

Towards an integrated perspective to identify solutions with multiple benefits

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IIASA-ASM Workshop on Biomass burning: Solutions with multiple benefits for
different groups in the society and long-term sustainable development

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Biomass burning is a problem with many facets

- The impacts of biomass burning on air quality and human health in South-east Asia are recognized as a public concern with significant negative economic consequences
- However, improvements are slow, for a number of reasons:
 - Multiple driving forces, many are intrinsically linked to development (from business perspectives to gender aspects and living conditions for the poor)
 - The international dimension is important
 - Prevailing governance problems in the region

Scientific studies have addressed many aspects of the problem

- There is ample literature on physical, technical, economic, social and institutional aspects of biomass burning, providing clear scientific evidence that:
 - Current practices are causing serious problems
 - But this has not yet led to effective action.
 - Policy measures are conceivable that would deliver important benefits
 - But these are not always convincing to the responsible actors, *i.a.* because benefits do not necessarily occur to those who would need to take action – and often those who suffer (or would obtain benefits) have no voice.

But little understanding of the linkages of different aspects

- A systematic understanding of the linkages of different aspects could open new dimensions for solutions:
 - Many actions have multiple benefits.
 - Often these multiple benefits contribute to different policy priorities which are tangible for different groups in the societies.
 - These linkages and multiple benefits could be strategically employed to reveal solutions that would receive more wide-spread support and have higher chances for implementation.

International Institute for Applied Systems Analysis (IIASA)

- International, interdisciplinary, solutions-oriented research
Use scientific evidence for resolving complex sustainability issues in an inclusive research and policy environment.
- Founded in 1973 to enable scientific cooperation during the cold war
- Today 23 member countries, including Indonesia, Malaysia, China, Vietnam, Japan, India, Korea.
- Research programs address global population, energy, air quality and greenhouse gases, water, land use, ecosystems management, evolution, methodologies, etc.

