

London asthma sufferers get space-based help

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The city of London has launched an innovative service, funded by ESA, which delivers air pollution alerts and health advice via SMS text messages to those who suffer from asthma and other conditions vulnerable to poor air quality.

The airTEXT service officially kicked off at London's City Hall yesterday with the Deputy Mayor of London Nicky Gavron addressing the event: "There's more than love in the air this spring! Air pollution causes around one thousand premature deaths each year, and we must do everything we can to cut emissions.

"This pioneering service will provide people with crucial information about peak periods of air pollution localised for their part of London, so

they can take action. It could literally save lives."

AirTEXT is a free service aimed at those who have been diagnosed with asthma, emphysema, bronchitis, heart disease or angina as well as for those who live or work in London. The service has operated in the Borough of Croydon, the largest borough by population, since July 2005 and has received a positive response with 80 percent of users saying it has helped them manage their symptoms better and reduce their exposure to air pollution.

Subscribers can choose whether they want airTEXT alerts delivered through SMS text messages, voicemail or e-mail and whether they want to receive the alerts the morning of days when air pollution is likely to be higher than normal or the evening before. Forecasts are generated for each London borough.

Messages will indicate moderate, high or very high levels of pollution are expected, what effects are likely to be noticed, such as wheezing, difficulty in breathing or chest pains, and what should be done to minimise the effects, such as avoiding long periods outdoors, avoiding strenuous outdoor activity and increasing the dose of reliever medication as directed by a physician.

The Cambridge Environmental Research Consultants (CERC) developed airTEXT using information from ESA's PROMOTE project, which aims to improve air-quality forecasting using satellite technology. In addition, PROMOTE aims to construct and deliver a sustainable and reliable operational service to support informed decisions on the atmospheric policy issues of stratospheric ozone depletion, surface ultraviolet (UV) exposure, air quality and climate change.

PROMOTE, PROtocol MOniToring for the GMES Service Element on Atmospheric Composition, is itself part of Global Monitoring for

Environment and Security (GMES), a joint initiative between ESA and the European Commission to combine all available space- and ground-based information sources to develop an independent European environmental monitoring capacity from planetary to local scales.

The airTEXT service works by combining satellite data from ESA's Envisat on regional air quality forecasts provided by PROMOTE with information on local road traffic patterns and monitoring stations around the city. Regional air quality information is important because not all the pollution affecting a city actually originates there. Depending on the weather, studies show that up to half the air pollution found in some European cities might have come from elsewhere in the continent.

"Previously air pollution forecasts have focused on very large geographical areas and the methods for communicating the information have been poor," CERC atmospheric scientist Dr Iarla Kilbane-Dawe said. "AirTEXT represents a revolution in air-pollution forecasting with localised information being sent directly to the individual."

Source: European Space Agency

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