

Sustainable Sanitation Campaign in China

生态卫生排水行动在中国

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CNSS, EcosanRes-2, SEI

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瑞典EcoSanRes-2研究项目可持续生态卫生中国节点

2011年

封面：Susana meeting in Stockholm(斯德哥尔摩会议)

封底：CNSS CSES CWA logo

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Mission 使命

- ◆ Achieving the MDG target in sanitation for China

使中国能够实现千年发展目标中的卫生设施目标

- ◆ Promoting eco-sanitation development in China

促进生态卫生在中国的发展

- ◆ Promoting the transfer of eco-sanitation technology to other developing countries

促进生态卫生技术在其他发展中国家的传播

- ◆ Promoting the transfer and exchange of knowledge and information on eco-sanitation

促进生态卫生技术知识传播和信息交流



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Water Supply & Sanitation Collaborative Council
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Acknowledgments 致谢

Sincerely thanks for all mentioned above

真诚感谢以上单位的支持

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Just a start.....

Introduction 前言

You know what CNSS is and what have been done, 2-years working is just a good beginning.....

CNSS是什么？它做什么？两年的工作，仅仅是一个好的开始

Since the contract of China Node for Sustainable Sanitation (CNSS) has been signed at November 6th 2008 at Macao, as the first node office of EcoSanRes-2 program, the CNSS started functioning and progressed rapidly according to its work plan.

China has both experience and history in the practices of ecological sanitation, which can be sourced back to the 1980s. However, there has been no platform or mechanism to either accumulate or exchange such knowledge on ecological sanitation before, thus making it difficult for the continuity of the knowledge transfer from one location to another to cover the huge territory of China. Moreover, the traditional taboo to talk about sanitation in China hindered the change from conventional technologies

to future and re-use oriented sustainable sanitation systems, and its mainstreaming both in the media and in the mindset of decision makers. The launch of CNSS was right in time to fill this gap and to bring forth a broad platform for different players to join efforts. The importance of CNSS became more and more prominent, also by connecting to the Knowledge Nodes located in Nepal, South Africa and the Philippines; they shared knowledge with the CNSS and exchanged information. Within the framework of CNSS itself, networking with local experts and organizations was developing straight forward within the EcoSanRes-2 supported period up to 2011.

自

从可持续生态卫生中国节点于2008年11月6日在澳门签订项目合同以来，可持续生态卫生中国节点（CNSS）作为EcoSanRes-2在全世界实施的第一个节点项目开始启动，并且按照工作计划迅速开展了工作。

中国进行生态卫生的实践和历史可以追溯到19世纪80年代。然而，由于缺少一个平台或者机制，导致生态卫生知识没有很好的整理和传播，使这些知识很难从一个地方传递到另一个地方。此外，谈论卫生设施的传统禁忌也阻碍了资源利用型可持续生态卫生系统的发展，这一禁忌在主流媒体和决策者身上都有。CNSS



的成立正是在恰当的时间来填补这一空白，为努力改变这一现状的有识之士提供一个平台。

自从与尼泊尔、南非和菲律宾的节点建立联系之后，CNSS和他们分享相关知识信息，使得CNSS的重要性越来越明显。CNSS本身形成的国内专家和组织的网络在EcoSanRes-2的支持下一直在持续发展。

The capacity development program on sustainability issues of sanitation, implemented through the excellence of USTB-CSES (University of Science and Technology – Centre for Sustainable Environmental Sanitation) and CWA (Clean Water Alliances), are founded on a sound project planning process, where (i) extensive consultations have been made with the relevant stakeholders and where (ii) the objectives and outcomes as well as focused outputs, are clearly identified. A Project Document has been prepared with that in mind, applying LFA and output based planning for achieving a sound planning process.

The China Node for Sustainable Sanitation (CNSS) office was officially hosted by USTB-CSES, but both partners were responsible for the funds they received separately from SEI. CNSS start-up and office was coordinated from November 2008 to November 2009 by Elisabeth-Maria Huba, international social scientist and expert in sustainable sanitation; from November 2009 to June 2011, Prof. Dr. Li Zifu coordinates the CNSS, supported by Dr. Zhang Lingling. CWA partner is represented since November 2008 by Mr. James Gao. The official website of CNSS www.susanchina.cn was launched in February 2009.

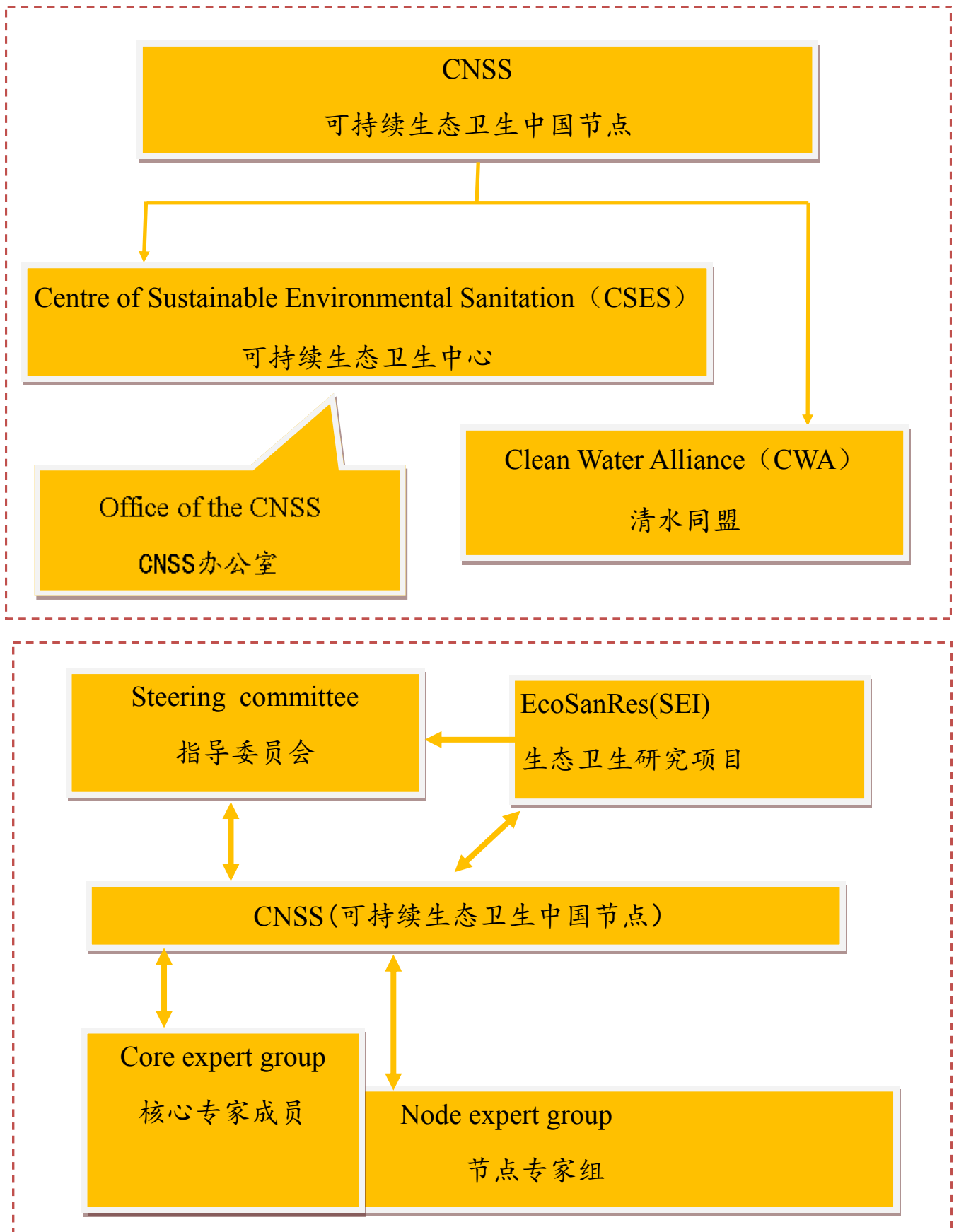


北京科技大学可持续生态卫生中心 (USTB-CSES) 和清水同盟 (CWA) 共同合作在全国各地不断实施着生态卫生项目和计划。这些项目和计划包括 (1) 和相关利益者进行了充分的交流 (2) 有明确的目标、任务和重点。对于项目我们已经胸有成竹，应用逻辑框架法和基于规划的结果分析方法让我们的项目计划完美完成。

可持续生态卫生中国节点 (CNSS) 办公室设在北京科技大学可持续生态卫生中心 (USTB-CSES)，但具体工作由每个合作伙伴分别或合作开展。从2008年CNSS正式启动到2009年11月由国际知名的社会学家和可持续生态卫生专家 Elisabeth-Maria Huba 作为项目协调人开展CNSS的工作。从2009年11月至2011年6月，CNSS由李子富教授担任项目协调人并在张玲玲博士协助下开展工作，CWA作为CNSS的合作伙伴从2008起开始由高中先生代表开展相关工作。CNSS的官方网站 www.susanchina.cn 在2009年2月开始投入使用。

The organizational structure of CNSS

可持续生态卫生中国节点组织框架



The Centre for Sustainable Environmental Sanitation (CSES), integrated in the School of Civil & Environmental Engineering at the University of Science and Technology Beijing (USTB) was created in 2007 with the objective to build capacity among young professionals (Chinese and international) in the interrelated sectors of sustainable environmental sanitation, food security, bioenergy and climate protection. Up to 30 master and PhD candidates (about 50% of them belong to the female gender) do their research and project work in the CSES.

