Air pollution ranks amongst the leading contributors to the national burden of disease in India. While there is a long history of research studies examining health effects of air pollution in India, relatively few efforts have been made to launch cohort studies that would cohesively address indoor and outdoor air pollution exposures within rural and urban populations, while simultaneously examining adult and children's health outcomes. Based on this premise, The ICMR Center for Advanced Research on Environmental Health (Air Pollution) was set up at Sri Ramachandra University in Chennai, Tamil Nadu(CAR-SRU) in 2010 to

(1)Establish an integrated rural –urban cohorts to generate exposure-response relationships for specific maternal (birth weight), infant (acute respiratory infections) and adult (chronic respiratory symptoms and lung function) health outcomes

(2) Develop and validate air pollution exposure indicators that may be used in other on-going health studies and wherever feasible guide implementation/evaluation of interventions and

(3)Develop research capacities in exposure assessment and environmental epidemiology within a network of partner institutions.

A pregnant mother-child cohort of 1200 women /children and an adult cohort of 1200 men and women has been set up across 54 villages in the districts of Thiruvallur, Kancheepuram and 10 corporation zones of Chennai city through collaborations with the Tamil Nadu Directorate of Public Health and The Corporation of Chennai. Air pollution measurements have been completed in all the 2400 subject households currently enrolled in the cohort. Exposure modeling (including land-use regression modeling) and exposure-response modeling are currently in progress. In addition, a bio-repository of peripheral and cord blood samples from the pregnant mothers have been set up to facilitate future analyses of biomarkers of genetic susceptibility