Strategy Development for Successful Implementation of Ecological Sanitation Approaches in Sri Lanka using Stakeholder Analysis

(Report 3 of 3 from "Evaluation of the Appropriateness of Ecological Sanitation in Relation to the Social, Cultural and Economic and Financial Context of Sri Lanka")

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SUMMARY

The presented stakeholder analysis provides the necessary information to develop strategies for the successful implementation of ecological sanitation approaches in Sri Lanka. The strategies should be developed by a working group, e.g. the Sanitation Task Force.

For the stakeholder analysis 30 interviews were conducted. 5 additional interviews were conducted at relocation and resettlement sites. These are attached in Annex 1. Due to time constraints not all key stakeholders could be interviewed.

The stakeholder analysis showed that there is a high interest in ecosan approaches in Sri Lanka. There is no active opposition. Stakeholders are generally very interested to ally with other organizations and public entities. Various opportunities to form effective alliances are existent. Particularly the expertise and resources of the plantation sector should be utilized. The private sector was also very positive and offered assistance. Very often training and awareness raising is proposed as potential support by different stakeholders. The existing networks have to be coordinated and utilized. Standardized modules could be provided.

The lack of information was the most often stated hindrance for further support. Supporters and opponents requested more information before taking any further steps. Potential smell and cultural constraints are mentioned most often as disadvantages.

The term "compost toilet" is often referred to as a pit latrine. By using the term "compost toilet" people also focus completely on the procedure of composting and explain the compost bin.

One side effect of the conducted stakeholder analysis was a certain amount of awareness / interest raising. The created momentum should be used and the interviewed stakeholders should be involved in the information sharing.

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ANNEXES

- Annex I: Interviews at relocation / resettlement sites and welfare centers
- Annex II: Tools for stakeholder analysis
 - Stakeholder table
 - Definition of characteristics
 - Questionnaire

The filled stakeholder table is provided in electronic format.

Background

The Terms of Reference state the following objectives for the third month of the consultancy:

- 1. Meet with members of national coordination group of water and Sanitation (OXFAM, Helvetas, World Vision, AICF, TRO, ITDG, Malteser, UN-Habtitat, UNHCR, OMS, JBIC, ADB, Government Institutions) to identify potential partnerships and alliances.
- 2. Carry out a stakeholder analysis with participation of selected members of the Coordination Group and Universities.
- 3. Make a presentation to the members of the Water and Sanitation Coordination group and other participants (Universities, Professional Associations, private entrepreneurs) on Ecological Sanitation and its principles to illustrate how ecological sanitation is applied in developing countries to respond to the rights of the poorest, and to explain the general principles of ecological engineering.

The content of this report addresses tasks 1 and 2. Regarding Task 3, two presentations were made for the Sanitation Task force, one for the Water and Sanitation Coordination Group and findings of the consultancy were presented at the 32^{nd} WEDC conference in Colombo.

Constraints & weaknesses of conducted stakeholder analysis

A comprehensive stakeholder analysis requires a workgroup for the formulation of the objectives, the development of tools, the conducting of interviews, the transfer of results, and the analysis of the results. Several attempts were made to form a working group. Due to the difficult situation in the country potential working group members were preoccupied and the formation of a workgroup failed. Therefore the presented stakeholder analysis was not conducted by a working group but by the consultant only. Due to the analysis carried out by a single person under serious time constraints, the presented results are not comprehensive. The stakeholders list was not thoroughly discussed and prioritized. Only readily available stakeholders were interviewed, which resulted in inaccurate data regarding potential leaders and alliances. It was for instance not possible to get an appointment with CEA, the central level of Ministry of Health and Ministry of Environment. The results can not be objective and can only give a rough overview of the situation. The position of key stakeholders, in particular the users of toilets and treated products and relevant ministries, were not explored in detail. Any follow up activities based on the presented stakeholder analysis should consider the inherent weaknesses of the carried out approach. However, if the gaps are kept in mind and filled, the presented results provide an appropriate base for the development of an action plan.

Stakeholder Analysis

Definition

A "stakeholder analysis is a process of systematically gathering and analyzing qualitative information to determine whose interests should be taken into account when developing and/or implementing a policy or program." (Schmeer 1999)

Process

The steps involved in a stakeholder analysis are

- 1) Planning the process
- 2) Identifying key stakeholders
- 3) Developing /Adapting the tools
- 4) Collecting and recording the information
- 5) Filling in the stakeholder table
- 6) Analyzing the stakeholder table
- 7) Using the information

1) Planning

Depending on the purpose of the stakeholder analysis, the potential users of the information and the plan for using the information the stakeholder analysis and the respective tools are planned and designed.

The purpose of the stakeholder analysis can be to increase support or build consensus for ecosan approaches. This could be achieved by using the gathered information as input for other analysis, for the development of an action plan to increase support, as input for strategic planning, or to guide consensus building processes. Forming of alliances, resource mobilisation and implementation should follow the stakeholder analysis.

