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ecosan Newsletter

Quarterly newsletter on ecological and sustainable sanitation worldwide

A service by the GTZ program "Sustainable sanitation – ecosan" (on behalf of BMZ)

Dear Reader,



Our last newsletter for the year 2010 has many exciting news items from Sub-Saharan Africa where the ecosan approach is increasingly taking hold and colleagues have kindly sent us information for publishing (Namibia, Burkina Faso, Ghana, Tanzania, and South Africa). Also within the GTZ water and sanitation programs in sub-Saharan Africa, interest is mounting in upscaling of sustainable sanitation to achieve more impacts in the coming years.

After three years with the GTZ ecosan program, our team member Steffen Blume is now moving to a position with the GTZ water and sanitation program in Zambia. Steffen was instrumental in giving the SuSanA website its current face and functionalities and led the working of SuSanA's working group 2 ("costs and economics"). We will sorely miss him in Eschborn and wish him much success in his new position in Lusaka!

If you see this newsletter in a messy-looking text-only format, please adjust your e-mail program to display e-mails in HTML-format. This newsletter is sent to 3894 subscribers for the English version and 277 subscribers for the French version.

Best wishes from Germany

Elisabeth von Muench (ecosan@gtz.de) (Leader GTZ program "Sustainable sanitation - ecosan")

News

Sanitation icon retires - Valedictory symposium - Jan. 2011



of Leeds in September and to celebrate his work and achievements a 'Valedictory Symposium and Dinner' will be organised on 13 January 2011. Duncan is particulary known for his work on condominial (or simplified) sewerage and tropical wastewater treatment and reuse. Clear principles govern his work such as "technology should be as simple as possible". His sanitation blog is also famous for his "personal and fairly maverick views on how international sanitation targets can be

Professor Duncan Mara retired from the University

achieved".

More reflections on Duncan Maras career and symposium announcement
 Duncan Mara's blog on sanitation

Re-launch of SuSanA website - Dec. 2010

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Germany, worldwide

The SuSanA website has been re-launched in mid 2010. It now includes a <u>library section</u> with publications on sustainable sanitation such as general publications, training course materials, awareness creation posters, conference papers/presentations, case studies and technical drawings. Currently the library contains 670 entries including over 65 <u>Spanish</u> and 57 <u>French</u> documents.

The website now offers additionally three portals: for educational purposes, for practitioners, and for journalists providing the most relevant information for the respective group within one click. In the future it is planned to offer community platform and discussion forum features.

New website of Sustainable Sanitation Alliance

GTZ and partners support Otji dry toilets for informal settlements – Nov. 2010



Namibia

The GTZ Namibian Water Resources Management (NWRM) Project together with the Omaruru Basin Management Committee (OmBMC) supported the construction of 21 so called "Otji toilets" in an informal settlement in Omaruru, Nambia. For the next

Breaking News

We have documented <u>313 ecosan</u> projects with a total of 4.8 million users in 100 countries. The expanded list with all project details is now also available online (Excel file). Please <u>help us</u> to improve it further.

Issue no. 38

December 2010

Links

German Minister Dirk Niebel gives prestigious <u>media award</u> to a journalist covering <u>ecosan in radio</u> <u>podcast</u> on last year's World Toilet Day.

Swedish lecturers have made support material for training of professionals for the sanitation and water sector available.

Fieldnote on teaching ecological sanitation at the Chisungu Primary School, Epworth, <u>Zimbabwe</u>.

Attractive Spanish-language <u>comic</u> <u>book</u> with story about hygiene, health and urine diversion dehydration toilets (from Mexico).

Success story (PDF; 0.2 MB) and photos about UDDTs in Peru implemented by company <u>Rotaria</u> del Peru in collaboration with <u>GTZ</u> <u>Peru</u> (in German).

All presentations and results from ecosan vision workshop in Nairobi and ecosan training workshop in Ugunja, Kenya. See also <u>Kenya</u> <u>Ecosan blog</u> and <u>facebook page</u> for regular updates about ecosan activities in Kenya.

South American network on sustainable sanitation "Red LAC Saneamiento Sostenible".

IRC to launch two new interactive websites: E-Source and IRC WASH Library in early 2011.

Key <u>UN body affirms</u> that human right to water and sanitation is legally binding.

