

SANITATION NOW

**What is Good Practice
and
what is Poor Practice?**



Duncan Mara

No time to waste!

- if we are to have any chance of meeting the MDG sanitation target**

**We need to know which sanitation systems represent ‘good practice’ and which represent ‘poor practice’
– and why**

Poor Practice

1. Conventional sewerage

– too expensive for poor urban communities

2. Urban 'EcoSan'

– same reason

(at least currently)

Good Practice in:

- 1. High-density urban areas**
- 2. Medium-density urban areas**
- 3. Medium- and low-density rural areas**

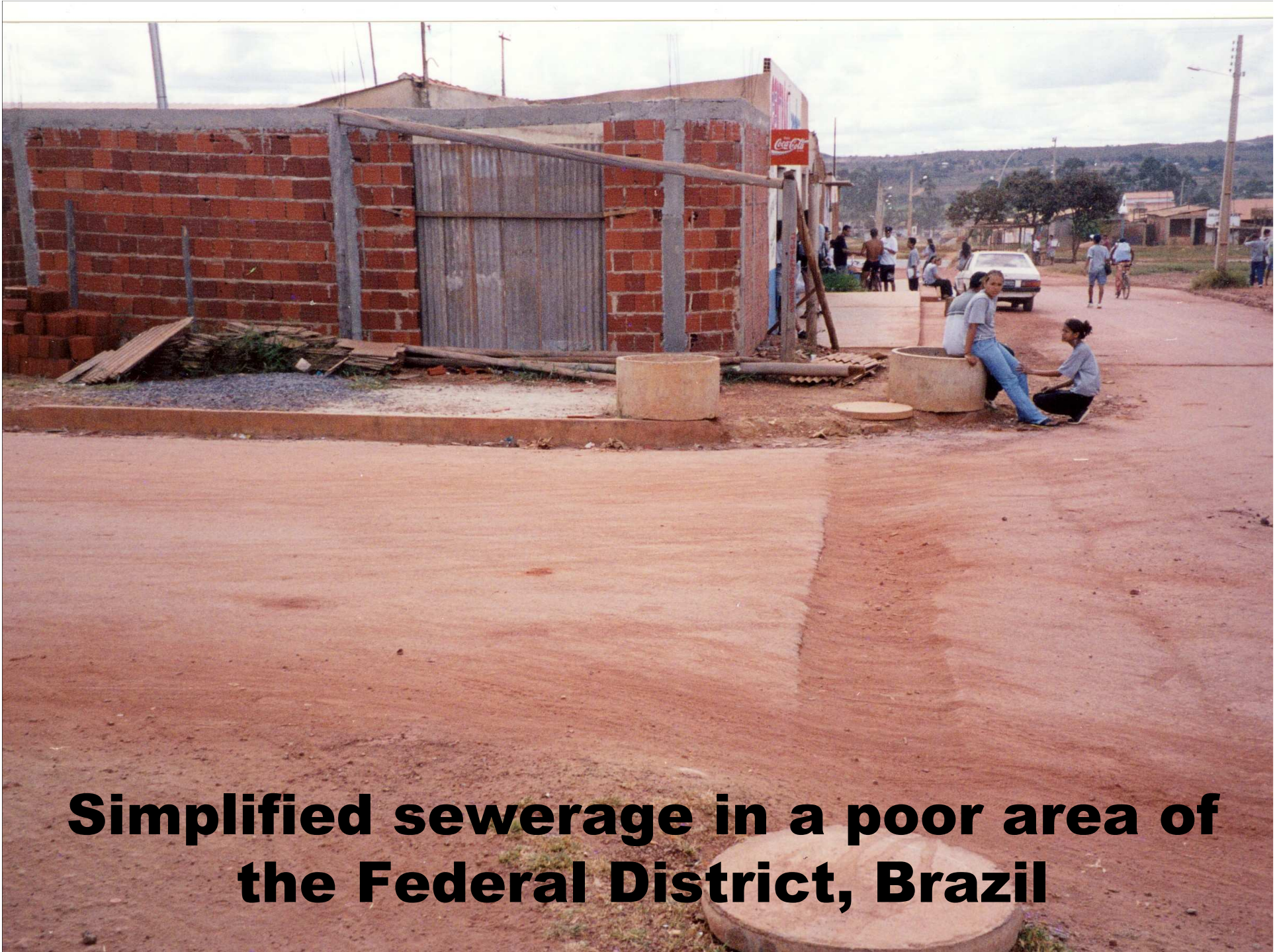
High-density urban areas

- **Simplified (condominial) sewerage**

Why? Cheaper than on-site systems

- **In areas subject to regular flooding
low-cost combined sewerage**

- **If either of these sewerage schemes
unaffordable, then SPARC-style
community-managed sanitation
blocks**



