

**ecosan – newsletter - no. 25 - 08/2007 - english**



This regular electronic news bulletin from the ecosan programme of gtz, Germany, addresses a network of friends and professionals involved in initiatives and projects in the field of closed-loop wastewater management and sanitation.

**Dear friends and colleagues!**

Welcome to gtz's ecosan newsletter issue no. 25!

The latest editions of the English version are distributed directly via e-mail in the globally readable, text-only format. You can also download German, French, Spanish, English and Chinese versions as easy-to-read pdf files from our web-site.

**!!! Downloads:**

**German:** <http://www.gtz.de/de/dokumente/de-ecosan-nl25-2007.pdf>  
**Spanish:** <http://www.gtz.de/de/dokumente/es-ecosan-nl25-2007.pdf>  
**French:** <http://www.gtz.de/de/dokumente/fr-ecosan-nl25-2007.pdf>  
**English:** <http://www.gtz.de/de/dokumente/en-ecosan-nl25-2007.pdf>  
**Chinese\*:** <http://www.gtz.de/de/dokumente/cn-ecosan-nl25-2007.pdf>  
(from September 2007)

\* For organisational reasons, the Chinese version is published later than the others.

Your ecosan team hopes you enjoy the current issue!

**Your contributions**

This medium lives through interaction. So please keep sending your suggestions, requests and information to be published via this newsletter to the addresses at the end of this issue. Thank you in advance for any contribution!



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  - Netherlands: Next UNESCO-IHE online ecosan course in September 2007

- Finland: Internet course "Safe and sustainable sanitation", Sept. - Oct. 2007
- Mexico: 2nd International ecosan course, 18 - 27 September, Tepoztlán

**Events – new**

- 12-14/09/07 2<sup>nd</sup> international water conference, Berlin, Germany
- 18-21/09/07 Advances in Biogas, Hohenheim, Germany
- 10-12/10/07 Internationales Symposium Abwasser-Recycling, Braunschweig, Germany
- 08/11/07 Symposium „healthy wetlands, healthy people“, Shaoxing, China
- 04-07/03/08 Water China 2008, Guangzhou, China
- 01-03/04/08 Asia water 2008, Kuala Lumpur, Malaysia
- 19-21/05/08 7<sup>th</sup> international conference on environmental problems in coastal regions, New Forest, U.K.
- 19-21/05/08 Call for abstracts: IWA Conference Sanitation Challenge, Wageningen, the Netherlands
- 28-30/05/08 Environmental economics 2008: 2<sup>nd</sup> international conference on environmental economics and investment assessment, Cádiz, Spain
- 11-13/06/08 Sustainable irrigation 2008: 2<sup>nd</sup> international conference on sustainable irrigation management, technologies and policies, Alicante, Spain
- 01-04/09/08 13<sup>th</sup> IWRA world water congress 2008, Montpellier, France
- 07-12/09/08 IWA world water congress and exhibition 2008, Wien, Austria
- 01-07/11/08 11<sup>th</sup> international conference on wetland systems technology for water pollution control, Indore, India

**Events – reminders**

- 05-07/09/07 ECOSUD 2007, Portugal
- 12-14/09/07 New directions in urban water management, Paris, France
- 23-27/09/07 11<sup>th</sup> world congress on anaerobic digestion, Brisbane, Australia
- 27-28/09/07 International symposium 2007: water supply and sanitation for all, Berching, Germany
- 01-05/10/07 Sardinian Symposium 2007, Cagliari, Italy
- 09-11/10/07 Tropentag 2007, Witzenhausen, Germany
- 09-12/10/07 6<sup>th</sup> IWA sp. conference on wastewater reclamation & reuse for sustainability, Antwerpen, Belgium
- 28/10-1/11/07 2<sup>nd</sup> IWA-ASPIRE Asia-Pacific regional group conference and exhibition, Perth, Australia
- 31/10-3/11/07 World toilet summit 2007, New Delhi, India
- 12-16/11/07 Latin America regional sanitation conference (LatinoSan), Cali, Columbia
- 19/11/2007 World toilet day, global
- 25-28/11/07 International conference on sustainable sanitation – food and water security for Latin America, Fortaleza Ceará, Brazil
- November 07 Launching of IYS activities by the UN, global
- November 07 East Asian ministerial sanitation conference (EaSan), Beijing, China
- 06-09/02/08 8<sup>th</sup> specialised conference on small water & wastewater systems & 2<sup>nd</sup> specialised conference on decentralized water & wastewater international network, Coimbatore, India
- 18-20/02/08 African ministerial sanitation conference (AfricaSan), South Africa
- 25-29/02/08 14<sup>th</sup> African water association congress, Cotonou, Benin
- 07-11/04/08 33<sup>rd</sup> WEDC international conference/access to sanitation and safe water: global partnerships and local actions, Accra, Ghana
- 11/6-14/09/08 EXPO Zaragoza 2008: Water for Sustainable Development, Zaragoza, Spain
- 06-09/07/08 1<sup>st</sup> international conference on sustainable biosystems, Perth, Australia
- 31/8- 5/09/08 Urban drainage, Edinburg, UK
- 07-12/09/08 World Water Congress and Exhibition, Vienna, Austria
- 24-26/09/08 International conference on sustainable sanitation in Africa/NETSSAF final conference, Ouagadougou, Burkina Faso
- 15-22/03/09 5<sup>th</sup> world water forum, Istanbul, Turkey
- 1/5-31/10/10 World EXPO, Shanghai, China

## In house News

## New project data sheets for ecosan projects

For some time now the GTZ project team has been publishing a series of project data sheets highlighting the variety of ecosan projects. 10 new projects have just been added to this series.

The ecosan project data sheets provide information on different projects. The series include projects in developing, emerging and industrialised countries and includes low tech, high tech, urban, rural, small and large projects in different cultural contexts. The sheets contain concise information on the technical, organisational and financial approach of the projects, as well as a description of particular experiences and "lessons learned".

The newly published data sheet drafts are on projects in India, Nepal and Japan, Kenya, Mozambique, the Ukraine, Armenia and the Netherlands. The GTZ ecosan team do not wish to limit the projects described simply to GTZ projects and would like to offer all institutions and organisations, groups and individuals the opportunity to present their project in this form.

We would welcome comments and suggestions for improvement for the new drafts. Please send us these before the end of September 2007.

Furthermore a form has been made available on the GTZ web site that can be completed by those interested for a new data sheet.

**!!! Download** the NEW project data sheets and the form for your own projects:

### **Newly published project data sheets:**

021 ecosan Concept at Navsarjan Vocational Training Institute "DSK", Gujarat, India [\[New\]](#)  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-021-india-navsarjan-dsk-institute-2007.pdf>

This ecosan project in the Navsarjan vocational training institute for up to 240 students comprises a sanitation unit with pour-flush toilets connected to a biogas plant, a urinal centre for urine collection, UDDTs as emergency toilets and simple biological systems for greywater treatment and reuse.

022 Urine-Diversion Dehydration Toilet Centres at Navsarjan Boarding Schools, Gujarat, India [\[New\]](#)  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-022-india-navsarjan-schools-2007.pdf>

Another project from the Navsarjan Trust, planned by seecon and GTZ and supported by SDC is the sanitation project for three primary schools in Gujarat, India. 3-hole UDDTs and urinals allow a separate collection, appropriate treatment and a reuse of faeces and urine as soil amendment or as fertilizer while greywater is reused in irrigation after a filtering process.

023 ACTS Eco-friendly Public Toilet Centre, Bangalore, India [\[New\]](#)  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-023-india-bangalore-public-toilet-2007.pdf>

The public toilet centre for up to 600 users per day in Bangalore, India, was constructed in 2000 and upgraded in July 2005. Faeces are collected separately from urine, treated via anaerobic digestion and reused as soil amendment while urine is stored before use as fertilizer for banana plantations.

024 Dry urine diverting school toilets, Gozhuli, Ukraine [\[New\]](#)  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-024-school-toilets-ukraine-2007.pdf>

In 2004 a pilot school sanitation project started for improving the bad sanitary situation for 160 pupils in rural Ukraine. The project was planned by TUHH, executed by WECF and MAMA-86 and supported by MATRA. Three UDDTs and three waterless urinals were installed for separate collection, treatment and reuse in agriculture of the excreta flow streams.

025 Dry urine diverting school toilets, Hayanist, Armenia [\[New\]](#)  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-025-school-toilets-armenia-2007.pdf>

A similar project was implemented at the school of Hayanist in Armenia where in 2006 a school building for 350 pupils and 26 staff members was equipped with seven urine diverting toilets and three waterless urinals. Faeces and urine are reused after storage and appropriate treatment in agriculture.

026 Waterless sanitation in UNESCO-IHE building, Delft, The Netherlands [\[New\]](#)  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-026-unesco-ihe-building-netherlands-2007.pdf>

The UNESCO-IHE Institute for Water Education, Department of Urban Water and Sanitation, implemented in 2006 this awareness raising and demonstration project in the UNESCO-IHE building in Delft, Netherlands. Urine is collected in eleven waterless urinals and in one urine-separation toilet but until the start of a research project discharged to the sewer while faeces are disposed off with the solid waste.

027 Urine diversion toilet programme in a rural resettlement area, Sofala, Mozambique [New]  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-027-rural-uddt-programme-mozambique-2006.pdf>

This rural upgrading project in Mozambique was realised in 2001 by the Department for Water and Sanitation under support of the Austrian Development Cooperation. It includes 245 domestic ecosan latrines, toilets for 5 public schools and further 12 public latrines where faeces are stored and dried before reuse in agriculture and the urine-greywater-mixture is directly used as fertilizer.

028 Private urine diversion dehydration toilets in peri-urban areas, Kathmandu Valley, Nepal [New]  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-028-private-uddt-kathmandu-nepal-2006.pdf>

The construction of presently 200 ecosan toilets in Kathmandu Valley, Nepal, started in 2003 under supervision of the Environment and Public Health Organisation and supported by UN-HABITAT and WaterAid Nepal. Double vault urine diversion toilets are applied for flow stream separation and appropriate treatment and reuse in agriculture.

029 Compost and biogas plants for small scale farmers, Kenya [New]  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-029-small-scale-compost-biogas-kenya-2006.pdf>

GTZ and the Kenyan Ministry of Agriculture support in a joined rural upgrading project three entrepreneurs which offer services for construction and operation of biogas plants. Project components include fermentation of bio waste and excreta for fertilizer production and biogas use for cooking and lighting, alternatively composting for bio waste and a planned greywater management.

030 Automated composting toilet system at Asahiyama Zoo, Asahukawa city, Japan [New]  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-030-automated-compost-toilet-asahiyama-zoo-2006.pdf>

Since 1997, 31 mechanically stirred, ventilated and heated composting toilets have been installed at Asahiyama Zoo in Japan by Seiwa Denko Co., Ltd. The zoo which receives up to 3 million visitors per year has both portable and permanent toilets and compost is reused as a soil conditioner in agriculture.

031 Improved traditional Ladakhi composting toilet, Leh, India [New]  
<http://www.gtz.de/de/dokumente/en-ecosan-pds-031-improved-traditional-toilets-ladakh-india-2006.pdf>

This already quite old ecosan demonstration project from 1986 for an improved traditional Ladakhi composting toilet in Leh, India, was planned and executed by LEDEG. An Ecology Centre guest house used by ca. 100 persons/day was supplied with a traditional composting toilet for utilisation of compost as fertilizer on crops.

