



KGID
2026
SEJONG

Seoul's Green Infrastructure Initiatives: From Urban Parks to Green Corridors

Seoul Urban Solutions Agency

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Green Infrastructure: Roles and Value

Health: Body and mind

Climate: Heat island mitigation,
Air quality, Water resource
management

Biodiversity

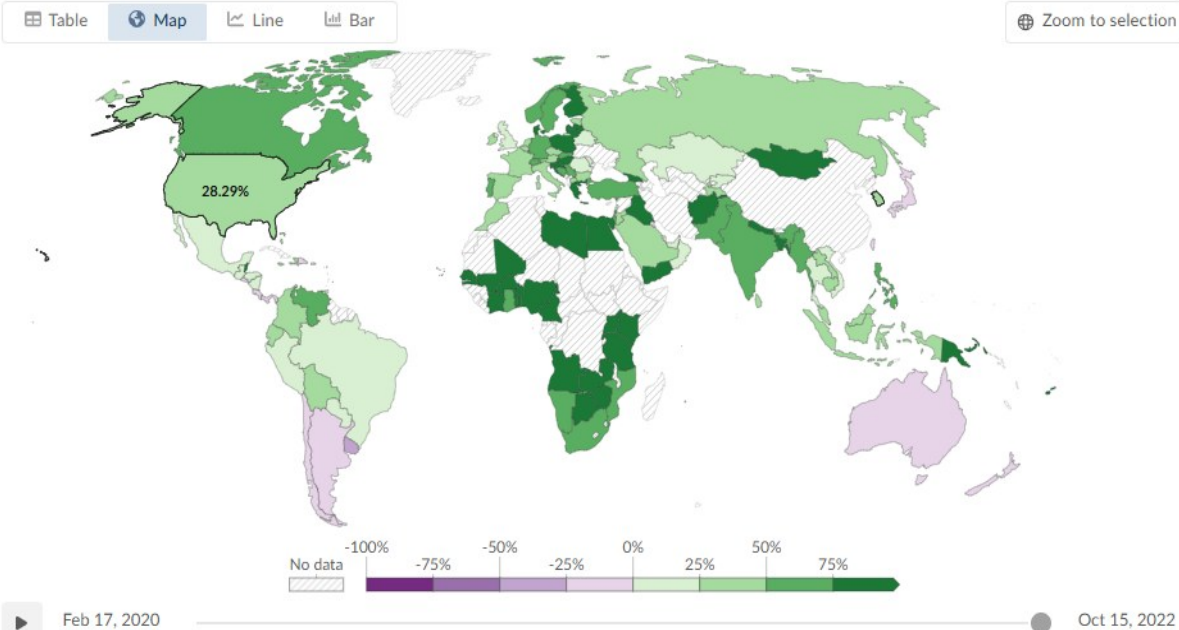
Social Connection: A Sense of community

Economic benefits: Increased property values,
Increased tourism

Aesthetic and cultural value

Green Infrastructure: Roles and Value

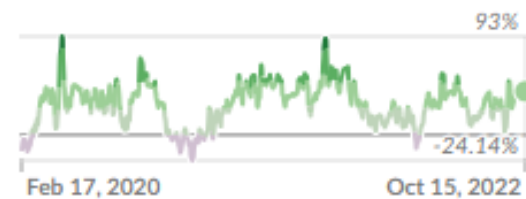
Parks and outdoor spaces: How did the number of visitors change relative to before the pandemic?



More important after the COVID-19 pandemic

South Korea
Oct 15, 2022

41.14%



Source: Our World in Data
(<https://ourworldindata.org>)

Green Infrastructure as Factors for Inclusive Growth

WB: Green, Resilient, Inclusive Development

- WB funds about 5~6 billion USD in the areas of sustainable and resilient cities, which is 5% of WB's total commitment
- Integration of Infrastructure development, [climate adaptation](#), [social equity](#), [urban planning](#) and poverty reduction in its projects.
- [Urban sustainability and improve quality of life](#) for all residents.

ADB: Green, Healthy, Safe, Inclusive Cities

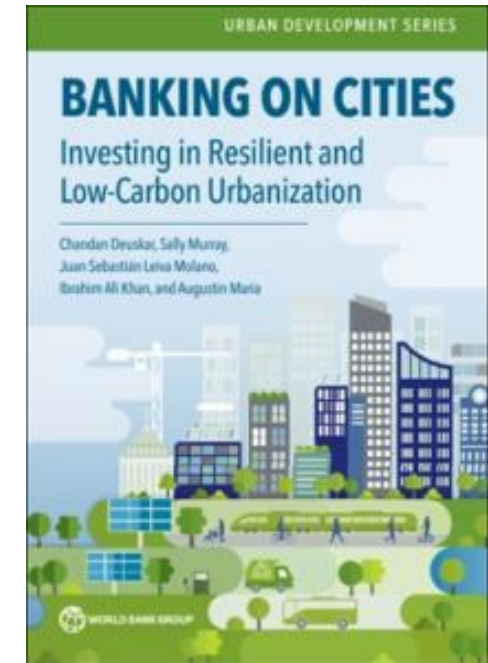
- ADB designs projects with an emphasis on inclusivity for low-income and vulnerable populations, along with addressing environmental and disaster risks.
- [Integrated Urban and Regional Planning \(Infrastructure+ Growth+ Welfare+etc\)](#)
- [NBS, Nature-based Solutions](#)
- [Climate Change & Disaster Vulnerability Reduction](#)
- [Urban Service Infrastructure](#)
- [Financial Sustainability & Urban Financial Management](#)

