CLIMATE AND HAZE EPISODE IN THE UPPER NORTH OF THAILAND

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Haze episode frequently happening in the upper north of Thailand for a decade. One of the influencing factors is climate aspect such as temperature, relative humidity, precipitation and other climate factors as well. The climate factors and pollutants factors were analysed from 1996 to 2017 using the records from the pollution control department monitoring station. The results showed that the ozone and particulate matters 2.5 (PM2.5) have been increased to 51% and 38%, respectively. Normally PM10 has been used as an indicator for haze episode if the daily concentration is over the national standard concentration. We found that during the dry season, number of days with high concentrations has been increased particularly in the Upper North region. Normally, haze is always detected in Apr' and Mar' every year. The haze episode was correlated with climate factors and some pollutants. In addition, we also found the socio-economic factor and transboundary of particles and aerosol movement. The consequences of haze episode are not only the health impact but also the socio-economic status of the country. The health related to climate factors are respiratory diseases, cardiovascular disease and also lung cancer. The spatial coherent and widespread of haze and respiratory diseases were also observed in the upper north of Thailand. Changes in climate factors and its consequence in Thailand would have substantial health, socio-economic and ecological impacts. The challenging of climate change and its impacts in Thailand has been considered, the government and involved organizations have initiated the project to conduct for more understanding and the mitigation and adaptation for the future.

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