

ecosan – newsletter - no. 14 - 11/2004 - english



This regular electronic news bulletin from the ecosan project 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. 14!

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/ecosan/download/nl14dt.pdf>

Spanish: <http://www.gtz.de/ecosan/download/nl14esp.pdf>

French: <http://www.gtz.de/ecosan/download/nl14fr.pdf>

English: <http://www.gtz.de/ecosan/download/nl14eng.pdf>

Chinese*: <http://www.gtz.de/ecosan/download/nl14cn.pdf> [available in Dec. 2004]

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

Your ecosan team hopes you enjoy the current issue!

Your contribution

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 for any contribution!

Contents

In-house news

- GTZ ecosan team to be further strengthened
- New members of the GTZ-ecosan project team

ecosan at the WSSCC WASH Forum

- "WSSCC - Global WASH Forum" 2004, Dakar, Senegal
- Partner-event on ecological sanitation and hygiene takes place at the "WSSCC - Global WASH Forum", 29th Nov. - 3rd Dec. 2004, Dakar, Senegal

News from the 3rd International ecosan Conference

- Conference website of the 3rd „International Conference on ecosan“ (23-27 May 2005 Durban, South Africa) now on-line
- Post-Conference seminar on ecosan in Agriculture and Horticulture

News from Ecosan Club

- Conference report "Reuse oriented Sanitation Systems" (16. 09. 2004) in Vienna
- Study on the improvement of water and sanitation infrastructure at a school in Uganda

News from WASTE

- The WASTE-ISSUE Programme
- Report from a "Participatory ecological sanitation planning workshop", Philippines

News general

- FAO creates a waste water treatment research centre to foster agricultural reuse
- EU ACP-Waterfacility: first call for proposals

Job Vacancies

- Tunisia, Tunis : Advisor to support the African Development Bank (AfDB) in the Water Sector
- Germany: The GTZ-Construction team seeks reinforcement

Pilot project news ... German cooperation

- China: Decentralised Water and Wastewater Management System launched
- Egypt: Tourist ships help green the desert
- India: News from the Indian Innovative Ecological Sanitation Network IIESN
- Namibia: Comprehensive report on inception phase and base-line study in Marienthal and Gibeon now available on-line

- Philippines: GTZ-WSP-Symposium on Low-Cost-Technologies
 - Philippines: Foundation of the Philippine Ecosan Network (PEN)
 - Romania: ecosan system implemented in the scope of the project "safe drinking water"
 - Ukraine: Double vault urine diverting toilets and waterless urinals for a school in Gozhuli, Oblast Poltava
 - Zambia - ecosan inception phase at a peri-urban school in Lusaka
- ... other organisations**
- Australia: Composting Toilets – Inner City Apartment Style in Melbourne
 - China: Nationwide "ecosan Integrate Act" by Jui San Society
 - Peru: Foundation of a national ecosan-team: GT-ecosan Peru
- Products and Links**
- From "worms eat my garbage" to the "vermi-composting toilet"
 - Ready made German compost toilets systems
 - Indian NGO pioneers plastic toilet pan
 - Pour-Flush squatting toilet pans from India
- Publications**
- ...on the web**
- New edition of the standard book on Ecological Sanitation Systems from EcoSanRes now available for download
 - WECF-publication "Ecological Sanitation and Associated Hygienic Risk"
 - A World Bank "Water and Sanitation Programme Africa" (WSP-Af) publication which includes a chapter on ecosan
 - WHO 2004: "Waterborne Zoo Noses: Identification, Causes, and Control"
 - Study on reuse oriented wastewater concepts for a village in the Nile delta, Egypt
 - Material flow separation in a multi-storey apartment building in Seoul, South Korea
 - Two interesting articles on Greywater recycling
- Information request**
- "Who is using, designing or implementing eco-sanitation systems that also incorporate separation or treatment of the water used for anal cleansing?"
- e-conference**
- Electronic Forum of the FAO /Netherlands Conference on Water for Food and Ecosystems, runs until 16. December 2004
- e-learning course**
- 6 - 10/12/2004 IEES e-learning course "Ecological Sanitation: Sustainable Toilet solutions – an e-learning course"
- New upcoming events**
- 02-04/12/2004 13th Annual Conference on Biogas and Bio-energy in Agriculture, Wolpertshausen, Germany
 - 06-07/12/2004 1st Conference on ecological health, Beijing, China
 - 06-10/12/2004 CREPA Network Research Forum – Community Sanitation, Hygiene and Water for Poverty Reduction, Ouagadougou, Burkina Faso
 - 19-28/02/2005 Prithvi 2005 – Global Eco Meet, Thiruvananthapuram, India
 - 23-25/02/2005 (...) Women's Participation in Water Management, Teheran, Iran
 - 08-11/03/2005 6th Water China / PVP China / AW China 2005, Guangzhou, China
 - 15-18/03/2005 3rd Int. Conference on Efficient Use and Management of Water, Santiago, Chile
 - 06-08/06/2005 3rd IWA Leading-Edge Conference on Water and Wastewater Treatment Technologies 2005, Sapporo, Japan
 - 08-10/07/2005 International Conference on Water Economics, Statistics and Finance, Rethymno/ Crete, Greece
 - 02-07/04/2005 7th Int. Conference on Urban Drainage Modelling & 4th Int. Conference on Water Sensitive Urban Design, Melbourne, Australia
- Upcoming Events-reminder**
- 25-29/04/2005 IFAT 2005 / 13. Europ. Wasser Symposium, München, Deutschland
 - 10-15/07/2005 1st IWA-ASPIRE (Asia Pacific Regional Group), Singapur
 - 08-11/11/2005 5th IWA Wastewater Reclamation and Reuse, Jeju, Korea
 - 16-22/03/2006 4. World Water Forum, Mexiko
- General information**
- contact and ecosan newsletter information
 - virus information

In-house news

GTZ ecosan team to be further strengthened

From the start of 2005, the GTZ ecosan core team in Eschborn will be complemented by 2 new positions.

The position of Heinz-Peter Mang is to be filled, as for the next two years, he will be working as a biogas / ecosan specialist with the Institute of Energy and Environment Protection at the Chinese Academy of Agricultural Engineering in Peking. For this post we are looking for an expert in the fields of agricultural, construction or environmental engineering (or from a similar field), with at least 10 years experience working in ecological wastewater management and at least 5 years experience of international development co-operation.

In addition to this, a junior expert is sought for ecosan information and knowledge management, and accompanying and overseeing ecosan pilot projects.

For both positions excellent knowledge of German and English with very good writing skills is required, as is the sound knowledge of an additional international language.

Competent negotiating skills, an interest in innovation and sustainable development as well as a large degree of creativity, commitment, and enthusiasm to work in an international team are further requirements.

!!! An exact job description can soon be found under:

<http://www.gtz.de/> [please select the links "Jobs" and "Germany"]

!!! Contact: christine.werner@gtz.de

New members of the GTZ-ecosan project

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

- **Katrin Pietzsch** from Germany graduated in Environmental and Process Engineering from Brandenburg University of Technology in Cottbus. She is currently carrying out an internship with the ecosan team in Eschborn (September – December 2004).
- **Jochen Weber** from Germany graduated in Architecture – specialization in urban management from the Technical University of Aachen (RWTH). He is currently carrying out an internship with the ecosan team in Eschborn (October – December 2004).
- **Ulrike Mosel** from Germany, water engineering student at Technical University Dresden. She is completing the second mandatory internship for her engineering studies in the ecosan team in Eschborn. (October – December 2004).
- **Sebastian Haß** from Germany, civil engineering student at the Technical University of Berlin will graduate in November 2004 and is carrying out an internship with the ecosan team in Eschborn (November 2004 – January 2005).
- **Tim Frese** from Germany, geography student at the University of Heidelberg. He is currently carrying out an internship with the ecosan team in Eschborn (October – December 2004).
- **Ina Jurga** from Germany recently graduated in civil engineering, with specialization in urban water and waste management from Universität-Gesamthochschule-Duisburg-Essen: She is working until the end of December as a short-term consultant in Eschborn, with the main task of composing technical data sheets and preparing ecosan activities in China.
- **Friedemann Klinek** from Germany studied biology at the Technical University Munich and has worked for some time in the tourism sector in Thailand. He is currently carrying out an internship with the ecosan team in Eschborn (December 2004 bis February 2005).
- **Sonny Syahril** from Indonesia obtained a BSc Regional and Town Planning in Indonesia and an MSc Resources Engineering at the University of Karlsruhe. He is currently carrying out an internship with the ecosan team in Eschborn (December 2004 bis February 2005).

