

Energy & Air Pollution

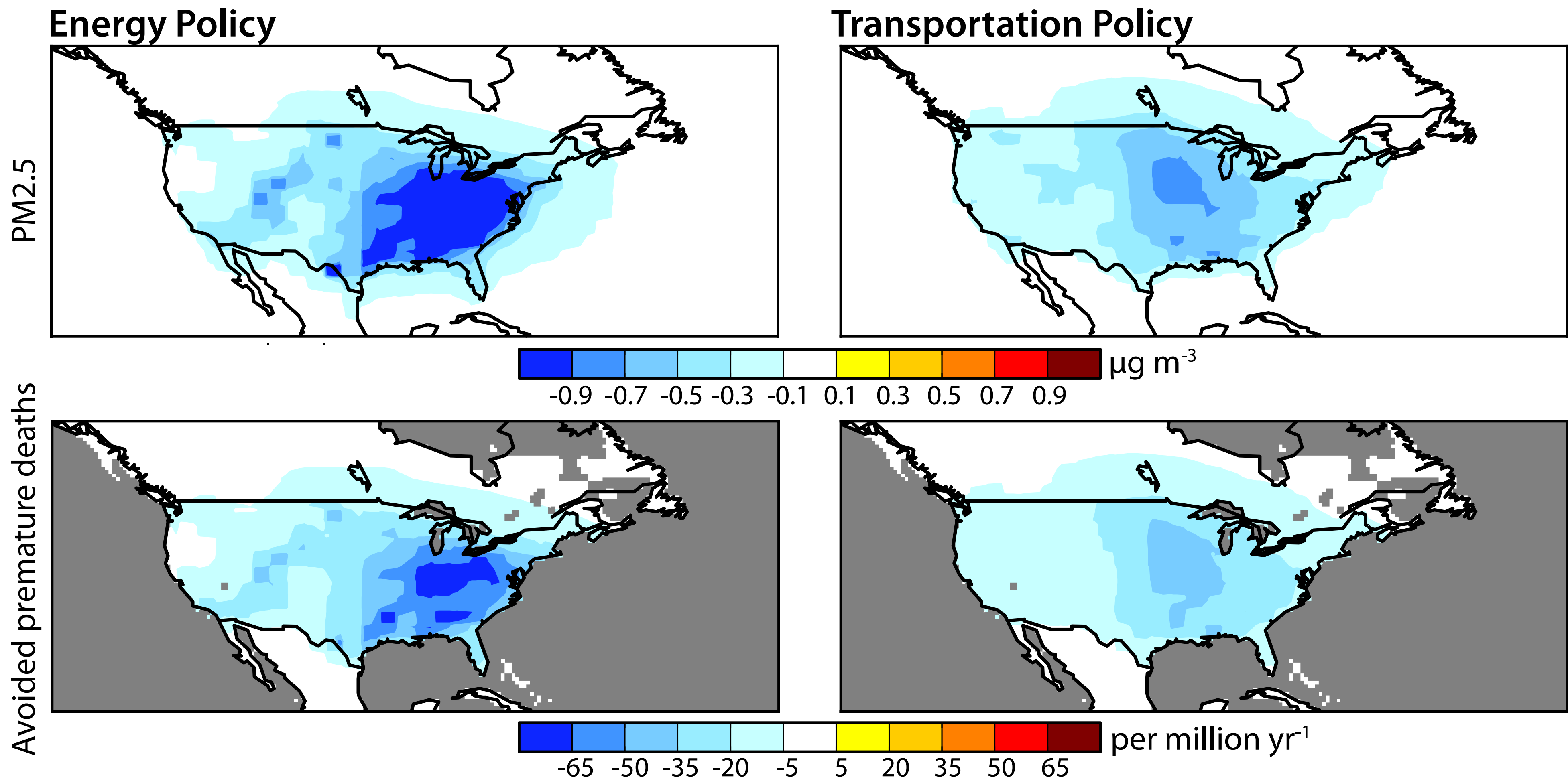
Drew Shindell

*Nicholas School of the Environment
Duke University*

Policy Benefits: US Clean Energy & Transportation Consistent with 2°C