**Or direct from the GTZ ecosan Homepage under:**

<http://www.gtz.de/en/themen/umwelt-infrastruktur/wasser/9399.htm>

**Forms to submit your own project contribution:**

<http://www.gtz.de/de/dokumente/en-ecosan-project-data-sheet-template-2005.doc>

**!!! Please send all contributions to the project data sheet series to [ecosan@gtz.de](mailto:ecosan@gtz.de)**

### Changes in the gtz ecosan team

We are pleased to welcome the following new interns and employees to the gtz ecosan team:

- **Soeren Rued** completed a bachelor in Environmental and Resource Management with a focus on wastewater management in Cottbus, Germany, with an overseas semester in Brazil and Mexico. From November 2006 to May 2007 he worked as an intern in knowledge management with the GTZ team in Eschborn. From June 2007 Sören is a junior expert in the ecosan team and along with knowledge management will supervise projects in Latin America.
- **Arne Panesar** studied biology in Darmstadt, Delhi and Freiburg and wrote his doctoral thesis in the framework of a water quality monitoring project in the Himalayas. Since 1995 he has been involved in promoting ecological sanitation concepts as a member of the Freiburg water working group, in the NGO-umbrella organisation "Bundesverband Bürgerinitiativen Umweltschutz". In this capacity he was a member of the advisory board of the GTZ ecosan programme from 2002 to 2007. After contributing several years as a freelance consultant he became a member of the ecosan team in July. Among his activities are the preparation of the newsletter, maintenance of the web-site and supervising projects in China and the Philippines.



- **Gudipudi Venkata Ramana** has a bachelor degree in town planning from the Jawaharlal Nehru Technological University / Department of urban and regional planning, Hyderabad, India, and is currently doing his Masters degree in urban management at the Technical University Berlin. From May 2003 to June 2006 he worked as a part-time assistant town planner at the Municipal Corporation of Vishakhapatnam, India. He will work as an intern at the ecosan programme in Eschborn from 1<sup>st</sup> of August 2007 to 31<sup>st</sup> of January 2008.
- **Juergen Eichholz** studies water resources and soil management at the University of Lueneburg (Suderburg Campus). During his practical semester he worked at a wastewater treatment plant in Bremen-Seehausen and spent a 4 month internship with the Water Resources Management Authority in Embu, Kenya. From June to November 2007 he will be working as an intern with the ecosan programme in Eschborn.

The gtz-ecosan team is **looking for two more junior experts**. For more information check the "jobs" section of this newsletter.

### News from Eawag-Sandec

### Sustainable excreta and wastewater management contributes to cities' economic development

The current "Sandec News" publication gives information on current Sandec activities and research outcomes. Sites have been selected for testing the Household-Centred Environmental Sanitation (HCES) approach: Two sites were identified in Costa Rica (Central America), one site in Burkina Faso (West Africa), two sites in Kenya and Tanzania (East Africa), and one site in Laos (South-East Asia). Furthermore the article "Excreta and wastewater management is contributing to cities' economic development" calls for a paradigm shift towards reuse oriented approaches and reports on the Sandec/Eawag research programme "Excreta and Wastewater Management" (EWM) which places its focus on creating an enabling framework for sustainable service provision to users of on-site sanitation facilities.

**!!! Download:** EAWAG: Sandec News, No. 8, June 2007, 20 pages

[http://www.eawag.ch/organisation/abteilungen/sandec/publikationen/publications\\_sandec/general\\_sandec\\_publications/sandec\\_news\\_8](http://www.eawag.ch/organisation/abteilungen/sandec/publikationen/publications_sandec/general_sandec_publications/sandec_news_8)

### News - general

### Short report from the 3<sup>rd</sup> Meeting of the "Sustainable Sanitation Alliance" (SuSanA) 11<sup>th</sup> – 12<sup>th</sup> August 2007 in Stockholm

Just one month after the official declaration of the "UN International Year of Sanitation 2008" (IYS2008), at the UN General Assembly in December 2006, a number of organisations promoting sustainable sanitation systems met. At this meeting a network and working platform, the "Sustainable Sanitation Alliance" (SuSanA) was founded and a roadmap drawn up of how the alliance aims to promote sustainable sanitation during the IYS. Among other actions, several working groups were formed to work on particular questions (for example sustainable sanitation in cities, sustainable sanitation in emergency situations or sustainable sanitation and food security).

At the third SuSanA coordination meeting from the 11<sup>th</sup> – 12<sup>th</sup> August 2007 in Stockholm were more than 80 participants from more than 50 organisations who discussed the results so far from the working groups, financing initiatives for sustainable sanitation projects, an information leaflet and the next steps to be taken.

It was discussed for example how the SuSanA network could participate in the 2<sup>nd</sup> meeting of the UN Organisation for the preparation of the IYS 2008, which also took place in Stockholm at the World Water Week on the 15<sup>th</sup> of August.

A comprehensive results protocol for the 3<sup>rd</sup> SuSanA meeting will be available in September and can be obtained from the addresses below.

The 4<sup>th</sup> SuSanA meeting takes place on the 3<sup>rd</sup> and 4<sup>th</sup> November 2007 in Delhi (India), directly after the World Toilet Summit.

**!!! Contact:** [Info@sustainable-sanitation-alliance.org](mailto:Info@sustainable-sanitation-alliance.org)

### !!! Downloads:

Short info sheet on the goals of SuSanA (DRAFT):

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-susana-short-statement-2007.pdf>

Protocol from the 2<sup>nd</sup> SuSanA meeting:

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-minutes-iys-2nd-susana-meeting-2007.pdf>

Updated "joint roadmap for the promotion of sustainable sanitation in the UN's International Year of Sanitation 2008":

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-susana-joint-road-map-iys-2008.pdf>

Agenda and selected presentations of the 3<sup>rd</sup> SuSanA Meeting

<http://www.gtz.de/de/dokumente/en-susana3rd-agenda-2007.pdf>

World Toilet Summit, Delhi <http://www.worldtoiletsummit2007.org>

### UN-objectives for the UN-international year of sanitation 2008 (IYS 2008)

The goals set by the United Nations for the UN – "International Year of Sanitation 2008" (IYS 2008) underline the importance of sanitation to ensure the achievement of all the MDGs. Among other aspects, emphasis will be put on the fact that an improvement in the sustainability of sanitation systems will have an impact on public health, and will lead to socially acceptable, technically and institutionally appropriate and source saving solutions. The list of goals can now be seen on the UN-Secretary General Advisory Board on Water and Sanitation (UNSGAB) web-site.

The first preparation meeting for the UN IYS 2008 took place on the 7<sup>th</sup> May 2007 in the UNICEF building in New York. His Royal Highness the Prince of Orange, the Chair of the UNSGAB, greeted the participants from different UN and international organisations working in sanitation. In the morning session, moderated by the vice-chair of the UNSGAB, Dr. Uschi Eid, a draft of the UN goals was discussed. In the following podium discussion, moderated by the Prince of Orange, representatives of governments, financing institutions and civil society presented their vision of how the IYS could become a "Year of real change". At the end of the meeting the "Chair's Summary" and the "Draft Objectives of IYS" were handed to the UN General Secretary, Mr. Ban Ki-Moon.

The second UN preparatory meeting took place on the 15<sup>th</sup> August at the World Water Week in Stockholm. The targets of the IYS were highlighted during this event and an overview of the planned UN activities was given.

Information material on this will be uploaded to the UN-DESA-website and the UN will also launch a website dedicated to the IYS. Also, activities by other organizations and networks regarding the IYS were presented. Among those, the SuSanA-network was introduced to the audience, as it is regarded as one of the important activists for the IYS.

!!! Contact: [IYS2008-c@unsgab.org](mailto:IYS2008-c@unsgab.org)

### !!! Information:

First preparatory meeting for the IYS2008 [http://www.unsgab.org/top\\_page.htm](http://www.unsgab.org/top_page.htm)

Chair's Summary [http://www.unsgab.org/IYS2008/May0707/chairs\\_sum.htm](http://www.unsgab.org/IYS2008/May0707/chairs_sum.htm)

Draft Objectives of IYS

[http://www.unsgab.org/IYS2008/May0707/draft\\_objectives.htm](http://www.unsgab.org/IYS2008/May0707/draft_objectives.htm)

### Small funds for ecosan research related to agriculture

People working with one of the 15 CGIAR Institute, with a Challenge Program (Water and Food, Sub-Saharan Africa Challenge Program, Global Horticulture Initiative), with the "ICIPE" or the "AVRDC - The World Vegetable Centre" and which have a German research partner, can apply for extra financing up to 60 000 Euro for agricultural research projects with the BMZ. These funds can also be used to support ecosan projects that have a strong link to agriculture.

A brochure with detailed information on this support programme is available from the link below:

**!!! Download:**

<http://www.gtz.de/de/dokumente/en-beaf-small-grant-guidelines-2007-7.pdf>

**!!! Information:**

<http://www.cgiar.org/>; <http://www.waterandfood.org/>  
<http://www.avrdc.org/>; <http://www.icipe.org/>

### Complete reuse of waste from settlements by 2020

A complete reuse of waste from settlements by 2020 is the declared goal of the German government. This reuse should however not be at any price. Importantly in this regard the aim is "to achieve as complete a reuse as possible, whilst ensuring a high-quality and efficient use of the material and energy contained in the wastes, and this with as little effort and as small a cost as possible".

"Wastewater" of course does not appear in the government declaration as waste from settlements. However this may prove to present a huge opportunity for ecosan: to use the advances in sustainable solid waste management as showing the way for closed-loop, sustainable wastewater management in Germany.

**!!! Information:** <http://dip.bundestag.de/btd/16/043/1604350.pdf>

## Jobs

### CIM Vacancies

The CIM (Centre for International Migration and development) is a cooperation project of the gtz and the German Federal Employment Services (BA). The programme for integrated experts offers an additional remuneration to qualified European specialists signing a contract with local institutions in developing countries. Applicants must have German or European nationality and should have several years of professional experience in the respective field of specialisation (except for junior positions). They should speak German fluently and not live permanently outside of the EU.

#### Uganda: Expert in water management - Kampala

The Water Development Agency in Uganda is the leading governmental agency in the field of water and sanitation, within the Ministry of Water, Lands and Environment (MWE) and is responsible for water supply in small and medium sized cities. Some of the current challenges facing the Ugandan water sector include: improving institutional and legal frameworks, increasing economic and investment efficiency and improving the cooperation of small water systems with the private sector. The position includes responsibility for the analysis for town specific developments needs and support for the water authorities.

Contract duration: 2 years

Reference number: 60073376

**!!! Job description:**

<http://www.cimonline.de/de/bewerber/199.asp?region=Afrika+s%FCdlich+der+Sahara&anzeige=60073376>

#### India: Advisor for decentralised wastewater & sanitation systems - Chennai

The Auroville Centre for Scientific Research (CSR) is an internationally recognised and active NGO in India. CSR is engaged in promoting environmentally friendly development in the areas of regenerative energy (wind, sun, biomass), appropriate building technology, water and sanitation, and in the transfer of these technologies through training programmes. As a result of great demand CSR has established a department for wastewater and sanitation. Your tasks in this position include providing technical advice for different wastewater and sanitation options, the dissemination of information and the transfer of know-how for decentralised urban wastewater systems and concepts.



Contract duration: 2 years; Reference number: 60074801

**!!! Job description:**

<http://www.cimonline.de/de/bewerber/199.asp?region=Asien&anzeige=60074801>

**Egypt: Engineer with a focus on wastewater management - Cairo**

The Holding Company for Water and Wastewater (HCWW) is responsible on a national level for the operation and management of the water supply and wastewater services infrastructure.

One of your tasks is to contribute to the transformation of regional suppliers into economically independent daughter companies. Additional tasks include supporting and advising the technical department of HCWW with regard to wastewater treatment.

