On behalf of BMZ Federal Ministry for Economic Cooperation and Development

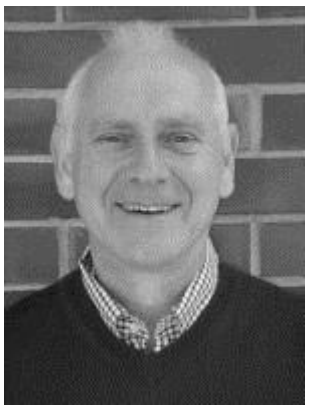
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Sustainable sanitation and ecosan Newsletter

Newsletter on sustainable sanitation and ecosan
By the GIZ program "Sustainable sanitation"

Issue no. 45
April 2013

Dear Readers,



As mentioned in our last newsletter, I have taken over the responsibility to lead the Sector programme on Sustainable sanitation into its new phase (2013-2015) with new goals and objectives to achieve.

In this new programme phase, our programme will concentrate its efforts on scaling up of sustainable sanitation solutions and offering support to GIZ's bilateral water and sanitation programmes in their sanitation interventions. Our thematic focus will be more on "improving governance in sanitation sector" for creating an enabling environment for scaling up sanitation projects. Knowledge management and SuSanA shall still remain key areas of our programme.

Also in our new phase we would like to continue the legacy of the newsletter started by my predecessors. However as you might have already noticed we have now renamed the newsletter as "Sustainable sanitation and ecosan". Starting with our next newsletter, alongside articles on ecosan we shall also feature articles from other sustainable sanitation projects/approaches which strive to fulfil other sustainability criteria prescribed by SuSanA but are not necessarily reuse oriented.

We hope you enjoy reading the newsletter as much as we did preparing it. This newsletter is sent to approximately 4070 subscribers for the English version and 444 subscribers for the French version. If you see this newsletter in a text-only format, please adjust your email program to display emails in HTML-format.

Best wishes from Germany,

Conrad Thombansen (sanitation@giz.de)
(Program director "Sustainable sanitation")

Contents

Breaking News

GIZ and UNICEF sign 'memorandum of understanding' to promote 'Fit for School' approach globally. Read more in 'WASH approaches' below.

Links

Summary of SuSanA 2008 to 2012 Status quo analysis is now available online.

Project evaluation report of peepoo toilet bags for monsoon floods in Pakistan 2012 by Peepoople and UN-Habitat is now available. Discussions on SuSanA forum.

Presentations at the conference on "Promoting Innovations and Sustainable Investments" in Manila, Philippines, January 2013 are now available.

Audio, photos and videos

Photos of the field trip on faecal sludge management, eThekwini, South Africa

Photos of Amalooloo prefabricated toilets, South Africa

top

WASH approaches

Germany, worldwide

GIZ and UNICEF initiate collaboration on WASH in Schools – Oct 2012

In October 2012 GIZ and UNICEF signed a MoU (Memorandum of Understanding) in the area of WASH (Water, Sanitation and Hygiene) in Schools. Through this collaboration UNICEF and GIZ are aiming to jointly support governments, organisations, and communities to provide basic hygiene programming, including WASH in Schools and essential school health programming based on the Fit for School Action Framework for children worldwide. Children should attend schools that have essential water, sanitation and washing facilities, and where hygiene behaviour, specifically handwashing is practiced regularly. The MoU was followed by a GIZ - UNICEF WASH in All Schools Learning Exchange in November 2012, when UNICEF Wash experts and their government partners from 10 countries around the globe visited GIZ in the Philippines to learn about the Fit for School approach. The focus was on enabling participants to understand, adapt and introduce appropriate elements and tools of the FIT approach in their working context to enhance impact, scale and sustainability of WASH in Schools.

top

- Contact: Christian Rieck (GIZ)
- Fit for School Website

Photos of Public Toilet, Athi River, Kenya

Photos of various UDDTs, Uganda

Photos of UDDT with shower, Peru, Lima

Photos of the Moyobamba UDDTs, Peru

Video: presentations at the FSM work of the Bill and Melinda Gates Foundation at the Second International Conference on Faecal Sludge Management, Durban, South Africa, 29-31 Oct. 2012

Guy Hutton (WSP) talks on "Rethinking our approach to choosing sanitation interventions".

