


# Urban Regeneration Plan Through Environmental Strategies in Busan

5th High Level Seminar on Environmentally Sustainable Cities

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- 01 Background of the Project
  - 02 Background of the Project Area
  - 03 Masterplan for Seo-gu Model City
  - 04 Pilot Projects

2014. 02. 28





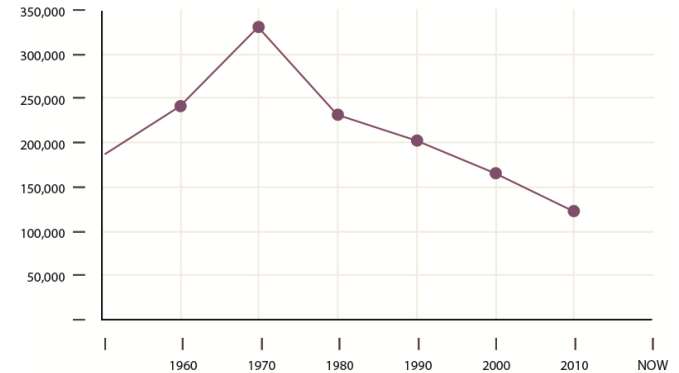
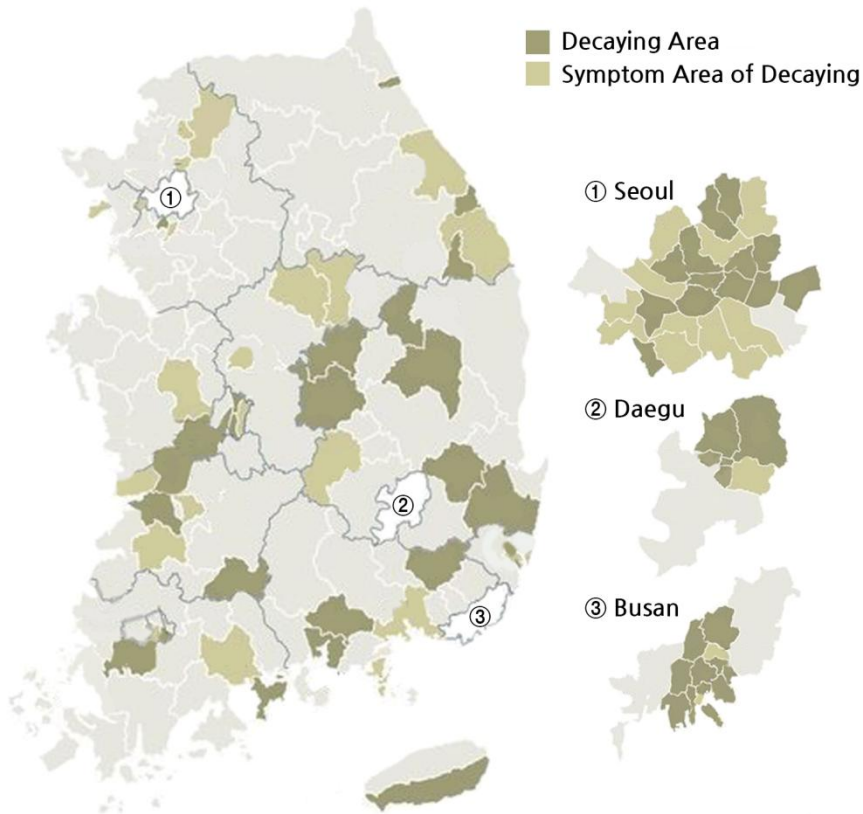
# BACKGROUND of the PROJECT

# Facing Issues of cities in Korea

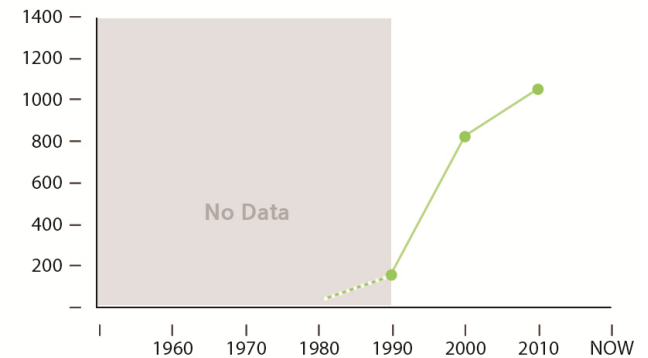


- **Post-Industrial age**
- **Outflow and decreasing of population**
- **Population aging**
- **Declining commercial vitality**

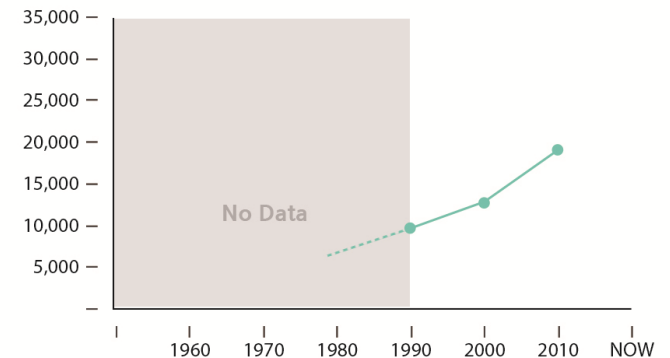
[Decaying Areas in Korea]



[Total Population, Seo-gu]



[Person 65 old and over years, Seo-gu]



[Foreigner, Seo-gu]