In the case of the presented analysis the potential users are the members of the Sanitation Task Force, Sri Lanka. The analysis should define relevant stakeholders and their positions. A plan for using the information does not exist yet and was not discussed in the planning process. Therefore the scope of the analysis was very broad. This makes a definition of key stakeholders and the design of the tools difficult. The presented analysis focused on public entities, NGOs and INGOs. Due to time constraints only readily available respondents were interviewed. Therefore some key stakeholders were not consulted.

As mentioned before the stakeholder analysis should be carried out by a working group. The members would be interviewer and analysts and should represent different interests and organizations. For interpreting qualitative data different points of view are helpful. If a single person conducts the analysis certain biases could occur. The forming of a working group and the involvement of the members in all steps of the analysis would have also increased the understanding of the presented results.

2) Identifying key stakeholders

The identification of stakeholders is very important to the success of the analysis. Depending on the objective of the analysis you should focus on certain sectors. The presented stakeholder analysis should provide a rough overview and the base for the development of an action plan. It has to be emphasized, that key stakeholders vary in each region. User perceptions, positions of local governments, NGOs and INGOs active in a certain region vary considerably. The first step of implementing a certain project in a certain region will be to map the positions of the stakeholders in the respective area. Actors who are not organized or do not have the ability to affect the a potential ecosan program should not be included.

Who is a stakeholder?

"An institution, organization, or group that has some interest in a particular sector or system. Also: individuals and constituencies contributing, either voluntarily or involuntarily, to wealth-creating activities, and who are therefore potential beneficiaries and/or risk bearers of its operations." (www.fao.org)

The following stakeholders are relevant for conducting an ecosan programme:

- Users of sanitation facilities: households, neighbourhoods, tourists, pupils, employees.
- Users of treated products: households, farmers, enterprises.
- Community-based organizations and selfhelp groups.
- Nongovernmental organizations (NGOs and INGOs).
- Local authorities, government institutions.
- Service providers: planners/consultants, builders, maintenance service providers, producers of equipment, providers of collection, treatment, transport and marketing of the treated products.
- Developers and investors.
- Financial institutions.
- Research institutions.
- International organizations (IOs).

The conducted analysis focused on public entities, NGOs and INGOs. Based on available information and documents a list of possible stakeholders was developed. The stakeholder list was discussed and prioritized with UNICEF project officer Ananda Jayaweera and head of SRIWASH, Ranjith Wirasinha. The list presented in Table 1 is the outcome of the discussions. Since the number of potential interviews is too large a further prioritization would be necessary. The presented stakeholder list and the respective contacts are a major outcome of the analysis. Gathering information and contact details on relevant organisations and persons proved to be a difficult task and the presented table should be used as a resource for further activities. Table 1 also indicates the persons / entities interviewed. The chapter *Collecting information* provides more details on the process of collecting the data.

Table 1. Semi-Prioritized Stakeholder List

SECTOR	CONTACT	INTERVIEW ID
Users		
of sanitation facilities		
Households, neighbourhoods, tourists, pupils, employees.	Data of Report 1 (interviews in Puttalam area, Matale, Galle area, Karukkupane)	(I)*
Users of compost toilets	Data of Report 1 and secondary data (interviews in Matale, Bulatsinhale, Hambantote)	(1)
of fertilizer and soil conditioner		
Farmer	Contact via Provincial Department of Agriculture	23
Conventional Agriculture:		
Plantation companies / Estates (Rubber, Coconut, Tea)	XXX	
- Pitahanda Tea Estate	Contact via COSI	19
National Agribusinees Council	XXX	
The Planter's Association * *	Mr. Goonethilake, 011 2587013	
Farmer associations	XXX	
Organic Agriculture:		
Plantation companies / Estates (Rubber, Coconut, Tea)	XXX	
- Target Agriculture	Gaubrecht, 0777 920054	
National certification bodies?	XXX	
National Farmers Federation	Contact via Varuna Rathnabharathie, 0773 565590	
Organic Agriculture Network	XXX	
Farmer associations	XXX	
Key Public Entities		
Ministry of Healthcare and Nutrition		
Central level:		
Director of environmental Health	Dr. C.K. Shanmugarajah, 011 2672004	
Health Education Bureau (Regulation, Policies, Implem.)	Dr Sarath Amunugama (Director Health Education and Publicity), 011 2692613	
Provincial & local level:		
DPDHS	DPDHS: Kandy, Nuwara Eliya	17, 26
SPHI	H.A. Gunawaradhana and Mr. Nimalasiri, Galle district	(1)
	A.Jayasundara, Ambalantota	(1)
	Gamini Abeyratne, 077 3286736, Matale	(I) 25
PHI	PHI, Nuwara Eliya	25
Ministry of Agriculture, Irrigation and Mahaweli Development		
Central level:		
Director Projects	XXX	28
Dept. of Agriculture, Kandy		
Director General of Agriculture Department	Dr. K.C.Kudagamage, 071 4157584	
Director Extension	Gamini Samara Singhe, 081 2387405	20
National Fertilizer Secretariat	Mr. Munusinga, 011 2885402	(1)
DG of Irrigation	Mr. Senaratne, Deputy Director, 2585171	
- Director Environment Department	XXX	
Provincial & local level: Director of Agrarian Services		
Director of Agrarian Services		
Deputy Provinicial Director (Dept. of AG.)	Anton Wimalarathne, 052 2222313	22
Assistant Director of the Agricultural Office, Puttalam,	K.M.A. Sukoor, Assistant Director of the Agricultural,	(1)

