

**ecosan – newsletter - no. 26 - 11/2007 - 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. 26!

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-nl26-2007.pdf>

**Spanish:** <http://www.gtz.de/de/dokumente/es-ecosan-nl26-2007.pdf>

**French:** <http://www.gtz.de/de/dokumente/fr-ecosan-nl26-2007.pdf>

**English:** <http://www.gtz.de/de/dokumente/en-ecosan-nl26-2007.pdf>

**Chinese\*:** <http://www.gtz.de/de/dokumente/cn-ecosan-nl26-2007.pdf>

\* 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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  - India: “City Water and Waste Management: alternative paradigms”, January 2008
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- Events – new**
- |             |  |
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| 02-03/04/08 | 1st Symposium on Wastewater Reclamation & Reuse, Birzeit, Palestine                                      |
| 02-04/06/08 | 4 <sup>th</sup> Int. Conf. On Waste management, Granada, Spain   |
| 05-09/05/08 | IFAT 2008, Munich, Germany   |
| 28-30/05/08 | Water and sanitation in international development and disaster relief, Edinburgh, Scotland               |
| 23-25/06/08 | Eco-architecture 2008, Algarve, Portugal   |
| 24-26/06/08 | Design & Nature, Algarve, Portugal   |
| 06-09/07/08 | 1st Int. Conference on Technologies and Strategic Management of Sustainable Biosystems, Perth, Australia |
| 23-27/06/08 | Int. Symposium on Sanitary and Environment Engineering, Florence, Italy.                                 |
| 17-23/08/08 | World Water Week, Stockholm, Sweden  |
| 08-10/09/08 | 2nd IASTED Africa Conference on Water Resource Management, Gaborone, Botswana                            |
| 03-05/09/08 | Sustainable Tourism Conference, Malta  |
- Events – reminders**
- |               |  |
|---------------|--|
| 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, India |
| 25-29/02/08   | 14 <sup>th</sup> African water association congress, Benin   |
| 04-07/03/08   | Water China 2008, equipment for fresh/wastewater treatment, Guangzhou  |
| 01-03/04/08   | Asian Water 2008, Expo & forum, Malaysia   |
| 07-11/04/08   | 33 <sup>rd</sup> WEDC international conference/access to sanitation and safe water: global partnerships and local actions, Ghana   |
| 19-21/05/08   | 7 <sup>th</sup> int. conference on environmental Problems in the Coastal Regions, UK   |
| 19-21/05/08   | IWA Conference Sanitation Challenge, Netherlands   |
| 28-30/05/08   | Environmental economics 2008, Spain  |
| 11-13/06/08   | Sustainable Irrigation 2008, Spain   |
| 11/6-14/09/08 | EXPO Zaragoza 2008: Water for Sustainable Development, Spain   |
| 06-09/07/08   | 1 <sup>st</sup> international conference on sustainable biosystems, Australia  |
| 31/8-05/09/08 | Urban drainage, UK   |
| 01-04/09/08   | 13 <sup>th</sup> IWRA World Water Congress 2008, France  |
| 07-12/09/08   | World Water Congress and Exhibition, Austria   |
| 24-26/09/08   | International conference on sustainable sanitation in Africa/NETSSAF final conference, Burkina Faso  |
| 01-07/11/08   | 11 <sup>th</sup> International Conference on Wetland Systems, Technology for Water Pollution control, India  |
| 15-22/03/09   | 5 <sup>th</sup> world water forum, Turkey  |
| 1/5-31/10/10  | World EXPO, China  |

## In-house news

### 4<sup>th</sup> Meeting of the German advisory council for the GTZ-ecosan programme

The members of the German project advisory council for the ecosan programme joined for the 4<sup>th</sup> council meeting in Eschborn on the 24<sup>th</sup> September 2007. Themes discussed included the prolongation of the current phase of the BMZ / gtz-ecosan programme, the upcoming "International Year of Sanitation" and the global network initiative begun by the "Sustainable Sanitation Alliance" SuSanA, to improve sustainability in sanitation.

In a round table discussion, around 35 members of the council from ministries, administrations, the private sector and civil society presented themselves and their institutions relation to ecosan. The presentations provided a clear overview of the current situation and produced some interesting discussions.

At the German Development Service between 60 and 90 people currently work in the water sector, although ecosan is yet to feature very prominently in the work and will need to do so in the future. In the Federal Environment Office (UBA) a discussion process has begun on the potential of decentralised closed loop wastewater management systems. The Hessian Environment Ministry stressed that with split stream closed loop systems certain limitations set by EU guidelines for communal wastewater need to be considered, whilst at the same time the EU Water Framework guidelines promote the active implementation of closed loop approaches. The flexibility of innovative solutions in the face of the demographic change currently facing Germany, and the need in both the north and south for appropriate urban solutions and possibilities to refurbish existing central systems was stressed by both the Fraunhofer Institute and the KfW. The DWA pointed out that currently 20% of the German sewerage network is in acute need of refurbishment and therefore in many places systems decisions were due for the next generation in many areas.

"Results and recommendations of the consultant mission on the current state and further development of the sector project ecosan" were presented in the afternoon. The consultants recommended that the successful ecosan project continues its work basically unchanged. They however proposed that by all further decisions the project period should be considered to run until 2017 (MDG +2). Additionally, SuSanA should be supported with expert input and the project should assume the secretariat function and the political lobbying function of the network during the International Year of Sanitation should become the focal work of the project in the next 3 years.

#### !!! Download:

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/de-agenda-bmz-gtz-ecosan-beiratssitzung-2007.pdf>

#### !!! Contact: [christine.werner@gtz.de](mailto:christine.werner@gtz.de)

### Preparation of an "ecosan – exposure dialogue programme" in India

A preparatory meeting for an "ecosan - exposure dialog programmes (edp)" took place on the 31<sup>st</sup> of October in India. The edp is planned for October 2008 and is being organised and will be held by the NGO "Exposure Dialog Programme e.V", the gtz-ecosan programme and Indian NGOs.

Exposure programmes enable decision makers from the world of politics, the economy and the broader society (for example members of parliament) to live for one day in a poor family in a developing country, and experience the effects of development cooperation projects from another perspective. One of the topics discussed at the meeting in Delhi was which of the ecosan projects in Gujarat, Maharashtra, Karnataka and Tamil Nadu would be most suitable for the planned edp and that other projects may also be particularly suitable.

The idea for a sanitation edp during the "International Year of Sanitation" was greeted positively by the partners in the „Sustainable Sanitation Alliance" (SuSanA). This edp may therefore prove to be particularly international bringing together interested participants from Germany, from UN Organisations, from Switzerland and from Sweden.

!!! **Information:** Exposure Dialog Programme e.V. <http://www.exposure-dialog.de>

!!! **Contact:** Dr. Angelika Stauder [stauder@exposure-dialog.de](mailto:stauder@exposure-dialog.de)  
Christine Werner [christine.werner@gtz.de](mailto:christine.werner@gtz.de)

!!! **Download:** Agenda of the preparatory meeting  
<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-prep-ecosan-exposure-dialog-india-2007.pdf>

### Changes in the gtz ecosan team

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

- **Walter Neuenschwander** studies environmental technologies at the University of Applied Science, Lübeck. Before beginning his internship with the ecosan programme (October 2007 to March 2008), he worked as a student at the Wastewater Laboratory in Reinfeld (Holstein) on a urine diverting project.
- **Horacio Factura** finished his bachelor studies in Agriculture in Animal Science at Xavier University Ateneo de Cagayan, Philippines. After college, he worked for nearly 2 years as an agronomist at the Peri-urban Vegetable Project in the same university. He specialized in establishing allotment garden projects for vegetable farming in urban agriculture. Currently he is doing his masters degree in horticulture at Leibniz University Hannover, Germany and is doing an internship in the ecosan programme from October 2007 to March 2008.

### AfricaSan +5

### South Africa Second African Conference on Sanitation and Hygiene 18 – 20 February 2008, Durban

**Organiser:** Minister for Water Affairs and Forestry in South Africa; African Development Bank (AfDB), African Ministers' Council On Water (AMCOW), United Nations Secretary-General's Advisory Board (UNSGAB), United Nations Children's Fund (UNICEF), World Health Organisation (WHO), Water and Sanitation Programme of the World Bank (WSP), Water Supply and Sanitation Collaborative Council (WSSCC)

AfricaSan +5 will bring together African governments, private sector, NGOs and multilateral development organisations involved in the sector. The overall objective of AfricaSan +5 is to promote sanitation and hygiene improvement programmes in Africa and to assist key African stakeholders in identifying actions to accelerate achievement of national and MDG targets for sanitation.

#### Call for Papers / Case Studies

There are two possibilities for participants to contribute to the conference: either by submitting papers or case studies for a plenary session showcasing African innovations and successes in implementing large scale sanitation programs, or by contributing to one of the six parallel seminars on technical issues.

!!! **Information:** <http://www.africasan2008.net/indexsa.htm>

!!! **Contact:** [ce@wisa.org.za](mailto:ce@wisa.org.za)

### News from the IWA SG

### News from the IWA specialist group "resources-oriented sanitation, ecosan"

Dear members of the IWA specialist group on "resources-oriented sanitation, ecosan"!

