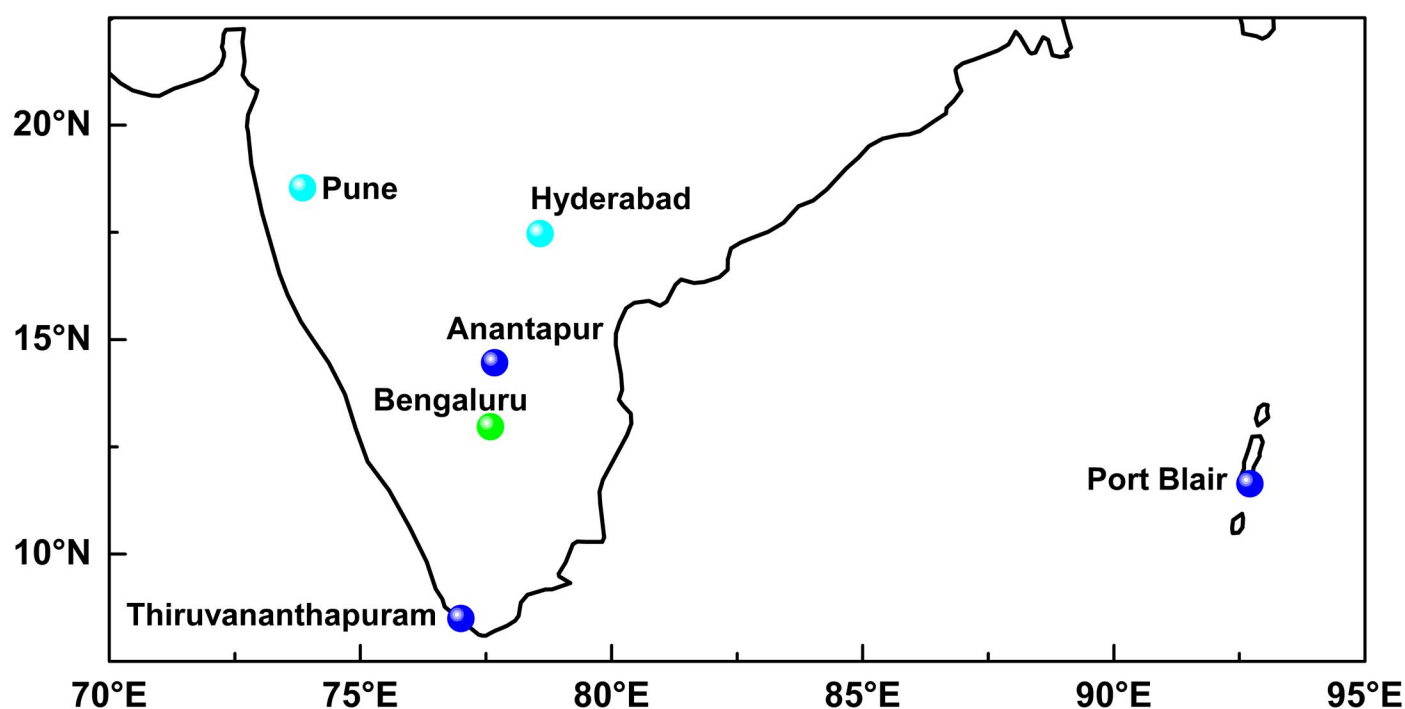


# THE DECLINE OF SOOT OVER INDIAN REGION

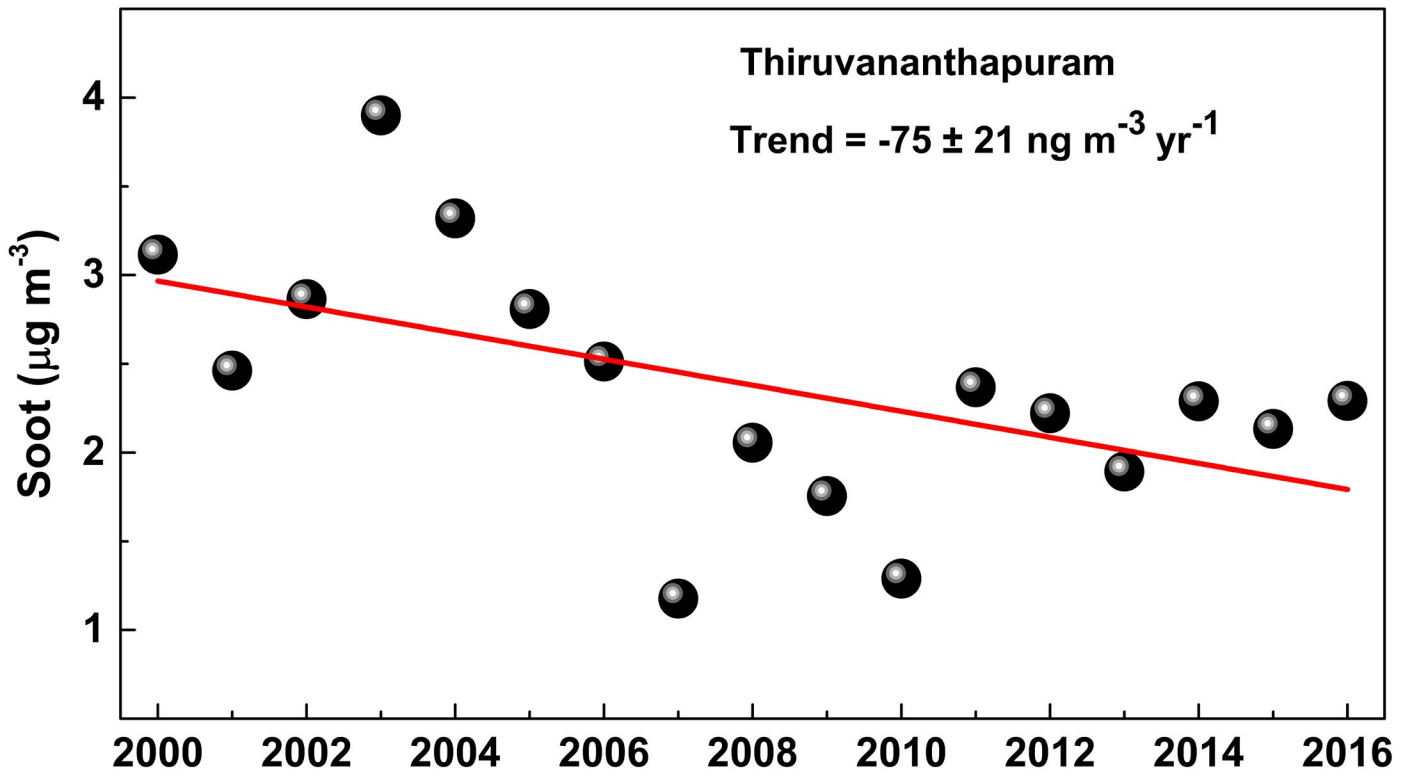
About 20 years ago a lot concern was expressed about the presence of high concentration of soot in South Asia. There was a speculation that the concentration of soot may increase further and lead to a decline in Indian monsoon rainfall. The Indian Space Research Organization (ISRO) decided to establish a network of ground observations to measure the surface concentration of soot in different parts of India. In a recent paper published in the journal Geophysical Research Letters jointly by scientists from Indian Institute of Science and Space Physics Laboratory, Indian Space Research Organisation have reported a steady and significant decreasing trend, in the concentration of soot in many stations in south India. The longest period of observations was in Thiruvananthapuram in the state of Kerala. At this station the concentration of soot showed a sharp decline after 2003. When the data of six stations in

peninsular India was pooled together, the concentration of soot showed a decline after 2009. The decline in concentration of soot is consistent with the decline in the concentration of column mean carbon monoxide detected from satellites. The authors also discussed the possible causes of this decline. They indicate an increased shift towards cleaner fuels for domestic and industrial applications and more stringent laws to control vehicular emissions have led to a decline in the concentration of soot in India. These results assume great importance in the context of India's global commitments to reduce its carbon emissions.

**Reference:** Decreasing trend in black carbon aerosols over the Indian region, M. R. Manoj, S. K. Satheesh, K. Krishnamoorthy, M. M. Gogoi and S. Suresh Babu, Geophysical Research Letters, 46, 2903-2910.



**Figure 1:** Cities where soot concentrations were measured.



**Figure 2:** Variation in the concentration of soot in Thiruvananthapuram and South peninsula.

