Air pollution in Asia: Trends, drivers and solutions

Lauri Myllyvirta
Clean air campaigner
Beijing

My used filter after one week in Delhi

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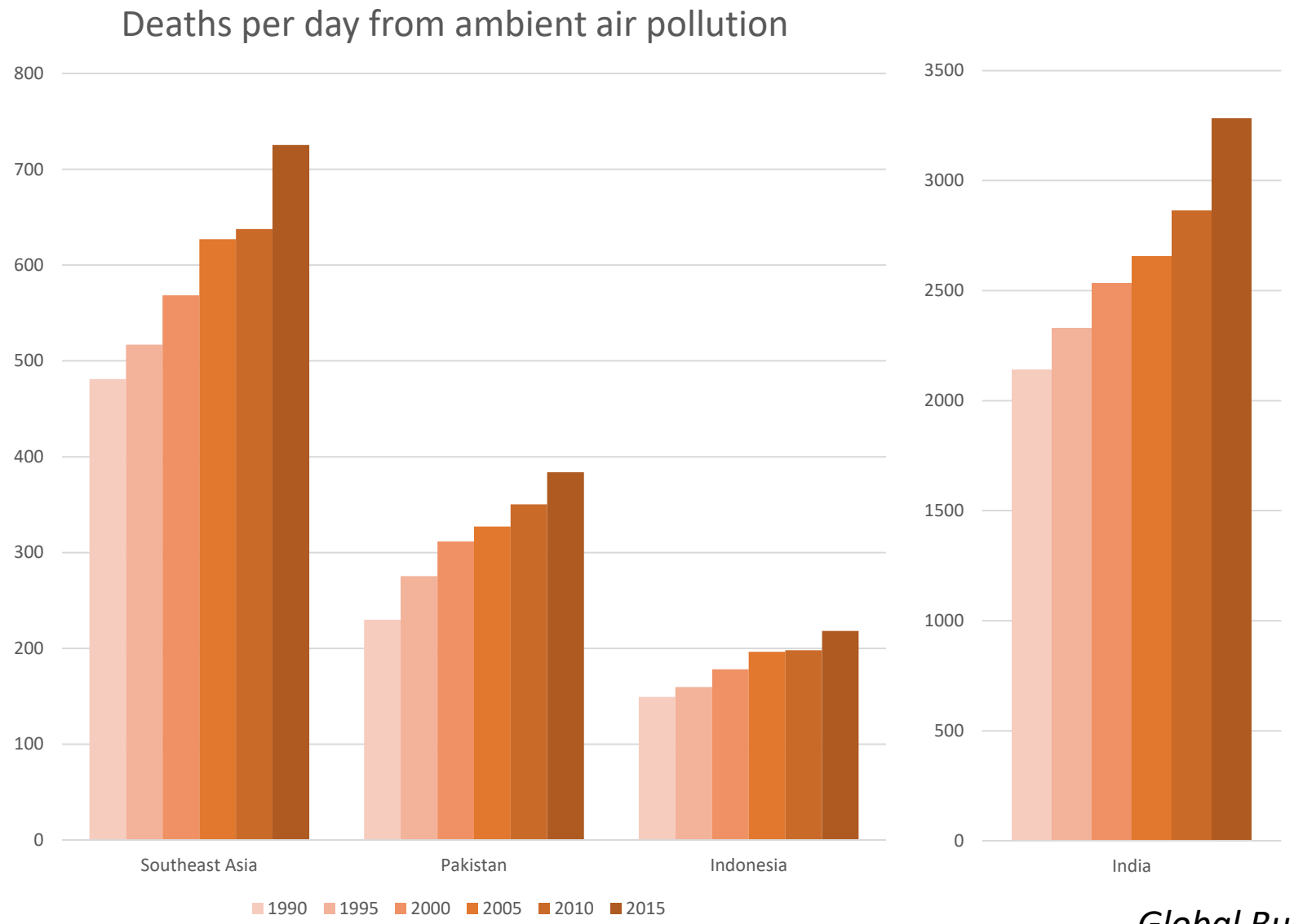
Southeast&South Asia: toll on health increasing fast