Since issue 21, the gtz ecosan newsletter contains a contribution for the members of the IWA specialist group on "resources-oriented sanitation, ecosan". All members of the group are cordially invited to submit their contributions.

**International Conference on Sustainable Cities and Villages with a focus on Urban and Rural Ecological Sanitation, Organic Waste Management and Agricultural Reuse**

### **27-31 August, 2007, Erdos, Inner Mongolia, PR China**

This conference had 500 participants, 120 of which came from 38 different countries. The conference was a success and attended by many top officials from China (e.g. Vice-Chairman of Inner Mongolia Mr. Hao Yidong) and some from abroad (e.g. Honourable Minister of Water and Environment of Uganda Maria Mutagamba). The final day of the conference was a hands-on workshop attended by about 100 people.

Abstracts, presentations and papers will be available on the official conference website. <http://www.ecosanres.org/icss/>

### **International Conference on Sustainable Sanitation - Water and Food Security for Latin America, 25-28 November 2007, Fortaleza, Ceará, Brazil.**

The International Conference on Sustainable Sanitation organized by Ecosanlac and the Federal University of Ceará with support of the IWA specialist group became a very successful event and exceeded the expectations of the organizers. During four days, more than 200 local and international participants had the chance to hear and learn in three languages about the existing experiences in ecological sanitation in Latin America and other parts of the world. The conference furthermore offered a poster exhibition, stands with information material on ecosan and demonstration models of urine diversion toilets. It is intended to organize every two years a similar event on sustainable sanitation in different countries of Latin America.

Full information is available at: <http://www.ecosanlac.org/>

### **EcoSan Workshop at the 8th IWA Specialised Conference on Small Water and Wastewater Systems (Small 2008), 5 February 2008, Kumaraguru College of Technology, Coimbatore, India**

An ecosan workshop will be organised at the IWA Small 2008 conference, 6-9 February 2008 in Coimbatore, India. The focus of the workshop will be the implementation of ecosan concepts in India. The program of the workshop will be co-organised by Dr. Sam Godfrey (UNICEF, Bhopal Field Office) and Mr. Martin Wafler (seecon) with ecosan activities in India being presented. Workshop sessions include the following topics: The new WHO guidelines for use of excreta and greywater, financing issues / optimising costs of ecosan technologies, and logistics and technologies of ecosan concepts in urban areas. More information can be found on the conference website: <http://www.kct.ac.in/small2008/>

### **2nd IWA conference on resource oriented sanitation, 9-11 September 2009, Oaxaca, Mexico**

In September 2009 the ecosan SG will organise a joint conference with other SGs such as "Sludge Management". More details will be announced in 2008.

All the best, the group team

#### **!!! Contact:**

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Håkan Jönsson (co-chair; [Hakan.Jonsson@bt.slu.se](mailto:Hakan.Jonsson@bt.slu.se)),

Günter Langergraber (co-chair; [Guenter.Langergraber@boku.ac.at](mailto:Guenter.Langergraber@boku.ac.at))

#### **News from Ecosan club**

#### **Sanitation for Dignity – Exhibition and Event**

From the 25<sup>th</sup> to the 30<sup>th</sup> of September EcosanClub presented the German Toilet Organisations travelling exhibition "Sanitation is Dignity – Where will you hide?" in Vienna. 33 life-sized figures "relieved" themselves hiding behind every day objects such as flower pots, bags and umbrellas to bring the often taboo theme of sanitation into public discussion for the International Year of Sanitation 2008.

Accompanying the exhibition was a comprehensive programme: the discussion "Shit Happens – No loo, what to do?" with international experts, a children's programme with a puppet theatre on the subject "Kasperl looks for the loo", games, a quiz etc. Information on how you can get active yourself can be found on the Viennese Campaign Home Page.



The event was made possible thanks to support by Austrian Development Cooperation, CWS, the Dreikönigsaktion and the BOKU Vienna.

!!! Information: <http://www.sanitation-is-dignity.org>

!!! Contact: [thilo.panzerbieter@germantoilet.org](mailto:thilo.panzerbieter@germantoilet.org) (Campaign of GTO)  
[elke.muellegger@ecosan.at](mailto:elke.muellegger@ecosan.at) (event in Vienna)

## News general

### UN launches the International Year of Sanitation in New York

The official launch event for the International Year of Sanitation (IYS) 2008 took place on the 21<sup>st</sup> November 2007 in the UN building in New York. Prince Willem-Alexander of Orange, head of the UNSGAB on Water and Sanitation, the head of UNICEF Ann Veneman and Jamal Saghier, head of the department energy, transport and water at the World Bank addressed the assembled press and representatives of international organisations (including SuSanA- and ecosan-org.). The UN General Secretary Ban Ki-moon also gave a brief speech. The speeches are available for download on the official site of IYS 2008.

The speech of Prince William Willem-Alexander not only stressed the relevance of improving sanitation coverage for a sustainable global development and for the fight against global poverty and to achieve the MDGs, but also named specific ecosan strategies as important innovative concepts mentioning for example urine separation and biogas plants.

A SuSanA information table provided info-material and the text of the SuSanA press release on the launch of the IYS.

The web-site for the IYS is being managed by UNDEZA. Here the official logo for the IYS can be downloaded. Whilst the logo is colourful it shows the theme of "hygiene and hand washing" in very water wasteful way. For sanitation only a simple "drop and forget" pit latrine is shown. The web-site contains a detailed instruction for use of the IYS Logo.

!!! Information: [http://esa.un.org/iys/iys\\_launch.shtml](http://esa.un.org/iys/iys_launch.shtml)

Press Release [http://esa.un.org/iys/docs/PressRelease\\_IYS\\_launch\\_en.pdf](http://esa.un.org/iys/docs/PressRelease_IYS_launch_en.pdf)

<http://www.un.org/News/Press/docs//2007/dev2649.doc.htm>

Speech of Prince of Oranie: <http://esa.un.org/iys/newsroom.shtml>

IYS 2008 Logo and terms of use: <http://esa.un.org/iys/ltou.shtml>

### Launch of the IYS 2008 in India at the World Toilet Summit in the presence of the former Indian president, four ministers and the Prince of Oranie

In New Delhi, the local launching of the UN "International Year of Sanitation 2008" took place at the opening session of the World Toilet Summit on 31<sup>st</sup> October 2007 in the presence of the former Indian president, four ministers and the Dutch Prince of Oranie. The summit was organized by the NGO Sulabh International and supported by several Indian ministries along with UN Habitat New Delhi. In his speech Hon. Abdul Kalam, the former Indian president advocated a "close loop system of waste management" and gave several examples of how to transform human waste into products such as irrigation water, compost, or fertiliser that can be reused in agriculture.

The "Delhi Declaration" of the WTS participants urges "a paradigm shift from disposal oriented systems to reuse oriented sanitation systems" and to "undertake data collection, annual reviews, monitoring and effective actions to scale-up sustainable sanitation programmes and strengthen policies at both international and national level".

!!! Information: "Inauguration ceremony" of the World Toilet Summit 2007  
<http://worldtoiletsummit2007.org/download/CARD%20-%20Final.pdf>

Speech of Hon. Abdul Kalam (former president of India)

<http://www.abdulkalam.com>

→ Speeches/Lectures → Address at World Toilet Summit 2007, Delhi

**“Delhi Declaration”** from the World Toilet Summit 2007  
[http://worldtoiletsummit2007.org/delhi\\_draft.php](http://worldtoiletsummit2007.org/delhi_draft.php)

### **Short report from the 4<sup>th</sup> meeting of the “Sustainable Sanitation Alliance” (SuSanA), 03 - 04 November 2007 in New Delhi, India**

The 4<sup>th</sup> steering meeting of the SuSanA, which was founded at the start of 2007 as a meta-network to promote sustainable sanitation systems and support the International Year of Sanitation, took place on the 3<sup>rd</sup> and 4<sup>th</sup> November 2007 in New Delhi, directly after the World Toilet Summit. More than 90 participants from 60 organisations, including many new partners from south and south-east Asia, met and discussed the current results of working groups, financing initiatives for sustainable sanitation projects, an information sheet and future work as well as the communication strategy of SuSanA, including the content and layout of the web-site and diverse planned publications. A first draft of the web-site can be seen at the link below.

Good progress was seen in the work of the groups “productive sanitation and food security”, “sustainable sanitation and renewable energies” and “sustainable sanitation systems”, some of whom already had first drafts of fact sheets or case studies. The important group “costs and economics of sustainable sanitation” was also revitalised and aiming to produce their terms of reference by the end of the year.

Under the leadership of SEI/EcoSanRes the second SuSanA vision paper “Sustainable Pathways to Attain the MDGs” should be ready in time for the Stockholm Water Week in August 2008. Additionally, the presence and impulses to be given by SuSanA at the launch of IYS 2008 were also discussed. A task force was charged to formulate a press release that would be distributed at the launch. A complete results protocol of the 4<sup>th</sup> meeting of the SuSanA steering group will be available on the web-site in December 2007.