FINISH <u>Sanitation Challenge</u> <u>Contest</u> offers a reward of 10.000

Euro for sanitation solutions in India (organised by WASTE, WTO and others).

Take a Pee & Get Money: An NGO in Darechowk (Nepal) pays anyone a rupee if he or she uses their toilet. The collected urine is converted to fertiliser for the villagers around.

Terra Preta Sanitation <u>research</u> <u>update</u> (PDF; 0.01 MB) from German university in Hamburg (TUHH).



year the municipality of Omaruru together with the support of GTZ and the OmBMC is

planning to scale up the implementation of the dry sanitation system in the informal settlements of Omaruru. Further Basin Management Committees supported by GTZ are also planning to implement the locally designed dry excreta management system. The Otji toilet uses a perforated container as collecting device under the toilet pot which separates solid from liquid material. The solids stay in the container while the urine runs through a perforated concrete panel underneath the container (or the urine collects on the walls of a concave-shaped toiled bowl), from where it infiltrates into the ground.

- Photos of Otji toilets in Namibia
- <u>The Otji-toilet self builder manual</u>
- Website of Namibian NGO Clay House Project
- Overview of the Otji-toilet: Different designs, one system

Germany

German NGOs trained in sustainable sanitation – Oct. & Nov. 2010

The German Toilet Organization (GTO) has been inundated with requests from right across the NGO spectrum asking for assistance in understanding the field of sanitation. In response, GTZ and GTO started a <u>training</u> on "School toilets in developing countries" in Oct. 2010 in Eschborn. On 27/28 Nov. a second training followed in Berlin.

The aim of the two-day training sessions was to discuss the application of specific technological solutions and sociological approaches, as well as giving an insight into the particular problems that may hinder project implementation. Moreover, the importance of considering needs of handicaped pupils to access toilets was extensively discussed.

If you would like to participate at a further training, please contact: GTO

- Presentations of the training
- Report in French about the training (by a participant; PDF; 0.8 MB)

Netherlands

Pumps, pipes and promises presentation online from IRC conference – Nov. 2010

From 16-18 Nov., 120 researchers, practitioners and governance specialists from 27 countries came together for the symposium, "Pumps, Pipes and Promises" in the Hague to discuss the latest standing on costs, financing and accountability in the water, sanitation and hygiene (WASH) sector. Further preliminary results from the "WASHCost" project, which researches the life-cycle costs of WASH services in rural and peri-urban areas in four countries from 2008 - 2010 were released as well. The symposium was organised by the International Water and Sanitation Centre (IRC).

- Symposium documentation on IRCs website
- Preliminary results of WASHCost project

 <u>Summary of sanitation costs and financing presentations (by Sanitation</u> Updates)

India/Philippines

World Toilet Day activities worldwide - Nov. 2010



The Pune (India) Municipal Corporation and Ecosan Services Foundation organised a poster competition and "Big Squat" action on World Toilet Day this year. School children participated to present their posters under the theme "What I wish for the World Toilet Day". In Cagayan de Oro, Philippines the first citywide "My School Toilet" contest took place on the World Toilet Day. More than 20 public elementary schools participated and the school children showed their immense creative potential (PDF; 0.1 MB) by translating important sanitation and hygiene messages into posters, puppet theatre and song

performances.

- · Photos of the poster contest in Pune
- Photos from the Philippines
- Website of BIG SQUAT campaign

Benin, Sub-Saharan Africa "We are scaling up impacts and quality" - sector meeting of GTZ, DED and CIM – Oct. & Nov. 2010

From 31 Oct. - 5 Nov. the bi-annual GTZ SOWAS (Services on Water and Sanitation) meeting took place in Cotonou, Benin. About 80 professionals working for German Development Corporation in Sub-Saharan Africa and in Germany came together to discuss how impacts of their work can be scaled up. After the meeting a one day training on sustainable sanitation and a field trip took place.

· Photos from the training and field trip

Dutch civil society alliances (WASH Alliance and Connect4Change) receive funds of 97 Mio Euro for 2011 to 2015.

Interesting article on recycling human excreta with focus on historical systems in China and Japan.

IWA Specialist Group on

Resources Oriented Sanitation is now represented on IWA Water Wiki.