Source: Proceedings of the Seoul Metropolitan Government International Development Cooperation Forum (SMG, 2025)

Green Infrastructure as an Investment Target

Banking on Cities: Investing in Resilient and Low-Carbon Urbanization (2025)

- **Low-Carbon Urban Transport:** Public transportation, electric vehicle charging infrastructure, resilient roads
- **Energy-Efficient Buildings:** Building energy improvements, rooftop solar, and energy recovery
- **Water & Sanitation:** Climate resilience in water systems, waste management, and wastewater treatment
- **Flood Protection & Resilience:** Coastal protection, flood control infrastructure, and nature-based solutions
- **Waste Management:** Recycling, landfill management, and energy recovery
- **Heat Resilience:** Green spaces, urban cooling, and addressing urban heat islands

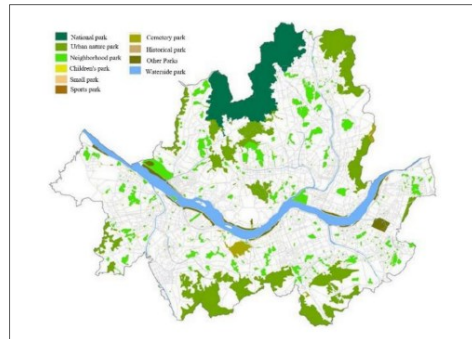


Source: WB' website
(<https://www.worldbank.org/en/topic/urbandevelopment/publication/banking-on-cities>)

Green Infrastructure of Seoul



Seoul after the Korean War



Source: Choi & Kim (2022)

Parks and Green Spaces in Seoul

Park area per capita in Seoul: 16.2m²

- Singapore: 18.0m², Beijing: 15.7m², New York: 14.7m²
- Paris: 10.7m², Tokyo: 4.5m²
- London: 33.4m²

Number and area of parks in Seoul

- 1992 / 1,348 / 150,423,380 m²
- 2002 / 1,646 / 158,135,000 m²
- 2010 / 2,608 / 169,792,300 m²

