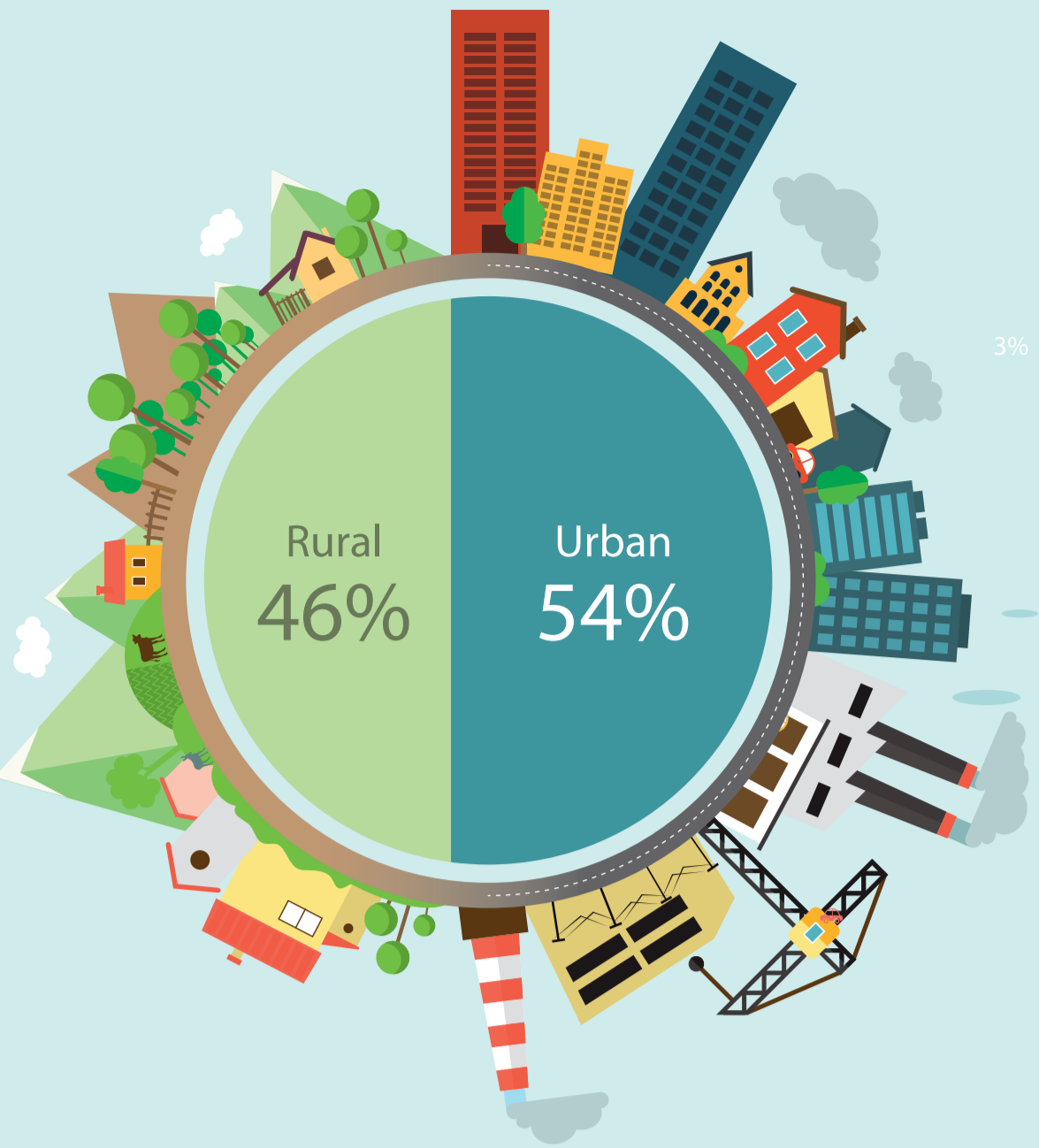


The Next Challenge for Cities: Integrating Multiple Sanitary Solutions

CITIES ARE GROWING FAST!

More than half of the world's people live in cities



...what does it mean for sanitation?

More people and increased density means higher risk of exposure to fecal pollution.



Consider this...