Over 700 people now like the <u>SuSanA facebook page</u>! So far, most of the fans are from USA, Germany, Sweden and India. To join and comment, just click on "like" <u>here</u>.

Audio, video and photos

Photos and first <u>report</u> from testing <u>uni-sex waterless urinals</u> in Nairobi by Norwegian NGO SuSan Design and partners.

Photos from <u>ecosan projects in</u> <u>Nepal</u> (by ENPHO).

Photos for <u>sanitation study in low</u> <u>income areas</u> in Kenya (by GTZ).

First photos from <u>UDDT at Adama</u> <u>University in Ethiopia</u> (built by GTZ-IS).

Photo sets showing good and bad sanitation for journalists.

Video from the <u>12th SuSanA</u> meeting in Stockholm.

See <u>SuSanA's YouTube channel</u> for more video clips on sustainable sanitation.

Upcoming events

22 – 23 Dec. 2010 Community Based Sanitation

training CDD Society's Training Calendar (Consortium for DEWATS Dissemination) Bangalore, India

13 Jan. 2011

Professor Duncan Mara: Valedictory Symposium (the Global Public Health Crisis) and Dinner Leeds, UK

24 – 26 Jan. 2011 <u>The future of urban water:</u> <u>solutions for liveable and resilient</u> cities

Paris, France

2– 5 Feb. 2011 International Conference on Integrated Water Management Perth, Australia

End of February 2011 (date to be confirmed)

East Africa Practitioners Workshop on Pro Poor Urban Sanitation and <u>Hygiene</u> Kigali, Rwanda

March to June 2011 UNESCO-IHE ecosan online course Worldwide

4-8 Apr. 2011

Study course in Spanish "modulo in Diplomado Sostenible" – Oct. 2010



The inauguration of the study module "Saneamiento Sostenible - Soluciones Descentralizados" took place on 20 Oct. 2010 in Lima, Peru. The course is a result of the public-private partnership between Rotaria del Peru SAC, the GTZ programme Proagua and the University Agraria de La

Molina (UNALM) in corporation with the dean of the department of Agricultural Engineering Ingeniería Agrícola, Prof. Rosa Miglio.

· Course information at UNALM website

West Africa

Regional course on Climate Change Mitigation/Adaptation includes the role of productive sanitation

SMHI (Swedish Meteorological and Hydrological Institute), SEI (Stockholm Environment Institute) and SWECO (a consultant company) have been contracted by Sida since 2007 to organise international training courses on climate change and mitigation/adaptation strategies. In the ongoing course for West Africa in Ouagadougou, Burkina Faso (29 Nov - 3 Dec), productive sanitation together with soil and water conservation technologies were taken up as approaches that could help small holder farmers cope with a changing climate. A study visit was made to the EcoSan_UE2 project that combines productive sanitation with water conservation technologies in 30 villages in the Kourittenga province in eastern Burkina Faso. The EcoSan_UE2 project is carried out by CREPA and the Ministry of Agriculture, with funds from the EU food security fund.

Presentation about EcoSan_UE2 project and climate change adaptation (in French)

- Presentation about productive sanitation and agriculture (in French)
- More information on the EcoSan_UE2 project in English
- Fact sheet by SuSanA working group 3 on sustainable sanitation, climate change and renewable energies

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Burkina Faso

Low cost upgrading of pit latrines with urine diversion makes manual pit emptying safer – Oct. 2010



Environmental aquatic chemist <u>Florian Erzinger</u> developed the so called ecosan ARA technology (ARA stands for Adapted to the Reality of Africa). This low cost technology is an "upgrade kit" for traditional latrines or for VIPs. The urine diversion upgrade is easy to construct and to apply and enables the separation of urine and faeces also for lowincome households. This technology can lead to much safer manual toilet pit emptying (the photo shows the current unsafe practice in Burkina Faso). It can also lead to nutrient recycling and reduces the input of nitrate into the groundwater.

Find six documents and drawings in English and French by putting "Erzinger" in the SuSanA library search field

· Links to photos about toilet construction, pit emptying and training sessions

USA, Switzerland, South Africa

Gates Foundation supports nutrient recovery harvesting project in South Africa called VUNA

The Swiss Federal Institute of Aquatic Science and Technology (Eawag), eThekwini Water and Sanitation (EWS) and the University of KwaZulu-Natal in Durban launched a four-year project on community-scale nutrient recovery from urine. New urine collection systems and fertiliser production technologies will be tested in the field in the municipality of eThekwini in South Africa.

