

Minimizing Health Impacts of Climate Change

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Climate change

Health risk

Vulnerability factors

- Demographic
- Geographical
- Biological factors & health status
- Sociopolitical
- Socioeconomic
- Health system capacity
- Gender & equity

Climate-related hazards

- Extreme weather events
- Heat
- Sea level rise
- Air pollution
- Vector distribution & ecology
- Water scarcity
- Reduced food production

Exposure

- People & communities
- Health workforce
- Infrastructure
- Energy systems
- Water systems
- Food systems
- Health systems

Environmental threats
and GHG emissions

Health outcomes



Injury and mortality
from extreme
weather events



Heat-related
illness



Respiratory
illness



Water-borne diseases
and other water-related
health impacts



Zoonoses



Vector-borne
diseases



Malnutrition
and food-borne
diseases



Noncommunicable
diseases (NCDs)



Mental and
psychosocial
health



Impacts on
health care
facilities

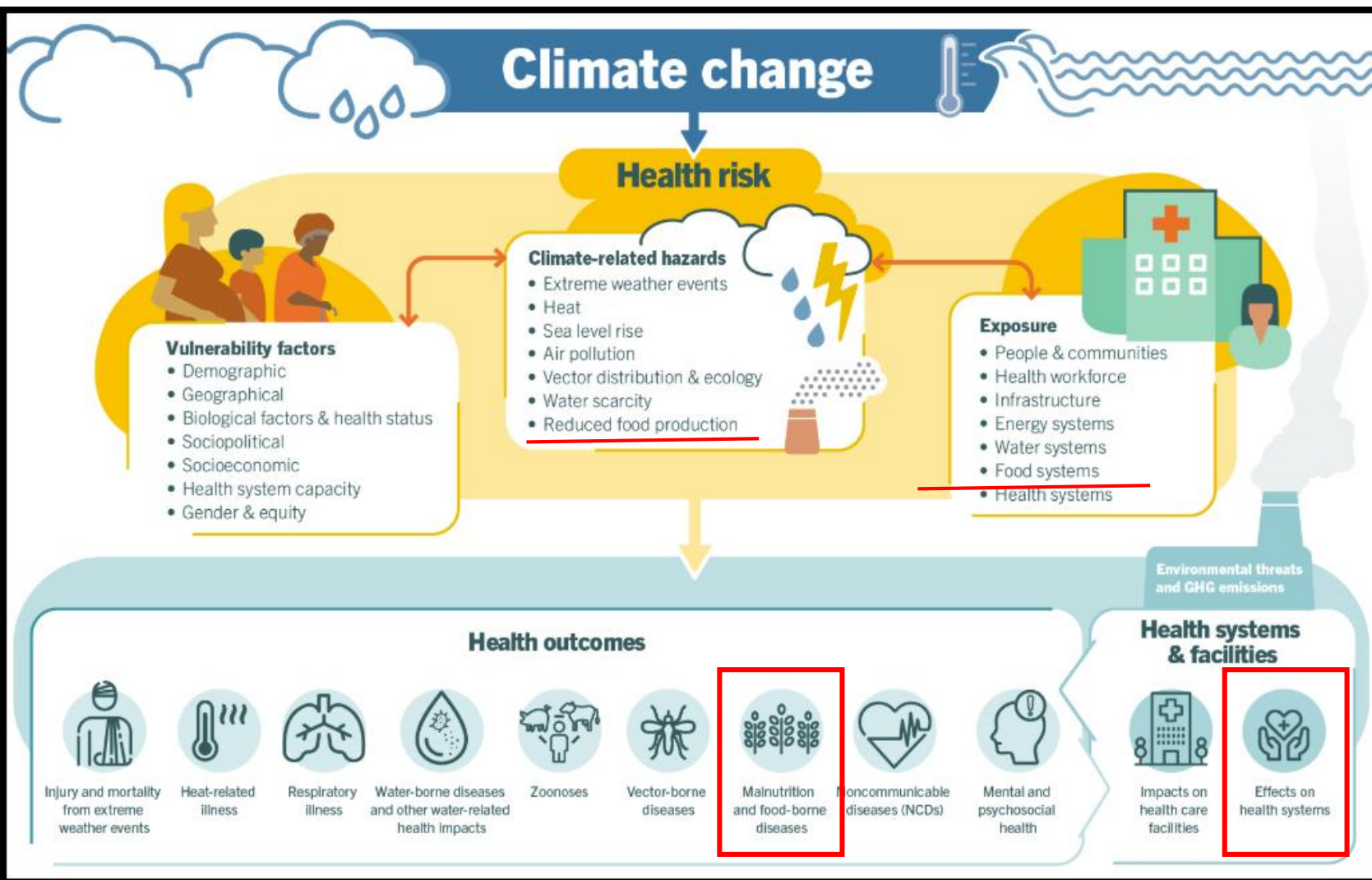


Effects on
health systems

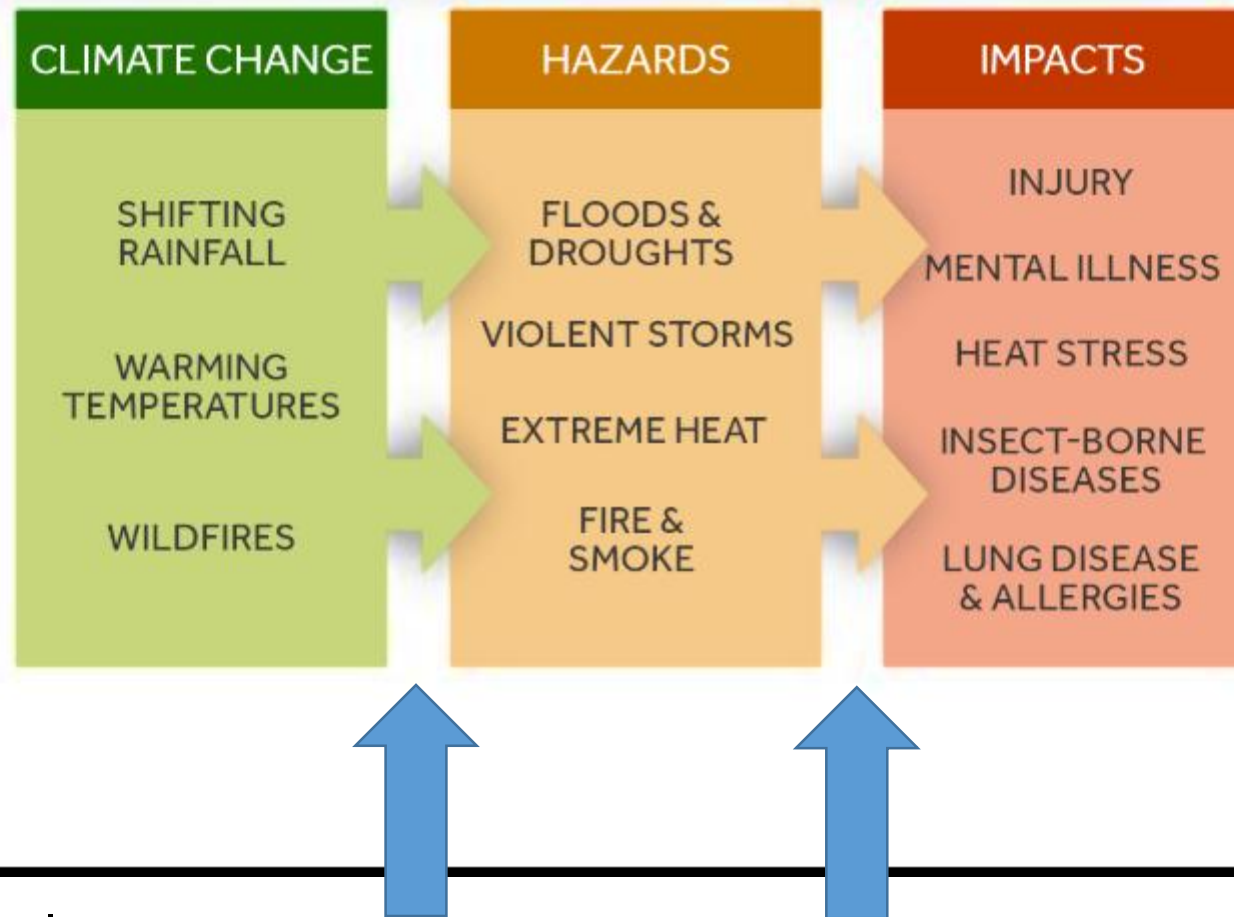
WHO CALLS FOR CLIMATE **ACTIONS** TO IMPROVE **#HealthForAll**



