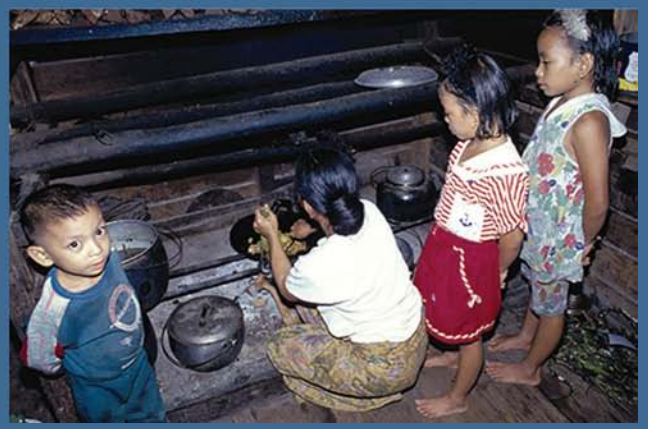
Partnership for Clean Indoor Air



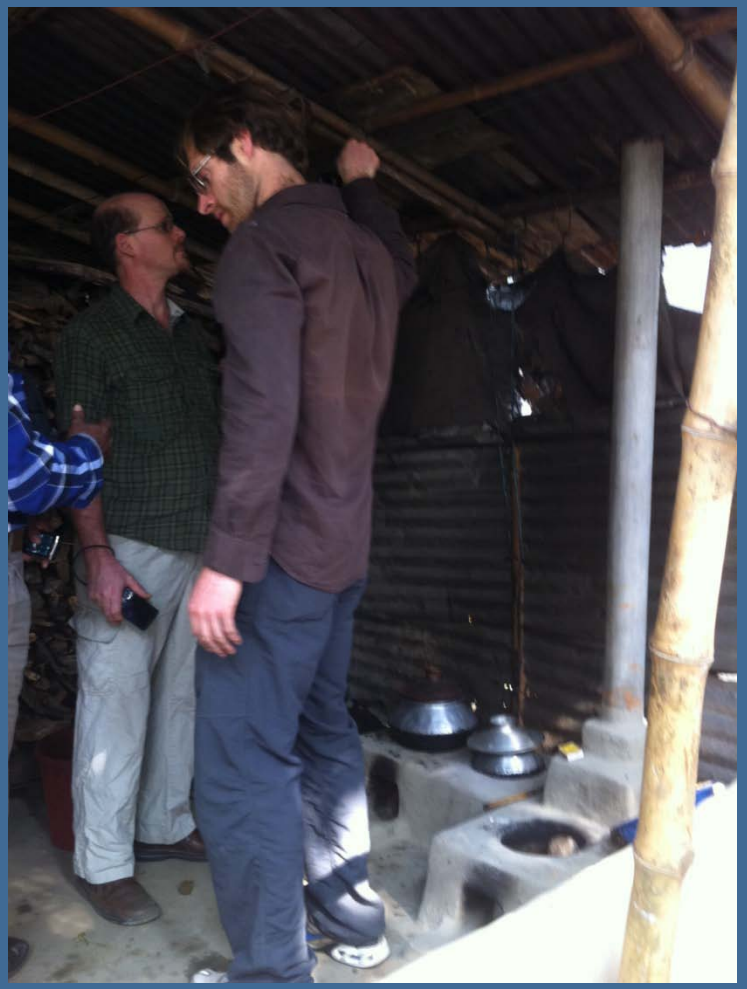
Stove Design and Performance Workshop Bangladesh

Day 2

What did we learn yesterday?

Complete Combustion

- Insulate combustion chamber
- Meter fuel
- Meter or preheat air
- Keep pot an adequate height above the combustion zone (pot low on flames will increase emissions)