# Facing Issues of cities in Korea



Outflow of Industry



Shutting Down of commercial vigor



Increasing Deserted Area



Elderly Impoverishment



Elderly Population Growth



Dropping Litter



Crime-ridden district





# Environmental Issue : Model City of ESC in Korea



1950 Constructing City Infrastructure

1960 Repair Development (the Korean War)

1970 Town Development Plan

1980~90 Constructing New Towns

2000 Urban Regeneration

2010~ Environmentally Sustainable City

■ 2010 (Gangneung)- Low-energy Green City

■ 2011 (Busan) - Environmental restoration

■ 2011 (Cheongju) - Restoring environment



2010

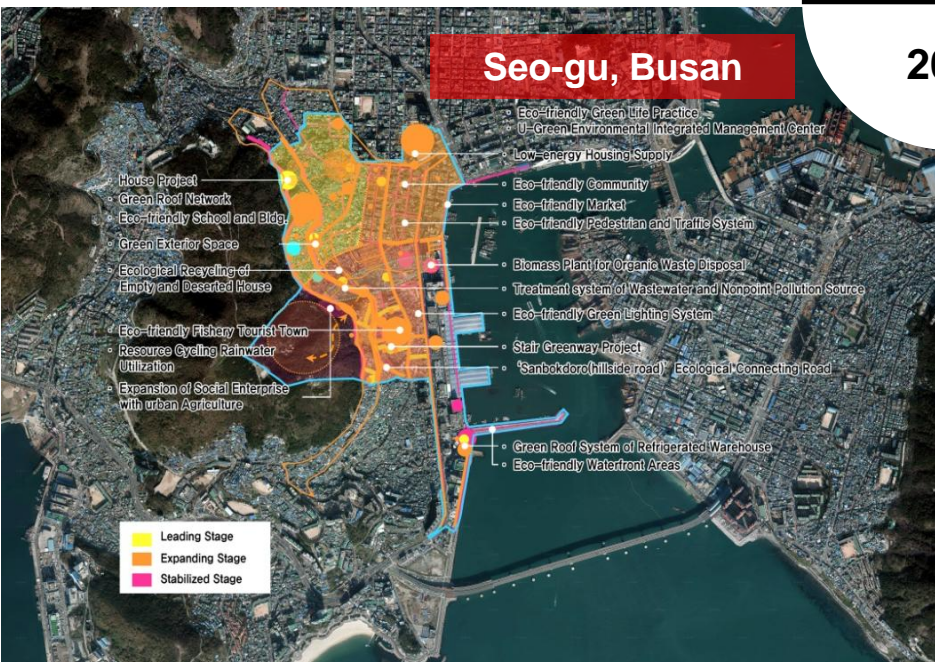
Gangneung

Seo-gu, Busan

2011

Cheongju

Master Plan

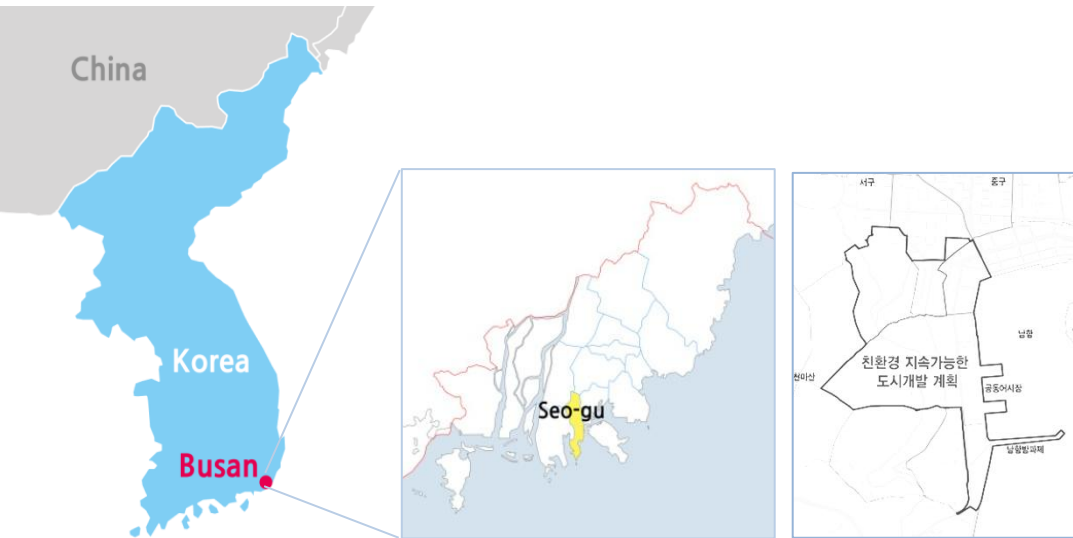




A photograph of a narrow alleyway in Japan. A two-story yellow building with a dark roof and large windows is the central focus. To its right is a light blue building. The ground is paved, and several bicycles are parked on the right. A utility pole with many wires is visible. A semi-transparent text box is overlaid on the image.

