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The costs and benefits of achieving SDG6

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INTERNATIONAL CONFERENCE ON WATER POLICY, INSTITUTIONS, AND REGULATION: ADVANCING SDG 6

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Presentation focus

"Costs and Benefits"

- Cost estimation ($$)
- Costs of inaction / costs-of-illness / damage cost ($$)
- Benefit analysis ($$ and disease outcomes)
- Cost-effectiveness analysis / cost-benefit analysis (ratios)

"SDG6"

- Focus on water supply, sanitation and hygiene (SDG targets 6.1 and 6.2)

Overview

Results

- Global and multi-country studies at household level
- Disease focus: cholera control
- WASH in healthcare facilities
- WASH in schools

Conclusion

Discussion questions

Global and multi-country studies at household level

Country Studies on the Economic Impacts of Poor Sanitation

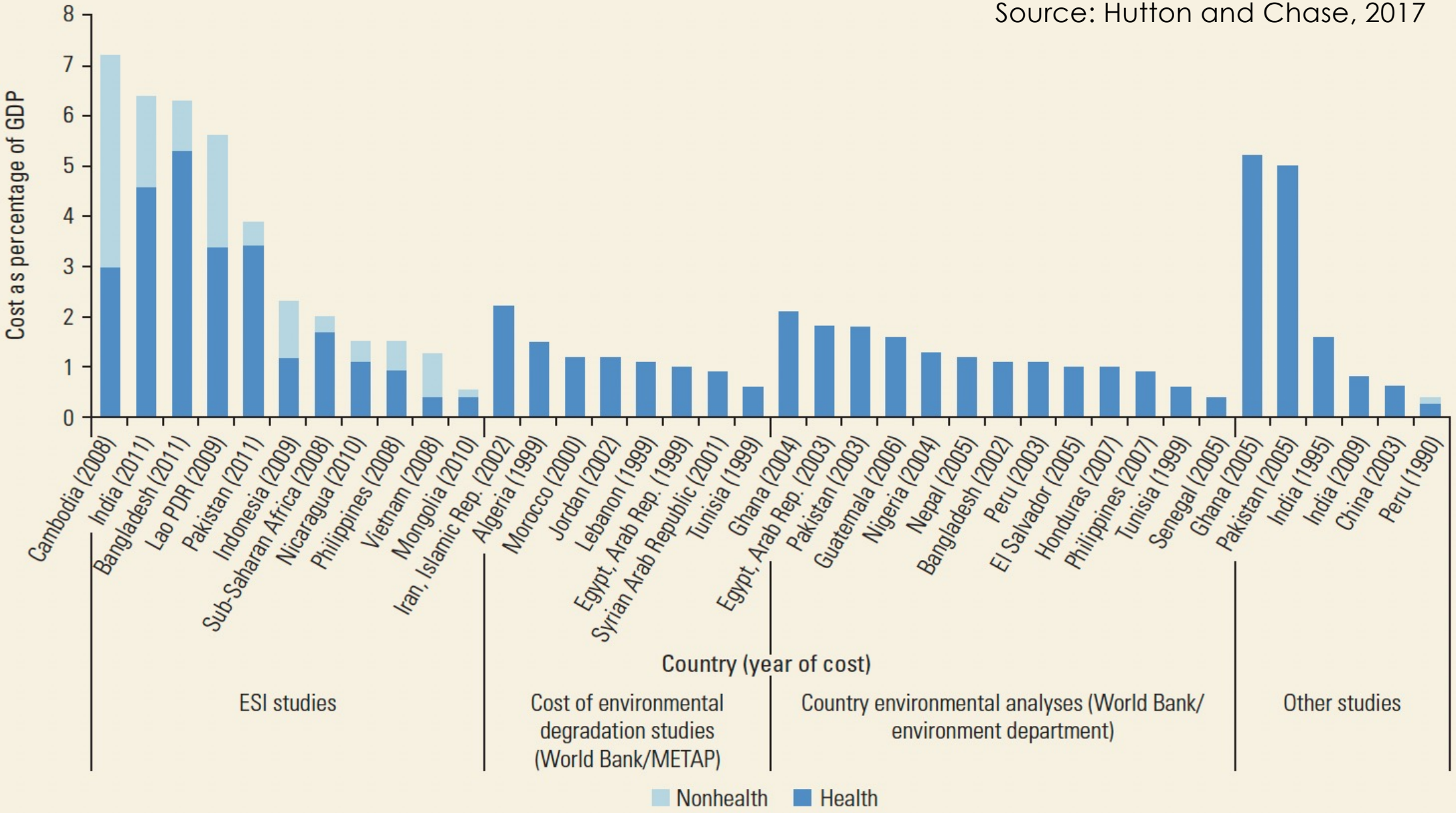
Health impacts

- Disease cases
  - $ = medical costs
  - $ = productivity losses
- Premature mortality
  - $ = Value of statistical life

