Eight to nine out of ten people are exposed to air pollution levels beyond the WHO air quality guidelines. Considering policies in place, the situation is not expected to improve much in the next decades in many of the fast growing economies; actually worsen in several megalocities. Responses to air pollution ‘crises’ at the local and national level will lead to policy changes that will have lasting impact on some of the key SLCF species (SO2, BC, OC, NOx, NMVOC) and might be important for regional and global climate change and respective impacts. Most of the air pollution mitigation technology (always affecting several SLCF species) can be introduced quickly as technologies are mature, costs for most techniques are well known, and there is ample experience in developed and developing countries. One of the key SLCFs, methane, is not part of the air pollution debate, even though its mitigation can contribute to important reduction of the background ozone. The climate policies address methane but there is significant potential to reduce its emissions much quicker driven by, e.g., local policies addressing waste management, and national policies regulating and incentivizing oil and gas industry. Policies to address several SDGs could be ‘unifying’ action on many, if not all, SLCFs and bring quick emission reductions resulting also an important contribution to climate debate.

The talk will review the impact of the recent air pollution policies on the likely SLCF emission trajectories, asses the remaining mitigation potential within next decades, and compare those to the CMIP6 trajectories for all key SLCF species.