-  **Safeguard nature**
-  **Ensure access to clean water**
-  **Ensure a quick healthy energy transition**
-  **Promote healthy, sustainable food systems**
-  **Build healthy, liveable cities**
-  **Stop funding pollution**

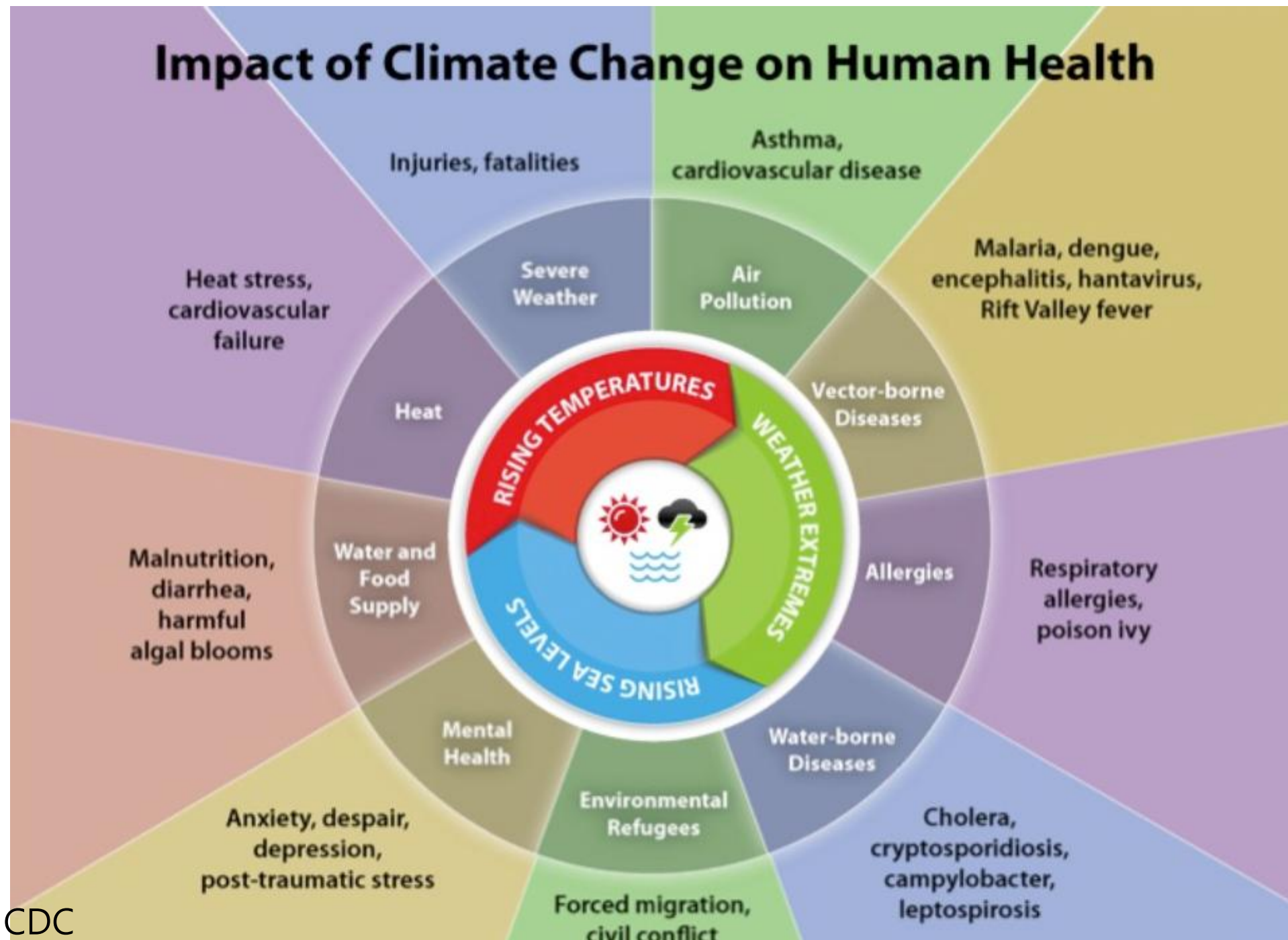


CLIMATE CHANGE IMPACTS HEALTH



Source: Climate Central

Impact of Climate Change on Human Health



Thanks

You may find my research articles

<https://orcid.org/0000-0001-7472-3752>

<https://scholar.google.com/citations?user=Z0LSCboAAAAJ&hl=en&oi=sra>

Students' activities



Establishment of the Eco-Friendly Student Committee
(2011 ~)



Launch of the Environmental Club Federation (2021 ~)
Organizing on-campus eco-friendly student activities.



Carbon Neutral Campus Transformation Forum (2024 ~)
Nationwide Carbon Neutral Student Alliance

Spreading the Eco-Friendly University Culture at SNU



Operating a Green Campaign Booth at the Daedong Festival (University Festival)(2010 ~)

Over 14 years, 25 Green Campaigns have been held.



Disposable Container-Free University Festival Culture Project (2022–Present)