ecosan at the ...
... WASH Forum

"WSSCC - Global WASH Forum" 2004, Dakar, Senegal

This week the 1st Global Water, Sanitation and Hygiene (WASH) Forum takes place in Dakar, Senegal (29th November - 3rd December). Organised by the Water Supply and Sanitation Collaborative Council, the general objectives of the forum are:

(a) to draw lessons on how successful water, sanitation and hygiene programs, sector reforms and development partnerships are in leading to the eradication of poverty, and
(b) to strengthen regional and national partnership initiatives aimed at attaining the goals of the World Summit on Sustainable Development.

Under the wider theme "Water, Sanitation and Hygiene for all - Solutions and actions; local and national" the Global WASH Forum will focus the topics of:

- * Finance
- * Coalitions
- * Local government
- * Policy

!!! For the latest detailed information on the Global WASH Forum go to:

<http://www.wsscc.org/dataweb.cfm?code=516>

Partner-event on ecological sanitation on Wednesday, 1 December at the "WSSCC - Global WASH Forum" 2004, Senegal

At the Forum a partner event on ecological sanitation and hygiene has been organised by the GTZ with the co-operation and participation of several other organisations (including the World Health Organisation, the London School of Hygiene & Tropical Medicine, Women in Europe for a Common Future, and the Mexican TepoZeco project). The event has been re-scheduled for the afternoon of Wednesday 1 December, 14h30 – 16h15.

The event highlights the importance of hygiene promotion and hygienic practice in ecological sanitation projects. Presentations will be given on the international perspective and upcoming WHO guidelines on the safe use of excreta and greywater from Thor Axel Stenström, on hygiene promotion from Dr. Val Curtis, and on field experiences with hygiene promotion in ecological sanitation projects in eastern Europe and Mexico.

We hope through this event to reinforce the importance of hygiene in sanitation systems which seek to safely collect, treat and reuse the resources represented by wastewater and excreta, and strengthen the cooperation between hygiene promotion and ecological sanitation professionals.

The **WHO** will be hosting a parallel event on "Breaking the barriers to sanitation: communicating policy and norms for better health". The upcoming WHO guidelines for the safe use of wastewater in agriculture, the safe use of wastewater in aquaculture, and the safe use of excreta and greywater will be presented and discussed, as will the sanitation connection information network.

EAWAG/SANDEC will host a parallel event offering a platform on faecal sludge management (FSM) entitled "Enhancing urban livelihood through proper management of faecal sludges from on-site-sanitation". An action plan for a sustainable FSM shall be discussed with recommendations being formulated at the Forum. The event is scheduled for Wednesday 1 December, 16h35 - 18h30 (Room C12).

EAWAG/SANDEC and **WSSCC** will present during a parallel event the preliminary guideline for decision makers entitled "HCES: Implementing the Bellagio Principles in Urban Environmental Sanitation Services".

Other side events currently planned by other organisations will look at further aspects of ecological sanitation, including the use of wastewater in irrigation.

!!! For more information on the side event on ecological sanitation contact:

patrick.bracken@gtz.de

News from the...

... 3. International ecosan Conference

Conference website of the 3rd International Conference on Ecological Sanitation (23-27 May 2005, Durban, South Africa) is now on-line

The Theme of the 3rd International Conference on Ecological Sanitation (23-27 May 2005, Durban, South Africa) is "Ecological Sanitation: A sustainable, integrated solution". The conference website is now available. Apart from giving information on the conference it will soon allow online registration.

!!! For detailed information on the 3rd International Conference on Ecological Sanitation visit: <http://www.buildnet.co.za/ecosan/index.shtml>

!!! Contact: cdejager@saice.org.za or Laustin@csir.co.za

Post-Conference seminar on agricultural and horticultural aspects on ecological sanitation Friday May 27th

You are invited to an afternoon seminar on agricultural and horticultural aspects of ecological sanitation Friday May 27th in Durban, South Africa. The seminar is arranged as a post-conference seminar in connection with the Third International Ecological Sanitation Conference.

The purpose of the seminar is to gather people with experience and/or interest in the reuse of urine and faeces for crop production. The focus is to network and exchange experiences on demonstration activities promoting reuse. Posters as well as papers are encouraged, within the framework of the Third Ecological Sanitation Conference. Registration takes place through the conference administration. For more information on registration, posters and papers, visit the conference website (see above).

There will be a small attendance fee, which covers also lunch and tea. Documentation and recommendations will be included in the conference proceedings.

The seminar is organized by Sida through EcoSanRes (<http://www.ecosanres.org>) in cooperation CSIR (<http://www.csir.co.za>).

!!! **Download:** Read more in the attached file, and please spread the invitation to those that might find this interesting.

<http://www.gtz.de/ecosan/download/Invitation-agro-seminar-050527.pdf>

!!! For more information please contact Elisabeth Kvarnström, Elisabeth@verna.se, or Håkan Jönsson, hakan.jonsson@bt.slu.se

News from

EcoSan Club

The contribution of architecture to ecologically oriented sanitary concepts – a conference report from EcoSanClub, 16.09.2004, at local credit Austria AG, Vienna

The meeting titled „Kreislauforientierte Abwassersysteme - Planung und Ausführung von ökologisch orientierten Sanitärkonzepten“ was well attended with over 40 participants from a broad range of disciplines, and from authorities, engineering offices and universities. The brisance of the topic was clearly defined with the focus of discussion firmly concentrated on Austria and Germany. Animated discussions followed the presentations and filled the coffee breaks.

The programme was divided into two main areas: i) Theory and ii) practical implementation. Both blocks concentrated on wastewater management, with the emphasis on the possible contribution of architecture to ecological sanitary concepts. It was clearly stated that for architecture function alone was not the only focal point. A balance between function and effect must also occur, and it was acknowledged that composition and design can play a huge role in ensuring acceptance. Both these themes are often largely neglected in the technical planning of sanitary concepts.

!!! **Download short conference report (in German):**

<http://www.gtz.de/ecosan/download/ecosanclub-report-040916.pdf>

!!! The documents presented in the conference (contributions and presentations) are available at: <http://www.ecosan.at>

!!! Contact: Elke Müllegger: elke.muellegger@boku.ac.at

Study on the improvement of the Water Supply and Sanitation Infrastructure at a Secondary School, Uganda

A recently published report from the EcoSan Club describes the work they were involved in at the Kalungu girls secondary school, Uganda, to help identify and implement a new sanitation system for the school.

The report contains an overview of the initial situation at the school and the systems that were identified, and provides a short cost comparison of the two different sanitation schemes that were proposed.

!!! Download Report:

<http://www.gtz.de/ecosan/download/study-ecosanres-ugandaschool03.pdf>

!!! Contact: Elke Müllegger: elke.muellegger@boku.ac.at

News from

WASTE

The WASTE-ISSUE Programme

The ISSUE programme (Integrated Support for Sustainable Urban Environment) is a four year plan till the end of 2006, financed by DGIS (Netherlands Agency for International Co-operation, Ministry of Foreign Affairs). The programme aims at enabling regional and local key-stakeholders to make informed and well motivated choices in the field of urban sanitation and waste management. Special attention is given to the introduction of ecological sanitation as an environmentally sustainable and socio-economically viable option for addressing a range of urban sanitation problems.