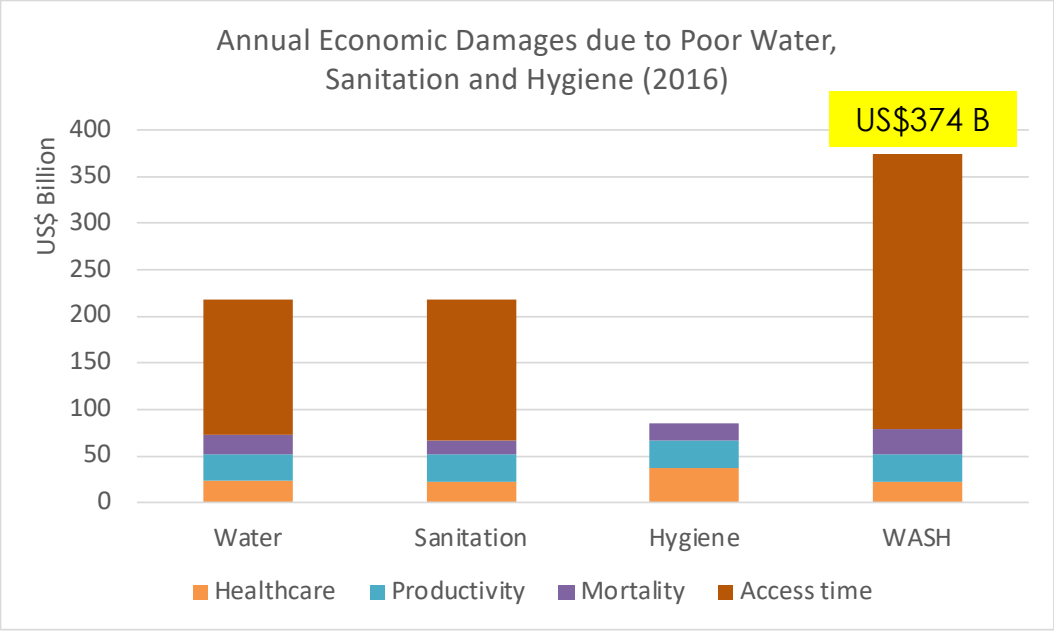
Non-health impacts

- Access time to place of sanitation
  - $ = time loss x proxy for value of time
- Impacted tourism revenues due to polluted environment/water
  - $ = gap with potential revenues
- Dignity/pride/security etc.
  - No $ value estimated

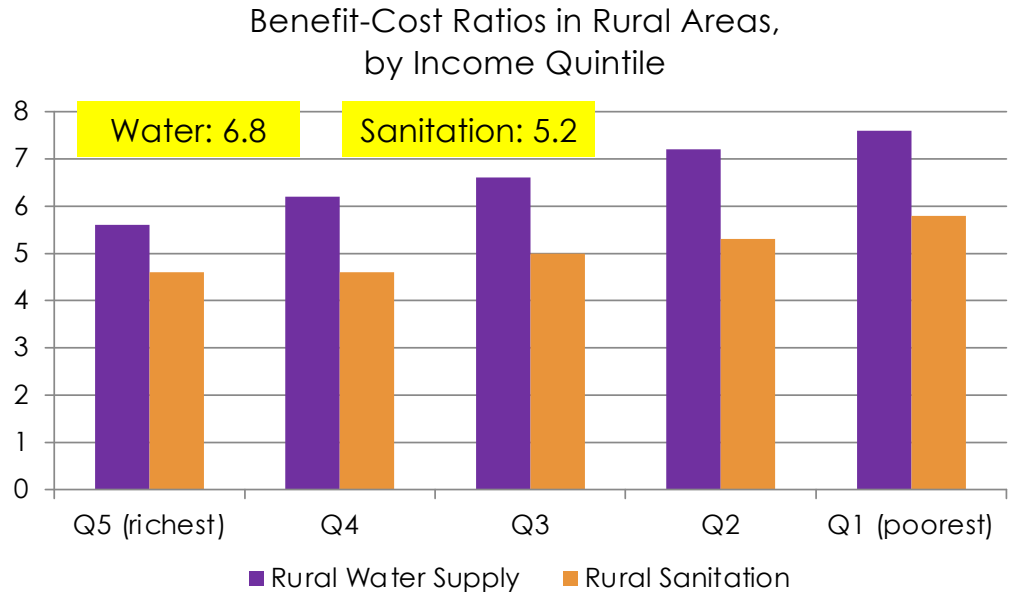
Source: Hutton and Chase, 2017



Global Cost-Benefit Studies (2004, 2008, 2012, 2016)

