

Policy Report 2019-02

One Decade of Health Impact Assessment Development in South Korea

– Characteristics of Health Impact Assessment for Central and Local Government Policies



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One Decade of Health Impact Assessment
Development in South Korea: Characteristics
of Health Impact Assessment for Central and Local
Government Policies

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I

Introduction

- The Master Plan for Decentralization (September 11, 2018), the announcement of the total amendment of the Local Government Act (LGA, November 14, 2018), and the Comprehensive Health Program for Local Communities all represent efforts to strengthen the autonomy and accountability of local governments across South Korea. These efforts, intended to promote balanced development across regions, are also expected to increase the demand for locally decided and tailored policy measures for promoting health.
- Health impact assessment is a research instrument developed to help policymakers revisit their health policy decisions. More specifically, it involves the application of various techniques for predicting and forecasting the future of human health in light of socioeconomic and environmental changes (Fehr, Viliani, Nowacki, and Martuzzi, 2014).
- A variety of methods and predictive models can be applied to assess health impacts. Sophisticated models are designed to measure and formulate the complex ways in which environmental, psychosocial, and politico-economic factors interact, influencing the core

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and reinforcing the factors of health and the exposure of individuals and groups.¹⁾

□ Acknowledging the “health in all policies” emphasis of the World Health Organization (WHO)’s Healthy Cities program, Korean local governments that are members of the Korean Healthy Cities Council undertook 26 trial health impact assessment (HIA) programs from 2008 to 2016, evaluating the policies of central and local governments alike in terms of their health impacts. These governments have also sought to expand the HIA infrastructure by establishing databases and websites, promoting the development of HIA networks across East Asia, and pushing for the development of by-topic HIA guidelines for Koreans.

HIA: Overview		Introduction			Trials and capability development				Diffusion
		2008	2009	2010	2011-2013	2015	2016	2017	2018
1. Enhancing capabilities for HIA at all government levels									
(1) HIA programs launched	① Central				●				→
	② Local	●	●	●	●	●	●	●	●
(2) HIA guide and tool tailored to Korean needs developed						●	-	●	●
2. Enhancing capabilities of HIA personnel									
(1) HIA Knowledge Portal DB established			●	●	●	●	●	●	●
(2) Training provided (seminars, workshops)		●	●	△	●	△	●	●	●
3. Introducing institutional support for HIA									
(1) Exchange of information: networks established	① In Korea				●	●	●	●	●
	② Abroad				●	●	●	●	●
					←TWG chair organization→ ^{*)}				●
(2) Legislative research		●			●			-	→

1) DPSEEA model: World Health Organization Western Pacific Region Office (WHO-WPRO, 2016), p. 36.

□ Types of HIA programs of central and local governments

No.	Program/subject	Year	Approach	Type	Level	Subject
1	Dream Start Health Impact Assessment	2008	Intermediate	Non-developmental	Central	Welfare
2	KTX Health Impact Assessment	2008	Intermediate	Developmental	Central	Transportation
3	Sorokdo National Hospital's Chronic Disease Management Program	2008	Rapid	Non-developmental	Central	Medical service
4	Year-Round Care for Rural Schools	2011	Comprehensive	Non-developmental	Central	Welfare
5	Health Impact Assessment of the central government's culture policies	2012	Comprehensive	Non-developmental	Central	Culture
6	Gangnam-gu Carbon Mileage Project	2009	Rapid	Non-developmental	Local	Energy & environment
7	Artificial Turf and Lighting Installation Project for Garam Middle School, Gwangmyeong	2009	Comprehensive	Developmental	Local	Education
8	Lighting Installation Project for Gwangmyeong Elementary School, Gwangmyeong	2009	Intermediate	Developmental	Local	Education
9	Aegineung Reservoir Waterfront Park Development Plan, Gwangmyeong	2009	Rapid	Developmental	Local	Environment
10	Changwon Bicycle Policy	2009	Intermediate	Developmental	Local	Transportation
11	Siheung Healthy Apartments Project (trial)	2010	Rapid	Non-developmental	Local	Housing
12	Dongjeok-gol Trail Development Project, Gwangju	2010	Rapid	Developmental	Local	Land development
13	Urban Housing and Living Environment Improvement Project, Jinju	2010	Rapid	Developmental	Local	Housing
14	Free Vaccination Program for Children, Jinju	2010	Rapid	Non-developmental	Local	Medicine
15	Gangdong-gu BRT Project (trial), Seoul	2010	Rapid	Developmental	Local	Transportation
16	Gangnam-gu Cheonsan Road Development Project, Seoul	2010	Desktop	Developmental	Local	Land development
17	Gwangmyeong No-Smoking Zone Program	2011	Intermediate	Developmental	Local	Environment
18	Sanseo Landfill Repair Project, Jangsu	2011	Comprehensive	Developmental	Local	Land development
19	General Rural Environment Improvement Plan, Muju	2011	Comprehensive	Developmental	Local	Land development
20	Disinfection Program	2012	Comprehensive	Non-developmental	Local	Health
21	Daejeon Public Health Promotion Center	2014	Comprehensive	Non-developmental	Local	Health
22	Sejong Health Impact Assessment of Construction	2014	Comprehensive	Developmental	Local	Construction
23	Health Impact Assessment of Exposure to Spontaneous Radioactive Substances in Living Environments	2015	Comprehensive	Non-developmental	Local	Housing

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No.	Program/subject	Year	Approach	Type	Level	Subject
24	Health Impact Assessment of the Banditbul Center Project	2016	Comprehensive	Developmental	Local	Health
25	Health Impact Assessment of the Yangjaecheon River Repair Project, Seocho	2017	Comprehensive	Developmental	Local	Environment
26	Health Impact Assessment of the City Vacating Project, Jongno	2018	Comprehensive	Developmental	Local	Urban landscape
27	Health Impact Assessment of the No-Smoking Zone Expansion Policy, Songpa	2018	Rapid	Policy	Local	Health

- The trial Health Impact Assessment Program (HIAP) and HIA Technical Support Program for Local Governments that the Korea Institute for Health and Social Affairs (KIHASA) undertook over the past decade strove to enhance the health orientation of all policy programs across Korea by giving policymakers a tool with which to conduct comprehensive reviews of the health impacts of those programs. To support HIA, KIHASA has reviewed, adopted, and adapted diverse instruments from developed countries.
- KIHASA continues its HIA research and trial program with the goal of promoting the legislation of HIA at the national level and establishing HIA as part of the local policymaking system.
- Of the HIA programs of Korean local governments amenable to a-posteriori review, KIHASA has evaluated 14 and traced how the findings of HIA have been used to policymaking ends. KIHASA found that eight of the

reviewed programs have made tangible differences in policymaking. Inspired by the applicability of HIA results to policymaking, KIHASA continues promoting research and trial programs to help establish HIA as part of the local governance system in Korea.

- One of the research objectives of KIHASA's HIAP has been to enable the central and local governments to jointly undertake trial HIA projects so that KIHASA can identify the grounds upon which technical support can be increased, thus enhancing the HIA capabilities of government at each level.

- The purpose of this study is to analyze the patterns and characteristics of HIA programs as implemented by the central and local governments of South Korea, and draw implication for future HIA research.

II

Practices of Health Impact Assessment

1. HIA by the Korean Central Government
2. HIA Programs of Local Governments: Types and Characteristics
3. Development and Operation of an HIA Database
4. International Relations
5. Development and Application of the Rapid HIA Model for Local Governments in Korea

II

Practices of Health Impact Assessment <<

1. HIA by the Korean Central Government

A. Dream Start Health Impact Assessment Program (2008)

□ Background and objectives

- To introduce and apply an HIA model developed abroad to policy evaluation in Korea.
- To provide support for policymakers and working-level officials in charge of planning the content and process of the Dream Start Program.

□ Assessment process

- An organizing committee was assembled (consisting of experts, researchers, and Dream Start Supporters).
- Screening, scoping, assessment, and HIA process evaluation were undertaken.
- Task orders were written up.
 - Subject of assessment: Dream Start Program as undertaken at three centers in 2008
 - Topics subject to assessment: prenatal care, vaccinations, nutrition, accessibility of health and

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medical services, and child abuse

- Methodology: literature survey, local community profiling, focus group interviews with on-site personnel and caregivers, opinion poll, and secondary data analysis

□ Results and implications

○ While the Dream Start Program was assessed as having positive impacts on the health of local residents in general, a number of improvements/changes had to be made to realize those impacts.