Source: Seoul Research Database, The Seoul Institute

Green Infrastructure of Seoul: Structure and Strategy

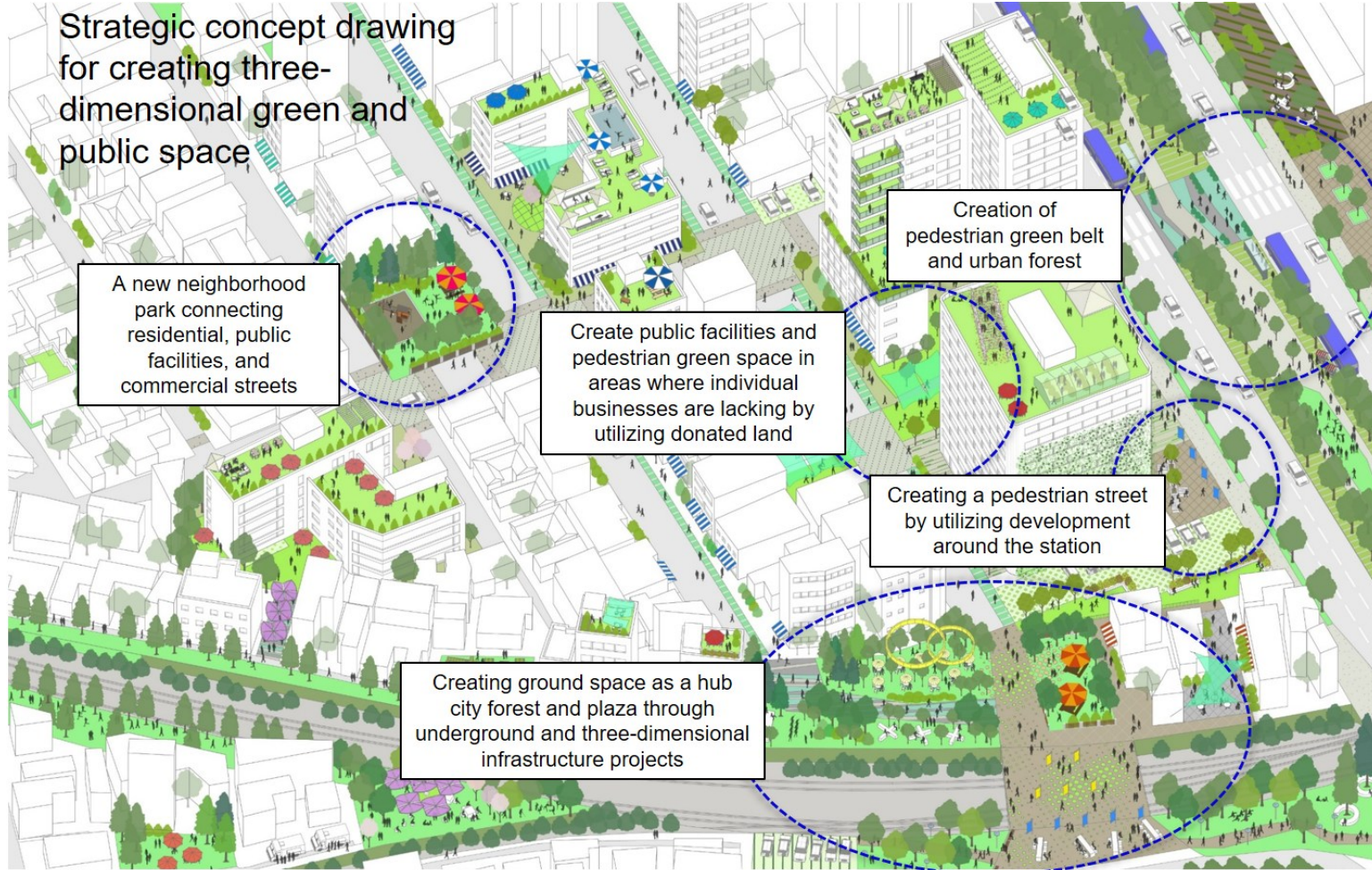


Image: Yoon Seo-yeon (2024), The Seoul Institute



Waterfront Development for Han River



Image: Kim Inhee (2023), 2050 Grand Plan, The Seoul Institute

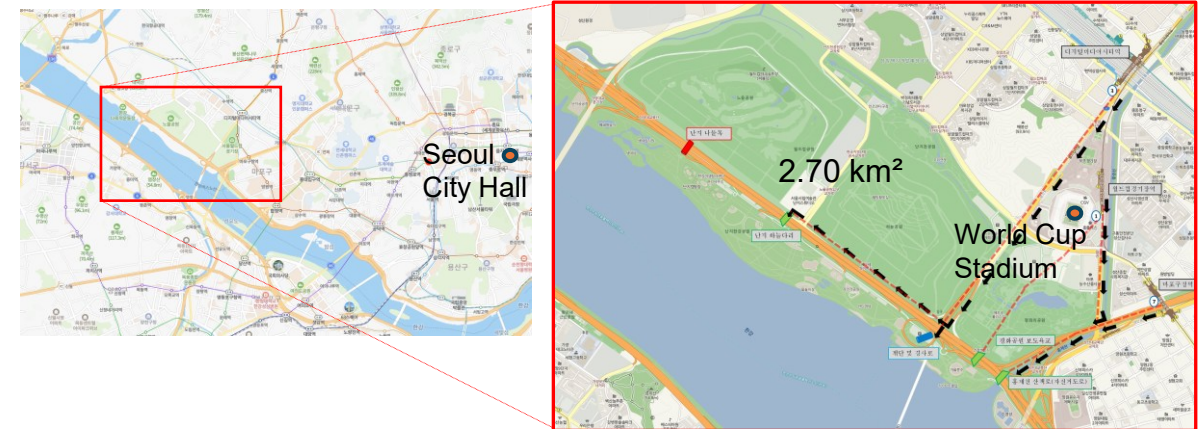
Case 1. Nanji Ecological Park (World Cup Park)

From Landfill to Urban Park and Campsite

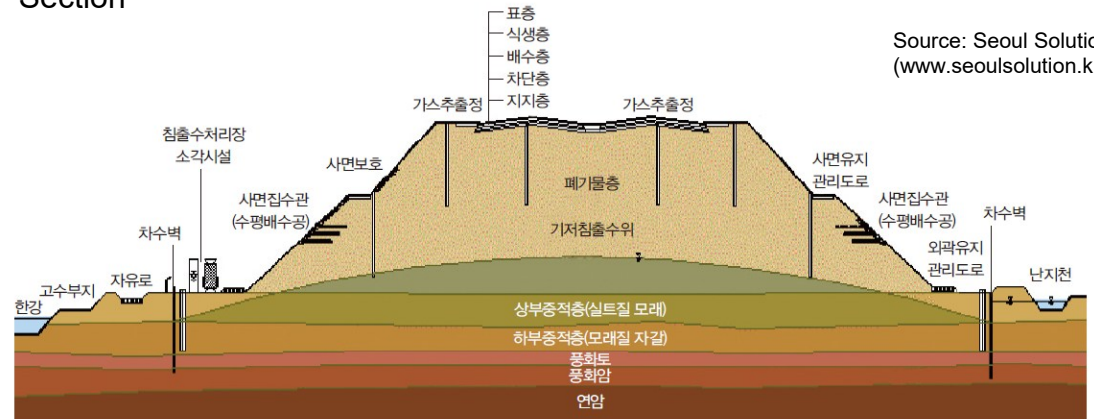
Before the development



After the development



Section



Case 1. Nanji Ecological Park (World Cup Park)

From Landfill to Urban Park and Campsite

Development Overview and Impacts

Lead	Seoul Metropolitan Government
Development Period / Scale	1996–2002 / 2.70 km ²
Park Construction	2000–2002
Opening	May 2002
Project Cost	KRW 235 billion / USD 159.4 million
Funding Sources	Seoul Metropolitan Government budget; landfill gas later reused as an energy resource
Public Role	Landfill stabilization, environmental remediation, financing, planning, park construction, relocation support, long-term monitoring
Private/Civic Role	Expert consultation, civic participation, environmental education, tree planting, ecological stewardship, post-restoration management

Social

- Transformed the negative image of a former landfill into a space for public recreation and environmental education
- Provided opportunities for ecological learning and family leisure

Economic

- Catalyzed development around Sangam DMC and Seoul World Cup Stadium
- Improved the area's image and identity
- Created a venue for tourism, events, and public gatherings

Environmental

- Stabilized the former landfill site
- Managed leachate and landfill gas
- Restored urban ecosystems and biodiversity
- Converted a brownfield into a valuable ecological public asset

A brownfield **restoration model** with clear benefits for **climate resilience, the environment, public health, and land value enhancement.**

Case 1. Nanji Ecological Park (World Cup Park)

