

RESEARCH

Environmental Justice Institute

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# Environmental Justice in Korea

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– Specially, focusing on Environmental Health –

2019. 11. 15.

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# 1. Environmental Justice Sector on EPA, KOREA(2017)

**korea has made remarkable progress in corrective justice by strengthening its liability regime for compensating environmental damage to health, property and welfare. however, not everyone has the same access to environmental goods and services and some are more exposed than others to environmental harm. there is potential to improve environmental democracy. Clarifying korea's environmental justice objectives would help strengthening progress made in these areas.**



Symposium on inequality at rural area(2019.2.21.)



Environmental Justice Forum(2019.6.13.)

\* Environmental Justice Forum was held by Ministry of Environment to make the strategy and action plan on environmental justice and promote the related policy.

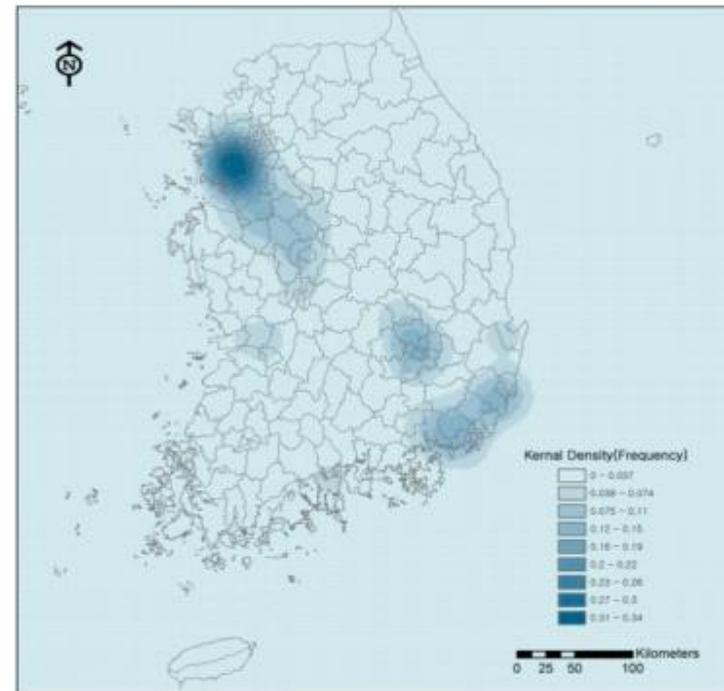
## distributive Justice (분배적 정의)

- ⌘ Korea's income inequality and relative poverty have declined in recent years, but remain high. The rate of relative poverty among the elderly is the highest in the OECD. Public social spending as a share of GDP is less than half the OECD average.
- ⌘ Access to environmental goods and services (such as water services and green space) and exposure to environmental harm (such as air pollution) varies significantly between regions, between cities and between urban and rural areas (Figure below).

Figure 9. Environmental quality of life varies between regions

Administrative district	Air pollution Mean exposure to PM <sub>2.5</sub> , µg/m <sup>3</sup> , 2014	Water Population connected to the national water supply network, 2014	Sanitation Population connected to sewerage, 2014
 Gyeonggi-do	33	98%	94%
 Seoul	34	100%	100%
 Busan	19	100%	99%
 Gyeongsangnam-do	19	92%	88%
 Incheon	35	99%	98%
 Gyeongsangbuk-do	22	89%	79%
 Daegu	24	100%	98%
 Chungcheongnam-do	30	83%	73%
 Jeollabuk-do	26	95%	85%
 Jeollanam-do	22	85%	75%
 Chungcheongbuk-do	28	90%	86%
 Daejeon	30	100%	97%
 Gwangju	30	100%	99%
 Gangwon-do	22	89%	86%
 Ulsan	20	98%	98%
 Jeju-do	19	100%	91%
 Sejong	30	82%	81%
 Korea	29	96%	93%