The next meetings of the steering committee are planned in Durban (16-17 Feb 2008) and New York (3-4 May 2008).

**!!! Information:** <http://www.sustainable-sanitation-alliance.org>

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

**!!! Downloads:** Short info sheet on the goals of SuSanA:

<http://www.sustainable-sanitation-alliance.org/pdf/en-susana-vision-statement-1-version-1-1.pdf>

Updated “joint roadmap for the promotion of sustainable sanitation in the UN’s International Year of Sanitation 2008”:

<http://www.sustainable-sanitation-alliance.org/pdf/en-susana-roadmap-version-1-1.pdf>

### **ecosan played an important role at LatinoSan in Cali, Colombia**

The first Latin American Conference on Sanitation, LatinoSan, took place from the 12<sup>th</sup> to 16<sup>th</sup> November in Cali, Colombia. More than 900 participants from more than 40 countries attended the bilingual meeting in the recently inaugurated conference centre in Cali.

After the introduction to the conference and the information on the situation of sanitation in Latin-American countries, two days of thematic sessions looked in detail at the challenges and achievements in the Hispanic sanitation sector. In these sessions Ron Sawyer of Sarar Transformación, gave a keynote presentation on the hygienic aspects of dry sanitation, Elías Rosales, CIVCO-ITCR, presented experiences of ecosan in Costa Rica, Jenny Aragundy of Ecosanlac, summarized the results of participatory workshops for environmental sanitation in the Amazon region of Ecuador, Soeren Rued, gtz-ecosan, introduced ecosan technologies and project examples from a global viewpoint, Ivette Gómez, Hospital Rafael Uribe, spoke about Colombian experiences with alternative sanitation methods and Juan Carlos Calizaza, CENCA, gave a summary of ecosan activities in peri-urban Lima, among other presentations related to ecological sanitation. On the last day of the conference, the Andean dialogue on sanitation and health by CDC (Centre for Disease Control and Prevention, Atlanta, USA) and FunSalud (Bolivian Founda



tion for Health) deepened the exchange of experiences of various institutions with ecosan in Bolivia leading to a lively discussion.

A follow-up LatinoSan conference for revising the progress in the sanitation sector in Latin America is planned for 2010, probably in Peru or Brazil.

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

**!!! Download:** Cali Declaration:

[http://www.latinosan2007.net/2007/diaadia/Declaracion de Cali.pdf](http://www.latinosan2007.net/2007/diaadia/Declaracion_de_Cali.pdf)

### Targeting sustainability: African sanitation knowledge network started

In Entebbe, Uganda, during a two day meeting, african and european academics founded the African Sanitation Knowledge Network (ASKNet) to dedicate the research and support of sustainable sanitation systems. A five member interim executive board was elected to take the formalization process further, for example, drafting the constitution, the membership guidelines etc. for the ASKNet. The elected members of the interim executive board that will work for 6 months (min.) to 1 year (max.) until the formal launching were Charles B. Niwagaba of Makerere University to represent the East and Central African region; Kouassi Dongo of University of Cocody, Abidjan to represent the West African region; Nicola Rodda from University of Kwa-Zulu Natal, to represent the Southern Africa region and also elected chairperson of the group, and European partners, Elisabeth Kvarnström (SEI and secretary of the interim board) and a representative from WASTE. The meeting was closed by the Hon. Minister of Water and Environment of the Government of Uganda, Mrs. Maria Mutagamba who pledged support to the network.

**!!! Contact:** [elisabeth.kvarnstrom@sei.se](mailto:elisabeth.kvarnstrom@sei.se)

### UNESCO-conference calls in its Paris-statement for reuse-oriented sanitation approaches

The International Symposium on "New Directions in Urban Water Management", organized by UNESCO on 11-14 September 2007 brought together leading international experts (200 participants from 50 countries) to discuss urban water challenges and to deliberate on new approaches and technologies for addressing these challenges. In the so-called Paris-statement adopted by the participants in the closing session, the UNESCO-conference underlines that the "development and transfer of new technologies and techniques such as advanced water and wastewater treatment processes, greywater reuse and eco-sanitation are essential for optimizing and enhancing the design, performance and efficiency of urban water systems". A short conference-report and the full Paris-statement are available from the gtz-website.

**!!! Download:**

Paris-Statement:

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-unesco-urbanwater-symposium-paris-statement-2007.pdf>

Short report of the conference:

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-unesco-urbanwater-symposium-paris-shortreport-2007.pdf>

### Network established to keep water and sanitation on international agenda

The Global Public Policy Network (GPPN) on Water Management was launched at the Stockholm World Water Week in August 2007. The network will coordinate the participation of stakeholders (government, civil society and international organizations) in the preparation of the water and sanitation review at the May 2008 session of the UN Commission on Sustainable Development (CSD-16). It also aims to ensure that the linkages between water and the six thematic issues on the CSD-16 agenda - agriculture,

rural development, land, drought, desertification, and Africa - are reflected in the conference proceedings and outcomes. The GPPN further wants to ensure that the integration of water with other sustainable development issues continues in 2009, through to 2015 and beyond.

The water and sanitation review at CSD-16 will look at five themes agreed at CSD-13 in 2005: access to basic water services; Integrated Water Resources Management (IWRM); access to basic sanitation; sanitation and hygiene education; and wastewater collection, treatment and reuse.

**!!! Information:** <http://gppn.stakeholderforum.org>

Source: IRC Source Weekly No 13 <http://www.irc.nl/page/37629>

### **New version of wikipedia-entry of "ecosan" available**

The online platform Wikipedia, a multilingual, free content encyclopaedia has established itself as an important reference site. With more than 75.000 active contributors working on some 9.000.000 articles in more than 250 languages it is a knowledge management tool that can be of very significant importance. The English language version alone has more than two million articles, and is one of the preferred sources of information retrieval on the internet.

An informative, up-to-date version of the article on "ecological sanitation" on Wikipedia would therefore be of considerable importance. This article has recently been updated and newly structured into an introductory section, a history of reuse-oriented sanitation approaches, concepts, technologies and project examples of ecological sanitation, references as well as Wikipedia and external links. In order to further improve the entry, contributions from the whole ecosan community are very important to get a well-balanced picture of the diversity of ecosan approaches.

However, the article on ecosan alone is not enough to give interested readers a sufficient picture about the fields of sustainable sanitation. Articles for ecosan technologies such as UDDTs, vacuum sewerage or anaerobic treatment are urgently needed and the already existing entries on greywater, composting toilets, constructed wetlands, etc. need continuous updating. Only a joint effort can ensure that a good information platform of ecosan on wikipedia is provided.

**!!! Information:** [http://en.wikipedia.org/wiki/Ecological\\_sanitation](http://en.wikipedia.org/wiki/Ecological_sanitation)

### **Prince Sultan Bin Abdulaziz International Prize for Water 2006-2008**

The "Prince Sultan Bin Abdulaziz International Prize for Water" awards around \$150,000 in each of its five categories, plus a special new creativity prize, worth more than a quarter of a million dollars that has recently been added.

The Creativity Prize will be awarded to any original work (research, invention, technique etc) which is considered a breakthrough in any water-related field. The work must be practically applicable, economically feasible and environmentally friendly.

Nomination deadline: **End of December 2007.**

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

**!!! Contact:** [tnolan-shaw@btconnect.com](mailto:tnolan-shaw@btconnect.com)

## 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 not live permanently outside of the EU.

#### Peru: Environmental advisor drink and wastewater, Lima – CIM

As a specialist for environmental questions on water and sanitation measures in urban engineering you will accompany and advise the current municipal environment office in its transformation into an environmental general direction. The environment office is attached to the department Construction and Sanitary Engineering of the ministry and assesses the environmental impact of all activities of the department.

Contract duration: 2 years; Reference number: 60078079

#### !!! Job description:

<http://www.cimonline.de/en/aspirant/101.asp?fachgebiet=Wasserversorgung%2C+Abwasser%2D+und+Abfallentsorgung&anzeige=60078079>

#### Egypt: Engineer focussing on wastewater management - Cairo– CIM

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– CIM

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>

**Bolivia: Project team leader drinking water and sanitation supply, La Paz –gtz**

The aim of this post is to improve the water and sanitation supply in small and medium towns by advising sector policies and strategic advice, through the expansion of small service provider systems to businesses, through the promotion sector investment programmes and through advising the expansion of social water cooperatives.

You will be responsible for leading the German contribution to the programme.

**!!! Job description:**

<http://www.gtz.de/en/karriere/stellenmarkt/jobs-by-sector-detail.asp?fachgebiet=Environment+and+Infrastructure&anzeige=60006600>

**Bolivia: Project staff / Responsible for implementation water supply**

The aim of this post is to improve the water and sanitation supply in small and medium towns by advising sector policies and strategic advice, through the expansion of small service provider systems to businesses, through the promotion sector investment programmes and through advising the expansion of social water cooperatives.

Your main tasks are in providing advice, in process accompaniment, and in supporting relevant sector institutions such as national institutions, prefectures and communes.

