

# Divecha Centre For Climate Change



## Indian Institute Of Science



### CONTRIBUTIONS OF AEROSOLS TO CLIMATE CHANGE AND AIR QUALITY: INDIA AS A CASE STUDY



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3:30 pm**

**Divecha Centre for Climate  
Change Auditorium**

**Tea at 3:15 pm**

Aerosols are also known as particulate matter (PM). They play key roles in global climate forcing, because of their interaction with incoming light, and human health since they are air pollutants. It is generally accepted that the overall effect of aerosols is to offset the warming effect of greenhouse gases. Different countries and regions of the world have had different rates of emissions of greenhouse gases and precursors for aerosols/PM; thus, they have contributed differently to the global climate warming and air pollution in their own countries and regions. I will examine the time history of the net contributions of regions and countries to climate warming using a new climate metric called cumulative radiative forcing and of PM to air pollution/health. I will discuss the tradeoffs between global warming and immediate human health. The information for this talk will be simple energy balance calculations, GEOS-Chem modeling of aerosols over India, and some preliminary measurements of PM<sub>2.5</sub> in an Indian city.