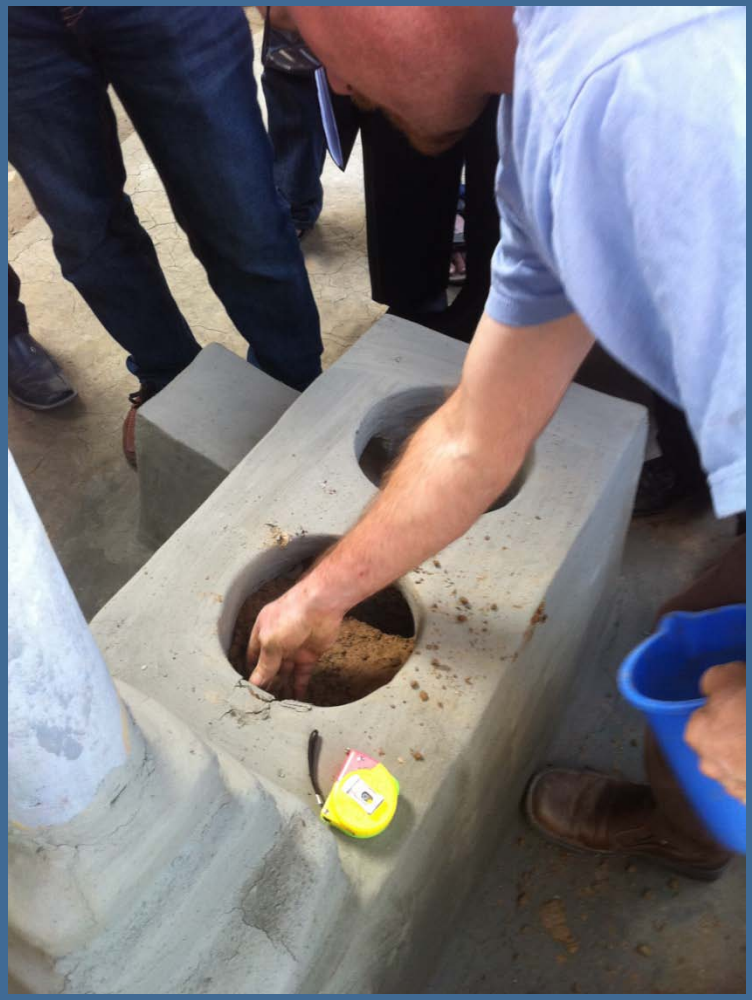
What did we learn yesterday?

Optimizing Heat Transfer

- Maximize radiation to pot if it does not increase smoke in kitchen
- Maximize surface area of pot that is exposed to hot flue gases
- Keep cross sectional area constant throughout flow path of hot gases
- Insulate wherever heat is being lost

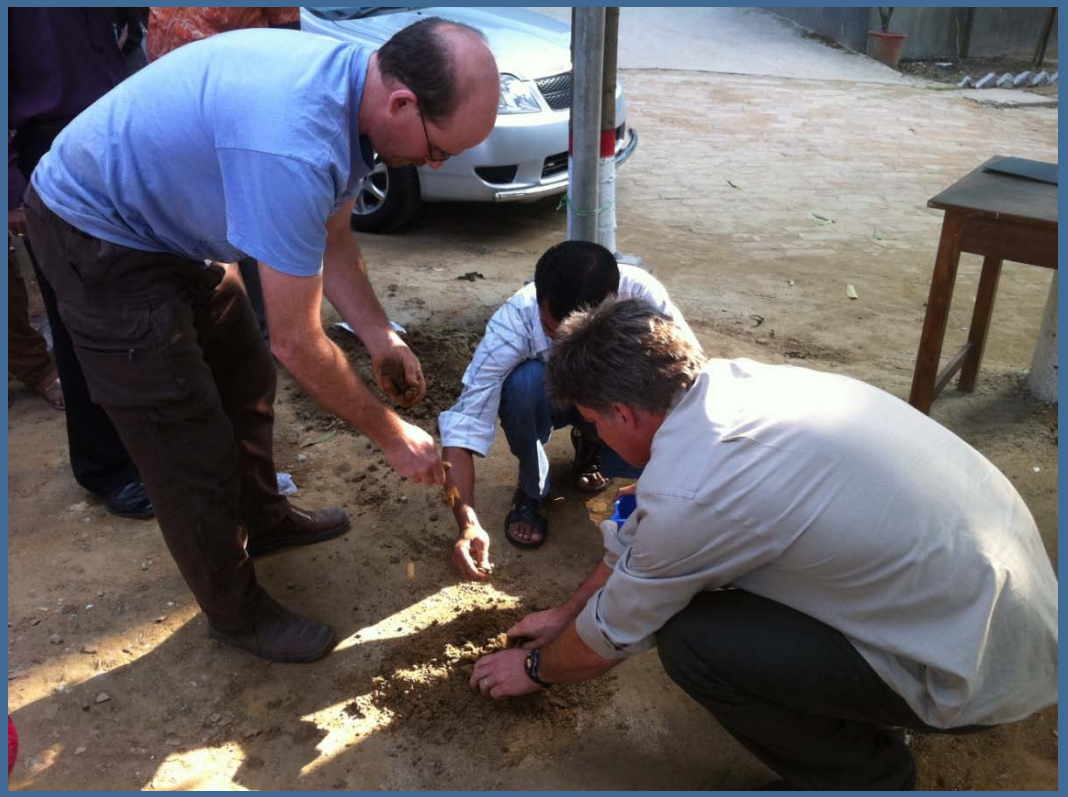
What new approaches/solutions?

- A barrier below the second pot making the hot gases scrape closer to the pot may increase heat transfer efficiency. Need to assess any backdraft? Needs to be sufficiently below lowest pot point



What new approaches/solutions?

- Mixing clay with sawdust or rice husks to form insulative material
- Fewer cooks! Use just one tester.



More observations

- We observed sawdust as a fuel in Mustaq's stove; as a batch fuel, it was limited in WBT applicability