Sanitation and Health: The Past, the Future and Working Out What Works

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1. The state of sanitation in Indonesia today and recent gains.

2. What we know about the relationship between sanitation and health.

3. Policy: What has and is currently being tried.

4. How we can learn more about what works.
Consequences of Poor Sanitation

• Of the four most common causes of under-5 mortality in Indonesia, two are faecal borne illnesses (diarrhoea and typhoid).

• About 11% of Indonesian children have diarrhoea in any two week period.

• 33,000 children die each year in Indonesia from diarrhoea; 11,000 from typhoid.

• Losses also accrue from time spent collecting safe drinking water and/or money spent purchasing it.
Sanitation in Indonesia Today

• 23% of households do not have a toilet.
• 7% in urban areas; 32% in rural areas.

Large Variations Across Provinces

• Worst Sanitation
  Maluku & Papua: 41%; NTB: 39%.
• Best Sanitation
  Jakarta 2.5%; Yogya 5%; Kalimantan Timur 9.2%.
Large improvements in last 15 years

- Overall: 49% with no access in 1993 → 23% in 2009
- Rural: 61% → 32%
- Urban: 21% → 7%. 
Legend:

% of HHs with no toilet facility in 2009

- Green: <0.25
- Light Green: 0.25 - 0.50
- Orange: 0.50 - 0.70
- Red: >0.70
**What do we know?**

- Having a toilet decreases the probability of having diarrhoea by 14%;

- Having a flush toilet decreases it by a further 11%;

- Using a shared or public toilet increases the probability by 11% (c.f. no toilet).

- Having the water source within 10m of where people defecate increases the probability of having diarrhoea by 12%.

- If 32% of your community defecate in the open, you are 5.3% more likely to have diarrhoea.
Change in No Toilet (By Province)

Sumatra Utara
DKI Jakarta
Jawa Barat
DI Yogyakarta
Nusa Tenggara Barat
Maluku
Papua

1993 2009
Previous Policy

   - Government supplied toilets to communities and households.
   - Top down approach. Unsuccessful.

2. **Water Supply and Sanitation for Low Income Communities (WSLIC)**
   - Block grant to villages (approx Rp 200 million, A$25,000).
   - Community-driven development.
   - Some co-funding from village and district government.

3. **Total Sanitation and Sanitation Marketing (TSSM)**
   - Community-led
   - Aims to generate demand for sanitation by facilitating frank discussions of defecation practices in the community and their negative health consequences.
   - Offers little financial assistance.
TSSM Video
What do we know about what works?

• Not all that much.
• Governments locate sanitation programs in particular areas (e.g. WSLIC - where sanitation is poor; high diarrhoea prevalence;)
• Hence comparing health in villages that got the program with those that didn’t can be misleading.
• Also changes over time are not necessarily associated with the program.
• Randomised evaluations can overcome these difficulties.
• Communities are randomly chosen to be in or out of the program.
• A comparison of health in randomly chosen “treatment” villages with randomly chosen “control” villages provides an estimate of the impact of the program on health.
In Summary

• Poor sanitation leads to poor health.

• Top down approaches to providing sanitation have failed.

• Community-driven demand side programs seem to be having some success.

• Randomised evaluations are a tool that allow an unbiased assessment of the impact of these programs.
The End
Sanitation facilities by household per capita expenditure quintile

Share of households with...

- Private Toilet
- Shared Toilet
- Public Toilet
- No Toilet

Quintile
Sanitation Type by household per capita expenditure quintile

- Water seal flush toilet
- Pit latrine with slab
- Pit latrine without slab