**!!! Job description:**

<http://www.gtz.de/en/karriere/stellenmarkt/jobs-by-sector-detail.asp?fachgebiet=Environment+and+Infrastructure&anzeige=60080878>

**Marocco: Expert for Integrated Water Resources Management, Rabat – gtz**

The aim is to implement integrate water resources management in Morocco through the creation of necessary institutional, legal and organisational framework conditions in the water sector.

You will provide conceptual system advice for the introduction of integrated planning and management systems.

**!!! Job description:**

<http://www.gtz.de/en/karriere/stellenmarkt/jobs-by-sector-detail.asp?fachgebiet=Environment+and+Infrastructure&anzeige=60078704>

**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/en/karriere/stellenmarkt/jobs-by-region-detail.asp?region=Maghreb+and+Middle+East&anzeige=60030528>

**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.

**!!! Job description:**

[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 competences 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.

**!!! Full job description:**

<http://www.gtz.de/en/karriere/stellenmarkt/jobs-by-region-detail.asp?region=Maghreb+and+Middle+East&anzeige=60070852>

**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/en/karriere/stellenmarkt/jobs-by-region-detail.asp?region=Maghreb+and+Middle+East&anzeige=60076477>

**Chad: Team leaders for sustainable water management of Lake Chad, N’djamena – gtz**

The second phase of this project aims at improving the cooperation relations between the Lake Chad Commission and the partner institutions in the member states Nigeria, Cameroon, Chad and Niger.

You will assume responsibility for the German contribution and coordinate the project activities with other donors.

**Apply before: 15.12.2007**

**!!! Job description:**

<http://www.gtz.de/en/karriere/stellenmarkt/jobs-by-region-detail.asp?region=Sub%2DSaharan+Africa&anzeige=60081526>

**Belgium: Seconded National Expert (SNE) for EU Water Initiative – Brussels**

The Seconded National Expert (SNE) will be part of a team in charge of water sector policy activities. Tasks will focus on the over-riding objective of the EU Water Initiative, which is to contribute to the achievement of MDGs and targets on provision of water and sanitation services and integrated water resources management, and of the Africa-EU Partnership for Infrastructure, which is to develop sustainable infrastructure and services for economic growth that contributes to reducing poverty.

**!!! Job description:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-sne-eu-water-initiative-brussels-jobinfo-2007.pdf>

**Germany: UN-Water Decade Programme Office – Bonn**

The UN-Water Decade Programme Office has been founded to strengthen the activities of the more than two dozen UN organizations and programmes already co-operating within the interagency mechanism known as UN-Water. There are four vacancies, consisting of two senior academic officer and two academic officer positions

Applications before **15 December 2007**

**!!! Job descriptions:** [http://www.unwater.unu.edu/category/Job\\_Vacancies](http://www.unwater.unu.edu/category/Job_Vacancies)



**News from ecosan projects ...**

**German cooperation**

**India: ecosan for a college with 1.500 students near Mumbai**

The board of "Adarsh Vidyaprasarak Sanstha's College of Arts & Commerce" in Badlapur near Mumbai has decided to build an eco-friendly sanitation centre. Planning and design of the system is being carried out by the Ecosan Services Foundation (esf) in collaboration with seecon international and gtz. An ecosan system for 1.500 students comprising anaerobic treatment of brown water; collection, storage and reuse of urine from urinals (ladies and gents); and reuse /treatment of greywater from washbasins is currently under construction. An Up-flow Anaerobic Sludge Blanket (UASB) biogas plant for solid-liquid separation and recovery of valuable energy in form of biogas for direct use is being constructed. The further treatment will be done in a Horizontal Flow Constructed Wetland System. The final effluent is fit for surface irrigation purposes. Grey water (from wash basins) and urine (from urinals) is treated in greywater gardens and used as a liquid fertilizer on agricultural fields after storage.

Capacity development and awareness raising is being carried out parallel to the technical installation in order to ensure the correct operation of the system in the future.

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

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-project-info-badlapur-college-india-2007.pdf>

**!!! Contact:** [ecosan@ecosanservices.org](mailto:ecosan@ecosanservices.org)

**Burkina Faso: Up-date from the EU-ACP WF ecosan project in Ouagadougou**

First lessons from the EU-ACP Water-Facility ecosan project in Ouagadougou underline the time and patience needed in working with different stakeholder groups when introducing ecosan. The ambitious aim of the project is to reach up to 300.000 people in the Burkinabe capital by mid-2009 with the basic message of safely recycling urine and excreta, and to provide 1.000 households with access to ecological sanitation on the basis of demand. An overview of the current state of the project, which is implemented through CREPA in cooperation with gtz, was prepared for the UNESCO-IHP conference "new directions in urban water management" (Paris, August 2008).

**!!! Download:**

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

**Ethiopia: Ceramic and plastic urine diverting squatting toilets now available**

Within the gtz supported PPP project "Introduction of ecological sanitation for large scale housing programs in Ethiopia" dry squatting toilets with urine diversion for the Ethiopian market have developed and produced by local firms (photos to these toilets can be seen in the download provided), thus making cheap ceramic and plastic toilets available to sanitation projects. The toilet modules have already been successfully used in different pilot projects. The separated urine is used by local farmers. The increased harvest that has been shown on demonstration fields has increased farmer acceptance and has created a demand for this natural fertiliser.

Currently a dissemination of urine separating toilets is taking place in different regions throughout Ethiopia. This is being supported by the Ministry of Works and Urban Development. One focus of the project is to integrate multi-storey apartment buildings into its work.

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.

**!!! Download:** Photos of the toilets

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-squatting-uddt-figs-ethiopia-2007.pdf>

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

!!! Contact: Martin Oldenburg [oldenburg@otterwasser.de](mailto:oldenburg@otterwasser.de)

#### **PR China: Demand for modern ecological sanitation increasing**

The German Federal Ministry for Foreign Trade (BfA) has underlined the fact that in China the need and demand for modern, ecological sanitation installations is increasing, with dry systems (for example UDDTs) and other water saving systems receiving increasing attention. The capital, Beijing, wants to offer ecologically convincing sanitation systems for the Olympic games. Several firms are currently offering mobile eco-toilets – for example the firm Zhongke Longkai has fitted a bus with a mobile eco-toilet (see download). Technical and collection devices have been installed where normally luggage is stored, the faeces are mixed with sawdust using a stirring device in a composting container underneath the toilet, and urine is collected separately. The BfA recommend to firms who have similar technical innovations to offer to take the risk and market these now in China.

!!! Information: <http://www.bfai.de/fdb-SE,MKT200707128004,Google.html>

!!! Download:

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-china-ecotoilet-bus-zhongkelonkai-2007.pdf>

#### **Nepal: Up-date on ecosan in Nepal presented at conference on Community-led River-Management**

A two-day international symposium on “Community-led Management of River Environment” took place in Kathmandu, Nepal, from 26th to 27th August 2007. Project partners of the EU-KAPRIMO-project have developed and implemented a non-conventional river monitoring system for the capital Kathmandu. The project approach is designed to be a starting point for basin-wide or even country-wide river monitoring and environmental planning, being a model for other parts of Nepal or South Asia.

A presentation on “Ecological Sanitation - An Holistic Approach to Aquatic System Protection in Nepal” introduced the ecosan-approach to the participants. With the paper presentation urine-diversion dehydration toilets, toilet-linked biogas plants, vacuum sewer systems and constructed wetlands were presented as components of ecosan concepts that are deemed suitable, or have already proven their suitability for implementation in urban, peri-urban or rural settings in the Nepali context.

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

!!! Download: Download:

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-kathmandu-river-management-ws-shortreport-2007.pdf>

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-approach-in-Nepals-context-2007.pdf>

#### **Philippines: News from ecosan projects in the Philippines**

The German Embassy in the Philippines has approved an ecosan project for rural communities in Northern Bukidnon under its Small-Scale Projects Program that establishes ecosan urine-diverting dehydration toilets (UDDT).

The Periurban Vegetable Project (PUVeP) of Xavier University College of Agriculture (XUCA) in Cagayan de Oro City is assisting the Christian Community for Social Awareness Office (KKP) of the university in establishing three UDD toilets in different communities of barangay Lumbia, Cagayan de Oro City. Funding for two toilets comes from the German Embassy in Philippines while the funding of the third toilet comes from the Child Fund Japan.

In just 2 months (August – September 2007) almost 1000 students coming from different schools in the Philippines had visited the UDD toilet of the St. Ignatius Allotment Garden demonstration area in Manresa Farm of XUCA.

More information on the above projects and several other ecosan related news are found in the issue No. 10 of the "Water Link and Solid Waste" published by the gtz-DILG Water and Sanitation Program which appears every 3 months.

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-philippines-waterlink-solidwaste-nl10-2007.pdf>

**!!! Contact:** Ulrike Lipkow [ulrike.lipkow@gtz.de](mailto:ulrike.lipkow@gtz.de)  
Robert Holmer [rholmer@xu.edu.ph](mailto:rholmer@xu.edu.ph)

**India: Meeting on ecosan capacity development in India**

Several NGOs have presented on 3<sup>rd</sup> November 2007 their ecosan capacity development activities in India during a side-event at the 4<sup>th</sup> Sustainable Sanitation Alliance steering group meeting in New Delhi. UNICEF, WesNet India, SCOPE, IWWA, esf were among the contributors. The agenda and ppts of the workshop are available.

