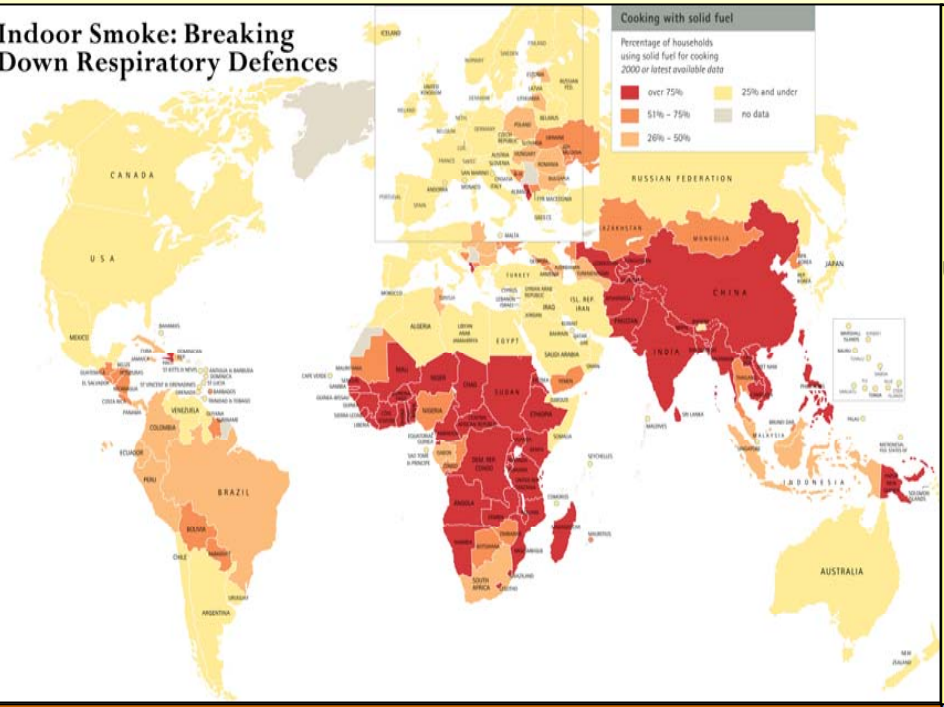
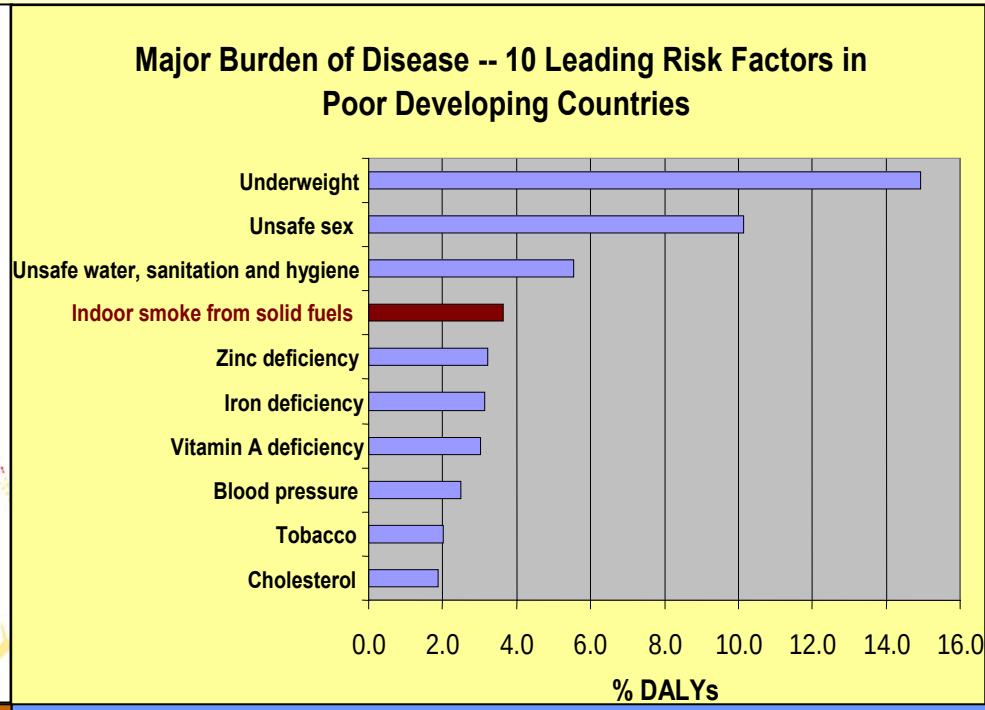
Partnership for Clean Indoor Air