Other Public Entities		
Ministries:		
M o Environment	Ms. Nazeema (ass. Director), Ms. Batuwitage, Director Env. 2872278	
- CEA	PollutionControl: Mr.K.H.Muthugoda Arachchi, 011 2872543, 011 2873447	
M o Urban Development and Water supply	Mr. Lathiff (Director Water Supply) 2866446, 0777 773525	12
- NWSDB	Lal Premanath, Add. GM, 2605349, Dulip Gunawardana, 071 4938876, D.S.D.Jayasiriwardene	
- Rural Water Supply and Sanitation Division	Mr. W.Piyasena, 2872144, 0777706750 (Head of RWSSD in Ministry)	
- UDA	Hon. Dinesh Goonawardena (Minister), 2863019	
M o Education	Ms. Renuka Pieris, Director Watsan 2784870-2	
Plantation Human Development Trust	P.A.Nandesena, Director Project Operations, 011 2887497 -500, 072 2714981	5
M o Local Government and Provincial Councils	Mr. Hettiarachchi, Senior Ass. Secretary, 2345971, 2421130	14
- UC & MC	Mr. Eng Jayasundera, Colombo MC, Legal Division, 2691191-7	
MC Kandy	Municipal Engineer, Ms. Wijewardena, 077 3293334	21
Board of Investments	Ms. Perera, 011 2451273, shwrinep@boi.lk	
Secretaries:		
M o Resettlement	XXX	
- RADA	Mr. Chandrapereira. Director Infrastructure 2496800 (-57)	
M o Disaster Relief Services	xxx	
- Disaster Management Centre	Mr. Chandradasa, Director, 2670068	
M o Social Welfare	XXX	
(M o Enterprise Development and Investment Promotion,	XXX	
Mo Agrarian Services and development of farmer communities)	XXX	
Research institutions		
NERD (National Engineering Research & Development Center)	Athula Jayamanne, 071 4778868	(1)
Universityof Moratuwa	Niranjanie Ratnayake, 011 2650567, Head of Division of Environmental Engineering	13
University of Peradeniya	Mr.Werallegama (Lecterurer for sanitation), Prof. Basanayake, 0777808932	
Research Station of Dept. of Ag., Kandy	Dr. Lathiff, 071 4797641 Ms. Marayka 081 2388011/12	16
Rice research stations of Dept. of Agriculture	Mr.Hemapala, Ms. A.P.Sumanaunthit, agriculture instructors, Rice Research Station Ambalantota	(1)
Private Sector		
Producers/Suppliers:		
Toto (Abans)	Mr. Asoka Herath, Manager for Sanitary ware, 0777 266949	8
Lanka Ceramics (www.ceramics.lk)	Mr. Ruwan Kasthuriarachthi (Marketing Manager, 077 3012024)	3
American Standards	XXX	
St. Anthony's Industries Group (Plastic tanks)	Pryantha Wanigaratne, 2422075	
Small scale producers of squatting pans!	XXX	
Service Providers:		
Abans	XXX	
Fertilizer/compost:		
BET	Sumith Jayewardene, 0777 763019	6
CIC	XXX	
Tourism		
Ecotourism project <i>Ecostop</i>	Manager	(1)

NGOs, Foundations, INGOs		
SRIWASH	Ranjith Wirasinha, 2712798	2
Sarvodaya (Nuwara Eliya)	Lakshman Perera, District Coordinator, 052 2223000	24 (I)
Gemi Seva Sevana	081 2225288, Ranjith de Silva (Director) 077 3646045	15
COSI	Palitha Jayaweera, 077 7809949	18
MONLAR	Sarath Fernando, 0777 899233	4
Energy Forum	Chinthaka Jayarathne, 011 5524613	
Practical Action	Varuna Rathnabharathie, 0773 565590	(1)
Environmental Journalist Forum	Mr. Wickramaratne	
Sevenatha	H.M.U.Chularathna, Mr. Jayarathna (072 2425939), 011 287 88 93	(1)
Palm Foundation	Saman Sunil (Director) 0777 806 295, 052 2222839	.,
Muslim Hands International	XXX	
RDF	Mr. Raphio, 032 2269024	(1)
ISRC	A.M. Mihlar, managing Director (contact via RDF)	(I)
IUCN (The World Conservation Union)	www.iucn.org/places/srilanka/contactus.htm	()
Clean up the world	Chris Kersten, 0777 542591	
Arthacherya Foundation	Mr. Nishante, Director Galle, Mr Sathis de Mel 011 4205840 (Mt. Lavina)	(1)
Industrial Technology Institute	Mr. Mubarak, 011 2674461	()
OXFAM	Adam Berthoud, 0773 184 815	(I)
Habitat for Humanity	Tony Senewirante, 077 7684055	(l)
World Vision	Niranjika Gunarathne, 011 5555508	(.)
CHA	Jeevan Thiagarajah	
Caritas	XXX	
Care International	XXX	
Solidare	XXX	
Forut	XXX	
Plan SL	XXX	
helvetas	Neil Herath, 011 2504561	(1)
Movimondo	Fiore Pietro, 077 6942438	(1)
International Agencies / Donors (Developers, Investors)		
	Emergency health management project Dr. Headrikes 077 0470004	10
WHO	Emergency health management project Dr. Hendrikos 077 3178604	10
WB	Mr. Narayanan (Director Home Owner Driven Programme) 077 9104646, Miriam (Sanitation Specialist) 5561304	
ADB	Mr. Tiruchelvam, Project Specialist, 2387055, 0777489097, mthiruchelvam@adb.org	7
USAID	Sujith Ratnakumara, Environmental Officer, 011 2498038	
FAO / SPFS	Mr. Potechumsri, 0777 686880, SPFS Dr. Maryen Joseph	9 / 27
UNDP	Dr. Ananda Malawatandri, 2580691 – 253, environmental officer, Ms.Darshani de Silva ext. 216	
UN Habitat (big housing programme)	Conrad Ditisssir, 0777 416401	
IOM	Mary Lear, 011 5351941	
GTZ	Hilke Ebert, 011 2686268, 0777 583306	29
IWMI	Ms. Alex Clemette, 077 3209646, livlihood officer	1
CASP	Michael Couture, 0722 245554	11
UNICEF	Philippe Barragne-Bigot, 077 3157904	30
DANIDA	XXX	
NORAD		
(ICSC, JBIC, CAPNET, SIDA, CIDA)	JBIC: Junko Fujiwara, 077 6993728	
$(IOO,ODO),ODO,ODO,ODO,ODO,ODO,ODO,ODO),\mathsf{ODO,ODO,ODO,ODO$		