1/3rd of the developing world's urban population is living in slums



700 million urban dwellers don't have access to sanitation



About 2.5 billion more people are predicted to live in cities by 2050



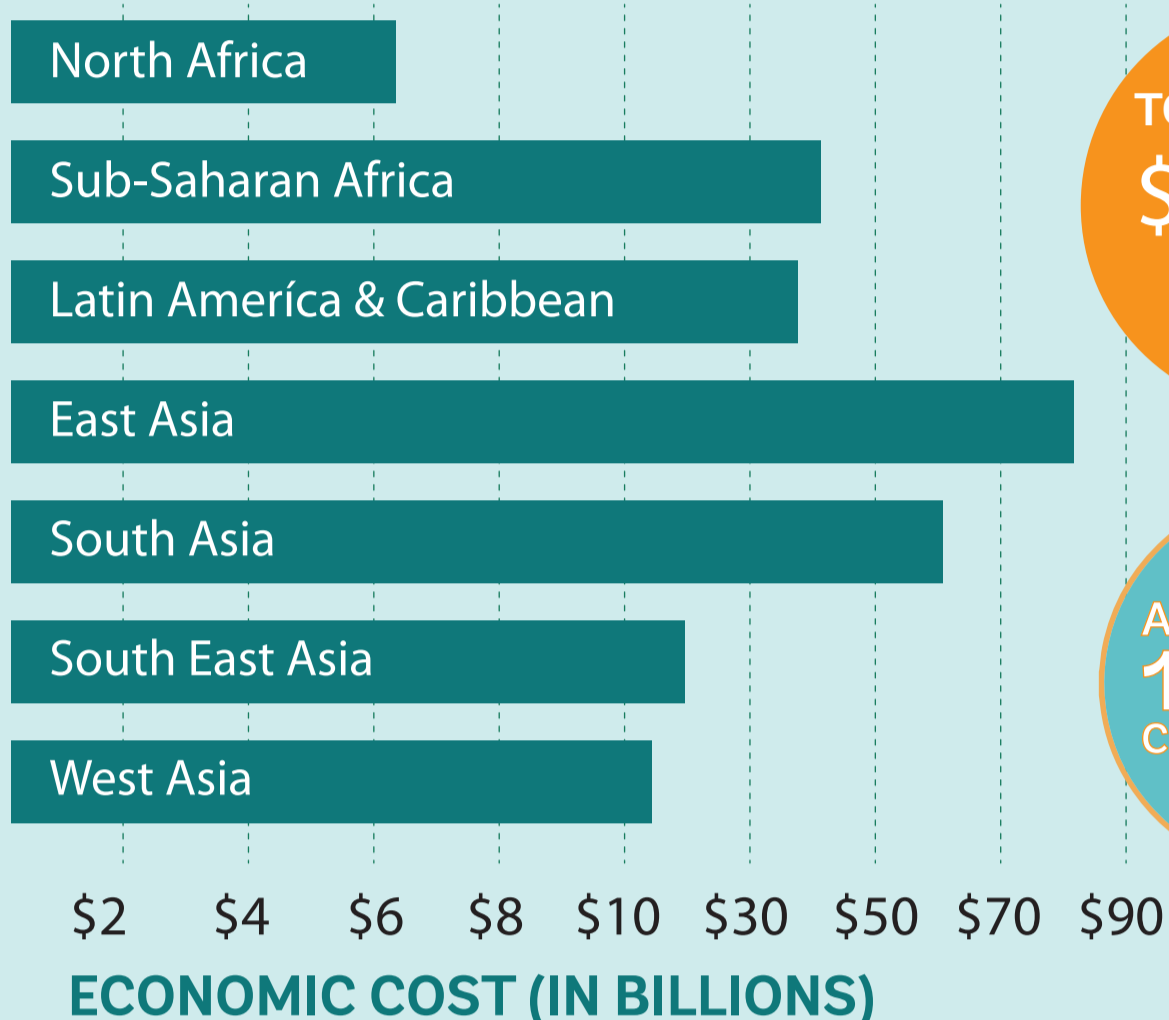
In the last 25 years, sanitation coverage increased by only 3%

THIS IS IMPORTANT

because cities need a reliable system to dispose of human feces in a safe way..

What are the consequences of a lack of sanitation?

GLOBAL COSTS OF INADEQUATE SANITATION



TOTAL COSTS
\$260
BILLION

Average:
1.5%
Countries' GDP



DIARRHEAL

Attributed to poor sanitation and water supply, diarrhea causes 1.4 million preventable child deaths per year.



STUNTING

India has some of the world's worst stunting as a result of more than half of the population not using a toilet or latrine.



LOWER SCHOOL & WORK PRODUCTIVITY

Inadequate sanitation has been calculated to have a negative economic impact of 3% of GDP or more.

Is it possible to provide sanitation for all in cities?