UN senior official calls for urgent action to end the crisis of 2.5 billion people with no basic sanitation on the eve of World Water Day.

Sophie Tremolet author of the SHARE Sanitation Markets Pathfinder Paper talks about sanitation markets and economics.

Upcoming events

21 March – 21 August 2013
Rural Sanitation at Scale
ongoing free online course

2 April – 2 December 2013

- Presentation on Fit for school approach
- Keeping children 'Fit for School'. Simple, scalable and sustainable school health in the Philippines
- "Fit For School" – a PPP for the health of school children in the Philippines
- Link to Facebook page
- Photos on flickr

Afghanistan, Germany

Farmer Field School approach ensures safe reuse of sanitation products in Afghanistan – Feb. 2013

The GIZ Urban Water Supply Improvement Programme in Afghanistan applied the Farmer Field School (FFS) approach to promote the safe and beneficial use of sanitation products within an integrated crop management system. FFS is a 'learning-by-doing' methodology in which farmers are involved in simple experiments and innovations, discussions, brainstorming and collective decision-making about appropriate interventions for a complete cropping cycle. The group of 120 farmers used stored urine, dried faeces from double-vault UDDTs, fresh excreta from traditional dry toilets, and/or septage from septic tanks as raw materials. The faeces, excreta mix and septage were composted with the help of a beneficial microorganism solution (Bioaab). The results of the FFS have been: keen interest in and understanding of farmers of the safe use of sanitation products, increased productivity and better quality of crops (which were presented at an agriculture fair), significant reduction in the use of chemical fertilisers and pesticides, and acceptance of urine as a fertiliser (faeces is traditionally used).

top

- Contact: Nadira Khawaja (GIZ)
- Curriculum document on nutrient management using sanitation products in FFS is available on request by email.
- Further information on Effective Microorganism Technology

top

Policy and capacity development

Sweden

Certification system developed in Sweden for the use of blackwater as a fertiliser – Jan. 2013

In Sweden it is now possible to certify safe and sanitised blackwater, urine and human waste from latrines for further use as a recognised fertiliser. The main aim is to provide the local authorities responsible for the sewage disposal and the famers with quality assurance through the certification process thus ensuring safe reuse. The criteria for the certification have been developed by the Swedish Institute for Agricultural and Environmental Engineering (JTI), Swedish Technical Research Institute (SP) and the Södertälje municipality. This will pave the way for farmers to use human waste for agricultural production and additionally spur development of sanitation technologies where it is possible to retrieve safe products that can

Costing Sustainable Services, online course

6 – 8 May 2013
1st International IWA Conference on Holistic Sludge Management
Västeras, Sweden

21 May 2013
Toillets du Monde training on dry toilets in households
Peyrolles, France

4 June2013
Toilettes du Monde training on grey water treatment by geopuration
Nyons, France

21 June 2013
World Water Summit
Lisbon, Portugal

1 – 5 July 2013
36th International Conference of the Water, Engineering and Development Centre (WEDC)
"Delivering Water, Sanitation and Hygiene Services in an Uncertain Environment"
Nakuru, Kenya

25 – 29 August 2013
7th IWA Specialised Membrane Technology Conference and Exhibition for Water and Wastewater Treatment and Reuse
Toronto, Canada

29 August 2013
International Terra Preta Sanitation Conference
Hamburg, Germany

1 September 2013

be easily certified.

top

- Programme document (in Swedish) (PDF; 0.5 MB)
- Contact: Madeleine Fogde (SEI) and Anna Berggren (Nitoves)
- Website of the Swedish International Agricultural Network Initiative
- Website of Swedish Environment Institute (SEI)
- Website of the Swedish Institute of Agricultural and Environmental Engineering
- Website of the Swedish Technical Research Institute