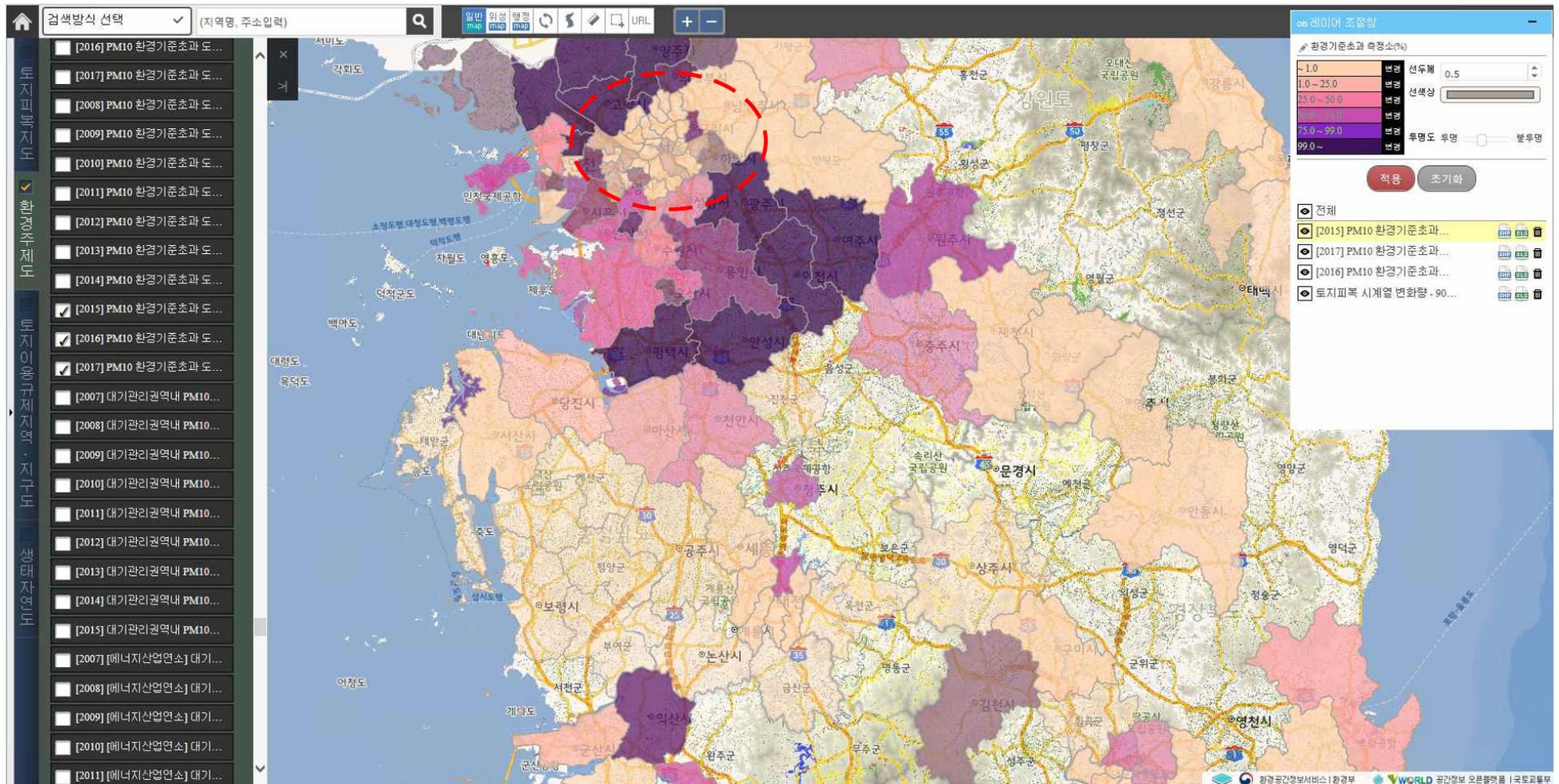
Note: Water - Excluding village waterworks and small facilities managed by local authorities.  
Source: KOSIS (2016); Ministry of the Environment (2015), *Environmental Statistical Yearbook 2014*; OECD (2016), OECD Environment Statistics (database).



Kernel density of the number of TRIs in 2010\*

\* Source : An Analysis of the Distribution of Toxic Release Inventory (TRI) Facilities and Toxic Releases

✂ Ambient Air Quality on PM10(미세먼지) at Seoul, capital city in korea, and Gyeonggi-do.



- ⌘ Korea has made progress in analysing environmental health issues. The Environmental Health Survey has revealed high levels of exposure to heavy metals and pesticides nationwide. Other surveys have shown elevated levels of pollutants in industrial complexes and abandoned mines with health implications.
- ⌘ There is little information on the incidence of polluting facilities in rural vs. urban areas, nor on where polluting facilities are situated in relation to vulnerable households.

