



ecosan – newsletter - no. 18 - 11/2005 - 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. 18!

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:

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Chinese*: <http://www.gtz.de/de/dokumente/cn-ecosan-nl18-2005.pdf>

[from December 2005]

* 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!

ecosan sector project

Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ)
GmbH
P.O. Box 5180
65726 Eschborn, Germany
fon: +49 6196 794220
fax: +49 6196 797458
e-mail: ecosan@gtz.de
internet: <http://www.gtz.de/ecosan>



Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH

commissioned by:



Federal Ministry
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and Development

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- An ecosan awareness raising tool and manual – Paul Calvert
 - From conventional to advanced environmental sanitation – Roland Schertenleib
 - German publication on infrastructures and intelligent networks for a sustainable development - Reinhard Loske and Roland Schaeffer [eds.]
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 - Principles for the assessment, construction and operation of wastewater stabilisation ponds - DWA, a datasheet in German language
- Publications - on the web**
- Water, Time and European Cities: History matters for the Futures – EU project report
 - Sustainable Composting – a WEDC publication
 - Sustainable pathways to attain the MDGs – Report from SEI/SIWI
 - Meeting the water and sanitation MDGs – Report from DFID
 - Evaluation of the Costs and Benefits of Water and Sanitation – WHO
 - Water, Sanitation and Hygiene Education for Schools – UNICEF/IRC
 - One article and two unpublished reports on ecosan – Edward Guzha
 - Wastewater use in irrigated agriculture – C. Scott, N. Faruqui, L. Rashid-Sally
 - Articles on ecosan in the German weekly “DIE ZEIT”

Reader call Manuscript on decentralised water supply in Spanish needs publisher

Trainings and Courses

- 13-14/12/05 "Water Recycling for Urban Applications" course, Cranfield, UK
- 10-28/07/06 International short course in decentralised water supply and sanitation, Netherlands
- 14/08-09/06 Training programme "Ecological Alternatives in Sanitation", Sweden, India/Latin America

New upcoming events

- 07-08/12/05 International Fair & Conference for Energy from Waste and Biomass, Bremen, Germany
- 11-13/12/05 Ecological Sanitation Symposium, Syria
- 02-04/02/06 CWG-WASH workshop "Solid waste, health and the MDGs, Calcutta, India
- 07-10/03/06 Conference of the IWA Specialist Group on Ecological Sanitation, Mérida, Yucatan
- 07-10/03/06 7th Specialised Conference on Small Water and Wastewater Systems, Mérida, Yucatan, Mexico
- 16-22/03/06 4th World Water Forum, Mexico City
- 04-08/04/06 International Symposium on Water and Land Management for Sustainable Irrigated Agriculture, Adana, Turkey
- 19-23/06/06 3rd World Urban Forum, Vancouver, Canada
- 27-30/06/06 IFAT China 2006 -2nd International Trade Fair for Environmental Protection, Shanghai, China
- 16-19/08/06 Dry Toilet 2006: The Second International Dry Toilet Conference, Tampere, Finland

Events reminder

- 06-09/03/06 Water China 2006 - Exhibition/ trade-fair, Guangzhou, China
- 02-07/04/06 7th Int. Conference on Urban Drainage Modelling & 4th International Conference on Water Sensitive Urban Design, Melbourne, Australia
- 23-25/05/06 Integrated Water Resources Management and Challenges of the Sustainable Development, Marrakech, Morocco
- 24-26/05/06 Researchers Conference for young water professionals, Nanyang, Singapore
- 10-14/09/06 5th IWA World Water Congress and Exhibition – Sustainable Water Management Practises, Beijing, China

In house news

Hessian Ministry of the Environment promotes ecological water and sanitation concept at the main building of the GTZ, Eschborn, Germany

On the 25th of October 2005 the GTZ received official confirmation of a support grant of 43,000 Euro from the Hessian State Ministry of environment, rural areas and consumer protection. With this the state of Hessian will be promoting the modern, ecologically sustainable concept for water supply and wastewater being installed during the modernisation of the main GTZ building in Eschborn.

Initiated and accompanied by the sector project ecosan, the central section of the main building will be equipped with urine diversion (UD) toilets and waterless urinals. The installation enables the separate collection of urine and lowers the water demand for flushing toilets. "This is a meaningful and farsighted project of the GTZ. A project which can secure ground water resources and reduce the load on the environment," says Mr. Dieke, president of the Hessian Government, as he handed over the support grant.

When finished, the building will serve as a model for similar facilities, also in countries where water is scarce and fertilizer is desperately needed in local agriculture. "With this concept, the GTZ not only saves 900 m³ of water per year, but also the load of substances and nutrients from the urine on the water treatment facilities is reduced." says the managing director of the GTZ, Mr. Eisenblaetter.

The urine, or the products of urine treatment, will be used in agricultural tests carried out by universities which are associated with the research project. The information collected from the project will also help to improve agricultural production in developing countries.

!!! **Contact:** christine.werner@gtz.de or ecosan@gtz.de.

!!! **Information:** Project data sheet GTZ Main building
<http://www.gtz.de/en/themen/umwelt-infrastruktur/wasser/9399.htm>

Changes in the GTZ ecosan team

We are pleased to welcome one new employee and two new interns to the GTZ-ecosan team:

- **Esther Geiss** from Germany, (geo-ecologist) joined our team as an employee (50%) in November 2005. She has previously worked as a junior professional in the GTZ-RWSS (rehabilitation of water supply systems), Eritrea on water resources protection issues and ecological sanitation. She will continue to closely follow up the ecosan and water resource protection activities in Eritrea and assist in the knowledge management within the GTZ-ecosan project.
- **Eve Menger-Krug**, from Germany, is a student of geo-ecology at the University of Karlsruhe. Her main interests are soil science, geochemistry and microbiology and she will write her diploma thesis in 2006. She will carry out her internship in the GTZ ecosan office from the 1st November 2005 until 30th of April 2006
- **Gumelar Pritosiwi**, from Indonesia, is student of International Master's Program in Environmental Engineering at the Technical University of Hamburg-Harburg. She will carry out her internship in the GTZ ecosan office from the 1st of November 2005 until 31st of January 2006.

Patrick Bracken, who was working in the GTZ-ecosan team from February 2003 to October 2005, goes to Niger to join his wife from January 2006. Fortunately he will continue to work with us as a free consultant. We wish him great ecosan projects not only in Niger!

News - general

Television love story broadcasted in Nepal explains waste water recycling

"Jalpari", a new movie explaining the importance of urban water conservation based on a love story, broadcast on Nepalese Television drew 60 per cent of the nationwide television audience on 17th September 2005. Newspapers said the show conveyed a message of rainwater harvesting and wastewater recycling techniques in a delightful and entertaining story about a young girl, Jalpari, whose parents would not let her marry a Kathmandu boy due to water scarcity in the city. In the film's happy end, Jalpari's parents finally agreed to the marriage after seeing how the boy's family had adopted proper water conservation techniques at home.

The film was produced by the NGO Forum for Urban Water and Sanitation and the Environment and Public Health Organization (ENPHO) with technical support from UN HABITAT as part of the campaign to observe 2005 as the Year of Rainwater. Water Aid Nepal, and IRC International Water and Sanitation Centre also supported it.

!!! **Contact:** NGO Forum for Urban Water and Sanitation,
ngoforum@mail.com.np, or enpho@mail.com.np

!!! **Information:** <http://www.ngoforum.net> and <http://www.enpho.org/>

Source: UN Habitat http://www.unhabitat.org/nepalese_television.asp

Quoted from: IRC Source Weekly, 39-40, 2005

The 2nd call for the EU-ACP water facility has opened

The EU-ACP water facility aims at is aimed at supporting projects providing water and sanitation services to the poor in Africa, the Caribbean and Pacific (ACP).

In the first call made in December 2004, the Water Facility aims to provide up to 250 Million EUR in co-funding for 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. Of great interest to many ecosan practitioners, was the fact that innovative and appropriate technical solutions, such as eco-sanitation were explicitly promoted in the first call for proposals. The results of this first call are expected in the coming weeks.

The second call for proposals is expected in March 2006. It is again expected that innovative approaches to water supply and sanitation will be given particular support by the facility and it will 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.

We would encourage all those interested to consider the possibility of submitting a proposal in response to the call in January, and would be happy to consider how we may best be able to support your application.