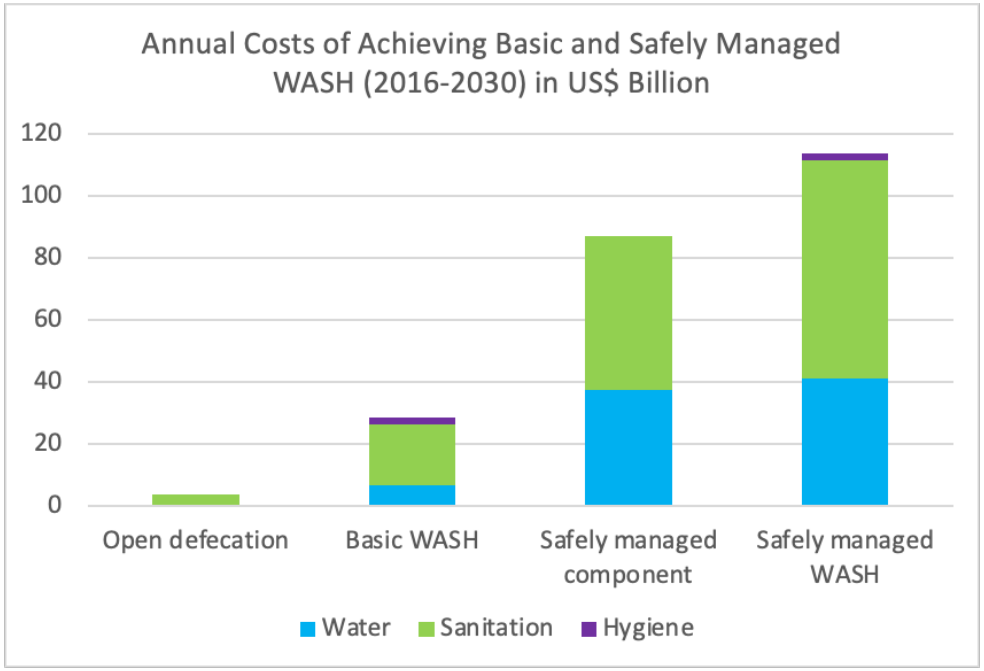


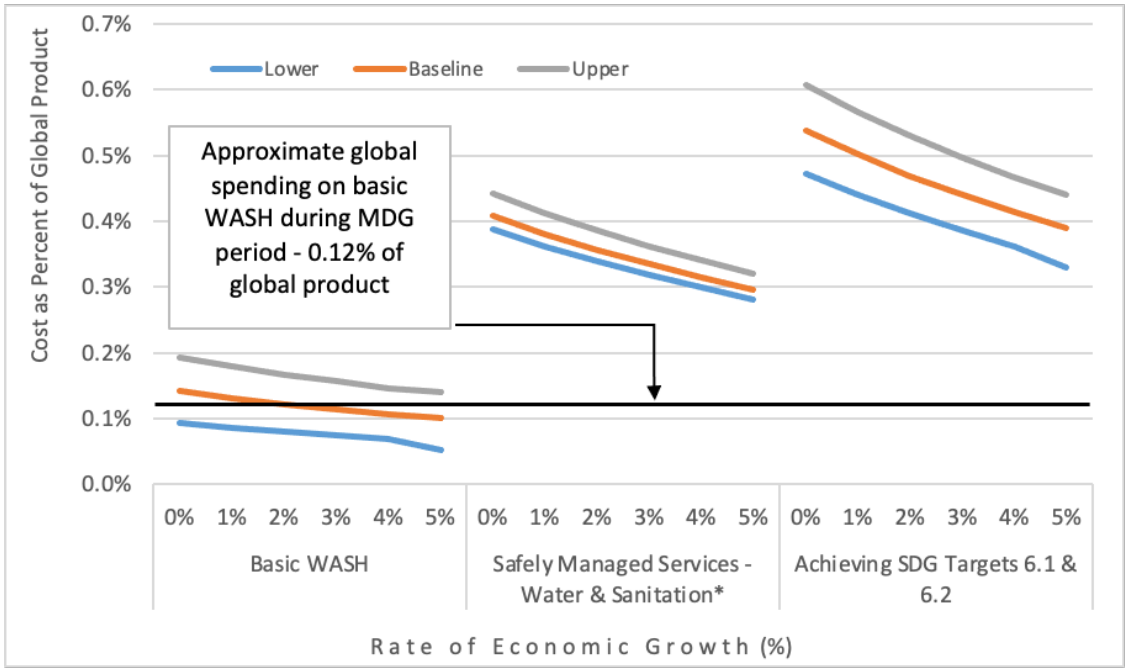
840,000 premature deaths annually attributed to poor WASH



Source: Hutton, 2018

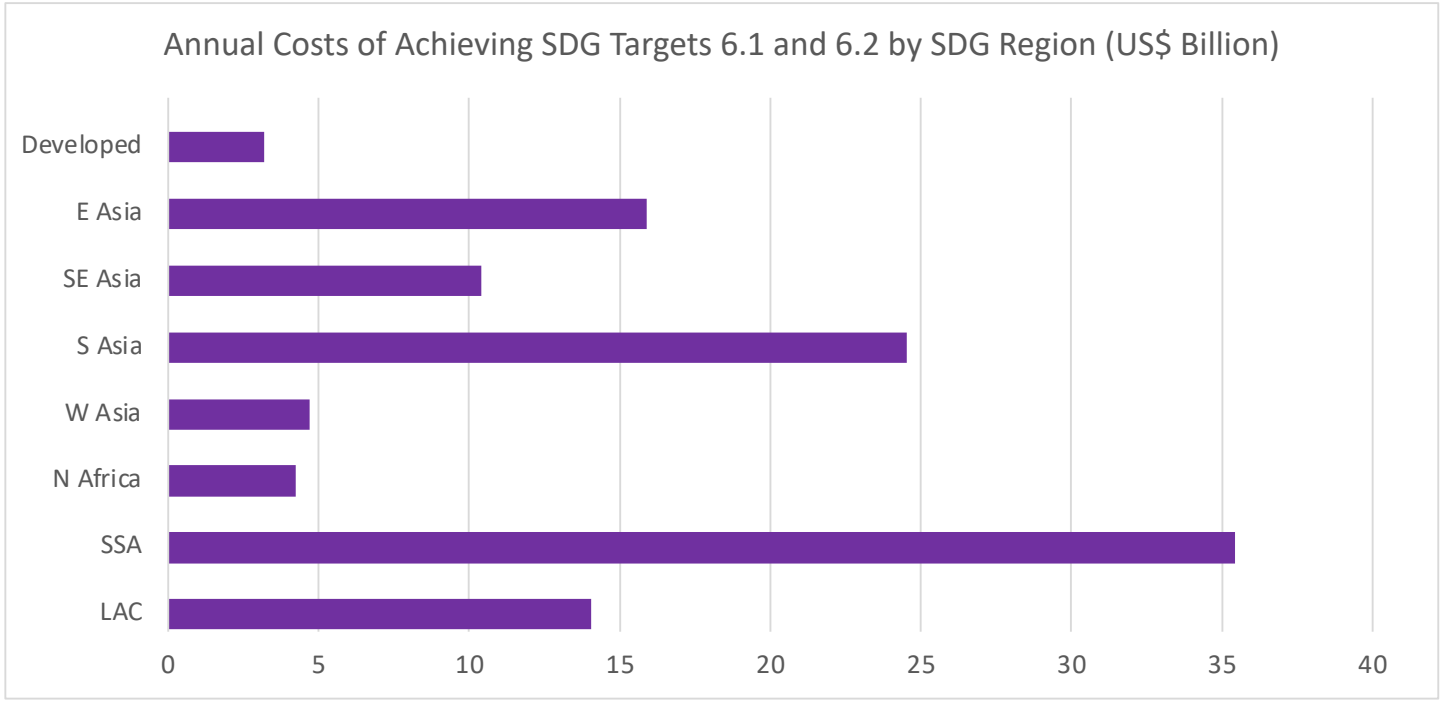
Global Cost Studies of WASH Investment (2004, 2008, 2012, 2016, 2020)