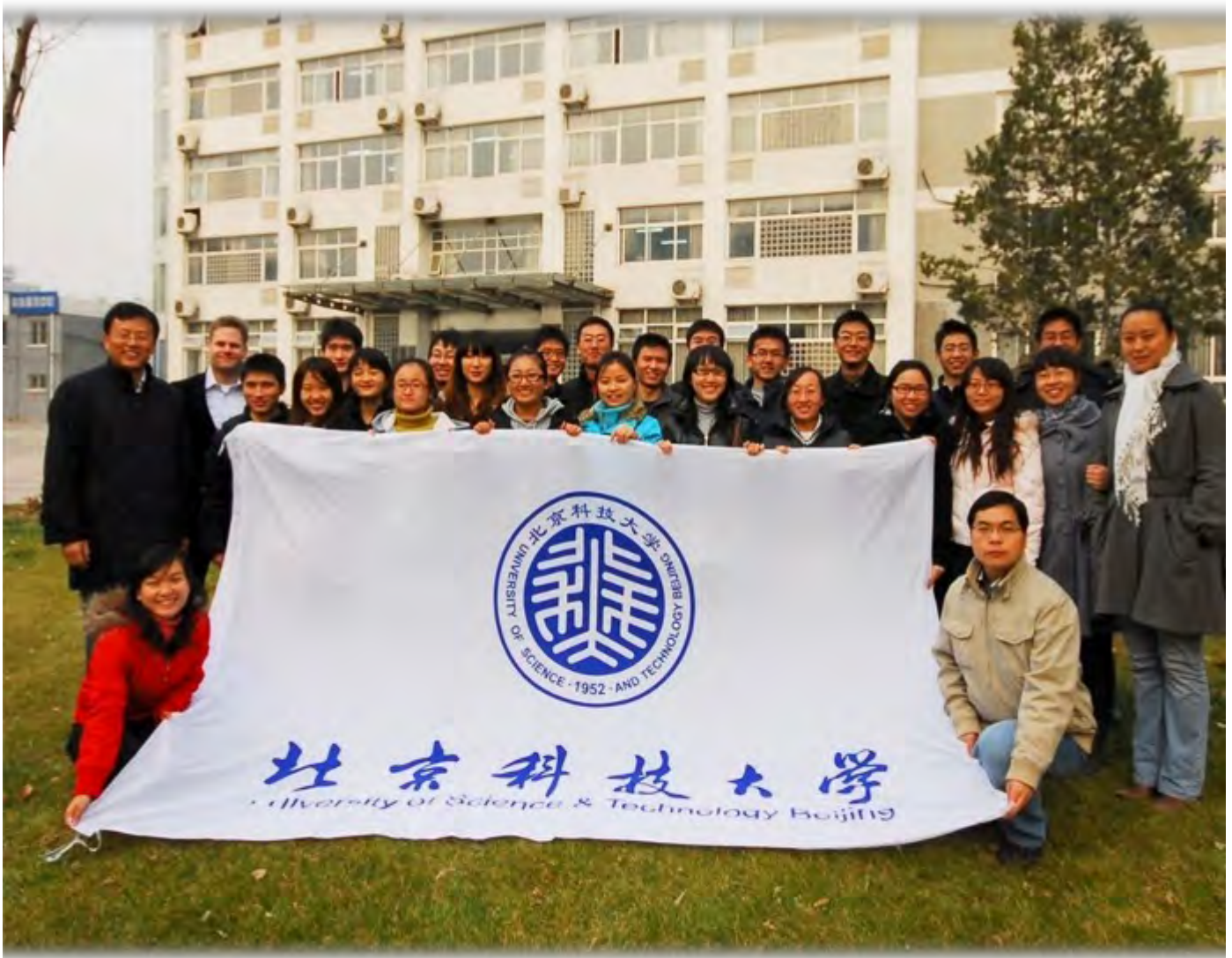


CSES

可持续生态卫生中心

可持续生态卫生中心(CSES)成立于2007年, 办公室位于北京科技大学(USTB)土木与环境工程学院, CSES的目的在于培养年轻学者(包括国内和国外)在可持续生态卫生、食品安全、生物质能和气候保护等方面的专业能力。目前已有多达30个硕士和博士生(其中约50%为女生)在CSES做相关的项目和研究工作。

These young academicians are coming from different Chinese provinces and different economic groups of the Chinese population: daughters and sons from workers, farmers and academicians. The Centre cooperates largely with national and international universities, organizations and individuals. Since May 2008 CSES distributes the Chinese EcoSan Newsletter among 100 registered users of the google-China EcoSan discussion group and the 5000 members of the China Biogas Association.



这些年轻的学生来自中国的各个省市有着不同的家庭背景，有工人、农民和知识分子的后代。CSES主要和国内外一些大学、组织和个人合作。从2008年5月开始截止到目前，由CSES翻译的中文版的Ecosan Newsletter已分发给100多位Google-China生态卫生论坛的注册会员和5000位中国沼气协会的会员。

In the moment of CNSS creation, Clean Water Alliances (CWA)-Vantone was a working group of CWA and Vantone charitable foundation. CWA-Vantone Foundation's awareness raising approach is based on mass media contacts and volunteers; among the volunteers at least 60% are girls. Since its foundation in 2004, CWA and its programs have been frequently covered by at least 100 Chinese media institutions for organizing a series of public welfare activities under the theme of "People and Water in China".



CNSS 创立之初，清水同盟（CWA）-万通由CWA和万通慈善基金会作为一个工作组。清水同盟-万通基金会通过大众媒体和志愿者（其中60%为女性）宣传生态卫生理念。自2004年成立以来，CWA以“中国人与水”为主题组织了一系列公益活动并被至少100家中国媒体报道。



Beijing Vantone Foundation started operation in May 2008, being committed to clean water schemes for ecological communities combined with energy conservation, poverty alleviation, emission reduction projects, resource recycling, and green building. In April 2009, CWA took over the role of contribution of Vantone with the permission of SEI project node project manager, Dr. Elisabeth Kvarnstrom. Strong in working actively with mass media, and in mobilizing resources from both authori-



北京万通基金会自2008年5月开始运行，一直致力生态社区、节能清水供应、减少贫穷、减少排放、资源循环利用、绿色建筑等项目。2009年4月，清水同盟在SEI节点项目经理 Elisabeth Kvarnstrom博士的许可下接手了万通的工作。清水同盟的优势在于和大众媒体具有良好的关系，并能利用政府和商业资源来支

ties and business to support charitable activities, CWA is enhancing the fundraising capability with several partners, either business or non-profit to support the activities of CNSS.



慈善活动。清水同盟通过与其伙伴合作提高其筹款能力来支持CNSS的活动，这些合作伙伴中有商业机构也有非营利机构。

Overview of Node Outcomes and Impacts

节点的成果和影响概述



CNSS partners mainly achieved the following outcomes and possible impacts in the period November 2008 to May 2011

2008年11月到2011年5月期间，CNSS主要取得了以下成果。

Launching pilot projects and showcases in different areas in China

在中国的不同示范项目及试点工程

Outcomes:

108 Eco-toilets built in the earthquake area in Sichuan province, improving hygiene and sanitation for more than 1000 people; Eco-toilets promoted in Shanxi Hougou village in September 2009.

Designed and installed urine diversion vacuum toilets for urban ecosan demonstration in the 12th floor in the building of the Department of Environmental Science and Engineering, University of Science and Technology Beijing.

Demonstration garden established next to CNSS office, where vegetables are grown using treated urine.



成果:

在四川省地震灾区修建了108个生态厕所，改善了超过1000人的环境和卫生状况。2009年9月，在山西省后沟村推广了生态厕所。

在北京科技大学土木与环境楼12层设计并且安装了尿液分集真空厕所，进行城市生态卫生系统的示范。

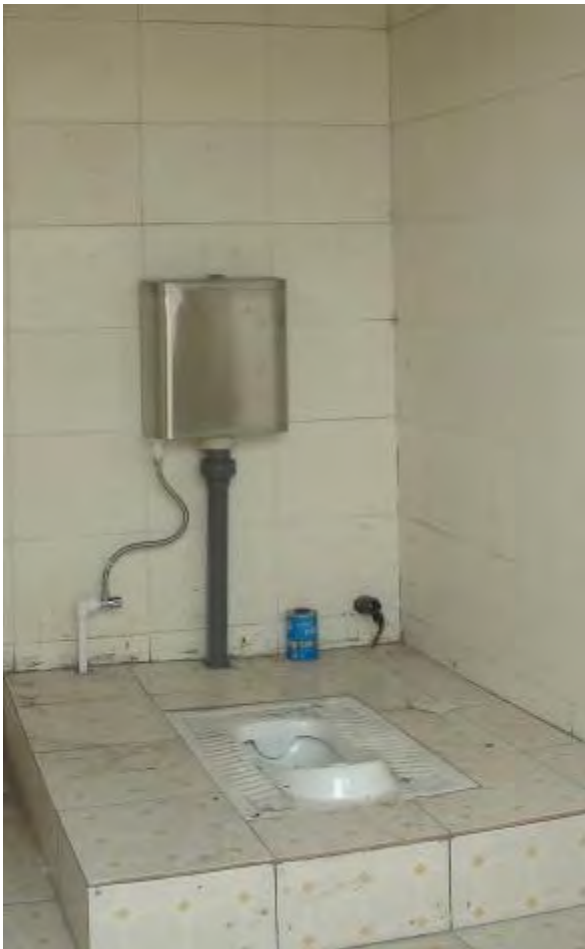
在CNSS办公室附近建立了一个试验田，里面种植的蔬菜用处理后的尿液浇灌。



Support to develop sustainable sanitation systems in peri-urban areas in extreme cold winter climates.

Design of eco-san toilets in two locations in Beijing (Yanshan Shuyuan and Shijiahutong, approved by the future users; construction work will be done in due time.

Impacts: Showcases could be copied in neighbour towns and neighbouring residential areas as a result of the training to the local implementation team and local authorities. Replication of showcases in vicinity of CNSS office (UD vacuum toilet and vegetable garden) is facilitated to visitors and members of the academic community in USTB's environmental science and engineering department



支持在极寒冷的城市地区周围发展可持续生态卫生系统。

经其用户同意，在北京的两个地方设计了生态卫生厕所（阳山书院和史家胡同），目前建造工作还在进行，并将在预期内完成。

影响：通过对当地施工队和地方政府的培训，示范项目可以被邻近乡村和附近居住区效仿。此外，CNSS办公室外的尿液分集真空厕所和试验田示范项目可方便参观者和北京科技大学环境科学与工程专业学生参观学习。

Outcomes:

- December 2008: Eco-San Forum and CNSS Workshop at Chengdu, Sichuan, attended by more than 100 organizations including research institutes, NGOs, and delegates from central and local governments. While CNSS partner CWA organized the workshop and the UDDT construction, CSES's contribution was to check the technical design and to give a presentation about ecosan and CNSS.
- January 2009 to May 2011: Several enterprise, experts and media salons for CEOs of environmental technology and equipment related companies, interested media and local governments.