!!! Further Information on the water facility will hopefully be appearing in the coming weeks under: http://europa.eu.int/comm/europeaid/projects/water/details_en.htm

!!! Contact: esther.geiss@gtz.de from January 1st 2006

ecosan at the 4th World Water Forum in Mexico, march 2006

The 4th World Water Forum is planned between March 16 - 22, 2006 in Mexico. 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.

Proposed sessions and local action are available on-line, e.g. the list of registered local actions at: [http://www.worldwaterforum4.org.mx/home/lista_actions.asp]

Several organisation and groups currently working in ecosan are planning specific events for the conference, and we believe it would make the conference more interesting if it were possible to offer an ecosan specific programme for the forum – with thematic sessions, excursions, information stands and local actions. The current list of the ecosan specific thematic sessions and local actions that are so far planned for the forum can be downloaded from the link below. In order to keep all interested participants up-to-date we would also ask any of our readers who may be planning another ecosan intervention at the forum to please let us know!

!!! Download: a list of ecosan-related proposed sessions from

<http://www2.gtz.de/ecosan/download/en-4WWFMexico-ecosansessions-06.pdf>

!!! Information: <http://www.worldwaterforum4.org>

The Netherlands increase their development budget for water and sanitation to reach a further five million people in 2006

One of the aims of the Netherlands development aid for 2006 is to provide sustainable drinking water and sanitation to an extra five million people; by 2015 the aim is to have covered 50 million people. In the new round of 5-year thematic funding for NGOs, the government has allocated nearly EUR 27 million to Dutch organisations working with water and sanitation for the period 2006-2010.

The Netherlands provides bilateral support to the water sector in ten countries. In at least two other countries water and sanitation will be supported via (silent) partnerships. Recipients of Dutch multilateral support include the World Bank, the regional development banks, UNICEF and UN-HABITAT. Key elements in Dutch support are output-orientation, institutional development, capacity building, and pro-poor gender-based approaches.

!!! Read full article at: <http://www.irc.nl/page/26682>

Prince Sultan Bin Abdulaziz International Prize for Water 2004-06 includes an award for research on treatment and re-use of waste water

PRIZE: Prince Sultan Bin Abdulaziz International Prize for Water 2004-06

Organisation: General Secretariat, Prince Sultan Research Centre for Environment

Five water resources applied research projects will each be awarded prizes worth SAR 500,000 (EUR 110,966) as part of the Prince Sultan Bin Abdulaziz Prize for Water (2002-4). Launched in Oct 2002, the Prize acknowledges special scientific achievements in the provision, protection and preservation of adequate and sustainable water resources, particularly in arid regions. Prizes will be awarded in five categories. **Category "3" is titled "Alternative (non-traditional) water resources - Treatment and re-use of waste water"**. The winners will be announced in October 2006. An award ceremony will be held in November 2006.

Application Deadline: 31 Dec. 2005.

!!! **Contact:** Prince Sultan Bin Abdulaziz International Prize for Water, General Secretariat, Prince Sultan Research Centre for Environment, Water and Desert, King Saud University, Saudi Arabia info@psipw.org

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

Quoted from: IRC Source Weekly, 29-30, 01 Aug 2005

Water research fund for southern Africa gets Swedish grant

The Water Research Fund for Southern Africa (WARFSA) has entered its third phase thanks to a SEK 30 million (EUR 3,2 million) grant from Sweden (Sida) and DKK 3 million (EUR 400,000) from Denmark (Danida). WARFSA was established in 1999 to support research projects on sustainable utilisation of water resources in Southern Africa.

Priority research areas for the third phase are:

1. Water use, conservation and technologies
2. Social, political and economic issues
3. Policy and legal issues
4. Ecological water requirements
5. Promotion of better use of precipitation

Project funds will go to Competitive projects (max US\$ 30,000-50,000 per project), Priority projects (usually US\$ 1,000 per project) and M Sc Grants (up to US\$ 4,000 per study).

For MSc/M.Phil research projects one hundred and sixty-eight (168) research grants will be allocated equally to all Southern Africa Development Community (SADC) countries between 2006 and 2008.

WARFSA is managed by the Institute of Water and Sanitation Development (IWSD) in Zimbabwe and detailed information on the fund is given on their website.

!!! **Information:** IWSD – WARFSA <http://www.iwsd.co.zw/WARFSA/index.html>

Source: IWSD <http://www.iwsd.co.zw/index.html>

Adapted from: IRC Source Weekly, 37-38, Oct 2005

Job vacancies

Jobs for Integrated Experts (CIM): Afghanistan, Malaysia, Nicaragua, Syria.

The German Centre for International Migration and Development (CIM), is a joint venture of the GTZ and the German employment agency. The Integrated Experts programme provides a wage "top-up" subsidy for qualified European specialists who obtain a contract with local institutions in developing countries.

Who can apply?

Applicants must hold German or European citizenship with many years relevant work experience, (except for applicants to junior positions), be articulate in German, and not be based on a long-term basis outside of the EU.

Water Supply, Afghanistan

The most important challenge after the war in Afghanistan is the reconstruction of cities. In the field of water supply, a new autonomous water supply company will be created, the Kabul Water Supply and Sewerage Utility (KWSSU). It guarantees the supply for Kabul and other cities in Afghanistan. To support the construction of this new independent facility, the Ministry of Urban Development and Housing (MUDH) looks for two integrated experts (CIM).

(1) Manager of finances (Water supply)

You lead the finance and accounting department of the new KWSSU.

The objectives of your work are (a) to ensure the sustainable recovery of revenues costs (b) the billing, financial statements and rendering of accounts and (c) planning and controlling of the supply company especially the systematic recording of consumption as a base for cause related costing.

Duration: 2 years (prolongation possible)

CIM- Reference number: 60057478

(2) Specialist for water supply

You work in close collaboration with the director of the new independent water supply company (KWSSU) and provide conceptual and specific advice. Your tasks are, among others, (a) the development of a business plan for a customer orientated water supply company (b) the appointment of internal management and organisation structures (c) the optimisation of the course of operation, especially relating to day-to-day operations (d) report to the supervisory board and to other involved ministries (e) assistance in the selection and engagement of new employees (g) capacity building: mediation of knowledge for the management of autonomous water supply company (h) replacement and representation of the director.

Duration: 2 years (prolongation possible)

CIM- Reference number: 60057451

!!! Complete job descriptions under → Regionen → Asia in:
http://www.cimonline.de/deutsch/frames/ind_stellen.htm

!!! Information and contact: Frau Heckmann
lieselotte.heckmann@gtz.de

Adviser for Aquaculture and PPP, Penang, Malaysia

The non-profit organisation WorldFish Centre was founded in 1977 and it is associated with the Consultative Group for International Agricultural Research (CGIAR). The centre fights against poverty and hunger in developing countries by promoting fisheries and aquaculture.

Job description: As the senior programme leader for public-private partnerships (PPP) in the field of fisheries and aquaculture you are under disciplinary assignment of the vice director general and work in close collaboration with the head of aquaculture and the directors of regional departments.

Your tasks are the creation and management of the PPP programme as an integral component of the programme and management structures of the centre. Also you will acquire financial support for the aquaculture projects and programmes and support of the centre in its collaboration with its national and international partners.

Duration: 2 years (prolongation possible)

CIM- Reference number: 60053912

!!! Complete job description under → Regionen → Asia in:
http://www.cimonline.de/deutsch/frames/ind_stellen.htm

!!! Information and contact: Frau Heckmann
lieselotte.heckmann@gtz.de

Adviser for water supply and wastewater management, Managua, Nicaragua

The National Commission for potable water and sanitation, Comisión Nacional de Agua Potable y Saneamiento (CONAPAS) is the National Commission for water supply and wastewater management in Nicaragua and responsible for strategy and planning in this sector. CONAPAS made a significant contribution to the formulation of a new sector strategy in 2004/2005, which was supported by the World Bank and by KfW. The sector strategy will be adopted shortly. CONAPAS will play a crucial role in the process of implementation, which is not always easy. Therefore CONAPAS needs external know-how and has requested one integrated expert (CIM) to support its work.

