**Divecha Centre for Climate Change**
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# DCCC Seminar

**Title:** The 2024 Global Nitrous Oxide Assessment of the Climate and Clean Air Coalition: An Example of Human Alteration of the Global Nitrogen Cycle

**Speaker:** Prof. Eric A. Davidson
Professor, University of Maryland Center for Environmental Science
Fulbright-Nehru Distinguished Senior Scholar, Hosted by Guru Gobind Singh Indraprastha University, Delhi
Former President, American Geophysical Union

**Venue:** Divecha Centre Seminar Hall

**Abstract:**
Nitrous oxide (N2O) concentration in the atmosphere is increasing exponentially, due primarily to the inefficient use of fertilisers in global food production systems. N2O is the third most important anthropogenic greenhouse gas (following carbon dioxide and methane) and is the largest currently emitted stratospheric ozone depleting substance. The Climate and Clear Air Coalition of the United Nations Environment Programme conducted a global assessment of the sources and trends of N2O emissions, their impacts on the environment and human health, and abatement opportunities. N2O is part of the nitrogen (N) cycle, which is essential to all life on Earth. The N cycle has been profoundly altered by human activities, including agriculture, fossil fuel combustion, industrial production, biomass burning, and wastewater management. Abatement of anthropogenic N2O emissions must be grounded in sustainable nitrogen management approaches across economic sectors and scientific disciplines. Due to strong linkages among forms of N in the N cycle, co-benefits of N2O abatement can provide concomitant reduction of other forms of N pollution that also affect environmental quality and human health, such as ammonia, nitrogen oxides, fine particulate matter (PM2.5), and nitrate leaching. Some abatement measures are already technically and economically feasible, but others, particularly those related to agricultural emissions, will require ambitious policy initiatives and technological development.
All are welcome