

REINVENTED TOILET MARKET OPPORTUNITY IN INDIA

Transformative Technology Commercialization

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Bill & Melinda Gates Foundation Water, Sanitation, & Hygiene Team

3.6B

people globally lack access to
safely managed sanitation

7%

Increase in proportion of global
population using safely managed
services since 2015

Nearly half the world's population
lacked safely managed sanitation
services in 2020



Global sanitation coverage, 2015-2020
(%)

Safely Managed

Improved and not shared - excreta
safely disposed in situ or off-site¹

Basic

Improved and not shared - excreta not
safely disposed

Limited

Improved (e.g. sewer, septic, VIP
latrines) and shared facilities

Unimproved

Use of pit latrines without a slab or
platform, hanging and bucket latrines

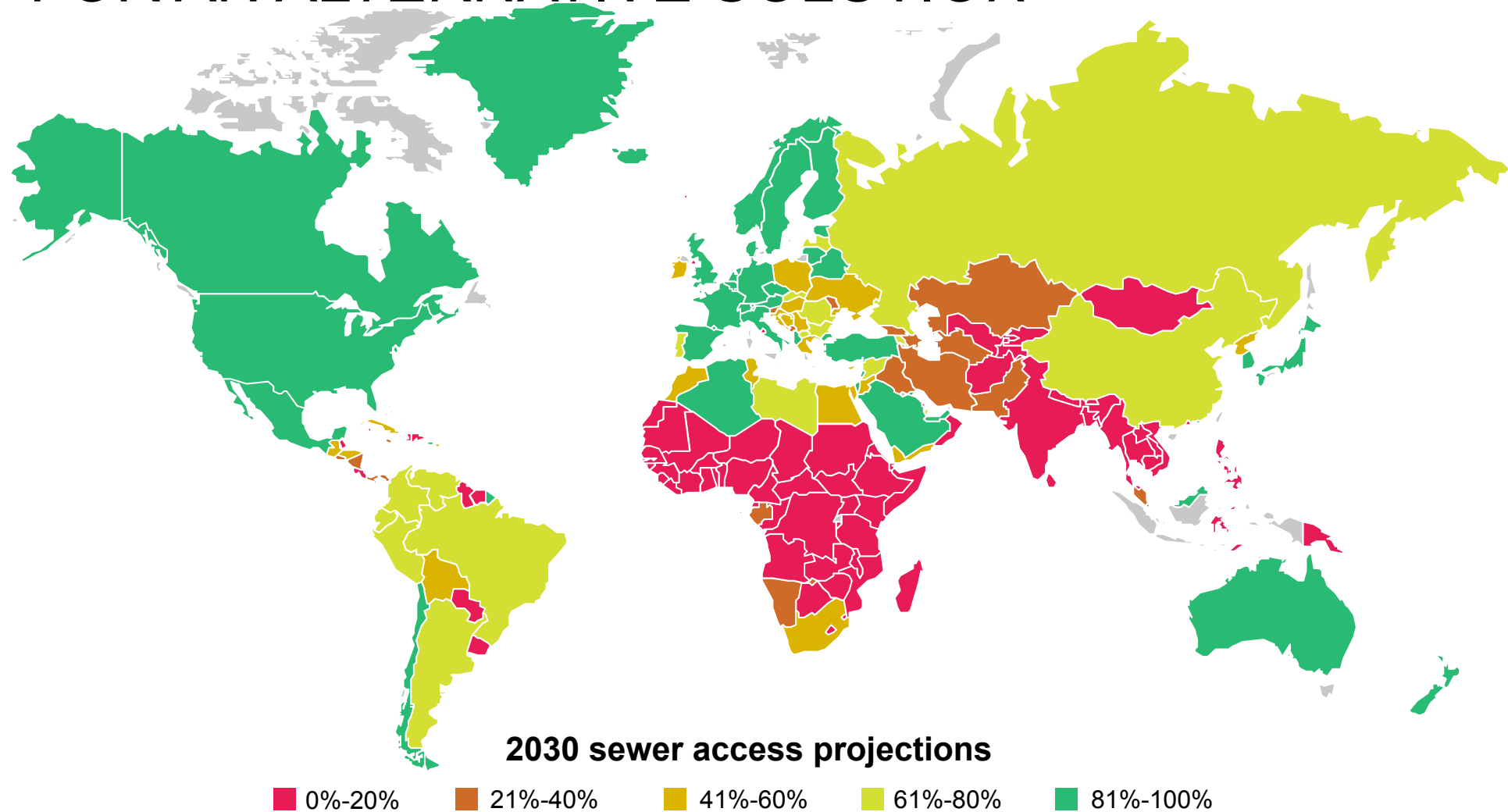
Open Defecation

Disposal of human faeces in fields, or
other open spaces or with solid waste

**Much faster progress is required to achieve the SDG
goal of safely managed sanitation by 2030**

1. Transported and treated offsite

SEWERS WILL REACH FEW IN MANY CITIES, INDICATING NEED FOR AN ALTERNATIVE SOLUTION



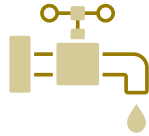
MACRO TRENDS MAKE TRANSFORMATIVE SANITATION TECHNOLOGIES INCREASINGLY NECESSARY



Growing population with urbanization

Population growth frequently outpacing infrastructure growth

68% of global population projected to be urban in 2050



Aging infrastructure

Centralized wastewater treatment systems often at/near capacity

Infrastructure repairs costly and disruptive



Water scarcity and stress

By 2030, 1/2 of world facing recurring water shortages, > 1/3 living full-time in water scarce areas