Contract duration: 2 years; Reference number: 60074585

**!!! Job description:**

<http://www.cimonline.de/de/bewerber/101.asp?fachgebiet=Wasserversorgung%2C+Abwasser%2D+und+Abfallentsorgung&anzeige=60074585>

**Syria: Expert for wastewater and environmental questions – Aleppo**

As a result of the dramatic population increase and the increasing presence of new industries there are growing problems with the treatment of industrial and domestic wastewater in and around Aleppo. Your employer, the Chamber of Industry Aleppo, has been contracted to identify, develop and implement economically viable concepts and proposals for the treatment of industrial waste, particularly wastewater.

Your tasks include monitoring the change process in the "treating units", on the job training of local colleagues, providing support for demands concerning the treatment of solid waste and waste gases, and the development and implementation of treating plants for industrial wastewater and waste gases.

Contract duration: 2 years; Reference number: 60054353

**!!! Job description:**

<http://www.cimonline.de/de/bewerber/101.asp?fachgebiet=Wasserversorgung%2C+Abwasser%2D+und+Abfallentsorgung&anzeige=60054353>

**Tanzania: Adviser for the operation and supply, city administration - Zanzibar**

You will advise the wastewater and solid waste department of the Zanzibar Municipal Council (ZMC) in the areas of operation and maintenance. Your activities include supporting planning, organisation and management with respect to establishing a cost effective and feasible water supply system, wastewater management, drainage and sewerage for Zanzibar city.

Contract duration: 2 years; Reference number: 60077430

**!!! Job description:**

<http://www.cimonline.de/de/bewerber/101.asp?fachgebiet=Wasserversorgung%2C+Abwasser%2D+und+Abfallentsorgung&anzeige=60077430>

**Lebanon: Senior project team leader for the rehabilitation of the water supply and wastewater system – gtz**

The goal is to improve service provision in the water supply and wastewater sector in Lebanon.

You will advise the Ministry for Energy and Water in supporting the institutional and technical capacity to improve boundary conditions and processes.

**!!! Job description:**

[http://www.gtz.de/de/karriere/stellenmarkt/detail\\_fachgebiete.asp?fachgebiet=Umwelt+und+Infrastruktur&anzeige=60076476](http://www.gtz.de/de/karriere/stellenmarkt/detail_fachgebiete.asp?fachgebiet=Umwelt+und+Infrastruktur&anzeige=60076476)

**Egypt: Position in the project "Strategic support of the Water Ministry" – gtz**

The water supply and sanitation sector in Egypt has been subject to a highly dynamic process of reform over the last several years. The programme supports the Egyptian side in implementing its reform process.

**!!! Job description:**

[http://www.gtz.de/de/karriere/stellenmarkt/detail\\_regionen.asp?region=Maghreb+und+Naher+Osten&anzeige=60070328](http://www.gtz.de/de/karriere/stellenmarkt/detail_regionen.asp?region=Maghreb+und+Naher+Osten&anzeige=60070328)

**Afghanistan: Advisor in the coordination of the water sector – Kabul - gtz**

The drinking water supply and the sewage disposal of the population of Kabul, Heart and Kunduz shall be improved by reorganisation and strengthening of the system of water companies. You will work as consultant in the Ministry of Urban Development and Housing/MUDH.

**!!! Full job description (in German only):**

[http://www.gtz.de/de/karriere/stellenmarkt/detail\\_regionen.asp?region=Europa%2C+Kaukasus%2C+Zentralasien&anzeige=60070557](http://www.gtz.de/de/karriere/stellenmarkt/detail_regionen.asp?region=Europa%2C+Kaukasus%2C+Zentralasien&anzeige=60070557)

**Algeria: Junior position "Water management" – gtz**

The objective of the programme is to improve the competencies to control the integrated water management of the institutions in the water sector (Ministry of Water, regional institutions). You will assist the programme leader in consulting relevant institutions as well as in accompanying the whole process. Also you will assist in the conception and implementation of new regulatory mechanisms.

**!!! Job description:**

[http://www.gtz.de/de/karriere/juniorpositionen/detail\\_juniorpositionen.asp?gebiet=&anzeige=60070852](http://www.gtz.de/de/karriere/juniorpositionen/detail_juniorpositionen.asp?gebiet=&anzeige=60070852)

**Germany: Junior expert sectoral project "ecosan" – gtz**

The focus of this position is to support the sector project with regard to the "Sustainable Sanitation Alliance" (initiated as a result of the UN International Year of Sanitation), and in the participation of the sectoral project in the working group "New sanitation systems" of the DWA Expert Committee, as well as with information and knowledge management and conceptual work. In addition to this is the representation of the project and the organisation and events and conferences and providing support to local ecosan projects and general administrative work.

**!!! Job description:**

[http://www.gtz.de/de/karriere/stellenmarkt/detail\\_fachgebiete.asp?fachgebiet=Umwelt+und+Infrastruktur&anzeige=60061003](http://www.gtz.de/de/karriere/stellenmarkt/detail_fachgebiete.asp?fachgebiet=Umwelt+und+Infrastruktur&anzeige=60061003)

**Germany: Senior expert planner in sanitation – gtz**

You will be responsible for the further development of the sanitation portfolio and particularly the mainstreaming of sanitation in existing and planned GTZ projects. You will thus be supporting our projects through your expert advice and will assume important functions and responsibility in representing German development cooperation in the sanitation sector. In addition to this your tasks will also include product and project management and knowledge management.

**!!! Job description:**

[http://www.gtz.de/de/karriere/stellenmarkt/detail\\_fachgebiete.asp?fachgebiet=Umwelt+und+Infrastruktur&anzeige=60077652](http://www.gtz.de/de/karriere/stellenmarkt/detail_fachgebiete.asp?fachgebiet=Umwelt+und+Infrastruktur&anzeige=60077652)

## WatSan and environmental health experts in emergency response

In order to strengthen its capacities for international environmental health response to emergencies, the World Health Organization, with support and in partnership with the International Water Association (IWA), is seeking expressions of interest from suitable expert candidates who will pre-qualify for a Roster of Environmental Health Experts for deployment into crises and disaster situations. WHO is seeking candidates with a degree in engineering, public health, environmental health or related field, with a minimum of five years' experience in the field of watsan and/or environmental health. Candidates will be expected to work in difficult disaster and emergency situations as part of an international humanitarian system with the main aim to provide technical guidance and support in the rehabilitation of damaged or destroyed water and sanitation systems and/or other environmental health related services. Candidates should apply to the IWA London office for further information and details relating to the application process.

!!!! Contact: [em-water@iwahq.org.uk](mailto:em-water@iwahq.org.uk)

## News from ecosan projects ...

### ... German cooperation

## Ethiopia Use of urine diverting systems and application of urine as a fertiliser

In the framework of the project "Introduction of ecological sanitation for large scale housing programs in Ethiopia" initial experience with urine diverting dry toilets as demonstration units has been made on the cities of Sodo Wolayita and Arba Minch in the south of Ethiopia.

Along with interventions in households wishing to exchange their flush toilets for waterless toilets due to an unreliable water supply, the toilets are also being used in an agricultural college and on a large building site. The squatting toilets are made of fibre glass reinforced plastic and are produced in Addis Abeba.

The resonance with users has so far been positive. Whilst in Sodo Wolayita the main motivation to use dry toilets has been the unreliable water supply, in Arba Minch they offer an excellent alternative to pit latrines, prone to both flooding and collapse.

The use of the toilet in areas with a large number of varying users requires that somebody is responsible to take care of cleaning and correctly maintaining the toilet. The construction company and offices using the toilets at a large building construction site are however ready to pay somebody to do this.

The urine collected is stored and then used in agricultural tests and demonstrations at the University of Arba Minch and the Sodo Agricultural College. Farmers are also using the urine to fertilise their cereal fields. The faeces are being composted separately. Despite the fears of many officials in Ethiopia, quite a few farmers already have traditional experience using human faeces in agricultural production.

The first toilet system in homes and apartments is planned for the next construction phase in autumn 2007 in the Wolayta region. In comparison to conventional toilet systems and septic tanks the project has considerable investment cost advantages.

The project is being carried out by the GTZ and the project partner OtterWasser GmbH, the Technical University Hamburg-Harburg and the planning group Prof. Krusche (Town planning TU Braunschweig), and is financed as a public-private partnership.

!!! Contact: Franziska Meinzinger: [f.meinzinger@tuhh.de](mailto:f.meinzinger@tuhh.de)  
Martin Oldenburg: [oldenburg@otterwasser.de](mailto:oldenburg@otterwasser.de)

!!! Information: [http://www.otterwasser.de/german/konzepte/beschreibung\\_ppp.pdf](http://www.otterwasser.de/german/konzepte/beschreibung_ppp.pdf)

### !!! Download:

Picture of the demonstration toilet at the Agricultural College in Sodo Wolayta

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-urin-diverting-demotoilet-ethiopia-2007.pdf>

### Germany Dairy wastewater as a resource

From the 2 500 m<sup>3</sup> daily of highly organically charged wastewater from the HUMANA dairy in Altentreptow (Mecklenburg-Vorpommern), valuable resources are being recovered since September 2006 by Remondis Aqua GmbH & Co. KG. Using anaerobic digestion valuable sludge can be obtained for agriculture and the biogas collected is used to produce electricity. The electricity fed into the grid alone is worth 400 000 Euro per year. The specific electricity demand of the wastewater treatment is reduced from 0.7 to 0.5 kWh/kg COD by using the anaerobic step before treatment. From an ecosan perspective it is particularly interesting to note that in this large scale pilot plant (4 m<sup>3</sup> per day of sludge) experience is being gained on the use of magnesium ammonium phosphate precipitation (MAP).

!!! **Contact:** Dr. Lars Meierling, Remondis Aqua GmbH & Co. KG, Tel +49-(0)2306-106546

!!! **Information:** [http://www.remondis.de/presse/pr\\_textdetail.php?id=167&h=ar&du=2006](http://www.remondis.de/presse/pr_textdetail.php?id=167&h=ar&du=2006)

[Source: „entsorga-magazin“, Nr 3-4, 2007, <http://www.entsorga-magazin.de>]

### The Philippines Charcoal and ecosan

The Kinaadman Research Centre of Xavier University in Cagayan de Oro, Philippines, finances research on “The Effect of Bio-Char Soil Amendments and Urine Application on Yield and Quality Parameters of Sweet Corn (*Zea mays* var. *rugosa*), Eggplant (*Solanum melongena*) and Bitter Gourd (*Momordica charantia*)”, conducted by the PeriUrban Vegetable Project (PUVeP). The study started in June 2007, and will investigate how a combination of bio-char soil amendments and urine application will affect the yield and quality parameters of different vegetables. Bio-char can be produced at home pretty easily and may then be used to fix nutrients and improve soil quality in tropical soils.

!!! **Information:** <http://puvep.xu.edu.ph/index.php>

on bio-char production: <http://bioenergylists.org/en/allafricabananachar>

!!! **Contact:** [puvep@xu.edu.ph](mailto:puvep@xu.edu.ph)

### The Philippines ecosan-training of trainers - course for NGOs

The DILG-GTZ Water & Sanitation Program conducted a 3-day training on ecological sanitation for local NGO's from the Visayas and Mindanao this April 24 to 26, 2007. The idea of a special training for NGO's was prompted by the requests of several local NGOs that had attended short presentations on ecosan and planned to integrate ecological sanitation into their programs. The 35 participants came from Oriental Negros, Bohol, Cebu and Misamis Oriental. Several NGOs have already started to put into practice, what they learned in the training. All presentations from the workshop are now available on-line.