### **Corrective Justice (교정적 정의)**

- ⌘ Responding to a sharp increase in chemical incidents, Korea made it easier for victims to access compensation for environmental damage to health, property and welfare. The Liability and Relief Act in 2016 shifted the burden of proof from victims to polluters (see box).
- ⌘ Korea has a robust liability regime for soil contamination targeted at environmental remediation. It could serve as an example for assigning responsibility for past damage to water bodies and ecosystems.
- ⌘ The country has strengthened chemical safety regulations. Since 2015, the Act on the Registration and Evaluation of Chemicals (Korea REACH) imposes reporting and registration requirements on chemical manufacturers, importers or sellers. A 2015 amendment to the Chemicals Control Act expands the number of workplaces required to report to government on types and quantities of chemicals treated.

## **Procedural Justice (절차적 정의)**

- ⌘ There is potential to improve public participation and access to information on environmental matters. This is illustrated by the controversy over some high-profile development projects such as the Four Rivers Restoration Project and high voltage transmission lines in Milang.
- ⌘ Disclosure of environmental information is growing, but some remains classified to protect private economic interests.
- ⌘ While non-governmental organisations (NGOs) are involved in strategic policy planning, there is no public participation in environmental permitting. Further, public engagement in EIA remains limited to local residents.
- ⌘ The long-standing alternative dispute resolution system has been successful at handling individual disputes. However, it is not designed to address major environmental conflicts.

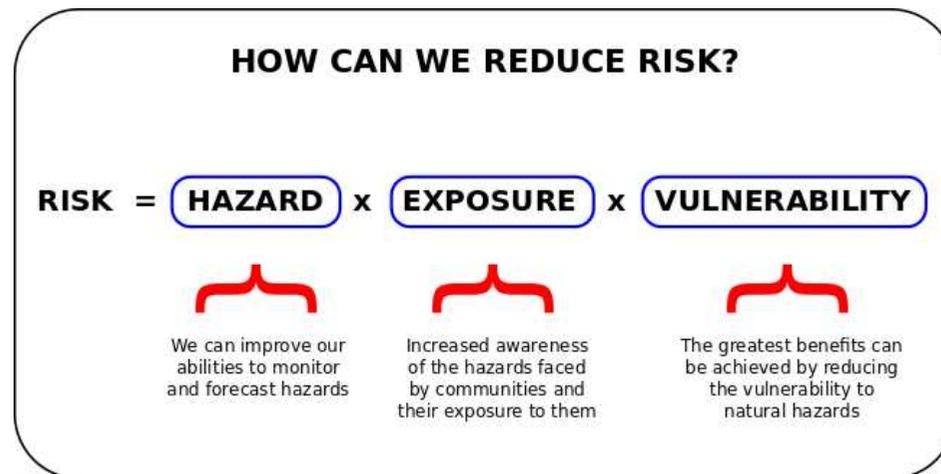
## **next steps | environmental justice**

- ⌘ Expand analysis of exposure to environmental risk in rural versus urban areas and with respect to vulnerable households. take distributive impact into account in policy making.
- ⌘ Involve the public in environmental permitting decisions. open the EIA(environmental impact assessment) process to the general public and NGOs.

## 2. Vulnerable population on Environmental Risk

### 1) Health Impact Survey on vulnerable population

⌘ Health impact surveys have also been carried out on vulnerable populations in the surroundings of abandoned mines and industrial complexes. Detailed resident health impact surveys were conducted regarding 17 abandoned metal mines from 2005 to 2007, and detailed investigations and follow-up measures have been implemented since 2008 for residents who have exceeded heavy metal limits. A preliminary health impact survey was also conducted in 2007 on 401 abandoned metal mines that have exceeded soil contamination limits and therefore cause concerns over health impacts. The results of the preliminary survey identified 39 areas that required closer examination, and health impact surveys were completed in these areas in 2011.



## 2) Protecting the Health of Children and other Sensitive Populations

⌘ The Ministry of Environment focuses on reinforcing environmental services for children, older adults, low-income earners, and other populations that are vulnerable to health damage caused by environmental pollution. Children are particularly vulnerable to exposure to environmental pollution or chemical substances because they have a high metabolic rate per unit mass, their respiratory and reproductive organs are not fully developed, and they tend to put anything they can reach in their mouths. Accordingly, environment health policies are being implemented with a priority on protecting children's health.



Certificate on Safe Zone for Children



Regulatory Criteria on the facility like kindergartens, schools

### 3) Protecting the Health of vulnerable people from environmental disease like atopic dermatitis, asthma, allergic rhinitis

⌘ The Ministry of Environment is promoting environmental disease management measures for vulnerable people for 1,800 households annually, in order to reduce the burden of environmental risk caused by indoor/outdoor environmental pollutions. Details are as follows.