Forums, conferences, workshops and training courses were organized.

组织了一系列论坛、会议、研讨会和培训课程

成果:

- 2008年12月，在四川省成都市召开的生态卫生论坛和CNSS研讨会上，有包括研究机构、非政府组织、中央或地方政府代表等超过100个组织参加。CNSS合作伙伴清水同盟（CWA）组织了研讨会并建造了粪尿分集生态旱厕示范项目，北京科技大学可持续生态卫生中心在会上作了有关生态卫生和CNSS的介绍，并负责担任该项目的技术设计和咨

询。

- 2009年1月到2011年5月间，CNSS组织了多次针对环境技术企业、专家、媒体的沙龙。



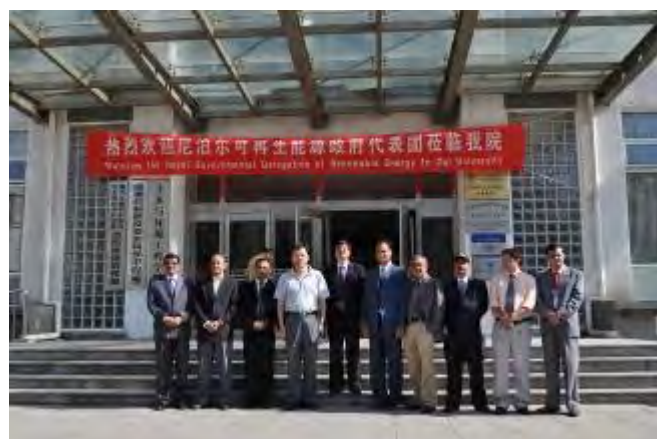
- March 2009: Experts' Meeting at USTB to create the Node Experts Group and to identify Chinese criteria for sustainable sanitation
- May 2009: Training of 25 engineers from DPR Korea, China and Nepal at USTB in re-use oriented Decentralized Wastewater Treatment Systems – cooperation of SEI, Save the Children UK, UNICEF, BORDA and GIZ。
- August 2009: Lecture at Tokyo University about “sanitation and urban planning”
- August 2009: Workshop at USTB on urine re-use and biogas technology in cooperation with University Bonn/Germany

→ 2009年3月：在北京科技大学举行了专家会议，并组建了节点专家团队，明确了中国可持续生态卫生的评价指标。

→ 2009年5月：在北京科技大学对25位来自朝鲜、中国和尼泊尔的工程师进行了分散式废水处理系统的培训，这是和SEI、英国救助儿童基金会、联合国儿童基金会、BORDA 和 GIZ的合作项目。

→ 2009年8月：在日本东京大学进行的有关“生态卫生和城市规划”演讲。

→ 2009年8月：在北京科技大学举行了与德国波恩大学等有关尿液回用以及沼气技术合作的研讨会。



- October 2009: Beijing International Environmental Technology Conference at USTB; about 120 participants from China and abroad; 90 articles are published in the Conference Proceedings.
- November 2009: NGO Eco-san training in Beijing for 15 NGOs that work in environmental protection projects in the context of rural urbanization.
- December 2009: Co-organizing with SEI workshop on Erdos-Eco Town project (Lessons learned and ways forward); partici-

pants include people from Dongsheng (local residents and government officers), Chinese experts, USTB, CNSS, international experts and Swedish Embassy representatives.

- December 2010: Organizing China Sustainable Sanitation Development Forum 2010.



-
- 2009年10月：在北京科技大学举办了国际环境技术会议，大约120位国内外与会者参加。90多篇会议文章发表在会议论文集里。
 - 2009年11月：在北京对15个非政府组织进行生态卫生培训，这些组织都参与了农村城市化环境保护项目工作。
 - 2009年12月：同SEI组织了鄂尔多斯生态城项目研讨会（经验和展望），参与者包括鄂尔多斯市代表（居民和政府官员）、中国专家、北京科技大学人员、CNSS、国际专家和瑞典大使馆代表。
 - 2010年12月：组织了2010中国可持续生态卫生（排水）发展国际论坛。

Impacts: CNSS provided a recognized communication platform for research institutes, NGOs, governments and media; sustainable sanitation concepts are introduced to media, CEOs of environmental technology and equipment related companies, and local decision makers; awareness of the importance of sustainable sanitation has increased. Indicators for showcase evaluation have been dis-

cussed and documented for future application; ecological sanitation systems are introduced and approved by the users; Chinese experiences and capacity building needs are collected and analysed. National and international networking is established.



影响: CNSS提供了一个供研究机构、非政府组织、政府和媒体公认的交流平台。可持续生态卫生理念被引进中国，环境技术和设备公司的CEO以及当地决策者对可持续生态卫生重要性的认识也得到了提高；讨论和提出了示范工

程评估指标，可作为今后案例的一个参考；生态卫生系统引进并得到用户的反馈。对中国的经验和建设能力进行了收集和分析，并且建立了与国内和国际相关组织的广泛联系。

Ecosan related publications

生态卫生有关的出版物

Outcomes:

Fact sheets and posters on sustainable sanitation technologies in Chinese language: constructed wetlands, urine diverting toilets, urine treatment and utilization, and faeces composting.

English- Chinese translation of Peter Morgan's "Toilets that make Compost".

Final editing of "GIZ-Biogas sanitation fact sheet"

成果

出版了中文版本的可持续生态卫生技术项目说明书和海报，包括：人工湿地、尿液分集厕所、尿液处理和利用以及粪便堆肥。

出版了Peter Morgan著作的《堆肥厕所》中文译本。

在‘GIZ-生态卫生’项目共同资助下，编写了“GIZ-沼气生态卫生项目说明书”。

对2009北京国际环境技术会议论文集进行数据库英文索引编辑，从而可在互联网上检索到会议论文集中发表的92篇文章。

2009年11月：由德国政府提供资助，CNSS

with co-financing from GIZ-ecosan.

Indexing English language proceedings of 2009 Beijing International Environmental Technology Conference in the knowledge database, which can be searched in the web worldwide: 92 articles published in the conference proceedings.

November 2009: CNSS presented Chinese experiences with UDDTs on the IWA Water, Sanitation and Development conference in Mexico; financially supported by the German government

Impacts: Facilitating access to international ecosan knowledge to people who read and speak only Chinese; information to international ecosan community about Chinese experiences and developments.



代表在墨西哥国际水协会大会上作了生态卫生在中国应用的经验介绍。

影响：促进国际生态卫生知识在中国的传播，向国际生态卫生组织提供了有关中国的经验和发展的信息。

Launching the CNSS website
www.susanchina.cn in February
2009 and improving web
design in 2010

在2009年2月创建了CNSS网站
www. susanchina. cn, 并在
2010年改进了网站设计

Outcome:

Until 15th June 2011, there have been about 44021 visitors counted

Impacts: Promoting knowledge about CNSS and ecosan issues through internet; discussion and knowledge platform is built.



成果:

截止2011年6月15日，网站访问者累计达到了44021人次。

影响: 借助互联网提高了CNSS的知名度，同时也开展生态卫生话题讨论，并且建立了讨论交流平台。

Outcomes:

In 2009, participating in a CCTV¹ program to discuss during one hour about “toilets”, CWA introduced the concept of ecosan.



In 2009, invited at the National Administrative School, CWA spoke to senior officers from 30 provinces and 10 central departments about ecosan.

SWIF Nov.2009: presentation of CNSS; article titled “Assessing the sustainability of innovations in Urban Ecological Sanitation: Erdos Eco-town Project” published in the conference proceedings.

In 2010, organizing the “2010 People and Water Photo Contests” in cooperation with SINA².com, the contest office received more than 2,400 photos from 23 countries.

Introduce ecosan through different ways and at different places in China

在国内不同的方式介绍生态卫生知识

成果:

2009年，参加了CCTV一个专题节目，一个小时时间中讨论了有关厕所话题，清水同盟介绍了生态卫生理念。

2009年，受国家行政学院邀请，清水同盟向30位省级高级官员和10个中央部门介绍了生态卫生理念。

2009年11月：参加了国际水协会SWIF会议，并作了会议发言，在会议论文集上发表题为“城市生态卫生创新技术可持续性评估：鄂尔多斯生态卫生城镇项目”的文章。

2010年，与新浪网合作组织了“2010人与



水摄影比赛”，赛会收到了来自23个国家的超过2400幅照片。



Presenting the ecosan concept in Yunnan TV programs on May 4th to May 8th 2010, the program received a very high audience ratio of 0.2%, which means that more than one million people watched the program. In addition, the program was reported on 15 evening newspapers nationwide.

Impacts: ecological sanitation concepts are known but not yet mainstreamed; the message of sustainable sanitation is disseminated.

¹China Central Television

²A very popular Chinese website

2010年5月4日至8日期间，在云南卫视节目中介绍生态卫生理念，节目得到了高达0.2%的高收视率，这意味着超过一百万观众观看了此节目。除此之外，这个节目在15个全国性晚报中进行了报道。

影响：生态卫生理念不再限于专业领域，而且得到了广泛的传播。

Broaden international and local cooperation.