!!! **Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/cb/en-ecosan-workshop-Philippines-2007.pdf>

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-ngo-training-philippines-2007.pdf>

!!! **Contact:** [Ulrike.Lipkow@gtz.de](mailto:Ulrike.Lipkow@gtz.de); [Claudia.Woelk@gtz.de](mailto:Claudia.Woelk@gtz.de)

### India Course material for the ecosan training programme “Capacity Building in India 2007-2009” now online

A series of ecosan training courses have been developed and carried out in the framework of the public-private-partnership “Capacity Building in India 2007-2009” between the “ecosan service foundation” (esf), gtz-ecosan and SEECON (Switzerland). The first group of 25 participants completed a two week course in April 2007 and then began work on their own ecosan projects. These were then presented and discussed in the third course week in June 2007. The next training course will begin shortly. More details can be found in the training course section of this newsletter.

The course intends to increase ecosan capacity on an international scale, not just in India. Therefore all course material is freely available, in accordance with the open source concept for capacity building and training. You too can use the course for your ecosan projects and adjust them to the national context of your work. We would be glad to help you in the further development of the course. Selected course material is now available on-line.

!!! Information: <http://www.ecosanservices.org/>

!!! Downloads:

<http://www2.gtz.de/dokumente/oe44/ecosan/cb/en-ecosan-workshop-india-2007.pdf>  
<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-ecosan-training-courses-india-2007.pdf>  
<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-ecosan-training-course-plan-india-2007.pdf>

!!! Contact: [johannes.heeb@seecon.ch](mailto:johannes.heeb@seecon.ch), [christine.werner@gtz.de](mailto:christine.werner@gtz.de)

### India School-children win first prize in Science Fair with UDDT-model

Children from Navsarjan Primary School in Raika, Gujarat, India, have won the first prize in the Ahmedabad School Science Fair with their model of the school's Urine Diversion Dehydration Toilet (UDDT). The urine and greywater are used in the school garden as fertilizer and gardening water, the dried faecal matter is used as soil conditioner. More information and illustrative pictures from the project are available for download as presentation, and as gtz-ecosan project data sheet.

!!! Downloads:

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-ecosan-school-prize-india-2007.pdf>  
<http://www.gtz.de/de/dokumente/ecosan-pds-022-india-navsarjan-schools-2007.pdf>  
<http://www.gtz.de/en/themen/umwelt-infrastruktur/wasser/9399.htm>

!!! Contact: Mr. Sanjiv Parmar [sanjiv272005@yahoo.com](mailto:sanjiv272005@yahoo.com)

### Uganda DED ecosan project started in 5 small towns

The German development service (DED) works in Uganda in a joint project implementation with GTZ, KFW and CIM in the programme Reform of the Urban Water Sector (RUWAS). The DED itself is working on local, urban level in 5 small towns of east and northern Uganda to advise and improve the management and planning of the water and sanitation systems, and to jointly elaborate with the town council the strategies for wastewater, waste, and storm water management.

In July 2007 a programme on ecological sanitation has started to identify sustainable solutions for onsite sanitation. The ecosan concept along with a demonstration facility will be introduced to the cities of Arua, Lira, Soroti, Luwero and Busia. The programme includes extensive water, sanitation and hygiene promotion, as well as awareness raising for reuse of nutrients with peer educators for the poverty stricken population, and focuses on schools.

!!! Information: <http://uganda.ded.de/>

!!! Contact: [ina.jurqa@ded.or.ug](mailto:ina.jurqa@ded.or.ug)

### Venezuela Sustainable wastewater concept for a spontaneous settlement

At the Harbour City University of Hamburg (HCU) a doctoral thesis is currently being prepared in cooperation with the University of Hanover that addresses the problem of wastewater in spontaneous settlements. The particularity of spontaneous settlements is that the wastewater system is generally built successively after the settlement has been established.



## Venezuela Sustainable wastewater concept for a spontaneous

It is currently being analysed in what way ecosan concepts present a sustainable alternative and in which projects they can be sensibly implemented. The work concentrates on a concrete area in Caracas, Venezuela in which 80 000 people live. The thesis will be completed within the next year.

An overview of the theme, the question being addressed and the goals of the work, as well as a presentation on spontaneous settlements in Caracas from the presentation series "Sustainable infrastructure planning in different geographical contexts" from the town planning department of the HCU are currently available.

### !!! Downloads:

#### Overview of the work:

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/de-ecosan-caracasslums-venezuela-p-2007.pdf>

#### Presentation: Wastewater treatment in spontaneous settlements

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/de-ecosan-caracasslums-venezuela-2007.pdf>

!!! Contact: Nicole Drücker, HCU Hamburg [nicole.druecker@hcu-hamburg.de](mailto:nicole.druecker@hcu-hamburg.de)

## News from ecosan projects

- other cooperation

## Mongolia UDDTs at tourist camp Khovsgol Inn in Khatgal

Two UDD-Toilets were constructed at the tourist camp "Khovsgol Inn" in Khatgal, Mongolia, with locally available materials - except for the pedestals which were imported from South Africa. The approach includes a single vault with room to hold 2-3 faeces buckets which can be removed easily, instead of building multiple vaults and moving the pedestal periodically from one vault to the other. A set of pictures illustrates the construction process.

!!! Download: (pictures from the construction phase)

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-uddt-touristcamp-khatgal-mongolia-2007.pdf>

!!! Contact: Kent Madin: [rett139@yahoo.com](mailto:rett139@yahoo.com)

## India Total Sanitation Campaign in Mysore District, Karnataka

The "Mysore - Total Sanitation Campaign" launched by the Government of Karnataka will cover 1 230 villages. Mosaralla is one village in the project area where an ecosan pilot and demonstration project has been undertaken. Here all households are now completely equipped with Urine Diversion Dehydration Toilets (UDDTs) and people are using ecosan products in their gardens. Beside this UDD toilet centres were constructed at schools in Mosaralla.

According to the Project Coordinator of the Water and Sanitation Cell in the Mysore Zilla Panchayat, the district Mysore had also taken up an eco sanitation programme in schools in association with UNICEF which entailed recycling human waste and converting it into manure. Three schools in Krishnapura, Mudlukoppal, and Kempannahosur had been selected for the implementation of the project. Based on the feedback, the concept of eco-sanitation would be expanded to other areas, he said. The Zilla Panchayat will launch the programme at Viyamballi and Marthahallihundi with assistance from MYRADA. The cost of the special toilet was Rs. 11,000 (approx. 200 Euro) of which UNICEF would give Rs. 5,000 (approx. 90 Euro) and MYRADA had agreed to give Rs. 2,500 (approx. 45 Euro).

The Government would spend Rs 110 Mio (approx 2 Mio Euro) on the construction of community and individual toilets in the whole district. School and Anganwadi centres would also be covered in this region and the ecosan approach is expected to be an important part of the campaign.

!!! Information: <http://www.hindu.com/2006/12/17/stories/2006121711070300.htm>

!!! Download: Some photos of ecosan projects in Mysore Districts, Karnataka

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-sanitation-campaign-mysore-project-india-2007.pdf>

## India Toilet beauty contest

On 14 July 2007 a beauty contest, jointly organised by Friends in Need, Society for Community Organisation and Peoples Education (SCOPE), Tiruchi and the District Rural Development Agency, Nagapattinam, was held in the tsunami-hit village Kameshwaram. About 100 ecosan toilets participated in the contest. Prizes were awarded based on criteria such as usage of ecosan by-products and a green environment by raising gardens. Ecosan was also a topic during a conference on technology innovation and the MDGs, discussing ways of replicating easily affordable sanitation models, such as ecosan.

SCOPE, an NGO founded in 1986, is strongly involved in sanitation, hygiene and health themes and has specialised in ecosan in the last 4 years.

!!! Information: <http://www.scopetrichy.org/>  
<http://www.hindu.com/2007/07/15/stories/2007071550890200.htm>

## Indonesia ecosan course in Banda Aceh

An "Ecological Sanitation and Community Approach Training Workshop" was arranged by Handicap International / Atlas Logistique (Watsan Atlas) and Aceh Solidarity Forum (ASF) in Banda Aceh on 13th - 15th June 2007.

This activity was intended to:

- (1) share experience of Watsan Atlas and ASF on implementation of Integrated Watsan Project in Lamkruet, Lhoknga, Aceh Besar;
- (2) follow-up of a Household Sanitation Workshop which was held in Banda Aceh on February 2007 by Unicef/GTZ/Oxfam/ESP/BRR;
- (3) build local initiative and local commitment to implement ecosan concepts in Aceh in order to rehabilitate and reconstruct post-tsunami areas.

The materials used in this training workshop were mainly taken from the UNESCO-GTZ book and resource CD-ROM "Capacity building for ecological sanitation".

!!! Contact: [cecilelaborderie@hotmail.com](mailto:cecilelaborderie@hotmail.com)

!!! Download UNESCO/GTZ 2006 "capacity building for ecological sanitation" (5 MB):  
<http://www2.gtz.de/Dokumente/oe44/ecosan/en-ecosan-capacity-building-2006.pdf>

!!! Download: Link-list to the material collection:  
<http://www2.gtz.de/Dokumente/oe44/ecosan/cb/en-ecosan-capacity-building-material-2006.pdf>

## Rwanda Human faeces powers Rwandan prisons

Prison overpopulation in Rwanda has created a situation where the facilities have significantly increased energy needs. The overcrowding also leads to large amounts of human waste that the prisons cannot adequately process. Prior to the construction of a biogas facility at a prison situated atop a hill in south-western Rwanda, some human waste was being thrown down the hill, near natural bodies of water such as Lake Kivu. The prisoners are not put off by the idea of using the by-product of human waste to cook. The remaining waste is used as an odour-free fertilizer for the gardens at the prison. Implementing this technology in the prisons has reduced by 60 percent the annual wood-fuel costs which would otherwise reach near \$1 million.

!!! Information: <http://www.wired.com/news/planet/1,68127-0.html>

## Lebanon Grey water reuse in Tannoura

In Tannoura in Rasha Caza, Lebanon, most households reuse their water two to three times before discharging it in the cesspit. Since 2006, 30 houses in Tannoura benefit from the Greywater Treatment and Reuse project of the Middle East Centre for the Transfer of Appropriate Technology (MECTAT).

Each house was equipped with a 4 or 3 barrel treatment kit, in which anaerobic treatment of the collected grey water takes place during one or two days, and then is pumped into a drip irrigation network installed in the garden. The success of the Greywater project in Tannoura and the 9 other towns of Rashaya Caza in which the project is being implemented, encourages the government to adopt smaller grey water projects with results to be felt at the household and community level.

!!! Information: <http://www.mectat.com.lb/mectat/about/about.htm>  
<http://www.mectat.com.lb/metopics/Tannoura%20Web/tannoura.htm>

!!! Contact: [boghos@mectat.com.lb](mailto:boghos@mectat.com.lb)

### Technology update

#### EcocyclET: a Recirculating Wastewater Garden

Ecological Engineering Group Inc. features a filter, a collection tank, and an engineered lined garden bed, filled with specially chosen substrate and phreatophytes, such as willows, bamboo and certain vines for the treatment and reuse of household waste water.

!!! Information:

<http://www.ecological-engineering.com/DescrOfWastewaterGarden.pdf>  
<http://www.wixnet.ca/watersheds/test/whatwedo/wwg.html>

!!! Contact: [et@watersheds.ca](mailto:et@watersheds.ca)

### New on the Net

#### Biogas for Better Life – An African Initiative

On May 20-23, representatives of 37 countries, 27 of them African countries, met in Nairobi, Kenya to formally launch the Biogas for Better Life Initiative. The group discussed important aspects of developing and implementing national biogas programs including sanitation, gender integration, technology, costs, program structure and management, financing and subsidy structure, and marketing and communications. Some information can already be accessed via the initiative's website: a summary of key issues from the meeting and the draft/discussion papers distributed at the meeting. More material is will be posted soon.

This initiative was started by the Dutch government for developing biogas programmes in Africa, similar to the on-going, very successful biogas programmes in Nepal and other Asian countries.

