societies are not only zero-carbon but also water-wise.**

Society: Water & Carbon Nexus

Fig,(4)

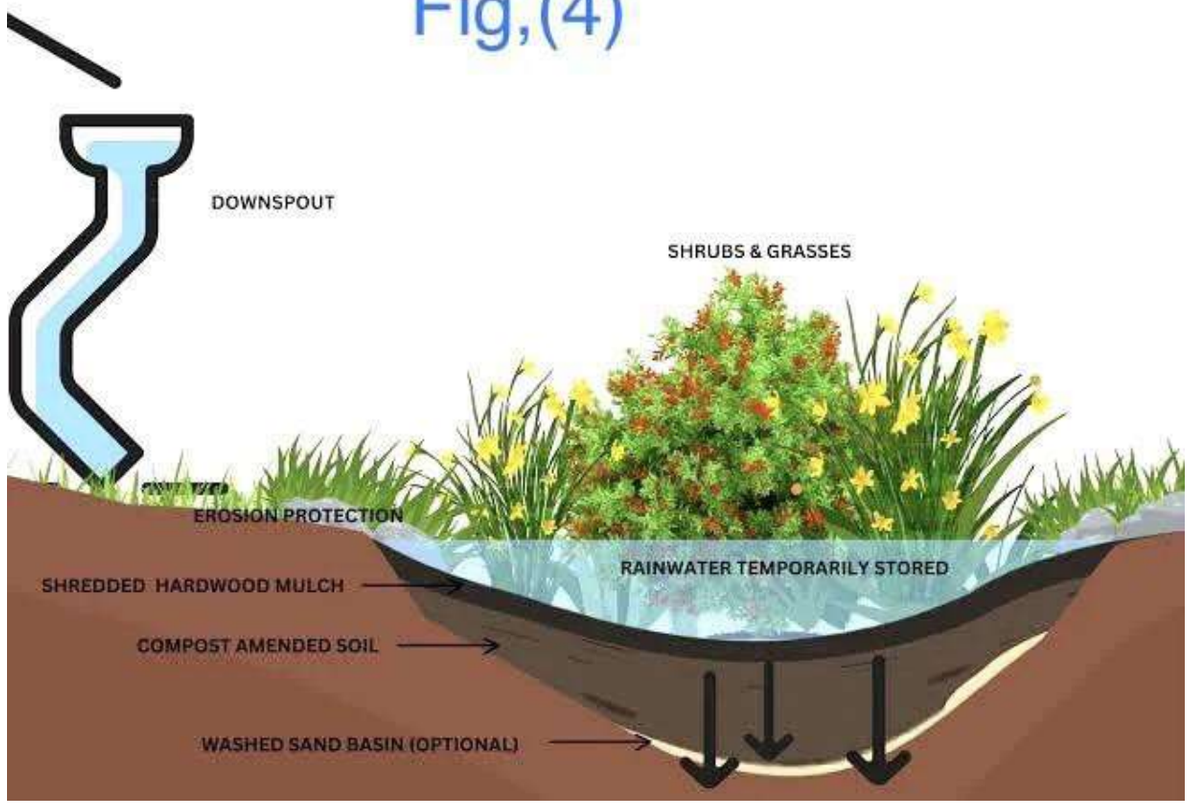


Fig.(5)

* Reduced Energy Consumption: Net-zero carbon goals lower energy needed to treat and transport water. Water-Energy Nexus: Efficient, low-emission water treatment reduces energy use. Water Reclamation & Reuse: Reclaim, treat, and reuse wastewater/greywater. Sustainable Water Infrastructure: Bioswales, rain gardens, green roofs absorb/filter stormwater.

Societal Benefits of Green Water- Wise Societies

*Cleaner air, reduced waste, connected communities.

*Stronger connection to nature and higher quality of life.

*Bioswales: vegetated ditches that collect, filter, and absorb stormwater, replacing traditional gutters. Steps: collection, conveyance, filtration.