**!!! Download**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-agenda-meeting-SuSanA-capacity-development-focus-on-Asia.pdf>

**News from ecosan projects ...**

**... other cooperation's**

**Afghanistan: An improved version of the traditional ecological sanitation system recommend as the most appropriate solution for Kabul**

Most urban households in Afghanistan, in Kabul as well as in other cities, use traditional Dry-Vault-Toilets. In 1996, concerns over the possible health consequences of night soil being exposed and sometimes flowing in the streets from vault latrines led the International Committee of the Red Cross (ICRC) to initiate a large scale sanitation project. It consisted of rehabilitating or reconstructing private vault latrines, increasing the size of the chamber, separating urine, installing a ventilation pipe and, most importantly, installing doors on the emptying hole (made of cement or metal) in order to confine night soil. Night soil collectors continued the evacuation of excreta with shovels and carts and its reuse as fertilizer after composting. However, the traditional system now needs to be redesigned for a population of over four million people.

The sanitation consultant Barbara Evans recently pointed out that so far no sanitation system presented a more appropriate option than the Urine Diversion Dehydration Toilets (UDDTs) for many parts of Kabul. "I would tend to ask those people who say the city is too big [for UDD-systems] to consider what the alternatives are. Few major cities with the growth and poverty profile of Kabul do a good job of designing sanitation which works for the poor - they tend to spend money on expensive infrastructure that at best provides a high level of service for a tiny minority of the city - usually the elite. Kabul has a system which used to work - we should not abandon it unless we really have a better option to suggest that is cheap and simple enough to put in place rapidly."

**!!! Information:** <http://www.irinnews.org/Report.aspx?ReportId=73691>

**!!! Download:** <http://wedc.lboro.ac.uk/conferences/pdfs/31/Pinera.pdf>

**India: Rice on the roof**

Greywater reuse is a feasible option for Indians with flat roof-tops as an article in "The Hindu" shows. And no doubt: harvesting rainwater, reusing grey water and cultivating plants are part of the million solutions that a city needs to manage its water wisely.

**!!! Information :** <http://www.hindu.com/pp/2007/08/11/stories/2007081150290200.htm>

### **India: Workshop on urban ecosan held in Trichy, Tamil Nadu**

“Rapid urbanisation and the accompanying environmental degradation, and increasing water scarcity should make urban planners look for sustainable sanitation systems, which can meet the requirements of the rising population. It is time ecological sanitation (ecosan) technologies that offer a range of options for improving urban sanitation were promoted in a big way”. This was the conclusion of a workshop on urban ecosan, organised by the Society for Community Organisation and Peoples Education (SCOPE), the Stockholm Environment Institute (SEI), Sweden, and WASTE, a voluntary organisation of the Netherlands.

**!!! Information:** <http://www.hindu.com/2007/11/07/stories/2007110755420500.htm>

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-trichy-india-urban-ecosan-ws-shortreport-2007.pdf>

### **Mexico: ecosan contributing to the protection of El Tule Lagoon**

The community of Cihuatlán in Jalisco on the Mexican Pacific coast has an NGO completely dedicated to alternative sanitation supply. “AproSanidad Melaque” was set up with the financial support of UNEP and will soon complete a pilot project that installed 10 urine separating, dehydration toilets (UDDT). The organisation will maintain a collection system for urine and faeces that will be treated in an eco-station to produce compost and fertiliser. These will then be given to the farmers in the region.

The initiative is a reaction to the problematic environmental situation on El Tule lagoon – a sweet water lake which has received untreated wastewater from the surrounding settlements over the last decades. Only recently has an ecological rejuvenation begun, which include a wastewater treatment plant and the 10 AproSanidad Melaque toilets.

Since December 2006 a demonstration UDDT has been in service. The toilet has been used by a household of 6 (2 adults and 4 children) with the aim of identifying, analysing and solving any eventual technical problems in order to avoid the same mistakes when building the remaining 9. All sanitation installations have a ceramic urine separating toilet and waterless urinal, a water saving shower, wash basins and a biofilter for greywater treatment. The toilets were all built in homes where previously the wastewater was discharged directly into the El Tule Lagoon.

By the end of the year the community will build a further 20 UDDT’s, bringing the total to 30 in 2008.

“AproSanidad Melaque” has also contributed to adapting the local laws with a community by-law being passed that requires all new construction areas to separate black and grey water and to install a biofilter for greywater treatment. In addition the legislation has been adapted to now accommodate dry toilets as a possible sanitation option for areas with no connection to the public sewer.

AproSanidad Melaque also supports the communal administration in its search for a more sustainable sanitation system for Cihuatlán, the main city in the commune. Currently treatment ponds and the construction of a constructed wetland are being considered.

**!!! Information:** <http://aprosanidad.blogspot.com>

**!!! Contact:** Juan José Del Toro Madrueño [jdeltoro1973@yahoo.com](mailto:jdeltoro1973@yahoo.com)

### **Mozambique: Increasing demand for ecosan in the Niassa Province**

The village of Muita in the Niassa Province of Mozambique is home to six thousand people. Until recently the villagers had no access to clean water and improved sanitation. Diseases like cholera, diarrhoea, malaria and scabies were very common. In 2001 ESTAMOS, the partner organisation of WaterAid, in the north of Mozambique, began a participatory process with the villagers on sanitation options. Composting toilets were chosen (which are often called “ecosan latrines” in WaterAid’s articles and mostly comprise of the Fossa

Alterna system).

Results from recent agricultural trials show that the compost is boosting crop yields: Crops which were planted in soil mixed with the contents of various designs of ecosan systems, including a urine diversion system, thrived in comparison with other local techniques. WaterAid and ESTAMOS are receiving increasing requests from other farmers for assistance in constructing further latrines. The expansion of "composting toilets" across the province will benefit the poor rural communities - incidences of disease should fall as sanitation coverage increases and crop yields look set to rise dramatically. Thus WaterAid has now added ecosan to the list of successful sanitation approaches for their projects.

**!!! Information:**

[http://www.wateraid.org/international/what\\_we\\_do/where\\_we\\_work/mozambique/2933.asp](http://www.wateraid.org/international/what_we_do/where_we_work/mozambique/2933.asp)

[http://www.wateraid.org/international/what\\_we\\_do/where\\_we\\_work/mozambique/2593.asp](http://www.wateraid.org/international/what_we_do/where_we_work/mozambique/2593.asp)

[http://www.wateraid.org/international/about\\_us/oasis/springsummer\\_03/1491.asp](http://www.wateraid.org/international/about_us/oasis/springsummer_03/1491.asp)

**Publications...**

**Feeding the city: Food consumption and flow of nitrogen, Paris, 1801–1914**

Barles, Sabine (2007): Feeding the city: Food consumption and flow of nitrogen, Paris, 1801–1914. In: Science of The Total Environment, Volume 375, Issues 1-3, 48-58.

In this paper the flows of foodstuffs (and the nitrogen they contain) through the city of Paris in the 19th and early 20th century is evaluated. Between 1801 and 1914, the fivefold increase in the population of Paris, as well as the threefold increase in the number of horses used in urban transport, gave rise to increased needs for food and feed. The fate of dietary nitrogen after consumption changed a lot with the techniques used for exploiting urban excreta of all kinds, particularly of nitrogen, which was in great demand until the development of synthetic fertilizers. Dietary nitrogen flow diagrams are established for the years 1817, 1869 and 1913, and reveal an increasing improvement of the agricultural reuse (from 20 to 40% of the inflowing N).

**!!! Information:** (Abstract) <http://dx.doi.org/10.1016/j.scitotenv.2006.12.003>

**Publications...  
on the web**

**Master's Thesis on resource-oriented public toilets in developing countries**

Aleksandra Drewko (2007): "Resource-Oriented Public Toilets in Developing Countries: Ideas, Design, Operation and Maintenance for Arba Minch, Ethiopia", English, 148 pages, Hamburg University of Technology, Institute of Wastewater Management and Water Protection.

The work presents an introduction to the current global sanitary crisis, different approaches to sanitation and conditions in the city of Arba Minch, Ethiopia. It also depicts general considerations and a technology choice for drafting a project of a public toilet complex based on various case studies from developing countries. The final part focuses on a cost analysis of a particular project (a public toilet for a bus station) in Arba Minch. This thesis was submitted as a partial fulfilment of obtaining a Master's degree at the Hamburg University of Technology in September 2007.

**!!! Download (6 MB):**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-publictoilets-arbaminch-ethiopia-mscthesis-2007.pdf>

**Meeting the MDG target will require extraordinary efforts, UN report**

UN DESA (2007) The Millennium Development Goals Report. – 36 pages, New York. ISBN 978-92-1-101153-1

With half the developing world without basic sanitation, meeting the Millennium Development Goal (MDG) target will require extraordinary efforts, according to a new UN report. At the current rate, the target of halving the proportion of people without basic sanitation by 2015 will be missed by 600 million. The region demanding most attention is sub-Saharan Africa, where the absolute number of people without access to sanitation actually increased – from 335 million in 1990 to 440 million people by the end of 2004.



