the pioneer

LUCKNOW | TUESDAY | AUGUST 25, 2015

Dust, other ions can cause health problems: Tripathi

PIONEER NEWS SERVICE ■ LUCKNOW

Prof SN Tripathi from the IIT-Kanpur, delivered a lecture on 'Vayu Pradooshan' in Hindi at the BSIP, Lucknow, in the Rajbhasha Kaaryashala. The speaker, a recipient of the prestigious SS Bhatnagar Award in Earth Science, was welcomed by the Director of BSIP, Prof Sunil Bajpai. Dr CM Nautiyal, convener of the Official Language Committee, introduced the speaker.

Prof Tripathi said that the nature, size, colour and other properties of the pollutants determined how they were going to influence the climate and weather. He said that dust and other ions present in the atmosphere were necessary for cloud formation and hence rain but too much dust and pollutants could lead to serious health problems, especially those related to lungs and trachea (the breathing passage).

Talking about the conditions in India, he said that the dust in Indian cities was far in excess of the upper permissible level abroad.

"Even in India, there is a large variation in pollution levels in different cities. In the Indian subcontinent, more than half the population is exposed to unhealthy levels of pollution. Kanpur has one of the highly-polluted atmospheres, especially when compared to places like Manora Peak in Nainital (Uttarakhand). The fine and nano particles are difficult to avoid . The pollution has necessitated the cleaning of the monument, Taj Mahal, every alternate year while earlier it was needed once in 8 to 10 years. The black carbon emitted by small vehicles with inefficient fuel burning is one of the serious health hazards," he stated.

He said that the climate forcing in cities like Lucknow and Kanpur was tens times higher than in clean places in the hills. "Now techniques are being developed which will allow simple photographing of the filter with pollutants and posting it to a server allowing measurement of black carbon pollution. Now the pollutants are being studied using sophisticated techniques, including a transmission and scanning electron microscopy providing details of the fine structures of the pollutants. This is important because now it is not just the primary pollutants room power plants or vehicles but also the complex secondary pollutants that evolve and change shapes and combinations," he said in his lecture. Dr Neeru Prakash proposed the vote of thanks.