Morocco, Germany

National workshop on rural sanitation in Morocco – Feb. 2013

The Moroccan Government with support of the EU and the GIZ IWRM Program AGIRE ("Appui à la Gestion Intégrée des Ressources en Eau") has launched the development of a National Rural Sanitation and Reuse Programme (PNAR). In this context, a two-day national workshop was organised in February 2013 with the objective to share knowledge in rural sanitation and reuse, and to enrich the development process of the PNAR. Other objectives have been to provide information on sustainable rural sanitation systems, reuse of wastewater and excreta and to discuss the preparation of a "Catalog of good rural sanitation practices". Furthermore, three different working groups have been initiated to accompany the development of the PNAR which focus on "Technical aspects of rural sanitation and reuse", "Costs and Financing" and "Organisational and institutional aspects and aspects concerning accompanying measures" respectively.

top

- Contact: Christine Werner (GIZ)
- Website of AGIRE
- Website of AGIRE about the workshop

top

Technology

Uganda, Switzerland

"Diversion toilet" to be field tested in Uganda – Feb. 2013

The "diversion toilet", developed by Eawag and EOOS as part of the Gates Foundation's "Reinvent the Toilet Challenge", is a dry urine-diverting toilet with the additional feature of an integrated water recovery that allows for the comfort of hand washing and toilet cleaning. The used water is treated on-site and recycled. Separated urine and faeces are recovered in a decentralised recovery plant. One toilet pre-prototype will soon be tested in two slums in Kampala over a period of 3 months. Field testing will be accompanied by a scientific social acceptance study, funded by Eawag. The Swiss Agency for Development and Cooperation (SDC) is funding the

World Water Week 2013
Stockholm, Sweden

14 – 17 October 2013
3rd IWA Development Congress and Exhibition
Nairobi, Kenya

14 – 18 October 2013
Water and Health Conference
Chapel Hill, North Carolina, USA

28 – 30 October 2013
11th IWA Conference on Small Water & Wastewater Systems and Sludge Management
Harbin, China

11 – 13 November 2013
SACOSAN V – South Asian Conference on Sanitation
Kathmandu, Nepal

Jobs

Job offer: Water and Sanitation Expert, Philippines

Applications are invited from international MSc students currently studying in Germany for a 3-month internship in the program Sustainable Sanitation, Eschborn, Germany

business model development for the “diversion toilet”.

top

- Contact: Tove Larsen (EAWAG)
- Project Website
- Video presentation on “Diversion for safe sanitation: a new approach to sanitation”
- Relevant discussion on SuSanA forum the technology and design development.

India, Netherlands

Journey of a prize winning integrated toilet to a total sanitation system – May 2012

The first Total Resource Recovery Toilet System (TRRTS) in India, an entry by Mr. Benjamin Clouet, won the first prize in the Global Sanitation Innovation Contest organised by FINISH. The TRRTS has five components - a flush toilet, a bathroom, a urine diversion bowl, a cultivated wetland for treating bathroom water, and a biogas plant. Urine from the urine bowl is stored in a tank, diluted with treated bathroom water and is used for irrigating a small farm. Human faeces from the flush toilet are drained into the biogas plant. Cowdung and vegetable waste are also fed in to the biogas plant. The biogas generated is used in kitchen for cooking. TRRTS was commissioned in a farmer’s house in Evoor village, Tamilnadu in May 2012 with SCOPE (India) as the implementing NGO. The total project cost of EUR 857 includes EUR 329 as prize money, EUR 129 as District Rural Development Agency grant and the remaining amount of 399 as personal contribution with the support of a bank loan. TRRTS has been fully functional for the past 8 months, and the treated urine and slurry are applied as manure for the maize, coconut and mango plants.

top

- Contact: Ms. Sharmistha (FINISH Society), Dr. Shyama Ramani (Contest organiser), Mr. Subburaman (SCOPE), Valentin Post (FINISH)
- Detailed project description (PDF; 1.2 MB)
- Society for Community Organisation and People's Education Website

---

Moldavia

Future of ecosan toilets in Moldova depends on local manufacturing of toilet seats – Mar. 2013