Re-Launching PCIA as a Bigger, Independent, and Sustainable Entity

Interagency Discussion
April 24, 2008

What are the Ten Worst Health Threats in Poor Developing Countries?





Half the World Cooks with Solid Fuels (IEA expects # to increase 8% by 2030).

Indoor Smoke is the 4th Worst Health Risk Factor in Poor Developing Countries.

Biomass met 48% of Africa's and 29% of India's 2004 primary energy supply (IEA).

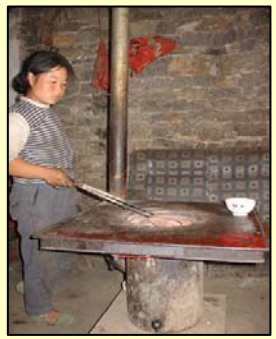
Inhalation of this smoke leads to ~1.5 million deaths/year (1 every 20 seconds).

Source: WHO's World Health Report, 2002

Reducing Indoor Smoke from Cook Stoves

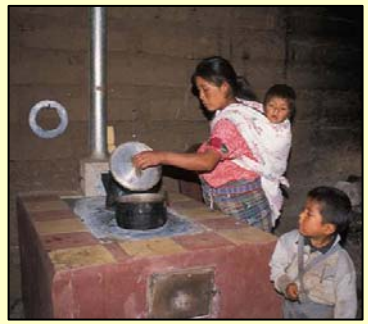
$PM_{2.5}$ 24-hour Standard	Typical Indoor $PM_{2.5}$ Concentrations from Indoor Smoke	Some Pollutants in Indoor Smoke
EPA: 35 µg/m³ WHO: 25 µg/m³	24-hour: 100s-1,000s µg/m³ Peak: 1,000s-10,000s µg/m³	Criteria Pollutants: $PM_{2.5}$, CO, NO_2, Toxics: formaldehyde, benzene, 1-3 butadiene, polyaromatic hydrocarbons (e.g., benzo[a]pyrene) For Coal: SO_2, As, Pb, Hg, & F