Promotion of Student-Centered Sustainable Eco-Friendly Activities : Eco-Friendly Cultural Festival

Enjoyable activities



Environmental Library



Env. Festival



Movie Fest



Start-up experience



Visiting Institutes



Festival



Seminar

Promotion of Student-Centered Sustainable Eco-Friendly Activities : Exhibition, Eco-Friendly Group Study



Carbon Neutral Competition



Exhibition



Exhibition



No-Smoking Campaign

Students' Research & education



Group study



Seminar



Int'l sympo



workshops

Promotion of Student-Centered Sustainable Eco-Friendly Activities : Eco-friendly educational volunteering, vegetarianism, etc.

Working with local community



Education



mentoring



Educational Volunteering

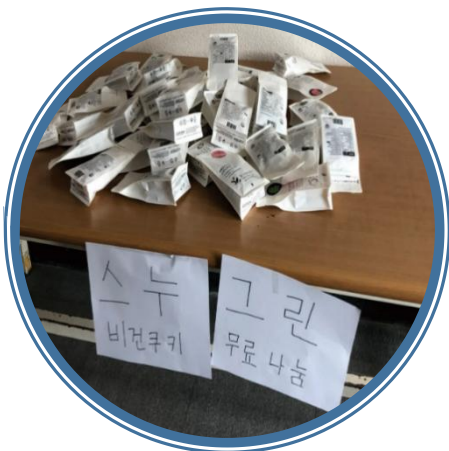


Community Coexistence Project

Doable Programs on Campus



Vegetarian Project



Vegan Food Sharing Event



Sharing Vegan Food



Cultivating Companion Plants

Promotion of Student-Centered Sustainable Eco-Friendly Activities : Resource Circulation, Experiential Activities

