

Partnership for Clean Indoor Air



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The Household Energy Challenge

- Almost 3 billion people burn traditional fuels indoors for home cooking and heating.
- The number of people using these fuels is expected to rise substantially by 2020.
- More than 1.6 million people, mainly women and children, die prematurely each year from breathing elevated levels of indoor smoke.



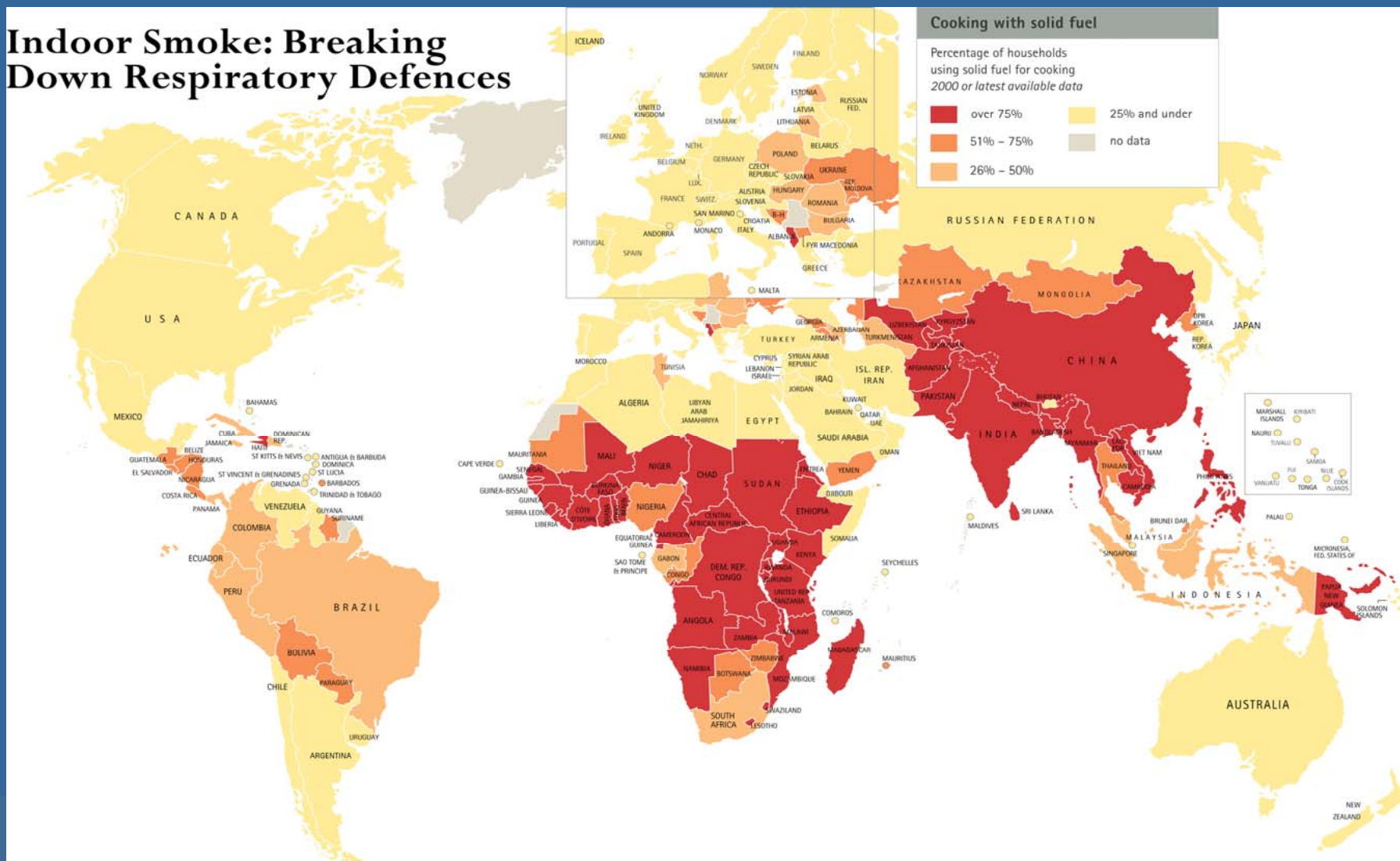
People Relying on Biomass Resources as their Primary Fuel for Cooking, 2004

IEA, 2006

Region	Total Population		Rural		Urban	
	%	million	%	million	%	million
Sub-Saharan Africa	76	575	93	413	58	162
North Africa	3	4	6	4	0.2	0.2
India	69	740	87	663	25	77
China	37	480	55	428	10	52
Indonesia	72	156	95	110	45	46
Rest of Asia	65	489	93	455	35	92
Brazil	13	23	53	16	5	8
Rest of Latin America	23	60	62	59	9	25
Total	52	2528	83	2147	23	461