(I) = Informal Interviews
* see Annex I: Interviews conducted at relocation / resettlement sites
* (25 regional plantation companies + 3 govt. organisations manage 450 estates)

3) Developing / adapting the tools

The tools to be used for the stakeholder analysis should facilitate the collection of accurate data regarding the identified stakeholders. The collected data should allow conclusions on the stakeholder's position, interests and the ability to affect a potential ecosan program.

The following tools were used for collecting and analyzing the information:

- Definition of stakeholder characteristics
- Stakeholder table
- Interview questionnaire

Stakeholder characteristics

The following information or characteristics were considered during the data collection (adapted from Schmeer 1999):

- I.D. number (given to the stakeholder on the questionnaire)
- Position and organization
- **Knowledge** of ecosan/compost toilets: The level of accurate knowledge the stakeholder has regarding compost toilets, and how each stakeholder defines compost toilets. This is important for identifying stakeholders who are not supporting the concept due to misunderstandings or lack of information.
- **Position**: Whether the stakeholder supports, opposes, or is neutral about ecosan/compost toilets, which is key to establishing whether or not he or she will block implementation
- **Interest**: The stakeholder's interest in ecosan, or the advantages and disadvantages that implementation may bring to the stakeholder or his or her organization. Determining the stakeholder's vested interests helps to better understand his or her position and address his or her concerns. The information should be used primarily in developing conclusions and strategies for dealing with the stakeholders' concerns.
- Alliances: Organizations that collaborate to support or oppose ecosan. Alliances can make a weak stakeholder stronger, or provide a way to influence several stakeholders by dealing with one key stakeholder.
- **Resources**: The quantity of resources—human, financial, technological, political, and other—available to the stakeholder and his or her ability to mobilize them. This characteristic is summarized by a power index and will determine the level of force with which the stakeholder might support or oppose ecosan.
- **Power**: The ability of the stakeholder to affect the implementation of ecosan.
- Leadership: The willingness to initiate, convoke, or lead an action for or against ecosan. Establishing whether or not the stakeholder has leadership will help to target those stakeholders who will be more likely to take active steps to support or oppose ecosan (and convince others to do so).

The above listed stakeholder characteristics form the top row of the *stakeholder table* (see Annex II).A further definition on each of the characteristics and on the procedure of filling in the stakeholder table are provided in Annex II.

Interview Questionnaire

A questionnaire (see Annex II) was developed to gather the above mentioned information. Semi structured interviews were conducted. The questionnaire was used to guide the conversation. Interviews took between 30 minutes to two hours, depending on the knowledge and interest of the respondent. Notes were taken during the interview by the interviewer. The notes were typed into the electronic version of the questionnaire as soon as possible after the interview. If possible information was entered in the same words the stakeholder used. The questionnaire was slightly adapted for different interest groups (e.g. private sector, International Organisations).

If the stakeholder analysis is carried out by a working group a protocol to be followed during the interview should be prepared. A reference chart to aid the working group in transferring the information from the questionnaire to the stakeholder table should also be developed. These tools are necessary to ensure to ensure the collection of consistent, objective and accurate data.

4) Collecting and recording information

Before conducting the interviews secondary data was reviewed. This information is part of Report 1 & 2.

