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Integrated Climate and Air Quality Prediction System

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It is highlighted that there is a need to setup the modeling system in the integrated manner, for assessing the feedback mechanism between climate system and air quality, i.e., the impact of climate change on the air quality and the impact of the air quality on climate change. With this regarding, the Ministry of Environment, Korea has developed the modeling system integrating both climate change and air quality so as to provide decision makers of various fields with the informative and credible scientific basis for adopting optimal policies from regional to local scales. An integrated modelling system consists of four numerical models which are climate/air quality future projection models with the global/regional spatial scale. Using this system, we made the future climate and air quality projection with the IPCC Special Report on Emissions Scenarios (SRES) A2, A1B, and B1 scenarios up to 2100s time horizon. These climate and atmospheric variables predicted from simulations will be used to estimate the quantified inter-impact between climate change and atmospheric environment, the direct and in-direct effect of climate change, and so on. Furthermore, it can give the scientific information for the international effort for the other East Asia region.