



International Institute for
Applied Systems Analysis
www.iiasa.ac.at



science for global insight

Findings from regional UNEP/CCAC assessments in Asia and Latin America

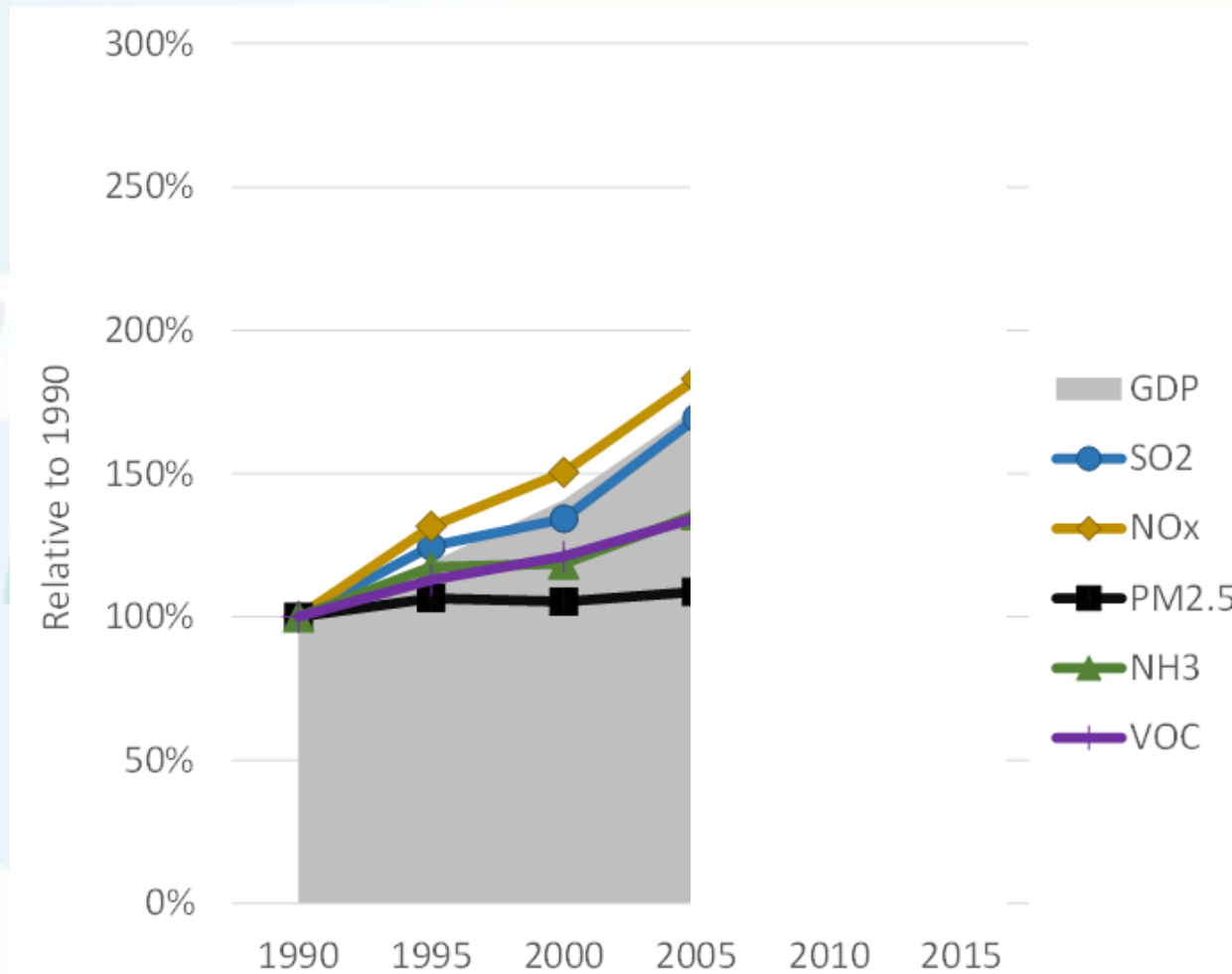
Markus Amann
Program Director
International Institute for Applied Systems Analysis