○ Recommendations regarding prenatal care:

- Educate pregnant women to help them abstain from smoking and drinking, and refer them to available services that help people quit smoking and drinking.
- With less than 50 percent of pregnant women receiving congenital metabolic disorder tests, it is important to increase their awareness of the tests and refer them to tests offered free of charge at local public health centers.
- Increase financial support for pregnant women to help them receive prenatal care regularly, distribute free prenatal vitamins, and educate women on health issues.

○ Recommendations regarding vaccinations:

- Distribute vaccination schedule books so that people can keep up to date with essential vaccinations.
 - For people who are reluctant to receive vaccinations due to the hassle of traveling long distances to public health centers (for free vaccines) and long waiting times involved, it may be necessary to dispatch public health center nurses to local community centers to provide free vaccinations and/or distribute vaccination vouchers.
 - Government subsidization of expensive vaccines, such as those for hepatitis-A and pneumococcus, should be increased.
- Recommendations regarding nutritional support:
- Increase nutritional programs that provide breakfast for children and students.
 - Provide additional training for nutrition personnel.
 - Provide nutrition education for children and their parents.
- Recommendations regarding the accessibility of health and medical services:
- Increase policy support for referrals to health and medical services, personnel training, and families with patients of chronic diseases.

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- Recommendations regarding child abuse:
 - Provide diverse therapy services for families experiencing abuse and ensure integrated case management.

B. KTX Health Impact Assessment Program (2008)

□ Background and objectives

- The KTX, Korea's high-speed rail system, was launched in 2004. It was expected to affect local patients' access to and use of medical services in various ways. Since the KTX went into service, patients have been flocking to Seoul from across Korea in search of quality medical care, leading hospitals and clinics in more rural parts of the country to experience financial difficulties. At the time, there was growing concern that the change in patients' behavior would also adversely affect the processes and outcomes of their treatment.
- The HIA of the KTX was conducted with the primary objective of finding out how the new express train service affected the health of local residents of areas where KTX stations are located.

□ Assessment process

- The assumption was that the introduction of the KTX had profoundly changed Koreans' use of medical

services, and that it had even affected the quality of life and average lifespan of patients using medical institutions in Seoul. Positing the improved access of residents of cities where KTX stations are located (“KTX-near cities”) to medical care in Seoul as a determinant of their health, local populations living near KTX stations were profiled, and local officials were interviewed, to gauge the changes brought about by the KTX in people’s use of medical care, quality of life, and average lifespan.

- An HIA committee was organized, with members being drawn from hospitals and health insurance organizations in KTX-near cities. The members reviewed the HIA program in terms of its content, methodology, and findings.
- Target local populations were profiled.
 - Populations of cities where KTX stations are located, i.e., Busan, Daegu, Daejeon, and Gwangju, were surveyed in terms of their demographic and socioeconomic characteristics (population size and density, distribution by sex and age, etc.).
 - The cities were also profiled in terms of the distribution of medical personnel and resources and locals’ satisfaction with locally available medical care.

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Local populations were also surveyed in relation to major indicators of health, such as prevalence rates, mortality rates, and average lifespan.

- Opinion poll on satisfaction with medical care
 - Patients who used the KTX to access medical care in Seoul and officials of hospitals inside and outside Seoul affected by the increases in patients' travel to Seoul were interviewed.
 - As for patients' satisfaction with medical care, 561 patients were polled at the Seoul and Yongsan train stations in terms of whether they had sought medical care in Seoul, how often they had visited medical institutions in Seoul, and how satisfied they were with the care they had received.
- Analysis of the KTX's effects on people's use of medical services
 - The National Health Insurance Service (NHIS)'s records on NHI holders were divided by region and analyzed in terms of the diseases afflicting them, use of medical care by cancer patients (in terms of the number of consultations sought, number of hospitalization days, number of outpatient visits, and amounts of medical expenses), and mortality rates.
 - Patients treated at the six major hospitals in Korea

for cancer, angina, and cerebral infarctions were polled with respect to quality of life and satisfaction with the medical care they received.

□ Results

○ Local population profile

- The proportions of seniors aged 60 or older were greater in Busan and Daegu than in Seoul. The prevalence rates of hypertension and diabetes in these two cities were also higher than the national average. Locals' satisfaction with the services offered at general hospitals in Busan and Daegu trailed behind the nationwide average satisfaction score.
- Children aged nine or under made up greater proportions of the populations in Gwangju and Daejeon than elsewhere nationwide. These two cities boasted relatively higher availability of medical resources and higher rates of satisfaction with general hospital services than the national average. Gwangju also had more medical practitioners per 100,000 residents than other comparable cities.

○ Patients' satisfaction with medical care in Seoul

- Of the poll participants living outside Seoul, 51.9 percent had travelled to Seoul in search of medical care. In particular, 70.4 percent of all poll

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participants had used the KTX to access medical care in Seoul. Of these, 76.1 percent were satisfied with the quality of care they had received.

- Interviews with hospital officials confirmed that the launch of the KTX has benefitted hospitals in Seoul by increasing the number of patients accessing them.
- The diseases for which people outside Seoul mainly travelled to Seoul for treatment were cancer, cardiovascular diseases, and neurovascular diseases.

○ Changes in the use of medical care

- Analysis of the trend of the number of consultations provided for cancer patients in Korea from 2001 to 2007 affirmed that the introduction of the KTX in 2004 accelerated the concentration of patients in the big five hospitals in Seoul.

○ Quality of life, health, and satisfaction with medical care

- While people living outside Seoul were generally more satisfied with the medical care they received in Seoul and their health status as a result than people who had not had the same experience, the difference was not statistically significant.
- Of patients who died from their diseases from 2001 to 2007, those who had received medical care in Seoul even once were found to have a shorter average

lifespan than other patients. This may be because the more serious the condition of the patient, the more likely he/she is to travel to Seoul to seek treatment.

- Policy recommendations
 - KTX fare discounts and other forms of support should be considered to facilitate patients' travel from other parts of Korea to Seoul. Similar discounts and support should also be provided for Seoul-based medical practitioners traveling to other parts of Korea to tend to patients.
 - Medical resources and personnel in the more rural parts of Korea should be reinforced to reduce the concentration of gravely ill patients in Seoul.

C. Health Impact Assessment of the Central Government's Culture Policies (2011)

- Background and objectives
 - Culture policies affect the mental wellbeing of the citizenry. They can also be determinants of mental health and wellbeing more broadly.
 - The health impact of the Korean government's culture policies was assessed with a view to minimizing any negative effects on Koreans' mental health and maximizing the positive effects in the development and

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implementation of such policies.

□ Assessment process

- Culture and cultural policies were given operational definitions, and the established literature and theories on the impacts of culture policies on health and the paths involved were surveyed in order to define the scope of culture policies to be assessed.
- The current status of the Korean government's culture policies was analyzed to determine the target policies to be subjected to HIA.
 - Of the diverse policy programs, those for supporting art lecturers and instructors, preventing Internet addiction, and supporting local festivals were chosen for assessment.
- The criteria of HIA were decided, and a method specifically tailored to the HIA of culture policies was developed.

□ Results

- Review of the scope of culture policies to be assessed
 - Activities and behaviors relating to, or involving the use of, video products and performances, architecture, public libraries, sports, films, broadcast and digital media, adult education, local communities, volunteerism, traditional culture, fashion, and historic sites are generally classified as cultural or leisure activities. This classification forms the basis of the culture policies of most nations.
 - An alternative approach to policymaking on culture focuses on the customs and traditions of people's ways of life, such as cuisine, drinking, and transportation. Some policies also focus on culture as a marker of certain subsets of the population, such as immigrants and their families.
- Review of the health impacts of culture policies
 - Culture policies are concerned with more than the provision of access to videos, performances, fine arts, architecture, museums, public libraries, and sports. Such policies seek to promote diverse values—values that inevitably affect the public's health in diverse ways—via the sharing of these cultural resources.
 - Relevant topics of health assessment derived from a

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survey of the established literature included lifelong education, social capital, civic participation, artistic activities, festivals, drug and alcohol use, and crime.

