



# Physical Research Laboratory, Ahmedabad

## Special Colloquium 18-03

**Speaker:** Prof. Mark G. Lawrence

Scientific Director, Institute for Advanced Sustainability Studies (IASS), Germany

**Title:** “Air Pollution in Southern Asia: a Case Study of Steps Towards a More Sustainable Atmosphere for the Kathmandu Valley”

**Time:** Tuesday, 20 February 2018, 16.00 hrs.

**Venue:** K. R. Ramanathan Auditorium, PRL

### Abstract

Air pollution in Southern Asia is a well-known problem. It cannot be overlooked, whether on the streets or in the fields, in an airplane passing over the subcontinent, or even in pictures taken from satellites. It is ubiquitous, from megacities to tiny villages in remote farming districts. It is responsible for extensive health impacts, including contributing to over a million premature deaths per year. It reduces productivity, causes vast infrastructural challenges such as frequent closings of airports, and is a deterrent to tourism. And it contributes significantly to regional and global climate change, especially via black carbon in soot. Finding effective ways to reduce the air pollution, however, is not so straightforward. The pollution arises from several different main sources, such as diesel and two-stroke vehicles, factories like brick kilns, and agricultural waste burning. Polluted air masses can be transported over large distances, e.g., across the Indo-Gangetic Plain, picking up more pollution along the way. Furthermore, the developing economic situations of southern Asian nations make it challenging to introduce clean technologies. This talk gives an overview of our efforts in the IASS project SusKat (A Sustainable Atmosphere for the Kathmandu Valley) to support steps towards improving the situation of one of the highly-polluted regions of southern Asia: the Kathmandu Valley in central Nepal. Starting with the 6-month long SusKat/ABC field measurements campaign in 2013, jointly coordinated by the IASS and ICIMOD, and bringing together over 20 regional and global scientific partners, we have been developing a strong scientific knowledge base. In parallel, we have been working together with policy makers and societal leaders to reach a deeper understanding of the complex situation, and to co-develop strategies and measures to improve the air quality in this once beautiful and scenic cultural heritage location.

### The Speaker

Prof. Mark Lawrence is a scientific director at IASS in Potsdam, focusing on mitigating the impacts of short-lived, climate forcing pollutants and on the potential impacts, uncertainties and risks of “climate engineering”. Prof. Lawrence received his Ph.D. in 1996 from the Georgia Institute of Technology. From 2000 until 2011 he was a research group leader at the Max Planck Institute for Chemistry in Mainz. He served as interim professor for meteorology at the University of Mainz during 2009-2010, and moved to the IASS in 2011. In 2014 he was appointed Honorary Professor at the University of Potsdam. Prof. Lawrence is author or co-author of over 130 peer-reviewed publications. He has led various international projects, has served on the editorial and advisory boards of various journals, and is on several international committees, including being co-chair of the International Global Atmospheric Chemistry (IGAC) program.

Tea at 15:30 hrs.

**ALL ARE WELCOME**