**!!! Download:**

[http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2007/UNSD\\_MDG\\_Report\\_2007e.pdf](http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2007/UNSD_MDG_Report_2007e.pdf)

**Sustainable Sanitation for Central and Eastern Europe - GWP CEE**

Bodik, Igor & Peter Ridderstolpe [eds] (2007): Sustainable Sanitation in Central and Eastern Europe: Addressing the Needs of Small and Medium-Size Settlements. – Global Water Partnership: ISBN 978-80-969745-0-4

The primary focus of the European Union wastewater legislation is on settlements of over 2000 people while smaller, and usually poorer communities, have not yet been sufficiently addressed. This book therefore focuses on such small settlements where sustainable sanitation can bring low cost, sustainable and effective solutions in dealing with wastewater. The book has been developed by experts from Central and Eastern Europe (CEE) in cooperation with Swedish and German sustainable sanitation experts, and provides an overview of the sanitation state in CEE countries. It contains a set of case studies illustrating different workable solutions from Hungary, Ukraine and Slovenia, as well as from Germany and Sweden. It also provides an overview of legislation on sustainable sanitation in European Union and in some CEE countries. The book is targeted at decision makers on national administration level, mayors and local decision makers.

**!!! Information: (Book review)** <http://www.gwpceeforum.org/?page=63&read=160>

**!!! Download:** <http://www.gwpceeforum.org/?page=9&action=view&id=151>

**Model TORs of ADB asks consultants and governments to consider ecosan**

Asian Development Bank (2006): Model terms of reference: planning urban sanitation and wastewater management improvements. - Asian Development Bank, Manila, The Philippines; 24 p.

These Terms of Reference (TOR) for a Project Preparation Technical Assistance include an approach and methodology for planning urban sanitation and wastewater management improvements. They direct the project preparation consultant to review a comprehensive range of sanitation and wastewater management options, including among others conventional and low cost centralized and decentralized sewerage, on-site sanitation options, public toilets, sanitation in slums, and community-based NGO-supported programs. Consultants and governments are encouraged to consider where ecological sanitation fits in the sanitation strategy. The appendices include lessons learned from ADB and the World Bank, case studies, and urban sanitation references.

**!!! Download:** <http://adb.org/Water/tools/Planning-US-WSS.asp>

The CD-Rom “Smarter sanitation” is another recent ADB-publication. It contains a wealth of material related to sustainable sanitation – including the above TORs. The CD-ROM is available from the ADB.

**!!! Information:** <http://www.adb.org/Water/Topics/Smarter-Sanitation/default.asp#2>

**Lessons from ecosan in Malawi – WSP**

WSP (2007): Lessons from a low cost ecological approach to sanitation in Malawi. – 12 pages. Field Note, World Bank Water and Sanitation Programme WSP, Nairobi, Kenya, Africa.

Low cost ecological sanitation programs in Malawi have led to the building of over 11.000 compost producing toilets since 2003. While the toilets are affordable and simple to construct, the fact that they convert human waste into valuable odour-free compost, enables cost recovery for households and is a prime driver in popularizing ecosan designs. This field note was prepared by Peter Morgan, and peer-reviewed by a group of people. Detailed feedback and overall guidance came from Pierce Cross and Andreas Knapp.

**!!! Download:** [http://www.wsp.org/filez/pubs/926200795611\\_Malawiecotoilets.pdf](http://www.wsp.org/filez/pubs/926200795611_Malawiecotoilets.pdf)

### **PLAN evaluation report on large scale sanitation project in Shaanxi, China**

Zifu Li (2007): Report of sanitation latrine-specified evaluation of the water and environmental sanitation project – 120 pages. Department of Environmental Engineering, University of Science and Technology Beijing. (Report on behalf of Plan International)

The report evaluates the Plan International WES (Water and Environment Sanitation) program that is designed to explore a new approach to rural water, environment, and sanitation improvement in the Shaanxi Province, China.

At the community level, WES aims to work in this Province with 300 rural communities and 200 schools to develop a model that integrates the safe water supplies, sanitary living conditions and poverty reduction, through institutional capacity building and partnership between rural communities, government, and NGOs for sustainable environment and resource management and livelihood improvement. At the policy level, Plan China will build on this experience through dialogue and pilots in partnership with the rural development programs by the central government in western China.

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-plan-china-ecosan-evaluation-report-2007.pdf>

### **ecosan in Mongolia – M. Sc. Thesis, Katharina Conradin**

Katharina Conradin (2007): Ecological Sanitation in the Khuvsgul Area, Northern Mongolia: Socio-Cultural Parameters and Acceptance. – M.Sc. Thesis, Department of Geosciences, University of Basel, Institute of Geography, 188 pages.

The study gives an excellent evaluation of the current sanitation situation in the Khuvsgul area and includes a study about the acceptance and suitability of the ecosan approach in Mongolia.

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-in-mongolia-mscthesis-2007.pdf>

Trial garden experiments, with urine reuse from an ecosan urine-diversion toilet in Khatgal, Northern Mongolia, were undertaken by Jaqueline von Arx and Katharina Conradin, along with the above study. A short publication with pictures from the impressive results was recently made available.

**!!! Download:**

<http://www2.gtz.de/dokumente/oe44/ecosan/nl/en-ecosan-trial-garden-mongolia-2007.pdf>

**New...  
... on the web**

### **You-tube goes ecosan – add something from your project!**

In recent months a series of films on ecosan and ecosan projects has been published openly on the internet. You-tube now has a series of contributions that show the ecosan project at the UNESCO-IHE, awareness raising sequences from India, and a documentary on the construction and inauguration of a UDDT in Bulgaria. It would be nice to have even more ecosan film material. So put your ecosan project clips on-line and let us know here at [ecosan@gtz.de](mailto:ecosan@gtz.de) – so we can report on your project in the future.

**!!! Link-list (several examples):**

<http://www.youtube.com/watch?v=2ZQdGvpok3Y>

[“ecosan: Put Your Waste to Work” – an awareness raising video showing the installation at DSK-Campus, Ahmedabad, Gujerat, India]

<http://www.youtube.com/watch?v=pYJE2X7s3rs>

[Technical video explaining the UDDT-type as build by SCOPE-Trichy, India]

<http://www.youtube.com/watch?v=khW2mScBT0U>

<http://www.youtube.com/watch?v=ywp4YPDeBEc>

<http://www.youtube.com/watch?v=z0GKD3JAUOY>

<http://www.youtube.com/watch?v=ldZEivKwSGE>

[Information on the ecosan-awareness raising project at the UNESCO-IHE]

<http://www.youtube.com/watch?v=eQkF32BeXUk>

[Information on a composting toilet in Vancouver, BC, Canada]

[http://www.youtube.com/watch?v=7B\\_O3FFnZVM](http://www.youtube.com/watch?v=7B_O3FFnZVM)

[Promotion video on US sun-mar systems]

<http://www.youtube.com/watch?v=lq4ZblPSXeg>

[Building of UDDTs in Mexico]

<http://www.youtube.com/watch?v=nTa4yerQL1o>

[Maintenance of waterless urinals addicom in South Africa]

<http://www.youtube.com/watch?v=REU5yhJp3IY>

[Pilot project-report – AproSanidad, Mexico].

<http://www.youtube.com/watch?v=vvGbn0b1TI4>

[Introduction to the ERDOS-ecosan-project, China]

<http://www.youtube.com/watch?v=r2rzYxuyaVE&feature=related>

[Inauguration of new UDD toilet in a village in Bulgaria]

<http://www.youtube.com/watch?v=N622C8IU7ps>

<http://www.youtube.com/watch?v=drwb1LOebPA>

[The Prince of Orange talking on the sanitation MDG and the sanitation-taboo]

### ecosan news-groups are gaining momentum

Following the launch of the EcoSanRes-Yahoo discussion group in January 2002, the possibility of exchanging valuable information on ecological sanitation has been gaining momentum. Regional discussion groups looking at concepts and technologies of sustainable sanitation and exchanging information on projects, workshops and conferences have been set up, often communicating in the prevalently spoken language of its members.