扩大国际和地区合作

Outcomes:

- November 2008: following the World Toilet Summit in Macau, CNSS together with SEI visited the National Park Jiuzhaigou on demand of the park administration to develop ecological sanitation systems for park infrastructure (average 20,000 visitors/day) and for villages bordering the park.
- April 2009: CNSS invited to contribute with own experiences to the creation of the “South East Asia Node” in Kathmandu/Nepal



成果:

- 2008年11月：参加了在澳门举办的世界厕所峰会。CNSS和SEI相关人员参观了九寨沟国家公园，并经公园管理机构请求，在当地和公园周边村庄开展生态卫生系统基础设施建设。
- 2009年4月：CNSS受邀在尼泊尔加德满都与“生态卫生东南亚节点”的会议上进行交流。

- August 2009: Study tour on “eco-cities, eco-villages partnerships, and models for sanitation in a ageing society” with mass media representatives and high ranking decision makers/opinion leaders to Sweden, Germany, France, Luxemburg, Switzerland: places visited (among others): Freiburg Energy Village, Siemens Muenchen.
- February 2010: first meeting of CNSS delegates with the Southern African Knowledge Node on Sustainable Sanitation in Pretoria, South Africa to explore potential cooperation
- 2009 & 2010: attending the World Water Week at Stockholm, Sweden
- 2009 & 2010: 6 young academicians attend UMB Norway summer training course on Ecological Sanitation
- January 2010: attending the World Toilet Summit in Singapore



- 2009年8月：与大众媒体代表、相关高层决策者等前往瑞典、德国、法国、卢森堡、瑞士等地进行有关“生态城、生态村合作伙伴以及老龄化社会生态卫生模型”的考察，参观的地方有佛莱堡能源村、慕尼黑西门子公司等。
- 2010年2月：CNSS代表首次与生态卫生南部非洲节点的代表在南非的比勒陀利亚会面，并探讨合作的可能性。
- 2009年与2010年：出席在瑞典斯德哥尔摩的世界水周大会。
- 2009年和2010年：6位北京科技大学的硕士生前往挪威生命科技大学参加了有关生态卫生夏季培训课程。
- 2010年1月：出席在新加坡举办的世界厕所峰会。

- Since January 2010: collaboration with Mongolian University of Science and Technology and the French NGO “Action contre la Faim” on an urban ecosan project in the Ger areas of Ulaan Baator.
- Since May 2008: technical backstopping to the Nepal Biogas Support Programme to improve the toilet connection coverage to the biogas plant model; and model adaptations to safely co-treat human excreta - – supported up to end 2011 by KfW (German Development Bank).

Impact: International networking on sustainable sanitation concepts, experiences and technologies, cooperation opportunities explored like joint training workshops, joint ideas of media coverage, exchange of documents, reports and contacts with different countries; increased reputation of CNSS and its topics and capacities in Asia and abroad; Chinese experiences accessible for international audience.



- 从2010年1月至今：与蒙古科技大学和法国非政府组织“Action Contre la Faim”合作，开展了乌兰巴托的城市生态卫生项目。
- 从2010年5月至今：对尼泊尔沼气项目进行技术支持，以提高其厕所污水采用沼气设施处理率。并提高对人类粪便进行安全处理模型的适应性，该项目由德国复兴银行资助，资助项目持续到2011年底。

影响：有关可持续生态卫生的理念、经验、技术和合作机会的国际交流，通过合作的培训研讨会、媒体对合作理念的报道、文件和报告交流、与不同国家接触等不同方式，提高了CNSS在亚洲乃至全球的影响。全世界的感兴趣者都可以获取中国经验的相关信息。

Outcomes:



- ◆ Evaluation of the sanitation impact of UDDT, 4-in-1 biogas model, and DEWATS in selected Chinese regions (Liaoning, Sichuan, Yunnan, Shanxi).
- ◆ Investigation of an eco-toilet program for re-use of urine at fruit trees in Tianshui, Gansu province
- ◆ Investigation of a biogas project in Vietnam.
- ◆ Collaboration with Chinese NGO “YE CAO WEN HUA” in ecosan projects in Guangyuan Sichuan.



Impacts: Documented impacts of human excreta, agricultural waste and wastewater treatment with different ecological technologies, and detailed analysis of management challenges for long term operation: increased expertise in CNSS and in Node Expert Group and knowledge in NGOs for implementation of sustainable sanitation projects through sharing the results of investigations; increased local and international reputation of CNSS.

Evaluation different projects in China and abroad

对国内外项目进行评估

成果:

- ◆ 在中国选定的区域（辽宁、四川、云南、山西）对UDDT、四位一体沼气模型以及分散型污水处理系统的卫生影响进行了评价。
- ◆ 在甘肃省天水市对生态厕所项目和利用尿液浇灌苹果树进行了调查。
- ◆ 在越南对一个沼气项目进行了调查。
- ◆ 在四川省广元市与中国的一个非政府组织“野草文化”合作开展了生态卫生项目。

影响: 对采用不同生态技术处理人类粪便、农业废弃物和废水进行了评估，对长期运行管理所面临的挑战进行了详细分析：提高了CNSS和节点专家团队的经验，通过成果共享，提高了非政府组织在实现可持续生态卫生项目上的认识，提高了CNSS在国内外的知名度。

Objective

Until December 2010, public awareness in China on sustainable sanitation has been undergoing a significant change due to broad media coverage of related topics in at least 1 TV station, 1 Radio station, 3 newspapers and script for 1 documentary prepared



目标1：到2010年12月，通过媒体的广泛报道，中国的可持续生态卫生公众意识出现明显变化，至少有1家电视台，1家广播电台，3家报纸和1部纪录片，就相关主题进行报道。

Indicators: In 2010, TV and radio stations as well as newspapers have informed about sustainable sanitation concepts; the script for a documentary on sustainable sanitation is prepared and ready to use

指标：2010年，通过电视和广播电台以及报纸介绍可持续生态卫生的理念；并拍摄一个以可持续生态卫生为主题的纪录片。



CNSS participated as co-planner in the CCTV program “People’s View” to discuss the topic “toilets” for 1 hour on March 15th, 2009. CNSS introduced the concept of Eco-San, gave a description of the Eco-San forum and the pilot project in Sichuan, and disputed with the supporter of traditional water-flush toilets. The program received the highest audience ever since the beginning of 2009, around 0.3%, which means 3,900,000 people watched the program.

2009年3月15日，CNSS合作策划并参加了中央电视台《大家看法》节目录制，在时长1小时的节目中，就“厕所”这一话题进行讨论。CNSS向观众介绍了生态卫生的概念和中国生态卫生旱厕行动论坛，展示了四川的试点项目，并与传统水冲厕所的支持者进行辩论。该节目获得了自2009年年初以来的最高收视率——约0.3%，这意味着3,900,000人观看了该节目。

TV programs

电视节目



CNSS was invited to inform about alternatives to the conventional flush toilets as a private charity foundation just set up luxury flush toilets for primary schools in an extremely dry and poor town in Gansu province. As so many people doubted whether the charity did the right thing, the charity started to look for alternative solutions. After the broadcasting of the program, CNSS received a lot of supportive messages including requests from other real estate developers. This potential and how to work together with private charities and real estate companies still needs to be explored.



节目中介绍了一个私人慈善基金会在甘肃省极端干燥和贫困地区小学建造了奢侈的水冲厕所。导致了许多人怀疑慈善机构此举的正确性，于是该机构开始寻求新的解决办法。CNSS也因此应邀在节目中介绍了不同于传统水冲厕所的新方案。节目播出后，CNSS得到了很多支持，包括一些房产商也开始咨询有关生态卫生系统的资料。与私人慈善机构和房地产商之间如何合作，仍需加以探讨。

CNSS joined in a Yunnan TV provincial program called “drought, nature and people”. The program was broadcasted on May 4th to 8th, 2010. The ecosan concept was introduced and project pictures were shown. After the program was broadcasted Beijing Times, the largest newspaper in circulation in Beijing, expressed a strong interest in cooperation with CNSS-CWA.

”Hougou Eco-Village Launching Ceremony” – a CNSS-CWA showcase - was reported by Shanxi provincial TV. The program introduced the Hougou village project and the eco-village launching ceremony, shot on the eco-toilets and interviews of users and experts.



CNSS代表参与在云南省卫视“干旱、自然与人”节目的录制。该节目在2010年5月4日至8日播出。节目中介绍了生态卫生的理念，并展示了项目的照片。节目播出后，北京发行量最大的报纸——京华时报，表达了与CNSS-CWA合作的浓厚兴趣。

山西省电视台报告了CNSS-CWA的“后沟生态村启动仪式”。该节目介绍了后沟村项目和生态村启动仪式，拍摄了生态厕所，并采访了使用者和专家。

CNSS arranged a visit for media from Beijing to the pilot project site in Sichuan province after the accomplishment of 108 eco-toilets, accompanied by professor Lin Jiang and Li Lingling from Guangxi to give training on site both to media and to the implementation team from March 21th to 23th, 2009. As a result of the visit and training, a reporter from the Chinese People's Political Consultative Committee Daily wrote about the concept of Eco-San, the process how the pilot projects process, and concluded that the Forestry Department of Sichuan Province will build eco-san toilets in many of their reservation territories. The newspaper is a national newspaper that serves as information tool for central and local Political Consultative Committees. News being published in such newspaper are regarded as "official distribution". The readers of this newspaper are governors, including all PCC officers throughout China.



四川试点项目的108个生态厕所建成后，2009年3月21日至23日，CNSS为媒体安排了访问，广西的同行林江和李玲玲给媒体和施工团队进行了现场培训。参观培训后，中国人民政协报的一名记者写下关于生态卫生理念、试点项目运行流程的报道，并推荐四川省林业厅在其自然保护区建立生态卫生厕所。这家报纸是

一家中央和地方的政治协商委员会信息交流的全国性报纸。刊登在这种报纸上的新闻均被视为“官方发布”。该报读者为全国的政协官员。

Newspaper

报纸

Other major media contacted like China Daily, Xinhua News Agency are also “official media” and cover both the high-rank and low-end readers of the whole nation. An article ”The Eco-Toilet Dream of a grassroots NGO” on the Chinese People’s Political Consultative Committee Daily described in detail how the 108 eco-toilets are built up at Water Drop Village, Sichuan province, and why it is important for the village to use the eco-toilets. ”How to turn a Thousand-Years-Village to Ecology” - an article to introduce Hougou village project, including background, current status and visions to promote the eco-san concept was released by Xinhua News Agency during Hougou Eco-Village Launching Ceremony.