Saltsjobaden VI Workshop
Gothenburg, March 19-21, 2018



IIASA, International Institute for Applied Systems Analysis

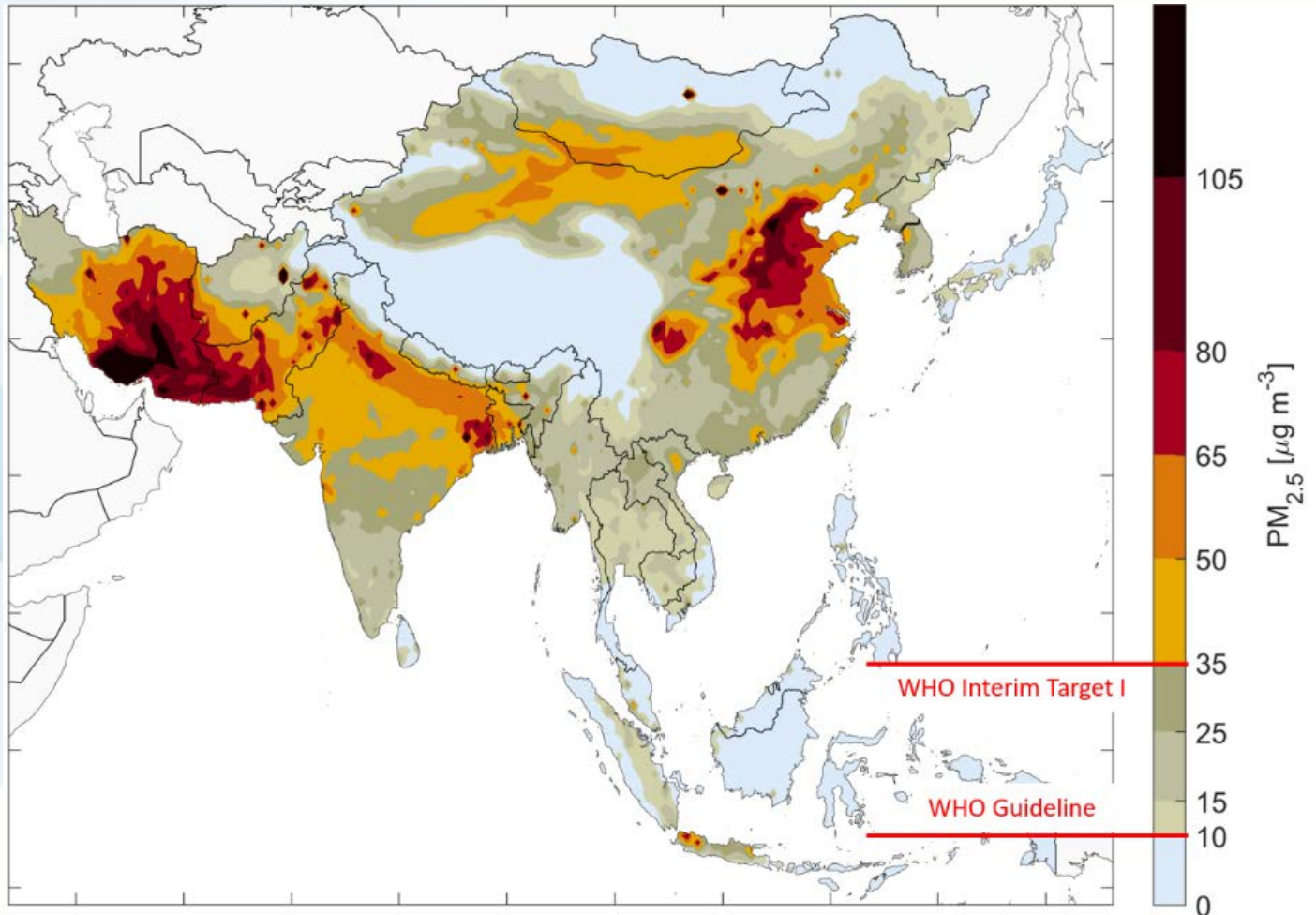
POLICY INTERVENTIONS HELPED TO BREAK THE HISTORIC LINKAGE BETWEEN ECONOMIC GROWTH AND EMISSIONS IN ASIA