Re-cycling



Food Zero Waste Seminar



Ugly Tangerine Sharing Event



Value Consumption Project



Eco-Friendly Products Sharing Event

Sharing ideas and products



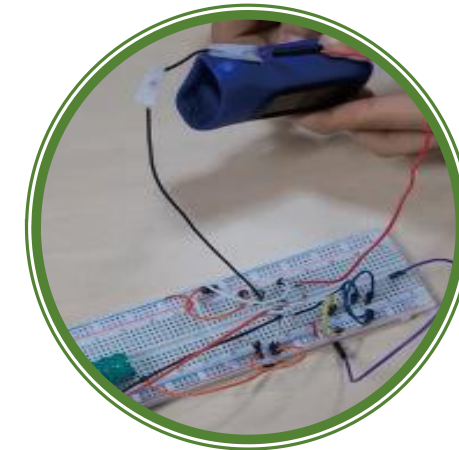
Vegan Snack-Making



Resource Circulation Kit Making



Making Eco-Friendly Goods



Eco-Friendly Mosquito Trap

Promotion of Student-Centered Sustainable Eco-Friendly Activities : Ecological Volunteering, Tree Planting Activities

Eco-friendly activities



Organic Crop Cultivation



Planting



Cultivating a Rooftop Garden



Cultivating Garden



Ecological Volunteer Activities
Helping with Rural Farm Labor



Community
Plogging



Univ Plogging
=jogging and picking

Garbage Sorting and Collection

Promotion of Student-Centered Sustainable Eco-Friendly Activities : On-campus Campaign

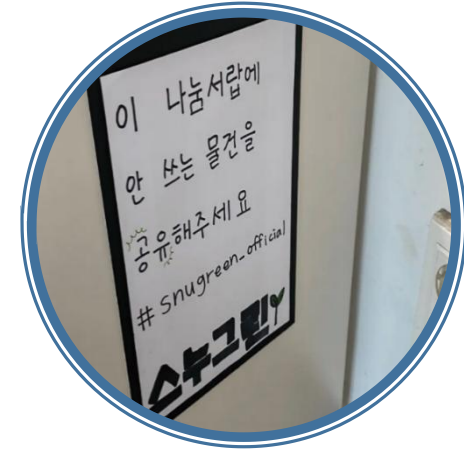
Waste-zero activities



Eco-Friendly Transportation Ride



Sharing Box



Sharing Drawer



Garbage Sorting and Collection



Promote Tumbler



Up-cycle



Eco-Friendly Festival Booth

Promotion of Student-Centered Sustainable Eco-Friendly Activities : Waste and Energy Field Activities



Multi-use container



Trash-Free Festival



Fest w/o Disposable Container



No plastic

Design market



Monitoring energy use



Lights Out Campaign



Energy saving Campaign



Green Refrigerator

Energy saving

Examples

Heatwave Response Policy

- **AFCC domains:** 1 (Outdoor spaces and buildings), 7 (Communication and information), 8 (Community support and health services) or 1, 8 (depending on the project)
- One of Korea's **long-standing best practices** and demonstrates its impact on enhancing the resilience of cities and communities in protecting the ageing population.
- **Seasonal** (operating during health wave season)
- Combination of central and local government level interventions
 - (Run by Central government) **Real-time heatwave alerts, emergency room monitoring system**
 - (Implemented at the Local government level) **Cool shades, Cool shelter, Vulnerable care services, Disaster helpers, etc.**
- Found in various national and local government plans (e.g., safety, ageing, climate crisis adaptation, etc.)
- Korean government **has enhanced this policy to be more comprehensive** by monitoring the use of the interventions and developing more measures.
 - A pilot project of effectively using wearables in 2024