- The policy programs primarily considered for HIA were those for supporting art lecturers and instructors, preventing Internet addiction, and supporting local festivals. The final choice was the Internet addiction prevention program, as it seemed to bear the closest relation to mental health.

○ Results of assessment

- Policy recommendations for minimizing the adverse health effects of Internet use were made on the basis of an analysis of the risk factors involved in Internet addiction. As the use of the Internet remains pervasive in Korea and the size of the Internet-addicted population is considerable, it is important to design the policy program in such a way that maximizes its contribution to improving mental health.
- There is much room in the Internet addiction prevention program to make use of HIA. In particular, addiction prevention and intervention programs for children and youth can benefit greatly from HIA.
- Close collaboration across departments is essential to

the success of the program, as not only the Ministry of Culture, Sports and Tourism (MCST) but also the Ministry of Gender Equality and Family (MOGEF), Ministry of Public Administration and Safety (MOPAS), Ministry of Education and Science (MES), and Ministry of Health and Welfare (MOHW) are involved in its implementation.

- The art lecturer and instructor support program is one of the costliest programs operated by the MCST and is intended to enhance access to culture and the arts for youth and the poor. To increase the positive effect of the program on the mental health of Korean youth, it is necessary to expand the scope and reach of the program.
- Local festivals are expected to have significant impacts on mental health. Also, safety management is especially needed to protect locals' health.

D. Year-Round Care Program for Rural Schools (2011)

- This comprehensive educational welfare program was launched in 2010 with the goal of providing a wide range of support for education, culture, and welfare programs at rural schools to ensure better care and educational welfare for rural students. In 2010, 378 schools in 84 areas were chosen, with those numbers

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increasing to 383 schools in 86 areas the following year. The selected schools included all levels of primary and secondary education.

- The program was assessed in terms of its direct and indirect impacts on students' health.
 - An HIA advisory board was assembled, with members being drawn from the ranks of MOHW officials, academics, and researchers.
 - The members surveyed theories and literature on health impacts and analyzed data on local populations.
- The board's policy recommendations included: providing basic learning guarantee programs for rural schools, assigning educational welfare specialists to schools to reinforce the channels of service delivery, and providing greater policy support for families with at-risk children. The board also recommended legislating a special act on supporting rural education to ensure a firm basis for the stable implementation of the program. The board emphasized that close cooperation between MEST and the MOHW was crucial to the success of the program.

2. HIA Programs of Local Governments: Types and Characteristics

- Trial HIA of local governments' policies first began in 2009.
 - There were three objectives of the trial HIAP: first, to provide opportunities for local policymakers to consider health impacts when making policies in areas other than health; second, to help develop a guideline for HIA; and third, to improve local governments' capabilities to undertake HIA and pursue the creation of healthy cities.
 - In April 2009, copies of an official letter were sent out to all public health centers across Korea to recruit participants. Local governments in Gangnam-gu (Seoul), Gwangmyeong (Gyeonggi-do), Changwon (Gyeongnam), and elsewhere expressed interest in participating. The applicants' local policy programs were then screened for inclusion in HIA, with three programs of Gwangmyeong, one program of Gangnam, and one program of Changwon being chosen.
 - The program of Gangnam chosen for HIA was a carbon mileage project, which involved providing cash incentives for local households to encourage them to reduce their electricity, water, and gas consumption. The project was subjected to rapid HIA.

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- Gwangmyeong had three of its programs chosen for HIA. The project for installing artificial turf in local schools was subjected to comprehensive HIA; the project for installing night lighting on school grounds, to intermediate HIA; and the master plan for the development of the Aegineung Waterfront Park, to rapid HIA.
 - Changwon's bicycle policy was subjected to intermediate HIA.
- The trial HIAP in 2010 targeted the policy programs of local governments that openly espoused the desire to become healthy cities. This time, HIA concerned a much wider range of policy programs, related to not only health and medicine but also transportation, green spaces, local community development, and housing.
- The Healthy Apartment Project of Siheung (Gyeonggi-do) was subjected to HIA, which analyzed local residents' physical activities and smoking (including secondhand smoke and smoking within homes), safe living environments, and capabilities of local communities as determinants of health.
- The assessors recommended that Siheung adopt multi-level approaches to both individuals and groups to ensure their health. They also emphasized

the importance of establishing a comprehensive approach as part of the overarching local health and medicine plan, undertaking intermediate- to long-term projects, and supporting such projects with stable streams of fiscal resources.

- The Dongjeok-gol trail development project of Dong-gu, Gwangju, was also subjected to HIA, with environmental conditions, socioeconomic conditions, cultural circumstances, local networks, and lifestyles emerging as decisive factors of the health of local residents.
 - The assessors advised Gwangju to regulate traffic near and on the trail to be developed as a way of reducing air pollution. They also recommended the use of new and renewable energy to provide power for the foot bath arena and streetlights. Their recommendations also included the installation of an ecology learning ground to maximize the educational value of the trail for local children, repair of the existing trail to encourage locals to engage in more physical and athletic activities, and introduction of diverse amenities to accommodate visitors with disabilities.
- Jinju (Gyeongnam) subjected its living environment improvement project for the urban poor and free vaccination program for children to HIA.

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- The determinants of health that emerged from the HIA of the living environment improvement project for the urban poor included housing and living conditions and rapport among neighbors. The assessors stressed the need to adopt a well-planned and gradual approach toward improving housing and living conditions. They also suggested the need for spaces for exchange and community activities to strengthen rapport among neighbors. The assessors also advised the creation of spaces designed to encourage seniors and other vulnerable groups to engage in athletic activities.
 - The assessors reviewed the free vaccination program for children with a view to enhancing its accessibility, and advised strengthening cooperation with local private medical institutions to make vaccines more accessible to children in rural and other often-neglected areas.
- Of the policy programs of Gangdong-gu (Seoul), the Seoul-Hanam BRT Development Project was subjected to HIA.
- Air pollution, noise and vibrations, traffic accidents, physical activities, and pedestrian environments were reviewed as possible determinants of health.

- The assessors confirmed that, in relation to ensuring pedestrian safety, it was unnecessary to revise the BRT project further. They instead advised that improvements be made to enhance the environment for bicycle riders.

□ Implications of the trial HIAP

- The trial HIAP helped usher in a framework for making the “healthy public policies” emphasized by the WHO at the level of local governments in Korea.
- By reviewing the health implications of policies other than those on health, the program reminded policymakers and officials of the need to consider the health impacts of their policies on local populations.
- The program encouraged locals to participate in HIA and help ensure the equality of health in local populations by supporting a democratic consensus-building process.

□ Results of the trial HIAP in 2011:

○ No-Smoking Zone Program, Gwangmyeong

- Gwangmyeong, a city in Gyeonggi-do, joined the Healthy Cities Council in 2008. While devising various policy programs to protect locals’ health, the city’s policymakers became aware of the serious

consequences of non-smokers' exposure to secondhand smoke in public spaces. In an effort to publicize its commitment to banning secondhand smoke in public spaces and foster greater participation in the initiative, the city government turned the indoor spaces of the entire city hall into no-smoking zones and proposed that restaurants, bus stops, and other public facilities near city hall adopt the no-smoking zone policy as well.

- The assessors advised Gwangmyeong to approach the issue at gradual pace, as it was impossible for all smokers working in city hall to quit smoking overnight, and the growing resistance among employees could be detrimental to the effort. The assessors also advised the city to provide education and training for owners of local restaurants and continue advertising the no-smoking campaign by putting up appropriate banners at bus stops.

○ Landfill Repair Project, Jangsu

- Sanseo, part of Jangsu County, was turned into a public landfill site in July 1998. For 13 years, it was the place where the household waste of local residents was buried. Prior to the scheduled end of household waste burial at Sanseo in December 2012, Jangsu decided to repair the landfill site pursuant to

the Ministry of Environment's Guideline on the Repair of Obsolete Landfill Sites. The HIA of Jangsu's plan focused mainly on the health implications of the proposed onsite repair and management practices and the excavation, sorting, transportation, and disposal, elsewhere, of the waste buried in Sanseo.