Using a standardised biogas digester type, usually connected to a household waste water connection, the "Biogas for Africa" initiative is aimed at achieving three objectives: (1) providing renewable energy, (2) supplying sustainable ecological sanitation, and (3) ensuring sustainable fertiliser production.

!!! Information: <http://www.biogasafrica.org>

#### Information on "New Sanitation Systems" in Germany

The advice and information centre "Wastewater Decentral" is currently adding the section "New Sanitation Systems" to its web-site. The goal is to develop an expert network in Germany that can react to the increasing demand for information and advice concerning decentralised wastewater management.

!!! Information: <http://www.abwasser-dezentral.de>

#### Glossary and crossword puzzles for ecosan

As a teaching aid, Elisabeth von Muench (lecturer at UNESCO-IHE, Delft, the Netherlands) has set up a glossary with over 300 terms for sanitation and water (with a focus on ecosan, but also including terms related to conventional wastewater treatment). The glossary uses definitions from other people's glossaries, from Wikipedia and also the author's own defini-

tion - it is meant for the layperson and newcomer to ecosan (simple language, short descriptions). Many existing glossaries concentrate on conventional sanitation with few references to ecosan-relevant terms and this has been addressed in this new glossary.

This glossary is now available on-line (see link below), and comes as a help file (.chm format), which should run on most computers without any problems. The author plans to continually improve this glossary over time and welcomes any suggestions for improvements (e-mail: [e.vonmunch@unesco-ihe.org](mailto:e.vonmunch@unesco-ihe.org)). She is also contemplating turning it into a Wiki so that it can easily be modified by the whole ecosan community. This glossary is only a starting point and it is likely to grow and improve with time.

Based on the glossary, Elisabeth has also made some crossword puzzles (using the free software from <http://www.eclipsecrossword.com>) - one such crossword puzzle is available from the link below. It can be used as a fun teaching aid, for example for in online courses or in classroom teaching (e.g. as an ice breaker if students have to solve the crossword in small teams, for example).

**!!! Download glossary**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-water-sanitation-glossary.chm>

**!!! Download ecosan cross word**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-crossword-ecosan2.html>

**!!! Contact:** Elisabeth von Münch, [e.vonmunch@unesco-ihe.org](mailto:e.vonmunch@unesco-ihe.org)

### **CINARA, English Web Site**

Cinara has launched their English language website. Cinara is a research and development institute in water supply, environmental sanitation and water resources conservation, based at the Faculty of Engineering at Universidad del Valle in Cali, Colombia. On April 22 2005, Cinara launched the Spanish version of their website, with the support of the Resource Centre Development Programme of IRC.

**!!! Information:** <http://cinara.univalle.edu.co/english/>

### **IWA Global Development Solutions**

Sustainable sanitation is one of the focal points of the IWA Global Development Solutions programme, and comprises of the Sanitation 21 task force, the NETSSAF-consortium for sustainable sanitation in Africa, and the faecal sludge management symposium which focuses on policy and practice oriented solutions. These projects represent important stepping stones for the sustainable sanitation movement.

**!!! Information:**

[http://www.iwahq.org/templates/ld\\_templates/layout\\_633184.aspx?ObjectId=645440](http://www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=645440)

### **Publications**

#### **Biogas course material**

The project community of NawaRo-Bildung, with the support of the German Ministry of Education and Research, is currently developing teaching material for professional and further education and testing them in courses. The course material provides an overview of Biogas systems in three didactic models based on nine different thematic areas. The content of the course is relevant to agricultural businesses and is aimed primarily at farmers who would be interested in investing in a biogas digester. It is however also relevant to people who are interested in this topic and wish to become familiar with the complex interdependencies of these systems. The course does not have a sanitation focus, but could be integrated into ecosan projects with biogas components – although it is mainly aimed at German farmers and is currently only available in German.

**!!! To order:** <http://www.nawaro-bildung.de/index.php?id=113>

**!!! Contact:** [j.finkenzeller@nawaro-bildung.de](mailto:j.finkenzeller@nawaro-bildung.de)

## Publications

... on the web

### Comparative economic consideration – MSc Thesis

Zimmermann, G. (2006): Vergleichende Betrachtung der Effektivität und Effizienz von konventioneller Abwasserbehandlung (mehrstufige Kläranlage) gegenüber neuartigen, kreislauforientierten Sanitärsystemen an ausgewählten Beispielen in Syrien (Comparative consideration of the effectiveness and efficiency of conventional wastewater treatment compared to closed loop systems on the basis of chosen example in Syria) MSc Thesis at the Bauhaus Universität Weimar, in cooperation with the gtz-ecosan programme.

In this thesis costs for wastewater systems (investment, re-investment, operating costs) over a thirty year period were examined using a dynamic capital value calculation. The thesis shows that constructed wetlands and dry toilet with urine separation have considerable cost advantages over activated sludge processes.

!!! Download:

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/de-thesis-oekonomische-betrachtung-syrien-2006.pdf>

### WHO Guidelines for the safe use of wastewater, excreta and greywater - Volume 4 available for download

The fourth volume of the new WHO Guidelines for the safe use of wastewater, excreta and greywater is now available on-line. This completes the on-line publication of the four volume series of this 3<sup>rd</sup> edition of the WHO guidelines, which represent an important further development of what was previously static standards and norms. The four volumes address different specific use areas and target groups. Ecosan systems and system components are thoroughly discussed and recommended as standard technology for many situations.

!!! Download:

[http://www.who.int/water\\_sanitation\\_health/wastewater/qsuww/en/index.html](http://www.who.int/water_sanitation_health/wastewater/qsuww/en/index.html)

### Report on sanitation approaches by Bill & Melinda Gates Foundation

Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene, Opportunities for Action, April 2007

The mapping and landscaping study carried out on behalf of the Bill and Melinda Gates Foundation by a consortium of Cranfield University, Aguaconsult, and IRC International Water and Sanitation Centre includes the ecosan approach (see page 47 of "The landscaping of Approaches") and regards it to be of high potential, especially for poor people with some land. One (common) short-coming of the report is, that it sometimes refers to ecosan as an equivalent to composting latrines only and does not describe it as a holistic approach to closed loop oriented sustainable sanitation, comprising a large range of different high- and low-cost technical options.

!!! Information: <http://www.irc.nl/page/35947>

!!! Download (in three parts):

<http://www.irc.nl/redirect/content/download/126186/336851/file/Main%20Report%20FINAL%20April%202007.pdf>

<http://www.irc.nl/redirect/content/download/126185/336848/file/Approaches%20Landscape%20FINAL%20April%202007.pdf>

<http://www.irc.nl/redirect/content/download/126184/336845/file/Technologies%20Landscape%20FINAL%20April%202007.pdf>

### Ecological sanitation in Lima, Peru

CENCA, WSP and PNUD: "Saneamiento Ecológico – Lecciones aprendidas en zonas periurbanas de Lima" ("Ecological Sanitation – Lessons learned from periurban zones of Lima"), Spanish, 34 pages

CENCA - Instituto de Desarrollo Urbano (Institute for urban development), the Water and Sanitation Programme for Latin America and the Caribbean (WSP-LAC) and the United Nations Development Programme (UNDP) published in October 2006 this essay on the lessons learned in ecological sanitation in the Peruvian capital.



The publication presents a short introduction to the ecological sanitation concept, summarizes the experiences of two pilot projects in Lima and expresses recommendations for facilitating dissemination of ecosan in the country.

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/es-saneamiento-egologico-cenca-lima-peru-2006.pdf>

### **Greywater management in unsewered areas of South-Africa**

Kirsty Carden, Neil Armitage, Kevin Winter, Owen Sichone & Ulrike Rivett (2007): Understanding the use and disposal of greywater in the non-sewered areas in South Africa. Report to the Water Research Commission SA, Report number 1524/01/07.

This study provides a general overview of the large variety of conditions that occur in the non-sewered settlements in South-Africa, and highlights the implications of certain settlement characteristics (specifically settlement density) on greywater management in these areas. To the authors, it is essential that there is systematic management of greywater in non-sewered settlements both in terms of reducing health risks by eliminating inappropriate disposal and surface ponding, and also to provide benefits in terms of greywater use initiatives. They see greywater reuse as one option of on-site disposal and recommend considering on-site disposal up to a greywater generation rate of 2500 l/ha day.

**!!! Download:**

<http://www.wrc.org.za/downloads/report%20lists/municipal%20wastewater.pdf>

### **Enhancing livelihoods through sanitation**

Borba, M.L.; Smet, J.E.M.; Sijbesma, C. (2007): Enhancing livelihoods through sanitation. IRC Thematic overview paper no. 19, Delft, The Netherlands, IRC International Water and Sanitation Centre, 63 p.

This paper outlines the complex links between sanitation, health, livelihoods and poverty, paying attention to different strands within communities, especially gender differences. The "Thematic overview paper" underlines that the safe disposal, management and re-use of human excreta play a key role in improving people's livelihoods. There is a virtuous circle as safe sanitation improves people's health and the environment, and this makes it possible for people to engage in productive activities, and further increases demand for better conditions in the local environment. Effective sanitation also has a direct impact on the creation of jobs, new markets and small scale enterprises. Case studies from Bangladesh, Malawi and Brazil, give practical examples of how a focus on sanitation can transform communities.

**!!! Information:** <http://www.irc.nl/page/36080>

**!!! Download:**

[http://www.irc.nl/redir/content/download/126399/338893/file/TOP19\\_SanLiv\\_07.pdf](http://www.irc.nl/redir/content/download/126399/338893/file/TOP19_SanLiv_07.pdf)

### **Selection of sustainable sanitation arrangements**

Mara, D.; Drangert, J.-O.; Nguyen V. A.; Tonderskid, A.; Gulyase, H; and K. Tonderskif (2007). Selection of sustainable sanitation arrangements. Water policy; vol. 9, no. 3; p. 305-318.

The paper includes a sanitation selection algorithm, which considers several available sanitation arrangements and is based on the principles of sustainable sanitation. It is especially designed for the poor and very poor rural and peri-urban areas in developing countries. According to Mara et al, the fundamental principles for sustainable sanitation are: human health, affordability, environmental sustainability and institutional appropriateness. Sanitation arrangements should not only comply with these principles but also take into account technical feasibility in the physical environment, socio-cultural preferences and socio-economic conditions (such as willingness and ability to pay).

The low-cost sanitation arrangements chosen for the algorithm are:

- On-site systems: Urine diversion dehydration toilet [misleadingly referred to as “ecosan-toilet” in this publication], biogas generator, ArborLoo, Sanplat latrine, ventilated improved pit (VIP) latrine, pour-flush (PF) toilet and septic tank system
- Off-site systems: Urine diversion flush toilet [misleadingly referred to as the only off-site “Ecosan system” in this publication], settled sewerage, and simplified sewerage

According to the authors, an important function of the algorithm is to invite discussion between all stakeholders on “true” basic costs of the systems, which depend on local capital and operation and maintenance costs, and on an assessment of institutional arrangements. Determining affordability remains difficult due to the lack of good data on comparative costs and an agreed costing methodology, the researchers conclude.

One short-coming of the paper is, that it sometimes refers to ecosan as an equivalent to specific technologies and does not describe it as a holistic approach to closed loop oriented sustainable sanitation.

!!! **Download:** <http://www.personal.leeds.ac.uk/~cen6ddm/pdf%27s%202006+/0705.pdf>

!!! **Contact:** [D.D.Mara@leeds.ac.uk](mailto:D.D.Mara@leeds.ac.uk)

## Trainings and courses

### India Register now for ecosan training course in September 2007

**Organisation:** Ecosan Services Foundation in collaboration with seecon int. and GTZ

The Ecosan Services Foundation (esf), with support from gtz-ecosan and SEECON International, offers a training course in ecological sanitation in India. The ecosan training course follows a participatory cross-institutional and interdisciplinary approach. Participants gain thorough theoretical and practical knowledge in the field of ecosan. The course consists of two one-week modules, which will enable course participants to plan and implement their own ecological sanitation projects, with partial funding possibilities for outstanding project ideas. Training includes lectures given by International ecosan experts, group works, role plays, case studies and a field trip to ecosan projects in India.

