

Benefits of using remote sensing for health alerts and chronic respiratory exposures

Respiratory diseases such as asthma can be triggered by environmental conditions that can be monitored using Earth observing data and environmental forecast models. Frequent dust storms in the southwestern United States, the annual cycle of juniper pollen events in the spring, and increased aerosol and ozone concentrations in summer, are health concerns shared by the community at large. Being able to forecast the occurrence of these events would help the health care community prepare for increased visits to emergency rooms, as well as allow public health officials to issue alerts to affected persons. This information also is important to epidemiologists for analyzing long-term trends and impacts of these events on the health and well-being of the community. Earth observing data collected by remote sensing platforms are important for improving the performance of models that can forecast these events, and in turn, improve products and information for decision-making by public health authorities. This presentation will discuss the benefits of using remote sensing data for forecasting environmental events that can adversely affect individuals with respiratory ailments. The presentations will include a brief discussion on relevant Earth observing data, the forecast models used, and societal benefits of the resulting products and information. Several NASA-funded projects will be highlighted as examples.