Solid Fuel Use

Indoor Smoke: Breaking Down Respiratory Defences



Use of Biomass Energy 2004 vs. 2030

IEA, 2006

Country/ Region	2004			2030		
	Total Primary Energy Supply (Mtoe)	Of Which, Total Biomass & Waste (Mtoe)	% Biomass & Waste	Total Primary Energy Supply (Mtoe)	Of Which, Total Biomass & Waste (Mtoe)	% Biomass & Waste
Developing Countries	4460	972	22%	8619	1236	14%
Africa	582	283	49%	954	385	40%
Developing Asia	2916	600	21%	5796	717	12%
India	573	214	37%	1104	253	23%
China	1626	221	14%	3395	239	7%
Latin America	484	88	18%	845	129	15%
Brazil	200	54	27%	349	90	26%
OECD	5,502	187	3%	6,860	386	6%
World	11,204	1176	10%	17,095	1645	10%

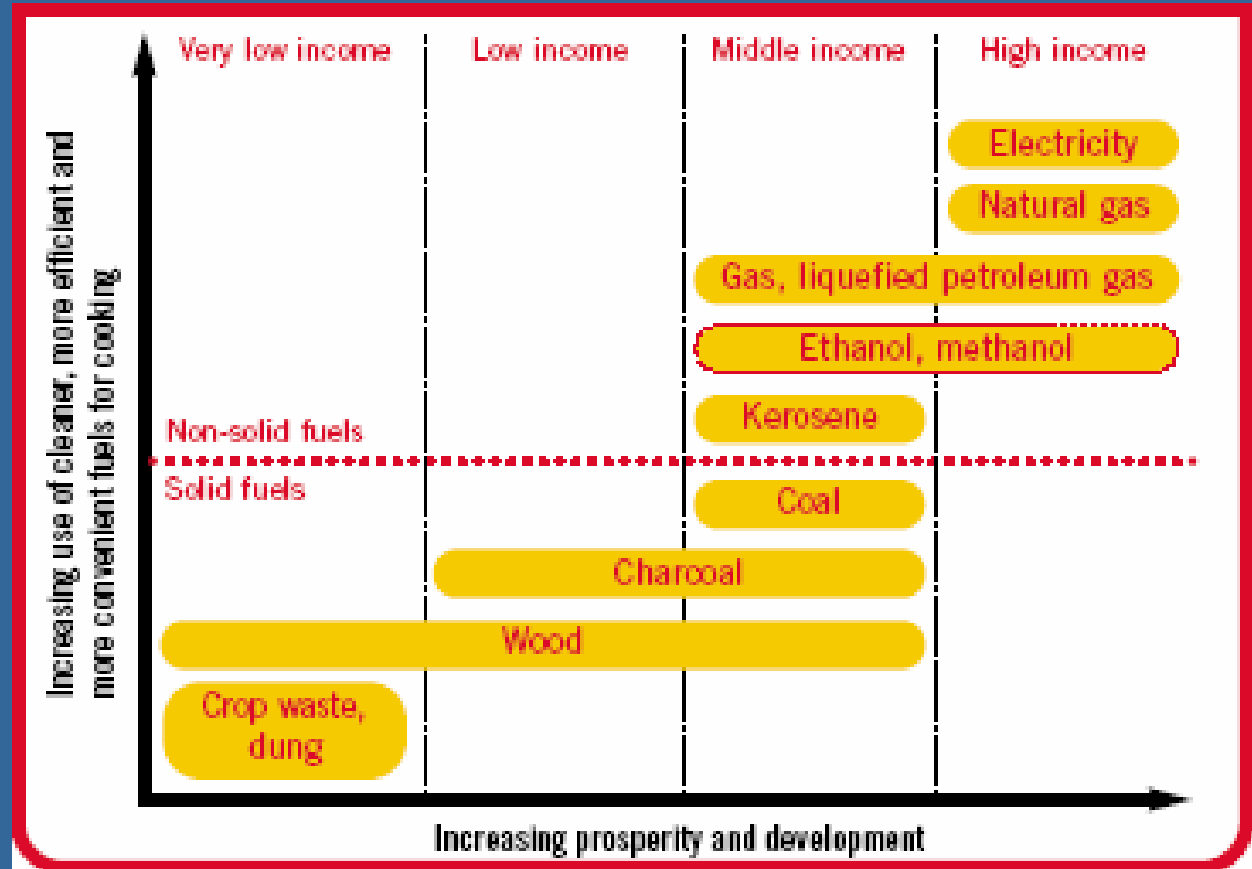
The Number of People in Developing Countries Relying on Biomass for Cooking & Heating is Growing