China



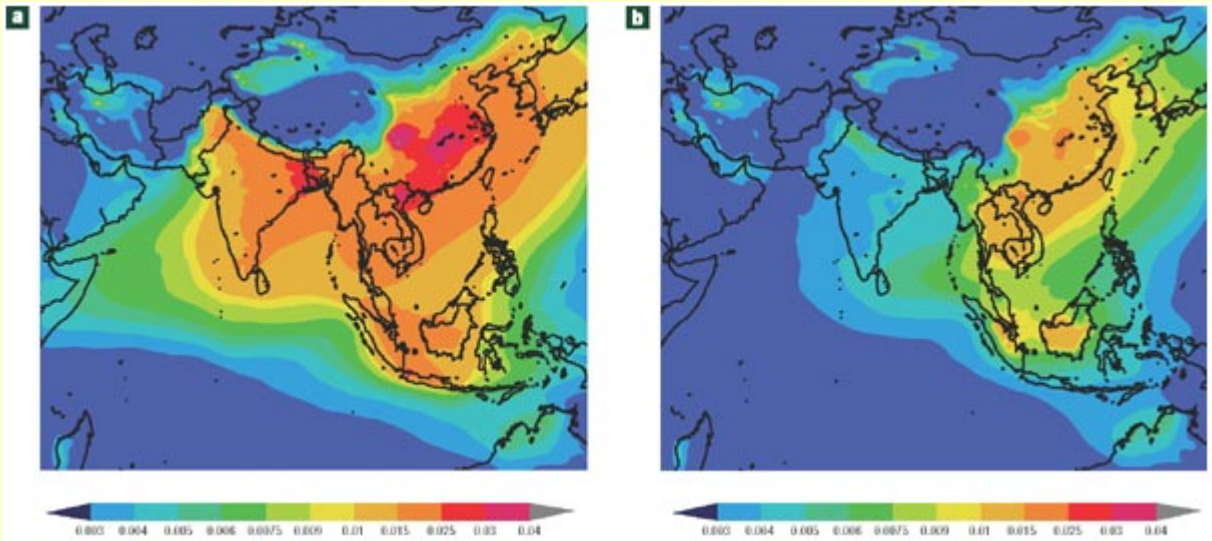
Uganda

Guatemala



Emerging Angles for the Field

- Climate: using improved stove *may* reduce up to 1-3 tons C/yr
  - Significant CO_2 emissions when the fuel is not harvested sustainably.
  - Other GHG: CO, CH_4, N_2O, TNMHC, black carbon, organic carbon
  - Black carbon emissions are the 2nd strongest contribution to current global warming, after carbon dioxide emissions; atmospheric lifetime of ~1 week



The dramatic impact of replacing biofuel cooking with smoke-free cookers in South and East Asia:

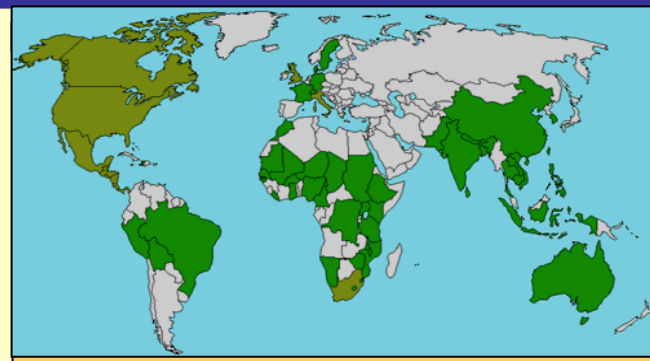
- **South Asia – a 70-80% decrease in black carbon heating;**
- **East Asia – a 20-40% decrease.**

Source: Ramanathan and Carmichael, *Nature Geoscience*, March 2008

- Biofuels: increasing competition of biomass resources for food production, cooking & heating, and transportation
  - Already some debate re. what is a "renewable fuel" in this global context.
  - How will developed country needs (transportation fuels) intersect with developing country needs (food, household fuel – supply and cost)?

About the Partnership for Clean Indoor Air (PCIA)

- PCIA Launched at World Summit on Sustainable Development in 2002
- Cumulative U.S. Govt. Funding: ~$8.5M total
- PCIA Activities to Date Include:
  - pilot projects reached over 320k people and scale-up projects to reach over 750k people
  - biennial forums, networking, tools, website, bulletins, stove testing
  - capacity building training (e.g., monitoring; stove design; enterprise devo.)
- Two key constraints: resources and partner engagement/leadership