# BACKGROUND of the PROJECT AREA

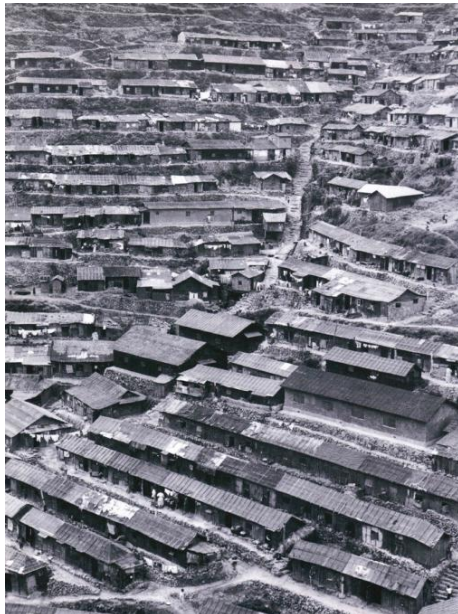
# Historical Background



## Seo-gu in Busan

- Refugee villages during Korean War in 1950
- 1960~80, inflow of low-income workers

[1950s]



[1960~70s]



[2010s]





# Deindustrialization & Depopulation after 1990s



[ Housing area on the Hillside steep slope ]



[ Lack of parking space ]



[ Lack of traffic roads ]



[ Empty and deserted house ]



- Sustainable regeneration
- Population decrease
- Empty and Deserted house rise
- Urban deterioration

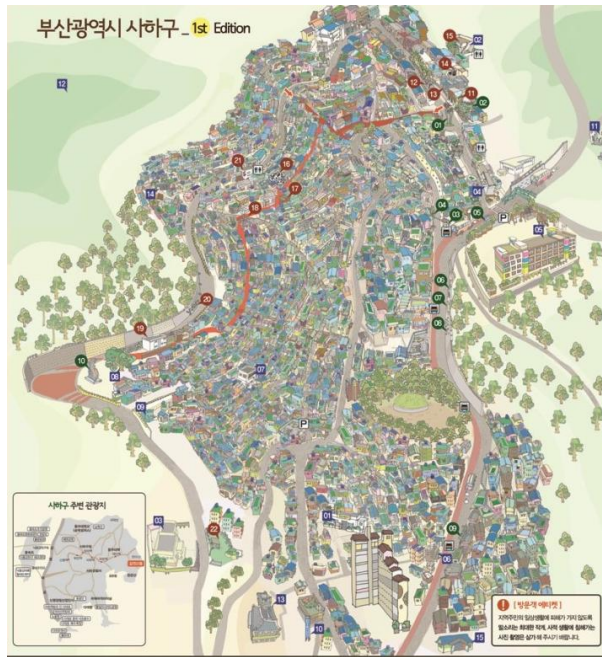
● Empty House  
● Deserted House  
● Bare Ground



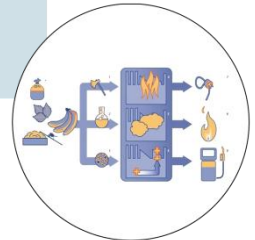
# Urban Regeneration : Culture vs Environment



[Gamcheon Cultural Village]



[Model City in Seo-gu]





# Masterplan for Seo-gu Model City





# Environmental Strategies and Projects in Seo-gu



- Area : 1,019,128 m<sup>2</sup>
- Population : 33,547 persons
- Period : 2011 ~ 2022
- Asset : 15,400 million Korean won(\$145 million)