User's perception

To explore user's perceptions, two community meetings with compost toilet users were organised in Bulatsinhale and Matale. Unfortunately both meetings had to be cancelled. The position of users of flush toilets was collected in interviews conducted at relocation / resettlement sites and welfare centres (see Annex I, Interview 1 - 5). Additional to these structured interviews information was collected in an informal way at visits of flush toilets along the road or at different site visits. The gathered information was not considered in the analysis of the data but in the recommendations. However, since it is not the scope of this stakeholder analysis to provide specific recommendations on marketing or implementation strategies the cancelled meetings are not problematic. The community meetings can and should be conducted at a later stage. Users (of compost toilets, flush toilets, fertilizer) perceptions should be analyzed and taken into account when developing a marketing strategy.

Due to time constraints not all key stakeholders were interviewed. The selection was mainly done by availability of the respondents. Table 1 above lists the interviewed parties and the respective Interview ID. 30 semi structured interviews using the developed questionnaire were conducted. The distribution between sectors is as follows: 2 interviews with users of products, 3 interviews with representatives of Ministry of Health, 3 interviews with respondents attached to Ministry of Agriculture, 4 interviews with other public entities, 2 interviews with research institutions, 3 interviews with the private sector, 5 interviews with local NGOs and 8 interviews with International Organisations and donors. (I) stands for informal interviews, which did not follow the questionnaire. The information gathered in these informal interviews is not considered in the Analysis below. Table 2 lists parties which were interviewed informally.

Date	Key Person	Organisation	
30.07.06	Kannan Pasupathiraj	Australian Red Cross	
31.07.06	Ananda Jayaweera	UNICEF	
07.08.06	D.Senevirathne	NWSDB	
08.08.06	Fidel Peña Angon	ICRC	
	Varuna Rathnabharathie	Practical Action	
	Arim Corea	Consultant	
	Reinhard Dalchow	KfW	
	Fiore Pietro	Movimondo IWMI	
	Sarath Abeyawardena Roberto Saltori	UNICEF	
		virathne, NWSDB to Kaluthara,	
09.08.06		OILET-USERS	
10.08.06	Udani Mendi	SARVODOYA	
	Mary Lear	IOM	
	Bob Cunning	IOM	
	Tony Senevirathne	Habitat for Humanity (HfH)	
	Jayarathne Adam Berthoud	SEVENATHA	
	Adam Berthoud Athula Jayamanne	OXFAM NERD	
	lan Jones	UNICEF	
		ONICE	
15.08.06	FIELD VISITS with Sevenatha to Matale Sites, ECOSAN TOILET - USERS		
	Mr. Gamini	SPHI, Matale	
	Community development agents	Municipal Council, Matale	
	Lasanthe and Sudith	Sevenatha,	
	Luky	Community Leader	
1618.08.06	FIELD VISITS in Puttalam District,		
	Rural Development Forum		
	Family in relocation site Hijarath F	Puram	
	Ida Suhanya, UNHCR		
	Woman Society of Nayakkarchen	ai	
	Owner of pour flush		
	Family in relocation site Karambe		
	Community leader and family in w		
	K.M.A. Sukoor, Assistant Director	of the Agricultural, Puttalam	
	A.M. Mihlar, ISRC	et "OQ eeree"	
	Community Leader and residents Residents of Karukkupane	at 90 acres	
21.08.06	FIELD VISITS with Sarvodoya to Rathmalana sites, ECOSAN TOILET - USERS		
21.00.00	Sarvodoya: Regional Technical Advicer, Technical Officer		
	FIELD VISITS, Kaluthera, Balapitya, Galle,		
2224.08.06	Hambantote, ECOSAN TOILET - USERS		
	Arthacherya Foundation, Mr. Nish	ante	
	SPHIs Galle district: Mr. Gunawaradhana, Mr. Nimalasiri		
	Residents of relocation site Gallagodawatta		
	Malteser International		
	Practical Action, Ambalantota		
	SPHI of Ambalantota, A.Jayasundara		
	Ecotourism project Ecostop, Mana	ager	

Table 2. Informal interviews conducted from August to November 2006

5) Filling in the stakeholders table

After transferring the notes to the electronic questionnaire the information has to be transferred to the stakeholder table. This involves taking detailed and often lengthy answers and arranging them into a more concise and systematized format. The stakeholder table can then be used to develop clear comparisons among different stakeholders and concisely present the information. Instructions on how to transfer the data are included in the detailed definition of the stake holder characteristics (see Annex II).

The filled stakeholder table is delivered in electronic version only.

6) Analyzing the stakeholder table - Findings

The information in the stakeholder table should be analyzed to meet the objective of the stakeholder analysis. Since the objective was not thoroughly discussed, the consultant decided to focus on the following questions:

- Who are the most important stakeholders? Power and Leadership Analysis
- What is the knowledge level regarding ecosan?
- What are the stakeholder's positions on ecosan?
- What do the stakeholders see as possible advantages or disadvantages of ecosan?
- Which stakeholders might form alliances?

The presented results are based on the conducted interviews. When developing next steps it has to be kept in mind that not all key stakeholders at central level were interviewed.

Key stakeholders very considerable in each region! The interviews were conducted in Colombo and in the Hill country.

Power and Leadership Analysis

For implementing an ecosan approach all stakeholders are equally important since the success of the ecosan approach depends on every single component. Even if a stakeholder might not have power in terms of leadership or resources an active opposition and the discredit of the system can seriously affect future implementation.