- ① Measure 6 items of harmful substances\* causing environmental disease by household
  - \* Fine dust, Mold, TVOC, HCHO, CO<sub>2</sub>, House dust mites
- ② Provide vulnerable people, which is over-exposed to hazardous materials, the environmental risk communication on the potential hazard about environmental disease
- ③ Provide vulnerable people, which live with poor indoor environment, newly applied interior wall and floorboards as a good quality of products with environmental mark certification to improve indoor environmental condition.
- ④ Provide medical treatment for the preventive care of children and teenager with atopic dermatitis, asthma and allergic rhinitis

#### ■ Procedure





Indoor Air Quality Monitoring Equipment



Application of eco-friendly wallpaper on old house



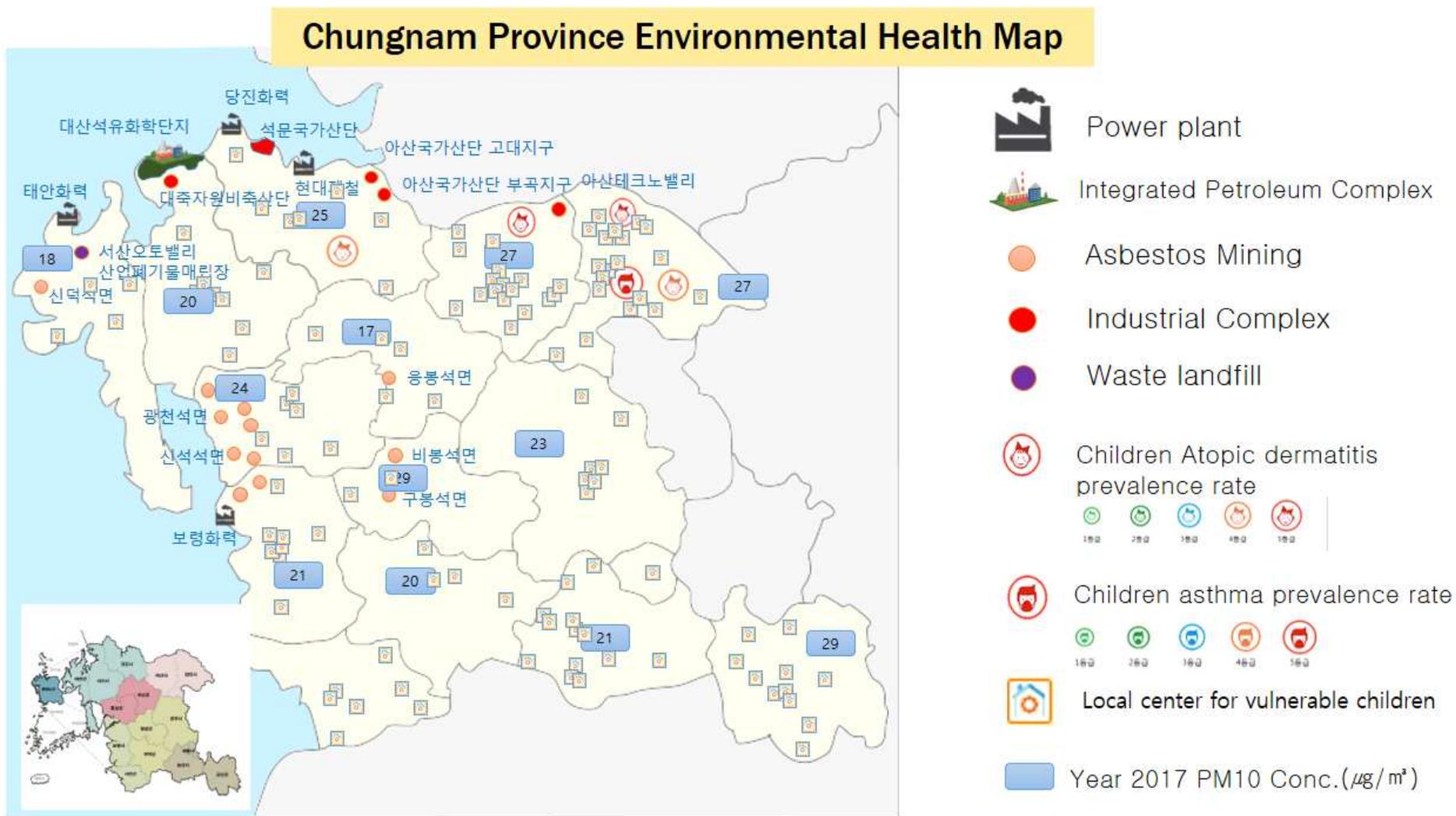
Record Indoor Air Quality



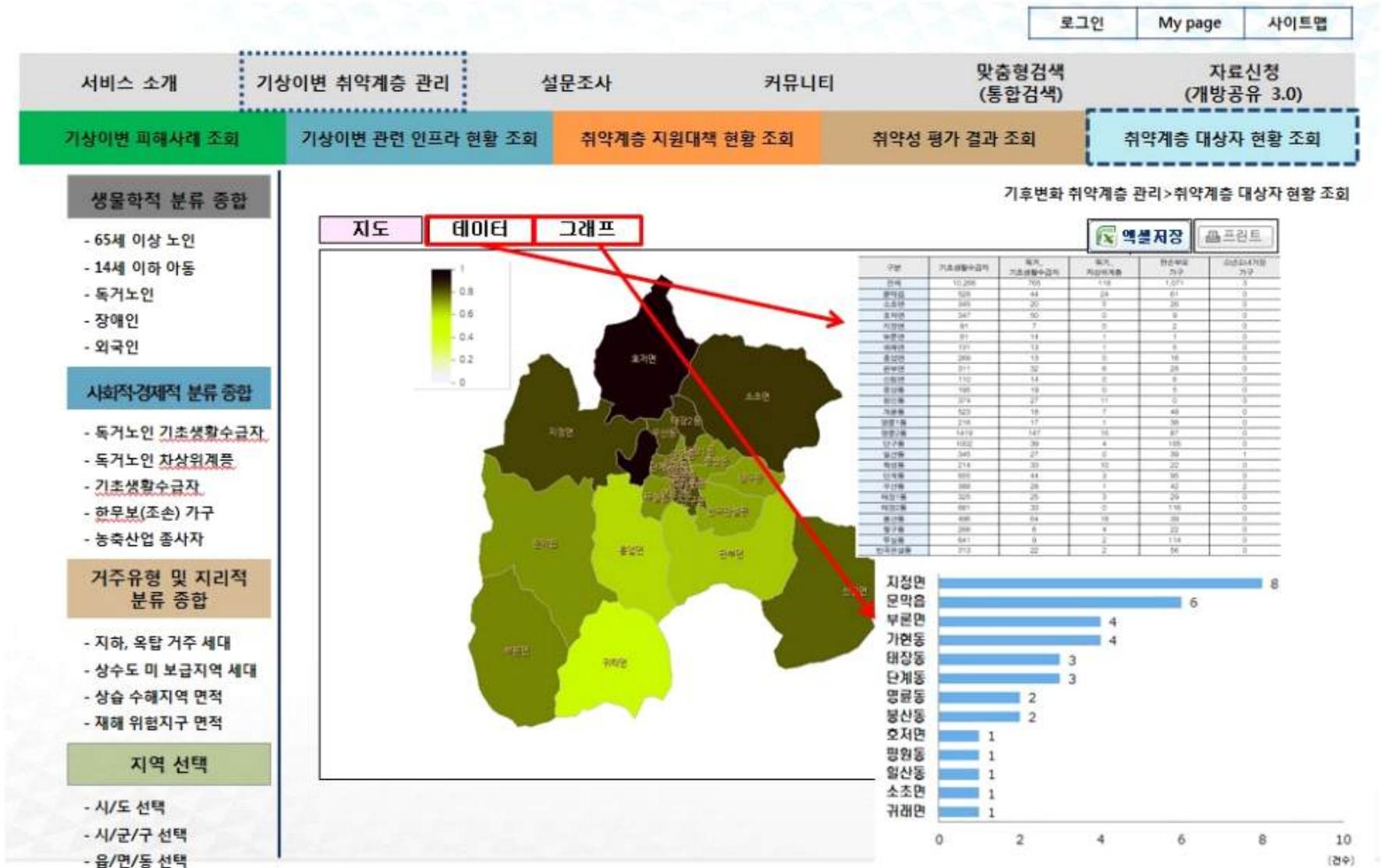
Medical program for at-risk child suffering from asthma

### 3. web-based Environmental Health GIS system

⌘ The Combination on Environmental Health Information and Toxic Release Facility



# ⌘ The Spatial Distribution of Vulnerable People on Climate Change / Environmental Health Risk



\* Source : Study of systematic support program for vulnerable group on climate change (KEI, 2014)