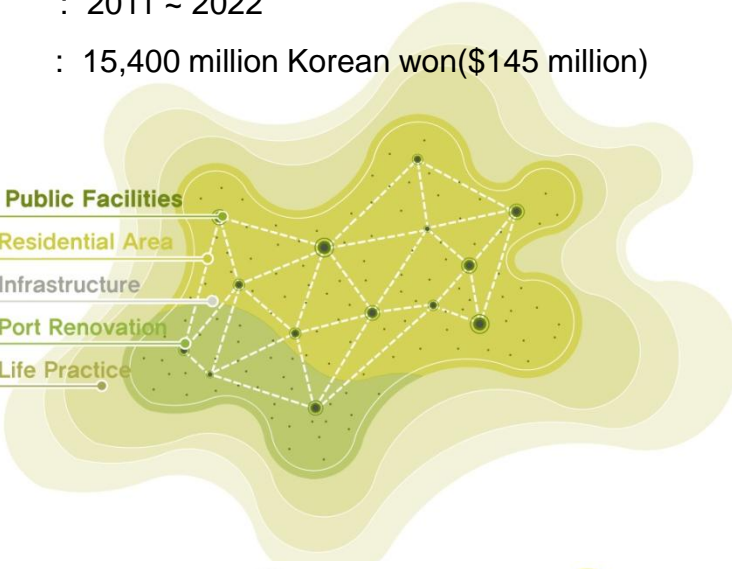
Eco-friendly Public Facilities

Eco-friendly Residential Area

Eco-friendly Infrastructure

Eco-friendly Port Renovation

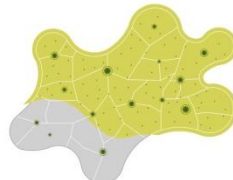
Eco-friendly Life Practice



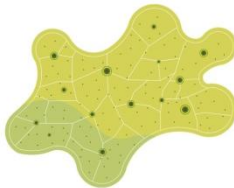
Seo-gu



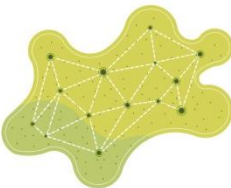
Eco-friendly  
Public Facilities



Eco-friendly  
Residential Area



Eco-friendly  
Port Renovation



Eco-friendly  
Infrastructure



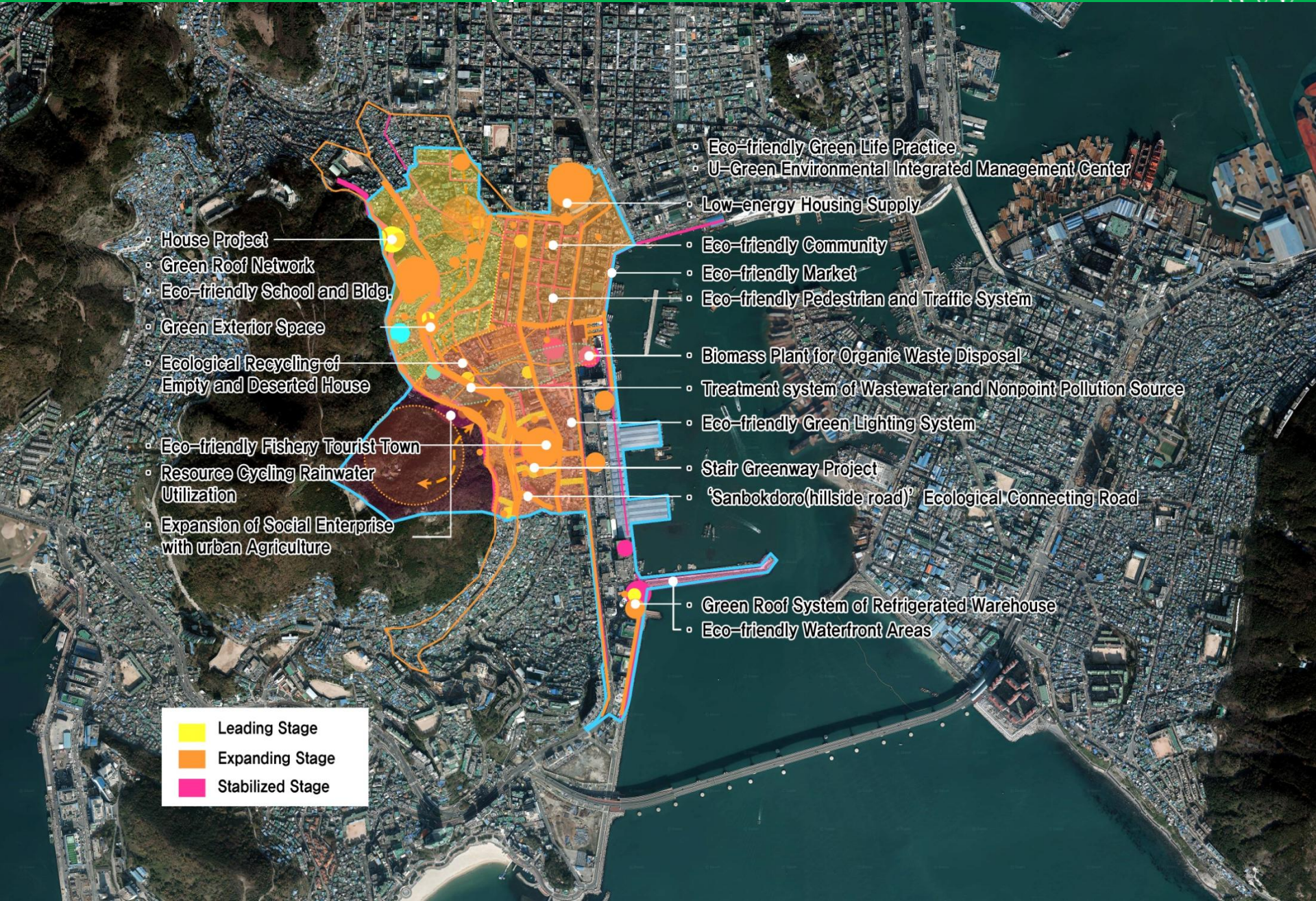
Eco-friendly  
Life Practice

## 5 Categories / 23 Projects

Category	Project
Eco-friendly Public Facilities	Eco-friendly Office Building
	Eco-friendly School
	Eco-friendly Park
	Eco-friendly Market
	Eco-friendly Community
Eco-friendly Residential Area	House Project
	Low-energy Housing Supply
	Green Roof Network
	Ecological Recycling of Empty and Deserted House
	Expansion of Social Enterprise with urban Agriculture
Eco-friendly Infrastructure	Resource Cycling Rainwater Utilization
	Treatment system of Wastewater and Nonpoint Pollution Source
	Green Exterior Space
	Eco-friendly Green Lighting System
	' Sanbokdoro(hillside road)' Ecological Connecting Road
	Stair Greenway Project
	Eco-friendly Pedestrian and Traffic System
Eco-friendly Port Area	Green Roof System of Refrigerated Warehouse
	Eco-friendly Waterfront Areas
	Biomass Plant for Organic Waste Disposal
	Eco-friendly Fishery Tourist Town
Eco-friendly Activity Program	Eco-friendly Activity Program
	U-Green Center : Integrated Environmental Management



# Masterplan for Seo-qu Model City



- House Project
- Green Roof Network
- Eco-friendly School and Bldg.
- Green Exterior Space
- Ecological Recycling of Empty and Deserted House
- Eco-friendly Fishery Tourist Town
- Resource Cycling Rainwater Utilization
- Expansion of Social Enterprise with urban Agriculture

- Eco-friendly Green Life Practice
- U-Green Environmental Integrated Management Center
- Low-energy Housing Supply
- Eco-friendly Community
- Eco-friendly Market
- Eco-friendly Pedestrian and Traffic System
- Biomass Plant for Organic Waste Disposal
- Treatment system of Wastewater and Nonpoint Pollution Source
- Eco-friendly Green Lighting System
- Stair Greenway Project
- 'Sanbokdoro(hillside road)' Ecological Connecting Road
- Green Roof System of Refrigerated Warehouse
- Eco-friendly Waterfront Areas