Source: Hutton and Varughese, 2016

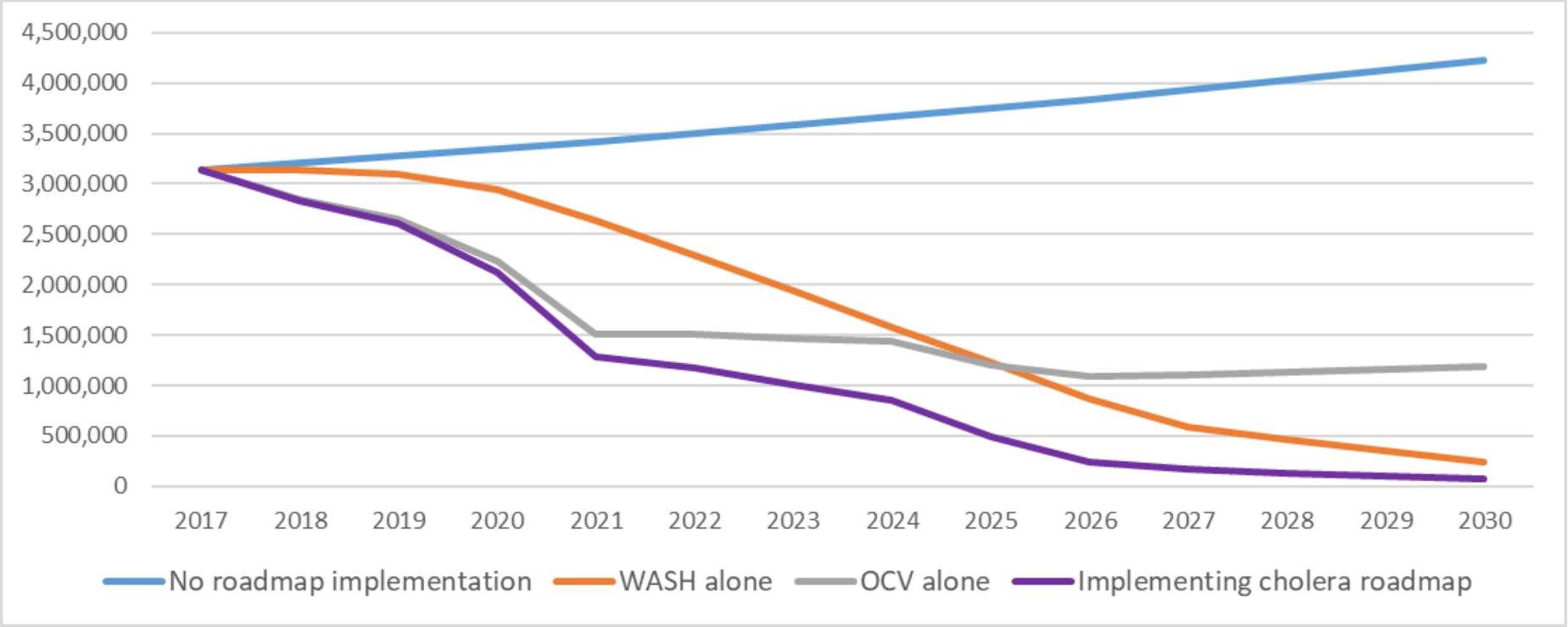
Global Cost Studies of WASH Investment



Source: Hutton and Varughese, 2016

Disease focus: cholera control

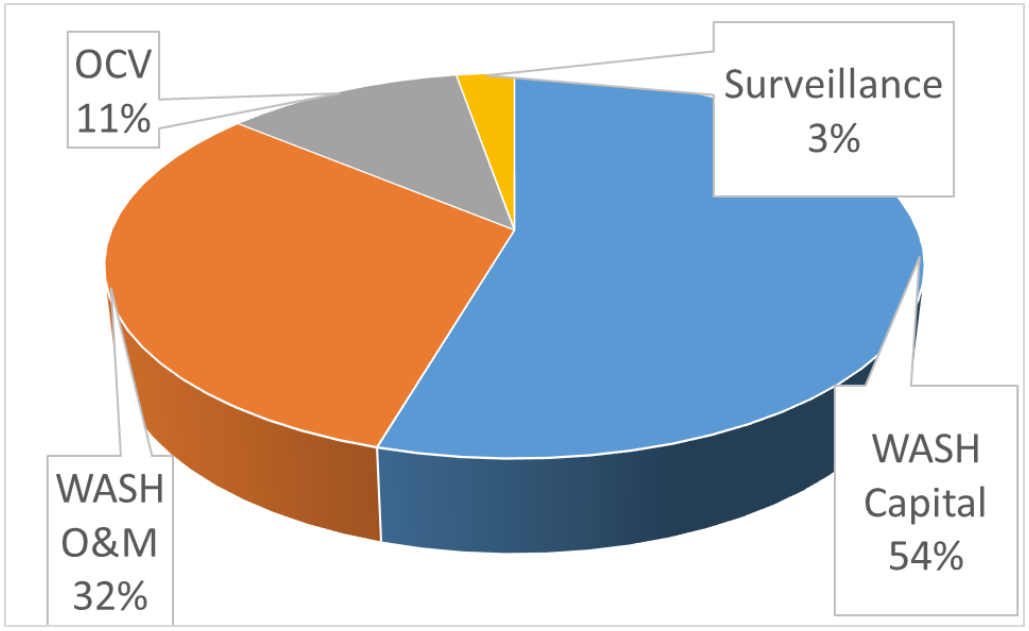
Evolution of Global Cholera Cases under Different Scenarios



Source: GTFCC, 2019 (unpublished)