The ISSUE programme is an innovative, learning programme concentrating on capacity building, institutional development and organisational strengthening. To gain different experiences, ISSUE is active in 5 regions: Central America, West Africa, East Africa, India and the Philippines.

Report from the „Participatory ecological sanitation planning workshop in San Fernando city, La Union province, The Philippines, 2-8 October 2004“

In close collaboration with its ISSUE-partners in the Philippines, CAPS, Ideas SWAPP and WASTE gave a workshop during the first week of October in San Fernando City, La Union, The Philippines.

The objective of the workshop was to facilitate the establishment of concrete targets and activities at the project level and the formulation of programme management goals and milestones at the Consortium level. The participants were local key-stakeholders, e.g. key members from the two selected barangay (communities), the local government and local and regional NGOs. Objective of the project is the successful introduction of ecological sanitation in the communities Nagyubuyuba and San Agustin.

As a result of the workshop the municipality of San Fernando City, CFSLU, has further strengthened its appreciation of ecosan principles and expressed its commitment to stated project objectives. Mayor Mary Jane Ortega of San Fernando City hosted last day's session and expressed the city's need for and commitment to ecological sanitation as a sustainable and economically feasible approach to sanitation.

The direct follow-up to this workshop consists in the selection of the first beneficiaries of eco-san toilets, the local design and construction of the ecosan pan or bowl, detailing, budgeting and construction of the ecosan toilets.

!!! Download the one-page workshop report from:

<http://www.gtz.de/ecosan/download/workshopreport-Philippines-041002.pdf>

!!! Contact: Gert de Bruijn gdebruijne@waste.nl

News - general

FAO creates a wastewater treatment research centre in Kuwait to foster agricultural reuse of waste water

To promote the exchange of experience and technical know-how among Middle Eastern countries the FAO will assist Kuwait in establishing a reference centre for studies and research on wastewater treatment and reuse, the UN agency announced on 21 July 2004. Treated wastewater has potential benefits, particularly in water-scarce countries, as a non-conventional water resource for agricultural and other applications.

!!! Contact: Salah Al-Bazzaz, Information Officer, FAO, salah.albazzaz@fao.org

**Quoted from IRC Source Weekly <http://www.irc.nl/source> and
FAO Newsroom, 21 Jul 2004,
<http://www.fao.org/newsroom/en/news/2004/48464/index.html>**

EU Water Facility: First call for proposals

On November 11th the European Union (EU) issued a call for proposals for the first tranche of EUR 250 million from the ACP-EU Water Facility (WF). In total EUR 500 million may become available from the WF, which is aimed at projects providing water and sanitation services to the poor in Africa, the Caribbean and Pacific (ACP). The WF will provide grants to projects in three categories: (1) improving water management and governance; (2) co-financing of civil society initiatives; and (3) co-financing water and sanitation infrastructure. In the first two categories the WF will provide co-financing of up to 75 per cent of the total project costs (TPC) (TPC = EUR 200,000 - EUR 5 million). For category three projects the WF will provide co-financing of up to 50 per cent of total eligible costs and up to 75 per cent for project preparation (minimum TPC = EUR 5 million).

Several NGOs, noted that opportunities for civil society are limited, by putting in a minimum amount (EUR 200,000) for projects. However, the EU is now in negotiations to extend the cooperation between the Facility and other funding agencies, such as the African Water Facility, with the aim to deliver parts of the fund via an institution that is used to deal with smaller grants.

Of great interest for ecosan practitioners, is the fact that innovative and appropriate technical solutions, such as eco-sanitation are explicitly promoted in the call for proposals (page 20 of the guidelines). This facility may therefore serve as an important instrument to generate and support the implementation of integrated and demand driven proposals aimed at reaching the water and sanitation Millennium Development Goals.

Preliminary project proposals to the Water Facility should be submitted by 17/01/2005 at the latest!!

The GTZ-ecosan team is interested in submitting common project proposals, with interested partners, for ecosan activities to the Water Facility. Projects ideas can be discussed with Christine Werner (christine.werner@gtz.de).

!!! Download call for proposals :

<http://www.europa.eu.int/comm/europeaid/cgi/frame12.pl>

go to: "FED/BUDGET; Status=Open; Type=Grants; Region=ALL"; and "submit query"

Job Vacancies

Tunisia, Tunis : Advisor to support the African Development Bank (AfDB) in the Water Sector

The GTZ is seeking an expert to reinforce the capacity of the African development bank (AfDB) in the water sector. The primary task is currently foreseen as being to support the establishment of the African Water Facility and to guarantee the success of the Facilities first activities. Essentially the professional know-how of African Water Facility is to be strengthened regarding criteria for the selection of the countries and projects which can be promoted.

Under the keyword "**your qualification**" in the job description:

"You are an engineer, economist or social scientist or have an equivalent training in the relevant field. You possess several years of professional experience and have worked in foreign countries in technical or financial co-operations. Regional working experience would be advantageous. You have a good knowledge and experience in the field of water resource management. You have experience in the analysis of boundary conditions, the international sector dialogue (AMCOW, NePAD), organisational systems and the assistance approaches of other donors in the water sector. You know technical assistance and financial assistance procedures and the strategies and policies of the client bank, the BMZ. In addition you have a good overview of the setting of the bank and its strengths and weaknesses in the context of development co-operation in Africa. Experience with other international financial institutions is desirable. You can think analytically and have a high degree of creativity, personal initiative, working independence. You can fluently speak and write English. Knowledge of French language would be an additional advantage.

Duration of contract: December 2004 to December 2006

!!! Complete job description:

<http://www4.gtz.de/personal/jAutoriX/HTML-GUI/pool.jsp?idoc=RSYTPSMMRL>

!!! Further information and contact: Frau Ramp Anne.Ramp@gtz.de

Germany: The GTZ-Construction team seeks reinforcement

The "Construction team" of the GTZ is looking for reinforcement. The "Construction team" is responsible for the building services engineering (electro-technology, heating, communications etc.) and the new employee will support it in all its activities.

Under the keyword "**your qualification**" in the job description:

You have completed studies in building services engineering / civil engineering. You have several years of professional experience specialising in material in the national and international environment. You are familiar with the problems that arise during the transfer of western technical systems into other cultures. You possess high conceptual abilities and could present the concepts you develop to the broader technical community. You are capable of working independently, creatively and searching for appropriate solutions to problems.

The post is to be filled as soon as possible and is limited for 2 years. The information for the complete job description and contact address can be found at

Complete job description:

<http://www4.gtz.de/personal/jAutoriX/HTML-GUI/pool.jsp?idoc=ULUSSSLKQ>

!!! Further information and contact: Frau Birgit Seynsche Birgit.Seynsche@gtz.de

News from the projects ...

... German cooperation

China: Decentralized water and waste management system launched in Hou Yu Jiangsu Province

In Hou Yu village of Xia Xi Town in the Wujin District of Changzhou a decentralized water and waste management system is to be established. After several preparatory studies in 2003 (with the support of GTZ ecosan project) and 2004 an appraisal has taken place in September 2004. It has been agreed to invest around 1.2 Mio. CYN to implement the project, which is supported by the Sino-German "ECOCITY Planning and Management Programme - Yangzhou and Changzhou". The endeavour comprises an upgrade of the existing sewer network, improvement of the existing septic tanks system, construction of wetlands for the treatment of greywater and septic tank overflow, regular nightsoil and waste collection, nightsoil composting, and an upgrading of the local dumpsite.

The project shall be accompanied by an awareness campaign that has been launched in mid-November 2004 and will be continued until at least the end of the ECOCITY Programme in 2007. It is expected that the system will be in full operation in spring 2005.

!!! Information: <http://www.ecocity-programme.org>

!!! Contact: Dr Traenkler trankler@ait.ac.th .

Egypt: Tourist ships help green the desert

Over 200 cruise ships travel the Nile between Luxor and Assuan – each with a daily wastewater mass of around 40 tonnes. The management of this wastewater has to date been problematic. However a co-operation between two German companies, Grüschow Entsorgungs- und Umwelttechnik GmbH and Joachim Krüger Pflanzenkläranlagen GmbH, financially supported by the German Investment and Development Company (DEG), aims to solve this problem using a productive constructed wetland to treat the wastewater, which will then be used to irrigate vegetables, trees or flowers.