Shindell et al., Nature Climate Change, 2016

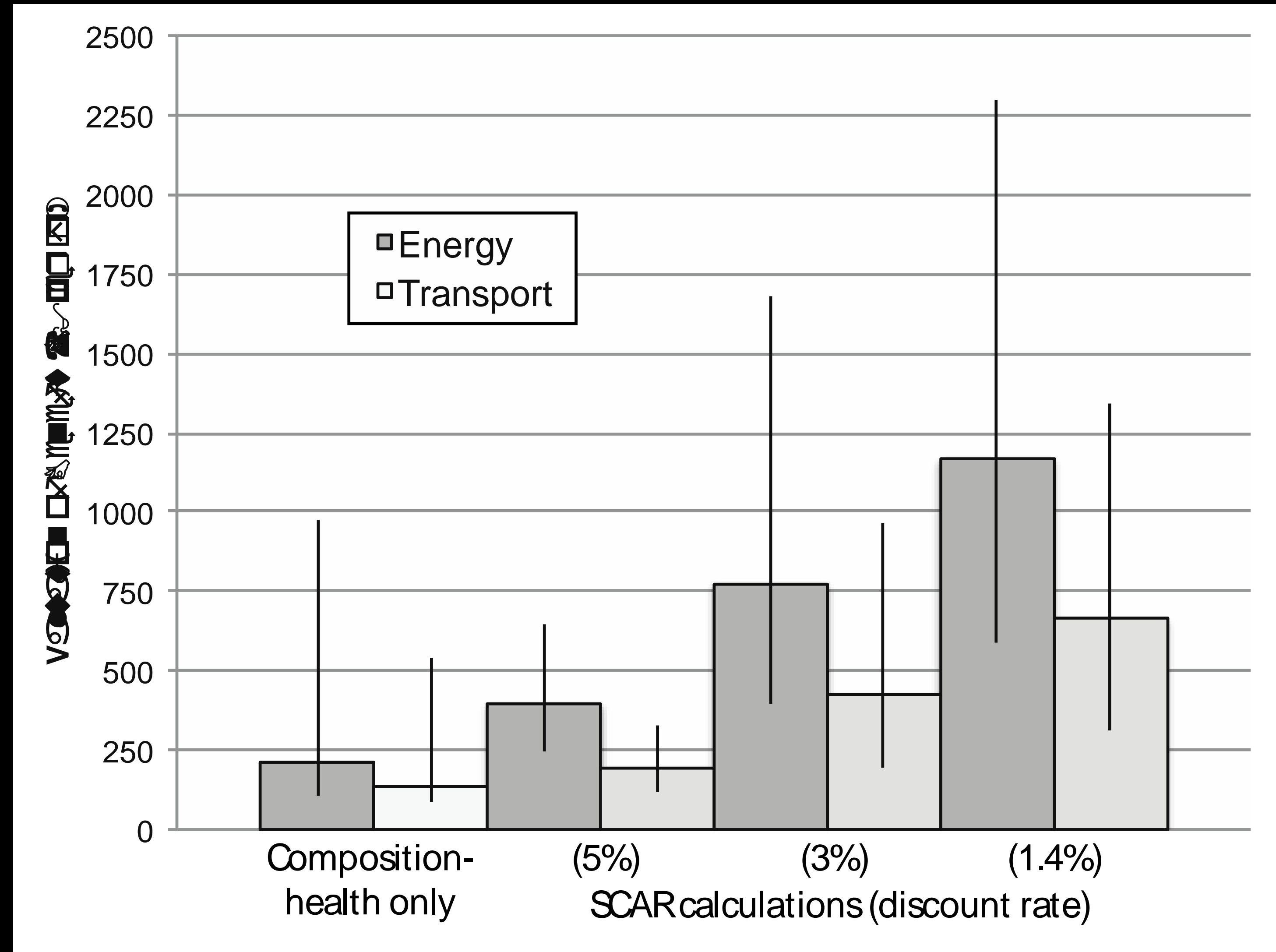
Mass-based Model



Clean Energy: Avoids ~175,000 premature deaths by 2030 (-50%/+450%; ~80% PM_{2.5}, 20% O₃)