The first Ecosan Training Course was successfully conducted in March 2007 at Nashik, Maharashtra (INDIA). There were 18 participants from five Indian states and Bangladesh, from various sectors including NGO's, Government agencies, universities and private companies. The participants particularly appreciated the interactive learning methods, which helped them to have a broader approach, not only on technologies, but also on other aspects of sanitation, hygiene and health, on environmental and social issues and the reuse of ecosan products.

The next ecosan training course in India will be held from **3<sup>rd</sup> to 15<sup>th</sup> September 2007**. The courses will be offered at a subsidized price of Rs. 8000 (or 160 Euro). The fee covers full boarding, accommodation, field trips, all tuition costs as well as handouts and materials for the course. Discounts for university students are available.

!!! **For more Information:** <http://www.ecosanservices.org>

!!! **Contact:** [ecosanindia@gmail.com](mailto:ecosanindia@gmail.com)

### Netherlands Next UNESCO-IHE online ecosan course in September 2007

**Organisation:** UNESCO IHE

The subjects covered in this course are: introduction to ecosan, transfer and treatment of excreta and greywater, agricultural reuse, water demand management measures, rainwater harvesting and some non-technical aspects. The course is conducted in part-time mode, which may prove challenging for participants. The most important aspects of this online course are the (asynchronous) discussions amongst participants and the course coordinator or guest lecturers. Another aspect that makes the course special is to have co-

ordinator or guest lecturers. Another aspect that makes the course special is to have such a wide geographical spread of participants, their current roles and their past experience in ecosan, ranging from none to extensive, which can result in interesting discussions.

The next online ecosan course will run from **3 September to 21 December 2007**. To see what this online ecosan course looks like, visit <http://www.lms.ihe.nl> and use the login: ecosandemo and password: 1234.

**!!! Information:**

[http://www.unesco-ihe.org/education/short\\_courses/online\\_courses/ecological\\_sanitation](http://www.unesco-ihe.org/education/short_courses/online_courses/ecological_sanitation)

**!!! Download** (application form):

[http://www.unesco-ihe.org/education/prospective\\_students/application\\_forms](http://www.unesco-ihe.org/education/prospective_students/application_forms)

**!!! Contact:** [e.vonmunch@unesco-ihe.org](mailto:e.vonmunch@unesco-ihe.org)

**Finland**      **Internet course "Safe and sustainable sanitation"**  
**3<sup>rd</sup> September – 30<sup>th</sup> October 2007**

**Organiser:** Institute of Environmental Engineering and Biotechnology/Tampere University of Technology (TUT), Finland

Safe and sustainable sanitation (SSS) internet course is a distance learning course. The course will be using an A&O learning environment. The course is divided into 7 sections each lasting for a week. Each section consists of a video lecture and/or reading material and a weekly assignment. The course topics include technological, economic and social aspects, health etc. In addition, the participants are encouraged to post comments on the course topics at the discussion groups. The target group consists of advanced M.Sc students, Ph.D students and post docs from Finnish and international universities, EnSTe and its partner graduate schools, UNESCO etc. There is no course fee.

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-internetcourse-finland-2007.pdf>

**!!! Contact:** [tuula.tuhkanen@tut.fi](mailto:tuula.tuhkanen@tut.fi)

**Mexico:**      **2nd International ecosan course**  
**18 - 27 September, Tepoztlán**

**Organiser:** SARAR Transformación SC, Mexico, and SEI – EcoSanRes, Sweden

The "II Curso Internacional de Saneamiento Ecológico", is designed for participants from Latin America and gives a profound knowledge about alternative sanitation systems.

The main topics covered include ecosan systems, types of grey water irrigation, rain water harvesting, composting and reuse of urine in agriculture. The theory will be expanded upon during excursions and practical experience.

Language: Spanish

Costs of the course: 1,350 US\$ including course fee, board and lodging.

Sponsorship of a part of the costs is possible.

**!!! Information:** <http://www.sarar-t.org> or <http://www.sarar-t.org/II-CISE.pdf>

**!!! Contact:** [mailto:sarar@sarar-t.org](mailto:mailto:sarar@sarar-t.org)

**Events**

**New**

**Germany**      **2<sup>nd</sup> international water conference**  
**12<sup>th</sup> – 14<sup>th</sup> September 2007, Berlin**

**Organiser:** Berlin Senate Department for Economics, Technology and Women's Issues, BGZ Berlin International Cooperation Agency GmbH

Based on the results and the fruitful dialogue initiated at the 1st International Water Conference Berlin in October 2004, this conference assembles international water experts from different professional backgrounds, including technical experts on rainwater use and waste water management to renowned scholars for sustainable water management solutions, policy-makers and representatives of small and medium-sized companies dealing with water and sanitation management.

!!! **Information:** <http://www.iwc-berlin.de>

!!! **Contact:** [info@iwc-berlin.de](mailto:info@iwc-berlin.de)

**German**      **Advances in Biogas, Hohenheim**  
**18<sup>th</sup> – 21<sup>st</sup> September 2007, Hohenheim**

**Organiser:** IBBK, Universität Hohenheim, State office for agricultural mechanical and construction engineering, State Ministry for Nutrition and Rural Areas Baden-Württemberg, Ministry of the Economy Baden-Württemberg

This conference intends to inform participants on the different boundary conditions and the actual state of development and production processes in different regions around the world. Other themes such as development perspectives for rural areas, financing and marketing possibilities will also be discussed. Along with the presentations sessions, a company and poster exhibition and an excursion are planned.

!!! **Information:** <http://www.biogas-zentrum.de/ibbk>

!!! **Contact:** [info@biogas-zentrum.de](mailto:info@biogas-zentrum.de)

**Germany**      **International Symposium on Wastewater Recycling,**  
**10<sup>th</sup> – 12<sup>th</sup> October 2007, Braunschweig**

**Organiser:** Braunschweig Water Company GmbH, Wastewater Association Braunschweig, Technical University Braunschweig, Water Competence Centre Berlin

The following questions, among others, will be discussed: What resources in wastewater can be used sensibly? What possibilities are there to use this water and other resources in agriculture at low risk? How could wastewater technology of the future, with the goals of protecting water resources, protecting other resources and improving living conditions function?

!!! **Information:**

[http://www.kompetenz-wasser.de/fileadmin/user\\_upload/pdf/veranstaltungen/Symposium\\_SEBS\\_aktuell1.pdf](http://www.kompetenz-wasser.de/fileadmin/user_upload/pdf/veranstaltungen/Symposium_SEBS_aktuell1.pdf)

!!! **Contact:** [info@se-bs.de](mailto:info@se-bs.de)

**China**      **Symposium " healthy wetlands, healthy people "**  
**08<sup>th</sup> November 2007, Shaoxing**

**Organiser:** Wetland International, Waste (support)

!!! **Information:**

<http://www.wetlands.org/articlemenu.aspx?id=60f364c0-fd6b-437e-aa03-8be294cc6408>

!!! **Contact:** [susanne.boom@wetlands.org](mailto:susanne.boom@wetlands.org)

**China**      **Water China 2008**  
**04<sup>th</sup> – 07<sup>th</sup> March 2008, Guangzhou**

**Organiser:** China Foreign Trade Centre (Group)

Topics include equipment for water treatment, advice and engineering service provision, fresh water treatment and industrial water treatment.

**!!! Information:** <http://www.merebo.com/Water/>

**Malaysia**      **Asia water 2008**  
**01<sup>st</sup> – 03<sup>rd</sup> April 2008, Kuala Lumpur**

Asiawater Expo & Forum is a business-to-business trade show focusing on the water and wastewater industry where exhibitors include operators, regulators, technology suppliers and service providers.

**!!! Information:** <http://www.asiawater.org>

**U.K.**      **7<sup>th</sup> International Conference on Environmental Problems in Coastal Regions**  
**19<sup>th</sup> – 21<sup>st</sup> Mai 2008, New Forest**

**Organiser:** Wessex Institute of Technology, UK

The Coastal Environment Conference deals with problems related to monitoring, analysis and modelling of coastal regions, including sea, land and air phenomena. An important part of the meeting is the discussion of ecological and environmental problems and the issues of water quality.

**!!! Information:** <http://www.wessex.ac.uk/conferences/2008/coast08/>

**!!! Contact:** [rswinburn@wessex.ac.uk](mailto:rswinburn@wessex.ac.uk)

**The Netherlands: Call for abstracts: IWA Conference Sanitation Challenge**  
**19<sup>th</sup> - 21<sup>st</sup> May 2008, Wageningen**

**Organizers:** Wageningen University, IWA, Wetsus centre for sustainable water technology, LeAF

In the UN International Year of Sanitation an IWA conference is organized in Wageningen, the Netherlands to scientifically discuss new sanitation concepts and techniques, models of governance and experiences from all over the world. The conference deliberately aims to create a dialogue between civil, process, agricultural and environmental engineers; urban planners, sociologists, economists, and political scientists who are involved in international sanitation research and implementation. Furthermore, this conference tries to bridge the gap between sanitation research and demonstration in the 'North' and in the 'South'. Among others, the conference will be a platform to present the findings of the 'Decentralized Sanitation and Reuse' (DESAR) project performed in the Netherlands from 2001-2007, and those of a sanitation and urban infrastructure research project in East Africa (PROVIDE).

The themes of the conference are the following: (1) Innovation management in sanitation, (2) Socio-spatial embedding of innovative sanitation solutions, (3) Perspectives from the extreme ends of the chain: consumers and farmers, (4) New sanitation concepts, (5) Contemporary knowledge gaps.

You are encouraged to submit an abstract on sanitation issues that relate to the challenges described above.



**!!!Deadline for abstract submission: October 15<sup>th</sup>, 2007**

**!!!Deadline for early bird registration: 1<sup>st</sup> March, 2008**

**!!!Further information**

<http://www.sanitation-challenge.wur.nl>

<http://themas.stowa.nl/Themas/Projects.aspx?mID=7216&rID=1006&aID=1639>

<http://www.provideafrica.org>

**!!! Contact: [leaf@wur.nl](mailto:leaf@wur.nl)**

**Spain Environmental Economics 2008: 2<sup>nd</sup> International Conference on Environmental Economics and Investment Assessment**  
**28<sup>th</sup> – 30<sup>th</sup> May 2008, Cádiz**

**Organisers:** Wessex Institute of Technology, UK; University of Cádiz, Spain, The National Technical University of Athens, Greece

Conference topics include:

- cost benefits analysis
- natural resources management
- environmental performance
- economics of waste management
- social issues and environmental policies

**!!! Information: <http://www.wessex.ac.uk/economics2008rem1.html>**

**!!! Contact: [krobberts@wessex.ac.uk](mailto:krobberts@wessex.ac.uk)**

**Spain Sustainable Irrigation 2008: 2<sup>nd</sup> International Conference on Sustainable Irrigation Management, Technologies and Policies**  
**11<sup>th</sup> – 13<sup>th</sup> June 2008, Alicante**

**Organiser:** Wessex Institute of Technology (UK), University of Alicante (Spain)

The conference aims to attract researchers in academia and industry as well as professional practitioners and policy makers to review the state of the art from the scientific, technological, political and economic points of view. Its objective is also to discuss how to reach the sustainable management of irrigation resources in the future by applying modern computer simulation methods, advanced technologies and new technologies as well as analysing different policies and economic forecasting techniques.