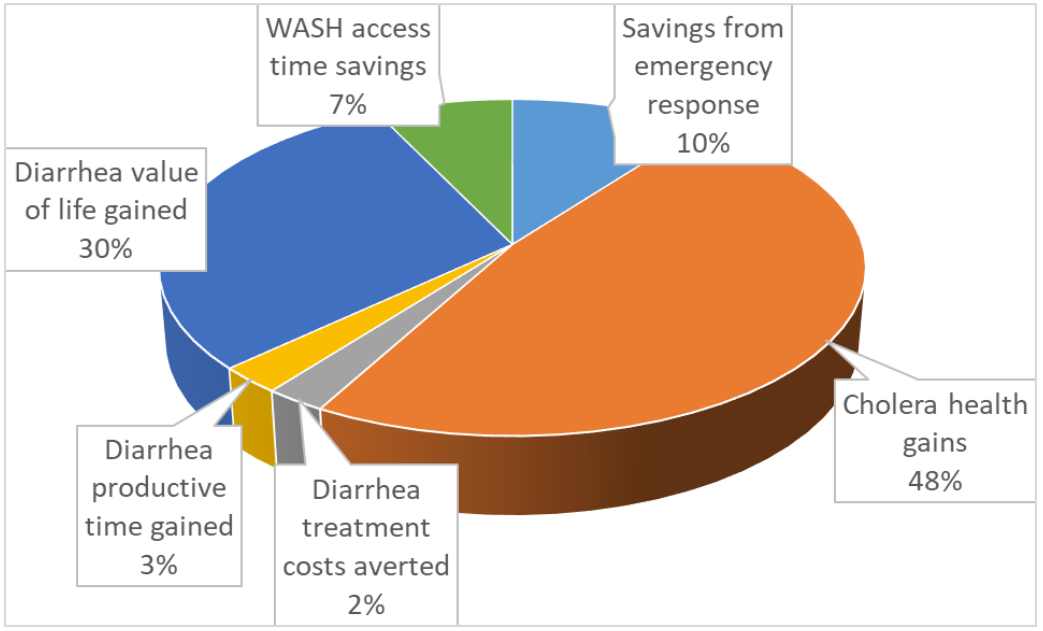
Costs versus Benefits of Implementing the Cholera Roadmap

Total Roadmap Costs 2018-2030



Annual discounted cost is US$ 3.3 billion 2018-2030

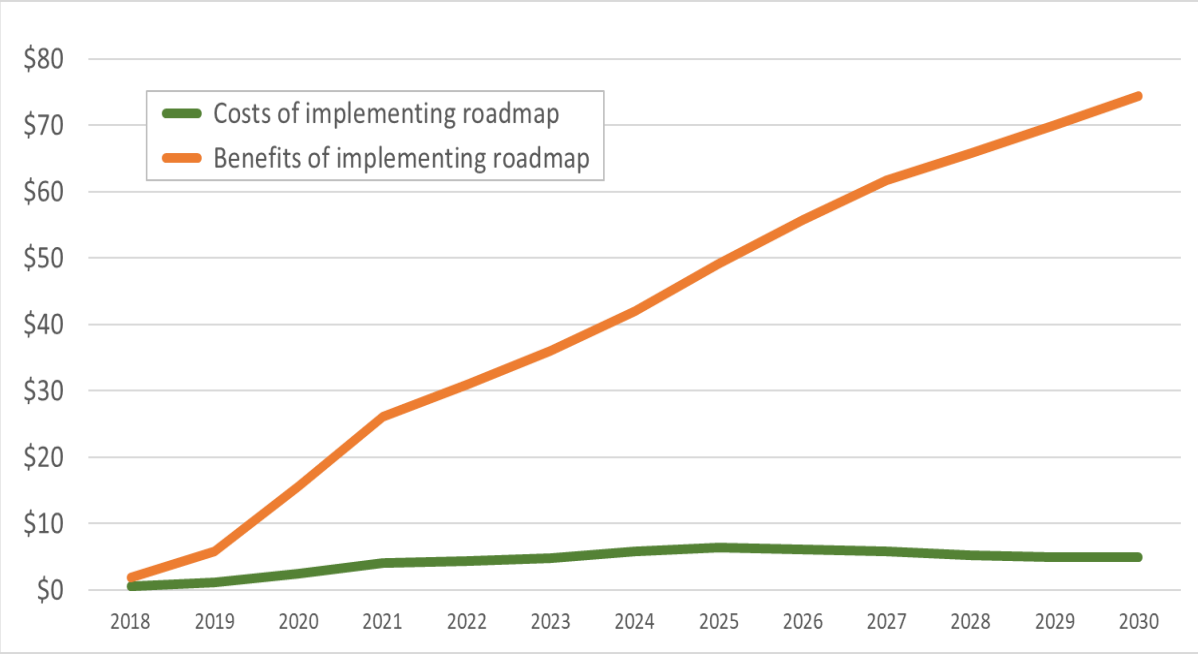
Total Roadmap Benefits 2018-2030



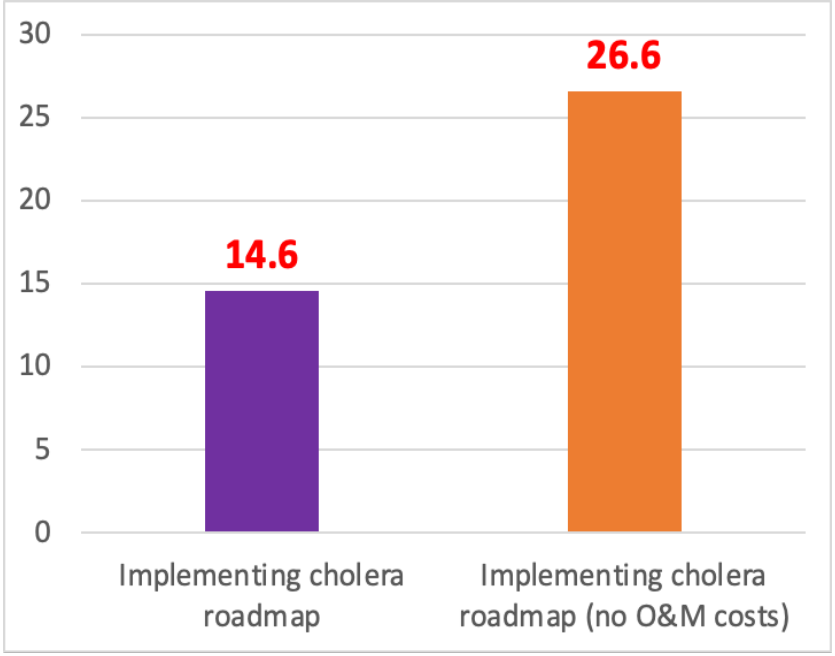
Annual discounted benefit is US$ 33 billion 2018-2030