From Landfill to Urban Park and Campsite



RESTORATIVE REGENERATION: SANGAM WORLD CUP PARK

- Closed landfill site was stabilized over 6 years to create a new ecological park for citizens to enjoy :



IMPACT

- ✓ 2.7 km² green park space around Seoul World Cup Stadium welcomes over 9.8 million visitors per year
- ✓ Methane gas is collected to provide heating for 16,000 households

Increase in Species of Plants and Animals in Nanjido (Major classifications, 2000 -> 2013)



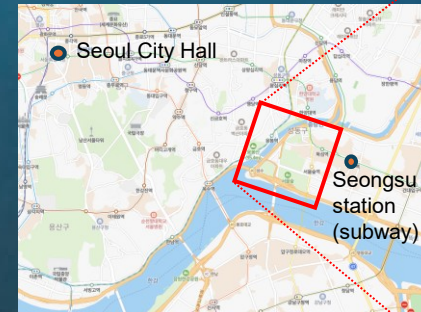
Source: SUSA Promotional Material (2024)

Case 2. Seoul Forest

From Development Reserve to a Citizen-Created Forest Park



Before the development



Case 2. Seoul Forest

From Development Reserve to a Citizen-Created Forest Park

Development Overview and Impacts

Lead	Seoul Metropolitan Government
Development Period / Scale	2003–2005 / 0.48 km ²
Opening	June, 2005
Key Partners	Seoul Green Trust, Seoul Forest Lovers Group, Seoul Forest Conservancy, citizens, private companies
Project Cost	KRW 235 billion / USD 160 million
Funding Sources	Seoul Metropolitan Government budget; complemented by civic donations, corporate sponsorships, membership fees, and volunteer contributions
Public Role	Land-use decision, planning, financing, construction, infrastructure provision, facility and safety management
Private/Civic Role	Civic fundraising, tree planting, volunteer programs, environmental education, cultural programs, corporate-sponsored gardens, participatory park management

Social

- Fostered a civic-oriented park culture based on citizen participation
- Expanded volunteer, educational, and cultural programs
- Helped transform Seongsu-dong into a lifestyle-oriented urban district

Economic

- Revitalized commercial activity in Seongsu-dong
- Increased surrounding real estate values
- Attracted high-end residential, office, and cultural facilities

Environmental

- Expanded large-scale urban green space
- Provided ecological forests, wetlands, and waterfront spaces
- Helped mitigate the urban heat island effect and support urban habitats

A large-scale **public green space investment** that not only improves **citizens' quality of life**, but also serves as a catalyst for **local economic growth, real estate value enhancement, and private investment.**

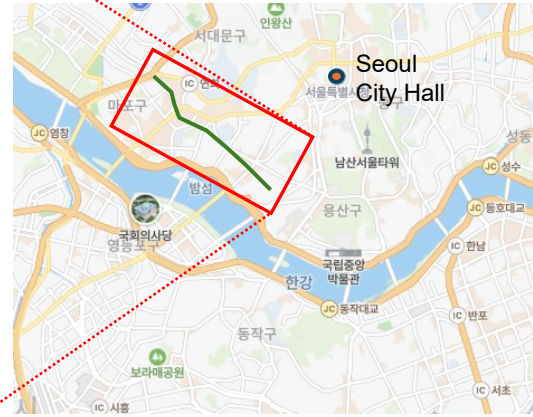
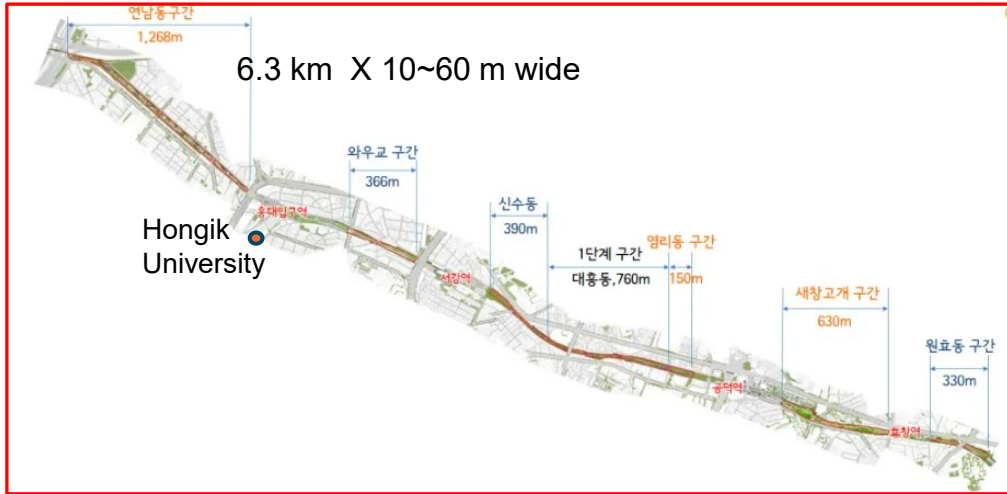
Case 2. Seoul Forest

From Development Reserve to a Citizen-Created Forest Park



Case 3. Gyeongui Line Forest Path

From a Railway Corridor to a Linear Green Park



Before the development



After the development



Case 3. Gyeongui Line Forest Path

From a Railway Corridor to a Linear Green Park

Development Overview and Impacts

Lead	Seoul Metropolitan Government * Land Provider: Korea National Railway
Development Period / Scale	2009–2015 / 6.3 km X 10~60 m wide
Opening	2016
Project Cost	KRW 45.7 billion / USD 31 million
Funding Sources	Seoul Metropolitan Government budget + Railway land provided by the rail authority
Public Role	Railway undergrounding coordination, land provision, park planning, construction, financing, maintenance, and safety management
Private/Civic Role	Resident consultation, local stewardship, cultural programming, neighborhood commerce, and participation through a local consultative body

