

U.S.-ASEAN Smart Cities Partnership

Promoting sustainable, resilient, and inclusive solutions to advance urban quality of life in Southeast Asian nations

Vientiane Symposium July 2024

Day 1: July 17

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<https://www.usascp.org>

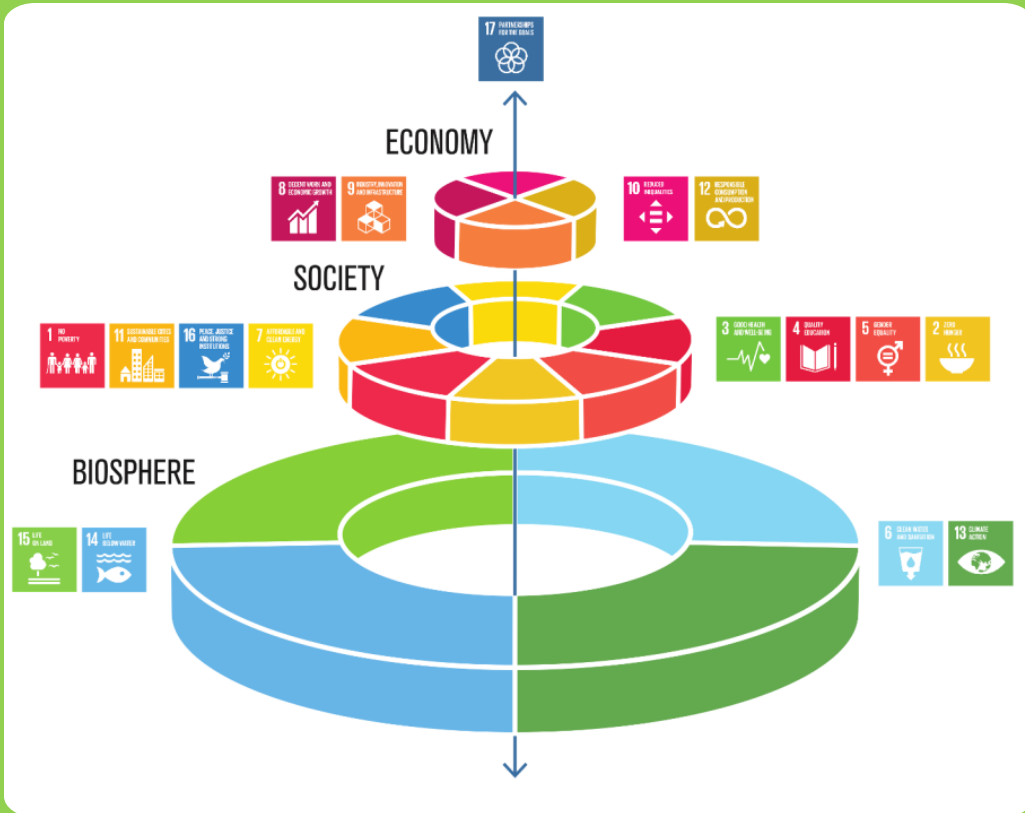


U.S. - ASEAN Smart Cities Partnership: Whole of Government Approach

- **\$12+ million portfolio** launched in 2018
- **20+ projects** with U.S. government agencies and implementing partners
- Projects address ASEAN urban challenges to improve quality of life through knowledge sharing, innovative industry practices, technical assistance, and peer partnerships across urban sectors
- **Climate Action and Finance:** Provide seed capital and mentoring to catalyze sub-national climate actions through net-zero, innovative solutions for climate mitigation and urban resiliency
- **Green Economic Recovery:** Promote circular economy for resource efficiency and reuse to reinforce local sustainability and resilience; facilitate professional exchanges for circular waste management
- **Private Sector Engagement:** Support reverse trade missions, technical/trade shows, and conferences with the Department of Commerce



Smart Sustainable Cities



Connected/Integrated

Holistic & Equitable

Green/Biophilic

Resource Efficient & Circular

Sustainable & Resilient

Ten Pillars of USASCP Programming



Business Innovation Fund (BIF)

Climate finance for Net-zero urban innovation

Capitalization of \$1M USD

Department of Commerce: International Trade Association

Phnom Pehn, Cambodia
Tangerang, Indonesia
Luang Prabang, Laos
Penang, Malaysia
Bataan, Philippines
Da Nang, Vietnam



Business Promotion & Cybersecurity

Business engagements and networking, reverse trade missions

Department of Commerce: International Trade Association

ASEAN Region



Circular Waste Management

Professional exchange program

Department of State: Bureau of Educational and Cultural Affairs

Center for Liveable Cities (Singapore)

ASEAN Region



Green Buildings Innovation

Capacity building and site visits; Building innovation education for future architects, planners, and engineers