Global Burden of Disease 2015

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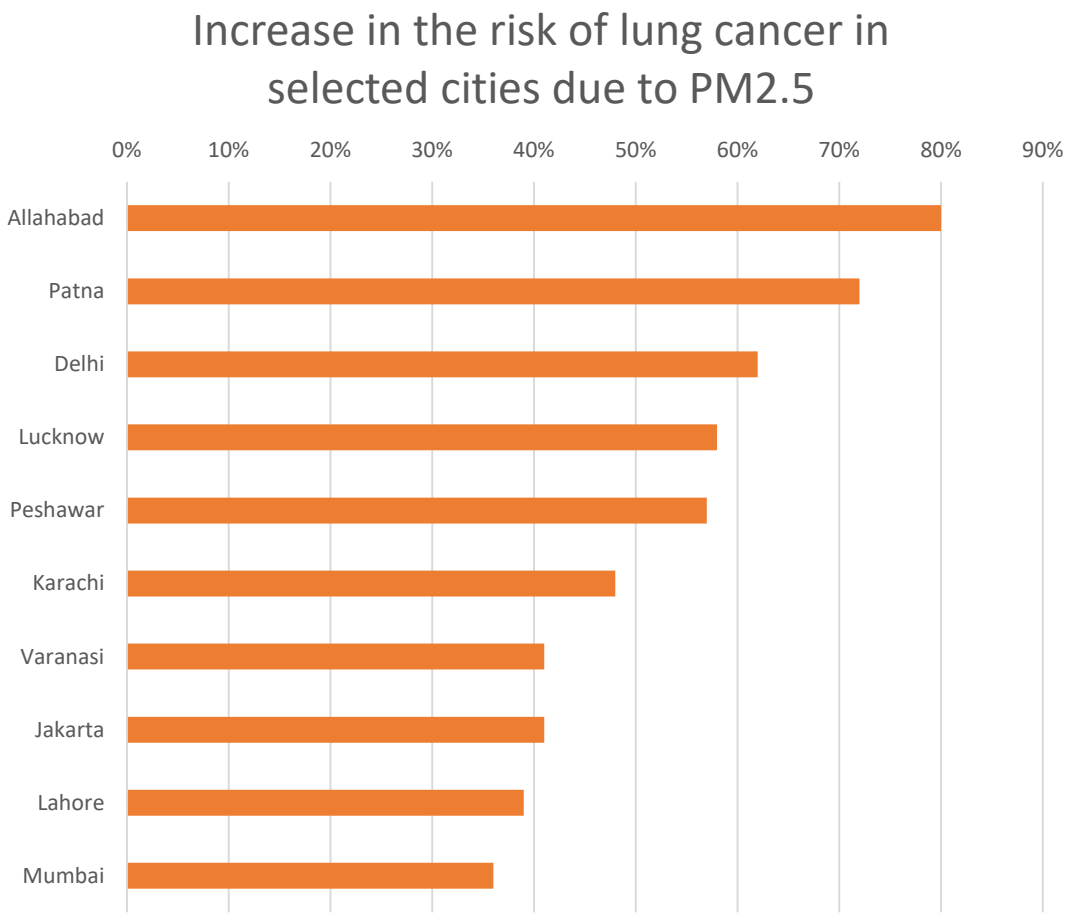
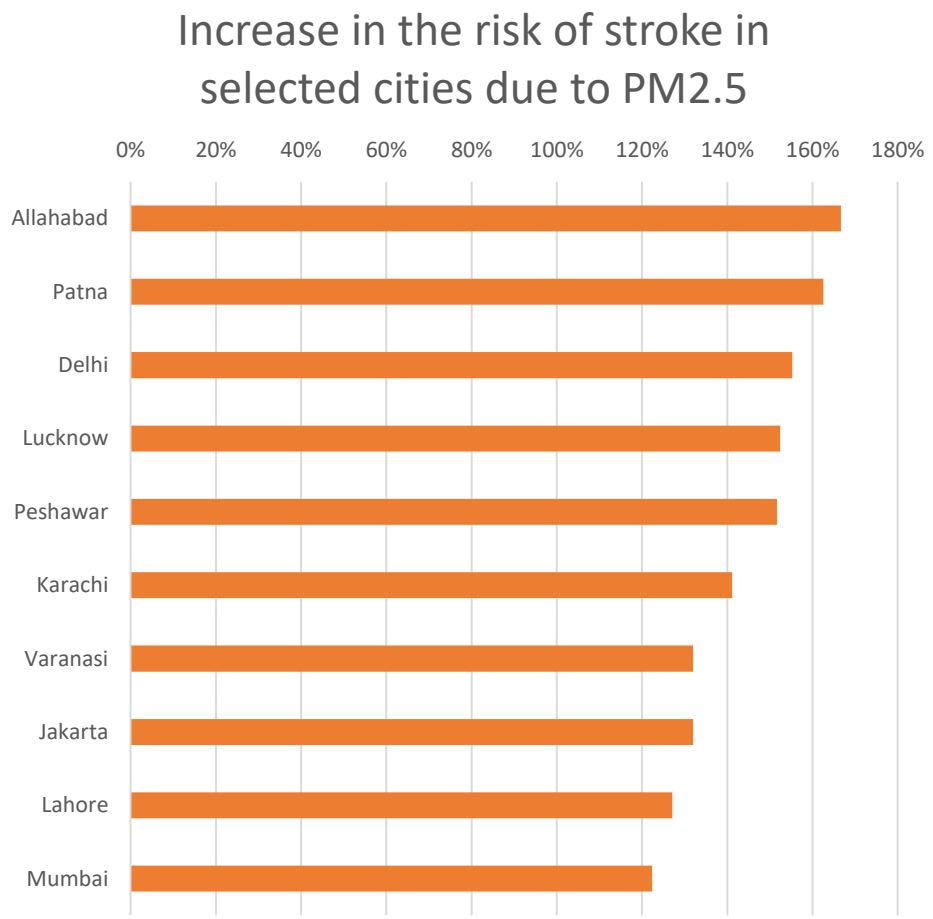
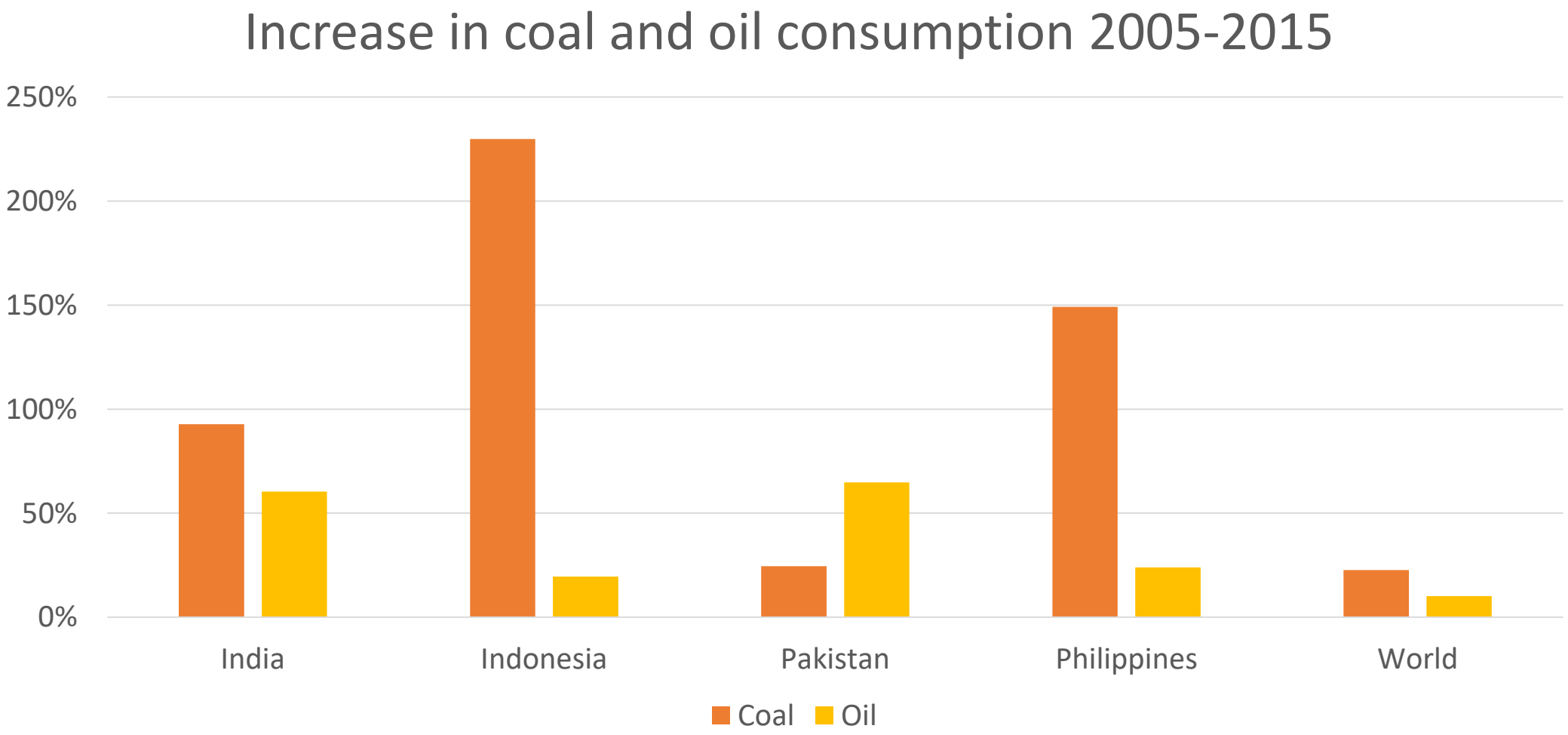
Unacceptable health risks for people living in polluted areas