**!!! Information: <http://www.wessex.ac.uk/conferences/2008/irrigation08/index.html>**

**!!! Contact: [krobberts@wessex.ac.uk](mailto:krobberts@wessex.ac.uk)**

**France 13<sup>th</sup> IWRA World Water Congress 2008**  
**01<sup>st</sup> – 04<sup>th</sup> September 2008, Montpellier**

**Organiser:** IWRA, Verseau Développement, Institut Languedocien de recherche sur l'Eau et l'Environnement (ILEE), ENJOY Montpellier

The objective of the 13<sup>th</sup> World Water Congress is to enhance the world's knowledge and raise global consciousness of the impact of global changes on water resources. The Congress will bring together wide-interest participation, exhibitions and scientific communications about our planet's water resources. This Congress will represent an important global meeting point for open dialogue between public and private partners, between users and decision makers and between developing, emerging and developed countries. In order to contribute to this global reflection and action, the Congress will organise numerous debates, presentations and exhibitions among key water stakeholders. -

!!! Information: <http://www.worldwatercongress2008.org>

!!! Contact: [wwc2008@msem.univ-montp2.fr](mailto:wwc2008@msem.univ-montp2.fr)

**Austria**      **IWA World Water Congress and Exhibition 2008**  
**07<sup>th</sup> – 12<sup>th</sup> September 2008, Vienna**

**Organiser:**      IWA, IAWD

The Vienna congress provides a rich and comprehensive means of accessing the leading edge of knowledge in the management of water. The programme includes three different mechanisms for the exchange of knowledge and experience: sessions involving the platform and poster presentations of scientific and technical papers, practice-oriented workshops and an industry forum.

!!! Information: <http://www.iwa2008vienna.org>

!!! Contact: [2008vienna@iwahq.org.uk](mailto:2008vienna@iwahq.org.uk)

**India**      **11<sup>th</sup> International Conference on Wetland Systems**  
**Technology for Water Pollution Control**  
**01<sup>st</sup> – 07<sup>th</sup> November 2008, Indore**

**Organiser:**      IWA, Vikram University IEMPS, ICWST

The conference will review and evaluate research findings and management practices on use of constructed and natural wetlands for water pollution control, and aimed at improving dynamic processes, planning, operation, performance and economics of wetland systems. Since this event will be taking place for the first time in growing India, efforts will be made to attract more participants from the region.

Proposed Themes are process dynamics, design criteria, investment costs, operation and maintenance costs, ancillary benefits, ecological services vis a vis conventional technologies, carbon trading, beautification in water scaping and aquatecture, roof gardens, flood plain construction, bio drainage, wildlife sanctuary in wetland, treatment performance of wetlands in water pollution control and case studies.

!!! Information: <http://www.wetland2008.org/SaveWater/>

!!! Contact: [sbillore@wetland2008.org](mailto:sbillore@wetland2008.org)

**Events Reminder**

**Portugal:**      **ECOSUD 2007**  
**05<sup>th</sup> – 07<sup>th</sup> September 2007, Coimbra**

**Organiser:**      Wessex Institute of Technology, University of Coimbra, Uni. of Siena

The aim of the conference is to encourage and facilitate the interdisciplinary communication between scientists, engineers and professionals working in ecological systems and sustainable development. Emphasis will be given to those areas that will most benefit from the application of scientific methods for sustainable development, including the conservation of natural systems around the world.

The Conference objectives have evolved over the years, seeking to integrate thermodynamics, ecology and economics into "ecodynamics".

!!! **Submissions deadline:** send abstracts as soon as possible

!!! Information: <http://www.wessex.ac.uk/conferences/2007/eco07/index.html>

!!! Contact: [zbluff@wessex.ac.uk](mailto:zbluff@wessex.ac.uk)

**France: New directions in urban water management**  
**12<sup>th</sup> – 14<sup>th</sup> September 2007, Paris**

**Organiser:** UNESCO-IHP

UNESCO's International Hydrological Programme is approaching the end of its Sixth Phase of IHP (2202-2007) and an end-of-phase Symposium related to Urban Water Management activities will be held on 12-14 September 2007 at UNESCO Headquarters, Paris.

This event will be an occasion for bringing together leading international urban water management experts to discuss new concepts, approaches and technologies for dealing with urban water problems. There will also be the opportunity to learn about IHP-VI urban water management projects results and outputs.

Symposium topics include: Processes and interactions in the urban water cycle, Integrated urban water system interactions: complementarities among urban water services, Urban water security, human health and disaster prevention, Socio-economic and institutional aspects in urban water management, Urban water education, training and technology transfer.

**!!! Download:** First announcement and call for abstracts/papers for the Symposium.  
<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/en-unesco-urban-water-management-flyer-2006.pdf>

**!!! Download:** UNESCO-GTZ Publication "Capacity Building for eco. San."  
<http://www.gtz.de/de/dokumente/en-ecosan-capacity-building-2006.pdf>

**!!! Contact:** [SymposiumUWM2007@unesco.org](mailto:SymposiumUWM2007@unesco.org)

**Australia: 11th World Congress on Anaerobic Digestion**  
**23<sup>rd</sup> – 27<sup>th</sup> September 2007, Brisbane**

**Organisation:** IWA, AWA, University of Queensland

The general theme of the congress is bio-energy for our future – renewable energy from waste. Topics include:

- Recovery of energy from waste materials, either as methane, hydrogen or directly as current in microbial fuel cells
- Anaerobic biodegradation of recalcitrant chemicals, e.g. in bioremediation
- Nutrient recovery issues related to anaerobic processes;
- instrumentation, control and automation of AD processes

**!!! Information:** <http://www.awmc.uq.edu.au/ad11/>

**!!! Contact:** [ad11@eventsolutions.com.au](mailto:ad11@eventsolutions.com.au)

**Germany: International Symposium 2007: Water Supply and Sanitation for All**  
**27<sup>th</sup> – 28<sup>th</sup> September 2007, Berching**

The proposed conference themes are:

- The conceptual and enabling framework
- From purification to recovery
- Central versus decentral: contradiction or complement?
- From discharge to reuse

**!!! Information:** <http://www.huber.de/hp1033/Symposium-2007.htm>

**!!! Contact:** [Susanne.Lindner@huber.de](mailto:Susanne.Lindner@huber.de)

**Italy: Sardinia Symposium 2007**  
**01<sup>st</sup> – 05<sup>th</sup> October 2007, Cagliari**

**Organiser:** International Waste Working Group (IWWG) and Environmental Sanitary Engineering Centre (CISA)

The symposium will focus on innovative aspects of Waste Management, presenting new technologies, describing the state of the art and related case studies, discussing the main controversial subjects, sharing experiences among different countries, valuating social and economical balances. The Symposium will include oral presentations, poster sessions, specialized sessions and specific Workshops. Before the start of the Symposium, training courses will be offered by IWWG under the supervision of international leading experts.

!!! Information: <http://www.sardiniasymposium.it/main.html>

!!! Contact: [info@sardiniasymposium.it](mailto:info@sardiniasymposium.it)

**Germany: Tropentag 2007**  
**09<sup>th</sup> – 11<sup>th</sup> October 2007, Witzenhausen**

**Organisation:** University of Kassel-Witzenhausen and Göttingen

This year's theme of the Tropentag is "Utilisation of diversity in land use systems: Sustainable and organic approaches to meet human needs".

!!! Information : <http://www.tropentag.de>

!!! Contact: [info@tropentag.de](mailto:info@tropentag.de)

**Belgium: 6<sup>th</sup> IWA specialty conference on wastewater reclamation & reuse for sustainability**  
**09<sup>th</sup> – 12<sup>th</sup> October 2007, Antwerp**

**Organisation:** International Water Association (IWA)

There will be three sessions dealing with a Rationale for sustainable water reuse, advances in water reclamation techniques, and Implementation and operation of water reuse schemes. Ecosan relevant topics may be:

- Economic benefits of water reuse (internalities or externalities)
- Sustainable cost recovery
- Health risks
- The role of decentralised water reuse systems
- Reclamation techniques for decentralised water reuse and more ...

!!! Information: <http://www.wrrs2007.org>

!!! Contact: [info@wrrs2007.org](mailto:info@wrrs2007.org)

**Australia: 2<sup>nd</sup> IWA-ASPIRE Asia-Pacific Regional Group Conference and Exhibition**  
**28<sup>th</sup> October – 01<sup>st</sup> November 2007, Perth**

**Organisation:** Australian Water Association (AWA) and International Water Association (IWA)

The conference will focus on the design, operation, maintenance and management of water and wastewater systems. Innovations in the field, case studies on safe and reliable systems for removal of nutrients, water reuse, and methods of better operation will also be discussed. There will be a specific emphasis on issues facing the Asia-Pacific Region. Ecosan-relevant topics are especially wastewater treatment and onsite and small scale systems.

**!!! Information:**

<http://www.awa.asn.au/Content/NavigationMenu2/Education/NationalInterestEvents/ASPIRE2007/default.htm>

**!!! Contact:** [aspire@awa.asn.au](mailto:aspire@awa.asn.au)

**India: World Toilet Summit 2007**

**31<sup>st</sup> October – 3<sup>rd</sup> November 2007, New Delhi**

**Organiser:** Sulabh International Social Service Organization and WTO

The World Toilet Summit 2007 will incorporate the International Toilet Conference & Expo 2007. News on the programme shall appear soon on the website given below.

**!!! Information:** <http://www.worldtoiletsummit2007.org>

**!!! Contact:** [info@worldtoiletsummit2007.org](mailto:info@worldtoiletsummit2007.org)

**Colombia: Latin America Regional Sanitation Conference (LatinoSan)**

**12<sup>nd</sup> – 16<sup>th</sup> November 2007, Cali**

**Organisation:** Water and Sanitation Program - Latin America and the Caribbean (WSP-LAC), Colombian Vice Ministry of Water and Sanitation, CINARA (Colombia) and UNICEF

This conference is one of a series of regional sanitation conferences in support of the 2008 International Year of Sanitation. The objectives are to accelerate the progress of sanitation and hygiene in Latin America, to raise the profile of sanitation, health and hygiene, to generate political commitment, to facilitate a regional policy and strategy, to strengthen leadership and advocacy for improvements in the region and sharing field experiences and lessons learned.

**!!! Download:** (Spanish)

<http://www2.gtz.de/Dokumente/oe44/ecosan/nl/es-folleto-latinosan-2008.pdf>

**!!! Information:** <http://www.latinosan2007.net/2007/home.htm>

**!!! Contact:** [wspandean@worldbank.org](mailto:wspandean@worldbank.org)

**Global: World Toilet Day**

**November 19<sup>th</sup> 2007**

**Organisers:** various

The World Toilet Day was launched by the WTO (World Toilet Organisation). Various sanitation related events are planned for this day around the world. The purpose of having this day is to have people in all countries take action, increasing awareness of the toilet user's right to a better toilet environment, and to lobby for increased access to toilets and sanitation for all.

**!!! Information:** <http://www.worldtoilet.org/>

**Brazil: International Conference on Sustainable Sanitation – Food and Water Security for Latin America**

**26<sup>th</sup> – 28<sup>th</sup> November 2007, Fortaleza, Ceará**

**Organisation:** ECOSANLAC – Saneamiento Ecológico en Latinoamérica y Caribe, Federal University of Ceará, UFC, IWA specialist group on reuse-oriented sanitation

The International Conference on Sustainable Sanitation is being organized to increase the communication and exchange between practitioners and researchers.

In particular, the conference intends to provide a forum for Latin American representatives to share their experiences, while providing direct exposure to the state-of-the-art in other regions of the world.