The power and leadership analysis below was carried out for the potential objective of initiating a nationwide ecosan strategy. The information provided can be used to focus on certain stakeholders and address their concerns. Keeping the above mentioned in mind power and leadership was defined as follows (adapted from Schmeer 1999):

Power:	Quantity of resources and ability to mobilize these resources
	for or against ecosan.
Leadership:	Willingness to initiate, convoke or lead an action for or against ecosan.
	<u> </u>

Table 3 illustrates the results of the power and leadership analysis.

Leadership &	Leadership & Medium	No Leadership,
High power	Power	but high to medium power
 Ministry of Health Plantation Human Developmer Trust (Plantation sector) Burns Waste Management (private sector) SRIWASH UNICEF (upon request) 	 Provincial Department of Agriculture MoHealth (DPDHS) IWMI 	 Department of Agriculture Research stations of Dept. of Ag MoAgriculture & Livestock ADB WHO GTZ SPFS TOTO (private sector)

Sarvodaya, CASP, Gami Seva Sevana would take the initiative to support ecosan if more information would be provided. COSI would take the lead in supporting and coordinating research activities. The Ministry of Urban Development & Water Supply would take the initiative if nobody else is willing to do so.

Level of Knowledge

The presented data should be used to target a communication strategy for a specific group of stakeholders. The data should be crossed with the power/leadership data to determine the importance level of stakeholders with low knowledge. It is also important to cross the knowledge data with the position of stakeholders. This would indicate that a communication/advocacy strategy for ecosan could increase the support.

The level of knowledge regarding ecosan was generally low across all stakeholders. Inside an organization the level of knowledge can vary significantly. Biogas technologies were more often known than compost toilets. Table 4 list the stakeholders with medium to high knowledge. The stakeholders not listed below had little or no knowledge of ecosan technologies, particularly compost toilets. Of these stakeholders with little or no knowledge the Ministry of Health and the Plantation Human Development Trust have leadership and power. The Department of Agriculture and the Ministry of Agriculture & Livestock would be important stakeholders but have a low level of knowledge. The knowledge level within Ministry of Urban Development & Water Supply varied significantly with each respondent.

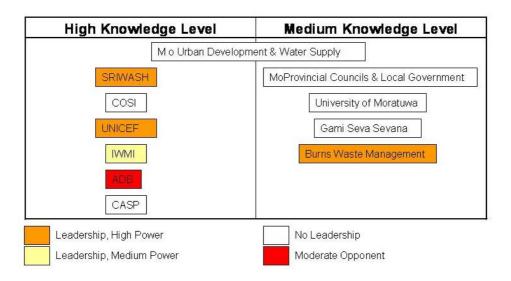


Table 4. Stakeholders with medium to high knowledge

Stakeholders' positions

The data on the position of the stakeholder can be analyzed in different ways. This very much depends on the intended use. To identify alliances a position map was developed (see Figure 1 under *Alliances*). It also provides an overview of the position of each stakeholder (excluding users) and clearly shows that there is an

The following information regarding the stakeholders' positions could be extracted from the data:

Total number of Supporters:

15 Supporters, 9 Moderate Supporters

Importance/Power of Supporters:

All the stakeholders listed under "Leadership & High power" in Table 3 are supporters of ecosan approaches.

Knowledge of Supporters:

Of the 15 supporters only six have medium to high level of knowledge of ecosan approaches. Of the nine Moderate Supporters four have medium to high level of knowledge and five have low or no knowledge of ecosan approaches and stated the request for more information.

Total number of Opponents:

None of the interviewed stakeholders strongly opposed ecosan approaches. Three stakeholders moderately oppose ecosan.

Importance/Power of Opponents:

All of the moderate opponents are listed under "No Leadership, but high to medium power" in Table 3. None of these opponents would actively oppose ecosan approaches and would either be convinced by results or by the request of the communities.

Knowledge of Opponents:

The level of knowledge of the opponents ranges from low to high.

Neutral Stakeholders, importance, knowledge, interest:

Three stakeholders did neither support nor oppose ecosan approaches. Their importance and knowledge is medium to low. All three stakeholders requested more information. Community acceptability was stated as a disadvantage and that there would be easier solutions for difficult areas and to produce compost.

Possible advantages / disadvantages

In the conducted interviews different aspects of ecosan approaches were given, namely:

- 1) Ecosan approaches provide an affordable solution for the poor (alternative to conventional sanitation technologies),
- 2) Solution for high groundwater areas, rocky and sandy soils and water scarce areas.
- 3) They also have the potential of livelihood improvement through the production of fertilizer.

For different stakeholders different aspects were important. Depending on the next steps to be taken, stakeholders with the same priorities can be grouped and addressed. It might be considered to form alliances of stakeholders with same interests. In particular the stakeholders who are mainly interested in the production and use of organic fertilizer could develop a common strategy.