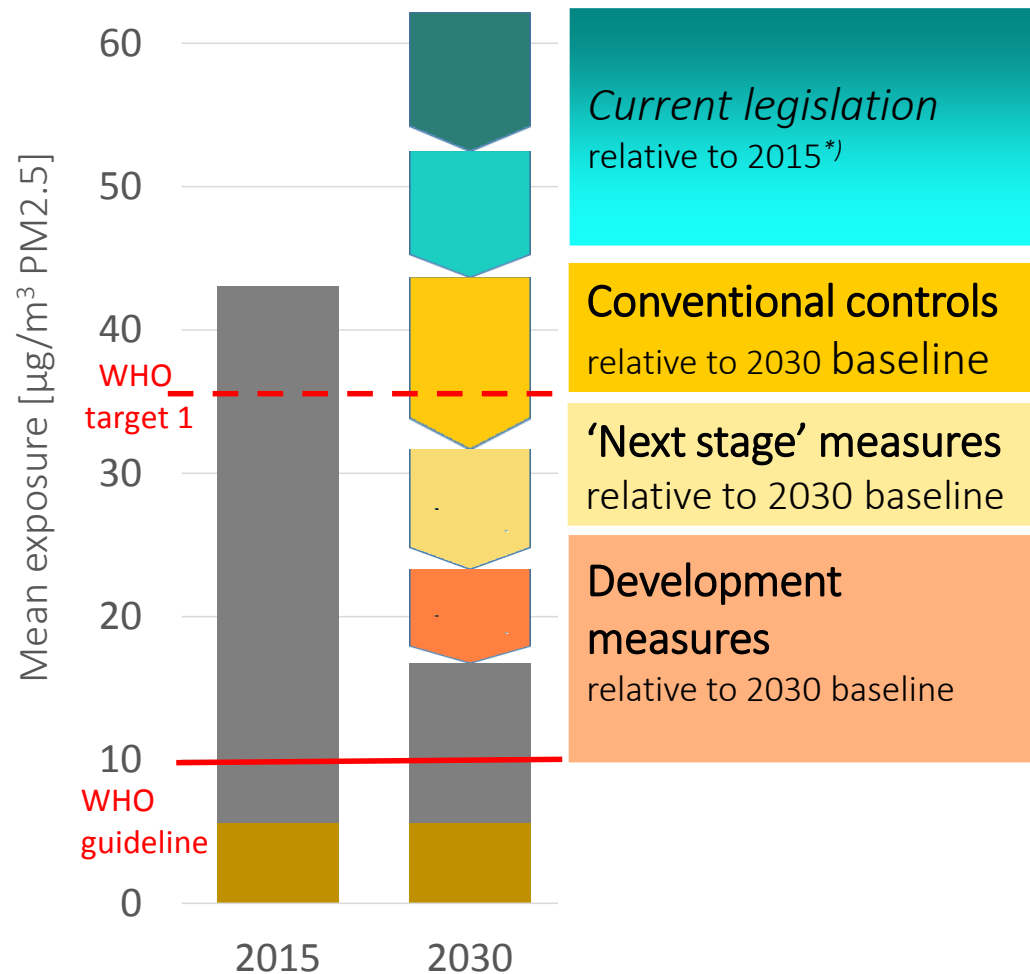


Summary

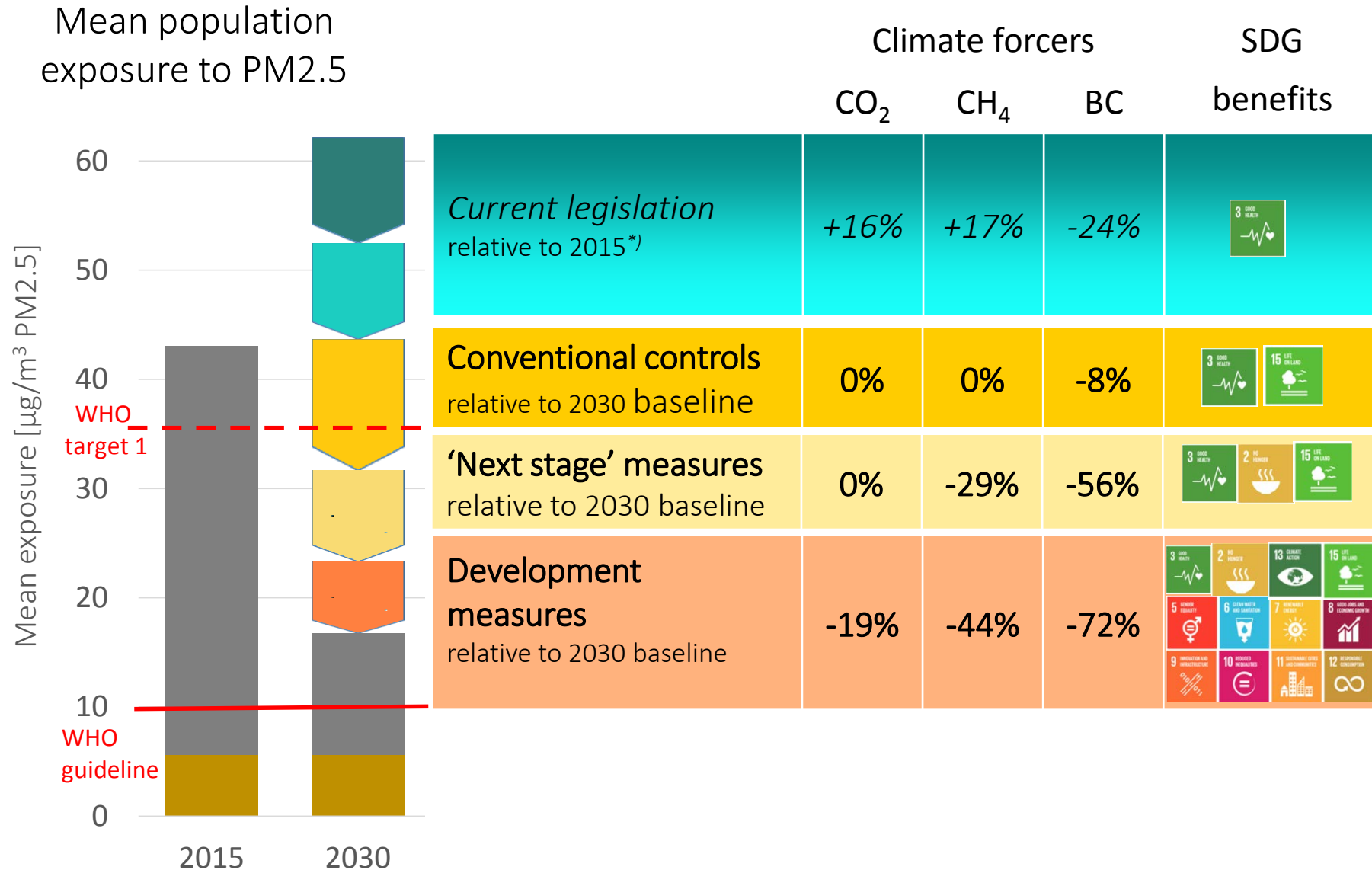
AIR POLLUTION IN ASIA AND THE PACIFIC: SCIENCE-BASED SOLUTIONS

THE TOP 25 CLEAN AIR MEASURES

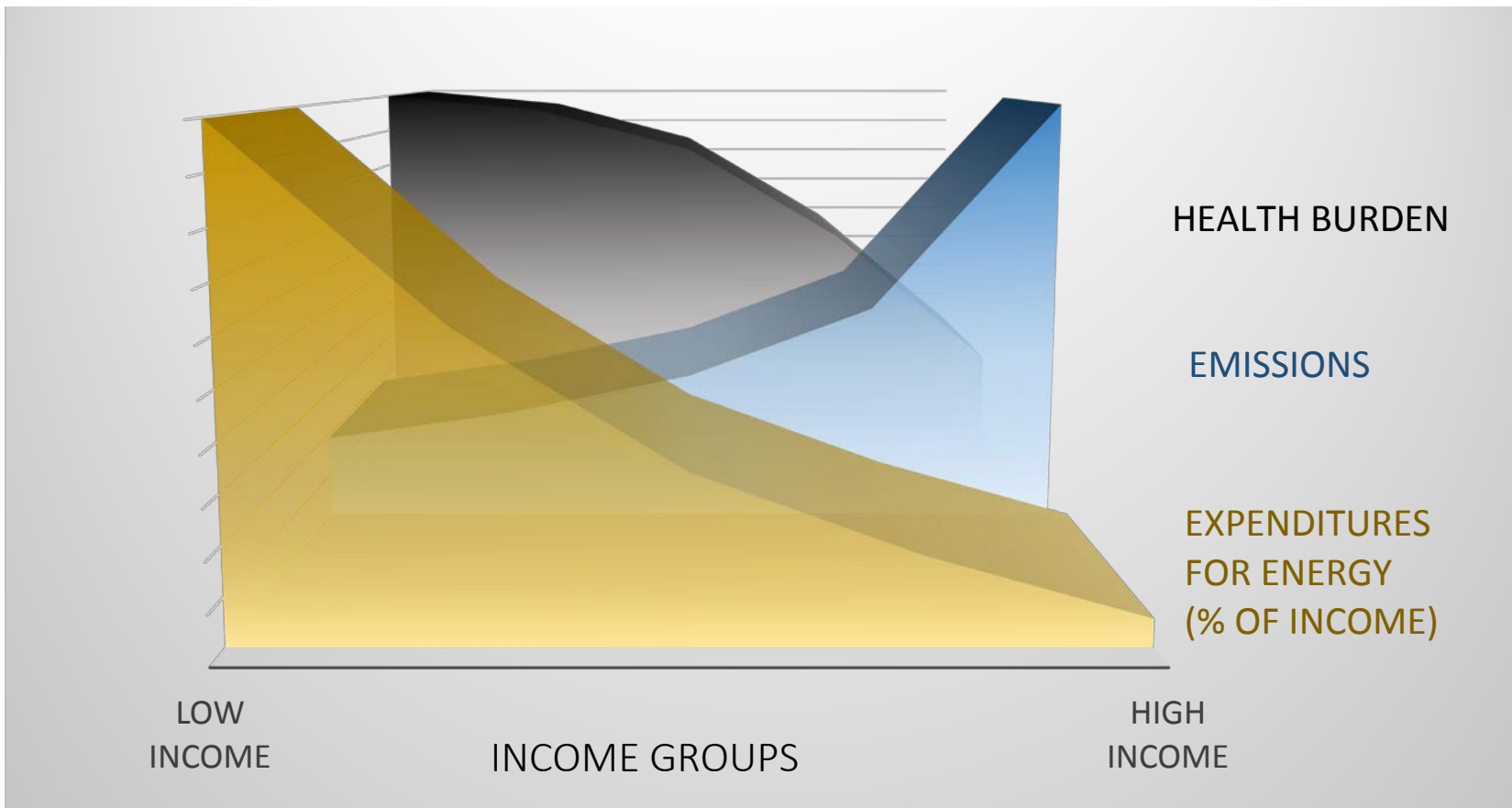
Mean population exposure to PM2.5



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



INEQUALITIES OF POLLUTION INDIA - 2010



The IIASA-ASM project on Biomass burning: Solutions with multiple benefits for different groups in the society and long-term sustainable development

- Objectives of the workshop:
 - Identify concrete options for policy interventions (solution-oriented)
 - Assess their benefits in a holistic way
 - Consider governance and institutional aspects
- An unusual blend of participants:
 - World class experts from many different disciplines working on biomass burning
 - Exploring the linkages between their work fields
 - Focus on solutions through identifying multiple impacts

Six sessions

1. Setting the scene