The pilot wetland in Luxor covers 1000 m² and currently treats the wastewater from two ships per day. Reeds are planted on the wetland, which is dimensioned in such a way as to ensure an optimal uptake of nitrogen, phosphorous and potassium and leave enough nutrients in the effluent to effectively fertilise the trees, flowers and vegetables currently being tested on the 3000 m² irrigation area that follows the constructed wetland.

The plant is built directly at the new Nile Harbour on Luxor, allowing an easy discharge of the wastewater from the ships. Following the two year pilot phase, four more such plants are planned along the Nile between Luxor and Assuan.

!!! Download pilot-project article (in German):

http://www.innovations-report.de/html/berichte/umwelt_naturschutz/bericht-30871.htm

!!! For further information: <http://www.deginvest.de>

India: News from the Indian Innovative Ecological Sanitation Network IIESN

In April 2004 The Indian Innovative Ecological Sanitation Network (IIESN) – a voluntary network of GTZ and different national and international partners (among others: ACTS India, Navsarjan Trust India, Indian Water Works Association, WOTR India, SDC Switzerland, NLH Norway, Waste Netherlands, BORDA Germany) – was established in order to promote ecosan development in India.

The objectives of IIESN are:

- Developing innovative and socially sound ecological sanitation systems (closed loop systems) for India (for rural and urban applications)
- Developing the institutional and economical framework for innovative ecological sanitation implementation in India
- Implementing 3-5 case studies in India (Bangalore, Nagpur, Khopoli, Sanand).
- Capacity building, knowledge dissemination, communication and implementation support

Currently Martin Wafler works as an intern under IGBP-CB&T Maharashtra State (Indo-German Bilateral Project Capacity Building and Training for watershed management and agriculture extension) to elaborate analyses and plans for modifying conventional sanitation systems into ecosan concepts. The four cases deal with three different training centres in Gujarat and Maharashtra and one slum community toilet block in Karnataka.

The Navsarjan (Gujarat) Case

The Navsarjan Training Centre in Sanand, Gujarat provides socially disadvantaged dalit youth (ladies and gents) a sound vocational education in different technical and non-technical professions. This enables students to later lead a self sustained socially accepted life. The Swiss supported centre with hostel facilities, workshops library, kitchen and dining hall, classrooms, community training centre and offices (admin block) has up to now discharged it's waste waters and solid wastes the conventional way. Scarce freshwater and social as well as environmental concerns have made it, that the institutes management called for changing this into an appropriate innovative ecosan system. The currently ongoing analyses go very much into details, as the Navsarjan Management wants to replace the existing sanitation system with as little efforts and costs as possible, without compromising on functionality and reliability.

The Vanamati/Rameti (Maharashtra) Cases

The new huge campus facilities of the Government of Maharashtra (GoM) owned Nodal Agricultural Training Centre "VANAMATI" in Nagpur India are currently under construction. They will include hostels, training- and lecture halls, a convention hall, syndicate rooms, offices and administration plus staff-quarters. Similar to the Navsarjan case, the conventional sanitation concept has been assessed and modifications as per ecosan principles suggested and introduced. This new centre can be an exemplary case regarding the application of various innovative technologies, among which the introduction of ecosan as basic concept for making the campus water saving and almost waste-water-effluent free is not going to be the least one.

Furthermore the campus facilities of one of the seven so called RAMETI's (Regional Agricultural & Extension Management Institutes) under GoM, situated in Khopoli, near Mumbai are also intended to be equipped with ecosan applications. The ideas to be followed in Khopoli are in principle similar to the ones in Nagpur.

Both institutes' future ecosan installations are supposed to not only provide environment friendly wastewater collection and treatment, but serve for demonstration purposes for all potential visitors, students and other interested stakeholders. This in combination with the agricultural orientation of the institutes will be of much value to spread the ecosan nutrient recycling ideas amongst farming professionals.

The Bangalore (Karnataka) Case

ACTS Ministries (Bangalore, India) is an NGO (Non-Government, non-Profit Organization) for capacity building with a centre for agricultural training, operating an ecosan toilet centre in a slum for the last 4 years. The centre serves some 600-800 People daily and is well accepted by the community as well as the operators. The operational experiences have repeatedly been analysed and a number of improvements have found to be necessary. They include inter alia the modification (optimisation) of the separate collection of faeces and urine for more efficient handling (transport) and the treatment and utilization of both fractions by the above mentioned centre for agricultural training. Martin Wafler has elaborated detailed plans which are currently under discussion and ready for implementation.

**!!! Contact: Mr. Hinnerk Bartels: hinnerk.bartels@gtz.de
and Mr. Martin Wafler: martin.wafler@gmx.at**

Namibia: Comprehensive report on inception phase and base-line study in Marienthal and Gibeon now available on-line

In June of this year the international inception phase and base-line study team working in Namibia finalised their data collection work. The team (Kristian Franzius, Germany, Ines Lacayo, Nicaragua, and Dino Kohima, Namibia) presented the first results at a National Workshop on ecosan in Windhoek/Namibia and oversaw the pilot implementation of 2 urine diversion systems (UDS) - one permanent in-house facility and a mobile facility - in Marienthal and one permanent in-house facility in Gibeon.

The final comprehensive report of this work is now available for download.

!!! Download base-line study:

<http://www.gtz.de/ecosan/download/Namibia04-Mariental-Gibeon.pdf>

!!! For further information contact: patrick.bracken@gtz.de

Dino Kohima and GTZ-Junior Expert Christiane Jung, who is working with the GTZ-Service Delivery Promotion Project in Windhoek until the end of this year, are continuing the work and are available for technical advice for further implementation of UDS planned in Marienthal.

Philippines: GTZ-WSP-Symposium - Low-cost-Technologies for the supply of water and sanitation

Ecosan was an important focal point of the the first International Symposium on Low cost technologies for water supply and sanitation, organized by the DILG GTZ the Water Program and the Water and Sanitation Program (WSP) of the World Bank, from the 12-14 October in Bohol (the Philippines). Decentralized Wastewater Treatment Systems (DEWATS from BORDA), constructed wetlands and biogas plants were further topics of the presentations. In working groups over 100 specialists, officials and politicians from the „Central Visayas" region, discussed the potential and acceptance of the concepts and technologies presented as solutions to the urgent problems in the water and particularly the waste water sector in the Philippines. As a direct result of the workshop the establishment of a national ecosan working group was agreed (see below), as well as the first steps for several concrete pilot projects. Philippine and German companies used the occasion presented by the conference to exhibit products for waste water treatment and rain water use.

!!! Contact: Florian.Klingel@gtz.de and gtzwater@info.com.ph

!!! Download the Symposium documents (will be soon available):

<http://www.gtz.de/ecosan/download/GTZ-WSP-Symposium-041012.pdf>

!!! Information on the DILG-GTZ-Water Programme

<http://www.gtz.de/philippines/projects/rwsp.html>

Philippines: Foundation of the Philippine Ecosan Network (PEN)

On the occasion of the 1st International Symposium on Low-cost Technology Options for Water Supply and Sanitation held in Bohol, Philippines last October 12 to 14 (see above), broad interest among the participants in the philosophy and technology options of ecological sanitation lead to the formation of the Philippine Ecosan Network (PEN).

On its first meeting on November 11 in the House of Representatives in Metro Manila the "Philippine Ecosan Network" defined its objectives and drew up a one year plan of action for ecosan in the Philippines. The network's main objectives are to improve common understanding on ecosan concepts and principles, to act as a venue for knowledge sharing, to build up local experience in ecosan, to develop capacity and expertise within the network and the target sectors, to promote ecosan through policy advocacy at the national and local levels and to broaden the network of ecosan practitioners.