Source: IIASA, GAINS

IN 2015, AIR QUALITY STANDARDS WERE EXCEEDED OVER LARGE AREAS IN ASIA

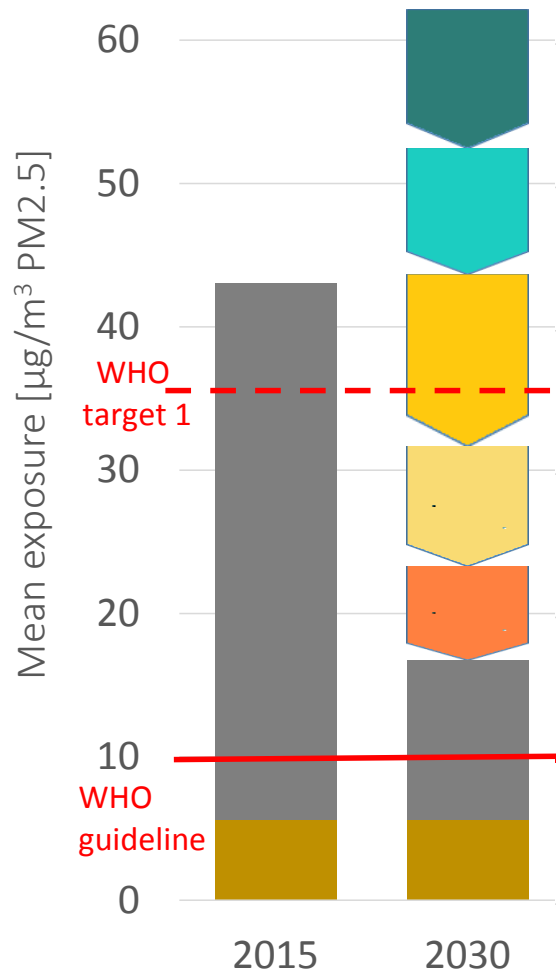
AMBIENT PM_{2.5} IN 2015



Source: IIASA, GAINS

FURTHER AIR QUALITY IMPROVEMENTS IN ASIA REQUIRE A RE-ORIENTATION OF CURRENT POLICIES

Mean population exposure
to PM_{2.5}



Measures already in place in 2015

- Vehicle emission standards
- TSP controls at large plants

Post-2015 legislation

- SO₂+NO_x controls at stationary sources

Other 'conventional' PM controls

'Next stage' air quality measures

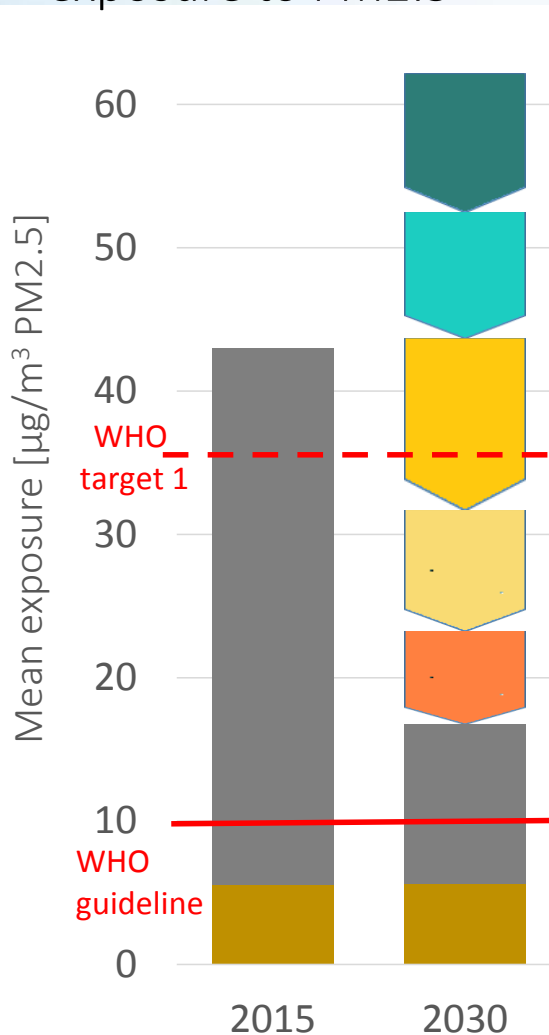
- Fertilizer use, manure management, open biomass burning, residential waste burning, I&M of vehicles