<u>New VUNA project website</u>

<u>Article in humanitarian news and analysis</u>

Ghana, Germany

Interlinking sanitation and agriculture at university in Accra: final reports now available – Sept. 2010



A joint German-Ghanaian research project implemented and evaluated reuse-oriented sanitation systems at "Valley View University" in Accra, Ghana since 2003. The project was financed by the German Ministry of Education and Research and focused on much needed and successfully implemented cooperation between sanitation and agriculture. SACOSAN IV Colombo, Sri Lanka

18 – 22 April, 2011 International conference on Small Sustainable Solutions for Water (SSS 4 WATER)

jointly organised by EcoSan SG, IWA Small Systems SG and the Decentralized Water and Wastewater International Network (DEWSIN). Deadline: 15 Dec. 2010 Venice, Italy

25 – 28 Apr. 2011 Smallwat11 - 3rd international

congress Wastewater in Small Communities Seville, Spain

25 – 28 May 2011 Decentralised Wastewater Treatment Systems (DEWATS) for Urban Environments in Asia Possibly with SuSanA meeting or

side event (to be confirmed) Manila, Philippines

3 – 5 July 2011 2nd Southern African Regional Young Water Professionals Conference Pretoria, South Africa

6-8 July 2011

WEDC Conference The future of water, sanitation and hygiene in low-income countries Loughborough, UK

19-21 July 2011

AfricaSan 3 (3rd African Conference on Sanitation and Hygiene)

Possibly with SuSanA meeting or side event (to be confirmed) Kigali, Rwanda

26 - 29 Sept. 2011

8th International Conference on Water Reclamation & Reuse Barcelona, Spain

2-6 Oct. 2011 <u>The 4th IWA Asia Pacific Region</u> (ASPIRE) Conference & Exhibition: <u>Toward Sustainable Water Supply</u> and Recycling Systems

Deadline for abstracts: 31 January 2011

Tokyo, Japan

21 – 22 Nov. 2011 <u>3rd International Symposium "Re-</u> <u>Water"</u> Braunschweig, Germany

21 – 24 Nov. 2011 2nd IWA Development Congress and Exhibition (IWA SG EcoSan plans Terra Preta workshop) Kuala Lumpur, Malaysia

Mar. 2012 World Water Council Marseille, France

2012

3rd East Asian Ministerial Conference on Hygiene and Sanitation Bali, Indonesia

Jobs



Beyond the installation of locally adapted rainwater and greywater collection technology for demonstration, methods for hygienically safe use of urine and faeces in plant production were also

investigated. The final reports "Sanitary installations" and "Agriculture" are available (in German), a scientific evaluation of optimised UDDTs and urine fertilised grain sorghum is forthcoming.

 Final report of the project component 2: "Sanitärtechnik innerhalb von Gebäuden" (in German)

- Publications on website of Uni Hohenheim for component 5 on agriculture
- Project information on IOEV website (in German)
- Presentation about design and construction of an optimised public dehydration toilet in Ghana (PDF; 1.7 MB)
- Photos from the sanitation technology implemented at VVU

Switzerland, worldwide

Human right to water and productive sanitation – Sept. 2010

The Independent UN Expert on the issue of human rights obligations related to access to safe drinking water and sanitation, Ms. Catharina de Alberquerque, organised on 13 -14 Sept. a two day seminar with the civil society in Geneva following her call for good practices in the WatSan sector earlier this year. Some 19 presentation were held on good practices. SEI and CREPA presented the experience of the "productive sanitation approach" in Burkina Faso and Niger. The meeting opened the opportunity to broaden the discussion and consider the important link between sanitation and the right to water and the right to food.

- Report about the event from Linus Dagerskog (PDF; 0.1 MB)
- Presentation by CREPA and SEI on productive sanitation and gender

<u>All presentations from the meeting</u>

Tanzania

Workshop on sustainable sanitation, Mtwara - Sept. 2010



MTWASA (Water and sanitation authority of Mtwara), DED and GTZ organised a workshop aiming at capacity building for the Water Supply and Sanitation Authorities from 7 towns in Tanzania which participate in the "Seven Towns Upgrading Program". This program is issued by the Tanzanian Ministry

of Finance and managed by the Ministry of Water and Irrigation. It includes feasibility studies and detailed tender and design documents for the seven towns.