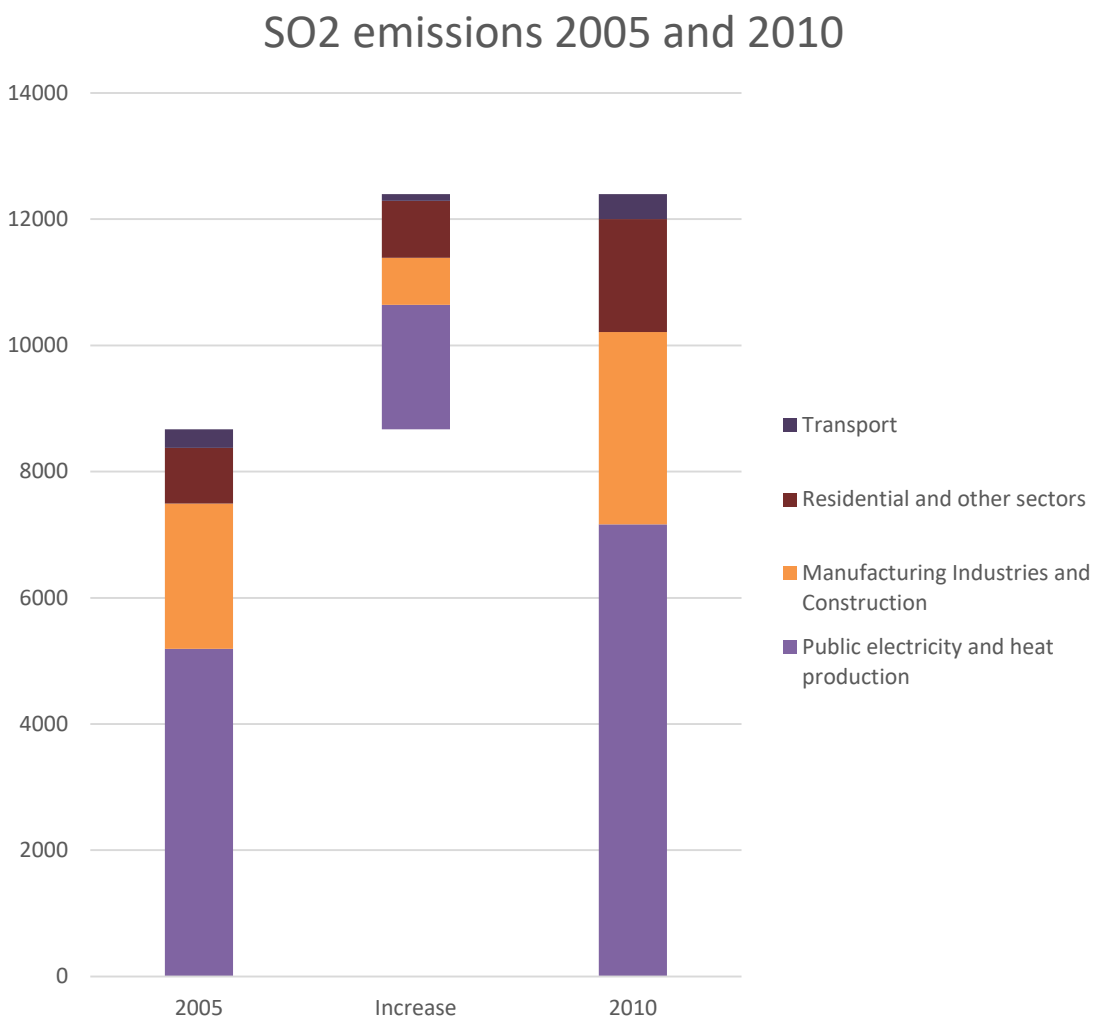


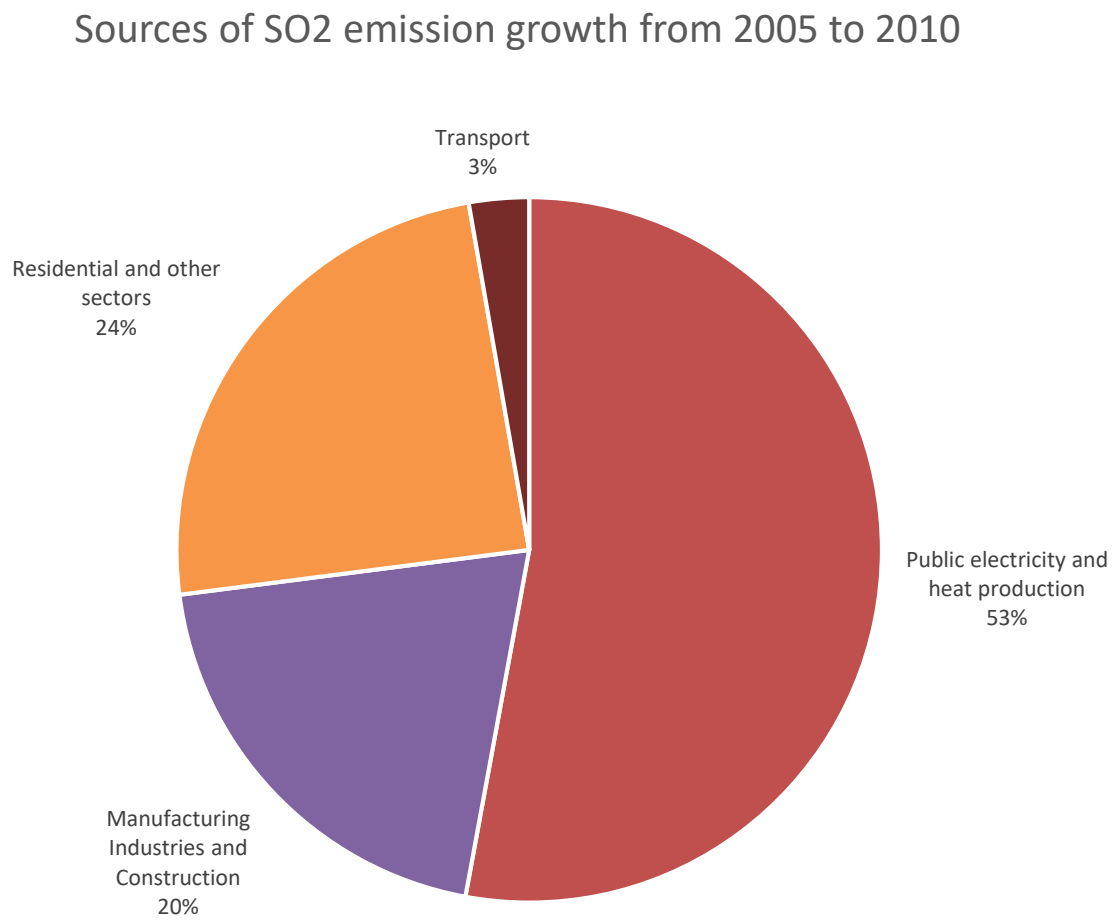
Calculated using Global Burden of Disease 2015 methodology and PM2.5 concentrations from WHO Ambient Air Pollution database, except