Beijing Times China Social Responsibility Weekly, the subsidiary of Beijing Times will be founded

on June 20th 2009, and CNSS is invited as guest to attend the ceremony.



CNSS接触的其他媒体，如中国日报、新华社等也均为“官方媒体”，涵盖了全国不同层次的读者。一篇名为“草根NGO的生态旱厕梦想”的文章刊登在中国人民政协报上，详细阐述了108个生态卫生厕所如何在四川省滴水村建成的，以及在农村使用生态卫生厕所的重要性。在后沟生态村启动仪式期间，新华社发表了一篇名为“尘封千年古村，欲换生态新颜”的文章，介绍了后沟村项目，包括背景、现状和促进生态卫生理念的愿景。

此外，京华时报中国社会责任周刊于2009年6月20日成立，CNSS受邀出席了成立仪式。

108 Eco-toilets were built in the earthquake area in Sichuan province, improving hygiene and sanitation conditions of more than 1000 people in the village. Eco-toilet implementation has been started in Shanxi Hougou village.

CNSS and Wanruo Environmental Engineering Co. designed and installed vacuum toilets on the 12th floor in the Building of Environmental Science and Engineering, University of Science and Technology Beijing.

A demonstration garden was established next to the CNSS office on the campus of USTB, where crops or vegetables are grown using treated urine.



在四川地震灾区建造了108个生态卫生厕所，改善了该村超过1000人的卫生条件。生态卫生厕所已经开始在山西后沟村使用。

CNSS和万若环境工程有限公司在北京科技大学土木与环境工程学院楼12层设计并安装了粪尿分集真空厕所。

在北京科技大学CNSS办公室旁，建立了一个

试验田，在那里种植作物并使用处理后的尿液作为肥料。

Show cases

案例



Urine diversion toilets are designed for Yangshan Shuyuan, which is located in Beianhe village Beijing, for the house of a volunteering family. The system includes a urine diversion toilet, urine collection unit, fecal treatment unit as well as a constructed wetland as wastewater treatment unit.

Urban ecosan system demonstration with urine diversion toilets and “living machine” (a form of biological wastewater treatment, using sunlight, bacteria, green plants and animals to treat water) for sewage disposal is designed for a family house - Siheyuan, Beijing, to provide convenient and sanitary living condition.

CNSS为位于北京北安河的参与生态厕所志愿家庭改造的阳山书院设计了粪尿分集厕所。该系统包括一个粪尿分集厕所，尿液收集装置，粪便处理装置以及作为污水处理装置的人工湿地。

四合院设计了一套城市生态卫生系统包括粪尿分集厕所和“生态净化装置”的污水处理技术（一种利用阳光，细菌，绿色的植物和动物来处理污水的生物污水处理方式），为家庭住宅——北京四合院提供了便利和卫生的居住条件。

同时CNSS也为北京的传统家庭住宅-北京



Both, the 2009 Beijing International Environmental Technology Conference and the China Sustainable Sanitation Development Forum 2010 were reported by many professional websites (for ex-

2009年北京国际环境技术会议和2010年中国可持续生态卫生（排水）发展国际论坛活动被许多专业网站报道（例如，中国水网，给水排水工程）。

此外，新华社、中国网易、Sina.com、Sohu.com、China.com发布新闻和转载了云南电视台在其网站上播出的2010年5月4日至8日“干旱，自然与人”节目。搜狐公益频道（网站）上发表了一篇名为“从生态卫生寻找达到海晏河清的通途”的文章，详细讲述了CNSS-CWA如何开始了解生态卫生，然后启动中国生态卫生旱厕行动论坛，使公众了解生态卫生理念的故事。

ample, China water net, Water & Wastewater Engineering).

Xinhua news agency, netease China, Sina.com, Sohu.com, China.com released the news and copied the program of Yunnan TV show on their websites. An article in Chinese – ”The Eco-San approach to reach the ultimate target of All Water Are Back To Clean (Hai Yan He Qing)” By Sohu Gongyi Channel (website) describing in detail CNSS-CWA’s story how to start to know Eco-San and then launch the Eco-San Forum to make it public to all the possible audiences.

Websites publishing CNSS activities

网站发布CNSS相关活动





可持续性生态卫生与	健康	经济	社会	环境	实施	
政府官员	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。
商务人士	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。
教师学生	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。
非政府组织	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。
新闻媒体	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。
个体家庭	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。	了解国家生态卫生政策与项目进展，掌握项目实施的最新进展，了解项目实施的最新进展，了解项目实施的最新进展。

Toolbox

工具箱

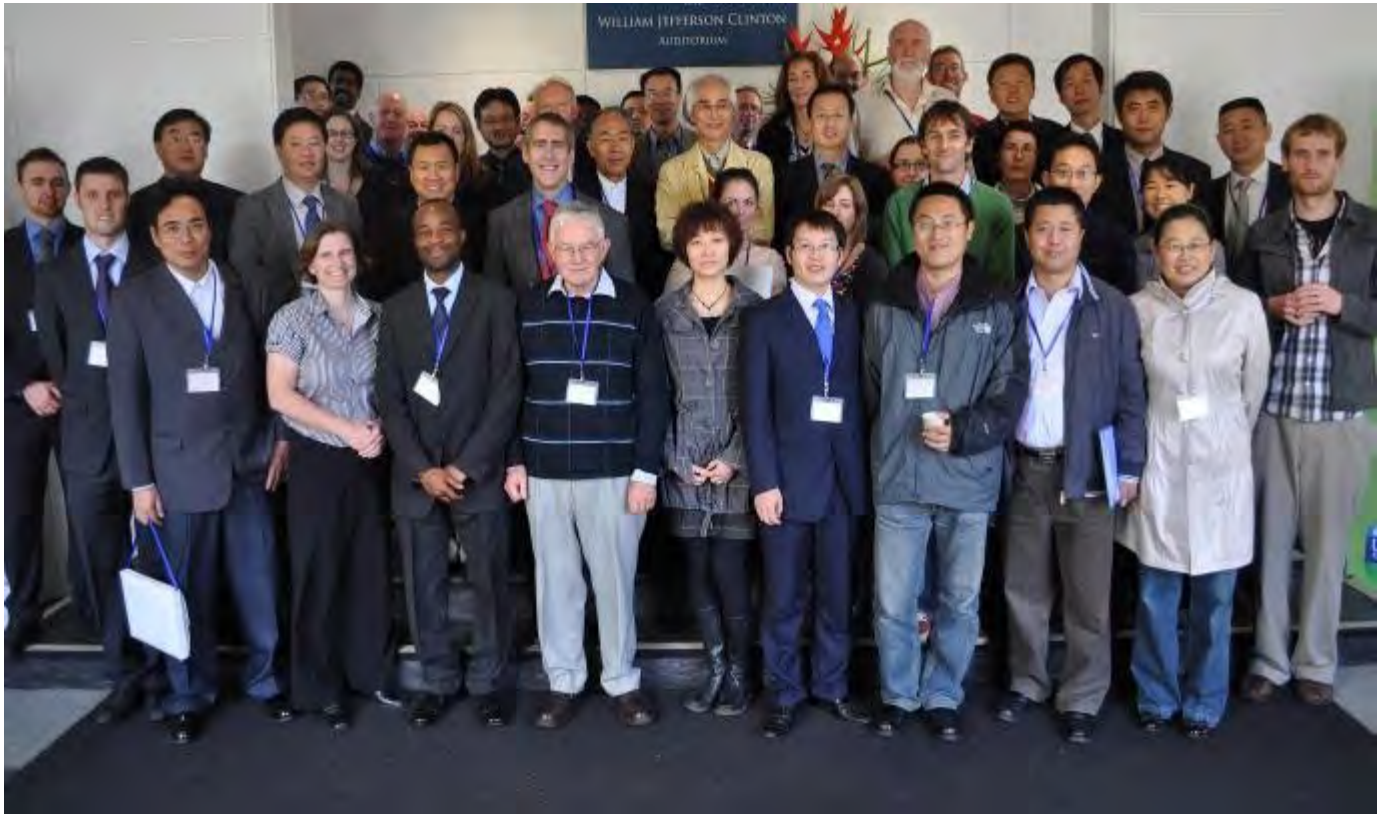
A set of comprehensive, informative, and eye-catching “outreach materials” has been produced. These materials include brochures on the introduction of CNSS and Chinese language fact sheets on constructed wetlands, urine treatment and utilization, and urine diverting toilets, as well as posters; adhesive stickers, leaflets and badges.

一系列综合性、知识性、趣味性的宣传材料制作完成。这些材料包括介绍CNSS的小宣传册和人工湿地的中文概况说明、尿液处理与利用、粪尿分集厕所以及海报、不干胶贴纸、传单和徽章。

Objective



Until December 2010, sustainable sanitation options for urbanized areas are analyzed, categorized and made available to urban developers in at least 1 province and the Association of Architects & Planners in Beijing



目标2:到2010年12月,对城市地区可持续卫生方案进行分析并提出分类,提供给至少一个省的开发商和北京城市规划协会。

Indicators: Architects and urban developers have been informed about sustainable options for urban sanitation

指标: 建筑师和城市开发商了解到城市生态卫生可持续观点

Connection with urban developers and their industry association: Supported by the CCTV program mentioned under Objective 1, and an ongoing governmental project related to the modification of old housing communities, CNSS get connected to some major urban developers and their industry associations. The idea of ecosan was transferred on the highest decision level.

In June 2010, CNSS received the invitation to present “Low carbon related technology and models for ecological city design” at the 2010 International Conference on Urban Development and Planning in Qinghuangdao city, Hebei province, China. The conference is held by Ministry of Construction, China Development Bank, World Bank and Hebei Province Government.