- Leading Stage
- Expanding Stage
- Stabilized Stage



# 1 Eco-friendly Public Facilities



Category	Project
Eco-friendly Public Facilities	Eco-friendly Office Building
	Eco-friendly School
	Eco-friendly Park
	Eco-friendly Market
	<b>Eco-friendly Community Building</b>



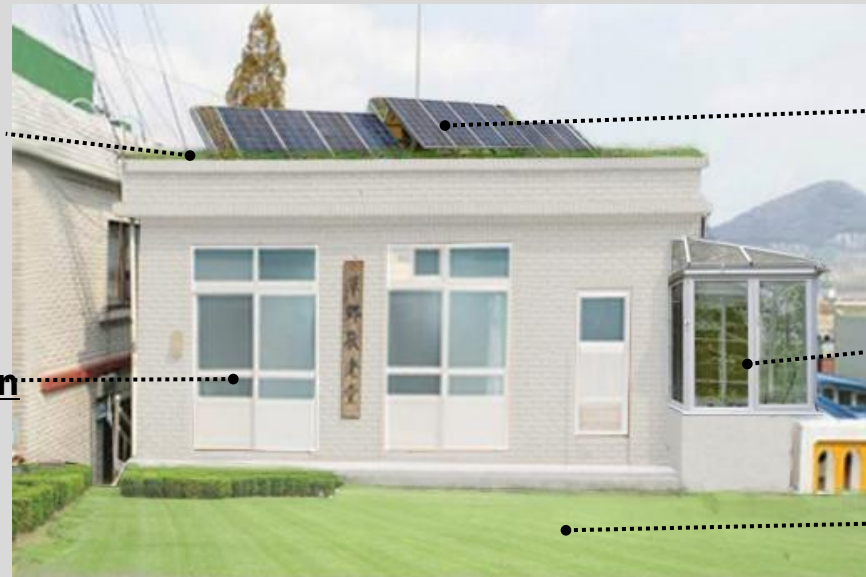
## Eco-Friendly Community Building for Elderly

### Green Roof System

- Reducing heating and cooling load on insulating effect and evaporation
- Runoff Reduction Effect

### Wall and Window Insulation

- Energy-saving by enhancing insulation
- Decreasing the amount of energy by load reduction of heating and cooling



### Solar Energy

- Heating and cooling with concentrated solar power energy
- Converting photovoltaic power to electrical energy

### Green Balcony

- Effect of indoor garden and urban vegetable garden

### Rainfall Storage

- Re-using rainfall to clean and landscape



# 1 Eco-friendly Public Facilities

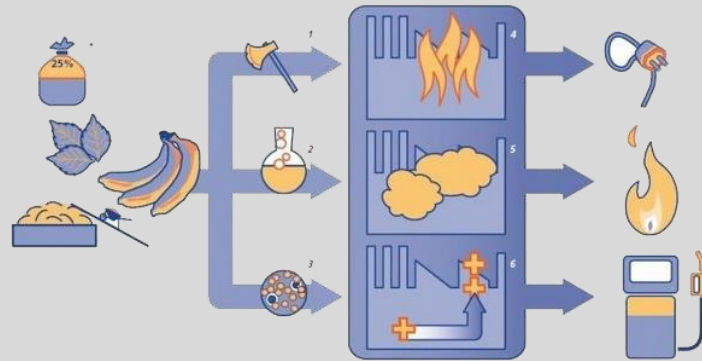


Category	Project
Eco-friendly Public Facilities	Eco-friendly Office Building
	<b>Eco-friendly School</b>
	Eco-friendly Park
	Eco-friendly Market
	Eco-friendly Community Building

## Eco-friendly School



- Green roof
- Renewable energy
- Underground rainwater tank
- Biotope



- 'Green box' developed by KAIST
- Compact system converts food waste to methane gas



# 2 Eco-friendly Residential Area



Category	Project
Eco-friendly Residential Area	House Project
	Low-energy Housing Supply
	<b>Green Roof Network</b>
	<b>Ecological Conversion of Empty and Deserted House</b>
	Expansion of Social Enterprise with urban Agriculture

## ① Green Roof Network



- Green is not green
- Building a green network system by connecting houses with consideration of ecological interrelationship
- Raising awareness of ecology by providing ecological community and learning space

## ② Ecological Conversion of Empty & Deserted House





# 3 Eco-friendly Infrastructure



Category	Project
Eco-friendly Infrastructure	Rainwater Recycling System
	Treatment system of Wastewater and Pollution Protection
	Green Exterior Space
	<b>Stair Greenway Project</b>
	The Sanbokdoro(hillside road)'s Ecological Road
	<b>Green Lighting with CPTED</b>
	Eco-friendly Pedestrian and Traffic System

## ① Stair Greenway Project



- Microclimate control by greening stairways-  
Leading residents to outdoor public spaces by  
providing resting area on stairways

## ② Green Lighting with CPTED



- Alleyways prone to criminal activities
- Installing eco-friendly and efficient LED lights
- Applying CPTED environment to facilitate outdoor activities

# 4 Eco-friendly Port Area



Category	Project
Eco-friendly Port Area	<b>Green Building System of Refrigerated Warehouse</b>
	Eco-friendly Waterfront Areas
	Biomass Plant for Organic Waste Disposal
	Eco-friendly Fishery Tourist Town

## Green Building System of Refrigerated Warehouse



- Installing photovoltaic panel on roofs and side walls



Category	Project
Eco-friendly Activity Program	<b>Eco-friendly Green Life-Style Promotion</b>
	U-Green Center : Integrated Environmental Management

## Eco-friendly Life-Style Promotion

- Training local resident as a green leader
- Green practice culture promotion
- Green evaluation and monitoring
- Green agreement guideline



[News letter]



지난 10월 1일 조종철 의원은 행복면에서 도시농부학교, 나  
도 할 일이라 개강식이 열렸습다. 참석자로는 관현 공무원을  
여왕 김경자, 장은주 주민들이 참석했습다.