Duration: 2 years (prolongation possible)

CIM- Reference number: 60059754

!!! Complete job description under → Regions → Lateinamerika in:
http://www.cimonline.de/deutsch/frames/ind_stellen.htm

!!! Information and contact: Herr Schattner
Bernhard.Schattner@gtz.de

Adviser for wastewater facilities and drinking water facilities, Damaskus, Syria

(1) Adviser for waste water facilities

Your task is to support the General Company for Engineering and Consulting (GCEC) in the planning and construction of wastewater treatment plants. You will be responsible for the evaluation and conceptual design of the wastewater networks and will help with the formulation of international tender documents. Also, you will provide workshops and on the job training to prepare the local employees for their tasks.

Duration: 2 years (prolongation possible)

CIM- Reference number: 60060176

!!! Complete job description under → Regions → Asia/Syria in:
http://www.cimonline.de/deutsch/frames/ind_stellen.htm

!!! Information and contact: Herr Koellner
Stefan.Koellner@gtz.de

(2) Adviser for drinking water facilities

Your task is to support the General Company for Engineering and Consulting (GCEC) with the planning and construction of drinking water treatment plants. Also, you will be responsible for the evaluation and conceptual design of the drinking water networks, assist with the formulation of international tender documents, make calculations for pressure surge / water hammer and assist in the planning of water systems for fire fighting. Furthermore, you will provide workshops and on the job training to prepare the local employees for their tasks.

Duration: 2 years (prolongation possible)

CIM- Reference number: 60060177

!!! Complete job description under → Regions → Asia/Syria in:

http://www.cimonline.de/deutsch/frames/ind_stellen.htm

!!! Information and contact: Herr Koellner

Stefan.Koellner@gtz.de

News from the
projects ...
... German
co-operation

Eritrea **Results from the ecosan workshops in Asmara in May 2005**

Within the framework of the ongoing GTZ-RWSS (Rehabilitation of Water Supply Systems in Western Eritrea) a study on livelihood and resource use in the town of Agordat has started in co-operation with the University of Asmara and the University of Bern. One component concentrates on how ecosan, and the resources contained in excreta and greywater, can be incorporated into livelihood studies, and how these can be integrated into plans for alternative resources use. Maria de la Pena, previously an intern with the GTZ ecosan team, will be supporting the study team in Agordat.

Two ecosan-workshops on national, regional and sub regional level were conducted in May 2005 in Asmara and produced the following results:

- (1) As a first step to strengthen local capacities and to conduct further awareness raising, the Eritrean Counterpart (WRD - Water Resources Department under the Ministry of Land, Water and Environment) is producing in cooperation with the GTZ- ecosan programme an In-depth Information Manual on Ecological Sanitation in the local language. This manual will form the basis for the production of further information materials in the local language about ecological sanitation for different groups of stakeholders.
- (2) An ecological sanitation-inception study for the city of Massawa will be conducted. The study will identify a series of suitable reuse-oriented sanitation solutions for the town and evaluate the feasibility of their implementation. Within the study, two workshops will be held, in order to encourage the participation of local and national stakeholders in the process.

!!! Contact: Esther Geiss esther.geiss@gtz.de
or Maria Eugenia de la Pena mdelapena@gmx.net

India **Inauguration of reuse oriented sanitation project for 1,250 people in Mysore**

In July this year a reuse oriented community based sanitation unit was inaugurated at a block toilet complex at KGF, Roopa Nagar, Mysore. The unit comprises 14 toilets for women and 6 for men catering to a population of around 1250 people. The toilet complex was originally built and maintained by the Bharat Gold Mines Ltd (BGML). However, after the closure of the mines, the community and women's Self Help Groups (SHG) took over the maintenance. With time, the toilet infrastructure deteriorated leading to unsanitary conditions. Health problems arising due to the unsanitary conditions in the area led to the community demanding better amenities.

The BORDA (Bremen Overseas and Development Association) co-operation partner FEDINA (Foundation for educational innovations in Asia) identified this area as a Community Based Sanitation and Slum Development project area and construction of DEWATS (Decentralized Waster Water Treatment) began. The treatment facility was added to the existing toilets (which were renovated). The DEWATS comprises a biogas settler, baffle reactor, planted drain and collection tank. The treatment by-products will be reused; biogas for lighting, treated water for irrigation and sludge for fertiliser. This ensures that the benefits of the project are maximised. The women's SHG have developed an understanding of the operation and maintenance issues and have accepted the responsibility for O&M. Regular financial contributions from the community towards O&M, their involvement in the project right from the initial stages and their labour contributions is helping build a sense of ownership over the project ensuring the sustainability of the project.

!!! Information: <http://www.borda-sa.org/modules/news/article.php?storyid=12>

!!! Download: <http://www.borda-sa.org/modules/news/makepdf.php?storyid=12>

!!! Contact: borda.india@vsnl.net

Source: Article at <http://www.borda-sa.org> posted by Karin Siepmann on 23.09.05

India Upgrade of the ecosan slum project in Bangalore, and information on the progress of other IESNI projects

In the Acts Trust public toilet centre in Bangalore a new biogas plant, which has been designed and built by Suma Khadi Gramodyoga Sangha, a local NGO, has been in operation for almost 2 months now. It replaces the composting trenches at the ACTS Rayasandra Campus, which had previously been used for the treatment of faecal matter collected from the ACTS Public Toilet Centre in Rajendra Nagar Slum. The biogas produced is used for cooking and substitutes a certain proportion of Liquefied Petroleum Gases (LPG) currently used. Having a retention capacity of 25 m³, the biogas plant allows an extension of the sanitation project to further public toilets that are to be built. Subsequent treatment of the digested slurry will be done in sludge drying beds.

To further improve hygienic conditions at the public toilet centre in Rajendra Nagar Slum, wash water that isn't taken up by the planted infiltration bed, is now drained to a nearby municipal sewer. The new suction unit for the vacuum evacuation of faeces and urine is already operating and the new logistics system for collection and transport of source separated urine and faecal matter will be implemented by December 2005.

An overview on the current state of 4 pilot projects of the "Innovative Ecological Sanitation Network India (IESNI)", supported by GTZ and SEECON, is now available for download. The pdf-file describes and illustrates the above described project upgrade and informs on the status of 3 other projects in Gujarat, Maharashtra and Karnataka.

!!! Download: <http://www2.gtz.de/ecosan/download/en-iesn-overviewIndia-2005.pdf>

!!! Contact: Hinnerk Bartels, Hinnerk.Bartels@gtz.de
or Martin Wafler Martin.Wafler@gmx.de

Philippines Results from the first ecosan training on low cost sanitation for rural areas

The GTZ Water, Sanitation and Solid Waste Program conducted the "1st ecosan training on low cost sanitation for rural areas in the Philippines" on September 14th -16th at Bohol Tropics Resort in Tagbilaran City. All program partners, stakeholders and decision makers involved in the GTZ ecosan projects in the Visayas were invited to share and gain expertise on ecosan.

International experts from China and Germany as well as local experts from the Centre for Advanced Philippine Studies and the Peri-Urban Vegetable Project (PUVEP) of the Xavier University in Mindanao presented their ideas and experiences. All participants visited the two pilot ecosan toilets in Panglao Municipality; Province of Bohol implemented by GTZ and Feed the Children Philippines.

As a result of the workshop the toilet type designed for Panglao, will now also be used in Bayawan, Oriental Negros with some modifications.

After the training, the Peri-urban Vegetable Project (PUVeP) of the Xavier University in Cagayan de Oro, Mindanao, was visited by the GTZ ecosan consultant and community organiser. The university program under the supervision of a CIM expert implemented allotment gardens and was awarded with the prize "local action for global problems" of the German Ministry for Economic Cooperation and Development Cooperation 2004. It is now constructing ecosan toilets within these gardens to provide the farmers with organic fertilizer and a sustainable sanitation facility. A further result of the workshop is that the Xavier University has now integrated ecosan in its training programme, emphasising its close relation to urban agriculture.