联系城市开发商和行业协会:通过第一部分中提到的中央电视台的节目和政府关于旧房改造项目的支持，中国可持续生态卫生节点联合了一些主要的城市开发商和行业协会。生态卫生排水理念已经传达到最高决策层。



2010年6月，中国可持续生态卫生节点受邀在中国河北省秦皇岛市召开的2010国际城市规划会议上介绍了低碳技术和生态城市设计。这次会议由住建部、国家开发银行、世界银行和河北省政府联合举办。



Alliances with the Association of Eco-city Research Committee. Already in June 2008, CSES received the invitation to present on the “Application of Ecological Sanitation Projects in Urban Areas“ at the International Symposium on Urban Development and Construction in Langfang city, Hebei province. CNSS was further invited to present about: ”rainwater utilization” at the Shenzhen Urban Planning Meeting⁴, a new developing zone of Guangming District, Shenzhen city: participants included the Director of the Urban Construction Department/Ministry of Construction; local officials from the Water Saving office; Chief Engineer

of Shenzhen Municipal Engineering Design Institute; Director of Guangming District Authority; CNSS presented also on ”integrated water management (ecosan, water saving, rainwater harvesting, wastewater reclamation and reuse)” to the technical staff of Shenzhen Water Group⁵ for Shanghai Construction Indicator Development during the Mid-Term Expert Evaluation Workshop⁶ of Chongming Eco-Island; participants included the Chief Engineer, Director of Technical Department, and other Engineers of the Shenzhen Water Group.

(⁴ 2009-06-06 ⁵ 2009-06-08 ⁶ 2009-06-09)



与生态城市委员会的联盟：早在2008年6月，CSES(可持续生态卫生中心)受在河北省廊坊市召开的城市发展和建设国际研讨会邀请介绍了有关城市生态卫生排水技术的内容。此外，中国可持续生态卫生节点也受邀参加了深圳城市规划会议，讨论雨水的利用，会议参加人员包括主管城市建设的官员、节水部门的官员、深圳市政工程设计研究院总工程师、深圳光明新区负责人等。CNSS还受邀参加了有关上海崇明县生态岛的生态指标体系项目中期专家评估会，作了“水资源综合管理(生态卫生、节约用水、雨水灌溉、废水回收再利用)”报告。参加者包括：总工程师、技术部门的主管以及深圳供水集团的相关工程人员。



Analyze eco-san options in Erdos/Inner Mongolia. November 2008 to January 2009, an intern at CNSS-CSES analyzed the performance and acceptance of the human excreta composting system in Erdos/Inner Mongolia; the report has been send to SEI.

分析蒙古鄂尔多斯生态卫生方案。从2008年11月到2009年1月，中国可持续生态卫生节点的一个实习生在内蒙古鄂尔多斯进行了人类排泄物堆肥处理系统的试验研究，试验报告已经提交给SEI。

Attending important conferences in China. Forums and conferences where CNSS has been invited to as presenter to governmental officers, urban developers, city planners and builders included:

- “Global Environmental Scientist Forum” in May 2010 in Shanghai;
- Forum on the topic of “Use of Rainwater” in Shenzhen with Shenzhen City Guang Ming Xin Qu government on 13th May 2010;

Annual forum of eco-city development in China;

- Nov 2009 in Shandong: topic of “Planning and models of Ecological cities”
- June 2010 in Hebei: topic of “Green、Ecology and Digital: the change of development model of Chinese city.”
- Nov 2010 in Wuxi: topic of “City water envi-

ronment and water ecological use technique”

- ”International Green Habitat Forum” in November 2010 in Chengdu.

Indicators for showcase evaluation. A working paper on evaluation criteria combining social, economical and technical parameters related to Sustainable Sanitation has been elaborated and applied as indicators for showcase evaluation. The report is available in the appendix.



出席国内的重要会议。中国可持续生态卫生节点受论坛和会议邀请给政府官员、城市开发商、城市规划者和建设者作报告，包括：

- 2010年5月上海全球环境科学家论坛
- 2010年5月13日由深圳和光明新区政府举办的“雨水利用”主题论坛

中国生态城市发展年度论坛：

- 2009年11月山东：会议主题为“生态城市规划和模型”

- 2010年6月河北：会议主题为“绿色、生态、数字：中国城市发展模式的改变”

- 2010年11月无锡：会议主题为“城市水环境、水生态利用技术”

- 2010年11月成都：会议主题为“国际绿色人居论坛”

示范项目评估指标。包括社会、经济和技术参数的可持续生态卫生评估标准的指标体系经过调查研究已经建立。

Set up technical database. A technical database has been developed by CNSS. This working document – periodically updated - displays devices and enterprise contacts. Its publication is still issue of negotiations with the included enterprises and individuals due to Chinese data protection regulations and Chinese Intellectual Property Rights.

Set up media list. CNSS has established a media

contact list which includes journalists from national and local TV stations, newspapers, magazines, radios as well as websites. Having built up a steady communication network, releasing eco-san news and activities will be done periodically. Also some specialized journalists can be chosen to join our bi-monthly salon periodically to communicate on sustainable sanitation options.



建立技术数据库。 CNSS 建立了技术数据库。它是一个定期更新的技术数据库，可以提供产品和相关企业的联系方式。遵循中国数据保护条例和中国知识产权，该数据库的发布需要与相关企业和个人进行磋商。



建立媒体名单。 CNSS 已经建立了媒体联系名单，包含了国内及地方电视台、报纸、杂志、广播电台及网站的记者。通过稳定的交流网络，可以定期发布生态卫生的新闻及活动。同时，一些专业记者也会被邀请参加定期的双月沙龙，就可持续生态卫生理念进行交流。

Objective

3

Until December 2010, knowledge in sustainable sanitation concepts is accessible to a broader audience through a website, an expert pool is identified and working, and technology development is ongoing in at least 2 universities, institutes and enterprises



目标3：截止2010年12月，可持续生态卫生的理念通过网站为更多的大众所了解，建立专家库并参与工作，在至少两个以上的大学、研究机构和企业中进行技术研发。

Indicators: CNSS website is visited at least by 1325 people/year; Expert pool is actively involved in knowledge sharing and development

指标：每年至少有1325人访问CNSS网站，专家库中专家可参与知识的共享及开发

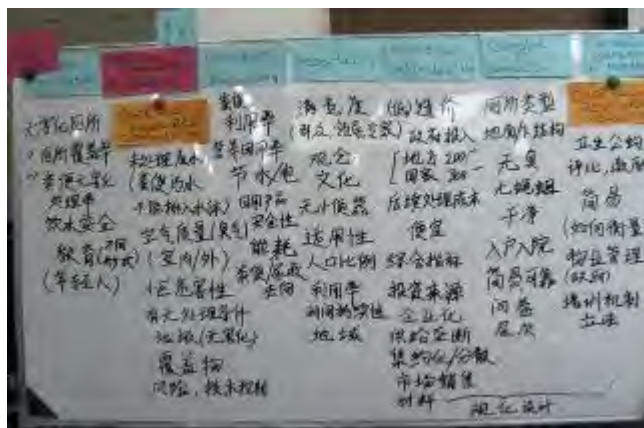
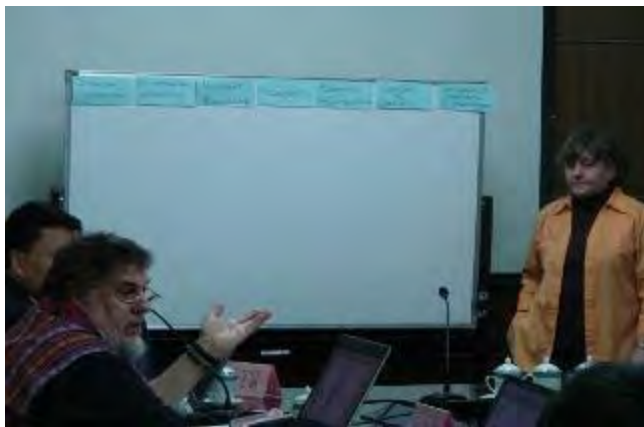
Installation of CNSS website. The CNSS website was installed under www.susanchina.cn in February 2009. It is designed to be the “virtual node”, a platform where much of the central function and purpose of the Knowledge Node could be served. A professional group was employed in June 2010 to update not only the website design but also the con-

tent. Until June 2011, both CNSS website versions were visited over 44021 times. Within the website, users can download materials related to ecosan, for example the GIZ Ecosan newsletter in Chinese. Ecosan technical facts sheets and information were translated and are available on the website.



CNSS网站建设。 CNSS网站于2009年2月创建（www.susanchina.cn）。作为“虚拟节点”为节点宣传交流提供平台。2010年6月CNSS聘请了专业团队对网站设计及内容进行了更新。至2011年6月，CNSS网站中文版和英文版的总访问量超过44021人次。在网站内，用户可以下载与生态卫生相关的资料，如汉语版的GIZ生态卫生时事通讯等。同时，在网站内可以找到并下载有关国内外生态卫生的技术情况说明书及相关资料（中文版）。

Set up expert database. An Expert Database has been set up – in a first stage, including universities working in sustainable sanitation, expert data base/core expert group, company list – suppliers and service providers. This data base is used only for internal networking among the two CNSS partners, as Chinese data protection rules do not allow for public accessibility.



建立专家数据库。专家数据库在节点成立初期已经建立，包括研究可持续生态卫生的大学、专家数据库/核心专家组、公司名单——供应商和服务商。遵循中国数据保护条例，该数据库不允许公开访问，仅限于CNSS合作伙伴间内部使用。

Expert meeting. The first expert meeting was organized on March 14, 2009 in the premises of USTB. 25 experts coming from different governmental institutions and universities attended the meeting. The Agenda included 3 topics: (1) Presentation of the China Node for Sustainable Sanitation to interested experts, (2) Identification of national indicators for evaluation of sustainable sanitation systems in China, (3) Identification of Core Node Expert Group.

The second expert meeting was organized on 31st July, 2010. 33 experts coming from different governmental institutions and universities attended the meeting. The Agenda included following topics:

- (1) Situation analysing on city drainage system;
- (2) Trend and aim on city drainage system;
- (3) Examples on city drainage system.