In order to further foster the exchange of information it is necessary to keep track of developments in the field of newly formed discussion fora and news groups. We therefore invite everybody to share their knowledge of other interesting news groups for those engaged in the field of sustainable sanitation. A short list of some of the ecosan discussion groups is giving in the following:

#### !!! Links to Newsgroups:

<http://tech.groups.yahoo.com/group/ecosanres/>

(intensively used discussion and news forum on Sustainable Sanitation in English)

<http://mx.groups.yahoo.com/group/laredseco/>

(ecosan discussion forum in Spanish for Mexico and Latin America)

[http://groups.google.com/group/ecosan\\_temperate](http://groups.google.com/group/ecosan_temperate)

(discussion group on ecosan in temperate climates in English, Bulgarian and Russian)

<http://groups.google.com.ec/group/ecosan-ecuador?hl=es>

(discussion group for Ecuadorian activists and institutions working in the field of ecological sanitation)

<http://groups.google.com/group/ecosan-china>

(discussion group for Chinese activists and institutions working in the field of ecological sanitation)

<http://tech.groups.yahoo.com/group/ecosan-philippines/>

(discussion group for Pilipino activists and institutions working in the field of ecological sanitation)

### Open source-related initiatives for appropriate sanitation technologies

There are several existing open source or open design-related initiatives and resources in the water and sanitation sector, mostly related to appropriate technology. These include:

Appropedia – Water Portal

<http://www.appropedia.org/Portal:Water>

Wikipedia – Water Portal

<http://en.wikipedia.org/wiki/Portal:Water>

Waterworks

<http://water.wikia.com/>

WatSan.org

<http://www.watsan.org/>

WatsanWeb

<http://www.watsanweb.ch/>

Lifewater

<http://www.lifewater.ca/>

CD3WD, an offline wiki for the third world

<http://www.irc.nl/page/30906>

Akvo.org is a project presented at the 2007 Stockholm World Water Week that aims to be an open source wiki and set of collaboration and finance tools that pool existing knowledge on water and sanitation for the poor. A prototype web site has been developed that already has a number of operational elements such as Akvopedia, Akvoblog and Akvo Forum. Initially Akvopedia has drawn most of its material from the publications Smart Water Solutions and Smart Sanitation Solutions.

Akvo.org

<http://www.akvo.org/>

Smart Water Solutions

<http://www.irc.nl/page/28654>

Smart Sanitation Solutions

<http://www.irc.nl/page/28448>

Source: IRC News weekly No 13 <http://www.irc.nl/page/37687>

### WHO lexicon of technical terms related to health and environment

To promote a common understanding of technical terms related to health and environment issues the WHO has created an on-line searchable database with multi-language terminology equivalence, called The Health and Environment Lexicon

Presently, there are over 2,700 English terms, with the following multi-language equivalents: French (2,300), Spanish (2,100), Portuguese (1,700) and Arabic (1,300). Chinese, German, and Russian are being added progressively. This is an on-going project which has three phases, listed in order of priority: 1) translations; 2) definitions; and 3) explanations and examples.

!!! Information: [http://www.who.int/water\\_sanitation\\_health/thelexicon/en/](http://www.who.int/water_sanitation_health/thelexicon/en/)

Source: Water, Sanitation and Health Newsletter N° 82 - 26 November 2007

### Readers contribution

### How to avoid clogged urine piping in no-mix toilets – from Sven Ingvar-Nilsson

Everyone who has worked with no-mix toilets has encountered the problems caused by urine sediments. As urine is an oversaturated solution the piping often clogs causing problems. Kidney stones are principally the same phenomenon as clogged piping. Different methods to get rid of the sediments have been proposed; strong acids and strong bases, or flushes with hot water. I myself have 12 years experience with a porcelain dry diverter in our permanent family home and we've rather often encountered clogged urine piping.

Two years ago I started to follow these pieces of advice:

1. Avoid water seals. In a dry diverter there is no need for them at all, the toilet is totally free from odour anyway. In a "double flush" toilet a water seal may be needed, but it should be placed within the toilet or very close to it and it should be of a type easy to flush clean.
2. Use 50-75 mm piping for single family houses and wider piping for multifamily houses. I myself have a 50 mm plastic pipe.
3. Be careful with the construction of the piping. The slope to the urine tank must be even. There must not be any places where the urine can remain and sediment.
4. Avoid metal pipes, especially copper, which may react with ammonia. Use plastic pipes!

Even if one acts accordingly I think one must be prepared to clean the piping in the future, maybe in 10-20 years, which I think is tolerable. I myself have a WM-Throne where a 19 mm hose leads the urine backwards through the bowl. This 19mm piping does not slope correctly and gets clogged maybe once every second month. I stir the sediments with a moderately stiff electric cable (voltage-free!) and then blow away the clogging with lungpower through a 250 mm long hose. So far, after 2 years, there's still no clogging in the wider pipe. I have never had any problems with sludge in the urine tank, nor do I expect any.

Some users recommend abundant use of flush water, which may prevent sediments. I do not like this idea! In order to make recycling of the urine profitable it is essential to keep volumes as low as possible.

!!! **Contact:** Sven Ingvar-Nilsson, [info@wost-man-ecology.se](mailto:info@wost-man-ecology.se)

## Trainings and courses

**Worldwide:** [ecosan E-learning course - capacity building](#)  
**03 – 08 December 2007**

**Organisation:** Ecosan Services Foundation in collaboration with Ecosan Capacity, a project funded by the Asia Pro Eco Programme of the EU

For those who cannot participate in ecosan face-to-face training courses in India, an internet-based introductory ecosan E-learning course has been developed. Designed and conducted by some of the most reputable ecosan experts worldwide, the course can be attended by all interested persons with a working internet connection **for free!**

This course provides a focused overview on ecological sanitation (ecosan) as a framework for sustainable sanitation development and resource management. Based on practical experiences, ecosan toilet systems (dry toilets, source separation toilets, etc.) will be introduced, analyzed and discussed online. Specific focus will be given on applications in developing countries.

Experts from Europe and Asia will be the supervisors and will give discussion incentives in the course. The participants will discuss topics such as which technology is best suited for which situation, how to approach different stakeholders, reuse and health aspects as well as which factors need to be considered for the successful implementation of ecosan projects. Participants will also be able to initiate discussions themselves.

Each training member who successfully participates in the e-learning course will get a course certificate from the International Ecological Engineering Society (IEES).

!!! **Information:** <http://www.ecosanservices.org/page.php?id=1165>

!!! **Contact:** [ecosan@ecosanservices.org](mailto:ecosan@ecosanservices.org)

!!! **Registration:** <http://www.myNetworks.org>



**India:** **City Water and decentralised Wastewater Management:  
alternative paradigms  
14 – 17 January 2008, New Delhi**

**Organisation:** Centre for Science and Environment (CSE), New Delhi

Through hands-on workshops, interactive seminars, detailed case studies, field trips and classroom instruction, the four-day workshop explores current water-waste, pollution management practices and policies and its drawbacks, suggests an alternative paradigm more suited to the Indian situation, and teaches participants to design and implement localised wastewater treatment systems.

**!!! Information:** <http://www.cseindia.org/aagc/citywater-workshop.asp>

**!!! Contact:** [rksri@cseindia.org](mailto:rksri@cseindia.org)

**India:** **“ecosan for you – exercises and case studies”  
21 January – 02 February 2008, Nashik, Maharashtra**

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

The Ecosan Services Foundation (esf), with support from gtz-ecosan and SECON 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.

Two training courses have already been successfully conducted in Nashik and 37 participants from all over the world have been trained and certified by the International Ecological Engineering Society as “ecosan experts”. The participants especially acclaimed 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 two ecosan training courses will be held at the MJP Research and Training Centre, Nashik, Maharashtra. The first one will be conducted from January 21st to February 3rd 2008. For people who cannot make it to this course, a second course will be offered from March 31st to April 12th 2008. An optional short wrap up for both courses will be held from April 13th to April 14th 2008. The course will be offered at a subsidised price of Rs. 8000 (approx. 140 Euro) for participants. The fee covers full board accommodation, field trips, all tuition costs as well as handouts and materials for the course. Discounts for university students are available.

**!!! Information:** <http://www.ecosanservices.org/page.php?id=994>

**!!! Contact:** [sreevidya.satish@ecosanservices.org](mailto:sreevidya.satish@ecosanservices.org)

**!!! Registration:** <http://www.ecosanservices.org/registration.php>

**Worldwide:** **Internet course “fundamentals and applications of ecosan”  
31 March - 19 July 2008**

**Organisation:** UNESCO IHE, Delft

The popular ecosan online course “fundamentals and applications of ecosan” which ran twice in 2007 (with a total of 49 participants), will run again in 2008. The topics of this online course are: introduction to ecosan; transfer and treatment of faeces, urine and greywater; agricultural reuse; water demand management measures; rainwater harvesting; non-technical aspects. The course runs for 16 weeks in a part-time mode (about 8 hours per week). A demo version of the course (including free access to all course materials) is available from UNESCO-IHE.

**!!! Information:** Demo-version of UNESCO-IHE online-ecosan-  
<http://www.lms.ihe.nl> (login: ecosandemo, Passwort: 1234)

There will also be **two new online courses in 2008** in topic areas related to ecosan, which are currently being developed with several partners (both courses will run for the first time during 3 March – 21 June 2008):

**“Urban groundwater pollution from sanitation, and groundwater protection”**

The topics in this course include: Introduction to urban groundwater pollution; introduction to hydrogeology; urban groundwater pollution processes; case studies for urban groundwater pollution (Sana'a (Yemen) and Kampala (Uganda)); approaches to urban groundwater protection (including, for example, ecological sanitation approaches).

**“Solid waste management and engineering”**

This course is currently being developed together with WASTE (Gouda, the Netherlands) and other partners.