- Government of Singapore
- Univ. of N. Carolina - Charlotte

ASEAN Region
University Partners

- Yogyakarta, Indonesia
- Bangkok, Thailand
- Ho Chi Minh City, Vietnam



Circular Entrepreneurship

E-waste material flow analysis, circular entrepreneurship, curriculum development and training, hackathons

Rochester Institute of Technology

ASEAN Region



Integrated Urban Services (IUS)


Systems integration for resource efficiency and reuse in the food, energy and water sectors

Department of State/OES

National Renewable Energy Laboratory

ASEAN Region (Peer Learning)
Pilot Cities:

- Iskandar, Malaysia
- Cagayan De Oro City, Philippines



Energy Modeling

Forecasting pathways towards carbon neutrality in cities and energy systems

Department of State: Bureau of Energy Resources

Pacific Northwest National Laboratory

Kuala Lumpur, Malaysia
Bangkok, Thailand



Research & Innovation

Urban Innovation

National Science Foundation

U.S.-ASEAN University Partners

Jakarta and Makassar, Indonesia
Kuala Lumpur, Malaysia
Manila, Philippines
Singapore
Thailand




Smart Sustainable Transport

Policy, planning and technology solutions

Department of Transportation

U.S.-ASEAN City Partners

Jakarta – Los Angeles, CA
Johor Bahru – Portland, OR
Phnom Penh – Boston, MA
Phuket – Las Vegas, NE



Water Smart Engagements (WiSE)

Drinking water and wastewater treatment

- Department of State: Office of Conservation and Water
- Global Environment & Technology Foundation
- Water Environment Federation

Cebu – Miami Dade, FL
Ho Chi Minh City – San Francisco, CA
Johor Bahru – Washington, DC
Phuket – Milwaukee, WI
Vientiane – Hillsboro, OR

U.S. Green Buildings Programs



Green Building Innovation Program: University of North Carolina at Charlotte developed [15 course modules](#) it is delivering to ASEAN Partner Universities:

- Gadjah Mada University, Indonesia
- Chulalongkorn University, Thailand
- Ho Chi Minh City University of Technology, Vietnam



U.S.-Singapore Third Country Training Program: A partnership between the Singapore Ministry of Foreign Affairs and the U.S. Department of State to jointly conduct capacity building courses for Southeast Asian countries to promote sustainable urban development and resiliency and decarbonization in the built environment



Smart Cities Business Innovation Fund 2022 Awardees

Climate finance mechanism supporting sustainable net-zero solutions to urban challenges



Agroecology Garden for the Future

Phnom Penh, Cambodia

Establishes urban school gardens and provides ecology education curriculum to promote youth environmental stewardship



Biopac

Tangerang, Indonesia

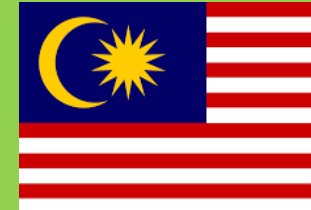
A women-led biodegradable seaweed packaging manufacturer that aims to reduce single-use plastic pollution



Patihoub

Luang Prabang, Laos

Shreds, presses, and molds unrecycled plastics into new products for school and construction materials



Greener Wheels

Penang, Malaysia

Develops a mobile climate application and 3-D printable hydrologic monitoring/early warning systems for rising sea levels and urban flooding



Kloudtech

Balanga City, The Philippines

Develops a mobile climate application and 3-D printable hydrologic monitoring/early warning systems for rising sea levels and urban flooding



Solar Panel Recycling Project

Da Nang, Vietnam

Seeks to improve reuse of panels and recycling of panel components using robotics and technology solutions

Circular Economy Initiatives

U.S.-Singapore Circular Waste Study Tour 2022



- ASEAN Participants
- Location: Singapore & Washington D.C.

Rochester Institute of Technology Circular Entrepreneurship Program



- Develop education and deliver training on circular economy principles and for target sectors (e.g. textiles, e-waste)
- Provide seed funding form sustainable startups
- Establish regional partnerships and networks among universities, business incubators, and accelerators