The Moldovan NGO ORMAX, which recently won the UN “Water for Life Best Practice Award” in partnership with the Women in Europe for a Common Future, the foundation France Libertés, and the Church World Service executed a two-year project of awareness raising of the rural population of Moldova on their right to water and sanitation. The project included information meetings, workshops, training sessions, conferences, and actions to improve safety and hygiene conditions in households. The cornerstone of the project was building of UDDTs for one of 10 schools involved in the project. 164 pupils and 35 teachers have benefited with an access to modern toilets inside the school. Source separation seats have been imported from the Ukraine. However, import of toilets seats is not a viable solution as besides

high transport costs there are also customs fees and administrative barriers. In order to promote ecological sanitation, ORMAX intends to produce separation seats locally. Production center will start its activities in 2013 in northern Moldova. ORMAX has launched a call on the SuSanA's forum for an inexpensive mould to manufacture source separation toilet seats.

top

- Link to UN "Water for Life Best Practice Award"
- Link to call for inexpensive moulds on SuSanA forum
- Contact: Natalia Dejean
- ORMAX website: http://www.cubolta.info and http://www.ecotehnologia.info
- WECF website
- Church World Service's website
- France Libertés' s website
- Photos of the project here and here

India, Switzerland

Flood prone village ready to tackle emergency situations – Mar. 2013

In India the entire village of Regullanka which is usually prone to flooding, has now access to safe sanitation. In its effort to provide improved water and sanitation, the Swiss organisation Terre des Hommes (TdH) has built Urine Diverting Dry toilets (UDDT) which are adapted to flooding in communities and schools. The project focused on health and hygiene habits in order to minimise health hazards, which is especially important in emergency situations. The raised height of the sealed chambers provides protection from flood waters. The UDDT also saves water in this water scare area. Out of 102 UDDTs built so far, 99 toilets are still in use and 29 toilets have sealed their first vault. Two toilets had their vaults opened after a retention period between six to nine months and the dehydrated faecal matter when tested was found to be safe for use in agriculture.

top

- Contact: Antoine Delepière (WASH adviser) and Markanday Mishra (WASH coordinator in India)
- Terre des Homme website
- The project website
- Pictures of the project
- Press release
- SuSanA case study of UDDT toilets by TDH in Bangladesh

---

top

Publications on ecosan and sustainable sanitation

GIZ, Germany

Technology review of urine-diverting dry toilets (UDDTs)

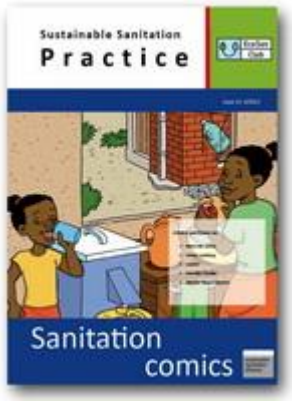
This technology review deals with the urine diverting dry toilets (UDDT). The publication offers a complete overview of UDDT functions, design considerations, common operation, maintenance issues, and generalised installation costs. It provides comprehensive design guidelines for all functional UDDT components, including urine diversion (UD) pedestals, benches and squatting pans, dehydration vaults, single vaults with interchangeable containers, and urine piping and storage systems. Possible design modifications are discussed to ensure the toilet's suitability for small children, the elderly, and persons with disabilities. Additionally, all relevant aspects of excreta management are described including treatment, disposal, reuse and maintaining hygienic quality standards. The focus is made on application in developing countries and countries in transition, although UDDTs are also applicable in developed countries.

top

- Link to publication
- Contact: Christian Rieck (GIZ)
- Link to discussion on SuSanA forum

EcoSan Club, Austria

Issue 13, 14 and 15 of Sustainable Sanitation Practice (SSP)



Issue 13 presents studies from different regions that mainly show the non-existence of faecal sludge management in most regions. The paper on LaDePa machine describes a new technological solution for producing hygienically safe organic fertiliser from sludge. The LaDePa machine was developed in Durban, South Africa.

Issue 14 contains selected contributions from the 1st WATERBIOTECH ("Biotechnology for Africa's sustainable water supply") conference, which was held in October 2012 in Cairo, Egypt. WATERBIOTECH is a coordination and support action funded within the Africa call of the EU 7th Framework Programme. It promotes biotechnology as useful, efficient and cost effective technique adaptable to African specific conditions and resources for water-wastewater treatment and reuse particularly for agriculture. The action is coordinated by ttz-Bremerhaven (Germany) and has 17 partners from six European countries (Austria, France, Germany, Italy, Spain, United Kingdom) and eight African and Arab countries (Algeria, Burkina Faso, Egypt, Ghana, Morocco, Senegal, Tunisia, and Saudi Arabia).