Presentations and photos of the workshop

Switzerland, worldwide

Launch of SSWM Toolbox - Linking up Sustainable Sanitation, Water Management & Agriculture – Sept. 2010 The Sustainable Sanitation and Water Management Toolbox has been launched in September 2010. The toolbox is designed to optimise a local sanitation and waste management system. It combines a thorough pedagogic approach, process and planning tools, software and technological approaches and links them with publications, articles and weblinks, case studies, training material and presentations.

Sustainable Sanitation and Water Management Toolbox

Worldwide New SuSanA partners

The following 7 organisations recently joined the SuSanA network as partners, bringing the total number of members to 136:

- Public Hygiene Lets Us Stay Human (PHLUSH) (USA)
- Synergy international (India)
- Unnayan Shahojogy Team (UST) (Bangladesh)
- WiSDOM (Moldova)
- Action Contre la Faim (France)
- SES Efficiency (Spain)
- Network for Water and Sanitation Uganda

Publications on ecosan and sustainable sanitation

Sustainable Sanitation Alliance

- Factsheets of SuSanA working groups (WGs)
- Updated factsheet of WG 7: "Sustainable Sanitation for Schools"
- New version WG 9a "Sanitation as a Business"
- New version WG 9b "Public Awareness and Social Marketing"

Applications are <u>invited</u> from international MSc students currently studying in Germany wanting to do a 3-months internship with the GTZ ecosan team in Eschborn, Germany.

GTZ has a <u>vacancy for an intern</u> for a shared position with GTZ and WTO based in Singapore, and for a German-speaking <u>intern for the</u> <u>research project SANIRESCH</u>.

Jobs with GTZ are advertised <u>here</u>.

Bill and Melinda Gates Foundation Research Analyst, Water Sanitation and Hygiene

Bill and Melinda Gates Foundation <u>Program Officer, Water Sanitation</u> <u>and Hygiene</u>

Terre des Homes Chef projet WASH Choléra Terres des Hommes Haiti

Medair WASH Project Manager Afghanistan

Medair WASH Project Manager

Northern Sudan

Medair WASH Project Manager

Afghanistan, DR Congo, Haiti, Madagascar, Somalia, Southern Sudan, Sudan (Northern States), or Zimbabwe

If you have a job opening in the field of sustainable sanitation, you are welcome to <u>post it to the</u> <u>SuSanA website here</u>.

Sustainable Sanitation Alliance New SuSanA case studies

• Community ablution blocks with sewers or infiltration, eThekwini (Durban),

South Africa

Peri-urban sanitation with urine diversion dehydration toilets, eThekwini
Municipality (Durban), South Africa (draft)

- UDDTs in a rural area, Tututepec, Oaxaca, Mexico (in Spanish)
- Reuse of effluents from a constructed wetland, Trujillo, Peru (in Spanish)
- Reuse systems of human urine, Esperanza, Argentina (draft, in Spanish)

GTZ

GTZ factsheets on sanitation in seven African countries

This series of short factsheets gives an overview of the sanitation situation of seven GTZ water programs in Sub-Saharan Africa. For Benin, Burkina Faso, Burundi, Kenya, Tanzania, Uganda and Zambia the factsheets underline the specific sanitation challenges and GTZ's approach and program activities to tackle them. First outcomes are also presented.

Factsheet Benin

- Factsheet Burkina Faso
- Factsheet Burundi
- Factsheet Kenya
 Factsheet Tanzania
- Factsheet Uganda
- Factsheet Zambia

DWA

Brochure "Brauchen wir in Deutschland neuartige Sanitärsysteme?" (in German)



The so called new sanitation systems (Neuartige Sanitärsysteme - NASS) are often based on the separation, treatment and reuse of effluent streams. The application of NASS mainly aims at the reuse of water and nutrients. This brochure gives an overview of the application in Germany, Austria and Switzerland.