Global Costs and Benefits of Implementing Roadmap (Billion US$)

Yearly Values



Benefit-Cost Ratio (2018-2040)



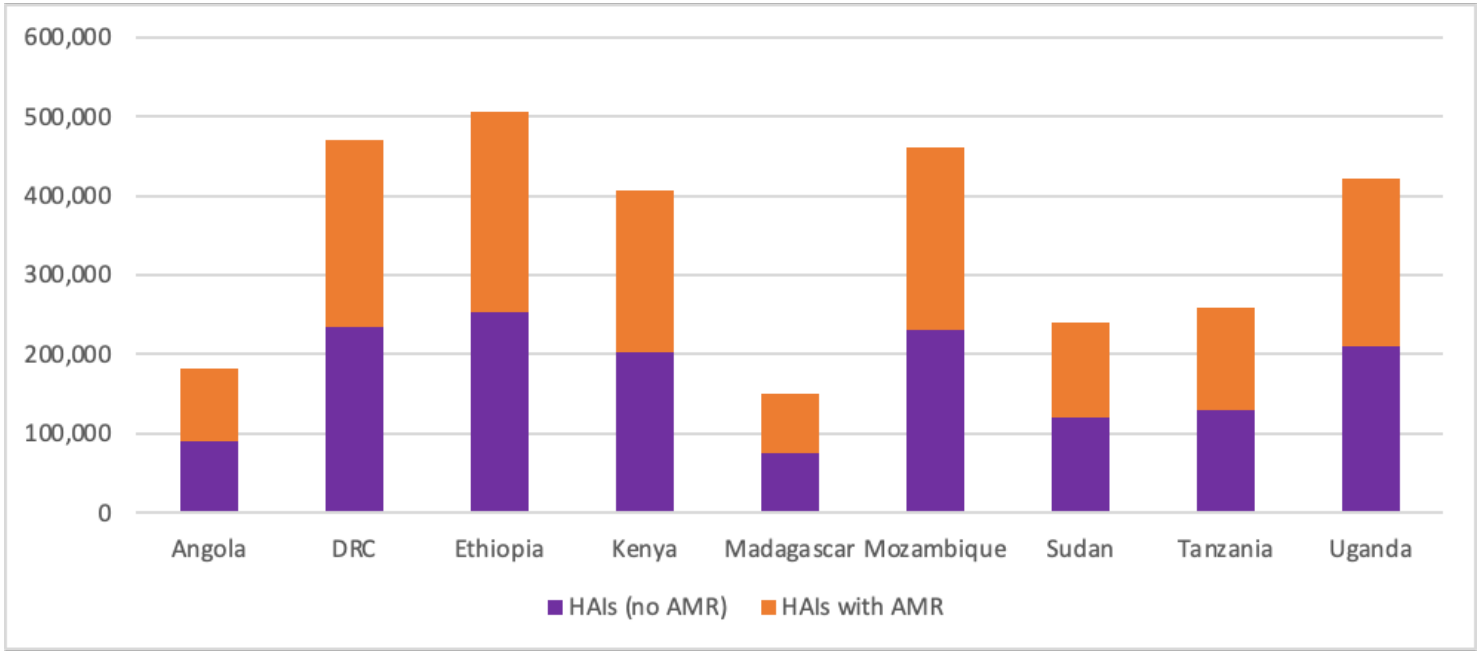
Cost equates with just US$ 11 per person per year in hotspots

Source: GTFCC, 2019 (unpublished)

WASH in healthcare facilities

Estimated Number of Healthcare Associated Infections in Selected African Countries

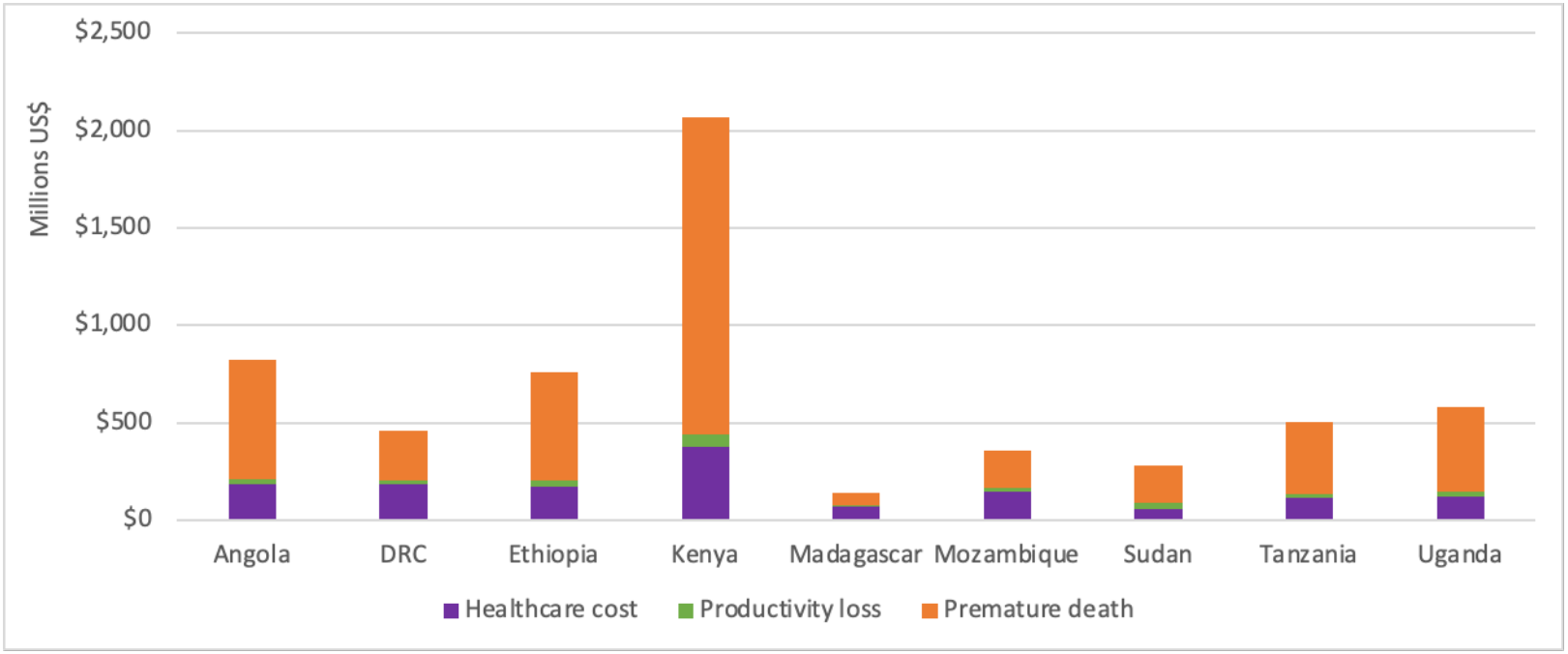
Number of cases (2023)