U.S.-Japan E-Waste Initiative



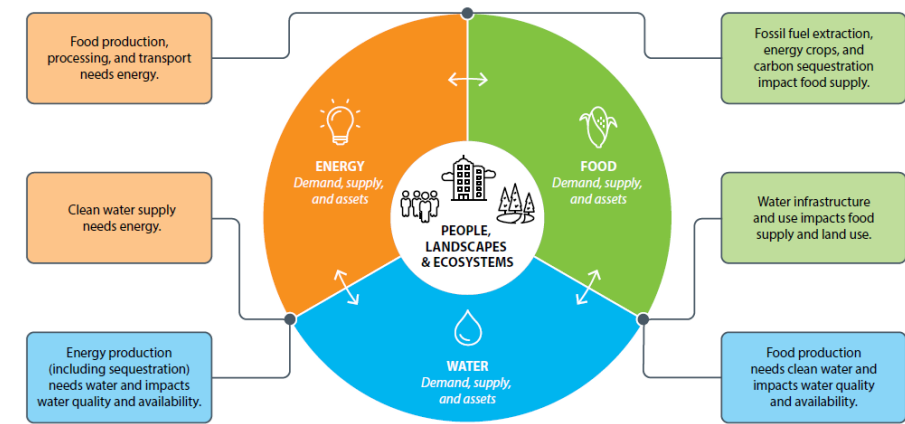
- Socialize importance of sustainable e-waste management and build local capacities to advance e-waste actions in ASEAN
- Identify electronics repurposing, recycling, and recovery opportunities in ASEAN cities
- Establish multi-sector partnerships and local e-waste ecosystems



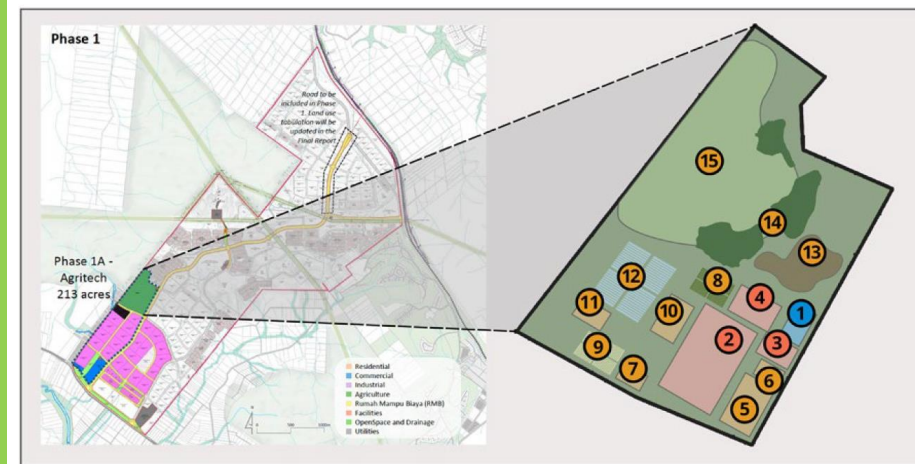
Integrated Urban Services

[NREL-Intl-IUS-Program Impact Brochure-FY24-CS-v2.pdf](#)

- Technical assistance to 2 ASEAN city pilot projects to support resilient, circular, and regenerative food, energy-water and waste systems to address food security and community resiliency
- Demonstrate the socioeconomic benefits of integrated systems planning to advance agritech
- Engage stakeholders and build organizational capacity on circular economic approaches and resilient planning models
- Attract private sector participation within project governance, finance, and implementation.



The interconnections between food, energy, and water systems. Illustration by Christopher Schwing, NREL.



Flagship F
Iskandar Malaysia, Malaysia
(Kual District)
Project Owner:
IRDA

Cagayan de Oro,
Philippines
Project Owner:
Cagayan de Oro APO



Research & Innovation: National Science Foundation Grants

Kuala Lumpur
Malaysia

Renewable Energy Generation Pad

Piezoelectric Surface Prototyped on Biking and Pedestrian Infrastructure

PRAIRIE VIE A&M UNIVERSITY
UNIVERSITY TENAGA NATIONAL (UNITEN)

Makassar City
Malaysia

Smart Garden Alleys

Micro-Climate Data Collection for Urban Planning and Investment Optimization

PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY OF COLORADO
VIRGINIA TECH
UNIVERSITAS GADJAH MADA
INSTITUT TEKNOLOGI BANDUNG

Jakarta
Manila
Singapore
Thailand

Digital/Gig Economy

Regional Big Data Analysis of Air Pollution

UNIVERSITY OF WASHINGTON
NATIONAL UNIVERSITY OF SINGAPORE
UNIVERSITY OF THE PHILIPPINES

Ho Chi Minh City
Vietnam

Transportation Planning

Crowd AI Sensing Traffic Analysis and Simulation

UNIVERSITY OF DAYTON
VIETNAM NATIONAL UNIVERSITY-
HO CHI MINH CITY

Ho Chi Minh City
Vietnam

E-Government

Distributed Data-Sharing and Decision Application for Early Warning of Urban Flooding

UNIVERSITY OF VIRGINIA
VIETNAM NATIONAL UNIVERSITY-
HO CHI MINH CITY

Thank You

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USASCP

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