!!! Information on ecosan curriculum at the Xavier University:

<http://www.xu.edu.ph/searsolin/module9.htm>

!!! Information on the PUVeP Project: <http://www.puvep.com/>

!!! Download Workshop programme

<http://www2.gtz.de/ecosan/download/en-DILGwaterandsanitationProgPhilippines-2005.pdf>

!!! Contact: Florian Klingel Florian.Klingel@gtz.de
or Bianca Galinat b.gallinat@web.de

Yemen Mosque water is reused to irrigate Yemen's dry fields

CIM-Expert, Dr. Lia Sieghart, Adviser to the Ministry of Water and the Environment in Yemen has been awarded a prize from the World Bank for an initiative water treatment system: grey water from the mosques, a result of ritual washing before praying, passes through a sand filter, is collected in tanks and is then used for agricultural irrigation. This is possible due to the relatively high quality of the water, as no soap is used during the 5 times daily ritual wash. The project was selected by the jury of the international "Development Marketplace" competition for convincingly bringing together Islamic tradition and environmental protection. The USD 130 000 prize money is now being used to buy sand filters and train technical personnel.

!!! Contact: liasieghart@hotmail.com

!!! Download project poster

<http://www2.gtz.de/ecosan/download/en-Poster-MosquewaterreuseYemen.pdf>

!!! Information about the grant programme "Development Marketplace":

<http://www.developmentmarketplace.org>

China ecosan pilot projects in Yangzhou and Changzhou, in the frame of the ecocity programmes

In China, the cities of Yangzhou and Changzhou are among the around 500 local government units that have embarked on the process of eco-city planning. A presentation on two reuse oriented solid and liquid waste management projects in these cities had been given during 25 September 2005 to a UNESCO-IHE Alumni Course on sustainable sanitation in Nanjing, China and is now available for download.

Case study I: Hou Yu, Changzhou is located in a high-density peri-urban area with old housing (confined catchment with around 1,100 inhabitants). Here the pilot project includes:

- Combined system of wastewater treatment with the use of existing and upgraded septic tanks and of a partially existing sewer system; overflow and greywater passing to the treatment system; and treated wastewater reused for irrigation
- Nightsoil treatment with regular collection and nightsoil composting
- Improved solid waste management with regular collection and landfill upgrading

Case study II: Tong Jiang, Changzhou is located in a newly constructed peri-urban area with new multi-storey and detached houses (future inhabitants 1,300). Here the pilot project includes:

- Combined wastewater and sludge treatment system with the use of an existing separate system and the few existing septic tanks in the catchment; storm water treatment via a natural wetland; and the treated sludge (humification) to be reused as soil amendment
- Nightsoil treatment from external sources maybe integrated
- Improved solid waste management with regular collection and further source separation

The presentation is available as pdf-file and gives further information on the projects.

!!! Download:

<http://www2.gtz.de/ecosan/download/en-ecosan-GTZCasestudiesChina-2005.pdf>

!!! Contact: j.traenkler@ecocity-programme.org

!!! Information on UNESCO-IHE Alumni Course:

http://www.unesco-ihe.org/downloads/Refresher_Seminars/RS_AS0505.pdf

News from the
projects ...

... other
organisations

Ethiopia **Piloting ecosan at schools**

A new study by WaterAid in Benishangul Gumuz, a remote, drought-prone and marginalised region of Ethiopia, has shown that teenage girls were hit the hardest by a lack of decent school sanitation. In these areas only 4% of the population have access to sanitation. Some schools had no toilets and in others they had to share a latrine with 325 other pupils. Some girls interviewed said that they could not be seen to go to a latrine in their school, especially during menstruation. Many go home and do not return, may drop out of school.

The WaterAid team began working here in 2004. It is now working with the local government and successfully piloting ecological sanitation and child-to-child hygiene education, as well as helping to improve school sanitation.

!!! Information: http://www.wateraid.org/what_we_do/case_studies/6481.asp

Quoted from: Source Weekly, 35-36, 2005 <http://www.irc.nl/page/25690>

China **ecosan concept for Shaxi Town, Yunnan**

The Shaxi sanitation project is conducted by the Swiss Federal Institute for Environmental Science and Technology (EAWAG/SANDEC) in close collaboration with the Swiss Federal Institute of Technology (ETH). The main objective of the project was to develop a sustainable sanitation concept for the city of Shaxi, Yunnan Province, China. Two basic concepts were proposed and implemented in parallel: (1) A simplified sewer system with wastewater pre-treatment in an ABR (anaerobic baffled reactor) and post-treatment in waste stabilisation ponds – implemented in the city centre for market visitors and tourists, and (2) Urine diversion latrines with combined grey and storm water drainage, with reuse of urine and dehydrated faeces in agriculture – for private households.

!!! Information: <http://www.nsl.ethz.ch:16080/irl/shaxi/pages/overview.htm>

!!! Contact: catarina.dallatorre@eawag.ch

India WASTE ISSUE programme provides ecosan for 500 households in Tamil Nadu

The foundation for an Ecosan Community Toilet in India was laid in Musiri, on the banks of the river Cauvery in Tamil Nadu on 13th September 2005. This is the start of the realisation of 500 Individual Household Ecosan Toilets and two community ecosan toilets. In Musiri the main reason for choosing for ecosan systems is the prevention of contamination of the river and nearby water sources. Also the reduction in the use of water for the disposal of human waste, and the recycling of human waste by composting to be used to increase in farm productivity helped to influence the decision on sanitation system towards the non-sewered option of ecological sanitation. The realisation of all the planned toilets will take 18 months and the costs involved are Rs. 50 lakhs (± 90,000 Euro).

During the official launch the District Collector congratulated SCOPE and the Musiri Panchayat for the preparatory work for the ecosan toilets during the past two years. SCOPE is a pioneer in the field of ecosan in the country and has already constructed around 150 ecosan toilets in two villages and also 40 individual ecosan toilets in the tsunami hit coastal areas of Nagapattinam.

Mrs. Vidhya Muthukumaran, Chairperson of the Musiri Panchayat Council who presided said that the council is planning a Decentralized Waste Water Treatment System (DEWATS) to treat the community toilet black water and reuse it for composting of garbage, and Solid Waste Management in all of the 18 wards of the town.

!!! **Source:** WASTE E-Mailbulletin 49, October 2005

<http://archive.antenna.nl/pipermail/uwep-bulletin/2005/000011.html>

!!! **Contact:** Verele de Vreede vdevreede@waste.nl

India Financing ecosan in-house infrastructure in Tamil Nadu

The Dutch NGO WASTE has set up a WASTE Ventures Fund as the business development facility under its ISSUE-Programme that supports micro, small and medium size entrepreneurs in the formal and informal waste sector. WASTE considers these entrepreneurs as essential stakeholders, who will have to be involved in any planning and implementation of sustainable urban waste management.

The objective of Waste Ventures Fund is to allow the local private sector to participate in the ISSUE programme, by providing access to credit, financial guarantees, partnerships in joint ventures and subsidies for production, product and service. Through its higher ceiling, bottom line and flexibility the Waste Ventures Fund distinguishes itself from micro-credit schemes.

Based on locally identified needs the Waste Ventures Fund activities in Musiri have taken the following form: The fund is used to extend the micro credit scheme to include composting toilets for 1000 families. In this case, the Fund is used to start up community enterprises manufacturing the composting toilets as well as initially to subsidise part of the investment cost. Manufacturing of higher numbers of units will reduce the unit costs and thus reduce the need for subsidies. Similarly the Waste Ventures Fund will be used to prepare business plans for composting, and if need be, to be used to acquire a share in the community enterprise.

Source: WASTE E-Mailbulletin 49, October 2005

<http://archive.antenna.nl/pipermail/uwep-bulletin/2005/000011.html>

!!! **Contact:** Verele de Vreede vdevreede@waste.nl

Romania Successful results from testing urine as fertilizer

Human urine from school urine-diverting toilets has proven to be an excellent fertiliser for maize. The project "Safe Drinking water" in the Romanian village Garla Mare, which had constructed a dry double vault urine diverting toilet-building for the primary school (200 children), applied the collected urine, after sanitization through storing, as a fertiliser on a maize field of the local medical doctor in spring 2005. The doctor is extremely satisfied with the results. Urine has proven to be an excellent fertiliser. The quality of the maize which had been given urine was much better than the maize which had not been given urine.

The urine had first been tested by the University of Hamburg-Harburg which is scientifically accompanying the project. The University found that the storage period of 6 - 12 months was more than sufficient. They found no pathogens in the urine. There were even less bacteria in the urine, than in the drinking water people use from the wells!!