To date the PEN connects Philippine organisations and institutions including the Center for Advanced Phils Studies (CAPS), Health Alternatives for total Human Development Institute, Inc. (HEALTHDEV), the Committee on Ecology, the Department of Local and Interior Government (DILG), the Water Supply and Sanitation Program Management Office (WSSPMO), the University of the Philippines (UP), World Bank's Water and Sanitation Program East Asia and the Pacific, and GTZ's Solid Waste and Water Program. Other interested institutions and individuals are invited to join the network.

!!! Join the internet discussion group:

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

Romania: ecosan system implemented in the scope of the project "safe drinking water"

In a rural Romanian school waterless, double vault urine diverting toilets and waterless urinals were installed as a groundwater-protection measure and for better sanitation condition installed. Due to the ecosan toilets, farmers are now provided with an excellent fertilizer. The project has been carried out by "Women in Europe for a Common Future" (WECF) in cooperation with the Technical University Hamburg-Harburg (TUHH). A detailed article on the project can now be downloaded from the WECF web-site. Reference to the first phase of the project is as well made in the below given WHO-publication (p.21).

!!! Download pilot-project report:

http://www.wecf.de/cms/download/finalreport_safewater_romania.doc

!!! Download WHOs

"Children's Health & Environment Case studies Summary book" from:

<http://www.wecf.de/cms/articles/2004/11/checcs.php>

Ukraine: Double vault urine diverting toilets and waterless urinals for a school in Gozhuli, Oblast Poltava

In the scope of in the MATRA pilot project in Ukraine "Cooperation for Sustainable Rural Development", financed by the Dutch ministry of Foreign Affairs, Women in Europe for a Common Future (WECF) and his Ukraine partner Mama-86 built for the primary school in the village Gozhuli in Poltava Oblast double vault urine diverting toilets and waterless urinals for app. 160 children. The draft and the supervision of the construction were carried out by Dipl.-Ing. Stefan Deegener, Hamburg University of Technology.

On October, 30th 2004 the new toilets were inaugurated festively. Instead of going to bad smelling latrines in the cold yard, the Ukraine children can stay inside of the school and use double vault (compost) toilets or waterless urinals. The urine of the 3 urine-diverting toilets and the 3 urinals is conducted to one of the two reservoirs, which are buried in the soil. Two urine reservoirs were chosen to keep in the urine storage time of 6 month.

After appropriate storage and treatment the products of the toilets and urinals will be used in agriculture.

!!! Further information: <http://www.wecf.org>

!!! Contact: Margriet Samwel margriet@wecf.org or
Stefan Deegener deegener@tu-harburg.de

Zambia: ecosan inception phase at a peri-urban school in Lusaka

In a cooperative effort between the University of Zambia in Lusaka and the Technical University of Berlin in Germany, a student project team is carrying out an ecosan inception phase at a peri-urban school in Lusaka, Zambia. The project team consists of Chibesa Pensulo and Kasenga Hara under the supervision of Dr. Mundia Muya on the Zambian side as well as Barbara Wagner and Thilo Panzerbieter under the guidance of Reinhard Marth on the German side.

By the end of 2004, a project proposal will be entered in a contest conducted by UNESCO and sponsored by DaimlerChrysler. The "Mondialogo World-Wide Engineering Award" challenges students in various fields of engineering to form teams consisting of members from developing and industrialized nations to work together on a project that will present sustainable solutions to contribute to reaching the Millennium Development Goals. With the prize money, the Zambian-German project team intends to create a pilot project that will be accessible to the expert community, in order to demonstrate various forms of ecosan technologies and thereby reduce the cost factor of awareness raising that is currently deterring the greater part of the sanitation expert community in Zambia from embracing ecosan as a feasible option.

You can find out more about the progress of the project by visiting the Project Team's "Virtual Project Office". As you explore this web-page, please keep in mind that this is the work platform for information exchange within the team. The information being displayed should not be further used by people other than the team members as it does not display a final product. Final assessment of the project work will not be completed until February 2005.

!!! Virtual Project Office:

<http://www.tu-berlin.de/fb9/iwawi/MASeiten/staff/marth/mondialogo/index.htm>

!!! Contact: Thilo Panzerbieter: tpan@uni.de

**News from the
projects ...**

**... other
organisations**

Australia: Composting Toilets – Inner City Apartment Style in Melbourne

The feasibility study report of a demonstration project with modern composting toilets in 12 inner city apartments at a landmark site to be redeveloped in Melbourne has been finalised and is now available online. You can download a copy of the executive summary or the full report at the web-site given below. The Smart Water Fund and the Project Team – GHD, Bensons Property Group, Demaine Partnership (architects) and Environment Equipment (Rota-Loo®) – jointly funded the project.

The next stage of this project did not receive funding in the second round of grants from the Smart Water Fund, however the project leader is still interested in speaking to any developer, sub-contractor or other user who is interested in the proposals for apartments or larger subdivisions on the urban fringe.

Please use the email link provided in the web-site below if you have an interest in this project.

!!! Further information: <http://www.ghd.com.au/compostloo>

China: Nationwide “ecosan Integrate Act” by Jui San Society

After successfully implementing ecosan activities in nearly 300 villages in Yongning county, Guanxi province, the Jui San society now aims to promote ecosan nationwide. Since October 2004 the Jui San Society has set out its “ecosan Integrate Act”, calling its other provincial organization paying special attention in ecosan promotion and implementing ecosan projects. Jui San Society hope to work together with different level governments and international agencies for further upscaling ecosan especially in rural areas of China.

!!! Further information and contact:

Lin Jiang, Guanxi committee of Jui San Society, jsqx@public.nn.gx.cn

Peru: Establishment of a national ecosan working group: GT ecosan Peru

On 3 April 2004 the working group was founded (GT-ECOSAN-PERU) for the promotion, dissemination and development of ecosan in Peru. Subsequent to this the first national ecosan Workshop in Peru was organised, and attended by more than 30 institutions, among them government organisations, universities, social organisations and NGOs. In the Workshop Ron Sawyer (SARAR Transformación SC) and Juan of Carlo Calizaya (CENCA) gave an introduction to the potential of ecosan systems and their adaptation in Peru. The experiences from projects of different Peruvian organisations and Universities (CENCA, APDES, ALTERNATIVA, ECOCIUDAD, Grupo de Apoyo Rural de la PUCP, Facultad de Arquitectura de la UPAO) were also presented in the workshop. At the closure workshop al plan of action for the regions of Costa, Sierra and Selva was adopted.

!!! Contact: ecosanperu_gt@yahoo.es and jcarloscenca@terra.com.pe

!!! Download the workshop highlights and establishment explanation:

<http://www.gtz.de/ecosan/download/GT-ecosan-Peru.pdf>

Products and links

From "worms eat my garbage" to the "vermi-composting toilet"

Mary Appelhof's 1982 book, "Worms Eat My Garbage", spawned many a home vermi-compost system and has popularized the technique over the years. The guide has now sold over 175,000 copies and earned Appelhof international recognition as the "Worm Woman."

Managing a worm bin is relatively simple. An aerated container is filled with worm bedding (shredded newspaper and dried leaves, or straw), a small amount of soil, and perhaps a pound (half a kilogram) of red worms or bloodworms.

Bacteria and other organisms break down food scraps buried in a bin maintained at proper temperature and moisture levels. Then the worms get to work, eating everything in their path - waste, organisms, and bedding. Afterward, the worms excrete a soil-like rich, dark humus. But only certain worms can do the job.

"You can't just go out in your garden, dig up worms, and have them work," Appelhof said. "There are about 4,500 species of earthworms. Only six to eight are used for composting." One is *Eisenia foetida*, commonly known as a red worm.

!!! For further information visit: <http://www.wormwoman.com/acatalog/index.html>

The popularity of worm bins has stimulated the development of worm or vermi-composting toilets. A vermi-composting toilet is a beautiful thing and a marvel to behold when it has been designed well and operating smoothly. Correct operation only requires an understanding of general, basic worm composting techniques and infrequent maintenance. As easy as the vermi-composting toilet is to operate, it's better to get experience first operating a worm bin for kitchen scraps. After managing (and troubleshooting) your worm bin, you'll find it easy to run a worm composting toilet. So, give it a try!

