

Review report on František Ficek's doctoral thesis, "Advancing efforts to improve sanitation conditions: insights from India", submitted in 2024, Study programme Social Geography and Regional Development, Faculty of Natural Sciences, Charles University.

### **Summary and evaluation of the thesis:**

This study takes a geographical approach to comprehend how large-scale sanitation interventions can improve sanitation conditions and how they are related to multi-scalar contextual drivers. It does this by coupling local situations with wider sanitation interventions. The study consists of four distinct publications, each written by the researcher in cooperation with other writers, with the researcher's average contribution coming in close to 50% (195/4). A well-informed and engaging introduction includes writing on popular frameworks for sanitation research, an overview of India's sanitation policy, the global sanitation targets outlined in SDG 6, and numerous factors that affect long-term sanitation change. As a result, four distinct goals and the publications that support them are brought together into a single, cohesive research output. The study comes to a strong conclusion about the relevance of localized factors for the long-term sustainability of improved environmental health in developing nations, as well as the critical role that targeted subsidies along with behaviour change approaches could play.

### **Detailed evaluation of individual aspects of the thesis:**

#### **a. Structure of the argument**

The argument is structured to unite existing literature, bridging the gap between epidemiological and critical sanitation research methods. This integration will allow large-scale sanitation initiatives to consider local structural and psychosocial factors, which is essential for meeting the global sanitation target.

#### **b. The formal level of the work**

The writing is easy to follow and there is one minor error – on page 14, the last line in the first paragraph: the parenthesis that closes the in-text citation for Coffey et al. 2017 has been overlooked by the researcher.

There is another point I wish to draw the researcher's attention to – on page 33, first paragraph – the researcher writes: "*The Indian government, led by Prime Minister Narendra Modi and his Bharatiya Janata Party, wholeheartedly supported the endeavor, fully aligned itself behind the goal of achieving ODF*" I believe this is not the case. PM Modi and his administration had set out to achieve ODF. Please check.

#### **c. Specific contribution**

A geographical perspective is largely absent in current sanitation research, leading to the widespread failure of top-down sanitation interventions. This study addresses this gap by highlighting how local factors can differ by region and emphasizing the importance of considering these variations for successful and sustainable sanitation change. Additionally, a comparison of the sanitation policies in Ethiopia and India demonstrates how the advantageous features of the sanitation programmes in both nations can help to create a single, efficient policy. The researcher indeed notes that common drivers, like social norms, the impact of structural and psychosocial determinants, or important players overseeing the grassroots

implementation in the Indian context, can also be examined in other regions, making the analytical approach used in this study easily transferable to other settings. Results regarding the reasons behind the necessity of making numerous changes to the current CLTS framework to address ecological, technical, and structural constraints may also be helpful from a policy standpoint.

**d. Questions for defense:**

1. Throughout the text, the researcher has employed two ontologies of sanitation: improved sanitation and safe sanitation. It's unclear, though, if these two fall under the same category or are used interchangeably.

Improved facilities are classified by the JMP as limited, basic, and safely managed. Furthermore, waste is safely managed either in-situ or ex-situ when it falls under the safely managed category, which occupies the top spot. My point is that combining safe and improved sanitation practices may cause some misunderstandings about what has to be done to provide better results for environmental health, both in terms of policy and implementation. In addition, should well-constructed shared toilets be included in the improved sanitation category, rather than subpar toilets designed for individual households?

2. The researcher is right in pointing out that both epidemiological and critical sanitation research approaches have their own limitations, and this is why the researchers have opted for a middle position by combining both approaches. In what sense the results obtained by the study could help to bridge the gap between epidemiological and critical sanitation research approaches? A more explicit deliberation could be useful here.
3. The government of India intends to address the ecological constraint in the second round of the SBM by launching a parallel programme known as Jal Jeevan Mission, according to the researchers. It is crucial to note that the use of subpar building materials results in the damage of a significant portion of individual toilets constructed under SBM 1. Therefore, the toilet structure won't be available for use once piped water enters the home. I would be interested in knowing the researcher's opinion on this relevant situation.
4. It would be helpful, in my opinion, if the researcher explicitly states whether his research addresses the problem of either urban or rural sanitation. Given that these are distinct research fields with distinct contextual specificities, there is a need to clarify this confusion.

The issue of rural sanitation is, in my opinion, the study's explicit focus. This leads me to an intriguing question: can research on urban sanitation help us understand the problems with rural sanitation, or vice versa? For instance, in rural areas with high and increasing population density, standard household toilets might not be effective. In this case, a high population density will make community sanitation infrastructure necessary (because of the negative externality linked to sanitation, which would be more pronounced in high-density settlements). The amount of money needed to construct community infrastructure in those rural areas, however, may deter the government from constructing such infrastructure. So how can this issue be resolved?

5. A question that is connected to the one before (04): the third publication looks at several structural and psychosocial factors that affect rural Jharkhand's sanitation conditions. The findings demonstrate the equal significance of psychosocial elements in the development of effective sanitation interventions. My point of submission is that social norms, both descriptive and injunctive, would work better in areas with high population densities and may not be effective as well in areas with lower densities.

**e. Conclusion**

The submitted work fulfills the thesis requirements and is recommended for defense.

Finally, the reviewer certifies that he has no conflicts of interest or biases with the author of the study.

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