专家会议。第一届专家会议于2009年3月14日在北京科技大学召开，来自不同机构及大学的25名专家出席了会议。议程包含了三项内容：

- (1) 向相关专家介绍可持续生态卫生中国节点；
- (2) 确定评价中国可持续生态卫生系统的指标体系；
- (3) 确定核心的节点专家组。

第二届专家会议于2010年7月31日召开，有来自不同政府机构及大学的33名专家出席。议程包含以下内容：(1) 城市排水系统的现状分析；(2) 城市排水系统的发展趋势及目标；(3) 城市生态排水系统示范工程。



Media salons. CNSS launched the first media salon on 29th August 2010. There were 14 journalists from Xinhua News Agency (Chinese official media), China Environment Daily, China Science and Technology Daily, Beijing Youth Daily, Qianlong.com etc who attended the salon. The second media salon was held on 12th September 2010. There were 9 journalists and 4 experts attended.



媒体沙龙。 CNSS于2010年8月29日举办了第一期媒体沙龙，有来自新华社（中国官方媒体）、中国环境报、中国科学技术报、北京青年报、千龙网等众多媒体的14位记者参加。第二期媒体沙龙于2010年9月12日举办，有9名记者和4名专家参加。

Scientific conferences. In October 2009, Beijing International Environmental Technology Conference was attended by about 120 participants, both from China and international organization. 90 articles were published, and the conferences proceedings were indexed by ISTP available for download at the CNSS website.

From 2nd to 5th December 2010, China Sustainable Sanitation Development Forum 2010 took place at USB. About 100 participants, both from China and international organizations, summarized the two years' work of CNSS and shared experience about and among other Knowledge Nodes and organizations. The Forum provided opportunities to experts, government officials, and business leaders, to present their work, exchange ideas and develop visions for future sustainable sanitation policies, standards and systems in China. On the last two days, international participants were invited to visit the showcase at Hougou Village, Shanxi Province.



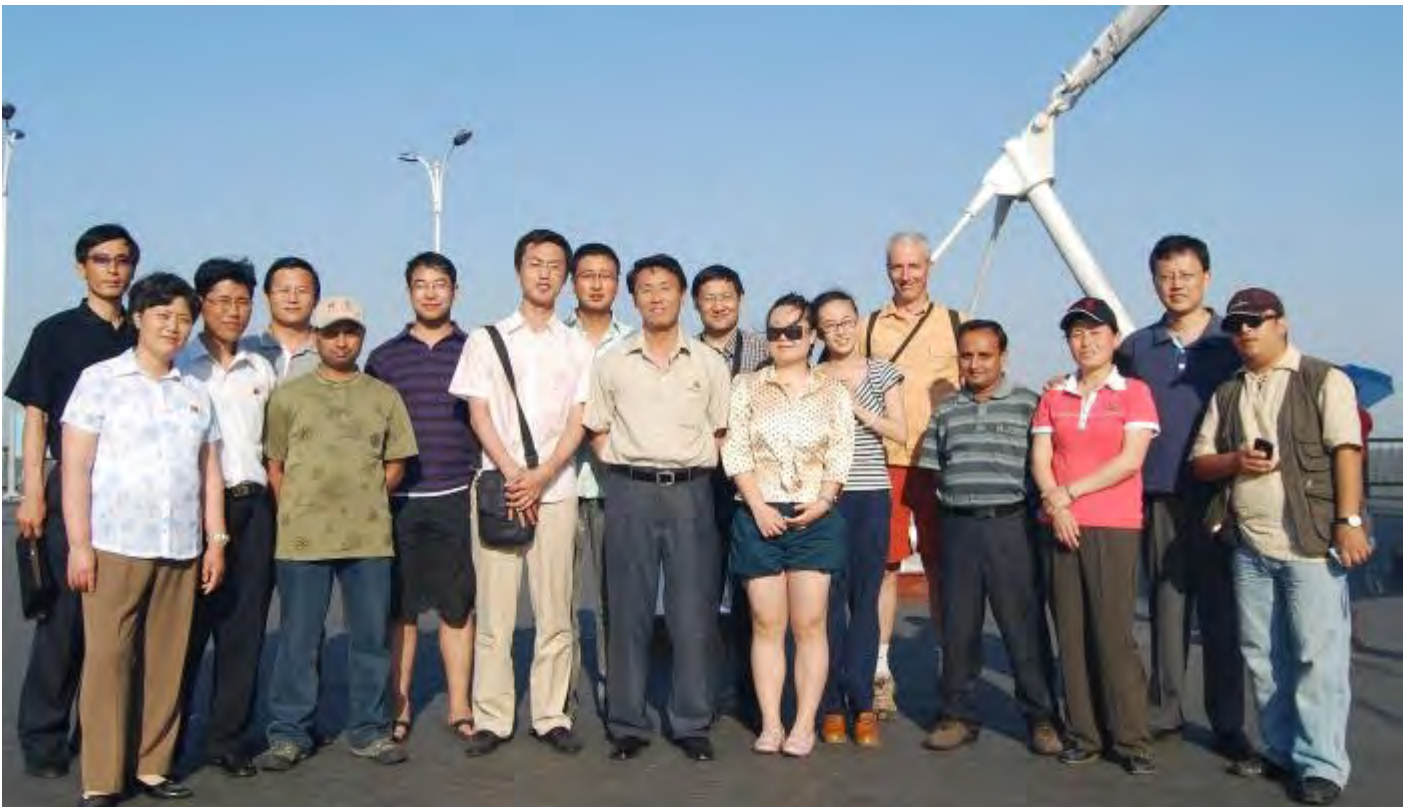
学术会议 从2010年12月2日到12月5日，中国可持续生态卫生（排水）发展国际论坛在北京科技大学举行。吸引了来自国内外的100多名专家学者，会议总结了CNSS两年来的工作，分享了其他节点和组织机构的经验。论坛为专家、政府官员及商界领袖提供了展示成绩、交换观点及展望中国未来的可持续生态卫生政策、标准及系统的机会。在会议最后两天，与会人员受邀参观了山西省后沟村的生态卫生成果展。



Objective

4

Until December 2010, in at least 2 universities and professional education institutions curricula on sustainable sanitation are applied and knowledge on sustainable sanitation is disseminated among sanitation promoters in at least 2 national organizations



目标4：截止到2010年12月，至少有2所大学和专业教育机构将开设可持续生态卫生课程；至少在2个国家级组织里推进可持续生态卫生理念宣传。

Indicators: Curricula developed with support from third parties (fund raising or assignment); capacity development

指标：第三方（集资或赞助）支持的课程发展；能力发展。

Production of sustainable sanitation script. A script on sustainable sanitation curricula for bachelor students is already drafted under the name “Bilingual Teaching Material – Introduction to Eco-San Technology”; it will be adjusted following the feedback from external experts and students. The textbook has been distributed to 3rd year undergraduate students in 2009, 2010 and 2011.

International networking building. Three delegates from CNSS provided in-sights into the Node Development in China to selected sanitation stakeholders in Nepal during the South-Asian Node Strategy Workshop in Kathmandu in April 2009.



可持续生态卫生的文字成果。一本面向本科生的可持续生态卫生的教程——《双语教材-介绍生态卫生技术》已经起草完成并使用，本教程还会针对专家和学生的反馈意见进行调整。目前该教材已经分别在09年，10年和11年的大三学生中使用。

国际网络建设。2009年4月，在尼泊尔的加德满都召开的南亚节点策略研讨会上，三名来自CNSS的代表向特定的卫生利益相关者提供中国节点发展的经验。

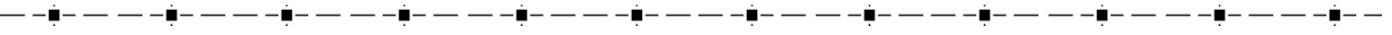


Ecosan engineering workshop. an international engineering workshop on DEWATS - waterbased ecological sanitation systems - was conducted between 02.05.-17.05.2009 at the USTB, co-financed by UNICEF DPR Korea, SEI, GIZ, and CNSS; engineer "trainees" have been delegated from DPRK, China and Nepal. The curriculum developed for this training course was later adjusted in order to be applied in a variety of Chinese universities and technical formation centres.

生态卫生工程研讨会。在2009年5月2日至5月17日，一个关于DEWATS——“一种分散式生态处理系统”——国际生态卫生工程研讨会在北京科技大学召开，研讨会由以下几个单位资助：UNICEF DPRK、SEI、GIZ和CNSS；与会代表来至朝鲜、中国和尼泊尔。研讨会结束后，根据反馈意见对研讨会上介绍的课程进行了调整和修改，以便日后在中国的其他大学和技术中心使用。

Chinese literature prepared for public. “Toilets that make compost” written by Peter Morgan has been translated into Chinese. Four Chinese fact sheets on constructed wetlands, urine diverting toilets and urine treatment and utilization, and faeces composting were produced. The fact sheet on constructed wetlands for small scale wastewater treatment was printed.

Ecosan concept survey distributed and analysed. A public survey on Ecological sanitation concept was done in September and October 2009 among students at the USTB who are not involved in the CNSS. Over 100 questionnaires have distributed. Opinions and knowledge about ecological sanitation from this basically informed public have been collected and revealed that the interest in ecological sanitation is quite high especially in regard to water saving and nutrient re-use.