Simplified sewerage in a poor area of the Federal District, Brazil



Simplified sewerage in a rich area of Brasília



Community-managed sanitation block in Kibera, Nairobi

Biogas generator



Medium- and low-density urban areas

On-site systems cheaper than sewerage

OPTIONS (all + greywater management)

- Alternating twin-pit VIP latrines
- Urine-diverting alt. twin-vault VIV latrines
- Alternating twin-pit pour-flush toilets
- Biogas toilets
- EcoSan systems
- Also:
Simplified or low-cost combined sewerage



**Urine-diverting
alternating
twin-vault
ventilated
improved
vault
latrine**

UD-VIV latrine



Urinal



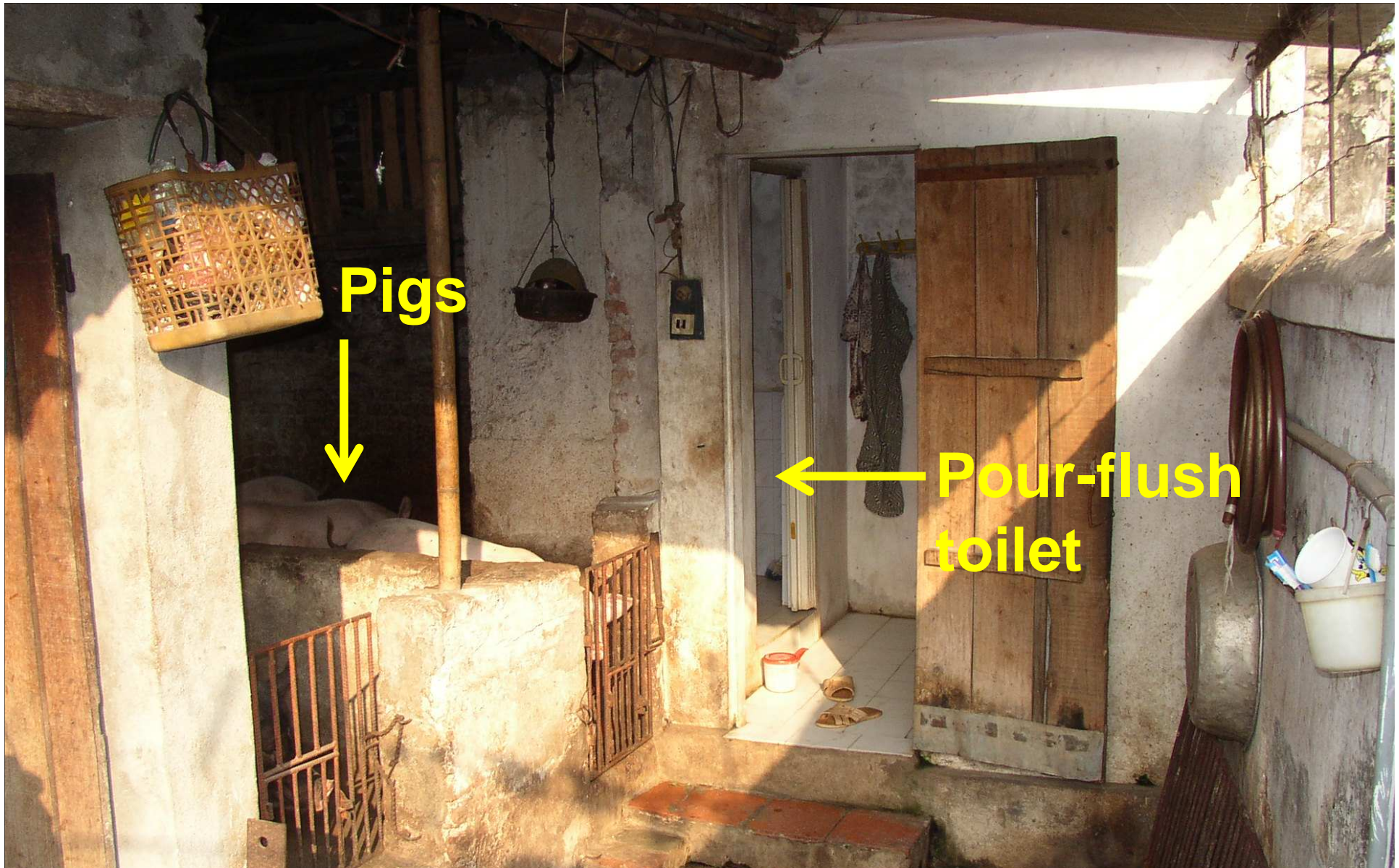
Urine-separating toilet





**Urine pipe
(to soakaway)**

**Alternating
twin vaults**



Pigs



**Pour-flush
toilet**



Biogas Toilet, near Hanoi, Vietnam



Biogas digester
~1 m³

**If individual household on-site
systems unaffordable, then:**

**‘SPARC-style’
community-managed
sanitation blocks**

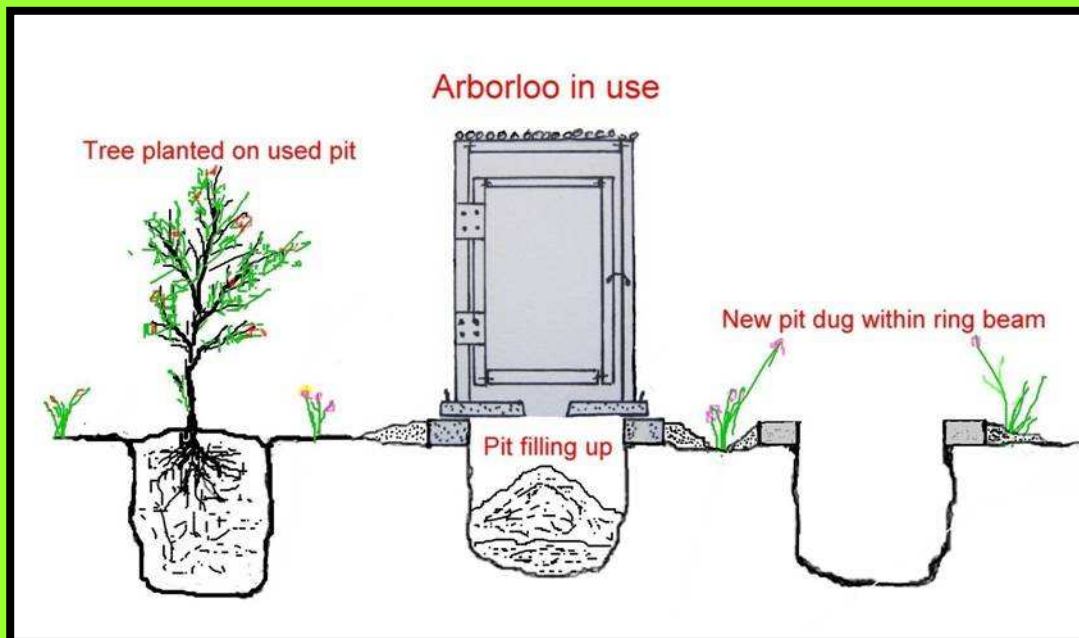
Medium- and low-density rural areas

OPTIONS (all + greywater management)

- Single-pit VIP latrines
 - Urine-diverting alt. twin-vault VIV latrines
 - Single-pit pour-flush toilets
 - Biogas toilets
 - EcoSan systems (Arborloo, Fossa alterna)
- Also: simplified sewerage

Arborloos

- The simplest form of EcoSan
- Short-life shallow pit latrines. Soil, ash, leaves added after each use.
- When full place soil on top and plant a young tree (a fruit tree or a medicinal tree)



How to choose?

COST

Simplified sewerage: Monthly cost to householder

State of Rio Grande do Norte in northeast
Brazil, January 2008:

Minimum water tariff:

BRL 18.10 (USD 10.00)

35% surcharge for simplified sewerage:

BRL 6.34 (USD 3.50)

(1.7% of minimum wage)

Even if simplified or low-cost combined sewerage is more expensive than on-site systems, it might well be more affordable to the intended beneficiaries:

– no connection fee, only a relatively small monthly payment

Microloans

If on-site systems chosen, then how will the intended beneficiary households pay for their individual sanitation facility?

Part of the sanitation planning process should be to arrange the provision of microloans

**Something very
important for**



and beyond

**Change outdated
sewerage design codes
and sanitation
regulations/bye-laws to
permit use of pro-poor
sanitation systems**



Thank you