!!! **Download** one page report on the use of urine fertilizer:

http://www.egora.de/cms/download/urine_on_maizefieldwebsite.doc

!!! **Visit** the Garla Mare pilot project page:

<http://www.egora.de/cms/projects/romania.php>

!!! **Source:** Article from Magriet Samwel at

http://www.egora.de/cms/articles/2005/09/maize_urine.php

Ukraine New ecosan household in Vorokhta

The project team of the local NGO MAMA-86 has been celebrating the opening of an ecosan toilet. MAMA-86 Yeremche, WECF's partner in the MATRA project "Sustainable Rural Development", has built the first household ecological toilet in Ukraine as a demonstration object. The toilet separates urine and faecal material, which are sanitised through storage (urine) and composting (faeces) so that both end-products can be used as fertiliser and humus in horticulture and agriculture.

MAMA-86 Yeremche organised a seminar for the people of the village to explain the functioning of the ecosan toilet. There was a lot of interest. Educational posters were produced and there is interest from other families to exchange their pit-latrines (a hole in the ground, often polluting ground-water sources) to the new ecosan model.

!!! **Information:** Article from Magriet Samwel under

http://www.egora.de/cms/articles/2005/09/newecosan_ukr.php

Products and links

ecosan toilet pan from eco-solutions

Since construction of urine-diverting dehydration toilets requires a fair degree of skill and training eco-solutions has developed a new type of toilet of pan - the ecopan - that simplifies the construction. There are examples of these operating in southern India in urban and rural environments for a number of years now to the full satisfaction of the users. Paul Calvert, eco-solutions, developed urine-diverting dry compost toilets with evaporative plant-beds, key components in ecosan, in 1994 in Kerala India. As he says "people struggle to comprehend how these toilets could be good for everyone especially in cities, but they should come and see them - I always say 'seeing and not smelling is believing!' When people see the real thing installed in a modern house then they are convinced and can't stop telling everyone about it."

Eco-solutions made the ecopan in small numbers in earlier years for its own projects and development work. The workshop was hit by the tsunami and moulds and pans were damaged. But now a new unit has been established with girls from tsunami-hit areas.

The price for the ecopan in India is RS 450 excluding postage und package.

!!! **Contact:** veena@eco-solutions.org

!!! **Information:** <http://www.eco-solutions.org>

Publications

... books

Ecosan awareness raising tool from Paul Calvert

Paul Calvert, eco-solutions, India, has produced a book and poster set full of colour pictures and straightforward messages that hit home the ecological disaster of major sewage schemes and flush toilets in high-water table areas. The illustrations show clearly how ecological sanitation offers safe and attractive alternatives for rural and urban dwellers. No matter whether you live in a simple shanty or village home or in a fancy city apartment there are ecological sanitation solutions for you! Paul Calvert has an eco-toilet in his office and apartment in Trivandrum, India. This book and poster set are tools that government and NGOs alike would find invaluable in raising awareness and debate on ecological sanitation.

Paul Calvert (2004) "Ecological Solutions to Flush Toilet Failures." - EcoSolutions, IF House / Thornton Road Industrial Estate, Pickering / N. Yorkshire / YO18 7JB England UK. ISBN 0-9547873-0-7

Prices: £9.99 / €13.99 / \$14.99 plus postage and packing: UK £2, Europe €5, rest of World £6 / €9 / \$9. Contact Publisher at: Tel +44 (0) 1751 475757 Fax: +44 (0) 1751 472555

!!! Information: <http://www.eco-solutions.org/linkfiles/book.htm>

From conventional to advanced environmental sanitation – R. Schertenleib

An article of Roland Schertenleib has recently appeared in the IWA Journal "Water Science & Technology". The abstracts states:

"The large number of people in the developing world who still do not have access to adequate sanitation is a clear indication that the conventional approach to sanitation is not adapted to the socio-economic condition prevailing in most countries of Africa, Asia and Latin America. Advanced environmental sanitation is aiming not only to protect public health and the integrity of aquatic ecosystems but also to conserve precious freshwater and non-renewable resources. The Bellagio Principles and the Household Centred Environmental Sanitation Approach (HCES) are suggested as guiding principles and a new approach for planning and designing advanced (sustainable) environmental sanitation systems."

Roland Schertenleib (2005) "From conventional to advanced environmental sanitation." – Water Science & Technology, Vol. 51, No. 10, pp 7–14.

!!! Information: <http://www.iwaponline.com/wst/05110/wst051100007.htm>

German publication on infrastructures and intelligent networks for a sustainable development by Reinhard Loske and Roland Schaeffer [eds.]

Infrastructure is more than just the material pre-condition for economic activity. They are the acquired holdings of societies and determine the participation in public life. Above all however they significantly influence material cycles between human society and nature and thus the magnitude of our resource use and of environmental and climatic stress.

This publication explores the question, how can infrastructure comply with the idea of decentralisation, networking, intelligent use of resources, participation and public services. Ralf Otterpohl, Klaus Lanz, Tove Larsen, Engelbert Schramm, and Thomas Kluge, have all contributed to the chapter on water.

Reinhard Loske, Roland Schaeffer [eds.] (2005) Die Zukunft der Infrastrukturen – Intelligente Netzwerke fuer eine nachhaltige Entwicklung, mit einem Vorwort von Klaus Toepfer. – Metropolis Verlag, 476 p., Euro 29,80 – ISBN 3-89518-502-7 [*german only*]

!!! Information: <http://www.metropolis-verlag.de/cgi-local/katalog.cgi?id=502>

Short-cutting the phosphorous cycle in urban ecosystems – Bekithemba Gumbo

Bekithemba Gumbo (2005) "Short-cutting the phosphorous cycle in urban ecosystems." – A A Balkema Publishers. – 327 pp. – ISBN 0415 3848 2 (Taylor & Francis Group)

This outstanding dissertation from Bekithemba Gumbo (2005) presents a methodology of short-cutting the phosphorous (P) cycle in urban ecosystems. Lake Chivero is used as case study to illustrate unsustainable current practices. The thesis refers to the household centred environmental approach (HCES), brings forth solutions which are source oriented (local and small scale), non-mixing, safe and ecologically sound, and tests the feasibility of these concepts through recycling of P in urban ecological agriculture.

!!! Information: <http://www.balkema.nl>

Principles for the assessment, construction and operation of wastewater stabilisation ponds – DWA, a datasheet in german language

Grundsätze fuer Bemessung, Bau und Betrieb von Abwasserteichanlagen
August 2005, 20 Seiten, DIN A4, ISBN 3-937758-84-4
EUR 28,00 / DWA-Members: EUR 19,60

Waste water stabilisation ponds are appropriate waste water treatment facilities, particularly if the required areas are available. This datasheet in German describes the different types of ponds and gives information on operation and maintenance.

!!! Information: <http://www.dwa.de/news/detail.asp?ausgabe=44/2005>

!!! To order a copy: in [Produktuebersicht → 02 Regelwerk - Kommunale Abwasserbehandlung] <http://www.dwa.de/shop> [German only]

Source : Newsletter DWA and GFA; No. 44, September 2005

Publications ... on the web

Water, Time and European Cities: History matters for the Futures – EU project report

Juuti, P.S. and Katko, T.S. (eds) (2005). Water, time and European cities : history matters for the futures. – 253 p. : 19 fig., 67 plates, 36 tab. – Bibliography: p. 244-253.

This book is based largely on the study "City in Time" undertaken in the frame of the EU-project Watertime. It explores the historical aspects of Watertime's 29 case study cities, looking at the long-term historical consequences of decisions made on these cities' water and sanitation systems. The book includes a chapter on the early diffusion of water and sanitation services, and public private cooperation in historical perspectives.

!!! Download (PDF, 7.8 MB): <http://www.watertime.net/Docs/WP3/WTEC.pdf>

Sustainable Composting – a WEDC publication

Mansoor Ali [ed.] (2004) "Sustainable composting." - WEDC, Loughborough University, 134pp, ISBN 1 84380 071 3 (Pb.), £19.95

(also available as a CD and as a free download from the WEDC website)

A successful urban composting business represents a win-win situation, solving the problem of organic waste while providing income. Often composting businesses fail, however, for a variety of reasons. This book looks at the importance of understanding demand for the product, and the need for marketing for such businesses, to increase the chance of success. Five case studies, from India, Sri Lanka, Bangladesh and Pakistan, make up the bulk of the book.