Demand could outstrip supply by 40%



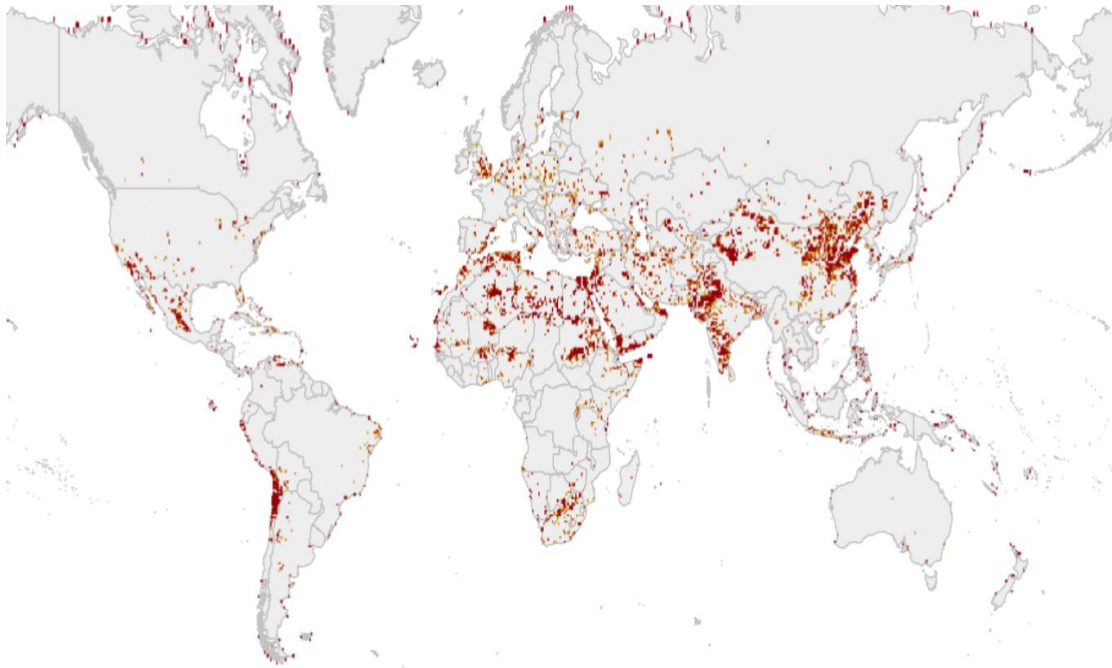
Policy changes

Government programs and initiatives focused on sanitation, esp. in developing markets

"Eco-friendly" policies to support sustainable development

SUSTAINABLE HUMAN WASTE MANAGEMENT WILL BE REQUIRED TO ADDRESS INCREASING WATER SCARCITY

Baseline: 2000



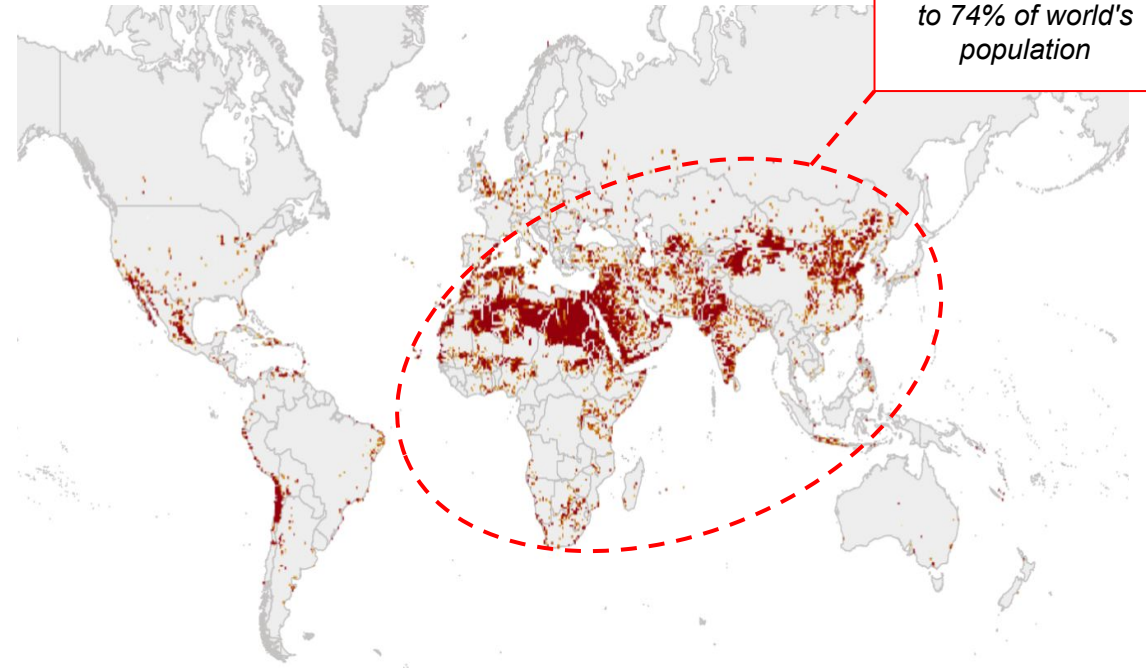
In 2000, ~1.7B people were living in water scarce areas