2. The current understanding of biomass burning in Asia and of the benefits from potential policy interventions
3. Understanding the driving forces of biomass burning, and their connections to other policy objectives
4. Solutions – potential policy interventions, their social and economic benefits, and their impacts on other policy priorities
5. Towards an integrated assessment of solutions
6. Research agenda, work plan, funding options, communication plan

A conceptual framework: Benefits of policy interventions

| | | Benefits | | | | | | | | | | | | | | |
|----------------------|-------------------------------------|----------------------|------------------------------|---------------------------|-------------|--------------|---------------------|--------------------------|--------------|-------|-------------|----------------------|------------------|----|-----|--|
| | | Health - ambient air | Health - Household pollution | Labour force/productivity | School days | Biodiversity | Fossil fuel imports | Food production/security | Soil quality | Water | Soil carbon | Temperature increase | Monsoon patterns | xx | xxx | |
| Policy interventions | Access to clean fuel | x | x | x | | | | | | | | x | x | | | |
| | Alt. agri. practices - less burning | x | | | | x | | | x | | x | x | x | | | |
| | Agri waste recycling | x | | | | x | x | | | | | | x | | | |
| | Water table management | x | | x | x | x | | | | x | | | x | | | |
| | Fire prevention | | | x | x | x | | | | | | | x | | | |
| | Fire management | x | | | | x | x | | | | | | x | | | |
| | Biofuel production | | | | | | x | | | | | x | | | | |
| | Training programs | | | | | | | | | | | | | | | |
| | xxx | | | | | | | | | | | | | | | |
| | xxxx | | | | | | | | | | | | | | | |
| xxxxx | | | | | | | | | | | | | | | | |

Tasks:

- Expand list of benefits and measures
- Indicate known impacts in matrix
- Quantifications
- Distributional/ social aspects
- Spatial features
- Future trends
- Costs and benefits
- Identify promising options