Extensive information on vermi-composting - including how to build and maintain a vermi-composting toilet - is given on the website below in an article of S. Zorba Frankel

!!! Visit: <http://www.wormdigest.org/wormtoilet.html>

Ready made German compost toilet systems

Ceramic and wooden models of Urine Diversion Compost Toilets can be ordered as ready made systems from the web-site of "Bueroholzapfel". The web-site also provides information on the dimensions of the system, maintenance instructions (in German) and photographs of the different models.

!!! Further information: <http://www.bueroholzapfel.de/>

!!! Download: <http://www.bueroholzapfel.de/Keramik.pdf>

!!! Download: <http://www.bueroholzapfel.de/Holz.pdf>

Indian NGO pioneers pour-flush plastic toilet pan

The Indian NGO Gramalaya has designed a toilet pan made of polypropylene plastic material with the financial support of WaterAid India Office, New Delhi. The toilet pans have been introduced in the construction of low-cost household toilets. The pan is made according to international standards and costs around INR 60 (1,07 Euro). The water seal is designed like gooseneck, so that only small volumes of water is required to flush the toilet pan.

Before sales in the open market, the toilet pan was installed at the Gramalaya Toilet Technology Centre and field tested for use and maintenance. It was found that very little water is required to flush (2 litres) and cleaning and maintaining of the plastic toilet pan is very easy, hence the brand-name "Easyflush".

Gramalaya is does not intend to monopolise the design, and hopes to stimulate manufacturers in producing the plastic pans in various locations.

!!! Information on this design: <http://www.toiletsforall.org/easyflush.html>
and on other toilet designs: <http://www.toiletsforall.org>

!!! Information on the NGO Gramalaya:
<http://www.gramalaya.org> and <http://www.healthemailnewsletter.org>

!!! Contact: S.Damodaran try_gramlaya@sancharnet.in

Pour-Flush squatting toilet pans from India

Over the last 10 years SHITAL Vitreous Ware has been producing ceramic equipment for "Pour Flush Latrines". The system was developed during an action research project supported by SIDA, UNICEF and others. The toilet needs about 2 litres only per flush and thus saves water.

!!! Download information on Shital Vitreous Ware:
<http://www.gtz.de/ecosan/download/Shital-poorflush-squattingpan.pdf>

!!! Contact: Shital Ceramic Works, Ahmedabad - 380009, India, Mr. Jayant Sompura,
Phone: 91-79-26561560 / 26469356, Fax: 91-79-26402123

Publications

... on the Web

Ecological Sanitation – revised and enlarged edition

Perhaps the most widely known book on Ecological Sanitation, first published in 1998, has been revised, updated and enlarged and is now available on-line i.

!!! Download: http://www.ecosanres.org/PDF_files/Ecological_Sanitation_2004.pdf

Ecological Sanitation and Associated Hygienic Risk – An overview of existing policy making guidelines and research

The publication "Ecological Sanitation and Associated Hygienic Risk – An overview of existing policy making guidelines and research" by D.R. Gajurel and C. Wendland 2004 has been published by "Woman in Europe for a Common Future" (WECF) and provides a good introduction to ecosan and an overview on current health issues over 36 pages. It can be downloaded from the WECF website.

!!! Download: http://www.wecf.de/cms/publications/2004/eco_san_pub.php

World Bank "Water and Sanitation Program - Africa" (WSP-AF): Field note with chapter on ecosan

A field note of the World Bank Water and Sanitation Program – Africa (WSP-AF) with a chapter on ecosan is the 2004 publication "Sanitation and Hygiene in Kenya: Lessons on What Drives Demand for Improved Sanitation" prepared by Barry Jackson. It shows that ecosan systems are well received in a number of projects [„A demonstration latrine constructed in a primary school has attracted the interest of parents who have asked for the design so they can construct one in their homesteads.“ (p. 9) or "One project to introduce the Arborloo latrine has been received with enthusiasm. The initial three demonstration latrines have been replicated to 57 within the last year. The health and agricultural benefits are clear to the community. “(p. 9-10)]. However the publication notes that the total number of ecosan toilets in Kenya is still meagre and awareness is missing. "All groups admitted to a lack of knowledge on excreta-re-use" (p. 7), while "70% of the survey respondents reported that they plant foodstuffs such as bananas on filled up pits which are consumed by household members." (p. 7)

!!! Download: "Sanitation and Hygiene in Kenya: Lessons on What Drives Demand for Improved Sanitation" prepared by Barry Jackson 2004 from:
http://www.wsp.org/publications/af_kenya_hygiene.pdf

Other recent WSP-AF field notes available for download include:

"Who Buys Latrines, Where and Why? - Insights from a study of household latrine adoption in rural Benin" by Marion Jenkins 2004
http://www.wsp.org/publications/af_latrines.pdf

and

“The Case for Marketing Sanitation” by Sandy Cairncross 2004.

http://www.wsp.org/publications/af_marketing.pdf

WHO 2004: Waterborne Zoonoses: Identification, Causes, and Control

This publication provides a critical and balanced assessment of current knowledge on waterborne zoonoses and identifies strategies and research needs for anticipating and controlling future emerging water-related diseases. It provides an invaluable tool for all professionals concerned with assessing and managing waterborne disease in humans or animals.

!!! Download: http://www.who.int/water_sanitation_health/diseases/zoonoses/en/

„Design and evaluation of reuse oriented wastewater concepts for a village in Nile Delta of Egypt“ - Lucia Hernández Leal

„Design and evaluation of reuse oriented wastewater concepts for a village in Nile Delta of Egypt“ is the title of a project work of Lucia Hernández Leal, prepared in collaboration with the GTZ-ecosan-team and submitted to the Technical University at Hamburg Harburg. For a village in the Nile Delta, currently lacking sufficient wastewater treatment, six different wastewater management systems were studied. Of those scenarios 2 were based on pond treatment, 1 on vermi-composting, 2 on anaerobic treatment and 1 on the separation of wastewater streams.

The study includes a good economic analysis and uses an indicator-based evaluation scheme, emphasising user acceptance and the potential of resource recovery, to compare the six scenarios.

!!! Download:

<http://www.gtz.de/ecosan/download/Village-NileDelta-LHernandez-040629.pdf>

Material flow separation in a multi-storey apartment building in Seoul, South Korea - Thesis (Diplomarbeit) by Nicole Drücker

Based on material flow separation, Nicole Drücker has developed 6 different possible ecosan system models in her thesis "An exemplary design of the waste water recycling for a multi-storeyed apartment building in Seoul, South Korea". They include 3 urine diversion systems, 2 black water systems and 1 membrane activated sludge system without flow separation. All models were examined and compared with respect to their consumption of drinking water and energy as well as their economic efficiency.

Of the 6 systems examined, 5 led to a significantly better management of drinking water resources. Economically the scenario with urine separation and the use of the urine as fertiliser proved particularly interesting, as a reduced nutrient discharge to the treatment plant enables an optimum treatment with a lower energy demand. The integrated wastewater, solid waste and biogas concept also proved interesting due to its positive energy balance. However, due to massive subsidies in drinking water supply and wastewater management in South Korea, innovative approaches to sanitation are seriously inhibited

!!! Download:

<http://www.gtz.de/ecosan/download/Seoul-SouthKorea-NDruecker.pdf>

Two interesting articles on greywater recycling

The aim of the studies of Amit Gross and colleagues from the Zuckerman Institute for Water Research at the Ben Gurion University of the Negev were to:

1) develop an economically sound, low-tech and easy to maintain treatment system (RVFCW) for the safe and sustainable use of greywater. The results are discussed in:

Gross, A., Shmueli, O., Ronen, Z., Raveh, E., and G. Oron. 2004. Recycled vertical flow constructed wetland (rvfcw) – a novel method to reuse graywater for landscape irrigation in small communities and households. 9th International IWA Specialist Group Conference on Wetlands Systems, Avignon, France.

