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Indoor Smoke: Breaking Down Respiratory Defences

Cooking is central to our lives, yet the very act of cooking is a threat to children's health and well-being.

Half of the world's population rely on solid fuels, such as dung, wood, crop waste or coal to meet their most basic energy needs. In most developing countries, these fuels are burned in open fires or rudimentary stoves that give off black smoke. Children, often carried on their mother's back during cooking, are most exposed. The indoor smoke inhaled gives rise to pneumonia and other respiratory infections – the biggest killer of children under five years of age. Indoor air pollution is responsible for nearly half of the more than 2 million deaths each year that are caused by acute respiratory infections.

Good ventilation and improved cooking stoves can dramatically reduce children's exposure to smoke. Ultimately, making the transition to gas and electricity will save lives and reduce the physical toll on women and children from gathering wood, freeing time for education and development.

This problem has been largely ignored by policy-makers.

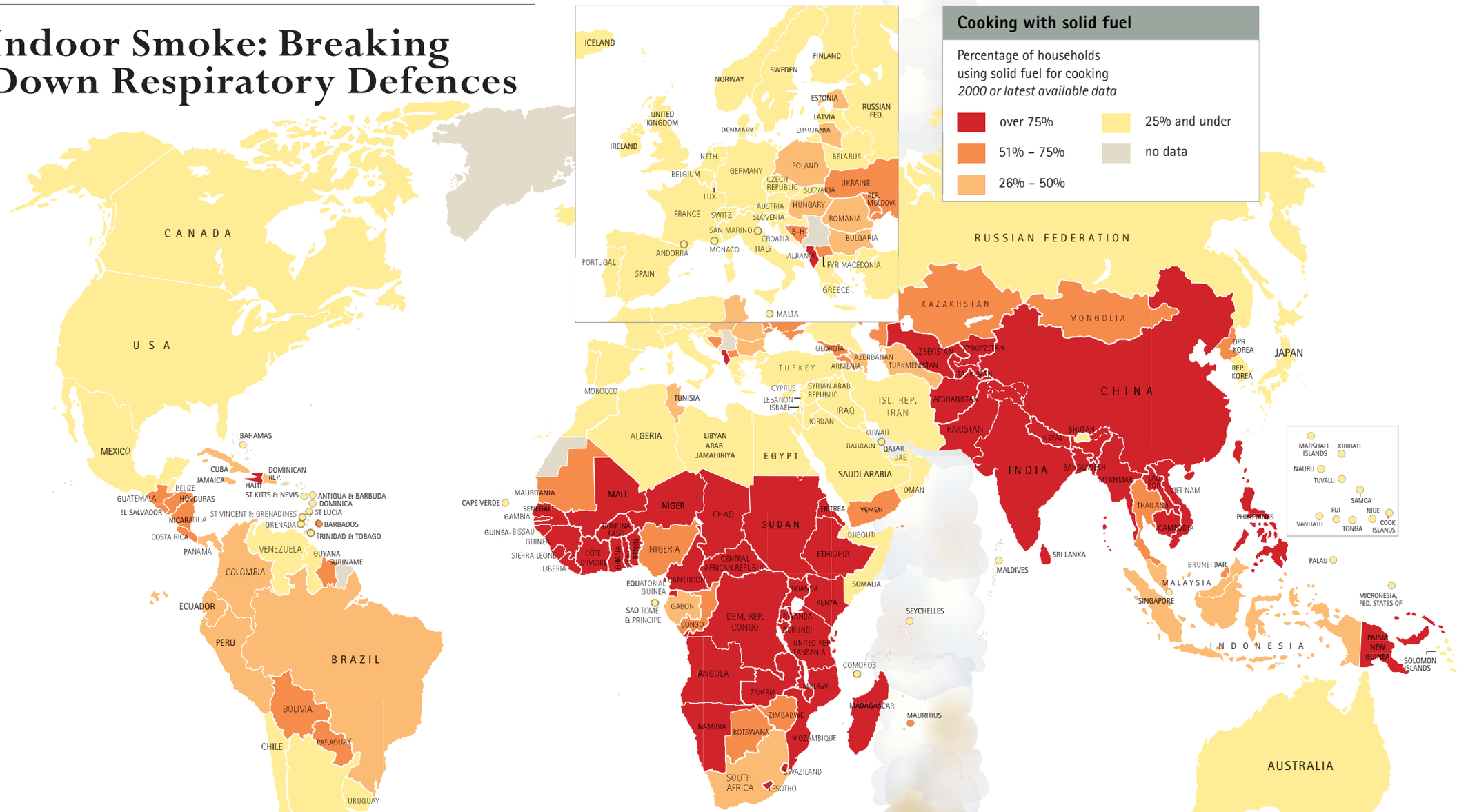
Health effects

Established effects:

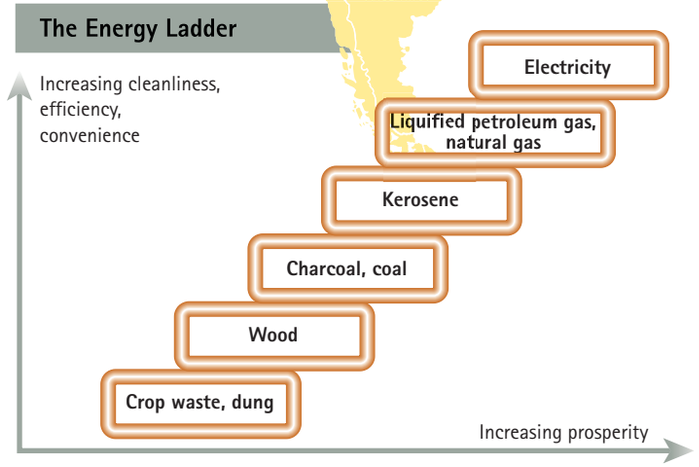
- Pneumonia and other respiratory infections
- Chronic obstructive pulmonary disease (including bronchitis, emphysema)

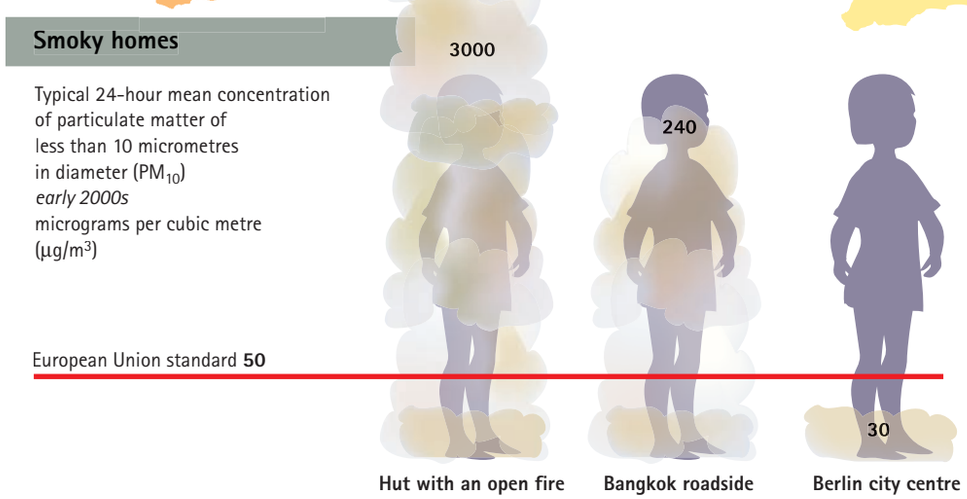
Suspected effects:

- Tuberculosis
- Cataracts
- Asthma
- Low birth weight
- Middle ear infection (otitis media)



The Energy Ladder



Smoky homes

Typical 24-hour mean concentration of particulate matter of less than 10 micrometres in diameter (PM_{10})
early 2000s
micrograms per cubic metre ($\mu g/m^3$)