Social

- Reconnected neighborhoods previously divided by railway infrastructure
- Created a pedestrian-oriented everyday living environment
- Expanded participation by residents, local merchants, and cultural artists

Economic

- Revitalized nearby commercial areas, including Yeonnam-dong, Gongdeok, and Daeheung
- Increased cafés, small shops, and cultural spaces along the corridor
- Strengthened the local identity and neighborhood brand

Environmental

- Transformed the former above-ground railway corridor into a linear green space
- Created a pedestrian- and bicycle-friendly urban environment
- Established a continuous urban green corridor

A high-impact **investment** that uses a relatively **narrow linear space** to enhance **urban connectivity and drive urban regeneration.**

Case 3. Gyeongui Line Forest Path

From a Railway Corridor to a Linear Green Park



Case 4. Seoulo 7017

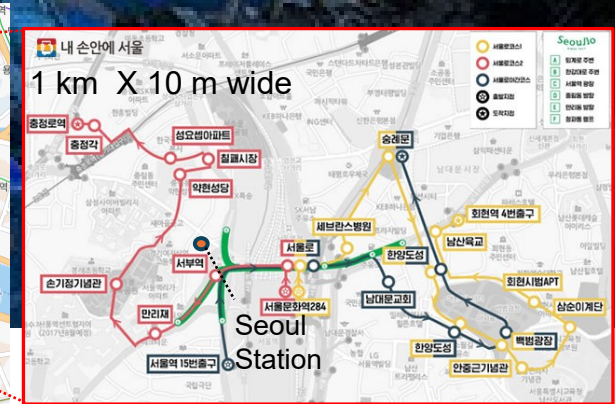
From an Elevated Highway for Cars to a Pedestrian Walkway



Before the development



After the development



Seoulo 7017 (For Use Only)

Case 4. Seoulo 7017

From an Elevated Highway for Cars to a Pedestrian Walkway

Development Overview and Impacts

Lead	Seoul Metropolitan Government
Development Period / Scale	2015–2017 / 1 km X 10 m wide * Original infrastructure: built in 1970
Opening	May 2017
Project Cost	KRW 38 billion / USD 25.8 million
Funding Sources	Seoul Metropolitan Government budget
Public Role	Policy decision, financing, design competition, structural reinforcement, construction, pedestrian network planning, maintenance and safety management
Private/Civic Role	Public consultation, stakeholder feedback, expert review, community participation, cultural programming and local revitalization activities

Social

- Transformed car-oriented infrastructure into a pedestrian public space
- Strengthened the pedestrian network around Seoul Station
- Expanded the discourse on urban regeneration

Economic

- Increased foot traffic around Seoul Station, Namdaemun, and Malli-dong
- Turned the area into a tourism asset
- Promoted nearby commercial revitalization and urban regeneration

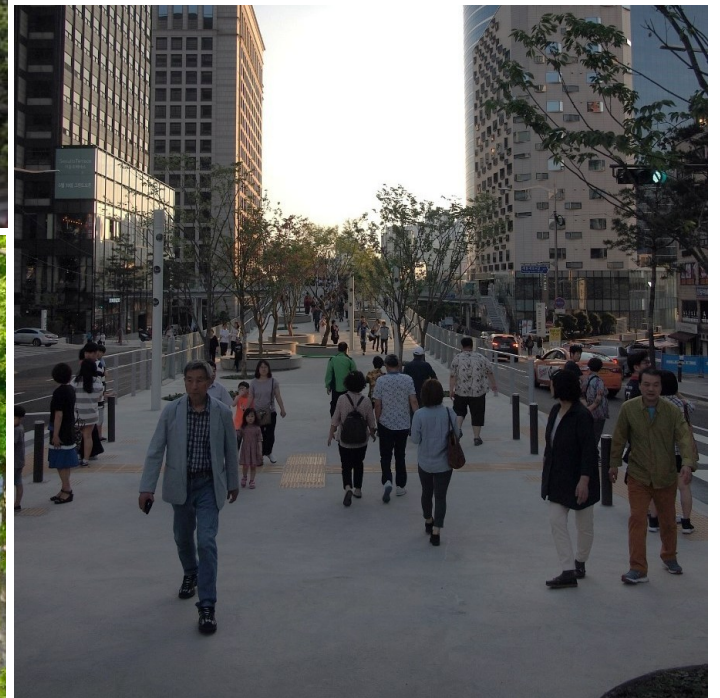
Environmental

- Reused an aging elevated roadway
- Introduced multi-level urban greening in the city center
- Improved the car-oriented urban structure through a pedestrian-friendly transformation

A symbolic **project** combining **low-carbon regeneration, pedestrian network enhancement, tourism, and urban branding.**

Case 4. Seoullo 7017

From an Elevated Highway for Cars to a Pedestrian Walkway



Cooperation project funded by Seoul ODA Challenge



2024 ODA CHALLENGE – 3 Projects

Phnom Penh, Cambodia

Master Plan for Enhancing the Pedestrian-friendly Environment on Preah Ang Eng Street in Phnom Penh

Lima, Peru

Advisory on Development of Integrated Transportation Platform Management and Automated Enforcement System in Metropolitan Lima

Colombo, Sri Lanka

Pre-feasibility Study for the Establishment of an Energy Generation Plan through Methane Capture Using Biodegradable Waste

