



Experiences with UDDT in schools in Eastern Europe, the Caucasus and Central Asia

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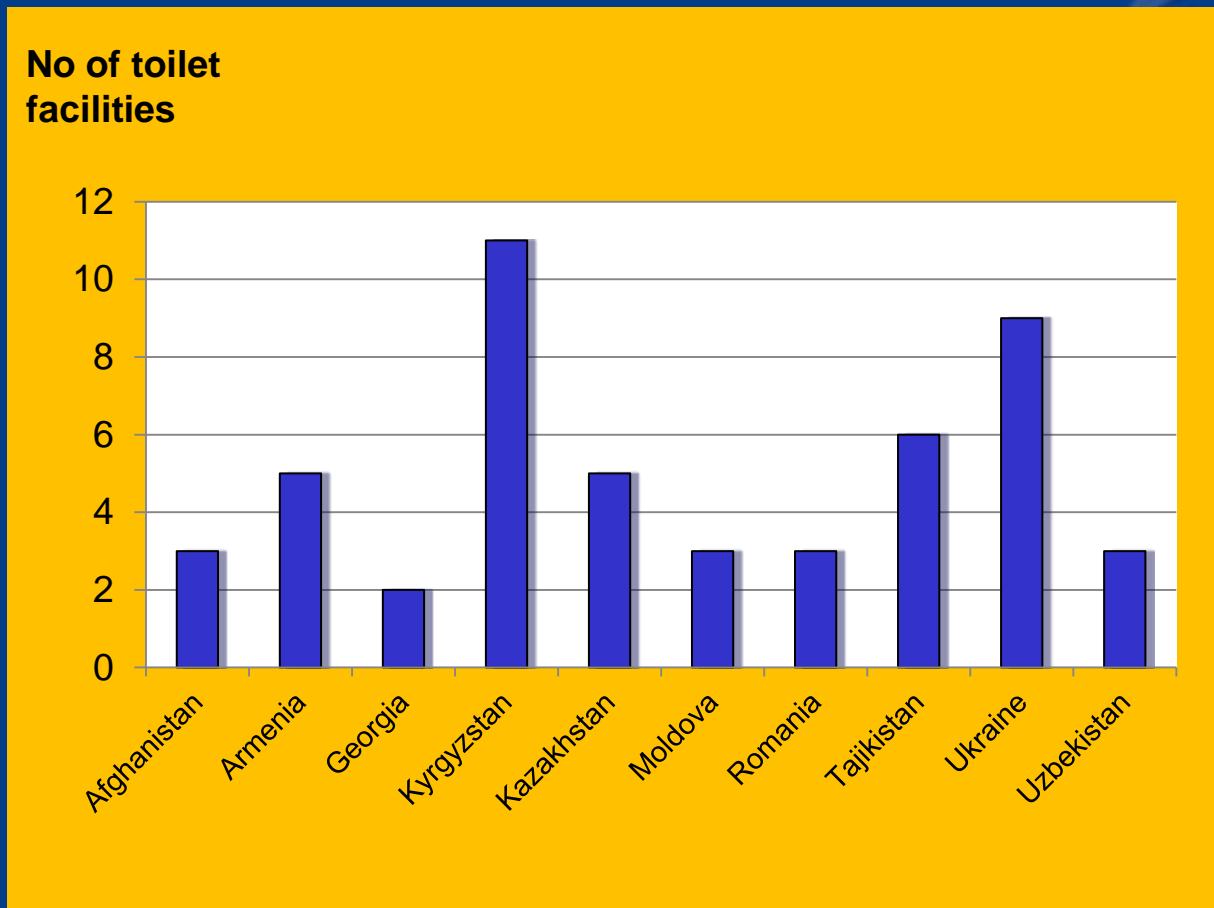
Stefan Deegener, Hamburg University of Technology

Finland, Tampere, Dry Toilet Conference 2012

School and Kindergarten Sanitation in Many Rural Areas in Eastern Europe, the Caucasus and Central Asia



