

INDOOR AIR POLLUTION:

RURAL, ENERGY, OR ENVIRONMENT ISSUE?

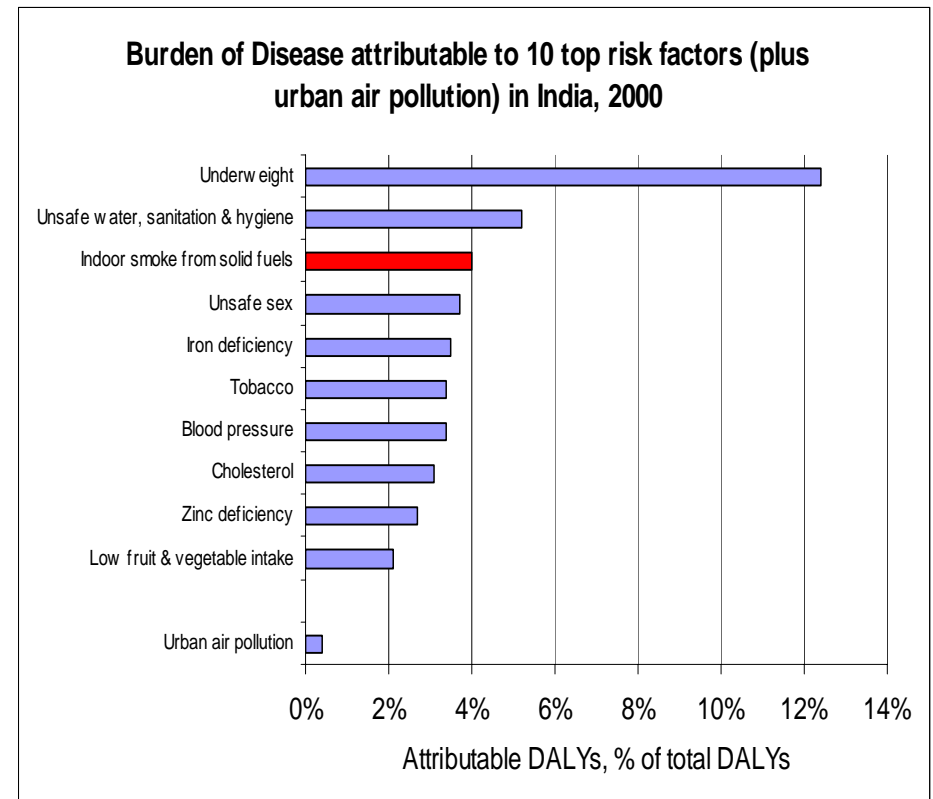
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Indoor Air Pollution (IAP) from solid fuels is a major health threat

- A leading cause of illness and death in developing countries
- Particularly affects young children and women in rural areas—**2 million death per year**
- An important factor for achieving **MDGs** of halving child mortality and improving maternal health





High social costs of traditional biomass use

- Forest and soil degradation
- Drudgery of biomass collection
- Time consuming cooking
- Indoor and outdoor air pollution
- Diversion of time of women and children from more productive activities
- Physical and mental health problems
- Gender disparity

What can be done?

A menu of options...

Solutions:

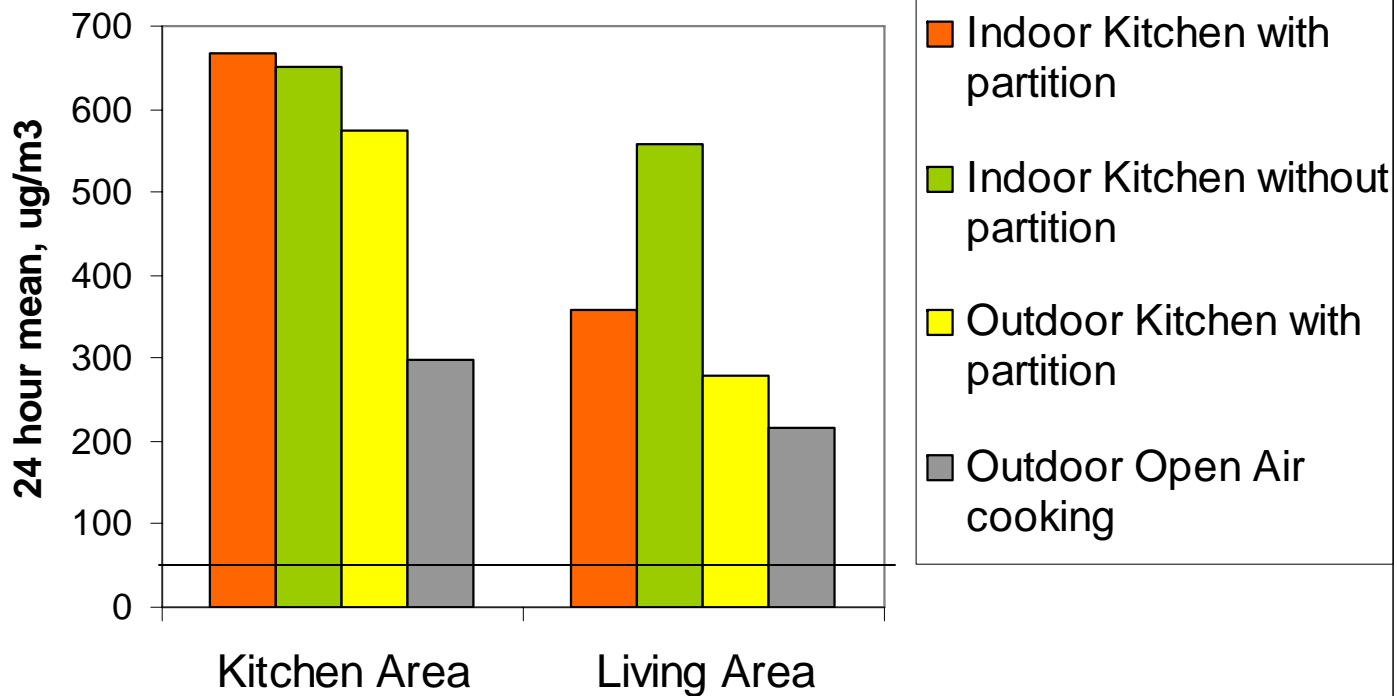
- Behavioral change
- Better Housing
 - Windows
 - Kitchen configuration
- Better Stoves
 - Chimneys & hoods
 - Fuel & combustion efficiency
- Better Fuels
 - “Clean” solids
 - Kerosene, gas, electricity

Examples of interventions:

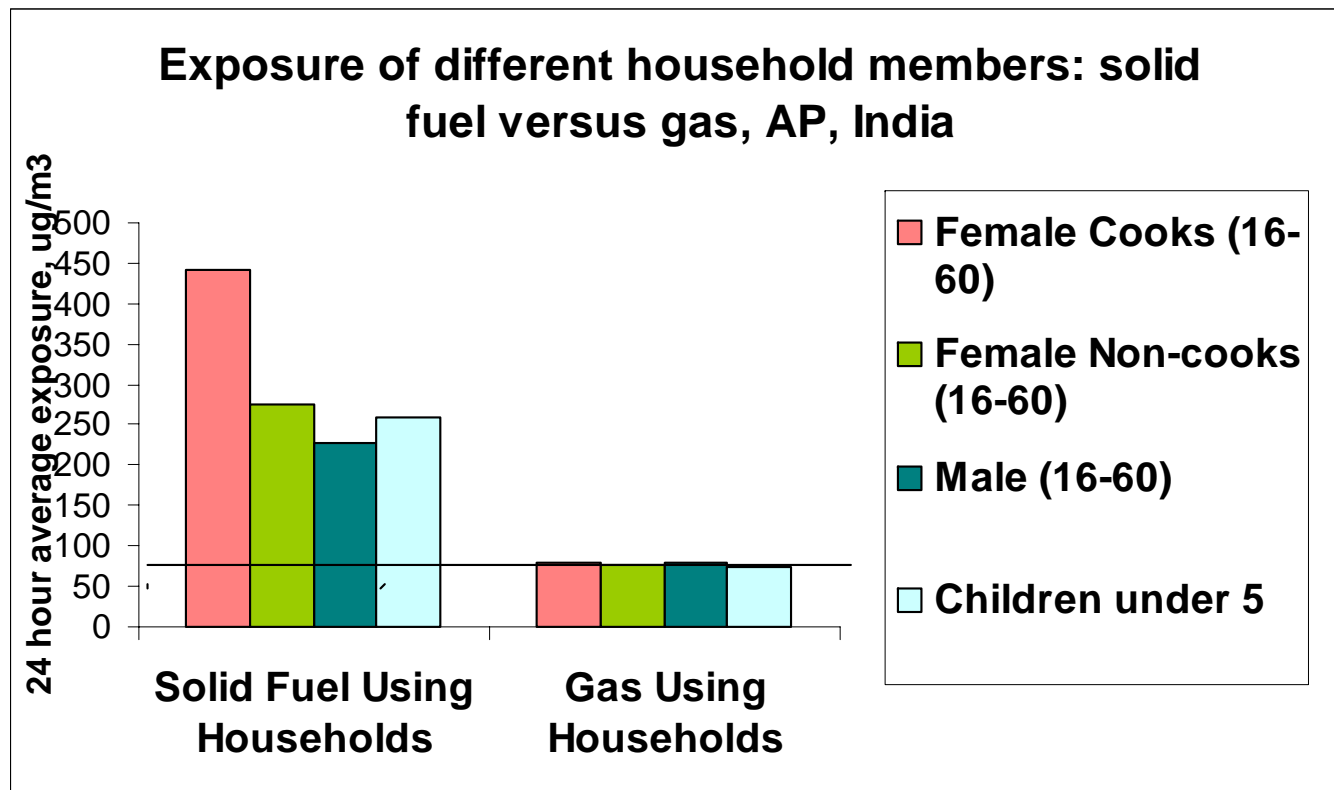
- Raising awareness of health effects & mitigation options
- Housing programs
- Improved stove programs
- Clean fuel promotion programs