2024 Seoul ODA Challenge Phnom Penh, Cambodia

MASTER PLAN FOR ENHANCING THE PEDESTRIAN-FRIENDLY ENVIRONMENT ON PREAH ANG ENG STREET IN PHNOM PENH, CAMBODIA

Country / City

- Cambodia / Phnom Penh

Partner Institution

- Phnom Penh Capital Administration

Sector

- Urban Planning & Housing

Type of Support

- Planning Support

Period

- Period: November 2024 - September 2025



Project Scope

- Technical diagnostics of current pedestrian environment on Preah Ang Eng Street
- Establishment of concept plan for pedestrianization of Preah Ang Eng Street
- Development of implementation plan and related policy recommendations
- Knowledge exchange and capacity building



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2024 Seoul ODA Challenge Phnom Penh, Cambodia

MASTER PLAN FOR ENHANCING THE PEDESTRIAN-FRIENDLY ENVIRONMENT ON PREAH ANG ENG STREET IN PHNOM PENH, CAMBODIA

Site



1.3km long, 20-30m wide

Issues

Consideration of Phnom Penh Walkway Plan



- **Need for physical environment improvement and programs to promote pedestrian activity:** securing pedestrian space, securing public space, improving transportation operation system, introducing cultural tourism programs

- **Linkage and utilization of surrounding resources to promote pedestrian activity:** historical and cultural resources, commercial facilities, waterfront spaces, etc.

Effectiveness

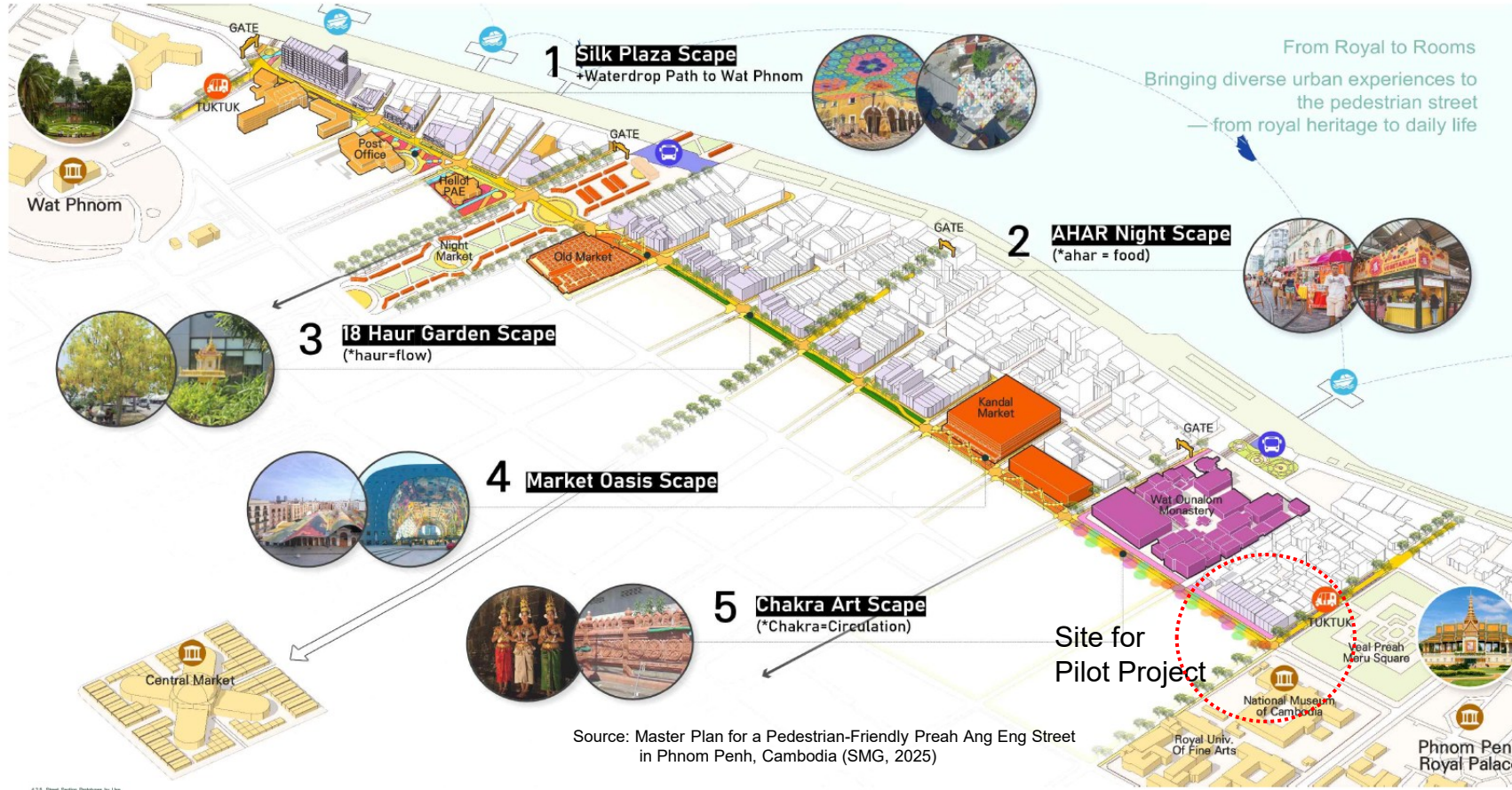
- Laying the foundation for creating a pedestrian-friendly street in the center of Phnom Penh
 - ✓ Forming a consensus on the need for street changes
 - ✓ Laying the physical/non-physical foundation for creating a pedestrian-friendly street
 - ✓ Strengthening the expertise of public officials and changing their perceptions
- Presenting a vision for construction projects
- Promoting cooperation between Seoul and Phnom Penh