- The assessors advised Jangsu to continue monitoring the impact of the landfill repair plan on locals' health in addition to monitoring the release and emission of pollutants from the landfill site.
- Emphasizing locals' direct participation in making public decisions that could affect public health, the assessors also advised Jangsu to advertise its plan to locals and ensure their support and cooperation.

○ General Rural Environment Improvement Plan, Muju

- The General Rural Environment Improvement Plan for Muju-eup in Muju was a rural development project designed pursuant to Article 39 of the Special Act on Improving the Quality of Life for Rural Residents and Promoting the Development of Rural Communities, enforced by the Ministry of Agriculture, Fishery and Rural Affairs (MAFRA). Muju's plan involved creating a "Street of Lights," installing a media façade artwork, creating artificial waterfalls near the county's intercity bus terminal, and

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improving local roads.

- The assessors advised the county to establish a multipurpose facility to encourage the local residents to engage in athletic and communal activities, ensure harmony between newly created structures and their surrounding environments, ensure the health of people who have difficulty using public transportation, and promote the use of eco-friendly materials.

□ HIA of a local disinfection program

- The disinfection program of Dongjak-gu (Seoul) was subjected to HIA to identify the factors of health that should be considered.
- The 10-step environmental health impact assessment (EHIA) process developed in Germany was applied to the analysis of the program, target area, target population, general status of the local environment, foreseeable pollution in the future, and future health impact as well as to the summary of the forecasted health impacts, development of policy recommendations, announcement of the results and feedback, and evaluation.
- Dongjak's disinfection program mainly involved deciding which chemical disinfectants to be sprayed, identifying mosquito habitats, disinfecting vulnerable areas, disinfecting wintering habitats of mosquitoes

during cold seasons, and organizing local disinfection volunteers.

- Based on a review of the available literature, the assessors found that the overuse of the pesticide could have serious consequences on local water and soil and also exert harmful effects on the human body.
 - Although the aim of the program is to protect the health of local residents by eliminating a key carrier of infectious diseases (i.e., mosquitoes), the mishandling and overuse of the pesticide could cause even greater harm to workers and local residents by exposing them to chemical toxins. The assessors thus stressed the need to develop, distribute, and provide training on a safe disinfection guideline for workers and locals.
- HIA of construction in Sejong (2014)
- Sejong was undergoing a construction boom, as the new city was in great need of new housing and facilities. At the time, lots were being prepared, and structures were going up all across the city.
 - However, extent and volume of the construction projects raised concerns over public health, leading to an HIA.
 - The HIA process involved screening (reviewing the validity and scope of HIA), scoping (specifying the

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subjects and methods of assessment), identifying factors of health (socioeconomic characteristics of target populations, major health issues, and prioritization of health factors), analysis of factors of health (polling locals, conducting focus group interviews, and surveying the literature), and writing up the report.

○ Results

- The construction boom in Sejong was anticipated to have some positive impacts on health, particularly through the development of the area and expansion of the local health infrastructure. In the short term, it was also expected to increase income and jobs for locals, which are factors of health in general.
- However, the construction boom was also expected to increase health inequality by widening the socioeconomic gap among locals and undermine the existing networks of friendly neighborly relations necessary for health. Air pollution from construction activities was also expected to increase respiratory diseases in vulnerable groups.
- The assessors advised the city to launch a large-scale survey on local health issues as part of its efforts to monitor the effects on the health of local residents.
- The assessors also proposed that Sejong keep

monitoring air pollution and disclose the information to the public.

3. Development and Operation of an HIA Database

- Research objectives and scope
 - The purpose of establishing an HIA database is to make available online the HIA tools developed inside and outside Korea, HIA reports, and information on the determinants of health in order to support HIA across Korea.
 - A website was launched in 2009 to support the development of the HIA database. It became the platform through which various data pertinent to HIA were gathered and uploaded.
 - The domain for the website is <http://www.hia.kihasa.re.kr>.
 - Defining the scope of the HIA database:
 - Conceptualization of HIA: HIA and related terms were defined.
 - HIA tools: HIA methods, tools, and guidelines developed inside and outside Korea were uploaded.
 - Links to related websites: Other websites providing or supporting HIA, both inside and outside Korea, were introduced.

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- Policy material on HIA: Documents on the national policy and programs for HIA and reports of actual HIA projects undertaken were uploaded.
 - Literature on determinants of health: Nationwide reports on determinants of health were uploaded.
 - Documented evidence for determinants of health: The database was designed to enable users to search for and browse documented evidence on each determinant of health.
 - Case studies: Reports on actual HIA projects undertaken were uploaded.
 - KIHASA's HIA reports were introduced.
- Analysis of the literature and evidence for the HIA database
- Literature on and analysis of correlations between behavior and health
- The multi-database search engine of KIHASA's e-library was used to look up relevant literature and data. The behavioral variables included smoking, drinking, exercising, and dieting as well as psychological/mental factors such as self-esteem and personal conviction.
 - A primary search was conducted using the keywords

“health impact” and “health effect.” Based on the determinants of health returned by the primary search, a secondary search was conducted using the keywords “smoking,” “physical activity,” “fitness,” “exercise,” “alcohol,” “drinking,” “lifestyle,” “behavior,” “health behavior,” “self-esteem,” “confidence,” and “locus of control.”

- Of the 21 articles returned that analyzed smoking as a determinant of health, 17 found smoking to be detrimental to health.
- The articles on physical activity and related keywords assessed such activities as being favorable to health in general.
- Of the 17 articles on drinking, five found consuming small amounts of alcohol to be beneficial to health, and eight found drinking in general to be harmful to health.
- Of the 15 articles on nutrition and dieting, 14 found significant correlations between these factors and health.
- Most of the articles on health-related behavior in general concluded that there are significant and positive correlations between what people do or don't do for health and their health conditions.

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- Of the nine articles on self-esteem, personal conviction, and health, eight found significant or positive correlations between these mental factors and health.
- Literature on and analysis of correlations between social resources and health
 - Social resources were searched for using keywords related to social support, occupations, and interpersonal relations. A primary search was conducted using the keywords “health impact” and “health effects.” A secondary search was then conducted using the keywords “social capital,” “employee,” “social support,” “income level,” and “job security level.”
 - The majority of the 20 articles on correlations between socioeconomic status and health affirmed positive correlations between the two variables.
 - The 17 articles on the correlation between occupations and health reached different conclusions regarding how different types of occupations (professionals, office workers, laborers, etc.), work positions, work-related stress, and workplace environments affect health.
 - The 21 articles on the impact of family and social

support on health analyzed self-help groups, family support, religious activities, and access to medical care as variables of social networks that have positive effects on health.

<Table 1> HIA Website: Structure and Summary (as of 2011)

Area	Categories	Subcategories
Introduction to HIA	HIA definition Glossary of HIA terminology HIA processes HIA techniques, tools, and methods	Taken from publications by WHO, etc.
HIA guideline	HIA manual	Downloadable PDF manual
Literature on and evidence of determinants of health	Categorized by determinant of health	Structured to allow users to search for and browse articles on HIA by determinant of health. Article structure: (1) Title of the article (2) Author(s) (3) Year of publication (4) Methodology (subject, timing, approach) (5) Article classification: determinants of health (6) Article classification: health (7) Conclusion regarding health impact (8) Source
HIA cases	Classification by determinant of health Classification by method	Structured to allow users to search for and browse HIA case reports by either determinant of health or HIA method. Report structure: (1) Title of the report (2) Year of publication (3) Nation of publication (4) Subject matter (5) Method

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Area	Categories	Subcategories
		(6) Determinant of health (7) Source (8) Table of contents (9) File (abridged/original)
Policy and legal systems for HIA	Korean legal system for HIA Overseas legal systems for HIA	Environment and Health Act (Korea) Human Impact Partners (USA) WHO website HIA websites of developed countries
Bulletin board	Korean and international news on HIA News on healthy cities Korean and international HIA events Korean and international HIA websites	Link to WHO website Links to international HIA websites
Introduction to KIHASA's HIAP	HIA research reports Introduction to KIHASA's HIA research projects	Report structure: (1) Title of the report (2) Year of publication (3) Nation of publication (4) Subject matter (5) Method (6) Determinant of health (7) Source (8) Table of contents (9) File (abridged/original)

□ HIA website and renewals as of 2018

○ The HIA website has been renewed, especially in terms of the menu structure and page layout, to maximize its user-friendliness. The menu was streamlined and redesigned to enhance the accessibility, legibility, and convenience of the information provided. The main page was restructured, and new templates for the online HIA system were added.