Source: Hutton, Chase and Kennedy Walker, 2024

Estimated Economic Losses from Healthcare Associated Infections

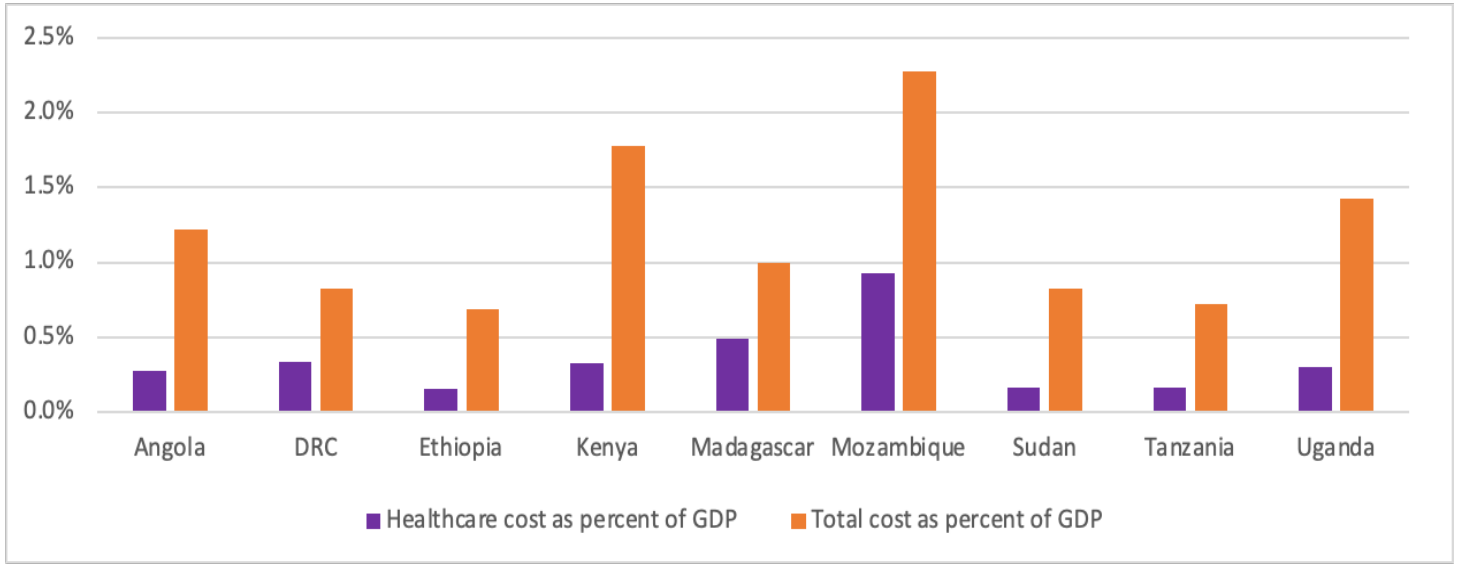
Economic value (losses)



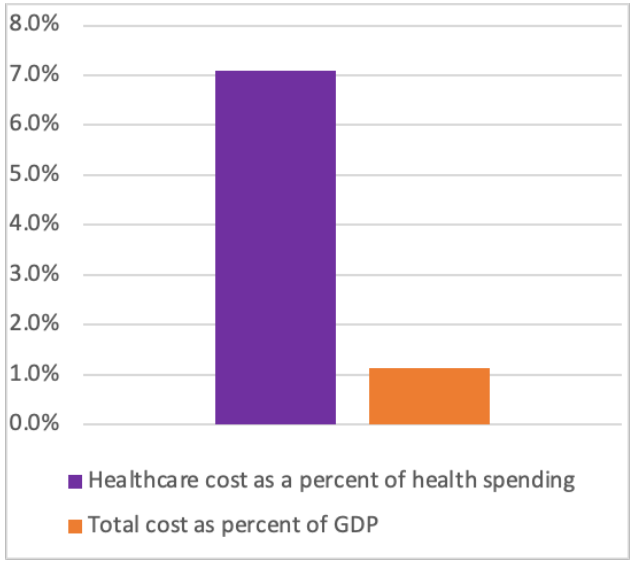
Source: Hutton, Chase and Kennedy Walker, 2024