Clean Transportation: ~120,000 lives by 2030 (-36%/+360%; ~66% PM2.5, 33% O₃)

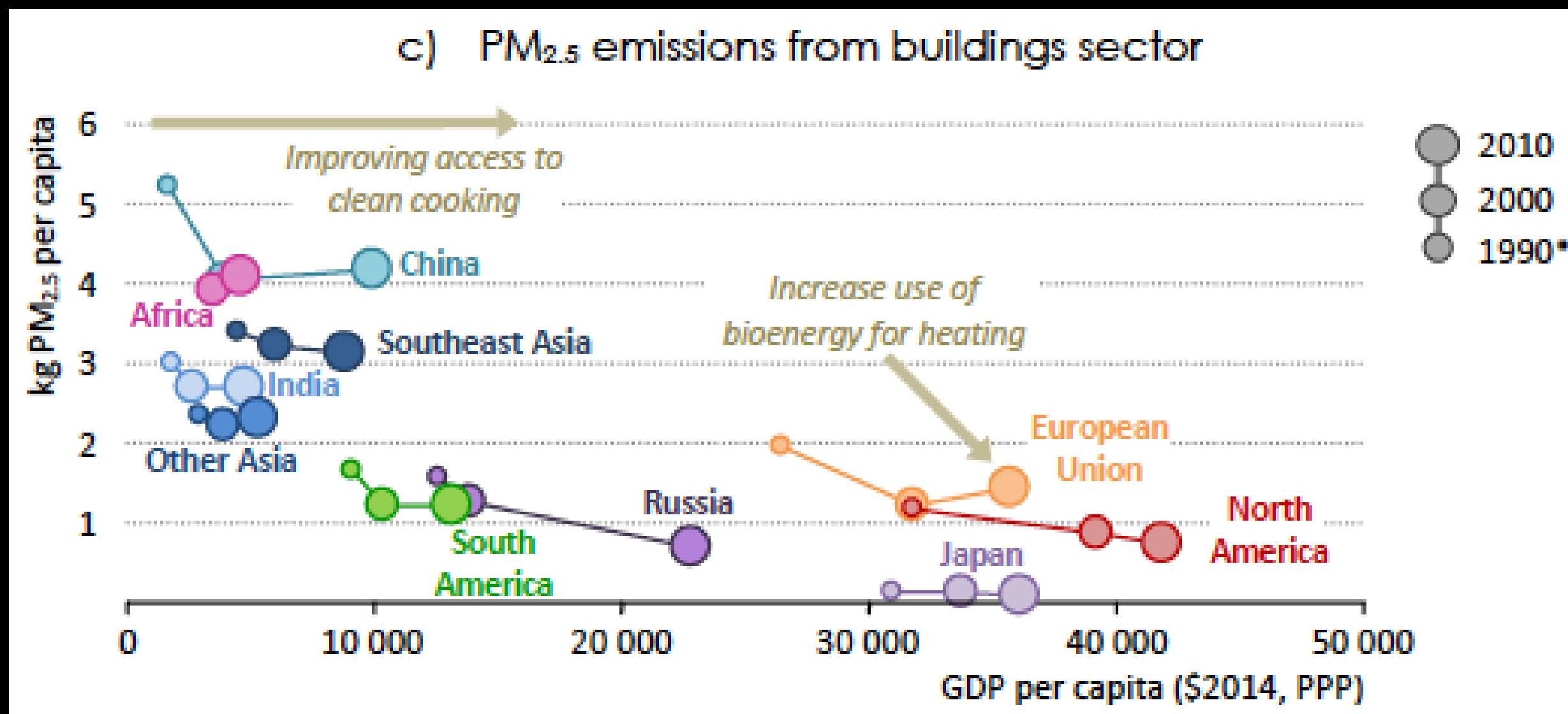