○ Main components

- Main menu redesigned: The HIA case reports, literature on and evidence of determinants of health, KIHASA case reports, HIA e-Book, policy and legal systems for HIA, and HIA guideline were converted into sub-menu items to make the main menu look more streamlined and navigable.
- Online HIA system menu restructured: Introduction to the online HIA system, templates for relevant policy projects, and RHIAT template were converted into sub-menu items.
- Page layout for online HIA system redesigned: A guide on the application process was added.
- Downloadable templates for online HIA system and related policy projects added: A checklist of requirements for applicants to policy HIA projects, RHIAT template, and RHIAT checklist were added for downloads.

○ Content on knowledge and information was streamlined and integrated into the database to enable users to search for and browse the information they need on the same page. Table 2 summarizes the changes that have been made to the main page of the HIA website.

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〈Table 2〉 Changes Made to the Main Page of the HIA Website

HIA Introduction	Database	Bulletin Board	Online HIA System
HIA e-book	<ul style="list-style-type: none"> - Introduction to the browser for literature on HIA - Guiding text added to help users look up HIA case reports and articles on determinants of health on the "Database." - All search functions were concentrated in the "Database" to facilitate searches. 		<ul style="list-style-type: none"> - Online HIA system - Guiding text added on how to use the online system and download templates.
News & events	KIHASA research projects and reports		
HIA links	WHO	MOHW	Korean Healthy Cities Council

[Figure 1] Renewed HIA Website: Main Page



4. International Relations

□ Health Impact Assessment Thematic Working Group (TWG): Background

- Every three years, the WHO-WPRO and the United Nations Environmental Programme (UNEP) jointly organize the Asia-Pacific Regional Forum on Health and Environment, bringing environment and health ministers in the region together to discuss pressing issues related to the environment and health and develop policy measures that aim to create environments conducive to human health. Participated in by ministers from 14 member countries,²⁾ the meeting has been held three times so far, first in Bangkok, Thailand, in 2007, next in Jeju, South Korea, in 2010, and finally, in Kuala Lumpur, Malaysia, in September 2013.
- The regional forum consists of the High-Level Meeting on Environment and Health, the Advisory Board, and seven thematic working groups (TWGs). Each TWG consists of officials working in the environment and health ministries of their respective countries. Experts participate as partner members. The seven TWGs

2) These were Brunei Darussalam, Cambodia, China, Indonesia, Japan, Republic of Korea, Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

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organize discussions on air quality, toxic substances, drinkable water and hygiene, crisis management, climate crisis, waste, and HIA. The TWG-HIA was newly added to the regional forum during its second meeting in 2010. Membership of the group is voluntary, and KIHASA served as its inaugural chair organization. KIHASA provided the nascent TWG with a work plan for the years 2010 through 2013.

□ Work Plan 2010-2013

Work Plan – Thematic Working Group on Health Impact Assessment

Prepared by: Thematic Working Group members on Health Impact Assessment

WP 1. Background

Many development policies, plans, programs, or projects at private or public sectors in the member countries in the region can affect environment and health of people in the region in both positive and negative ways. Although the environment effects of development have been systematically considered in several countries in the region through Environment Impact Assessment, health effects have not been fully addressed.

Health Impact Assessment can be a useful tool to protect health by predicting the positive and negative health effects of a policy, a plan, a program, or a project and by recommending proper measures to enhance the positive health effects and to minimize the negative health effect. HIA also addresses unequal distributions of health effects on people with different socio-economic backgrounds so that the health of vulnerable populations will not be disproportionately affected by development.

While many member countries have exerted efforts to implement HIA, we need more concerted efforts in the region to develop the methodology of HIA in each country. In order to develop HIA, standardized methodology and tools for HIA need to be development. We also need to strengthen the development of HIA of policies. This can be only achieved in a multi-disciplinary approach. A regional effort is necessary to organize and facilitate these activities.

Although some countries in the region have successfully institutionalized HIA in the government process, many countries implement HIA as an ad hoc project. Without incorporating HIA in the government process, HIA will not be able to be effective as it should be in protecting people from adverse health impacts of development projects, plans, and polices. We need therefore the knowledge on how to institutionalize HIA and how to expand HIA if it has already been institutionalized.

The increased awareness of HIA in various sectors as well as

the health sector is a basis of development and promotion of HIA. Capacity is also required by both consultants and government to set the scope and conduct HIA and to review completed HIA reports. Capacity for HIA will not be developed without some prior planning. Current regional activities for capacity building need to be reviewed and strengthened in terms of communication and exchange of information within the region.

WP2. Objectives

The Regional Work Plan aids the development and promotion of Health Impact Assessment in the member countries through the following objectives.

WP2.1 To share information and knowledge on HIA practices, guidelines and tools, evidence on health effects of various projects, programs, and policies

WP2.2 To develop and promote HIA as an integral part of the decision making process in countries in the region.

WP2.3 To enhance the skills and knowledge of professional staff and others involved in HIA and related areas by building capacity, promoting the dissemination of information and ideas and developing cooperative projects across countries in the region.

WP3. Activities

To achieve the overall objectives, the following set of activities and timelines of three-years are proposed based on the major issues and the necessity of the region.

WP3.1 To share information and knowledge on HIA practices, guidelines and tools, evidence on health effects of various projects, programs, plans, and policies

Activities	Timelines			Lead Institutions
	2010	2011	2012	
1. Collect	->	->	->	MOH, Cambodia
- existing documents on HIA activities/practices				MOH, Mongolia/ MOH, the Philippines
- guidelines and tools				KIHASA, Korea
- evidence				MOH, Thailand/CHETRE, Australia
- list of experts on HIA				
1. Share information via regional website and TWG on HIA website		->	->	KIHASA, Korea/KEI, Korea/CHETRE, Australia
2. Collaborate with other TWG's in collecting and sharing their information in HIA's in their environmental concerns or context	->	->	->	KIHASA/UNEP/WHO/KEI, Korea/CDC, CHINA

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WP3.2 To promote the development of HIA as an integral part
 of the decision making process in countries in the re-
 gion

Activities	Timelines			Lead Institutions
	2010	2011	2012	
1.Document legislations and organizational arrangements for HIA in the region	->	->		KEI, Korea /MOH, Laos PDR, University of New South Wales, University of Otago, and Curtin University
2. Make recommendations on institutionalization		->	->	KEI, Korea/Khon Kaen Univ., Thailand, University of New South Wales, University of Otago, and Curtin University

WP3.3 To enhance the skills and knowledge of professional
 staff and others involved in HIA and related areas

Activities	Timelines			Lead Institutions
	2010	2011	2012	
1. Collect recent training programs and materials and develop a training module, if necessary (if not redundant)	->	->	->	MOH, Vietnam/MONRE, Vietnam/MOPH, Thailand/CHTRE, Australia/ Univ. of Otago, New Zealand
2. Conduct regional technical workshops	->	->	->	KIHASA, Korea/KEI, Korea/Univ. of Otago, New Zealand
3. Collaborate with other TWGs in planning and conducting joint technical workshops	->	->	->	KIHASA, Korea/KEI, Korea/UNEP/WHO/Curtin Univ., Australia

WP4. Outputs

WP4.1 To share information and knowledge on HIA practices, guidelines and tools, evidence on health effects of various projects, programs, plans, and policies

- (1) Compilation of information on HIA practices/guidelines/tools/evidence
- (2) Website for HIA

WP4.2 Promote incorporation of the development of HIA into decision making process of the countries in the region

- (3) Compilation of information on legislations and organizational arrangements for HIA institutionalization
- (4) Recommendations and guidelines on HIA institutionalization

WP4.3 Capacity building

- (5) Compilation of training programs and materials including training modules for HIA
- (6) Reports of technical workshops