AVERAGE WATER AVAILABILITY PER PERSON

● <500m³ ● 500-1,000m³ ● 1000-1,700m³ ● >1,700m³

Source: "Water Scarcity Clock" (June 2022), World Data Lab

Future: 2030



Sub-Saharan Africa
& Asia will be home
to 74% of world's
population

By 2030, ~2.7B people will be living in water scarce areas

THE REINVENTED TOILET (RT) IS DESIGNED TO ADDRESS THE LIMITATIONS OF INCUMBENT TECHNOLOGIES

Eliminates pathogens



- Waste is treated on-site, no potential to spread disease
- Improves environmental safety
- All outputs are safe to handle

Conserves water



- Flush toilet experience without requiring any water connection
- Flush water is cleaned and reused, reducing household water needs, costs

Attractive



- Toilet is attractive, robust, and easy to install
- User-centered design for day-to-day maintenance by user, with only simple professional servicing expected

Affordable



- Designed for low cost of manufacturing, at scale, and low cost of operations
- Eliminates ongoing cost of tank emptying

THERE IS SIGNIFICANT OPPORTUNITY TO TRANSFORM THE SANITATION INDUSTRY IN INDIA VIA THE REINVENTED TOILET

The Opportunity



Revolutionize the toilet market with a transformative solution that treats waste on-site, recovers resources, saves money, improves health



Help solve a critical infrastructure need – safely managed sanitation without heavy investment in centralized sewer systems or large treatment plants



Access to global platforms and markets to productize and commercialize a unique solution

The Potential

~\$3Bn USD opportunity
estimated in India over 10 years

First mover advantage
for industry participants to develop product offerings across customer segments with compelling value-prop

Manufacture an integrated solution by building on engineering expertise and collaborating with top global technology developers and partners across the value-chain

The Approach

How to get involved

1. **Meet with the Foundation** to understand the technology options and market opportunity in order to ascertain strategic fit
2. **Sign an NDA with one or more technology providers** to access further details on the relevant technologies
3. **Negotiate a commercial license** with Foundation technology partners to productize and manufacture the solution in India

Overview of RT Market Opportunities in India

Segmentation



Premium Residential



Commercial & Institutional



Private Institutional



Government/CPT

Household & Community-scale RT (HRT/CRT)

- Near-term opportunities – premium apartments, villas with OSS mandate
- On-field demo units among innovators to establish feasibility

CRT

- Green mandate by commercial and industrial entities – Airports, Institutions, industrial houses
- High visibility, scope for robust demo
- Explore private investments – Build, Own , Operate model

CRT/HRT

- Schools, community toilets, malls, hospitals
- Industry houses – on-site sanitation solutions
- Some level of subsidy/grants needed
- Target specific states to establish use case

CRT/HRT

- High volume segment, serving low-income groups and BoP
- State-run schools, hospitals, religious trusts and tourist places
- Subsidy-driven in the long run
- Highest impact in meeting our sanitation goals by 2030

Innovators

Exploratory Opportunity

Early Adopters

Majority - Scale

BMGF WILL CONTINUE TO INVEST TO ACCELERATE MARKET DEVELOPMENT



R&D to overcome technical challenges and de-risk product and component innovation



Marketplace Readiness

- Government engagement to enhance demand for sanitation, focus on pathogen removal and water reuse
- Support implementation of international product standards (ISO 30500)
- Engage Development Finance Institutions to facilitate access to financing



Awareness & Perception

- Build awareness and change perception of the decentralized sanitation



Early Adoption

- Identify early adopter opportunities & early market entry requirements
- Develop value proposition and economic positioning for RT as a category



Technical & GTM Assistance

- Develop product requirements for identified customer segments
- Assist in pilot and demonstration projects
- Guide GTM strategy and tactics

PROPOSED NEXT STEPS

BMGF WSH team leaders will be visiting India from March 27 to April 3:

- We'd appreciate an opportunity to discuss the RT potential in more detail and to get your input, as an industry and private sector platform, on how you might see such a market developing, especially in India
- We'll be prepared to walk you through specific technologies in the portfolio that have achieved the RT goals, are ready for commercialization and are available for licensing
- We can also share the other work we are doing in support of national and state government goals to transform sanitation in India