A green, water-wise society fosters a higher quality of life by providing cleaner air, reduced waste, more connected communities, and a stronger connection to nature.

Fig.(6)

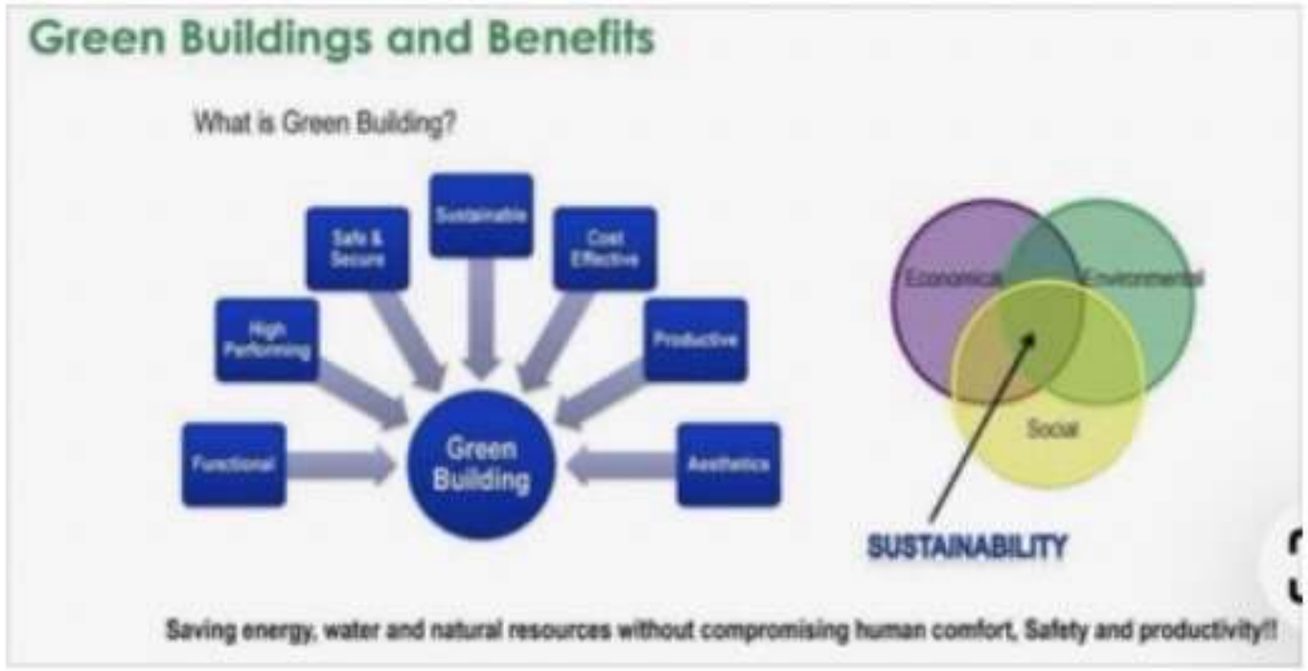


Fig.(7)

Fig.(8) Green Roofs

Fig.(9) Urban Green Space

Conclusion

I’d like to conclude by saying that our story of life should be a well-paved path. If we architects design with it, if we engineers innovate with it, if we policymakers safeguard it, and if we citizens cherish it, providing comfort and security, and only then can we call our progress truly transformative.

This suggests an active role in shaping the society by envisioning a better future.

So let us walk the pathways together: architects, engineers, policymakers, and citizens, each with our part to play. For progress is not progress unless it is transformative, and transformation begins with the waters of life.

THANK YOU

About the Speaker:

Prof. Dr. Swe Swe Aye

Retd. Pro Rector (YTU)

- Co-Founder of TWLP Consortium
- Patron & Founding Member of MGBS
- Advocate for sustainable architecture, engineering, and water-wise societies.
- Dedicated to transformative progress through design, innovation, policy, and community engagement.