개강식은 1부와 2부로 나뉘어 진행되었습다. 1부는 부산대학교  
전공학부 교수 2교수의 자연형 지속가능한 도시의 무엇인가라  
는 주제로 기후변화에 대응하는 녹색기술인성생태성향 그리고  
지반소 개척성과 환경교육을 담았습다. 새로운 성장 동력  
지역적 활성화 또한, 부산 원도입진 서구 중후부초등학교부원  
원들의 도시재생 방안 마련 및 서구지역의 미래를 모습에 설명하  
주셨습다.



▶ **한양도 도시를 설명한 문헌** 유구 **▶ 도시계획을 설명한 유구** 선경지

다음은 부산과 경성의 권공 선경지이다. 도시계획교육과 도시권이 도시의 다양한 공간을 이용하여 식물을 조성하고, 통풍을 기르는 과정과 생활을 활용하는 개념을 설명한다. 이를 통해 도시권은 경제적 사회학적 유익을 얻고, 도시 생활환경의 질적 개선을 도모할 수 있다. 또한 경성의 도시권 건설, 순회, 상하수도 자이만족권 부여, 세대간의 유대관 증진을 통해 공동체 형성과 지역을 주여 예전의 친근감을 마음공통체를 회복할 할 수 있는 교육이다. 도시권을 해설한다.

2부는 권언근·신라장이 도시농부 신청자들과 밭별만들기 수업을 진행하였습니다. 밭별은 행복센터에서 100m 떨어진 거리에 자리하고 있습니다. 당일 진행된 수업내용은 밭별만들기, 거름날리기, 마늘 양파 파종 등이었습니다. 주민들은 서로 어떻게 하자, 저렇게 하자는 이야기를 하면서 즐겁게 파종을 하였습니다.

마지막으로는 마음나누기 행사를 하였습니다. 이와 같은 행사 진행의 이유로는 같은 동네에서 살고 있어도 서로 인사만 하



▲ 맛살을 꺼낸 모습 ▲ 마늘나누기 시간

다나스 가 와도 수업은 계속 진행됩니다.

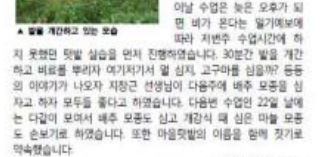
지난 10월 8일은 도농병학교설 2번째 수업이 있는 날이었습니다. 수업이 진행되기 5일전 태풍이 폭상한다는 소식을 듣고 수업을 진행하기는 쉽지 않을거라 짐작하고 있었습니다. 그러나 8일 오전 생각보다는 좋은 날씨로 인해 수업을 진행하기 하였습니다. 그래도 비가오고 바람이 불어 수강생들이 많이 출몰할거라 짐작하고 있었습니다. 준비를 하고 있었지만 많은 주민들이 참석해주셨습니다.



통해 해 팔기보다 곤충과 식물들 보고 작품을 쓰는 때와 수업을  
는지 알 수 있었으며, 집에서 만들어 사용하는 비료와 농약들  
결과고 정형하게 만드는 정밀한 측정과 기기를 배웠습니다. 수  
을 만든 후 주원본은 강의와 선생님과 많은 의견과 질문을 나  
였습니다. 그중 한 어머니께서 이런 말씀을 하셨습니다. 이전까  
는 '공으로 알고 있던 농사 방법'이었는데 수업을 듣고 나니  
'바로 이해가 되고 기분이 좋다'고 하셨습니다. 아 날 몇몇실습  
태도로도 다음주 수업으로 만나고 싶습니다.

10월 15일에는 비가 온다는 기상정보보가 있었지만 많은 주민들이 예방접종도하고 병원에도 가고 시장에도 가고 낚시와 야외모임에 가셨지만 그래도 도시농부 수업은 진행되었습니다.

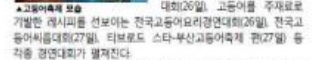
그러나 걱정과 우려와는 달리 많은 주민들이 수업 전에 오셔서 행복센터에 비치되어있는 안마기구를 이용하면서 담소를 나누고 있었습니다.



다음

소식 부산 고등어 축제 25~27일 개막

부산 서구 오모 25-27일 송도국제컨벤션과 부산공동농어시장 앞에서 '제6회 부산고동어축제'가 열렸다. 26일과 27일 열렸다. 올해 축제는 고동어 관련 행사 외에도 전국 규모로 각종 공연·대회를 비롯해 해양스포츠대회도 함께 마련됐다. 우천 주민자치회의 공영 대결인 전국주민자치회 경연대회(25일, 고교생 이상)는 댄스동아리의 특출한 전국단수전진



특검방식으로는 전국 전국 송도해역으로부터 126일과 부산항에서 100일, 동해안 126일, 남해안과 경기도(책) 전국사천전경(25일~11월 5일) 등이 열렸다. 그 고향이 책으로 205(25일) 제1항 부산항에서 26일~27일, 송도 1대 100구(25일) 제2항, 연송으로 고향이 26일~27일, 고갈비 하마구이(25일) 사, 고향이 정맥전(26일) 등 고향이 관련 다양한 변화가 준비되어 있습니다. 개척지는 오는 25일 오후 2시 송도해역속적 탐사수단이 열리며, 이어 개척구역경연에 100수준 탐험을 동시에 아리온-김연호 등 7083가수들의 추억의 공간이 분위기를 돋을 예정이다.