WP5. Monitoring and reporting on the TWG activities

The regular reports to the High-level meeting and Regional Forum will give an overview of:

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- Activities implemented over the last term based on Activities and Outputs listed above
- Activities planned for the coming term

WP6. Resources

Outputs	Required Resources
1. Compilation of information on HIA practices/guidelines/tools/activities	(1) Existing resources within the member countries and international partners (2) Documents written in English
2. Website for HIA	(1) Technical knowledge on creating and managing a website (2) Documents written in English (3) Budget (\$100,000/year) (4) Personnel
3. Compilation of information on legislations and organizational arrangements for HIA institutionalization	(1) Existing resources within the member countries and international partners (2) Documents written in English
4. Recommendations and guidelines on institutionalization of HIA	(1) Workshops of member countries and international partners (2) Budget (\$30,000*2)
5. Compilation of training programs and materials including modules for HIA	(1) Existing resources within the member countries
6. Reports of technical workshops	(1) Budget (\$50,000*2)

□ Achievements

○ Budgetary support and operation

- The biggest obstacle prior to the implementation of the work plan was the lack of financial resources. Although the plan included provisions for the budget, there were few organizations capable of meeting the

demand. KIHASA played the leading role in budgeting, while the WHO-WPRO subsidized part of the expenses of organizing the annual TWG meetings held from 2010 through 2012. The WPRO provided financial support on two occasions in 2010 and on a single occasion in 2011 and 2012. Much of the financial assistance went toward the travel, accommodations, and daily expenses of members traveling from low-income countries. While the majority of the attending members were officials working in health ministries, some countries, such as Vietnam, sent officials working in environment ministries as well.

- Since gaining official recognition at the second regional forum meeting in 2010, the TWG-HIA, created under the leadership of KIHASA, has been organizing meetings with members and partners every year.
- The main agenda of each of the TWG meetings was the work plan to be implemented over the years until the next regional forum was to be held. TWG meetings have been organized as back-to-back meetings in conjunction with international conferences or workshops on related topics. In 2010, the TWG meeting was held as part of the Third Asia-Pacific Health Impact Assessment Conference in Otago, New Zealand. Non-Asian countries in the Pacific region also sent

delegates to the meeting, broadening the spectrum of information being exchanged. The TWG-HIA held a joint workshop with TWG-Air Quality in Seoul in 2011 in addition to its own regular meeting. The Fourth Asia-Pacific Health Impact Assessment Conference was held in Seoul in 2012, under the leadership of KIHASA, along with the TWG-HIA meeting.

- Government organizations, university labs, and research institutes can become member organizations of the TWG-HIA, and membership remains voluntary. Full members are officials of the 14 member states that make up the Asia-Pacific Regional Forum on Health and Environment. At the time the TWG-HIA was launched, however, the forum itself had only eight member states, i.e., Cambodia, China, Laos, Mongolia, the Philippines, South Korea, Thailand, and Vietnam. That number increased to nine when the Indonesian government submitted its application to the sixth high-level meeting held as part of the regional forum in Bandung, Indonesia, in October 2011.
- The TWG-HIA includes regional and international partner organizations. Its university members include Curtin University and the University of New South Wales in Australia; Khon Kaen University in Thailand; University of Otago in New Zealand; and Soonchunhyang

University in South Korea. WHO regional organizations have also joined as partners, including the South-East Asia Regional Office (SEARO), WPRO, Regional Office for Asia and the Pacific (ROAP), and Regional Resource Centre for Asia-Pacific (RRC-AP). The Asian Development Bank also submitted its application to participate as a partner.

○ Gathering and exchanging information

- Exchanging information on policy and legal systems for HIA among nations is crucial to the development of HIA practices worldwide. KIHASA gathered information on HIA systems in various countries and shared it via the English HIA website. Included in the gathered information are legal systems, available HIA guidelines, and programs for training HIA personnel. Through this research, KIHASA found that, although some nations in Southeast and Northeast Asia have legal systems in place to support HIA, none of them, except for Thailand, have official HIA guidelines or training programs.

○ Legislative trend of HIA

- The number of TWG-HIA member states adopting HIA as an official tool for policymaking is on the rise. The Thai government, for instance, was one of the

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first to adopt the required legislative grounds and establish an organization tasked with ensuring the systematic implementation of HIA. Although the Laotian government also legislated an HIA policy, the policy was still regarded and practiced as part of environmental impact assessment (EIA). The Philippine government, too, practices HIA as part of EIA. The governments of Cambodia, Mongolia, and Vietnam have been making efforts to institute legislative and policy grounds for HIA, with the Vietnamese government having already provided for EIA and adopted a technical guideline for HIA in development projects.

- Efforts to enhance capabilities to engage in international relations regarding HIA
 - KIHASA has played the leading role in organizing technical workshops to enhance participating members' capabilities in relation to HIA. The institute also organized an opportunity for exchanging HIA information with other states in the Pacific region during the Asia-Pacific Health Impact Assessment Conference in New Zealand in 2010. KIHASA also co-organized a workshop with TWG-Air Quality in Seoul in 2011. The following year, KIHASA organized the TWG-HIA's workshop as part of the Asia-Pacific Health Impact Assessment Conference in Seoul.

- Given the nature and concerns of HIA, the TWG-HIA necessarily discusses a broad range of issues involving both environment and health, such as air quality, drinkable water, hygiene, climate change, safe waste management, and plans for responding to natural disasters. HIA is growing all the more important in policymaking in developing and the least-developed countries.

[Figure 2] HIA Capability Enhancement Workshops

© First meeting in April 2010



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© Second meeting in November 2010 (part of the Third
Asia-Pacific HIA Conference in New Zealand)



© Joint workshop with TWG-Air Quality in July 2011



- ◎ Fourth meeting held as part of the Asia-Pacific HIA Conference in October 2012



5. Development and Application of the Rapid HIA Model for Local Governments in Korea

□ Background

- KIHASA has developed and disseminated a rapid health impact assessment model for the use of local governments in Korea.

There is a high demand for a HIA from local governments. Therefore, it is necessary to carry out pilot projects in local governments prior to institutionalization of HIA.

Seocho-gu has a special interest in the residents' health. Hence, a health promoting system (excellent health index) is needed during the policy (project) making. Rapid HIA was dem-

onstrated on local governments using the operation system and assessment tool proposal that were developed in 2016. The outcomes were used for the final corrections of the assessment tools to ensure its practical application in the field. The pilot HIA results were employed for development of an assessment guideline.

□ Rapid HIA operation system for Seocho-gu

○ System

- HIA committee
- Affiliate organization

- Summary: Establishment of HIA committee when HIA is required
- Aim: HIA committee is the organization that makes key decisions whether policies, proposals, and projects impact on health and establishing, implementing and evaluating short- and long-term plans.
- Role:
 - HIA guideline (simplified assessment, comprehensive assessment) establishment
 - Monitoring and evaluation of HIA
 - Decision making on the workforce such as the person in charge of HIA implementation, and specialists, etc.
 - Schedule planning and reporting consultation
 - Review and decision making on employing external serv-

ices, when setting up a comprehensive evaluation

- Composition:

Chairperson: (deputy) mayor of -gu

Number of committee members: Odd number of 9~11 persons (at least one member of the (deputy) mayor of -gu, public health clinic, civic group, project manager, and HIA expert)

Composition of committee: consists of multiple departments within local government.

(deputy) mayor of -gu, public health clinic director (1) and staffs (2), and external experts (2), civic group representatives (2 or more), project manager (2 or more)

※ Decision is made after comparing the pros and cons presented

- Establishment of 'service bureau' and 'sectoral advisory group': The service bureau is responsible for preparing the data for decision making by the HIA committee. The advisory group keeps in contact with the pool of experts for each sector and provides a consulting service or recommends relevant experts.