Issue 15 presents comics as a valuable visualization, awareness raising, and communication tool in the field of sanitation.

top

- Link to SSP
- EcoSan Club website
- Waterbiotech website

- Contact: Günter Langergraber

The World Bank

How much international variation in child height can sanitation explain?

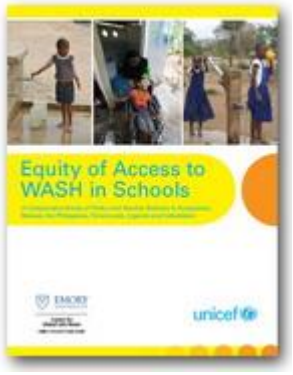
This paper documents a gradient between child height and sanitation. The association between sanitation and human capital is robustly stable, even after accounting for other heterogeneity, such as in GDP. The author applies three complementary empirical research methods to identify the association between sanitation and child height: an econometric regression model with the data from 65 developing countries, analysis of difference in child height over time in Indian districts and analysis of difference in height between children in Africa and India.

top

- Link to publication

Kyrgyzstan, Malawi, the Philippines, Timor-Leste, Uganda and Uzbekistan

Equity of Access to WASH in Schools



'Equity of Access to WASH in Schools' presents findings from a six-country study conducted by UNICEF and the Center for Global Safe Water at the Emory University. This research was carried out in collaboration with UNICEF country offices in Kyrgyzstan, Malawi, the Philippines, Timor-Leste, Uganda and Uzbekistan and their partners. The six case studies describe various dimensions that contribute to equitable or inequitable access across regions, cultures, gender and communities.

top

- Link to publication (PDF; 5.8 MB)

SEI, Sweden

Global Review of Sanitation System Trends and Interactions with Menstrual Management Practices

This study explores the interaction between menstrual management and sanitation systems, mainly relating to the issue of disposal of used menstrual blood absorption materials, and proposes a framework of interactions by positioning menstrual management into the different parts of the sanitation system. Generally, the appropriate disposal method for used menstrual pads and such material is with solid wastes that are collected separately from faeces and urine. Where such arrangements are lacking or not used, menstrual waste may be inappropriately disposed of through sanitation facilities, which may lead to

clogging or system failure. Understanding the interactions between menstrual management and sanitation is therefore important for improving sanitation functional access and ensuring benefits and sustainability of sanitation systems.
The study has been conducted as part of the project on Menstrual Management and Sanitation Systems financed by the Bill & Melinda Gates Foundation.

top

- Link to publication (PDF; 5.5 MB)
- Contact: Madeleine Fogde (SEI)

GIZ is a partner of the Sustainable Sanitation Alliance (SuSanA) - a loose network of 193 organisations active in the field of sustainable sanitation.

Registration information

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn, Germany

Friedrich-Ebert-Allee 40
53113 Bonn, Germany
Phone: +49 228 44 60-0
Fax: +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
Phone: +49 61 96 79-0
Fax: +49 61 96 79-11 15

Email: info@giz.de
Internet: www.giz.de

Registered at
Local court (Amtsgericht) Bonn, Germany: HRB 18384
Local court (Amtsgericht) Frankfurt am Main, Germany: HRB 12394

VAT no. DE 113891176
Tax no. 040 250 56973

Chairman of the Supervisory Board

Hans-Jürgen Beerfeltz, State Secretary

Management Board
Tanja Gönner (Chair)
Dr Christoph Beier (Vice-Chair)
Tom Pätz
Dr Hans-Joachim Preuß
Cornelia Richter
To subscribe to this newsletter (free of charge):
http://www.giz.de/en/mediacenter/117.html

If you no longer wish to receive this newsletter, please click here.
In charge of this newsletter:
Conrad Thombansen (conrad.thombansen@giz.de)

Editor(s):
Newsletter compiled by Rahul Ingle and Anna Kropina.

Our website: http://www.giz.de/ecosan

Technical implementation:
Juergen Eichholz (juergen.eichholz@saniblog.org)