Jakarta based on Greenpeace monitoring at 19 stations

Dramatic increase in fossil fuel use



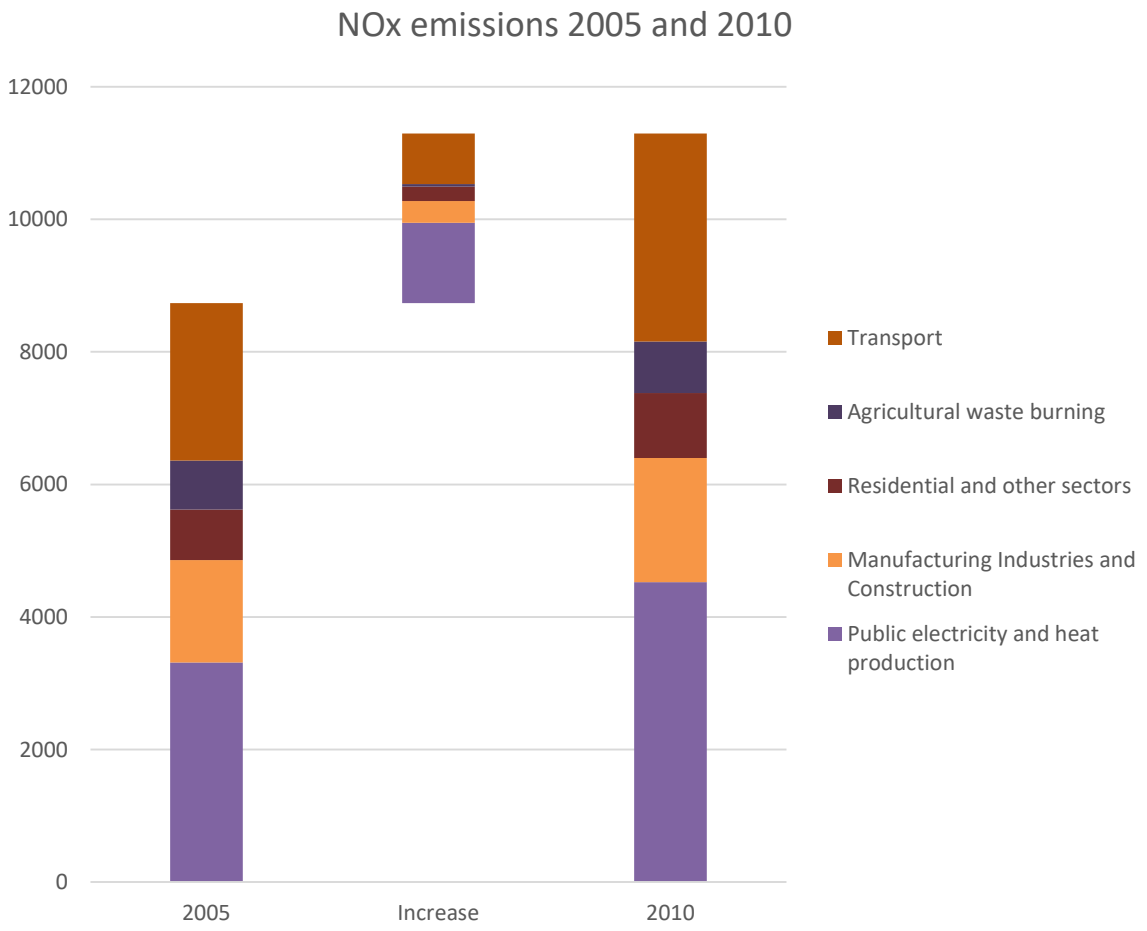
Coal-fired power dominates SO2 emissions in South&Southeast Asia

