Comparison of Pupils’ Acceptance of Conventional and Ecological Sanitation in Rural Schools

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Overview countries

Geographical Region:
Moldova, Ukraine: Eastern Europe
Armenia, Georgia: Caucasus
Kyrgyzstan, Tajikistan: Central Asia
Conventional rural school sanitation

Common sanitation technology: Pit latrines
Separate toilets for boys and girls
Ecological rural school sanitation

Ecological sanitation technology: Urine Diverting Dry Toilets (Ecosan)
Separate toilets for boys and girls
First indoor ecosan indoor toilet in Armenia

Squatting toilet with urine diversion
Waterless urinals at different heights
Urine storage tanks in the basement

Wash basins and the toilet care-taker

Built by AWHHW, Quelque Chose architects and TUHH
Research questions

How do secondary school pupils in the EECCA region accept rural school toilets, what are the perceived differences between ecological and conventional sanitation systems?

Are there relevant differences between the three sub-regions, Eastern Europe, the Caucasus and Central Asia, and between boys and girls?

Is there a relation between the two types of sanitation system and fluid intake at school?

What is impact of school sanitation on absenteeism of girls in puberty?
Study Methodology

No of pupils and availability of toilets/urinals in the selected rural ecosan and reference schools

<table>
<thead>
<tr>
<th></th>
<th>Ecosan school (10 schools)</th>
<th>Reference school (8 schools)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of pupils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>262</td>
<td>325</td>
</tr>
<tr>
<td>Min - Max</td>
<td>36 – 490</td>
<td>196 - 449</td>
</tr>
<tr>
<td>No of boys per toilet/urinal</td>
<td>27</td>
<td>36</td>
</tr>
<tr>
<td>No of girls per toilet</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>No of boys per toilet</td>
<td>8 – 43</td>
<td>23 – 110</td>
</tr>
<tr>
<td>No of girls per toilet</td>
<td>4 – 100</td>
<td>25 – 115</td>
</tr>
</tbody>
</table>
## Study Methodology

### Overview of the study population and methods

<table>
<thead>
<tr>
<th>Method</th>
<th>No. of schools</th>
<th>No. of pupils per school</th>
<th>Total no. of pupils</th>
<th>Statistical Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official absenteeism records</td>
<td>5</td>
<td>72-108 (50% girls)</td>
<td>931</td>
<td>two-tailed Mann-Whitney U tests</td>
</tr>
<tr>
<td>Questionnaire</td>
<td>10</td>
<td>at least 15 of each girls and boys</td>
<td>636</td>
<td>Chi-squared test</td>
</tr>
<tr>
<td>Focus group discussion</td>
<td>10</td>
<td>at least 6-10 of each boys and girls</td>
<td>145</td>
<td>Qualitative Data</td>
</tr>
</tbody>
</table>
Monthly absenteeism rate distributions by year and type of school

Boys miss schools in general more often than girls

Small but significant decrease in absenteeism in case of ecosan
Questionnaire

4 questions related to satisfaction
6 questions related to toilet use
2 questions related to drinking at school
2 questions related to skipping school
2 questions related to MHM
Schools with pit latrines
„Are you satisfied with the school toilet?“

In Eastern Europe and the Caucasus

Girls
- very satisfied
- satisfied
- neither satisfied nor dissatisfied
- dissatisfied
- very dissatisfied

Boys
- very satisfied
- satisfied
- neither satisfied nor dissatisfied
- dissatisfied
- very dissatisfied

In Central Asia

Girls
- very satisfied
- satisfied
- neither satisfied nor dissatisfied
- dissatisfied
- very dissatisfied

Boys
- very satisfied
- satisfied
- neither satisfied nor dissatisfied
- dissatisfied
- very dissatisfied
Schools with ecosan toilets
„Are you satisfied with the school toilet?“

In Eastern Europe and the Caucasus

Girls
- very satisfied
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In Central Asia

Girls
- very satisfied
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Boys
- very satisfied
- satisfied
- neither satisfied nor dissatisfied
Questionnaire – about drinking at school

„Do you drink at school?“

No difference between boys and girls
Questionnaire – about MHM

“Do you skip school during menstruation?”

70% of the girls at ecosan schools reply that they never skip school during menstruation, compared to 50% of the girls at reference schools. No differences between EEC and CA.

“For what reason do you skip school during menstruation?”

The major reason for skipping school is “pain”. Followed by “lack of privacy”, “lack of a washing facility”, “problems in obtaining hygienic material” and “inconvenience of toilet”
How do secondary school pupils in the EECCA region accept rural school toilets, what are the perceived differences between ecological and conventional sanitation systems?

Good acceptance of school toilets can be translated into sanitation conditions providing comfort, odor, cleanliness and privacy.

Pupils do not care of the technology but like that it can be placed inside, attached or close to the building.

If the operation and maintenance are not functioning, it is a problem.

On pit latrines:

Very unhygienic conditions and behavior in some places.

Especially girls avoid using the pit latrines.

In all countries some girls use latrines during classes to have more privacy.
Is there a relation between the two types of sanitation system and fluid intake at school?

Not always a direct relation between drinking at school and the sanitation situation as other factors are overlapping.

However in CA, the results suggest evidence that non-accepted school toilets lead to less fluid intake.
What is impact of school sanitation on absenteeism of girls in puberty?

In general the boys miss school more often than girls certainly due to other reasons than school sanitation.

Girls in all countries say that they miss school much less during menstruation when ecosan was implemented.

The higher positive impact of the intervention for girls is further underlined by the results of the FGD.
Thank you

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