Advantages and Disadvantages to supporters

For most of the supporters ecosan approaches serve the respective mandate of the public entity, NGO, IO or INGO. Additional to the above mentioned aspect the protection of health and the promotion of organic agriculture was mentioned several times. The private sector producing sanitary ware did not see an immediate advantage since their target group would be the upper class. Upper class versions are not yet available. One supplier of sanitary ware stated that the market would not get bigger but the choices would be more, whereas another supplier stated the market would become bigger since people who could not afford a system before could come in. The private sector waste management – compost production stated a potential increase of production and the decrease of input of artificial fertilizer and therefore a higher cash flow.

The most common stated disadvantages were potential smell, the lack of social acceptance, and the potential credibility problem if the system fails. The most common hindrances stated were the lack of information, financial constraints, and internal structures. The lacking cohesiveness among stakeholders and non defined responsibilities and roles were mentioned together with the difficulties of networking faced in Sri Lanka. For the private sector in organic manure the subsidy of urea is a serious constraint.

Supporters would chose NOT to support ecosan system if

- the communities are against it,
- it does not comply with relevant policies,
- it is financially not viable,
- it smells,

- it needs too many supplementary activities,
- the end product is not safe,
- it is an isolated with not sufficient room for software activities,
- there is no request from counterparts (in the case of IOs),
- it is a pilot scheme,
- only small numbers are produced (private sector).

Advantages and Disadvantages to opponents

The three moderate opponents mainly stated that there are other ways to address the aspects tackled by an ecosan system. Ecosan toilets should not be a solution for the poor. In competition with a poor flush system people will not choose a compost toilet.

Alliances

Possible alliances can be identified by

- 1) Referring to the stakeholder table and check which organizations were mentioned by certain stakeholders as potential allies.
- 2) Developing a position map and identify clusters (stakeholders with similar positions and within the same sub-sector)
- 3) By comparing the types of support offered and clustering organizations with same approaches.

1) Referring to mentioned organizations

Table 5 lists organizations / entities mentioned by different stakeholders as potential allies. The given information should be used when developing an action plan and further steps. It has to be emphasized again, that certain key stakeholders were not interviewed and should be included in the preparation of an action plan, in particular the central level of Ministry of Health. Table 5 also identifies stakeholders which were not mentioned in the stakeholder list (Table 1).

Organization / Entity	Potential allies mentioned
IWMI	COSI, SEI, PA, WATSAN Collaborative Group
SRIWASH	UNICEF, WHO, WB, ADB
Plantation Human Development Trust	Plantation Association
FAO	MoAg, UNEP, UNICEF
WHO	UNICEF, World Vision, MoH
CASP	PA, MoHousing, USAID for funding, Canadian Government,
	UNICEF, IOM
MoUrban Development & Water Supply	NWSDB, Community Water Supply and Sanitation Project
University of Moratuwa	IIT, AIT
MoProvincial Councils & Local Government	SLILG (Sri Lankan Institute of Local Government), Prov.
	Councils, Local Gov.
Gami Seva Sevana	Organic farming network
Department of Agriculture, Research Station	Universities (Medical Faculties)
MoHealth (Local level)	Plan SL, Sarvodaya, NGOs, Red Cross, Palm Foundation,
	WorldVision,
COSI	Universities, SANDEC, SKAT, PA, University of Moratuwa
Sarvodaya	Palm Foundation, MC, Mayor, Helvetas
GTZ, Tsunami Housing Support Project	Serious stakeholders, which already took steps, PA, NHDA,
	Gov., NGOs, STF
UNICEF	STF, any organisation which is willing to pull resources and
	expertise towards the common goal

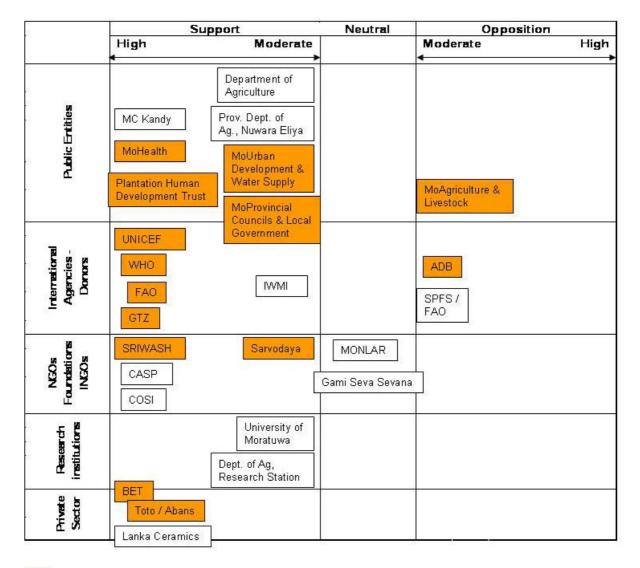
Table 5. Organizations / entities mentioned by different stakeholders

2) Developing a position map

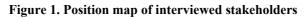
While developing a position map support clusters, stakeholders in the same sector who support policy, could be formed. By highlighting the stakeholders with leadership and high power (as defined above) alliances could be identified which are potentially the most supportive for ecosan implementation. The figure below groups the stakeholder by sectors they work in. Another possibility is to group the stakeholders by their main interests / mandate like

- Agriculture
- Poverty Alleviation
- Health and Hygiene
- Housing
- Knowledge Management

In this way the identified clusters would concentrate their effort on a certain aspect of ecosan approaches, e.g. an alliance of WHO and ministry of Health would focus on health aspects, while an alliance of Department of Agriculture, FAO, Burns Environmental Technologies (BET also Burns Waste Management) and Plantation Human Development Trust could focus on the reuse of ecosan products.