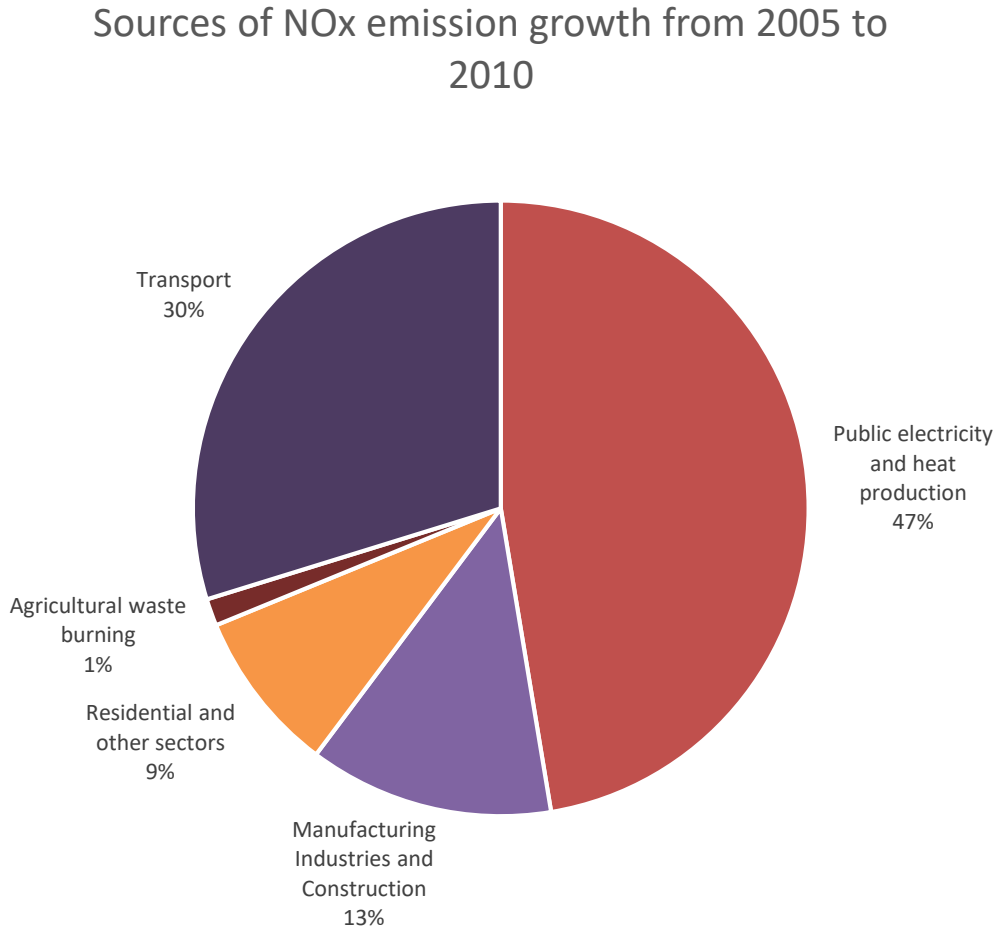




Calculated from EDGAR emissions database, v4.31

NOx: power, industry & transport dominate





Impacts of coal power expansion in Southeast Asia

Environmental Science & Technology

Article

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Burden of Disease from Rising Coal-Fired Power Plant Emissions in Southeast Asia

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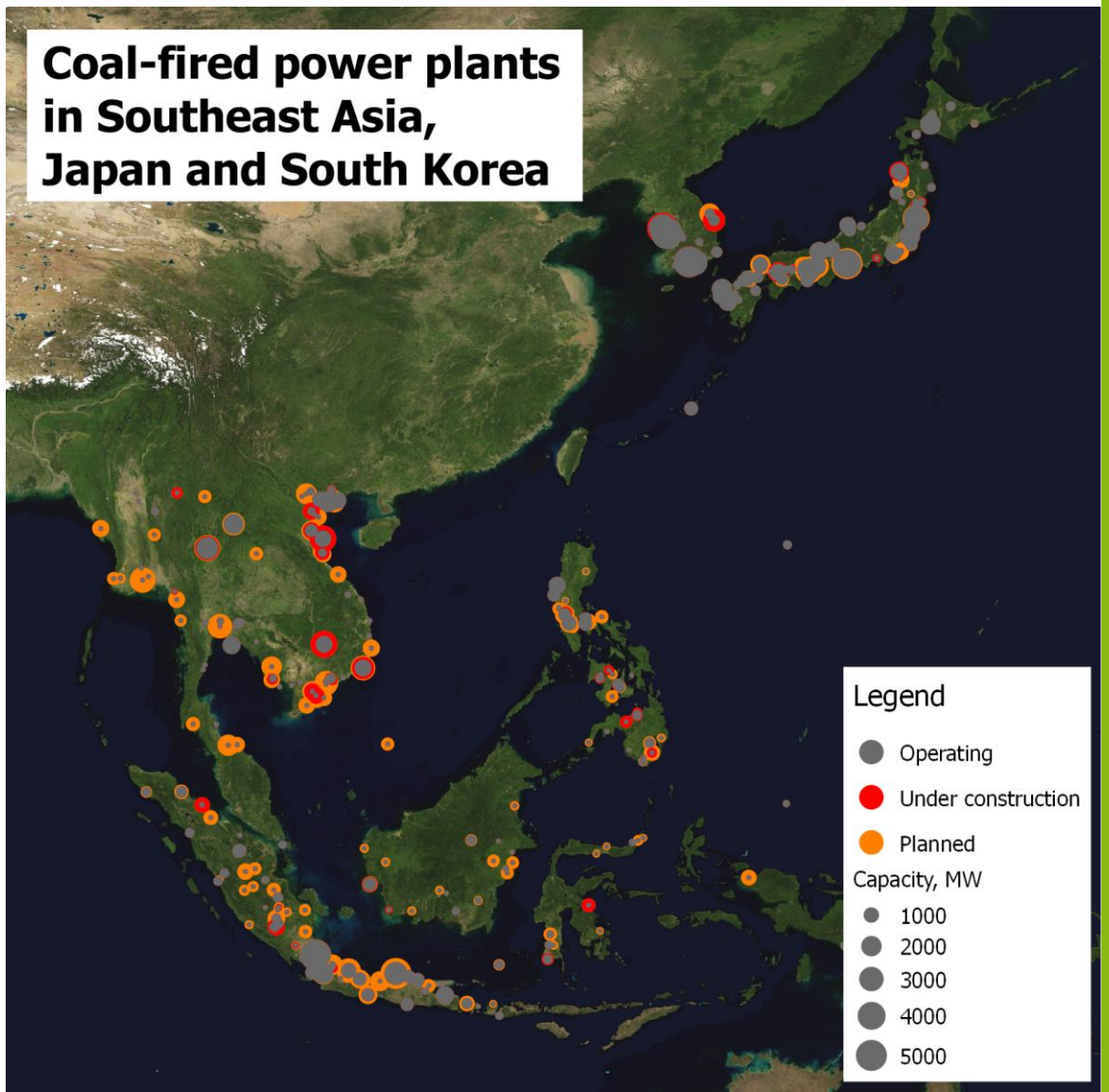
- 20,000 premature deaths due to pollution from coal-fired power plants in 2011
- Projected to increase to 70,000 by 2030 if planned coal power expansion is realized