Estimated Economic Losses from Healthcare Associated Infections

Economic value (losses) as a proportion of GDP



9 country average



Source: Hutton, Chase and Kennedy Walker, 2024

WASH in schools

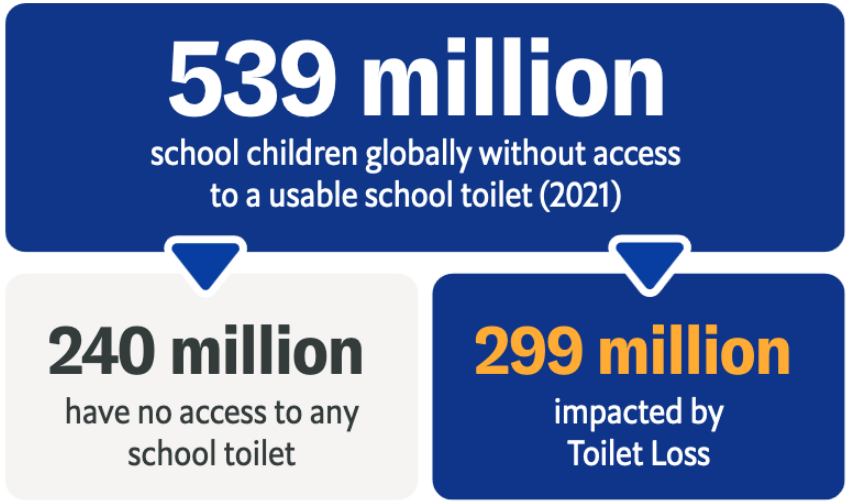
Study Assessing the Economics of School Toilet Loss

Toilet Loss is the economic and societal cost of neglected toilets. Toilets can become unusable through neglect from:

a) lack of investment in operations and maintenance;

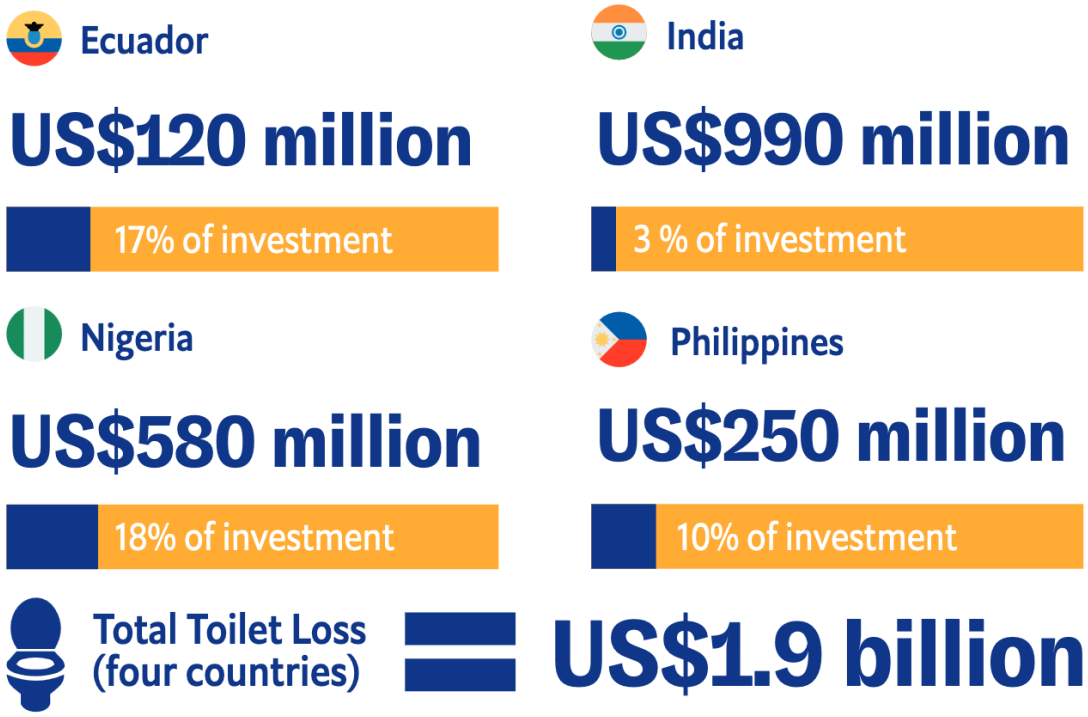
b) lack of appropriate school-level management policies, or implementation capacity, to enable toilet use (e.g. safety policies, school policies on routine O&M); and

c) lack of provision of essential resources (for example, water and sanitary products).



Source: Economist Impact, 2023.

Study Assessing the Economics of School Toilet Loss



Across the four countries in this study, 1.2 million school toilets constructed since 2015 have been "lost" through lack of maintenance, equivalent to a loss of US$1.9 billion

Source: Economist Impact, 2023.

Study Assessing the Economics of School Toilet Loss

Construction without O&M leads to societal losses of over

US$10 billion

across Ecuador, India, Nigeria and the Philippines from:

Higher healthcare costs from more diarrheal infections in children

Lost family income through absenteeism from work or increased childcare spending

Lost economic activity and employment in O&M

Increased O&M spending could have avoided large healthcare expenditure, reduced family income and lost economic output of over US$10 billion across the countries studied in 2015-21

Source: Economist Impact, 2023.

Study Assessing the Economics of School Toilet Loss

Additional annual spending needed per child to achieve full coverage of basic service toilets in schools

Source: Economist Impact, 2023.

Conclusions

- The investment case for WASH has been well demonstrated by 2 decades of economic evidence
  - When expressed in per capita values, many investments appear affordable
  - Global studies need regular updating and progressive improvement in data sets
  - Evidence is still weak for higher WASH standards
- Slow progress may be partially explained by the lack of country evidence to convince national and sub-national decision makers
  - Several tools are available online to support local studies
- New studies should focus on making the case for sustainable and climate resilient WASH

Discussion Questions

"If the economic performance of WASH interventions is so strong, why is progress not faster?"

- Some economic benefits are externalities and longer-term
- A significant share of the beneficiaries are poor and marginalized and have low affordability
- Governments are not prioritizing WASH spending in their budgets

"What needs to be done to achieve greater progress?"

- Market shaping (making it easier for providers to enter and operate in the market)
  - Conducive policies, regulation and tax regimens
  - Actively engage range of potential investors
  - Public funds leverage private investment
- Political and policy prioritisation

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Thank You !

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