SDG measures

- Clean cooking fuels, renewable energy
- Energy efficiency, waste management
- Public transport and electric vehicles

THE NEW POLICY MEASURES WOULD HAVE IMPORTANT CO-BENEFITS ON SDGs

Mean population exposure to PM2.5

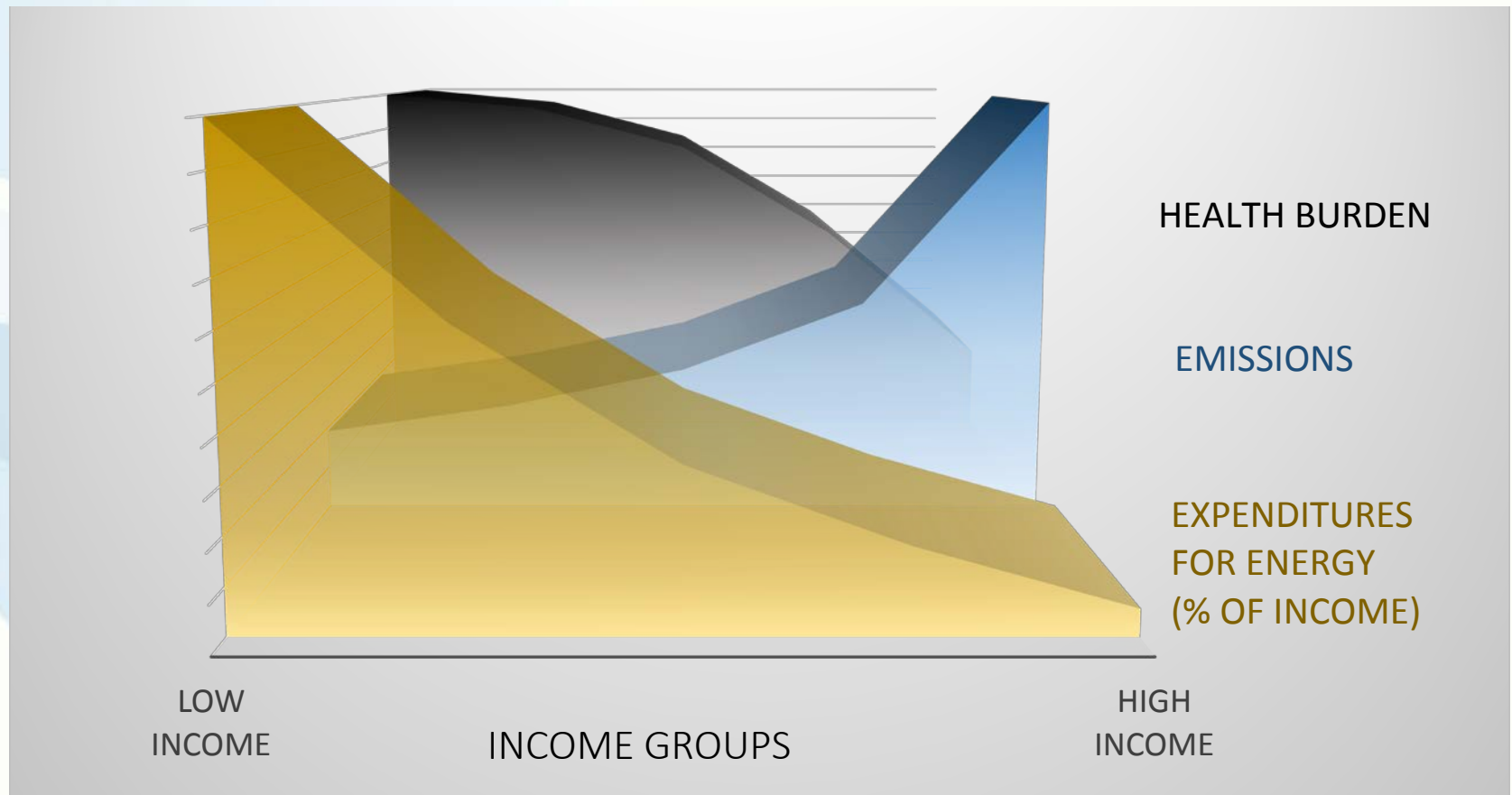


	Greenhouse gases		
	CO ₂	CH ₄	BC
Post-2015 legislation ^{*)}	+16%	+17%	-24%
Other PM controls ^{**)}	0%	0%	-8%
Next stage measures ^{**)}	0%	-29%	-56%
SDG measures ^{**)}	-19%	-44%	-72%