Overview of school UDDT in the WECF network



Key features in school sanitation

UDDT - Hardware

- Indoor if possible
- Hand wash basin and simple greywater treatment
- Double faeces vault if possible
- Big urine tanks to guarantee a storage time of 6 months according to WHO (2006) for larger systems
- Proper smell prevention
- Better use high quality material for long term sustainability
- In case of pupils above 10 years old: Provision of adequate possibilities for cleaning and/or disposal of hygienic materials

Design of the urine tanks for the school UDDT

No of users	Volume of urine tanks [m ³]
50	2*0,75
100	2*1,25
200	2*2,5
300	2*3,75
400	2*5
500	2*6,25
600	2*7,5
800	2*10
1000	2*12,5

The recommended volumes are schools where the pupils attend the school in average 5 hours per day, 5 days per week and 9 months per year

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Urine piping and storage



Minimum recommended No of toilet rooms

No of male pupils	Restrooms for boys		Urinals for boys		No of female pupils	Restrooms for girls	
	WECF	WHO ³	WECF	WHO ³		WECF	WHO ³
25	1	–	1	–	25	1	1
50	1	1	2	1	50	2	2
100	2	2	2	2	100	3	4
150	2	3	3	3	150	4	6
200	2	4	3	4	200	4	8
250	3	5	4	5	250	5	10
300	3	6	4	6	300	6	12
350	4	7	5	7	350	7	14
400	4	8	5	8	400	8	16
450	5	9	6	9	450	9	18
500	5	10	6	10	500	10	20

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500	5	10	6	10	500	10	20

First UDDT in Romania: 9 years in use



Construction



Trainings



Urine storage

www.wecf.eu



Example Nizhyn, Ukraine



before



Local partner
Mama86



Teachers' rest room



First indoor school toilet for 350 pupils + teachers 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
www.wecf.eu



Built by AWHHW, Quelque Chose architects and TUHH

Example Tajikistan



Local partner: ASDPNau



Madrasah, Kyrgyzstan



Local partner: CAAW

Average costs of 32 UDDTs in EECCA

	EUR	%
Construction costs	9000	47
Local contribution	2000	10
Management, Training & Support	8300	43
<i>Total</i>	<i>19300</i>	

Average material cost = 35 EUR / Pupil

Key features in WECF school sanitation programme - Software

- Contract with the school in advance to fix responsibilities (Who will take care of the toilet?)
- Legalization (approval needed from different authorities (education, architectural, health, fire department))
- Provision of hygiene education (PHAEST)
- Training for the use, operation and maintenance of facilities for pupils, teachers and personnel
- Training on the re-use

Sanitation education



If used well, no smell!!!



Not all toilets were well accepted...

- School-management not in favor
 - Increased maintenance (cost)
 - Fear for misuse and smell
- Education and awareness raising
 - Principle not well understood, smell prevention
 - No proper guidance of new pupils
- No plan to reuse the urine
- Adapt design to culture and involve institutions e.g. religious
- Construction not finished
 - Legalization takes time
 - Building capacity

Impact assessment

Questionnaire, focusgroup discussions and classbook survey




- 9 Ecosan schools and 7 reference schools
- Total 574 students:
 - 294 girls
 - 280 boys



Investigating stools

last 2 weeks

6.6 + 5.3 + 2.1 = 14.0

DATE			
1	5	4	2
10	(5) 1 = 6.6	3	2 (1) 1 = 2.1
10	= 47%	7 (4) 1 = 5.3	= 15%
10		= 38%	
10		5	0
10		4	1
1		9	5
7		5	1
5		5	5

one of the results of FGD discussion
reference school in Arawan,
Kyrgyzstan

General Results

At UDDT schools:

- Preference for school toilet
- Less toilet avoidance
- More hand washing
- More children drink at school

At reference schools:

- Preference for home toilet
- Privacy and smell are the main complains
- Children avoid sometimes using the toilet

Results related to gender

- Girls are more satisfied with a UDDT than boys
- Privacy is a bigger issue for girls than boys
- Girls skip sometimes classes during their period because of:
 - Menstruation pain
 - Lack of privacy
 - Lack of washing facilities

Thank you very much!

www.sanitation.wecf.eu

WECF (2010). Sustainable and Safe School Sanitation. How to provide hygienic, affordable and indoor sanitation in areas without a functioning waste water system

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*Let's
cooperate!*

