Pathways to SDG: Macro to Micro Perspectives

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TRACING PATHWAYS TO CLEAN VILLAGES: UNCOVERING THE NATURE OF “SWACHH”*

Introducing “SWACHH SUCHAK”: A Self-auditing tool for village Panchayats

By

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The contextual problem
Girls can’t do it in the street! YOU MUST WAIT!

KEEP YOUR CITY CLEAN
How to provide incentives to village Panchayats for SWACHH?
The first model: Nirmal Gram Puraskar
1. NGP does not mean sustained Swachh

2. NGP does not give guidance to non-winners – how to become a winner
3. You don’t need to be an NGP winner to be swachh
4. Catch-up paths to Nirmal-ity involve a lot of players
4. Catch-up paths to Nirmal-ity is like a snake and ladder game but even more challenging....
How to make a strategy?
We propose a new framework – a new perspective
Research Design
Motivation:
- Different regions of India have similar rate of diarrheal incidence and similar regions of India have different rates of diarrhoeal incidence.
- We know that there can be different pathways to diarrhoeal incidence, but we do not know enough about them or their determinants to design ‘tailor made’ interventions.
- This is important to study as it is a major killer in India.
- Detailed survey on 600 households
- In Two Different States of India in South and East
- With a high density of Tribes and minority religions
- Information gathered on a 121 variables related to our conceptual framework.
- These relate to 20 villages.
Questions

- What are the drivers of diarrhoeal incidence? [A variety of explanatory variables will be considered]
- What is the relation if any between social identity and socio-economic status?
- What is the relation if any between socio-economic status and hygiene capabilities?
Background
Toilets, safe drinking water and washing of hands are well known barriers to infection.
Type of toilet also matters. The most commonly diffused toilet is the pit latrine. But unless soil is very dry the common pit toilet pollutes the ground water.
Hygiene behaviour – especially washing of hands after defecation, before cooking and eating … and proper disposal of baby stools are essential for minimizing diarrhoea – we refer to these as hygiene capabilities.
Our Model
Fig. 1. Determinants of diarrhoeal diseases as per the medical literature
Ramani et al. 2010
This is further summarized in the following model of drivers of diarrhoeal disease incidence at household level:

**Village**
- Contamination pool
- Agency to manage environmental security

**Household**
- Social identity
- Socio-economic status
- Access to sanitation
- Access to water
- Household hygiene
- Behaviour

Consider a household as an entity characterized by five variables as shown here.

Actions of households can lead to generation of a contamination pool. Two such types of actions are:
- Open defecation
- Construction of pit latrine
Health depends upon a number of complementary factors.

1. Sanitation
2. Water
3. Agency to take care of village
4. Cleanliness of living zone
5. Hygiene behaviour
6. Health

Shyama Ramani (UNU-MERIT)
A household is characterized by its resources and behaviour:

- Sanitation Deprivation
- Water Deprivation
- Others Depriving behaviour/choices

Health Status

Access to Sanitation
Access to Water
Hygiene Capabilities
Due to its knowledge base (or lack of) and assets base (or lack of) – a household can generate negative externalities for the whole village through its behaviour which contaminate water and soil. Examples are: Open defecation and littering.
An Agency in the village has to take measures to promote public health and minimize the risk from the negative externalities. An agency can also add to negative externalities through the choice of toilet promoted. Examples are: Badly constructed pit latrines.
This is why – these are the main complementary factors that are considered in our model of health production.
These can all be aggregated into village level densities and

- Sanitation Deprivation
- Water Deprivation
- Others Depriving behaviour/choices
- Access to Sanitation
- Access to Water
- Hygiene Capabilities

Health Status
Tools
अच्छा

बुरा
अच्छा क्या है? [Internal Structure of strengths]
## 1. Strengths and Weaknesses of Each District

<table>
<thead>
<tr>
<th>District</th>
<th>Strength</th>
<th>Weakness</th>
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</thead>
<tbody>
<tr>
<td>भरूच</td>
<td>Hygiene Capability</td>
<td>Water deprivation</td>
</tr>
<tr>
<td>दहोद</td>
<td>Hygiene Capability</td>
<td>Contamination Risk</td>
</tr>
<tr>
<td>खेड़ा</td>
<td>Hygiene Capability</td>
<td>Water deprivation</td>
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### 2. Ranking of districts according to strengths

<table>
<thead>
<tr>
<th>District</th>
<th>🏋️‍♂️</th>
<th>🚪</th>
<th>💦</th>
<th>💦</th>
<th>🧼</th>
<th>✩</th>
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<td>Dahod</td>
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<td>3</td>
<td>2</td>
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<tr>
<td>Kheda</td>
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<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
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</table>
### 3. Ranking of districts according to weaknesses

<table>
<thead>
<tr>
<th>District</th>
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</thead>
<tbody>
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<td>Bharuch</td>
<td>🙁🙂</td>
<td>😞</td>
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<tr>
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<td>😞</td>
<td>😞</td>
<td>😞</td>
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<tr>
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<td>😞</td>
<td>😞</td>
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</tr>
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</table>

*Note: The symbols represent different indicators of weaknesses.*
3. Focus of villages should be

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<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bharuch</td>
<td><img src="image1.png" alt="Tap" /></td>
<td><img src="image2.png" alt="Washing Hands" /></td>
<td><img src="image3.png" alt="Plumber" /></td>
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<tr>
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<td><img src="image1.png" alt="Tap" /></td>
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Conclusions and Further work