^{*)} relative to 2015

^{**)} relative to 2030 baseline

INEQUALITIES OF POLLUTION INDIA - 2010



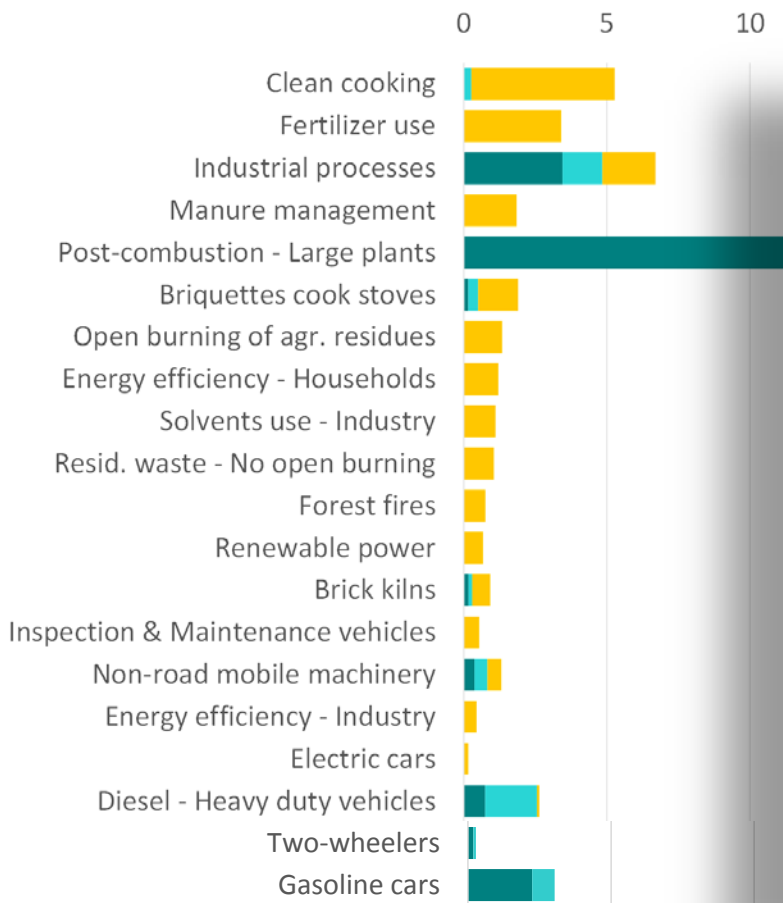
Source: Kieseewetter et al., 2018

Key messages

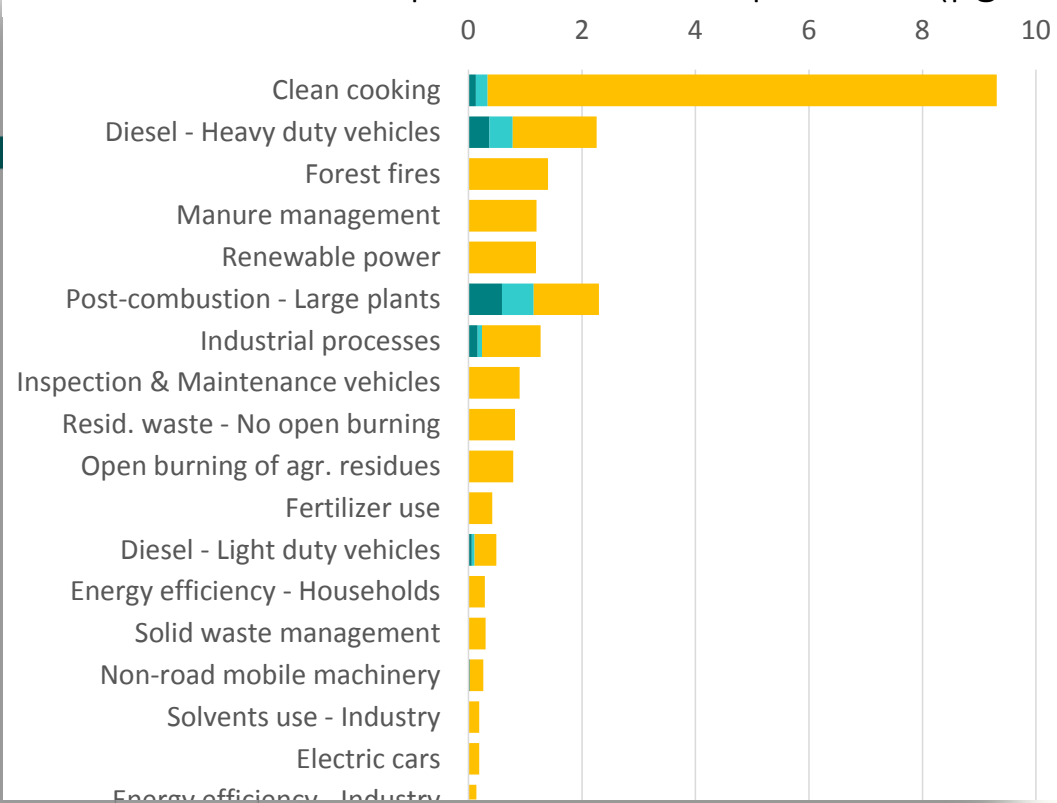
- While current policies limit a further increase of emissions in Asia, they will not be sufficient to significantly improve air quality.
- To move towards the Air Quality Standards, measures that involve other sectors (agriculture, energy, waste management, etc.) will be indispensable.
- These measures will deliver a wide range of health- and other development benefits and reduce pollutants that influence temperature increase and climate.
- Integrated multi-approaches (such as in the LRTAP Convention) could embed air quality measures in the development agendas, and offer powerful incentives for measures that serve the global goods.

THE PRIORITY MEASURES DIFFER ACROSS REGIONS, DUE TO DIFFERENCES IN ECONOMIC STRUCTURES AND GEO-PHYSICAL CONDITIONS

East Asia - Exposure reduction potential ($\mu\text{g}/\text{m}^3$)



South-East Asia - Exposure reduction potential ($\mu\text{g}/\text{m}^3$)



■ 2015 measures ■ CLE measures ■ Further potential