The most useful chapter, however, is probably the final one. Titled 'Marketing compost', it provides a comprehensive 'how to' that will help new or existing compost producers understand and accurately target their markets.

!!! Download:

<http://wedc.lboro.ac.uk/publications/details.php?book=1%2084380%20071%203>

Sustainable pathways to attain the MDGs – Report from SEI/SIWI

Sustainable Pathways to Attain the Millennium Development Goals - Assessing the Role of Water, Energy and Sanitation. - Stockholm Environment Institute, for the UN World Summit, Sept. 14, 2005, New York

This report highlights the importance of the environment in achieving all MDGs. It focuses on three core aspects of goal fulfilment, namely freshwater to eradicate hunger and sustain ecosystems, energy for poverty alleviation and sanitation for poverty alleviation, health improvements and environmental sustainability. The objective is to clarify the large environmental investments required to attain the MDGs, and to identify sustainable solutions where synergies between the environment and development can be achieved for more rapid MDG achievement and to secure long-term sustainability also beyond 2015.

!!! Download: <http://www.sei.se/SustMDG31Auglowres.pdf>

Meeting the water and sanitation MDGs – Report from DFID

Department for International Development 2005: Meeting the Water and Sanitation Millennium Development Goal, Final report, May 2005, Reference 0026288, Prepared by Environmental Resource Management ERM

Progress towards the MDGs varies within countries and regions. The water, energy and minerals Policy Group of the UK Department for International Development commissioned this study to investigate the common characteristics of countries "on-track" or "off-track" to reach the MDGs. 13 country studies have been assessed.

!!! Download (909 KB): <http://www.dfid.gov.uk/aboutdfid/foi/disclosures/f2005177.pdf>
or [→ search for : ERM] at <http://www.dfid.gov.uk/default.asp>

Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level – WHO

Hutton, G. & L. Haller 2004: Evaluation of the Costs and Benefits of Water and Sanitation Improvements at the Global Level – WHO, Geneva 2004: Water, Sanitation and Health-Protection of the human environment

The aim of this study was to estimate the economic costs and benefits of improved water and sanitation services, with results presented for the regional and global level. Predicted reductions of diarrhoeal disease were calculated based on the number of beneficiaries. The costs of the interventions included the full investment and annual running costs. The benefits of the interventions included time savings and gain in productive time due to less time spent ill, health sector and patients costs saved and the value of prevented deaths. The results show that all water and sanitation improvements were found to be cost-beneficial, and this applied to all world regions.

!!! Information: http://www.who.int/water_sanitation_health/wsh0404/en/

!!! Download (available in English, French and Spanish) under
http://www.who.int/water_sanitation_health/wsh0404/en/

Water, Sanitation and Hygiene Education for Schools: Roundtable Proceedings and Framework for Action – UNICEF/IRC (2005)

This publication is a report of the Water, Sanitation and Hygiene for Schools Roundtable meeting, which took place in Oxford, UK, 24-26 January 2005. It contains two documents. The first, 'A Call for Action', sets out actions that participants agreed must be taken to ensure that by 2015 – the target date of the Millennium Development Goals (MDGs) – all schools receive a basic quality package of water, sanitation and hygiene (WASH) education. The second, 'A Package for Water, Sanitation and Hygiene Education: The Oxford Roundtable Statement', is a concise and comprehensive outline of the 'optimal package' for scaling up with quality the programmes for Water, Sanitation and Hygiene Education in Schools.

"Water, Sanitation and Hygiene Education for Schools - Roundtable Meeting in Oxford, UK, 24-26 January 2005 - Roundtable Proceedings and Framework for Action" – UNICEF/IRC, 76 Pages, Only available electronically (PDF).

!!! Download(1.76 MB):

http://www.irc.nl/redir/content/download/21369/253486/file/SSHE_OxfordRoundTable.pdf

Source: <http://www.irc.nl/page/25321>

Article on the fertilising aspects of ecosan from Edward Guzha

An article from Edward Guzha and colleagues on fertilising aspects of ecosan and two unpublished ecosan reports were sent to us by the author to be available for download from our website.

Guzha, E; Nhapi, I & J. Rockstroem (2005) "An assessment of the effect of human faeces and urine on maize production and water productivity." – Physics and chemistry of the Earth Journal, Parts A/B/C, Volume 30, Issues 11-16, 2005, pages 840-845

!!! Download:

<http://www2.gtz.de/ecosan/download/en-Guzha-assessmentonmaizeproduktion-2005.pdf>

Guzha, E. & J. Gotosa (unpublished) "The effects of humanure and ecofert (urine) on soil fertility and physical properties."

!!! Download:

<http://www2.gtz.de/ecosan/download/en-Guzha-effectshumanureandecofert-2005.pdf>

Guzha, M. & S. Muduma (unpublished) "An assessment of community attitude on human excreta use and products produced from human excreta plots."

!!! Download:

<http://www2.gtz.de/ecosan/download/en-Guzha-assessmentcommunityattitude-2005.pdf>

Wastewater use in irrigated agriculture – Scott, Faruqui and Rashid [eds]

Scott, C.; Faruqui, N. I. and L. Raschid [eds.] 2004: "Wastewater use in irrigated agriculture - Confronting the Livelihood and Environmental Realities."- CABI/IWMI/IDRC, 206 pp. ISBN 1-55250-112-4

This book critically reviews experience worldwide in the use of wastewater for agriculture through a series of peer-reviewed papers defining and elaborating on the issues at the centre of the debate around wastewater use in agriculture. Particular emphasis is placed on untreated wastewater use by means of field-based case studies from Asia, Africa, the Middle East, and Latin America that address the environmental and health impacts and risks. Read more and download under the below given link.

!!! Information and Download: http://www.idrc.ca/en/ev-31595-201-1-DO_TOPIC.html

Articles on ecosan in the German weekly "DIE ZEIT"

The German weekly "DIE ZEIT" has recently published two articles on ecosan. One in its regular journal dated 2005-29-09 (Nr.40, p.44) portrays Uno Winblad and the history of the ecosan movement [in German].

!!! Download: <http://www.zeit.de/2005/40/P-Winblad>

The other one is more comprehensive and found in the journal for background knowledge "ZEIT WISSEN" Volume 4/2005 and gives information on various initiatives and pilot projects, and includes a number of interesting illustrations [in German].

!!! Download: http://www.zeit.de/zeit-wissen/2005/04/Klo_der_Zukunft.xml

Readers call

"Gestión de aguas. Conceptos para el Nuevo Milenio"- manuscript on decentralised water supplies in Spanish seeks publisher

Margot Frankens manuscript "Gestión de aguas. Conceptos para el Nuevo Milenio" deals with important technologies and concepts in decentralised water supplies over approximately 300 pages and illustrates them with case studies from developing countries and industrial countries. The manuscript is based on the household centred environmental sanitation (HCES) approach from WSSCC. The main subjects are water saving techniques, reuse of grey water, use of rain water, ecological sanitation and natural waste water treatment with constructed wetlands.

Margot Franken has yet to find a publisher for Spanish speaking countries. Anyone who may be able to assist her, please contact:

!!! Contact: mvfranken@yahoo.com

Trainings and Courses

United Kingdom "Water Recycling for Urban Applications" Course 13th -14th December 2005, Cranfield

Organiser: School of Water Sciences, Cranfield University, UK

The course aimed at designed for design engineers, process scientists, researchers, operators, regulators, interested citizens and water managers, with core information on the practical aspects of reuse scheme planning and management.

Subjects to be covered include:

- Water reuse policy issues
- Water quality characterization and standards
- Technology selection
- Water recycling-wastewater quantity issues
- Public perception and acceptance
- Participative planning and stakeholder engagement
- Economic analysis of reuse schemes
- Case studies
- Design example

!!! Information: <http://www.cranfield.ac.uk/sims/water/recycleshortcourse.htm>

!!! Contact: Lesley Roff, shortcourse@cranfield.ac.uk

Netherlands **International short course in decentralised water supply and sanitation**
10th – 28th July 2006, Delft

Organiser: Department of Municipal Infrastructure, UNESCO-IHE Institute for Water Education

The aim of the International Short Course in Decentralised Water Supply and Sanitation (DWSS) is to provide theoretical background and practical expertise for low-cost decentralised water supply and sanitation options specifically suitable for small towns, peri-urban areas and urban slums, and also for small island communities, tourist resorts and similar sensitive environments.