YES!

But first, let's make it clear:

SEWERS ARE NOT THE ONLY SOLUTION FOR PROVIDING ADEQUATE SANITATION



Urban sewers are expensive and require large amounts of water

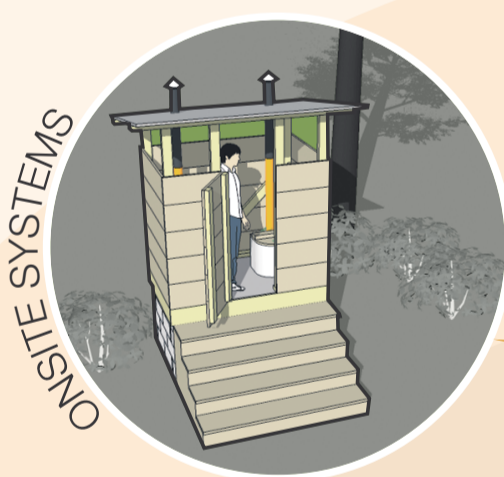


An adequate alternative for cities

Fecal Sludge Management (FSM)

How does it work?

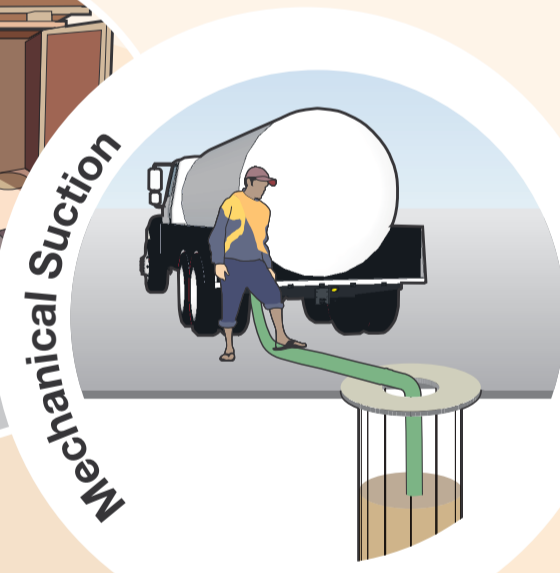
1. CONTAINMENT



Manual Excavation



2. EMPTYING



3. TRANSPORT

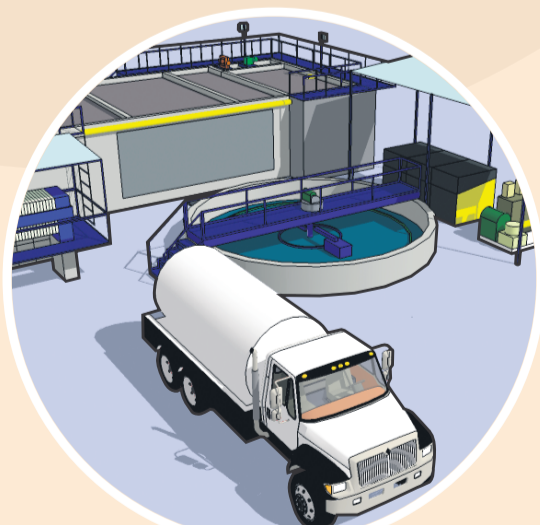


ADVANTAGES

- Effective in unplanned areas
- Improves management of existing onsite facilities
- Cheaper than sewerage
- Can be established quickly
- Creates local employment
- Complements city sewerage

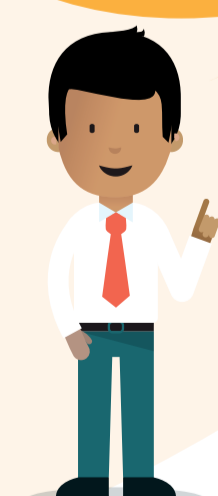


5. REUSE/DISPOSAL



4. TREATMENT

FSM & SEWERS can work seamlessly in a given city



CHALLENGES

According to the World Bank, to promote adequate FSM services in cities, Governments should...

- Recognize onsite systems and FSM services, and regulate them in bylaws and standards.
- Encourage the development of FSM service providers.
- Include onsite sanitation and FSM alongside sewerage in city development plans.
- Construct and sustainably manage appropriate fecal sludge treatment facilities.
- Upgrade onsite facilities to better contain excreta and be more easily emptied.
- Provide subsidies to poor users, as appropriate, to promote access to onsite facilities and to encourage the use of hygienic emptiers.
- Give existing manual emptiers an opportunity to provide more hygienic services.