!!! Download this article from:

<http://www.gtz.de/ecosan/download/greywater-rvfcw-040428.pdf>

2) demonstrate the potential effects of detergents (surfactants) originating from greywater on soil properties. In this study it was found that greywater reuse without treatment may have negative impacts on soil quality, and may lead to the development of water repellent soils. The results of this study are summarised in

A.W. Shafran, A. Gross, Z. Ronen, N. Weisbrod and E. Adar "Effects of Surfactants Origination from Reuse of Greywater on Capillary Rise in the Soil"

!!! Download this article from:

<http://www.gtz.de/ecosan/download/greywater-effects-010604.pdf>

Information request

Who knows of eco-sanitation projects or systems that also incorporate separation or treatment for water used for anal cleansing?

Abdullah Adam-Bradford would like to hear from anyone using, designing or implementing eco-sanitation systems that also incorporate the separation or treatment of water used for anal cleansing

!!! Please contact him at a.m.bradford@rhul.ac.uk or at the address:

Centre for Developing Areas Research, Department of Geography, Royal Holloway, University of London, Egham, Surrey, TW20 0EX, UK

e-conference

Electronic Forum of the FAO /Netherlands Conference on Water for Food and Ecosystems

runs until 16. December 2004

Organiser: FAO/Italy, Ministry of Agriculture, Nature and Food Quality/Netherlands, Ministry of Foreign Affairs/Netherlands

FAO and the government of the Netherlands invite you to participate in an Electronic Forum on Water for Food and Ecosystems. This E-Forum aims to collect and discuss experiences from various parts of the world on appropriate management practices in integrated management of natural resources, linking water, food and ecosystems.

The E-Forum is part of the FAO/Netherlands Conference on Water for Food and Ecosystems that will be held from 31 January - 5 February 2005 in The Hague. The outcomes of this conference will be communicated to the 13th session of the Commission on Sustainable Development in April 2005, which has a focus on water issues.

In the first phase of the E-Forum, which runs from mid November until mid December 2004, case studies are collected to build a case-study database. These case studies should consist of short statements that are supported by a 2-3 page background description and possibly references to more detailed documents or websites. You are cordially invited to participate in this E-Forum by adding your knowledge and by contributing cases and documents.

!!! Further information on the E-Forum and the Conference:

http://www.fao.org/ag/wfe2005/eforum_en.htm

e-learning course

"Ecological Sanitation: Sustainable Toilet solutions – an e-learning course"

6 – 10 December, 2004

Organiser: IEES – International Ecological Engineering Society

The online course "Ecological Sanitation: Sustainable Toilet solutions – an e-learning course" will provide practical knowledge on the framework of ecosan and ecosan toilet systems, and should serve as a working basis for decision makers, planners, developers, etc. A course description can be downloaded from the web-site below.

!!! For more information visit:

http://www.iees.ch/pdf_files/Ecosan_course_2004.pdf (65 kb)

!!! Contact: Johannes Heeb , johannes.heeb@seecon.ch

Events...

... new

Germany: 13th Annual Conference on Biogas and Bio-energy in Agriculture

2 - 4 December, 2004, Wolpertshausen

Organiser: IBBK (International Biogas and Bio-energy Competence Center) Fördergesellschaft nachhaltige Biogas und Bioenergie Nutzung e.V. Landesinitiative Erneuerbare Energien Baden-Württemberg Wirtschaftsministerium Baden-Württemberg (Infozentrum Energie)

At the start of December 2004 in northern Baden-Wuerttemberg the 13th conference on "Biogas in the agriculture" will take place. This year the support possibilities for renewable raw materials offered by the new Renewable Energy Laws (EEG) will be presented, as will new distribution and plant technologies, which should encourage market transparency at this time of increasing demand for these systems. The conference starts on the 2nd December and concludes on the 4th with a biogas study tour to plants in Hohenlohe and Franconia.

!!! Information: <http://www.biogas-zentrum.de/Jahrestagung13/index.html>

!!! Kontakt: info@biogas-zentrum.de

China: First conference on ecological health

6 - 7 December 2004; Beijing

Organiser: Central Committee of Chinese Peasants' and Workers' Democratic Party

The first conference on ecological health is organised by the Central Committee of Chinese Peasants' and Workers' Democratic Party. The organisation Chairman is Prof. Jiang Zhenghua, Vice chairperson of the Standing Committee of the National People's Congress and Central Chairman of Chinese Peasants' and Workers' Democratic Party. The executive committee is the Ecosan special committee of the Chinese Institute of Ecology. Eco-health describes the health of both human beings and the natural environment.

One topic of the conference will be "ecosan and eco-health in rural areas of China"

The Opening ceremony will be in the Great Hall of the National People's Congress. Venue and registration: Site of the China Hall of Science & Technology: No.3, Fuxing road, Haidian District, Beijing

!!! Contact: Science Department of Chinese Institute of Ecology, esc@mail.rcees.ac.cn, zwh8303@yahoo.com.cn

**Burkina Faso: CREPA Network Research Forum – Community Sanitation, Hygiene and Water for Poverty Reduction
6 - 10 December 2004; Ouagadougou**

Organiser: CREPA (Centre Régional pour l'Eau Potable et l'Assainissement à faible coût)

The objective of the Forum is to share the experiences gained through CREPA's research projects on ecological sanitation, waste sludge management, greywater by small bore sewers and micro-finance with national, regional and international actors in the sanitation and water sectors and to discuss alternative viable sanitation solutions, hygiene measures and water supply in rural, peri-urban and urban areas.

Deadlines for registration and paper submission have passed.

!!! **Further information:** <http://www.reseaucrepa.org/>

!!! **Contact:** Amah Klutsé or Hervé Tiendrébéogo, forum@reseaucrepa.org

**India: Prithvi 2005 – Global Eco Meet
19 - 28 February, 2004, Thiruvananthapuram, Kerala State**

Organiser: Swadeshi Science Movement (SSM)

PRITHVI 2005, organized by Swadeshi Science Movement in association with various international, national, regional agencies, government departments, scientific institutions, public and private enterprises, is a first of its kind which will bring together the entire green lobby in a single platform. The event will be held from February 19 to 28, 2005. Swadeshi Science Movement (SSM) aims at the development and propagation of science at all levels right from popular to professional and research levels. The movement attempts a holistic approach to adopt, adapt and assimilate the best from anywhere else and blend them to India's age-old socio-cultural and scientific traditions.

A high number of ecosan-related themes are discussed including:

- Decentralised community based sewage treatment
- Cost-effective and eco-friendly treatment of sewage
- Household wastewater recycling systems
- Sustainable agriculture – rural poverty, population growth
- Integrated nutrient management

Deadline for the Call for Papers was 30 November, 2004.

!!! **For further information and online registration visit:**
<http://www.prithvionline.org/default.asp>

!!! **Contact:** ssmkerala@eth.net

**Iran: Promotion of Women's Participation in Water Management
23 - 25 February, 2005, Teheran**

Organiser: UNESCO, Regional Centre on Urban Water Management – Teheran
I. R. Ministry of Energy

The Regional Centre on Urban Water management (RCUWM - Teheran) intends to hold a training workshop, aimed at involving international, governmental and non-governmental organizations which have had a significant part in promoting women's role in water management and also in creating dialogue among all national organizations and institutions involved in this field. The main themes of the workshop are: - How to develop strategies concerning women's participation in water management issues.

- The promotion of women's role in decision making on water resources management issues. - Capacity building - Case Studies; Effects of women's participation in water management.

!!! For more information visit:

http://www.unesco.org/water/water_events/Detailed/871.shtml

!!! Contact: Abbassgholi Jahani, jahani1325@hotmail.com

China: Water China / PVP China / AW China 2005
8 - 11 March, 2005, Canton (Guangzhou)

Organiser: China Foreign Trade Centre (Group)

The 6th Water China, an international fair for water, wastewater and water treatment takes place from 08.03 to 11.03.05 in Guangzhou (Kanton, capital of Guangzhou province). This fair is amalgamated with PVP China (5th specialist fair for Pumps, Vents and Pipes) and the AW China 2005 (2nd specialist fair for air and wastewater treatment).