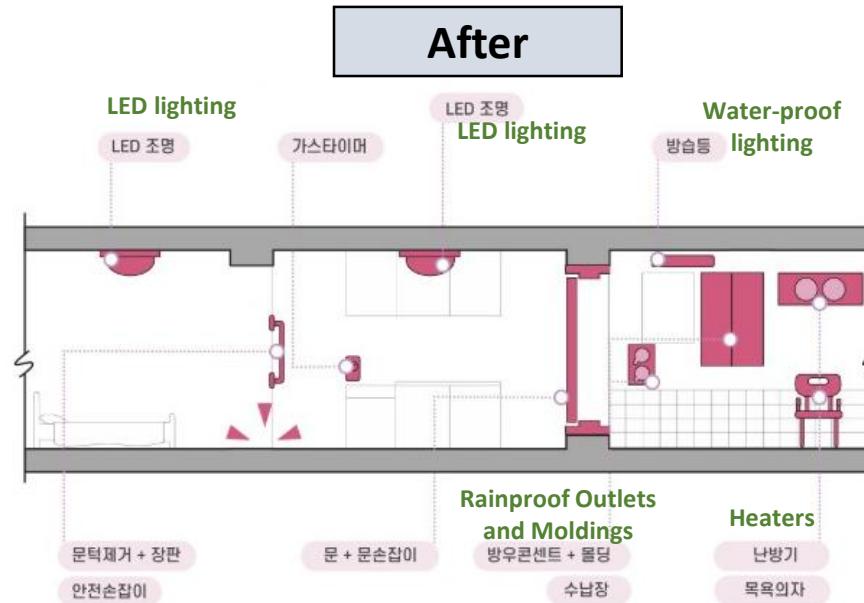
Examples

Age-friendly housing projects

Figure. An example of age-friendly housing projects



- ① 시야장애가 있어 주동선인 침실~주방, 침실~화장실 이동시 침실 문턱에 발이 자주 걸림
- ② 가사행위를 스스로 하고 있고, 가끔 가스불 켜둔것을 깜박할 때가 있음
- ③ 쾌적하지 못한 주거환경 (곰팡이 등)
- ④ 습기가 많은 화장실에 전선 등 정리가 되지 않아 누전 등 안전위험에 노출
- ⑤ 화장실 내 용품을 수납하기 어려워 보행 및 행위수행시 장애가 되고 있음
- ⑥ 화장실이 추워서 씻기 어렵고, 화장실 문이 잘 안여닫힘.



침실~ 화장실 / 주방 이동시 접근행위를 지원하는 문턱 제거와 장판교체 그리고 안전손잡이 설치



고장난 문을 교체하여 쾌적성을 지원하는 화장실문 교체 및 문손잡이(레버형)설치



누전과 화재 등 안전을 위해 방우콘센트 + 전선 몰당 정리와 수납장을 설치하여 편리성을 지원



겨울에도 급격한 온도변화 없이 안전하고 쾌적하게 씻을 수 있도록 목욕의자 주변 난방기 설치

- **AFCC domains:** 3 (Housing), 8(Community support and health services) or “3” (depending on the project)
- The projects improve the housing environment to meet the needs of the older adults.
- minimize the risk and damage to health and well-being by securing housing stability and safety (considering more frequent and severe extreme weather conditions)
- It may be funded solely by public or by combination of public and private sources.

Examples

Smart bus stops (Smart shelters)



- **AFCC domains:** 1 (Outdoor spaces and buildings), 2 (Transportation), 7 (Communication and information)
- Older adults in South Korea widely use public transportation
- Bus stops increasingly adopting ICT and renewable energy through **public-private partnerships**.
 - Introduction of heated chairs in 2008
 - Introduction of smart shelters in 2020
- **Initiated from Seoul Metropolitan Government** then expanded nationwide
- Open to public, however, senior citizens get bigger benefits in preventing harm and express high satisfaction

Examples

Senior-friendly Parks and recreation facilities



Senior-friendly park



Intergenerational playground

- **AFCC domains:** 1 (Outdoor spaces and buildings), 4(Social participation), 6(Social inclusion), 7(Communication and information), and/or 8(Community support and health services) (depending on the project)
- Designed to support the physical well-being and social interaction of seniors
- Related to climate resilience or environmental sustainability
 - **Senior-friendly parks, Intergenerational playgrounds:** often integrated into or developed from green spaces near residential areas.
 - **Age-friendly recreation facility:** repurposing of abandoned school building into age-friendly facilities
- While the effectiveness of **Senior-friendly parks** is still controversial, Seoul Metropolitan Government incorporated into its comprehensive senior welfare plan in 2021 and aims to install in all districts in Seoul by 2025.
- difficult to find and often used only for temporary events