DWA Brochure "Brauchen wir in Deutschland neuartige Sanitärsysteme?" (in German)

EAWAG-Sandec

Compendium of Sanitation Systems and Technologies in four languages



The compendium is now also available in Vietnamese, French and Spanish. All language versions are available as open source documents. They can be ordered as hardcopies from Sandec's website. Sandec is now preparing further translations in Urdu, Nepali and Chinese.

• EAWAG/Sandec Compendium of Sanitation Systems and Technologies

Sandec Sandec news No. 11



This year Sandec News is issued on the topic of Clean Water for a Healthy world analog to the World Water Day theme. It covers Strategic Environmental Sanitation Planning, Excreta and Wastewater/Solid Waste Management and Household Water Treatment Systems.

Sandec news No. 11

EcoSanClub

EcoSanClub (ESC) journal Sustainable Sanitation Practice issue 5 – Sanitation as a Business



Sustainable Sanitation Practice (SSP) aims to make available high quality information on practical experiences with sustainable sanitation systems. This issue no. 5 is about the topic of Sanitation as a Business. Topics for issue no. 6, 7 and 8 are announced already on the ESC website. Moreover readers are invited to suggest topics for further issues.

<u>Sustainable Sanitation Practice (SSP), issue no. 5</u>

International Institute for Environment and Development

Tales of shit: Community-Led Total Sanitation in Africa



CLTS has encouraged millions of people around the world to look at, talk about and tackle the problems caused by open defecation. This has not happened through education, force or monetary incentives, but through the facilitation of a participatory process called triggering'. This special issue of Participatory Learning and Action issue presents case studies on experiences with the Community-Led Total Sanitation (CLTS) approach in East, Southern and West Africa.

<u>CLTS in Africa</u>

Stockholm Environment Institute Peak Phosphorus, The Next Inconvenient Truth?



Phosphorus, as a fertiliser, is important for the world's food production. Several authors estimate the lifetime of the comercially viable global reserves (16 Gt rock) to be about 100 yrs based on the USGS data. A new estimate from IFDC in September increases Morocco's reserves by 9 times but it is not yet known how much of this increase is commercially viable. The demand for phosphorus is rising by about 2-3% per year (presently at 160 Mt rock/yr) and the prices are rising as the reserves in various countries tend towards depletion (for USA this will occur by

2040). For subsistence farming, human excreta is a very significant source of phosphorus fertiliser.

Presentation by Arno Rosemarin at World Bank, Manila, 15 Oct. 2010

Swedish University of Agricultural Sciences, Uppsala PhD thesis, Annika Nordin: Ammonia Sanitisation of Human Excreta – Treatment technology for Production of Fertiliser



This <u>PhD thesis</u> by Annika Nordin examined ammonia based sanitisation to produce a hygienically safe fertiliser form source separated urine and faeces.

Inactivation rates of pathogens could be related to ammonia (NH3) concentration and temperature within the ambient range. Faeces collected dry can be sanitised with 1-2% urea and urine should be collected with little flush water. Heating, e.g. by sun exposure can greatly enhance the sanitising effect from NH3.

Publications on health and sanitation

Various organisations

Publications on health and sanitation

In this section we highlight new publications which analyse the health impacts from either lack of sanitation or from improving the sanitation systems of communities. Health outcomes are an important impact of improved sanitation, and should - if possible - be monitored before and after sustainable sanitation projects are implemented.

PLoS Four-Paper Series on Water and Sanitation

The medical journal Public Library of Science Medicine (PLoS) has published <u>four</u> <u>papers</u> which highlight how sanitation and water, along with better hygiene, are the "forgotten foundations of health."

Hesperian's How to prevent cholera factsheets

The Hesperian foundation has developed easy to read and illustrated fact sheets on Cholera prevention in English, Spanish, French and in <u>Haitian Creole</u>.

WaterAid videos

Videos from WaterAid showing health impacts from poor water and sanitation service in Bangladesh, Zambia, Burkina Faso and Uganda.

- Video from WaterAid World Toilet Day 2010: Dhaka hospital, Bangladesh
- Video from WaterAid World Toilet Day 2010: a mother's story, Zambia
- <u>Video from WaterAid World Toilet Day 2010: Burkina Faso</u>
- <u>Video from WaterAid World Toilet Day 2010: Uganda</u>