It covers different approaches and technologies for water supply (water sources, wells and pumps, rainwater harvesting) and sanitation (ecological sanitation concepts, ecosan link with agriculture, greywater treatment and reuse, health aspects of excreta disposal, faecal sludge management and low-cost drainage and sewerage). Management aspects including subjects like participatory planning and evaluation, financing, cost recovery, institutional arrangement and operation and maintenance of DWSS system will be also covered.

Deadlines

Deadline for the submission of a "Netherlands Fellowship Program application" to the Dutch embassy in your country is on 1 March 2006.

!!! For details see Nuffic website: <http://www.nuffic.nl>

Prior to application for a fellowship to your Dutch embassy, you must submit an application form to UNESCO-IHE (for academic admission) prior to 15 February 2006.

For applicants with their own funding, the deadline for application for the course is 1 June 2006.

!!! Information: <http://www.ihe.nl/vmp/articles/Short-Courses/SHO-DWSS.html>

!!! Download of detailed course information:
http://www.unesco-ihe.org/downloads/reg_sh_courses/wssjuly2006.pdf

!!! Contact: S. Sharma s.sharma@unesco-ihe.org

Sweden **Training programme "Ecological Alternatives in Sanitation**
14th Aug to 1st Sept. 2006, Sweden and India/Latin America

Organiser: Stockholm Environment Institute, sponsored by SIDA

The objective is to acquire information and knowledge on new options in sanitation in order to support urban dwellers in reducing environmental health risks, improving their nutritional status and protecting their water sources.

Duration: 3+2 weeks: 14 Aug to 01 Sep 2006, and a 2-week follow-up early 2007

Location: First part in Sweden and second part in India/Latin America

Participants: 30 in total, 15 from Asia and 15 from Latin America

Target group: Professionals engaged in town planning and building, water supply, waste management, and socio-economic development; researchers and teachers/trainers in fields related to environmental sanitation and; key persons engaged in NGOs with projects related to improved sanitation and water supply.

This is an early announcement of the course. Eligible countries will be announced and available on <http://www.ecosanres.org> from 01 Jan 2006. **Before that no additional information will be available, and interested individuals are asked to please wait until the New Year!**

Closing date for application will be 01. April 2006

!!! Information: <http://www.ecosanres.org/ESR%20course%202005.htm>

!!! Contact: Solveig Nilsson solveig.nilsson@sei.se
Jan-Olof Drangert jandr@tema.liu.se

New upcoming events

Germany International Fair & Conference for Energy from Waste and Biomass 7th – 8th December 2005, Bremen

Organiser: Messe Bremen, HVG Hanseatische Veranstaltungs-GmbH in partnership with Freesen & Partner GmbH

The exhibition and conference "Waste to Energy" 2005 focuses on the implementation of the new landfill directive, the situation in other EU countries and the perspectives for waste producers, recycling and energy companies.

Scope of the exhibition:

- Plant and process technology
- Fuel production, material flow management
- Incineration, anaerobic treatment, gasification
- Secondary fuels, biomass, biogas, biofuels
- Climate protection, emissions reduction
- Process optimization, quality management, safety

!!! Information: <http://www.wte-expo.de> and <http://www.wte-expo.com>

!!! Contact: Anja Avci, Messe Bremen, wte@messe-bremen.de and
Ines Freesen, Freesen & Partner info@wte-expo.de

Syria Ecological Sanitation Symposium 11th -13th December 2005, Damaskus

Organiser: Syrian Engineers and Architects (OSEA), the University of Damascus and GTZ

The symposium will look at ecological sanitation comprising:

- dry and wet ecological sanitation systems
- low-cost wastewater treatment systems
- new guidelines of WHO and others for wastewater reuse experiences in piloting ecological sanitation systems.

Symposium topics are:

- water resources and wastewater situation in Syria
- introduction in ecological sanitation
- introduction in selected technologies for small and middle size sewage treatment systems
- use of wastewater, urine, faeces and sewage sludge
- advantages of ecological sanitation
- discussion of eco-sanitation needs and applications for Syria, further steps, identification of activities and capacity building
- model project constructed wetland in Haran Al-Awamied in Gouvernorat Damascus Rif
- discussion of Syrian Water and Wastewater politics.

!!! Information: <http://www.gtz.de/en/themen/umwelt-infrastruktur/wasser/12397.htm>

!!! Contact: Barea Abdeh, barea@aya.sy

India **CWG-WASH workshop 2006**
“Solid waste, health and the Millennium Development Goals”
2nd -4th February 2006, Calcutta

Organiser: WSSCC- CWG- the collaborative working group on solid waste management in low and middle income countries (CWG) of the Water Supply and Sanitation Collaborative Council (WSSCC)

This workshop is part of the WASH campaign (Water, Sanitation and Hygiene for all) and focuses on solid waste management (SWM) as a key component of environmental sanitation. The suggested themes are poverty, gender equality and education, health and environmental sustainability. The workshop will concentrate as well on practical experience that can contribute to the achievement of MDGs. The key outputs of the WSSCC Global WASH Forum in Dakar 2004, written down in the “Dakar Statement” and in the “Roadmap from Dakar towards achieving the MDGs on Water and Sanitation”, will be examined in closer detail.

!!! **Information:** under [→ workshop announcements] in <http://www.wsscc.org>

!!! **Contact:** Mr Jonathan Hecke cwg.secretariat@skat.ch

!!! **The Dakar Statement:** <http://www.wsscc.org/dataweb.cfm?code=516>

!!! **The roadmap from Dakar (...):**
<http://www.wsscc.org/dataweb/downloads/roadmap/Roadmap%20-%20Final.pdf>

Mexico **2nd Conference of the IWA Specialist Group on Ecological Sanitation**
7th – 10th March 2006, Mérida, Yucatan

Organiser: Institute of Engineering, Universidad Nacional Autonoma de Mexico (UNAM), International Water Association IWA

The IWA Specialist Group on Ecological Sanitation focuses on sanitation systems enabling nutrient reuse, mainly by source separation, and discusses the full range from high, to medium, and low-tech and from decentralised to centralised solutions. The 2nd Conference of the IWA Specialist Group on Ecological Sanitation will be integrated into the 7th IWA Specialised Conference on Small Water and Wastewater Systems. Please refer to the conference website of the latter conference for information.

Venue: Hotel Fiesta Americana, Paseo de Montejo 451, 97127 Mérida, Yucatan, Mexico

Early registration until: **15. Dec. 2005**

!!! **Information:** <http://pumas.iingen.unam.mx/small2006/>

!!! **Contact:** otterpohl@tuhh.de and small2006@pumas.iingen.unam.mx

Mexico **7th Specialised Conference on Small Water and Wastewater Systems**
7th - 10th March 2006, Mérida, Yucatan

Organiser: Institute of Engineering, Universidad Nacional Autonoma de Mexico (UNAM), International Water Association IWA

The conferences series “**Small Water and Wastewater Systems**” is focussing on decentralised systems for water supply and wastewater treatment and their association with receiving bodies and industrial wastewater systems.

Topics are Decentralised wastewater collection and treatment systems, Industrial wastewater treatment, Anaerobic treatment systems, Upgrading wastewater treatment sys-

tems, Environmental management systems, Environmental microbiology and population dynamics, Operation and monitoring wastewater treatment systems, Wastewater reclamation and reuse, Low tech/appropriate systems, Sludge management, Bio film reactors, Sequencing batch reactors, Nutrient removal and recovery, Wetland systems and stabilisation ponds.

Early registration until: **15. Dec. 2005**

!!! Information: <http://pumas.iingen.unam.mx/small2006/>

!!! Contact: small2006@pumas.iingen.unam.mx

Mexico: **4th World Water Forum**
16th – 22nd March 2006, Mexico City

Organiser: World Water Council

The 4th World Water Forum will take place on March 16-22, 2006, in Mexico. 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.

Proposed sessions and local action are available on-line, e.g. the list of registered local actions at: http://www.worldwaterforum4.org.mx/home/lista_actions.asp

Several organisation ad groups currently working in ecosan are planning specific events for the conference. The current list of these ecosan thematic sessions and local actions can be downloaded from the link below. In order to keep all interested participants up-to-date we would also ask any of our readers who may be planning another ecosan intervention at the forum to please let us know!