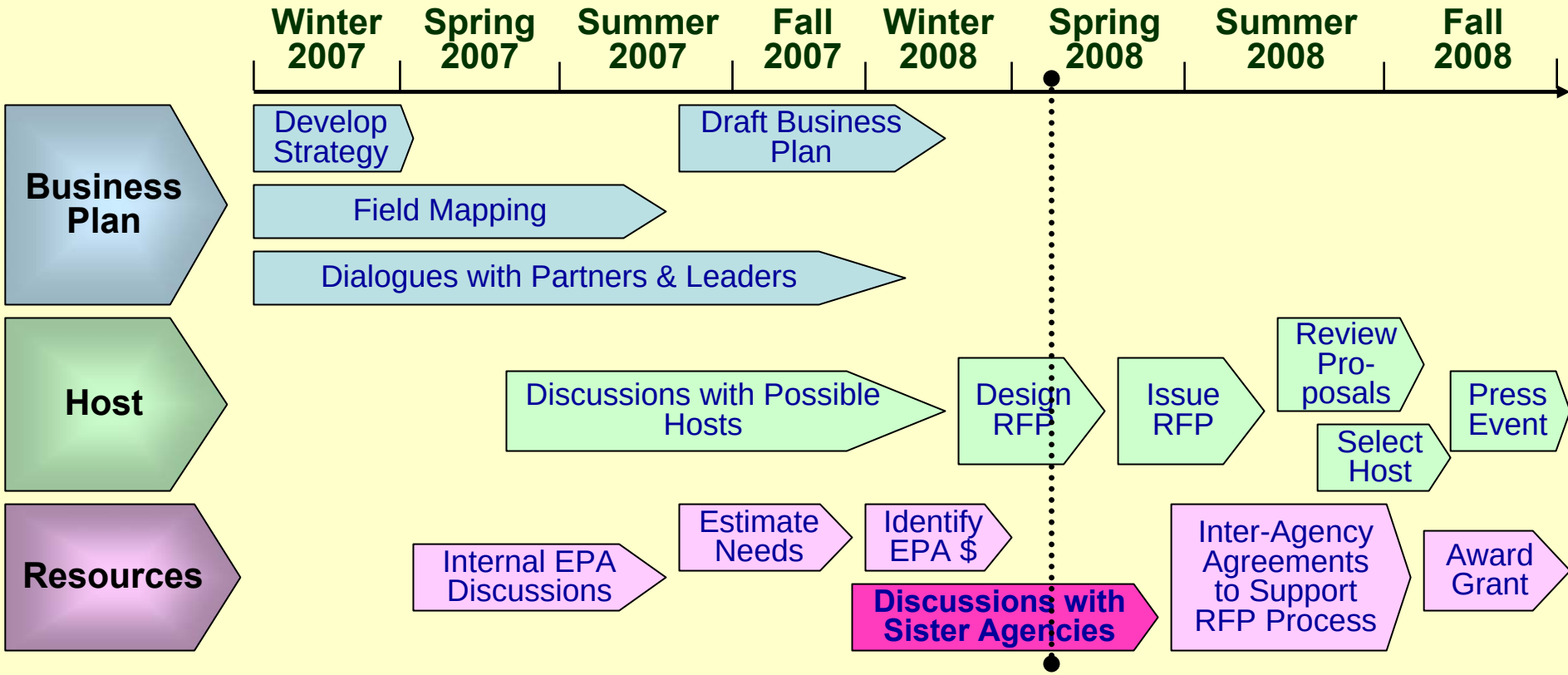


In 5 years, PCIA has grown from 13 to >160 partners, working in 60+ countries.

Results and Goals: Reports at PCIA 3rd Biennial Forum (Bangalore, India; March 2007)		
	# Homes with Clean Stoves	# People Affected
Results: 2003-6	1.3 million	7.6 million
Goal: 1 Year	~1.4 million	~8 million
Goal: 2-3 Years	~6.5 million	~31 million

PCIA Transition: Timeline & Stories

Question: **How can government transform a sustainable development initiative into a bigger, independent entity?**



Big-Picture Stories:

- **Government as incubator, but turns over to private sector when appropriate.**
- **Excellent example of Administration's diplomatic strategy regarding results-based sustainable development**

Future PCIA Business Plan

PCIA Role w/Partners

Not PCIA Role

PHASE 1: Demonstrate Ability to Reach Scale, 2008 – 2013 (Budget ≈ $30 million)

PHASE 1a: Priority Research

- Quantifying Dose-Response
- Climate Change: Impacts & Remedies
- Economic Metrics
- Clean Stove & Fuel Research

PHASE 1b: Mature Global Infrastructure

- Standards & Measures
- Global Communications
- Knowledge & Networking

PHASE 1c: Demonstrate Regional Strategy – Partner Networks to Support Markets

DEMAND

Users
- Homes
- Institutions
- Businesses

Public Awareness

Financing

Testing Centers

Government Policy

SUPPLY

Manufacturers
- Local Businesses
- Multi-National Corporations

Sales/Distribution
- Local Businesses
- Multi-National Corps
- Local NGOs

Monitoring and Evaluation

PHASE 2: Global Campaign to Reduce Indoor Smoke, 2013 – 2025 (Budget: $100s millions)