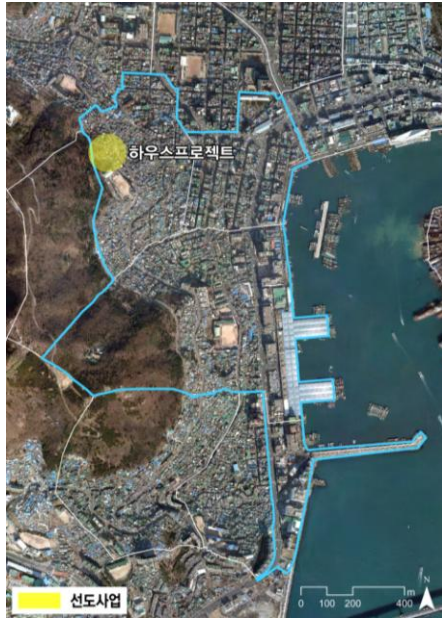
수업시간에 2000년

# PILOT PROJECTS



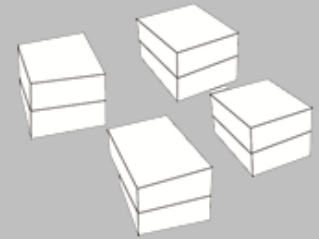
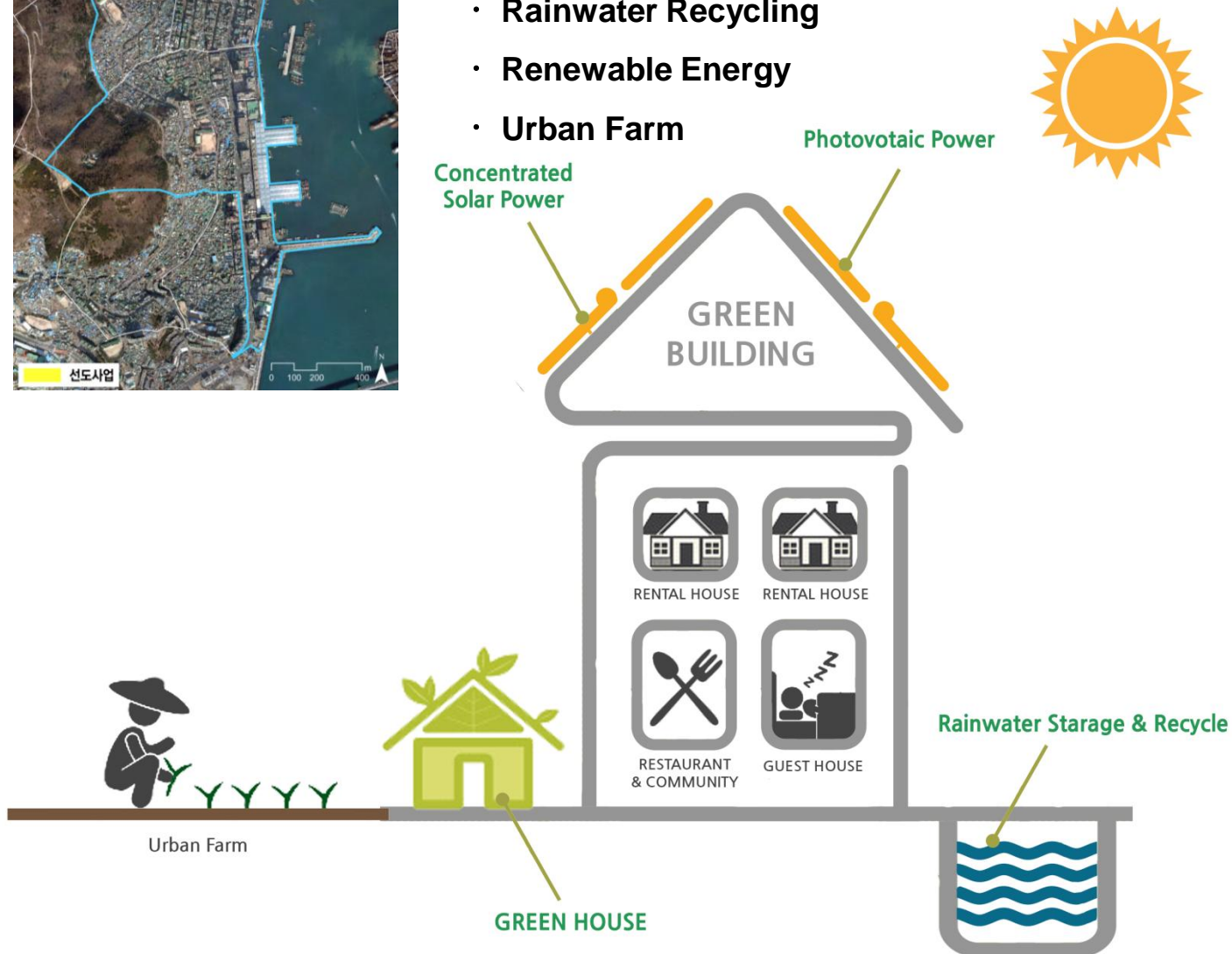