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Category	Service bureau	Advisory group
Role	- Collect data, make surveys, prepare meeting materials, etc. that helps committee's decision making	- Provide expert opinion on each area when requested by the committee
Composition	- 1 permanent employee at public health clinic	- Appoint 5~7 people from each of sectors: Culture and Sports / Education (Administration Supporting Bureau) / Local Economy (Planning and Budget Bureau) / Social Welfare / Environment (Life and Welfare Bureau) / Housing / Urban Planning (City management Bureau) / Transportation (Construction and Transportation Bureau)
Note	- If the committee is located outside the public health center (directly under the Planning Department, (Deputy) Mayer of -gu), problems with the approval line, administrative problems (work evaluation, etc.)	-Need to budget for consulting fees

Source: Gangseo-gu Public Health Center / Inje University (2014). Development of HIA model for local governments

A. Rapid HIA in the Healthy City Projects of Jongno-gu (Seoul)

□ Overview

- The rapid HIA model developed by KIHASA was applied according to the RHIAT Guideline for Local Governments established in 2017, with working-level officials of the Jongno-gu Government being trained accordingly. The RHIAT for local governments comes with a checklist designed to help local officials check

and monitor their HIA activities and practices. The model was designed with ease of use and the convenience of local officials in mind.

- The HIA committees, assembled to undertake the rapid HIA, evaluate whether and how the given policy measures, propositions, and projects affect the local populations and make important decisions regarding short- and long-term planning as well as the execution and evaluation of the plans.

□ Target projects

- The rapid HIA was conducted in relation to the 40 core Healthy City Projects of Jongno-gu in 2018, and the projects to be assessed were chosen according to the selection criteria of the rapid HIA. Five HIA experts developed the checklist for the selection of projects using the given screening tool. After the 40 projects were screened and scored, five were chosen for analysis.

〈Table 3〉 Rapid HIA

Stage	Assessors	Assessment criteria
Stage 1: Selection of projects to be subjected to rapid HIA	Organizing HIA committee (Officers and researchers in charge of HIA)	<ul style="list-style-type: none"> • Whether the given project affects health • To what extent the given project affects health • How long it would take the given project to affect health • Whether the given project affects the health of vulnerable groups

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Stage	Assessors	Assessment criteria
Stage 2: Implementation of rapid HIA	HIA researchers and Working-level officials in charge of given projects	<ul style="list-style-type: none"> • Checklist of five areas of determinants of health (Socio-economic environment, physical environment, community effect, personal lifestyle, population factors(gender, age, stakeholders)) • Review of positive and negative effects of determinants • Identification of necessary changes to combat negative effects
Stage 3: Report of results of HIA and Policy recommendation	HIA researchers and in charge of HIA	<ul style="list-style-type: none"> • Interpretation of the results of HIA on the given project and general review of likely health consequences of the project • Definition of scope of recommendations/advice to be given • Writing of report

Source: Kim, J., Lee, N., Kim, J., Son, A., and Jeong, J. (2017). Health Impact Assessment Program Operation 2017 (Details 2): Application of the HIA Models for Local Governments. KIHASA. p. 41 (supplemented).

<Table 4> Project Subject to Rapid HIA and Departments in Charge

No.	Project	Department
1	Health Management on Visit	Health Visit Team (Health Promotion Division)
2	Our Neighborhood Safety Watchers	Emergency Safety Team (Safety and Flood Control Division)
3	Freeing Jongno from Particulate Matter 2018	Facilities and Equipment Team (Sanitation Management Division)
4	Green Start (Low Carbon Footprint Lifestyle) Project	Environment Management Team (Environment Division)
5	Disability-Free Neighborhoods Project	Disability Welfare Team (Social Work Division)

□ Results

- Incentives should be provided for officials in charge of HIA, and other such measures should be introduced to make HIA a vital part of local policymaking and efforts to promote health.
- The clarity of rapid HIA checklists should be improved; the questions should be refined further; and

quantification measures introduced to ensure greater objectivity of assessment results.

B. Participatory rapid HIA for the no-smoking zone expansion policy of Songpa-gu (Seoul)

- The Songpa-gu Public Health Center officially requested KIHASA's technical support regarding HIA on June 8, 2018.
- Complaints had been mounting over the prevalence of smoking on the streets around Jamsil Subway Station, as office workers working in nearby buildings would take their smoke breaks in the area on a regular basis. With the active participation and leadership of local residents, Songpa-gu designated the entire area as a no-smoking zone. It now wanted to analyze the effects of that policy using rapid HIA in which locals themselves would participate.

1) Objectives and scope

- Under the supervision of the Songpa-gu Public Health Center, copies of the questionnaire for the opinion poll on the effects of the no-smoking zone expansion policy were mailed to residents of apartment buildings and

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workers in the workplaces and retail facilities within the vicinity of the no-smoking zone.

- A system of communication was established to enable the sharing of updates on the poll.
 - The center used the system to keep KIHASA informed of the questions and issues that arose in the process.
- The center processed the poll results, along with the original questionnaire, coded data, and visualized findings of the analysis, and submitted them to KIHASA.
- As no particular incentives or rewards were provided for the poll participants, the poll relied on their willingness to participate.

2) Poll structure and process

- Self-answered opinion poll
- Target area: neighborhoods surrounding Jamsil Subway Station in Songpa-gu, Seoul
 - In the vicinity of areas designated as outdoor no-smoking zones
- Spatial scope
 - West to east: within 420 meters of Olympic-ro 35-gil (Tower 730 to Jamsil The# Star Park)
 - Southeast: within 330 meters of Olympic-ro 35-gil

(Jamsil The # Star Park to Exit Gate 9 of Jamsil Station)

<Table 5> Rapid HIA Tool on Outdoor Secondhand Smoke and No-Smoking Zone Policy

Health determinant category	Answer type	Specific descriptions
Socioeconomic environment	Affirmative	<ul style="list-style-type: none"> - Some anticipated that the loss of tobacco sales revenue could be offset by increases in revenue of other businesses and industries. - Generally, support for the outdoor no-smoking policies was high, as was the case in the legislative examples of other developed countries. There were numerous smokers who supported banning smoking in outdoor areas near restaurants and bars. - Retailers located in the no-smoking zone expected that the policy would increase the numbers of non-smoking and family customers.
	Negative	<ul style="list-style-type: none"> - Although business owners facing intense competition in the market tend to be disparaging of any and all policy changes, the majority of studies report that these policy changes have little to no economic effects. - Consumer research has found that the designation of no-smoking zones has little influence on consumer behavior.
Housing and working conditions (physical environment)	Affirmative	<ul style="list-style-type: none"> - There is a report that shows the particulate density (PM2.5) is higher in outdoor areas frequented by smokers. - Some reports link no-smoking zone policies to health improvements among employees.
	Negative	<ul style="list-style-type: none"> - The policy has increased the amounts of litter, including cigarette butts, in and around smoking zones in residential neighborhoods.
Effects on society and local communities	Affirmative	<ul style="list-style-type: none"> - The policy has helped reduce drinking and smoking at home. - Some have reported that the policy also leads some smokers to quit smoking. - There is great popular support for banning smoking in public spaces, such as bus stops.
	Negative	<ul style="list-style-type: none"> - Smokers are generally unaware of the new no-smoking zones. It thus takes time for the policy to have any substantial effect. To address this issue, advertising efforts should be increased.

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Health determinant category	Answer type	Specific descriptions
Personal (lifestyle and mental health)	Affirmative	<ul style="list-style-type: none"> - Secondhand smoke is a major cause of lung cancer. Reducing the risks of secondhand smoke requires drastic measures, such as the prohibition of smoking in certain areas. - The policy can also better protect the health of vulnerable groups and encourage smokers to quit smoking.
	Negative	<ul style="list-style-type: none"> - The policy increases stress on smokers and may raise concerns over smokers' rights being violated. - As women smoke less than men, secondhand smoke causes greater harm to women than men.
Other	Affirmative	<ul style="list-style-type: none"> - The policy can strengthen the protection of health for vulnerable groups. - The policy embodies care for immigrants, the poor, and other minorities.
	Negative	<ul style="list-style-type: none"> - Health experts mishandle popular misperceptions of the health effects of smoking.