!!! Further information:

<http://www.waterchina.merebo.com/>

!!! Contact: China Foreign Trade Guangzhou Exhibition Corp.,
projekt3@fairwindow.com

Chile: 3rd International Conference on Efficient Use and Management of Water
15 - 18 March, 2005, Santiago

Organiser: International Water Association (IWA) Efficient Operation and Management Specialist Group

Efficient 2005 will provide a forum for the exchange of the most recent ideas, techniques and experiences in all areas of water management that could contribute to more sustainable use and management of water.

The Conference will be organised into sessions dealing among other interesting topics with:

- System Planning and Management
- Efficiency in Resources Management
- Water Reuse and Recycling
- Practical Experiences within the Planning and Efficient Management

!!! For the full programme and more information visit:

<http://www.efficient2005.com/>

!!! Contact: info@efficient2005.com

Japan: 3rd IWA Leading-Edge Conference on Water and Wastewater Treatment Technologies
6 - 8 June, 2005, Sapporo

Organiser: International Water Association (IWA)

The annual Leading-Edge Conference on Water and Wastewater Treatment Technologies is focused specifically on advances and developments in water and wastewater technologies. To keep the programme targeted and discussions meaningful, the conference consists of only two parallel sessions: one for drinking water and one for wastewater. For ecosan topics such as "Nutrient Removal and Recovery" and "Cost Effective and Efficient Technologies for Sludge Management" might be of interest.

!!! Further Information:

<http://www.let2005.iwa-conferences.org/templates/Conferences/Sapporo/home.aspx?ObjectId=194589>

!!! Contact: let2005@iwahq.org.uk

**Greece: International Conference on Water Economics,
Statistics and Finance
8 - 10 July, 2005, Rethymno, Crete**

Organiser: International Water Association (IWA) & Economics Specialist Group
University of Crete, Department of Economics

An international conference is being arranged that will focus on economic, financial and statistical aspects of water and sanitation. This conference is intended to make a major contribution to the transfer of knowledge from research to practice covering the entire water cycle, ultimately influencing major policy decisions. Topics at this conference are:

- **Integrated water resources and wastewater asset management:** full cost recovery is one of the topics
- **Economics: economic evaluation of water & sanitation projects:** economics of water pollution, valuing non market benefits of improved water quality
- **Finance:** i.a. privatisation of water utilities

!!! For further information visit:

http://www.soc.uoc.gr/iwa/iwa_page.php?IWAdoc=

!!! Contact: Konstantinos P. Tsagarakis, tsagarakis@econ.soc.uoc.gr

**Australia: Joint 7th International Conference on Urban Drainage
Modelling & 4th International Conference on Water
Sensitive Urban Design
2 - 7 April, 2006, Melbourne**

This conference will deal with two highly topical issues in management of Urban Water;

- modelling of urban drainage systems and the interfaces to other parts of urban water cycle.
- current achievements and problems in Water Sensitive Urban Design (WSUD), also known as Low Impact Development Design.

It will follow on the six past international gatherings on Urban Drainage Modelling (UDM), and highly successful international WSUD conferences traditionally held in Australia.

Important deadlines:

Closing dates for abstracts: 26 February 2005

notification of acceptance: 29 April 2005

receipt of final papers: 05 August 2005

notification of acceptance: 14 October 2005

edited papers for publication and presentation: 23 December 2005

!!! For further information visit: <http://iswr.eng.monash.edu.au/News/20040915>

!!! Contact: Mrs Maryann Drogemuller, Maryann.Drogemuller@eng.monash.edu.au

**upcoming events
... reminder**

**Germany: 13th European Water Symposium IFAT 2005
25 - 29 April 2005, Munich**

Organiser: European Water Association and ATV-DVWK

The international conference on the occasion of IFAT 2005 will take place on 25-29 April 2005 in Munich, Germany. It will include presentations on the following topics: Monitoring Plant Performance, Membrane Technology, Public-Private Partnership, Sewer Rehabilitation. The Call for Papers closed on 30 April 2004.

!!! For further information visit: <http://www.ifat.de/>

**Singapore: 1st IWA-ASPIRE Conference & Exhibition
(Asia Pacific Regional Group)
10. - 15. July 2005, Singapore**

Organiser: Environmental Engineering Society Singapore and the Public Utilities Board, Singapore.

The 2005 IWA-ASPIRE Regional Conference and Exhibition in Singapore, is the combination of the Asian Waterqual Conference and the IWA-ASPAC Regional Conference & Exhibition.

The IWA-ASPIRE Conference and Exhibition forms a forum for academics, scientists, engineers, and practitioners world-wide, particularly from Asia, to address, discuss, and share their experiences in pursuit of the latest developments in the innovative technologies and managerial techniques governing water resource conservation, reclamation, and sustainability as well as water pollution control. Knowledge and comprehension of such matters will lead to the advancement of ecological and environmental conservation for our future generations.

The conference will deal with:

New Vision and Strategies – Financing Water/Sewerage Projects - Human Resource Development Training, Benchmarking and Skill Competency - Diffuse (non-point) source pollution - Sewage and industrial wastewater collection, treatment, and management - Drinking water quality, treatment, and distribution - Innovative treatment technology - Instrumentation and control - Environmental remediation – Environmental sanitation and health related issues - Sludge management and disposal - Water reclamation, reuse and recycle.

!!! For further information visit: <http://www.aspire2005.org/>

**Korea: 5th IWA Int. Symposium on Wastewater Reclamation
and Reuse for Sustainability (WRRS)
8th – 11th November 2005, Jeju**

Organiser: Water Reuse Technology Centre (WRTC), Kwangju Inst. of Science & Technology (K-JIST), IWA

This conference aims to bring together international experts in the field of water reclamation and sustainable reuse (...). Conference Themes include:

Sustainable Technologies for Water Reuse - Advancement in wastewater Reclamation - Agricultural, Industrial and Indirect Portable Reuse - Biotechnology for Water reuse - Microbiology, Health and Risk Assessment - (...).

Important dates to remember:

- 2-page abstracts submission: February 28, 2005
- Notification of authors regarding acceptance: April 30, 2005
- Receipt of full manuscript: June 30, 2005

!!! Contact: Prof. In S. Kim (at iskim@gist.ac.kr) and Prof. Heechul Choi (at hcchoi@gist.ac.kr)

!!! For further information visit: http://env1.gist.ac.kr/~wr21/en_index.html

**Mexico: 4th World Water Forum
16. - 22. March 2006, Mexico**

Organiser: World Water Council

The 4th World Water Forum will take place on March 16-22, 2006, in Mexico, following the decision that was made by the Board of Governors of the Council in September 2003.

The objective of the 4th Forum is to come up with concrete measures and indicators that will create the enabling environment to boost progress on the achievement of the Millennium Development Goals.

Over the years, the Forum has led the movement from the World Water Vision, a product of the 2nd Forum, to the establishment of concrete actions and commitments derived from the 3rd Forum. Now, the challenge is to establish mechanisms of cooperation and coordination to transform a global vision into local concrete actions that integrate local knowledge.

!!! Info: http://www.worldwatercouncil.org/forum_4.shtml

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/ecosan/english/links.htm>

We would greatly appreciate your calling our attention to additional links of interest:

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 simply as text, with no attachments of any sort, instead, documents are always offered as download-links from our website. **If you do receive a 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

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

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

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

Useful mailing-list commands:

subscribe ecosan

Use this command to subscribe to the ecosan mailing list

subscribe ecosan your.name@xy.org

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

unsubscribe ecosan

Use this command to cancel your subscription.

unsubscribe ecosan your.name@xy.org

Use this command to de-register your receiving address, if this differs from the one from which 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.