# 1 Model House Project

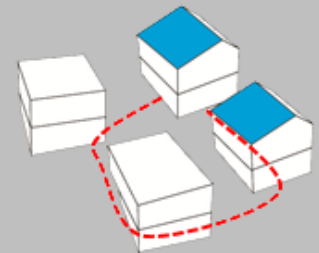


## Promotion of Model City of ESC

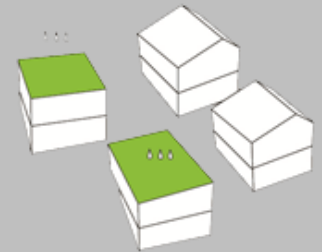
- Passive Building
- Rainwater Recycling
- Renewable Energy
- Urban Farm



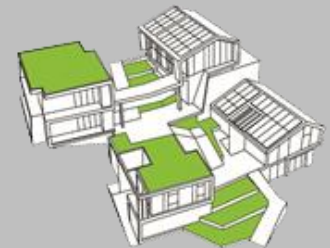
4 Passive Buildings



Energy Sharing



Rainwater Collecting]



Urban Agricultural Landscape



# 1 Model House Project



## Rental House

Rent to Low-income families

## Restaurant & Community House

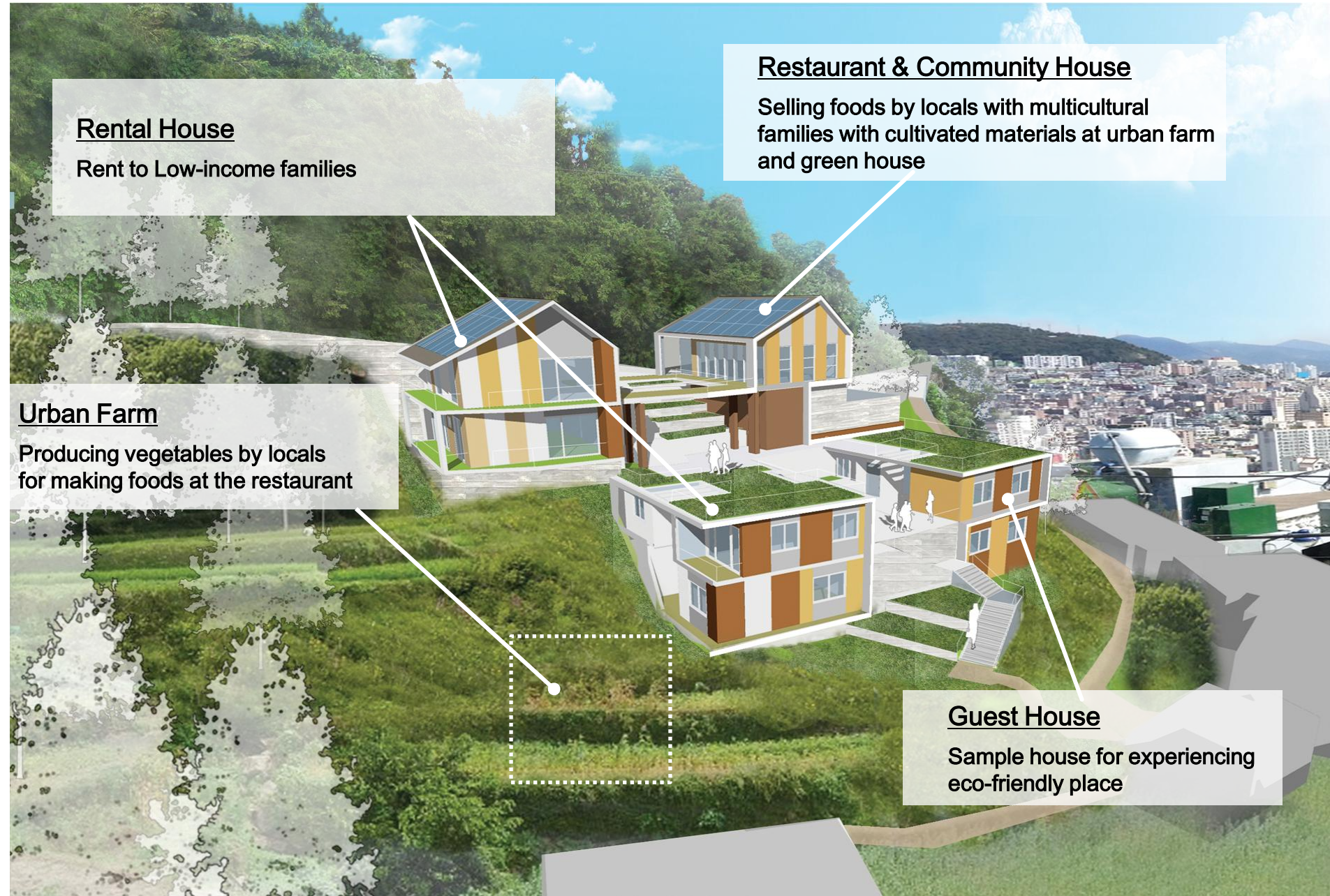
Selling foods by locals with multicultural families with cultivated materials at urban farm and green house

## Urban Farm

Producing vegetables by locals for making foods at the restaurant

## Guest House

Sample house for experiencing eco-friendly place





# 2 Community Activity



- Providing urban agricultural training programs to local people
- Encouraging the foreign people from multicultural families to participate in the community business (Urban Farm and Restaurant)
- Opportunity for the foreign people to adapt to the Korean society



Study and practice



Field Training





# Thank you