!!! **Download** a list of ecosan-related proposed sessions from:

<http://www2.gtz.de/ecosan/download/en-4WWFMexico-ecosansessions-06.pdf>

!!! Information: <http://www.worldwaterforum4.org>

Turkey **International Symposium on Water and Land Management for Sustainable Irrigated Agriculture**
4th – 8th April 2006, Adana

Organiser: Irrigation and Agricultural Structures Department at Cukurova University, Turkey

The symposium aims to identify best management practices that will harmonize the sustainable use of water for agricultural production and livelihoods with well-functioning ecosystems.

Some of the topics to be included in this symposium are as follows:

- Irrigation efficiency and associated economics
- Irrigation for poverty alleviation and food security improvement
- Water management in the irrigation sector
- Water valuation in the irrigation sector, cost coverage, tariff system and rate level: opportunities and constraints
- Water scarcity and water harvesting
- Virtual water and food security
- Policy options for saving water in irrigation
- Impacts of climate change on hydrological regimes and water resources
- Gender issues in water and land management

!!! Information: http://www.unesco.org/water/water_events/Detailed/1125.shtml

!!! Contact: Dr. Attila Yazar symp2006@cu.edu.tr

Canada **3rd World Urban Forum**
19th - 23rd June 2006, Vancouver

Organiser: United Nations Human Settlements Programme (UN- HABITAT)

The World Urban Forum was established by the United Nations to examine the impact of rapid urbanisation on communities, cities, economies and policies. The overall topic of this Forum is how to minimise burgeoning poverty in cities, improve the urban poor's access to basic facilities such as shelter, clean water and sanitation and achieve environment-friendly, sustainable urban growth and development.

!!! Information: <http://www.unhabitat.org/wuf/2006/>

!!! Contact: Mr. Lars Reutersward lars.reutersward@unhabitat.org

China **IFAT China 2006 - 2nd International Trade Fair for Environmental Protection**
27th - 30th June 2006, Shanghai

Organiser: Shanghai New international Expo Centre (SNIEC), Munich Trade Fairs International Group (MMI), Munich Trade Fairs (Shanghai) Co. Ltd and China Association of Resources Comprehensive Utilization (CARCU)

CHINA 2006 is the comprehensive exhibition in the Asian marketplace for practice-oriented solutions in the key sectors for environmental protection including water supply, sewage, waste disposal and recycling, air pollution, environmental technology and environmentally sound energy sources.

!!! Information: <http://www.ifat-china.com> (for exhibitors)
<http://www.dvqw.de> and <http://www.dwa.de> (for lectures)

!!! Contact: Mrs. J. Dettmann dettmann@messe-muenchen.de (for exhibitors)
Mrs. Gabriele Martens matens@dwa.de (for lectures)

Finland **Dry Toilet 2006: The Second International Dry Toilet Conf.**
16th - 19th August 2006, Tampere

Organiser: Global Dry Toilet Club of Finland, Tampere Polytechnic, and Tampere University of Technology

The objective of the conference is to offer a platform for discussion for the professionals and other interested parties. The conference will disseminate the latest information on various aspects of dry toilets. The popular Dry Toilet Exhibition will also be organised during the conference.

The themes of the conference are:

- Historical aspects of dry toilet use
- Architecture, construction, maintenance and logistics of dry sanitation (including practical experiences about dry toilets)
- Regulatory framework of dry sanitation
- Millennium Development Goals and dry toilets
- Separation and reuse of urine and faeces (nutrient loop, problems relating to hormonal and medical residuals, hygienic quality)
- Dry toilets in emergency and crisis situations
- Information, education and communications relating to dry toilets
- Prejudices and attitude change to dry toilets (including geographical and socio-economic differences)
- Dry toilet futures and scenarios (creative approaches to future development)

Deadline for submission of abstract extended until: 15. Dec. 2005

Notification of acceptance: 31. Jan. 2006

!!! Information: <http://www.drytoilet.org/dt06.html>

!!! Contact: secretary2006@drytoilet.org (for prog. and submission of abstracts)
drytoilet@tavicon.fi (for registration and accommodation)

Events reminder

China **Water China 2006 - Exhibition/Trade-fair**
6th - 9th March 2006, Guangzhou

'Water China' has established itself as the biggest Chinese trade-fair in the field of environment with international and Chinese Exhibitors. Being held for the 7th time. The fair comprises the International Water, Wastewater & Water Treatment Trade Show (Water China) and the International Air & Waste Treatment Trade Show (AW China).

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

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

Organiser: Institute for Sustainable Water Resources, Monash University, Melbourne, Australia

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.

!!! Information: <http://www.icms.com.au/UDMandWSUD/>

!!! Contact: UDMandWSUD@icms.com.au

Marocco: **Integrated Water Resources Management and Challenges of the Sustainable Development**
23rd - 25th May 2006, Marrakech

Organiser: The Moroccan Committee of the International Association of Hydrogeologists (IAH)

This congress will be a unique occasion for the different specialists in the field of water resources management (researchers, decision makers, planners, laboratorians, contractors, engineers and designers, etc.) to present and exchange information about the last developments in their works regarding integrated water resources management.

Topics of the conference:

- Tools and technologies applied to the integrated management of water resources
- Impact of climatic changes, new hydraulic structures and socio-economic development on water resources
- Quantitative and qualitative aspects of the integrated and sustainable water resources management

!!! Information:

http://webserver.lih.rwth-aachen.de/lih/content/e1864/e1865/index_ger.html

!!! Contact: gire3d@ucam.ac.ma

Singapore **Researchers Conference for Young Water Professionals**
24th - 26th May 2006, Nanyang Technological University

Organiser: International Water Association IWA

The **IWA Young Water Professionals Programme** provides professional development and networking opportunities to young professionals and students in the water and wastewater sector under the age of 35. As part of the programme, international events exclusively for young researchers are hosted every two years.

For this years conference submissions on all aspects of water, wastewater technology, engineering and management are invited. Only authors who are invited to present their work will be able to register for the conference.

!!! Information:

<http://www.ywp.iwahq.com/templates/dynamic/Conferences/Conference.aspx?ObjectId=310706>

!!! Contact: YRC2006@iwahq.org.uk

China: **World Water Congress and Exhibition**
10th – 14th September 2006, Beijing

Organiser: IWA China

Auspices: Ministry of Construction, P.R. China

Over four thousand delegates are expected to gather in Beijing to address water issues from a holistic point of view. The congress themes cover most areas of the global water industry, such as water resource utilisation and protection, water treatment technology and facility operation and management, water safety and health, water recycling, and sustainable utilisation, with an emphasis on the needs of developing countries.

The delegates will discuss and communicate with thousands of Chinese colleagues from the academia, industry, and government. Leading researchers and professionals will present the latest innovations in water technologies and management in the Congress, and promote their transfer to China and other countries interested.

Meanwhile, the international exhibition area will demonstrate the state-of-the-art water treatment technologies, equipments and services.

!!! Information: <http://www.iwa2006beijing.com>

!!! Contact: The Ministry of Construction, Secretary
<mailto:iwa2006@mail.cin.gov.cn>

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 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> (new)

<http://www2.gtz.de/ecosan>

Newsletter

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

owner-ecosan@mailserv.gtz.de

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

Contact

The GTZ ecosan team:

Christine Werner, Florian Klingel, Esther Geiss, Carola Israel

GTZ, Division 44: Infrastructure and Environment
ecosan project – ecologically and economically sustainable wastewater management and sanitation systems

Deutsche Gesellschaft fuer Technische Zusammenarbeit (GTZ) GmbH
P.O. box 5180
D-65726 Eschborn, Germany
Phone: ++49-6196-79-4220
Fax: ++49-6196-79-7458

christine.werner@gtz.de

florian.klingel@gtz.de

esther.geiss@gtz.de

carola.israel@gtz.de

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.

ecosan sector project



Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH

Dag-Hammarskjöld-Weg 1-5
P.O. Box 5180
65726 Eschborn, Germany

fon: +49 6196 79 4220
fax: +49 6196 79 7458
email: ecosan@gtz.de
internet : <http://www.gtz.de/eccosan>