面向公众的中文手册。由Peter Morgan 编著的 ——《堆肥厕所》和Anna Richert 编著的《尿液用于农作物种植实用技术导则》已经被翻译成中文。此外四个中文版的案例说明书已经制作完成（人工湿地，粪尿分集厕所，尿液的处理和利用，粪便堆肥）小规模人工湿地污水处理系统的技术说明书已经印刷完成。

生态卫生理念调查分布和分析。在2009年10月对北京科技大学的学生进行了一个关于生态卫生的理念的公众调查，被调查的学生均不涉及CNSS。调查发出了超过100份的问卷。通过调查发现学生们对生态卫生有较高的兴趣，特别是关于节约用水和营养元素再利用。



Objective

5

Until December 2010, the CNSS network has achieved permanent contacts to decision makers in at least 2 provinces and at central level



目标5：截止到2010年12月，CNSS至少与两个省的核心决策制定者建立长期联系

Indicators: Sustainable sanitation concepts and options are known at policy level in at least 2 provinces and by central decision-makers

指标：至少两个省的核心决策者了解可持续生态卫生的概念和其所用的设备。

Speech given in National Administration School. After several months' efforts, CNSS was invited as guest speaker to give a first speech on sustainable sanitation at the National Administration School on April 16th, 2009. This seminar for an advanced class for bureau level officers nationwide runs under the theme "How to keep the economy grow and how to make the supportive public policy"; the stu-

dents are 34 bureau level officers from various ministries from more than 15 provinces. CNSS was the only speaker representing the environmental experts from NGOs. CNSS introduced the idea of ecosan, the set up of CNSS and the pilot projects in Sichuan, which attracted many questions and interests afterwards.



国家行政学院宣讲。经过几个月的努力，2009年4月16日，CNSS受邀以特约嘉宾的身份参加了国家行政学院关于“如何保持经济增长和制定公众支持的决策”的研讨会。这次研讨会的参与者是来自超过15个省和不同部门的34个

局级干部。CNSS是非政府组织中唯一一个代表环境专家的发言人。会上CNSS介绍了生态卫生的概念、CNSS的创立和在四川的示范工程，示范工程的介绍吸引了很多与会人员。



Some of the students showed deeper interest requesting further information: the vice director of Hubei provincial bureau of press and publication, the vice director of secretariate office of Ministry of Civil Affaire, the vice director of Heilongjiang provincial bureau of surveying and mapping. This may open brighter ways to talking in depth possi-

bilities of working together in different provinces to promote sustainable sanitation. The vice director of the economy department of national administration school is very supportive to CNSS and is interested to be a strategic partner to create more chances for CNSS to present sustainable sanitation concepts in a wider range.

一些研讨会参与者对此有较强的兴趣并提出获得进一步信息的要求，提出获取进一步信息要求的研讨会参与者包括湖北省新闻出版局副局长、民政部秘书室副主任和黑龙江省测绘局副局长。此次研讨会为促进可持续生态卫生在不同省份实施提供了可能性。国家行政学院经济系副主任非常支持CNSS，并且对与CNSS建立战略伙伴关系很感兴趣，这些便于为CNSS在更广阔的范围内创造更多的机会介绍宣传可持续生态卫生概念提供便利。

Individual approaches to various provincial decision makers. CNSS has made individual contacts to the highest level of decision makers in Chongqing (Municipal city), Jilin province and Qinghai province. And the contact person are the Mayor of Chongqing, the Vice Executive Chairman of People's Political Consultative Conference of Jilin Province and the Vice Governor of Qinghai Province. All of them showed great interest to support sustainable sanitation concepts to be applied in their place. CNSS has made individual contacts to highest level decision makers in the cities of Guangxi, Dalian and Suzhou.

Support from the Youth Communist Party. CNSS, as one of the board experts, participated in an internal meeting organized by the Youth Communist Party and gave an introduction about the Eco-Toilet Action, which received high appraisal. There is an annual prize of 1 million CNY as total amount to be granted to various environmental-friendly projects; the prize is co-set by the Youth Communist Party and Toyota Investment Co. Ltd. Part of the prize, around CNY200,000 goes to one of the ecosan related projects under the lobby of CWA.

与一些省的决策制定者的单独洽谈。

CNSS与重庆（直辖市）、吉林省和青海省的最高决策者进行了单独的联系。联系人分别为重庆市市长、吉林省人民政协常务副主席和青海省的副省长。他们都表示非常支持可持续生态卫生理念。与此同时，CNSS还与广西、大连和苏州的最高决策制定者进行了单独联系。

共产主义青年团的支持。CNSS作为众多专

家之一参加了共产主义青年团的内部会议并对生态厕所行动进行了介绍，获得高度评价。共产主义青年团和丰田投资公司共同设置了每年一百万元人民币的资金，用于各种生态友好项目；在清水同盟的努力下每年大约有20万元人民币用于生态卫生相关项目。

Concept sheet for sanitation. CNSS presented Concept Sheets for brief information about the sanitation situation in China and the technological options provided by sustainable sanitation concepts. This Concept Sheets reflects both the Chinese context, potential and experiences, and international case studies.

Alliances building. CNSS has built up a good connection to the eco-city research committee of the Ministry of Construction, and attended conferences organized by this committee: (1) in October 2009 in Dezhou; (2) in June 2010 in Qinghuangdao

生态卫生理念宣传册。 CNSS的生态卫生理念宣传册介绍的是中国生态卫生情况和由可持续生态卫生理念提供的技术设备的简要信息。这个宣传册反映了中国生态卫生的背景、潜力、经验以及对国际案例研究。

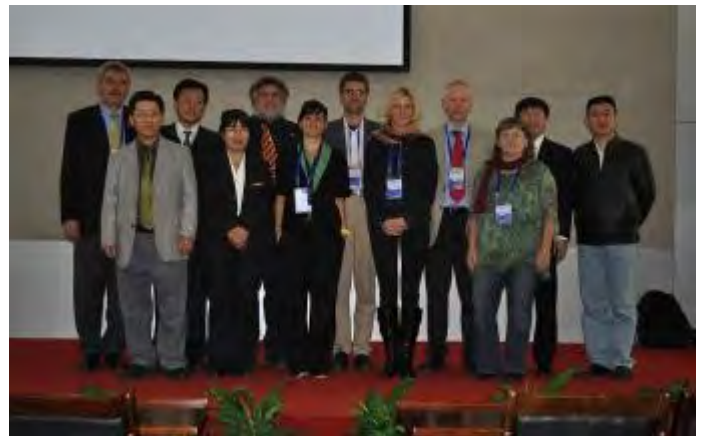
联盟建设。 CNSS已经和住建部的生态城市研究委员会建立了很好的联系，并参加了委员会组织的会议：（1）2009年10月在德州的会议；（2）2010年6月在秦皇岛的会议。



Overall Reflection

总体评估

According to its original activity plan, CNSS has almost achieved all its planned objectives. The main barrier to achieve the entire objective is the time. Besides, CNSS is the first node established in the world, no existing experience is available for references. CNSS activities have always been organized at a very high professional level. This professionalism led to the reputation CNSS is currently enjoying among experts, media, decision makers and developers. In the times of rapid transition from rural to urban areas, CNSS provides future oriented ecosan concepts to broaden the view on sanitation, and the technological choices. There are still many “not yet answered” opportunities for CNSS, and both partners USTB-CSES and CWA will go on looking for funding opportunities to implement at larger scale ecosan in urban and rural areas, in China and in neighbouring countries.



按照初始活动计划，CNSS基本上达到了原有计划目标，完成全部计划的主要障碍就是时间问题。CNSS是全球建立的第一个生态卫生节点，没有任何已有的或现成的经验可供参考。CNSS所举办的活动通常是在一个很高的专业水平上，这样就促使CNSS在专家、媒体、决策者和促进者中享有很高的声誉。在城乡转变的快速发展时期，CNSS提出了具有未来导向的生态卫生理念以开阔环境卫生的视野和技术选择。目前，CNSS 现仍有很多潜在的合作项目，北京科技大学可持续生态卫生中心以及清水同盟等合作伙伴将会继续寻找资金，在中国和邻国的城市或农村地区实施更大规模的生态卫生项目。

The “seed funding” provided by SEI allowed for conducting research and data collection which would not have been possible without this basic financing; students and young academicians were introduced to the ecological sanitation concept and were enabled to write their Master Thesis in the sector. Reaching out to media, NGOs and enterprises in the most comprehensive way would not have been possible without CNSS funding; the increased reputation as experts in environmental sanitation is partly due to the public events organized under CNSS.

Without any doubt, there is still a need for an institution like CNSS— both in the public and in the academic sector of China. The kind of activities still needed include (list not exhaustive) (1) user approved and functioning showcases of ecological sanitation technologies; (2) training to local decision makers and developers on sustainable sanitation concepts; (3) continuous presence in the media with related topics; (4) continuous presence in national and international workshops and conferences for knowledge sharing and update.



由SEI提供的“启动资金”涉及到科学研究和数据收集，没有这个启动资金的支持这些科学研究和数据收集是不可能完成的，学生和青年研究人员研究和学习了生态卫生理念，并且通过专业深入的学习完成了他们的硕士论文。没有启动资金就不可能与媒体、非政府组织和企业以广泛的方式进行接触。CNSS的一些公众项目为提高CNSS专家的声誉提供了很好的平台。

毋庸置疑，我们需要更多的像CNSS这样的机构，不论是社会上还是中国的学术界。这种活动的需求包括（不限于）：（1）得到用户认可和生态卫生技术成果展示（2）地方决策者和规划者的可持续生态卫生理念培训（3）相关主题的媒体参与（4）国内国际研讨会、会议的参与，以便进行知识共享和更新。

These activities will probably not be carried forward, as funding opportunities for networking, international and national knowledge and experience exchange, and media presence are currently very difficult to identify due to international donor agencies' and governmental budget restrictions.

CNSS has been created as knowledge platform to

cater also for neighbouring countries especially in Mongolia and DPRK. When relevant contacts had been established, SEI informed that this aspect is no longer in the task list of CNSS. However, the demand in Mongolia and DPRK was there, and CSES used other funds to respond, without being entitled to relate this important work to CNSS.



没有专门的资金支持、国际国内的知识经验交流、媒体的参与等这些活动有可能不会持续进行下去，因为现有的捐赠和政府支持能力是有限的。

CNSS建立了相邻国家需要的知识平台，例如蒙古和朝鲜。当相关联系建立起来后，SEI却告知这一方面不在CNSS任务列表中。可持续生态卫生中心利用其他方面资金支持相关活动，与蒙古和朝鲜进行合作。由于这项合作没有在CNSS的任务列表中，因而这一重要工作没有放在CNSS名下。