IAP mitigation impact of kitchen configuration

Kitchen and Living Area RSPM Concentrations for Different Kitchen Configurations in rural AP

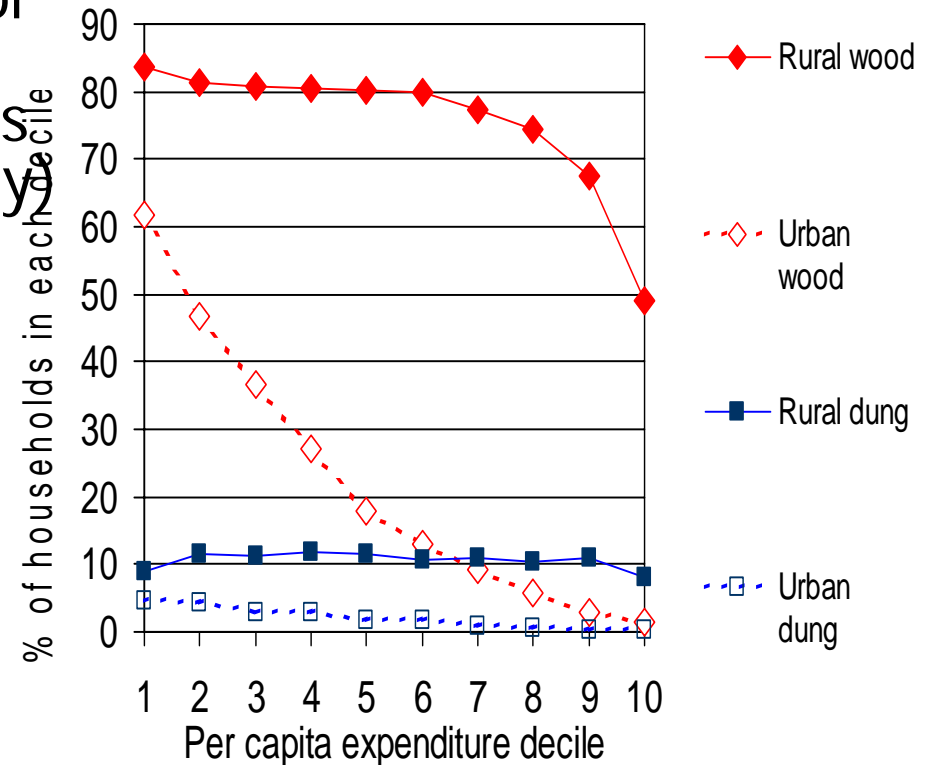


IAP exposure for different fuels and family members



What can be done? A realistic strategy...

- Long-term objective for rural areas: full switching to clean fuels (LPG, biogas, electricity)
- Interim solutions: improved stoves & house ventilation
- Sustainability is a key challenge
 - Low priority for poor households as long as free/cheap biomass is available



Integrated approach to household energy and rural development

- Income generating alternatives to time spent on biomass collection
- Raising awareness of health and other benefits of clean fuels and technologies
- Women empowerment
- Designing rural energy programs that meet and help sustain demand from users
 - Productive uses of energy