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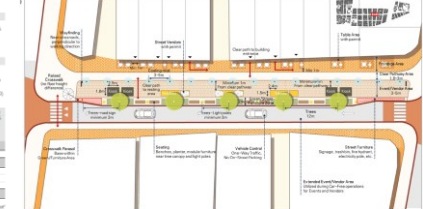
Cooperation project funded by Seoul ODA Challenge

Phnom Penh' Cool Culture Street

A cultural walking street to experience the layered everyday and extraordinary life of Phnom Penh



Source: Master Plan for a Pedestrian-Friendly Preah Ang Eng Street in Phnom Penh, Cambodia (SMG, 2025)



Design and cost estimation considering actual implementation

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4.2.3. Street Section Principles by Use

4.2.4. Basic Concept for the Preah Ang Eng Street Area

4.3.1. Heritage Site

4.3.2. Project Cost Estimation

No.	Component	Description	Unit	Quantity	Unit Price (USD)	Total Cost (USD)	Remarks
1	1. Road Improvement	Asphalt	m ²	4,111	10	41,110	
2	2. Pavement	Concrete	m ²	1,000	100	100,000	
3	3. Street Furniture	Bench	unit	100	1,000	100,000	
4	4. Landscaping	Planting	m ²	1,000	100	100,000	
5	5. Drainage System	Drainage	m	1,000	100	100,000	
Total Construction Cost (at 10% Contingency)						441,110	
Total Construction Cost (at 20% Contingency)						529,332	
Construction Management (1% of TC)						5,293	
Design & Management (2% of TC)						10,587	
Grand Total						545,202	

Cooperation project funded by KGGTF, WB

GEOSPATIAL APPROACHES FOR FOSTERING GREEN GROWTH IN FRAGILE CONTEXTS BY SHARING THE INNOVATIVE EXPERIENCES OF KOREA



Land Policy and Planning Analysis of Korea's Green Growth after Korean War

Defining inclusive green growth

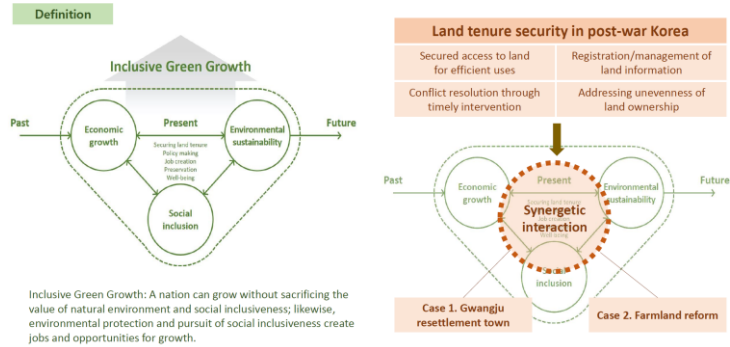
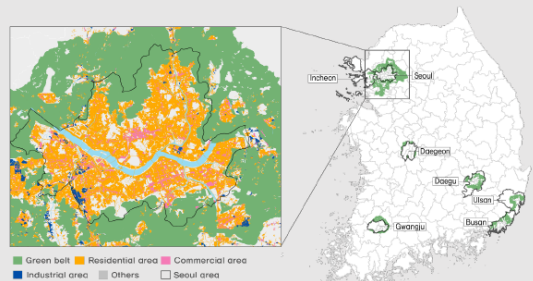


Figure 13. The area of green belt and land use in Seoul (2019)



Source: KNSIP (2020)

Spatial Information Policy and Digital System for Korea's Green Growth

Geospatial Information and Green Growth



Fig. Geospatial data for green growth

Geospatial data as a key of sustainable development

- Effective use of limited land and resources
- Save time and money
- Minimize damage from natural disasters and emergencies

Usage in economic and social activities

- **Public:** National space planning, urban planning, integrated urban management and services
- **Private:** High value-added industries, job creation
- **Individuals:** Selection and use of data according to needs

Geospatial Information and Green Growth

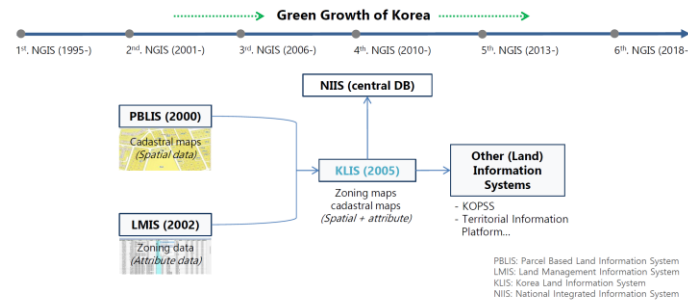


Fig. Relationship among PBLIS, LMSIS, KLIS, and other systems under the framework of NGIS

- Land Governance
- Spatial Planning
- Land Tenure Security
- Land Conflict Resolution
- Geospatial Information System
- Cadastral Management
- Green Belt Policy
- Integrated Land Information System