These online courses are designed for mid-career professionals who work in low-income countries or countries in transition. The registration deadline is always one month before start of the course. The course fee is € 550. Some scholarships are available for applicants from developing countries (a separate application procedure is used for these scholarships). - A reliable and reasonably fast (ideally 512 kbps) internet connection is necessary for optimal participation in the course and for the interactions with teachers and fellow classmates. The material is also provided on a DVD.

**!!! Information:** on the above UNESCO-IHE online courses  
[http://www.unesco-ihe.org/education/short\\_courses/online\\_courses](http://www.unesco-ihe.org/education/short_courses/online_courses)

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

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

**Sweden: ITP courses "ecological alternatives in sanitation"  
July – August 2008, Stockholm**

**Organisation:** Stockholm Environment Institute

This advanced, international training programme in ecological sanitation focuses on attractive sanitation solutions for urban and peri-urban areas to promote human health, enhance human dignity, improve nutritional status and protect water sources. Target groups are professionals in selected countries in Asia, Africa and EECCA engaged in town planning, water supply, waste management, hygiene, and socio-economic development, researchers and teachers/trainers in fields related to sustainable sanitation, and key persons engaged in NGOs with projects associated with community development for improved sanitation and water supply.

Application deadline: **01 April 2008**

**!!! Information:** <http://www.ecosanres.org/ITP2007.htm>

**!!! Contact:** [cecilia.ruben@sei.se](mailto:cecilia.ruben@sei.se)

**Events New**

**Palestine: First Symposium on Wastewater Reclamation and Reuse  
02 – 03 April 2008, Birzeit**

**Organiser:** Institute of Environmental and Water Studies (IEWS), Birzeit University, in cooperation with the Palestinian Water Authority (PWA), the International Development Research Center (IDRC), German Technical Cooperation (gtz), and UNESCO-IHE Partnership for Water Education and Research (PoWER)

This symposium aims at exposing Palestinian policy-makers and other stakeholders to the different aspects of wastewater treatment and reuse for agricultural irrigation. The main theme is wastewater reclamation and reuse within Palestinian Integrated Water Resources Management. The Symposium is coupled with the World Water Day 2008

**!!! Information:** <http://home.birzeit.edu/iws/symposium/symp.htm>  
<http://www.worldwaterday.org>

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

**Spain:** **4<sup>th</sup> Int. Conference on Waste management & Environment  
02 – 04 May 2008, Granada**

**Organiser:** Wessex Institute of Technology, UK, The University of Granada, Spain  
University of Nagoya, Japan, Department of Planning and Regional  
Development, University of Thessaly, Greece

Waste Management is becoming one of the key problems of the modern world, an international issue that is intensified by the volume and complexity of waste discarded by society's domestic and industrial waste. Unfortunately, many of the practices adopted in the past were aimed at short-term solutions without sufficient regard or knowledge for long term implications on health, the environment or sustainability and this, in many cases, is leading to the need to take difficult and expensive remedial action.

**!!! Information:** <http://www.wessex.ac.uk/conferences/2008/waste08/index.html>

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

**!!! Download:**  
<http://www.wessex.ac.uk/conferences/2008/waste08/documents/WasteManagement08.pdf>

**Germany:** **15<sup>th</sup> International Trade Fair for Water and sewage (IFAT)  
05 – 09 May 2008, Munich**

**Organiser:** Messe München GmbH

In 2008, IFAT - the international trade fair for the environmental sector - will revolve around environmental solutions. It will be oriented to the future of environmental technology, focusing on everything from high tech to low tech including comprehensive solution approaches.

**!!! Information:** <http://www.ifat.de/link/en/16607391>

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

**UK:** **Water and sanitation in international development and  
disaster relief  
28 - 30 May 2008, Edinburgh, Scotland**

The workshop focuses on new strategies and sustainable as well as appropriate technologies to solve the complex and multi disciplinary problem of water and sanitation in disaster relief.

**Deadline for abstracts: 15<sup>th</sup> Dec 2007**

(can be extended until the paper deadline within reason.)

Deadline for full papers 31<sup>st</sup> Jan 2008

**!!! Information:** [http://www.lifelong.ed.ac.uk/water\\_and\\_sanitation\\_2008/](http://www.lifelong.ed.ac.uk/water_and_sanitation_2008/)

**Portugal: Eco-Architecture 2008  
23 – 25 June 2008, Algarve**

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

Eco-Architecture is by definition inter-disciplinary; it requires the collaboration of engineers, planners, physicists, psychologists, sociologists, economists, and other specialists, in addition to architects. The aim of the conference is to provide a forum for discussing the many relevant aspects of Eco-Architecture.

**!!! Information:** <http://www.wessex.ac.uk/conferences/2008/ecoarch08/index.html>

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

**!!!Download:**  
<http://www.wessex.ac.uk/conferences/2008/ecoarch08/documents/EcoArch07Dscreen.pdf>

**Portugal: Design & Nature  
24 – 26 June 2008, Algarve**

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

It is intended that the meeting will bring together researchers from around the world working on a variety of studies involving nature and their significance for modern scientific thought and design.

**!!! Information:** <http://www.wessex.ac.uk/conferences/2008/design08/index.html>

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

**!!!Download:**  
<http://www.wessex.ac.uk/conferences/2008/design08/documents/DesnNat08.pdf>

**Australia: 1<sup>st</sup> Int. Conference on Technologies and Strategic  
Management of Sustainable Biosystems  
06 – 09 July 2008, Perth**

**Organiser:** Environmental Technology Centre - Murdoch University

The conference will primarily focus on the technical aspects of Integrated Bio Systems (IBS) and their integration into society. Topics include: Integrated Biosystems for Waste Treatment and Reuse; Water Management in Integrated Biosystems; Nutrient Management in Integrated Biosystems; Health and Environmental Issues with Biosystems; Integrated Biosystems for Improving Degraded & Saline-Affected Soils; Community Participation and Governance; Education and Training; and Case Studies and Applied Technologies.

**!!! Information:** <http://www.designtrek.net/1stconfmsb>  
<http://www.etc.murdoch.edu.au/pages/conf1.html>

**!!! Contact:** Dr Jaya Nair [IOBB2008@gmail.com](mailto:IOBB2008@gmail.com)

**!!! Download:** <http://www.etc.murdoch.edu.au/pages/IOBBV3.pdf>

**Italy: International Symposium on Sanitary and Environmental  
Engineering  
23 – 27 July 2008, Florence**

**Organiser:** Marine Waste Water Discharges and Coastal Environment (MWWDD)

The conference focus is on innovative processes and technologies for water and wastewater management.

Some of the conference themes:

- Treatment and use of non-conventional water resources
- Integrated systems for waste and wastewater treatment and management
- Waste and wastewater management in low income countries
- Waste, sludge, and wastewater as alternative sources of energy
- Economics (financing and cost recovery, pricing and tariffs, benchmarking, ...)
- Recovery, Recycling and reuse
- Environmental sustainability

An early bird reduction (10%) is applied for registration before 30 March 2008

!!! Information: <http://www.andistoscana.it/sidisa08/index.php?file=temi&lang=eng>

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

**Sweden: World Water Week  
17 – 23 August 2008, Stockholm**

**Organiser:** Stockholm International Water Institute (SIWI)

The theme of the week is "Progress and Prospects on Water: For a Clean and Healthy World", including a Special Focus on Sanitation

The deadline for workshop paper proposals is **February 1, 2008**.

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

!!! Contact: [secretariat.www@siwi.org](mailto:secretariat.www@siwi.org)

!!! Download:  
[http://www.worldwaterweek.org/Downloads/Synthesis\\_07\\_web.pdf](http://www.worldwaterweek.org/Downloads/Synthesis_07_web.pdf)

**Botswana: IASTED International conference on water resource  
management in Africa  
08 – 10 September 2008, Gaborone**

**Organiser:** IASTED: The International Association of Science and Technology for Development

The purpose of this conference is to act as an interdisciplinary forum for decision-makers, academics, and professionals interested in the development and application of technology in ensuring the sustainable use and management of our water resources. The forum will cover both hard and soft technology and will serve to promote the use of appropriate technologies.

!!! Information: <http://www.iasted.org/conferences/cfp-604.html>

!!! Contact: [calgary@iasted.org](mailto:calgary@iasted.org)

**Malta: Sustainable Tourism 2008  
31 October – 3 November 2008, Malta**

**Organiser:** Wessex Institute of Technology, UK The Complutense University, Madrid, Spain

This conference will explore issues concerned with achieving environmental, social and economic sustainability of tourism alongside the governance mechanisms needed to support sustainable tourism. In particular, the meeting will focus on empirical work and case studies from around the world, which can offer new insights and best practice guidance.

!!! Information: <http://www.wessex.ac.uk/conferences/2008/tourism08/index.html>

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

!!! Download: <http://www.wessex.ac.uk/conferences/2008/tourism08/documents/SustTourism08.pdf>

## Events Reminder

**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)

**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)

**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**

Asia Water 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>

**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>

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

**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 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> Int. 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)

**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)

**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)

**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>

**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)

**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>

## 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](mailto: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](mailto: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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