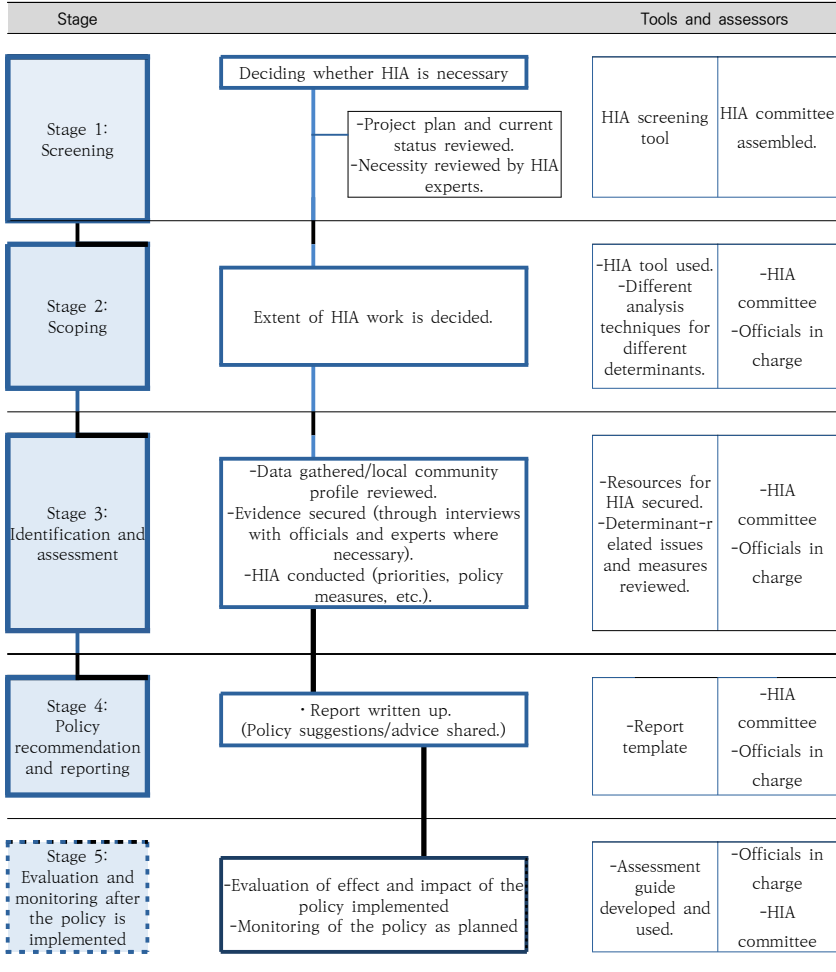
Note: See the HIA tool provided in Kim et al. (2017), p. 58.

3) Results

- The results of the opinion poll were shared, briefings were held for locals, and the feedback received there was used to help improve the policy and advisory report on the future implementation of the policy.

C. HIA of the City Vacating Project in Jongno-gu (Seoul)

[Figure 3] HIA Flow



Source: Kim et al. (2017).

□ Opinion poll on pedestrians' satisfaction with the City Vacating Project

- This poll was conducted with the IRB's approval and targeted lay citizens who agreed to participate in interviews in neighborhoods subject to the health impact of Jongno-gu's City Vacating Project, i.e., the area surrounding Pilun-daero, area in front of Gyeongbokgung Palace, and neighborhoods along Seoul City Wall.
- Poll method: one-on-one interviews with residents of Jongno-gu, Seoul
- Subject matter: perceived convenience and safety of improved pedestrian environments, and residents' satisfaction with them
- Target areas: Pilun-daero, Gyeongbokgung Palace Subway Station, and the surrounding areas and neighborhoods along Seoul City Wall in Jongno-gu, Seoul
- Interview subjects: 714 male and female pedestrians walking in the target areas
- Interview period: June 25 to September 10, 2018
- Polltakers: 10 trained polltakers
- Analysis: The pedestrians' answers to the questions were

coded and converted into digital data for statistical processing using the Statistical Package for the Social Sciences (SPSS).

- ○ Selection of interview subjects: Only pedestrians who had read the written guide on the opinion poll and expressed their agreement to participate, both orally and in writing, were included in the poll.
- Results
 - A total of 714 pedestrians walking in the target areas surrounding Pilun-daero, Gyeongbukgung Palace Subway Station, and Seoul City Wall participated in the poll. Of these, 72 percent rated their subjective health as good.
 - The largest percentage (45.2 percent) of participants used pedestrian roads in the target areas to commute, particularly near Hanyang Fortress and Gyeongbokgung Palace Subway Station. They also used these roads to access shops (23.0 percent) and exercise (12.6 percent).
 - When asked to rate their satisfaction with the pedestrian environments in the target areas on a five-point scale, the participants gave an overall average satisfaction score of 3.0, while 28.9 percent of them gave scores of 4.0 and 5.0. Satisfaction

depended more on the areas than either the sex or the age of the pedestrians. While the pedestrian environment that garnered the satisfaction of the highest percentage of pedestrians (36.5 percent) was Pilun-daero, the overall satisfaction score remained low. Neighborhoods along Seoul City Wall tended to fare poorly in terms of specific criteria of pedestrian satisfaction.

- All target areas were also rated rather poorly in terms of safety against car accidents.

□ HIA results

- The results of the opinion poll were reviewed and discussed with officials in charge of the City Vacating Project as part of the consultations on health-promoting policy factors.
- As both the City Vacating Project and three other policy projects of Jongno-gu subject to comprehensive HIA had the goal of enhancing the convenience and safety of walking and according better health to vulnerable groups, it was important to revisit the projects in light of the determinants of health that the poll revealed.
- It was also necessary to tailor pedestrian support to different types of pedestrians, such as seniors, people with disabilities, and baby stroller users. Surveillance

cameras were also recommended to help keep pedestrians safe from crime on the street.

- City officials were advised to consider factors of pedestrian experience (quality of streets, prevention of accidents and crime, continuity of walking, and inconveniences of walking) as well as the numbers of pedestrians walking these streets for commuting and other purposes.

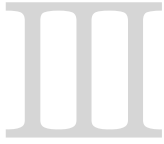
□ Assessment and monitoring plans

- It is important to assess pedestrians' satisfaction regularly in light of the demographic diversity of pedestrians.
- Continuous monitoring of pedestrian environments is important to minimize inconveniences and obstacles to walking for seniors, people with disabilities, and baby stroller users.
- Opinion polls and interviews with locals should be organized regularly to collect and review data necessary to improve the pedestrian environments and encourage locals to walk and exercise more.



Conclusion and Policy Suggestions

1. Conclusion
2. Policy Suggestions



Conclusion and Policy << Suggestions

1. Conclusion

- Officials and locals were encouraged to participate in HIA. Their participation deepened their understanding of the health impacts of policies and led them to discuss ways to improve policy effects.

- The rapid HIA tool (RHIAT) was distributed to all local governments nationwide and is expected to strengthen such governments' determination to become healthy cities. Because the RHIAT is relatively affordable and available online via KIHASA's HIA website, local governments will be able to make more efficient use of it in the future.

2. Policy Suggestions

- Increase technical support for HIA.
 - As an increasing number of local governments are working hard to incorporate HIA into their policymaking, owing to their aspiration to transform their jurisdictions into healthy cities, it is important to increase technical support for HIA. The tools for

providing such support may vary from program to program, but they can all be improved over time as experience is accumulated. The Korean government may receive, at the beginning of each year, all local governments' requests for technical HIA support, and oblige them by assigning experts in diverse fields in a planned manner to facilitate participatory rapid HIA and provide technical support.

- Devise strategies to increase participation in all stages of HIA.
 - Diverse strategies should be developed and applied to encourage the participation of more stakeholders in HIA at local levels. Opportunities should also be provided to enhance their HIA capabilities.

- Increase support to protect the health of vulnerable demographic groups.
 - Our study revealed the need to increase the assessment and review of determinants of health particularly in relation to vulnerable demographic groups, such as baby stroller users, people with disabilities, and children. As secondhand smoke in public spaces tends to be more detrimental to children and youth than adults, thus engendering much public complaints and criticism, it is

important to tailor HIA to these and other such concerns regarding the health of vulnerable groups.

- Identify tasks involved in fostering healthy environments for citizens.
 - Policy measures should be devised to foster safe living and pedestrian-friendly urban environments and promote physical activity and health as a means of preventing chronic diseases and increasing health spans.

- Develop health policies for preventing premature deaths and chronic diseases.
 - Policy measures designed to prevent premature deaths and chronic diseases and promote healthy aging should also be introduced to boost local economies.