Estimating GHG and air pollutant with SSP scenario: case study of Republic of Korea

Jin Han Park[1], Dong Kun Lee[2], Chan Park[3], Mi Jin Lee[4], Tae Yong Jung[5+], Sun Yong Sung[1], Yong Won Mo[1], Ho Gul Kim[1*], Sang Kyun Kim[6], Sung Chul Hong[6]

[1]Graduate School of Environmental Studies, Seoul National University, Korea
[2]Department of Landscape Architecture, College of Agriculture and Life Sciences, SNU, Korea
[3]National Institute for Environmental Studies, Japan
[4]Department of Landscape Architecture, Graduate School of Seoul National University, Korea
[5]KDI School of Public Policy & Management, Korea
[6]Global Environment Research Division, National Institute of Environmental Research, Korea

Recently, Korean government announced the greenhouse gas emission reduction target in 2030. To reduce greenhouse gas and air pollutant effectively, setting reasonable socio-economic goal is essential. In addition, air pollutant from GHG emission could be hot issue due to its trans-boundary characteristics. Therefore, it is necessary to estimate GHG and air pollutant apply with detailed socio-economic scenario.

In this study, we estimated GHG and air pollutant by using AIM/Enduse model. We set our base year as 2010 to enhance accuracy of estimation. Most of database collected from government agency and related research institute for update service demand and BAU scenario.

Total emissions are about 564 million tCO_2.

In conclusion, it is necessary to apply proper polices to reduce GHG and air pollutant to reach emission reduction target. At the same time, we could reduce more air pollutant and GHG emission by changing energy mix and high efficiency devices.