IEA, 2006

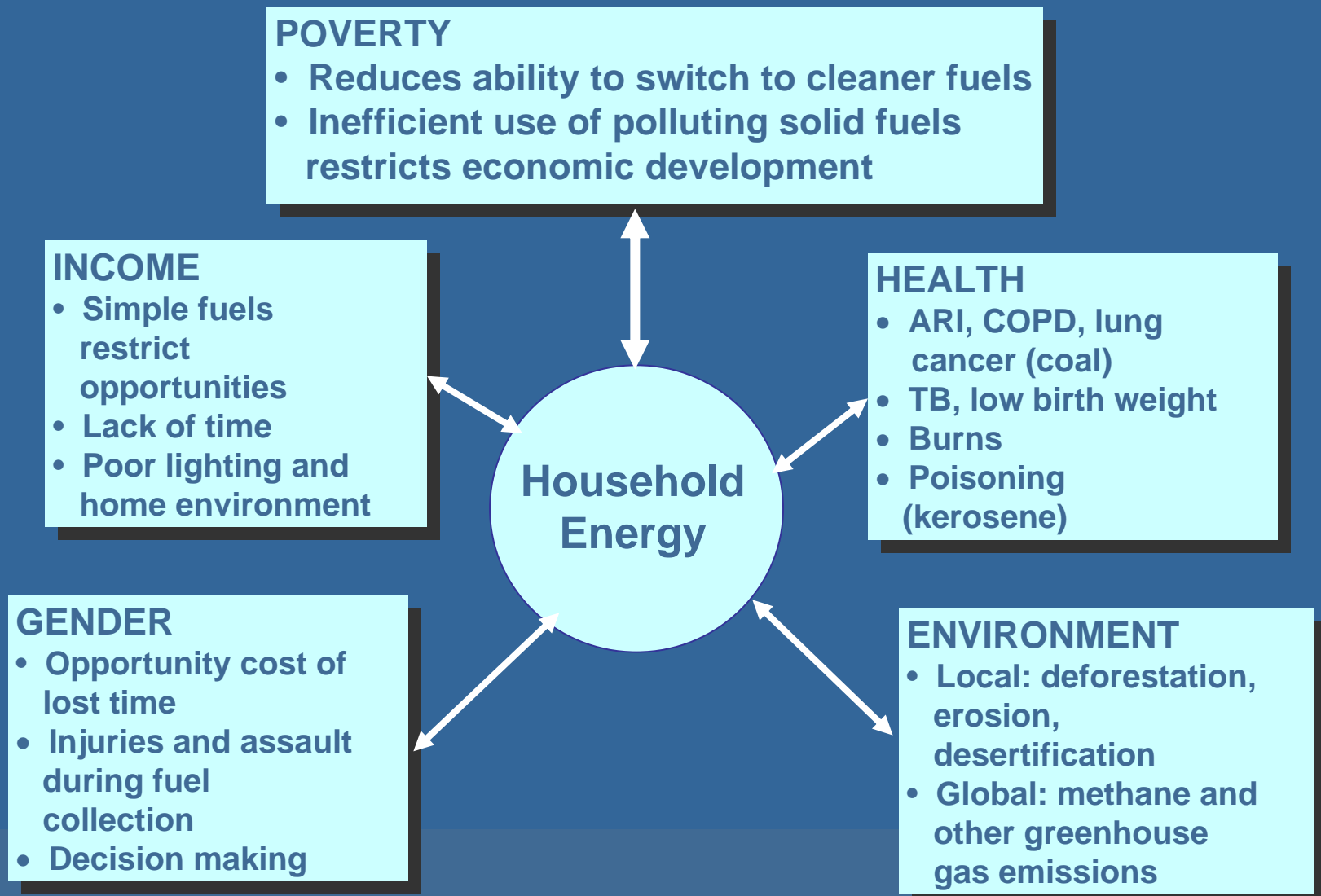
Country/Region	2004 (million)	2015 (million)	2030 (million)	% Change 2004-2030
Sub-Saharan Africa	575	627	720	+25%
India	740	777	782	+6%
China	480	453	394	-18%
Indonesia	156	171	180	+15%
Rest of Asia	489	521	561	+15%
Brazil	23	26	27	+17%
Rest of Latin America	60	60	58	-3%
Developing Countries (Total)	2528	2640	2727	+8%

Household Energy Ladder

- Dung
- Wood
- Charcoal
- Kerosene
- Alcohol
- LPG
- Electricity



Multiple Impacts of Household Energy Use



Barriers to Progress

- Low Awareness of Negative Impacts
- Lack of Engagement by Governments, and International Organizations
- Reliance on Non-Governmental Organizations to Address This Challenge
- Buying What Has Been Free (Stove / Fuel)
- Affordability of Improved Technology
- Uncertainty of Improved Technology (Performance/Durability)
- Availability of Improved Technology

Project Specific Barriers

- Incorporating social and cultural customs.
- Supporting sustainable, local markets.
- Meeting design/performance criteria.
- Demonstrating multiple benefits.