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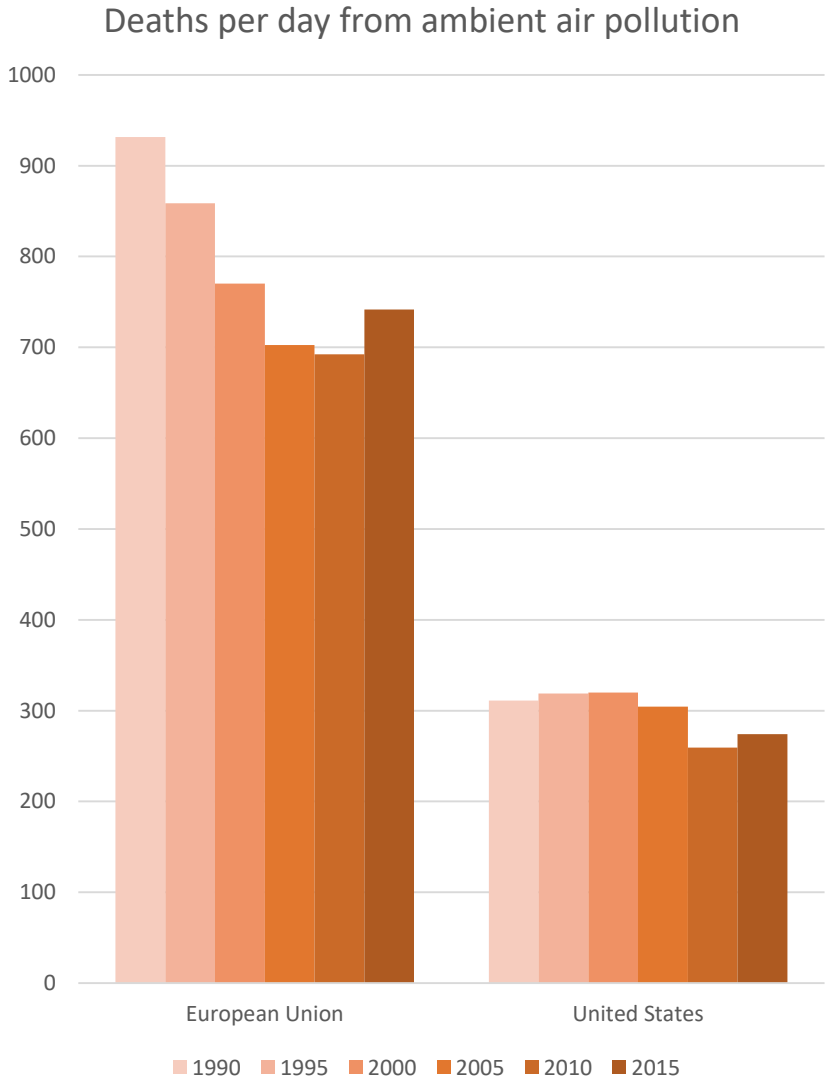
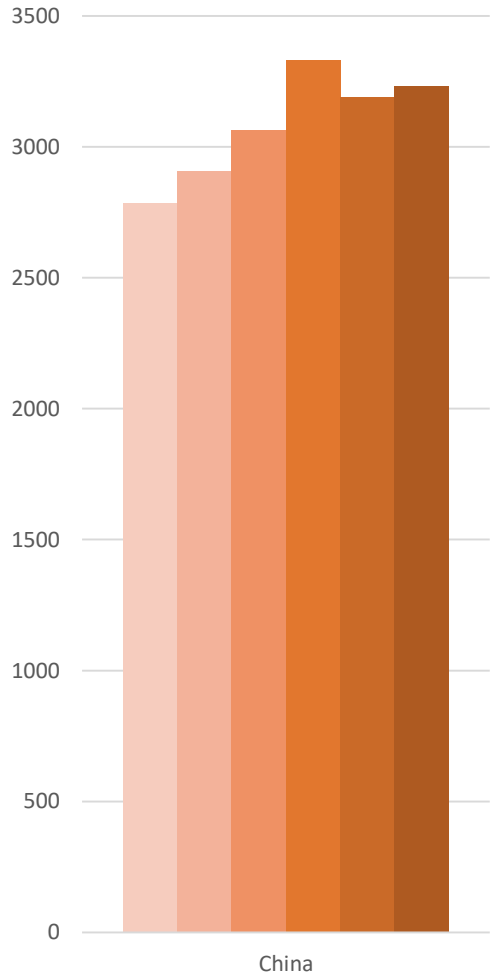
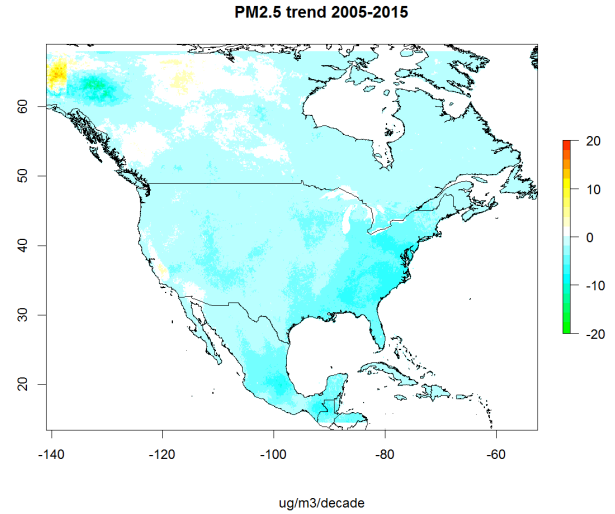
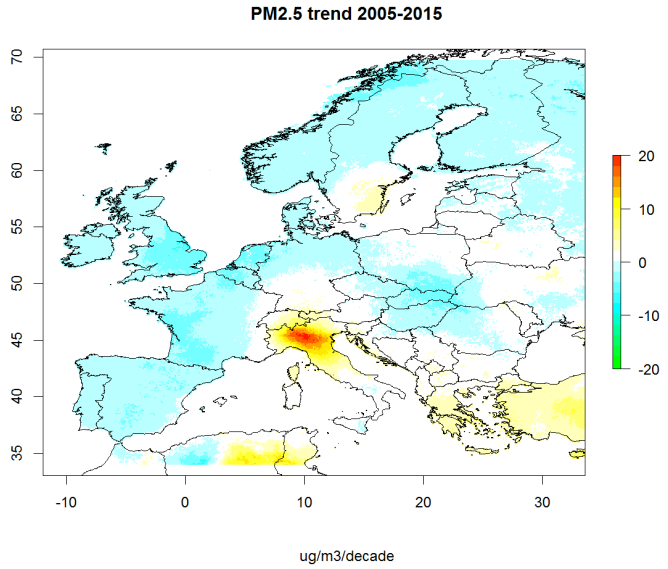
What has worked?