- Communicate Results of Local Strategy
- Develop Strategy with Global Leaders
- Identify Global Resources

Opportunities for Other Federal Agencies

- Provide modest support for the PCIA Transition
  - $800k over two years for each agency
  - Participate on RFP team – comment on RFP design; review proposals
- Become a major partner
  - Multi-million dollar investment over the coming years
  - Engage other major partners in your networks
  - Serve in advisory capacity to PCIA's future leadership board
- Support Implementation of Future PCIA Business Plan
  - Standards & Measures (e.g., stove or fuel standards, climate protocols)
  - Research (e.g., health, climate, stove design, clean fuels)
  - In-country implementation activities
  - Awareness – links to global dialogues on climate, health, energy, renewable energy, agriculture, biofuels, forestry, biodiversity, etc.
- Support PCIA activities today
  - Join PCIA – go to www.PCIAonline.org
  - Sponsor events (e.g., forums, trainings)
  - Encourage U.S. businesses to invest in this field

Appendix 1: Possible Future PCIA Budget

	Year 1	Year 2	Year 3	Year 4	Year 5	Total (5 Years)
EXPENSES						
Personnel	$1,463,000	$1,753,605	$2,034,936	$1,966,203	$2,027,598	$9,245,342
Purchased Services	$227,000	$370,000	$772,000	$986,000	$1,106,000	$3,461,000
Regional Technology Centers	$250,000	$250,000	$1,600,000	$700,000	$700,000	$3,500,000
Consulting/Marketing	$316,000	$475,000	$946,000	$680,000	$680,000	$3,097,000
Travel	$333,000	$398,000	$488,800	$477,760	$493,312	$2,190,872
G&A	$55,000	$65,925	$76,501	$73,917	$76,225	$347,569
Facility Costs	$96,000	$96,000	$80,000	$72,000	$72,000	$416,000
Initial Research Budget	$1,375,000	$2,000,000	$2,050,000	$1,375,000	$1,420,000	$8,220,000
TOTAL	**$4,115,000**	**$5,408,530**	**$8,048,237**	**$6,330,881**	**$6,575,135**	**$30,477,783**
REVENUES						
Membership Dues	$65,625	$128,750	$244,500	$263,400	$286,080	$988,355
Annual Conference	$0	$95,000	$171,250	$249,063	$328,828	$844,141
Services	$0	$20,000	$325,000	$451,250	$459,063	$1,315,313
Grants & Contracts	$4,000,000	$5,000,000	$7,000,000	$5,000,000	$5,000,000	$26,000,000
Donations	$50,000	$150,000	$262,500	$378,125	$497,656	$1,338,281
TOTAL	**$4,115,625**	**$5,393,750**	**$8,063,250**	**$6,341,838**	**$6,571,627**	**$30,486,089**

U.S. Government Contribution: $2M for three years

Appendix 2: Why Engage Now?

Relative Lack of Attention:

- The Global Fund to Fight AIDS, TB, & Malaria – $7.6B from 2002-2007.
- Gates Foundation invested > $1.8B to fight infectious diseases from 2003-6.
- Several major global water initiatives
- Annual IAP investment is $10s millions

IAP receives the least attention of the top 4 health threats in poor developing countries.

Commercial Scale:

- Only market-based solutions can access sufficient capital to address this issue at a meaningful scale.
- The private sector faces several key barriers in reaching scale – barriers best addressed by other entities.

PCIA networks can help enable sustainable and scalable commercial solutions.

Need for PCIA Leadership:

- This is little agreement among leaders in this field on what works.
- Most organizations in the field are working independently of each other.
- A need exists to convene and raise the game of the entire field.

It is a rare opportunity to lead solutions to such a critical global health risk.

Field May be Nearing a Tipping Point

- Leading donors are ramping up efforts.
- Major corporations are investing.
- Climate change is causing global environmental awareness to peak.
- Results of 1st major health study are starting to be published (NIH funded).

It is a particularly ripe and important time to enter and catalyze this field.