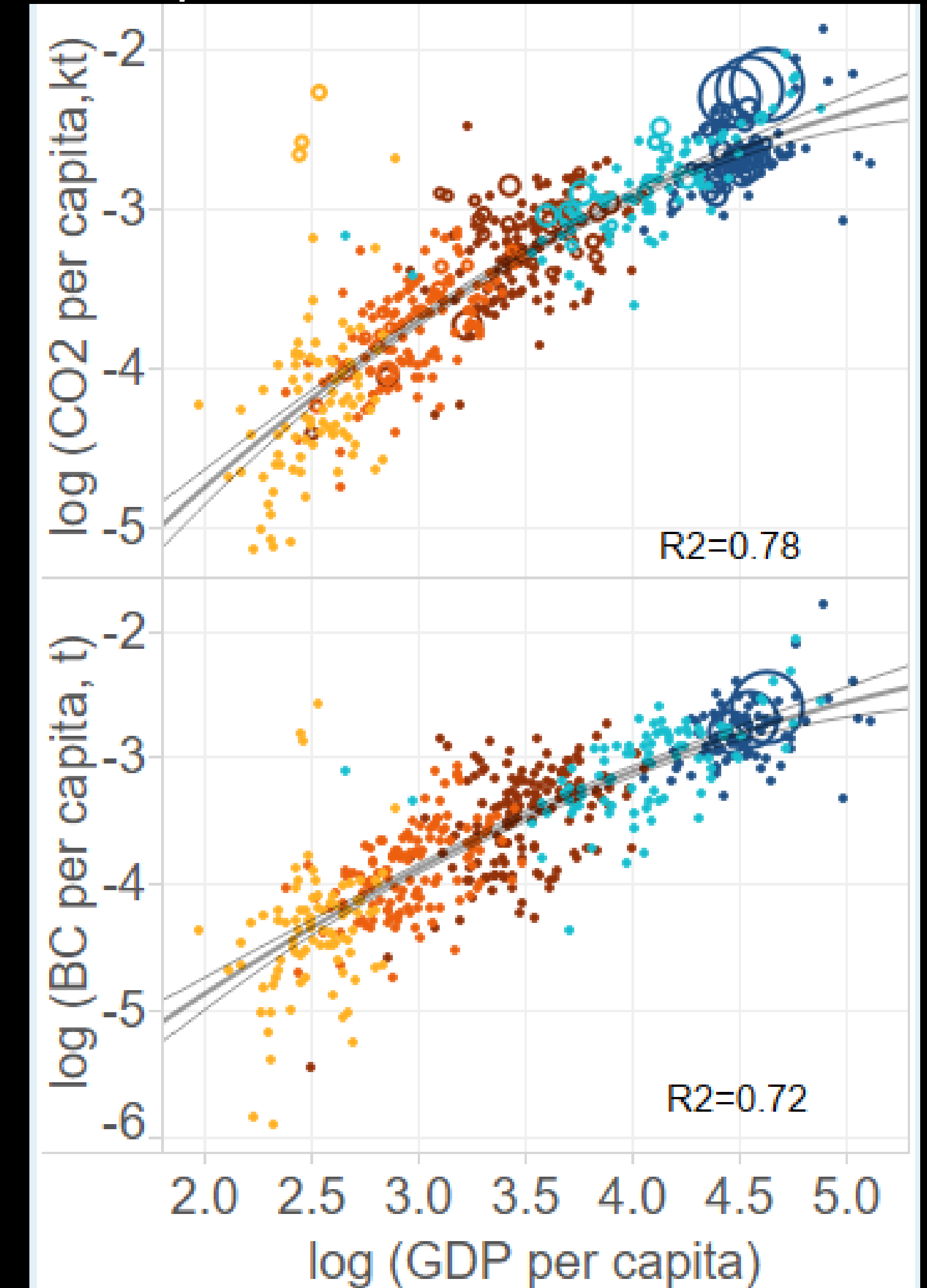
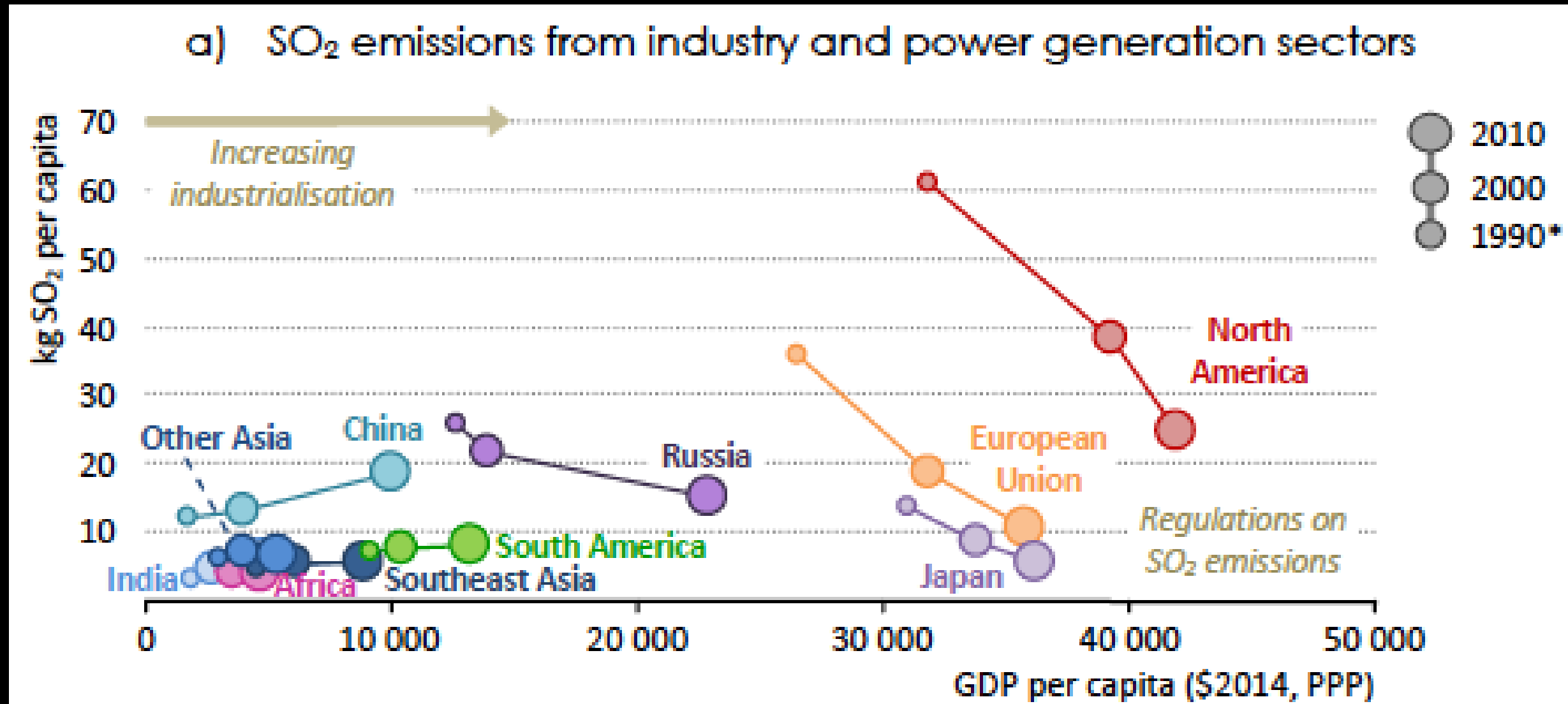
Policy Benefits: *US Clean Energy & Transportation Consistent with 2°C*



Implementation costs ~\$100-210B (2030 economy-wide)

Economic growth is not always enough

Transportation



IEA, 2016

Ru et al., in progress