EGU2020-11979
https://doi.org/10.5194/egusphere-egu2020-11979
EGU General Assembly 2020

The Progress of KMA's Impact-based Forecasting

Hyojin Han, YoungYoung Park, Ji-Hyeon Kim, Yongjun Ahn, KyongJun Lee, Ji Ae Song, Yeongseon Kim, and Wonho Kim
Korea Meteorological Administration, Impact-based Forecast Team, Korea, Republic of (hyojinhan@korea.kr)

The Korea Meteorological Administration (KMA) set a main policy goal as "Impact-based forecasting (IBF) for mitigation of meteorological disaster risks" in 2016. As a first step toward the goal, each regional office of the KMA operated a prototype of impact-based forecast service tailored to major severe weather conditions in each region from 2016 to 2018. As a result, the prototype service was found to contribute to reducing meteorological disasters in those regions. In order to determine quantitative impacts caused by meteorological disasters, a multi-ministerial R&D project was began in 2018 which is aiming to develop the Hazard Impact Models (HIM) for heavy rainfall and heatwave/coldwave. The project will be completed by the end of 2020, and the developed HIM will be operated for the KMA operational IBF.
The KMA officially launched heatwave IBF service from June to September 2019 in order to support effective reduction of heatwave impacts. The KMA provided risk levels in different colors (attention-green, caution-yellow, warning-orange, danger-red), impact information and response tips for seven sectors—health, industry, livestock, aquaculture, agriculture, transportation and electric power—considering the regional characteristics. This information was disseminated to the public on the KMA's website. It was also provided to disaster response related agencies through the Meteorological Information Portal Service System for Disaster Prevention, as well as to local governments' disaster response managers and officials managing the socially vulnerable people through mobile text messages. According to user satisfaction survey, a great number of users showed positive responses to the KMA heatwave IBF. Based on the success of heatwave IBF, coldwave IBF trial service was offered from December 2019 to March 2020. In addition, KMA plans to expand IBF to other high-impact weathers such as typhoon, heavy snow, heavy rainfall, and so on.