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Title: Sanitation for Low-Income Regions: A Cross-Disciplinary Review

Nearly two decades after sanitation was identified as a global priority under the Millennium Development Goals, more than 4 billion people still lack access to safely managed sanitation and two-thirds of all human waste generated remains unsafely disposed. While the Sustainable Development Goals include ambitious targets for sanitation coverage, the current pace of progress will bring us far short of these aims. Despite sanitation’s economic promise of 9-fold investment returns and numerous cross-sectoral benefits -- from girls’ education to environmental health -- realizing universal and sustainable sanitation access is proving to be an elusive task.

Over the past 20 years, sanitation research has grown broader in scope and deeper in complexity through diverse disciplinary approaches. Originally, sanitation research was entirely focused on containing fecal waste and preventing diarrheal diseases -- placed squarely in the domain of environmental engineering and public health. However, the literature on sanitation has since expanded into economics, urban planning, cultural studies, gender studies, and beyond. While this diversity has extended the scope of traditional sanitation research, adding richness to our understanding of this complex topic, it has also rendered the term “sanitation” more nebulous. Such diverse perspectives have led to myriad, and even contradictory, definitions of what sanitation is, what it does, and what it is good for. As a result, we find that ideas about the designated functions of sanitation systems and the priorities of sanitation policy vary widely among academics, policymakers, NGOs, and community members.

We review the full range of disciplines that now houses sanitation research with the goal of understanding the overlaps and disparities among and between these perspectives. Our review: (1) examines and systematically summarizes the interdisciplinary conversation around sanitation; (2) facilitates within-disciplinary understanding of cross-disciplinary definitions and priorities; and (3) recommends a more complete framework for sanitation for decision makers as well as for future research. Our aim for this work is to help those in the sanitation sector avoid the pitfalls and disciplinary silos that contributed to the failure to meet the Millennium Development Goals for sanitation as well as the current shortcomings in meeting SDG 6.2.