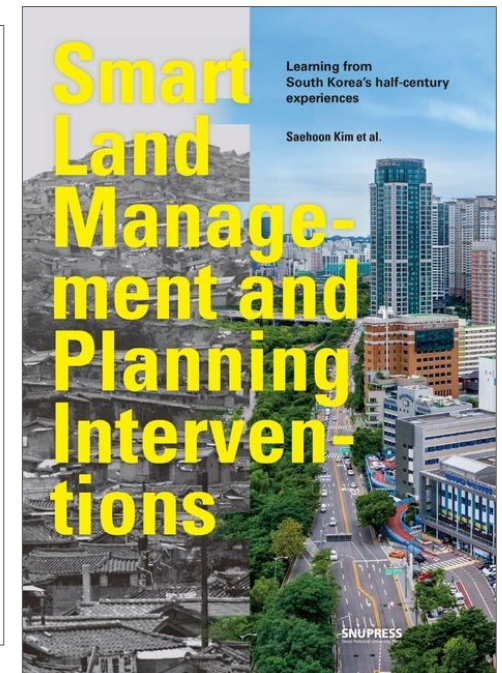
Figure 42. Interface of Virtual Seoul (upper) and simulations of the future impacts of redevelopments (lower)

Source: Virtual Seoul, <https://3dgs.seoul.go.kr>

making. Initially, ten spatial analysis modules were developed. However, after assessing actual user needs and convenience, they were integrated into the following five modules which are currently being used by the national and local governments.

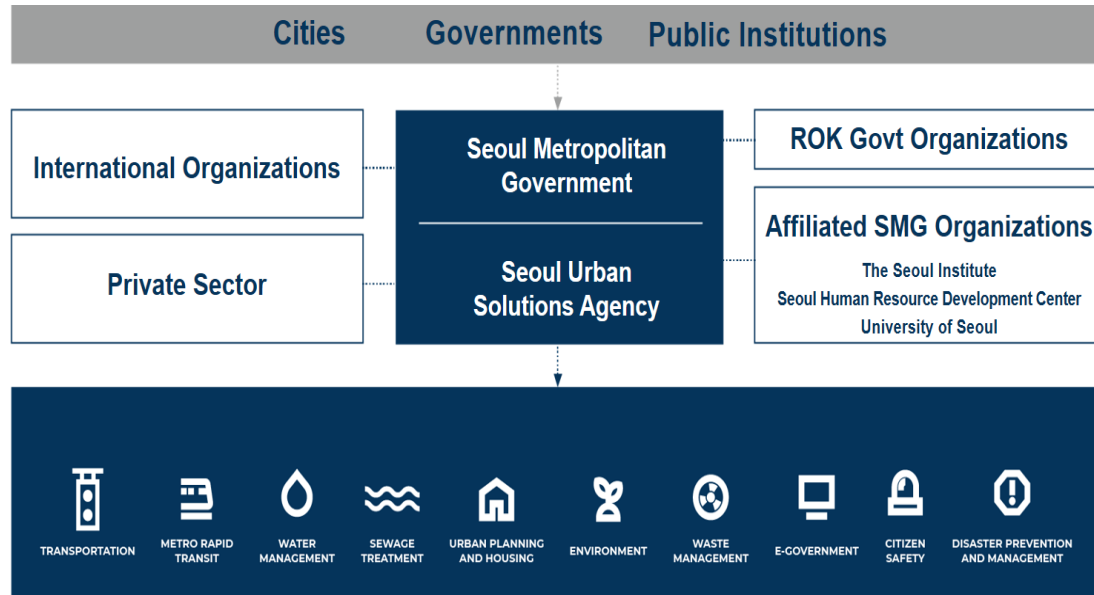
- Urban infrastructure planning support module
- Land use planning support module
- Regional planning support module
- City maintenance planning support module
- Landscape planning support module

Virtual Seoul was developed in 2019 as a 3D digital twin of Seoul, where the user can explore the entirety of Seoul's above-ground environment in a virtual space. One of the most important features of Virtual Seoul is its ability to integrate a wide array of data and information such as transport volume, demographics, climate, and physical characteristics (i.e. new buildings and



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- O&M SUPPORT
- STUDY VISITS
- KNOWLEDGE EXCHANGE
- CAPACITY BUILDING

Knowledge Sharing



- 2016**
India-Korea Smart City Knowledge Exchange (World Bank)
- 2017**
ADB-KRIHS Sustainable Urban Infrastructure Workshop – Seoul Module
World Bank – Seoul Sustainable Tourism Horizontal Learning Workshop
- 2018**
ADB-KRIHS Sustainable Urban Infrastructure Workshop – Seoul Module
ADB-SUSA Joint Workshop on Water and Solid Waste Management
ADB-SUSA Study Tour on Water and Energy for Uzbekistan
Saudi Arabia-Korea Smart City Knowledge Exchange
ADB-SUSA Joint Workshop on Smart City Financing (WUF)
EBRD-Seoul Joint Seminar on Big Data and Shared Economy
E-Tax System Development for Sri Lanka
Smart City Training Program for Kyiv, Ukraine
- 2019**
EBRD – Seoul Joint Seminar on Smart Transportation and Smart Energy
Creative Cities Supporting Competitiveness and Sustainable Urban Development : Case Study on Seoul (World Bank Group)
- 2020**
Geospatial Approaches for Fostering Green Growth in Fragile Contexts by Sharing the Innovative Experiences of Korea (World Bank Group)
- 2023**
International conference on the Reconstruction of Ukraine
Seoul Lima WB Transportation Joint Workshop in Seoul
- 2024**
IDB High level workshop in Seoul

Source: SUSA Promotional Material (2024)

Cooperation Records



43
COUNTRIES

78
Cities/
Institutions/
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107
PROJECTS

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Seoul's Green Infrastructure Initiatives: From Urban Parks to Green Corridors

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