EU&US have improved systematically, while China has turned the trend around





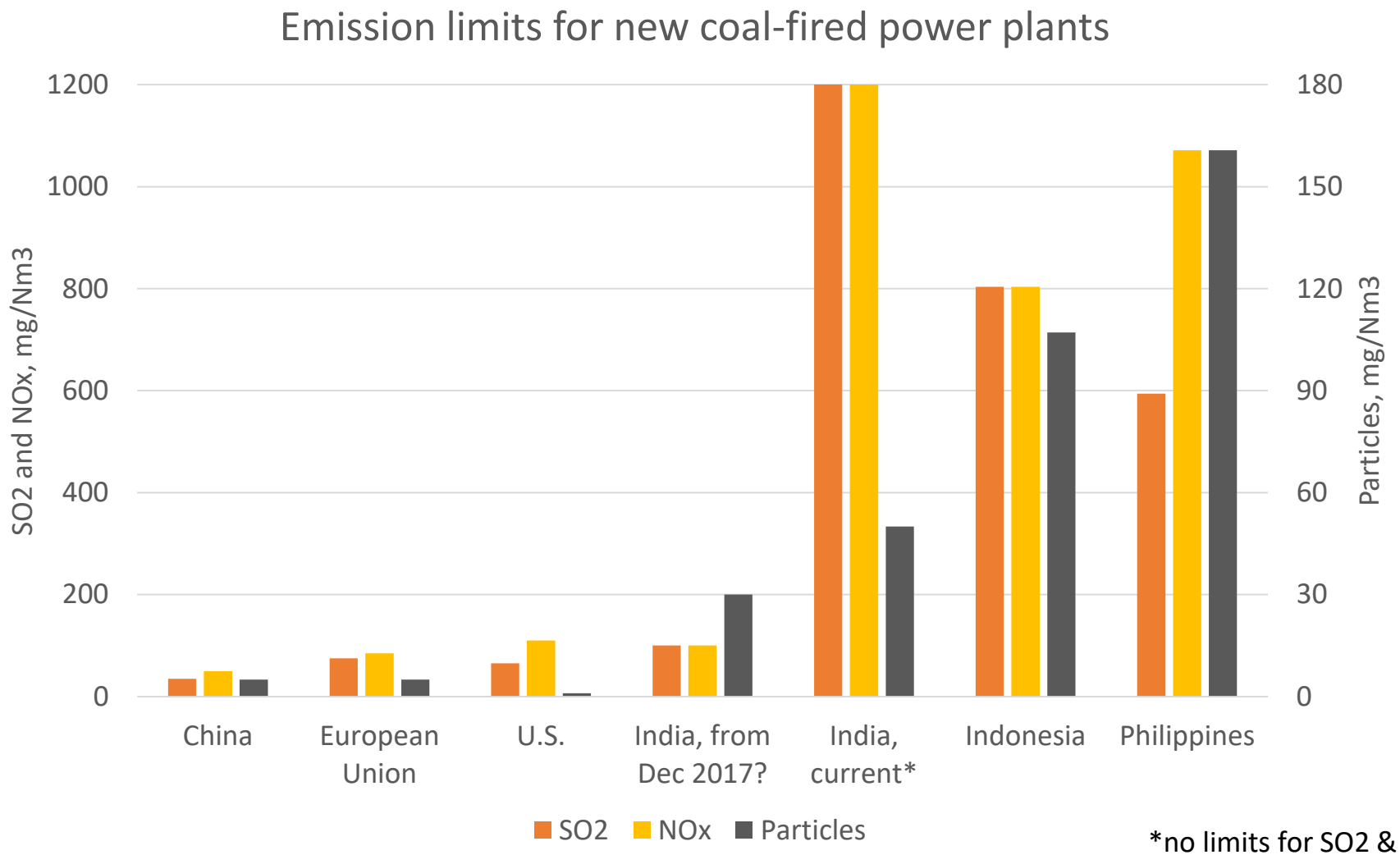




What has worked

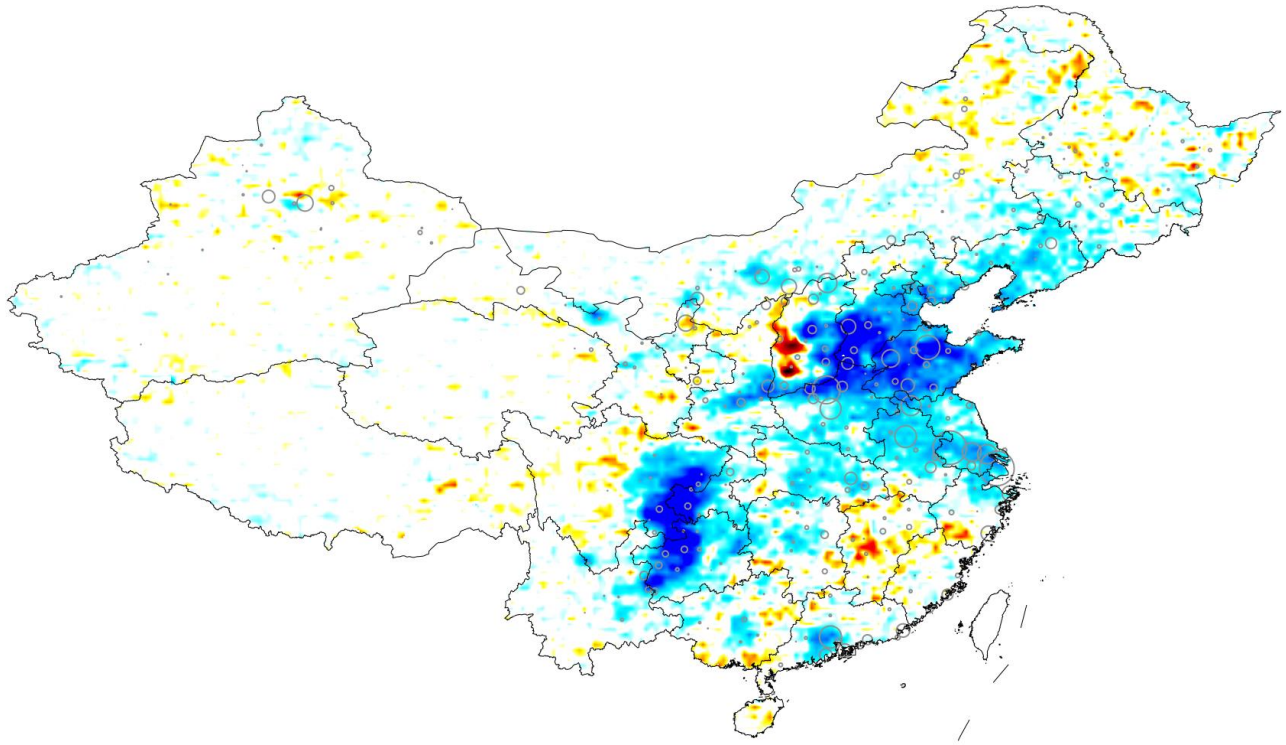
- Comprehensive air pollution monitoring network: real-time and yearly data
- Setting targets & timelines for air quality improvement with clear accountability
- National regional air pollution action plans targeting all key sectors and pollutants
- Emission standards: power plants, industry, transport
- Investment in clean energy, sustainable transport
- Cleaner economic structure

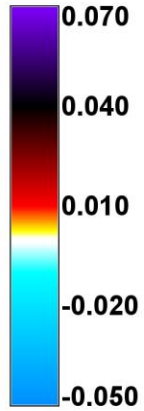
Improving standards

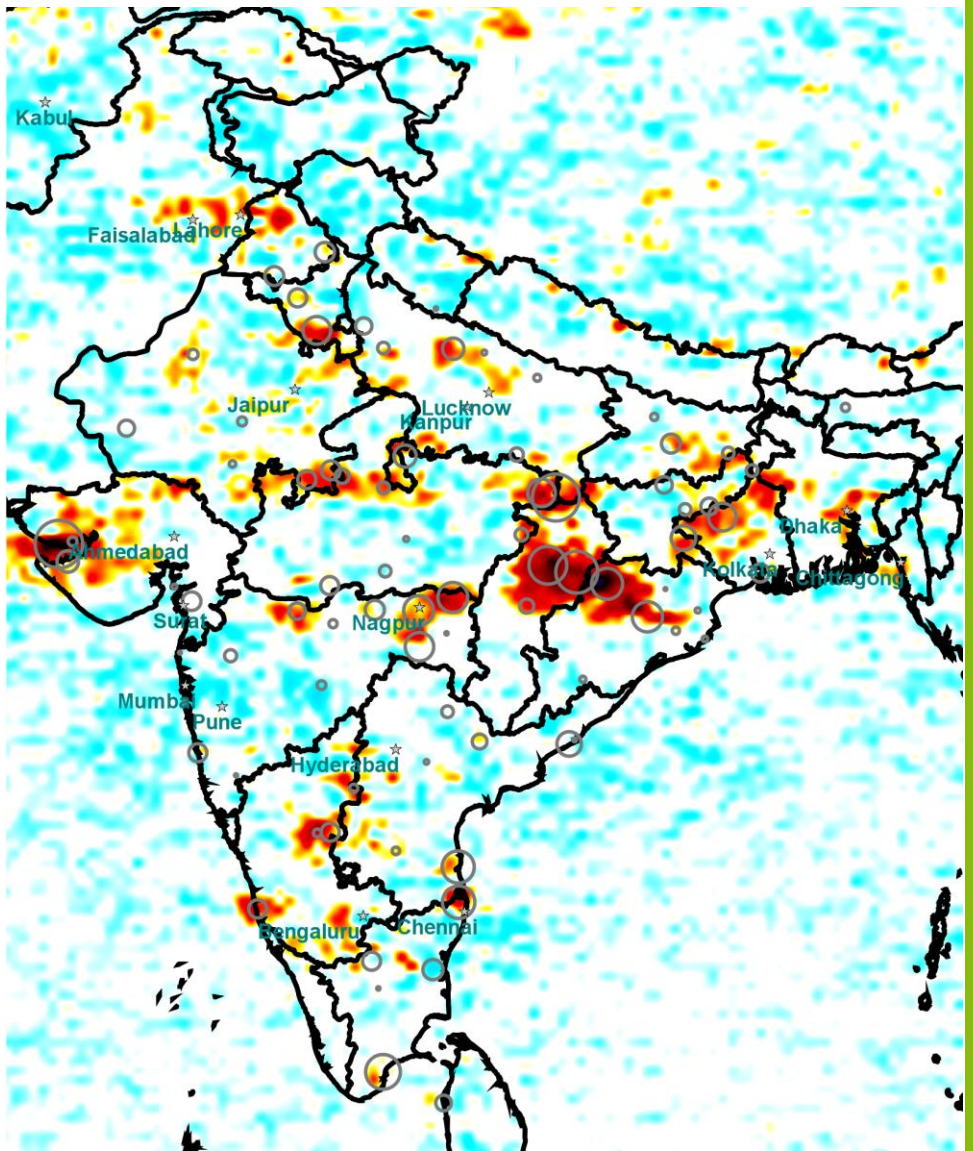


*no limits for SO2 & NOx

Standards work: change in SO2 levels, 2010-2015







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Clean energy works

- China: all power demand growth covered from non-fossil energy since 2013
- India: rapid decrease in costs with scaling up: both wind and solar more affordable than new coal
- U.S.: Power generation with coal fell 40% in 10 years! Renewable electricity grew 180%.
- EU: Coal use fell 17% in past 10 years, renewable electricity generation grew 4-fold

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Blue skies:
We know we need to do it
We know how to do it
So let's do it!

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