**!!! Information:**

<http://www.ecosanlac.org/ecosanlac/default2.php?siteid=html/page58.php>

**!!! Contact:** [info-fortaleza2007@ecosanlac.org](mailto:info-fortaleza2007@ecosanlac.org)

**Global:                    Launching of IYS 2008 activities by the UN  
November 2007**

**Organiser:**            UN-DESA

The UN plans to launch the IYS 2008 in November 2007. It is expected that the global launching will take place at the UN Headquarters. The regional launching will be at the UN Regional commissions which will also launch the IYS at country level. Various events will take place during November.

**!!! Information:** <http://www.un.org/esa/sustdev/sdissues/sanitation/iys.htm>

**China:                    East Asian Ministerial Sanitation Conference (EaSan)  
November 2007, Beijing**

**Organisation:**        World Bank - WSP

In the framework of World Bank - WSPs "Regional Knowledge Products – Sanitation Advocacy", the WSP-EAP countries and the other poorer nations in the region have identified common challenges which must be tackled at national level, alongside a strategic regional program to enhance and support the national efforts to achieve the sanitation MDG. Specific activities in this framework include the Ministerial Conference in Beijing.

**!!! More Information:**

[http://www.wsp.org/filez/activity/1312007124828\\_RegionalKnowledgeProductsSanitationAdvocacy.pdf](http://www.wsp.org/filez/activity/1312007124828_RegionalKnowledgeProductsSanitationAdvocacy.pdf)

**India:                    8<sup>th</sup> specialised conference on small water & wastewater  
systems & 2<sup>nd</sup> specialised conference on decentralized  
water & wastewater international network  
06<sup>th</sup> – 09<sup>th</sup> February 2008, Coimbatore**

**Organisation:**        International Water Association (IWA), Centre for Water and Environmental Studies (CWES) of the Kumaraguru College of Technology, India and the Laboratory for Environmental Biotechnology (LBE) of the National Institute of Agronomic Research, France; supported by IWA, Indian Water Works Association (IWWA), French embassy, and the Indian NGO Siruthuli

Proposed topics of the conference include:

- Decentralised domestic and industrial wastewater collection and treatment systems
- Aerobic and anaerobic treatment
- Low technology treatment systems
- **Ecological sanitation**
- Wastewater reclamation and reuse
- Sludge management
- Nutrient removal

**!!! Information:** <http://www.kct.ac.in/small2008>

**!!! Contact:** [small2008org@kct.ac.in](mailto:small2008org@kct.ac.in)



**South-Africa: African Ministerial Sanitation Conference (AfricaSan)  
18<sup>th</sup> – 20<sup>th</sup> February 2008, Durban**

**Organisation:** World Bank - WSP

WSP-Africa has been working on the conceptualization of a sanitation marketing approach for a better understanding of sanitation services demand, and established the basis for sanitation networking by holding a continental conference (AfricaSan) in 2002.

The marketing framework includes the regulation of transport and waste disposal, including ecosan. In 2008, there will be an AfricaSan +5 conference to keep the momentum alive.

**!!! Information:**

[http://www.wsp.org/filez/activity/1312007112430\\_KnowledgeDevelopmentinSanitationinAfrica.pdf](http://www.wsp.org/filez/activity/1312007112430_KnowledgeDevelopmentinSanitationinAfrica.pdf)

**Benin 14<sup>th</sup> African Water Association Congress  
25<sup>th</sup> – 29<sup>th</sup> February 2008, Cotonou**

**Organiser:** AfWA

The theme of the conference is "Partnerships and good governance for achieving the MDGs in the water and sanitation sector in Africa". Its declared objectives are to share experiences, promote cooperation, influence decision makers and maintain African water issues in the international agenda. 34 discussion topics are grouped under four technical sessions which cover a wide range of institutional, financial, technical and environmental aspects of water and sanitation management.

**!!! Information:** <http://www.uade.org/angl/index.asp>

**!!! Contact:** [susher.uade@aviso.ci](mailto:susher.uade@aviso.ci) or [kfofana.uade@aviso.ci](mailto:kfofana.uade@aviso.ci)

**Ghana: Access to Sanitation and Safe Water: Global Partnerships  
and Local Actions  
07<sup>th</sup> – 11<sup>th</sup> April 2008, Accra**

**Organisation:** WEDC

The theme of this 33<sup>rd</sup> WEDC international conference focuses on the concepts of global partnerships, alliances and networks within the water and environmental sanitation sector. This provides a mechanism for building strong alliances across the different stakeholder groups, and for capacity building through information exchange and skills sharing.

**!!! Information:** <http://wedc.lboro.ac.uk/conferences/33>

**!!! Deadline:** 1<sup>st</sup> September 2007

**!!! Contact:** [wedc.conf@lboro.ac.uk](mailto:wedc.conf@lboro.ac.uk)

**Spain: EXPO Zaragoza 2008: Water for Sustainable Development  
11<sup>th</sup> June – 14<sup>th</sup> September 2008, Zaragoza**

**Organiser:** Bureau International des Expositions (BIE)

The organisers expect 6 million visitors and the participation of 70-90 countries, as well as international organisations, NGOs and companies.

Key themes include: water, a scarce resource; water for life; waterscapes; and, water, an element linking peoples. The EXPO includes a Water Tribune based on the theme of 'Water and Sustainable Development', which will include: themed weeks consisting of sector seminars and meetings culminating in an international Conference on Water and Sustainable Development; a forum for citizen participation; and parallel events by international bodies and associations.

Output shall be given by the International Declaration of Zaragoza on Water and Sustainable Development.

!!! Contact: [expo2008@vardagroup.org](mailto:expo2008@vardagroup.org)

!!! Information: <http://www.expozaragoza2008.es>

**Australia:** 1<sup>st</sup> Int. Conference on Sustainable Biosystems  
06<sup>th</sup> – 09<sup>th</sup> July 2008, Perth

**Organisation:** Int. Organisation for Biotechnology and Bioengineering (IOBB)

The conference will primarily focus on the technical aspects of Integrated Biosystems and their integration into society. Development of decentralised technologies that mimic bio-systems, have led to real commercial gains without sacrificing a sustainable approach. Decentralised approaches and the move toward integration of high-tech solutions and bio-systems often guarantee innovation.

!!! Information: <http://www.etc.murdoch.edu.au/pages/conf1.html>

!!! Contact: [IOBB2008@gmail.com](mailto:IOBB2008@gmail.com)

**UK:** 11<sup>th</sup> international conference on Urban Drainage  
31<sup>st</sup> August – 5<sup>th</sup> September 2008, Edinburgh

**Organisation:** International Water Association (IWA)

At this stage the proposed topics of the conference are:

- The effects of climate change on urban drainage systems
- Demographic effects
- Urban drainage in developing countries
- Multi-disciplinary and sustainable aspects of urban drainage systems
- Management at or near the source
- Catchment systems, holistic and integrated operation and management
- Hydro informatics

!!! Information:

[http://www.iwahq.org/templates/ld\\_templates/layout\\_633184.aspx?ObjectId=641703](http://www.iwahq.org/templates/ld_templates/layout_633184.aspx?ObjectId=641703)

!!! Contact: [r.ashley@sheffield.ac.uk](mailto:r.ashley@sheffield.ac.uk)

**Austria:** World Water Congress and Exhibition  
07<sup>th</sup> – 12<sup>th</sup> September 2008, Vienna

**Organisation:** International Water Association (IWA)

In 2006, almost 3000 delegates attended this important water event in Beijing. In 2008 the World Water Congress will be hosted in Vienna, coming back to Europe after 7 years.

!!! Information: <http://www.iwa-vienna2008.org/>

**Burkina Faso:** Int. conference on sustainable sanitation in Africa /  
NETSSAF Final Conference  
24<sup>th</sup> – 26<sup>th</sup> September 2008, Ouagadougou

**Organisation:** CREPA, NETSSAF consortium

The objective of the conference is to bring together members of the NETSSAF consortium jointly with other decision makers, sanitation professionals and practitioners and scientists

to present their findings and discuss future trends and directions concerning the development of sustainable approaches for large scale sanitation issues in rural and peri-urban areas.

!!! Information: <http://www.netssaf.net/170.0.html>

**Turkey:** 5<sup>th</sup> World Water Forum  
15<sup>th</sup> – 22<sup>nd</sup> March 2009, Istanbul

**Organiser:** World Water Council

!!! Information: <http://www.worldwatercouncil.org/>

**China:** World EXPO 2010  
01<sup>st</sup> May – 31<sup>st</sup> October 2010, Shanghai

The theme of the world EXPO 2010 is "Better City, Better Life". An ecosan study undertaken in preparation of the EXPO 2010 has recently been presented at a DWA-BMZ-GTZ Symposium and is available as download.

!!! Information: <http://www.expo2010china.com/expo/expoenglish/index.html>

!!! **Download:** Shanghai 2010 reference project [in German]

<http://www.gtz.de/de/dokumente/de-innovative-staedtische-infrastrukturen-expo-projekt-shanghai-text-2006.pdf>

## Links and Tips

### Links on the GTZ ecosan-Homepage

You'll find an extensive list of interesting links on our homepage at:

<http://www.gtz.de/en/themen/umwelt-infrastruktur/wasser/9837.htm> and

<http://www2.gtz.de/ecosan/english/links.htm>

We greatly appreciate any comments and contributions: [ecosan@gtz.de](mailto:ecosan@gtz.de)

### Virus information

Sometimes viruses steal our addresses from other computers and use them to distribute themselves. We know that this problem is common for e-mail addresses that have been saved by many people, but unfortunately, we cannot prevent this from happening.

We would therefore recommend that you ensure all your mails are scanned by an up-to-date virus scanner and that you do not open any obscure attachments. Our newsletter is sent as plain text, with no attachments of any sort, instead, documents are always offered as download-links from our website. **If you do receive an e-mail from us with an attachment claiming to be related to the newsletter, do not open the attachment.**

## Homepage

Would you like to know more about GTZ's sectoral project ecosan or about the subject in general?

If so, visit our homepage (expansion and update in progress):

<http://www.gtz.de/ecosan> (new) and <http://www2.gtz.de/ecosan>

## Newsletter

If you would like to contact the administrators of this newsletter please send an e-mail to:

[owner-ecosan@mailserv.gtz.de](mailto:owner-ecosan@mailserv.gtz.de)

Your proposals for contributions to the newsletter, and any inquiries and comments you may have are always welcome.

## Contact

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## Mailing list / Newsletter

- user  
information

### How to use the ecosan mailing list

You can interact with the Majordomo software of our mailing list server by e-mailing commands to:

[majordomo@mailserv.gtz.de](mailto:majordomo@mailserv.gtz.de)

Commands must be the only text in the e-mail, and not as part of the subject line! You can send several commands in one and the same e-mail message. Just be sure to start a new line for each command.

If you attach a signature block to the end of your e-mailed messages, the Majordomo software could perhaps mistake it for another command, so please enter the word "end" by itself in the line below the last command.

#### Useful mailing-list commands:

##### **subscribe ecosan**

Use this command to subscribe to the ecosan mailing list

##### **subscribe ecosan [your.name@xy.org](#)**

Use this command to receive the newsletter at an address other than that listed in your registration (e.g. if you send the e-mail from your workplace account, but wish to have the newsletter sent to your private e-mail address).

##### **unsubscribe ecosan**

Use this command to cancel your subscription.

##### **unsubscribe ecosan [your.name@xy.org](#)**

Use this command to de-register your receiving address, if this differs from the one that you are currently using to send the request.

##### **info ecosan**

Use this command to request general introductory information about the ecosan mailing list.

##### **index ecosan**

Use this command to obtain a list of files sent so far via the mailing list.

##### **get ecosan <filename>**

Use this command to obtain a specific file sent via the mailing list (e.g., an archived newsletter).

**help**

Use this command to obtain information on how to use the Majordomo software.

**end**

Use this command to terminate a list of commands, e.g., especially if your mailer attaches an automatic signature.

**ecosan sector program**  
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