Leadership, High Power



3) Comparing the types of support offered and approaches

Different organizations offered different types of support. The following was mentioned between others

- Information dissemination,
- Research activities,
- Implementation of trials and demonstrations
- Conducting awareness programs, and
- Developing marketing strategies were mentioned.

Example for alliance: COSI would like to lead and coordinate, whereas the University of Moratuwa and certain research stations are interested in carrying out research activities and SRIWASH is in charge of knowledge management. An alliance should be formed.

Stakeholders which offered specific support should be addressed. Organizations which focus on dissemination of information should link with stakeholders, which have access to media and different networks.

By forming alliances between stakeholders with similar approaches, the approaches could be more successful. For instance, the data in the stakeholder table indicates that GTZ and UNICEF have very similar approaches which could easily be combined.

The private sector has to be included for marketing and operation and maintenance. Toto offered their showrooms for the distribution of information leaflets and Burns Environmental Technologies (BET) offered its vast experience of marketing compost and its credibility. For any large scale project BET could even provide the collection service at initial stage.

Alliances with local NGOs and women associations are crucial for the success of any ecosan program, but vary with the specific local area and the respective NGOs. Local politicians (GA, Mayor) which are supportive have to be identified.

Additional results

Need for information

Major outcome of the conducted result is the need for information and awareness raising. With the exception of one stakeholder, stakeholders either had a high level of knowledge and supported ecosan approaches or the level of knowledge was medium to high. In the latter case all of these stakeholders requested more information before taking further steps.

There are many misconceptions about ecosan systems. A number of respondents stated they know about the compost toilet. When explaining the technology a pit latrine was described. It is crucial for any marketing strategy to address this misperception.

Additional stakeholders

As mentioned before the conducted stakeholder analysis did not involve all relevant stakeholders, which was not problematic for the scope of this particular analysis. However, when planning next steps and strategies the gaps have to be kept in mind. One important group of stakeholders is the private sector. In particular for the production of ceramic version small scale informal producers should be approached. Also refer to Table 5 to identify additional stakeholders.

Perceptions towards a modern toilet system

People were asked what they expect of a modern toilet system. A modern toilet system should not smell, should be easy to clean, should provide privacy, and should be liked by others, should be usable by children, and should need less assistance to repair. An attached version is preferred to the outhouse. Commode versions were always preferred. Tiling is mentioned often as a characteristic of a modern toilet.

Stated reasons for opposition

The following potential reasons for opposition were mentioned by supporters:

- More interest of certain IO, Ministries and political parties in big / high capital extensive sanitation schemes, like sewerage, requiring long term low interest loan.
- Misconceptions, lack of information
- The UDA-Plans could be a problem if ecosan is not mentioned in the 10-years plan.
- Ecosan affects the actions and by-laws of certain Ministries and Government bodies. The regulation has to be amended. As individuals certain people might support ecosan but as Ministries they have to go by the book.
- Promoting in slum areas could be problematic, since authorities do not want the people to stay and will not support activities to improve standard of living there.
- Image problem, since people compare to more developed countries.
- Cultural obstacles, attitudes.

Perceived Supporters / Opponents

Respondents where ask which organisations they think would support or oppose ecosan approaches. About 60 different organisations, Ministries, NGOs, INGOs and IOs were mentioned. The following stakeholders were mentioned by at least five interviewees. The *Ministry of Health* was mentioned by 11 respondents as a supporter and by one as an opponent. *Communities* in general were mentioned by seven respondents as opponents by two as supporters. Five respondents mentioned the *Ministry of Environment* as a potential supporter. *CEA* was mentioned by 4 respondents as supporter, by one as opponent. *UNICEF* was mentioned by five respondents as supporter.

7) Using the information

The next step would be to present and discuss the above data in the Sanitation Task Force and develop a plan to use this information. Resources have to be mobilized and strategies implemented. The presented data should be used to develop and implement strategic communication, advocacy, and negotiation plans. An action plan should be developed based on the presented data. This strategic action plan should focus on getting the most effective support possible and reducing any obstacles for the successful implementation of ecological sanitation. This should be done by:

- Maintaining the current support of respective stakeholders,
- Increasing the power and leadership of the supporters,
- Converting opponents to supporters,
- Converting neutral stakeholders into active supporters.

Specific strategies should be developed to address the concerns of individual stakeholders.

Reference:

Schmeer K. (1999) *Guidelines for Conducting a Stakeholder Analysis*, MD: Partnerships for Health Reform, Abt Associates Inc., www.phrplus.org/Pubs/hts3.pdf

ANNEX I

INTERVIEWS IN WELFARE CENTERS, RELOCATION AND RESETTLEMENT SITES

- 1) Hijarath Puram, Puttalam
- 2) Karambe, Puttalam
- 3) Saltern, Puttalam
- 4) 90 Acres, Puttalma
- 5) Galladawatta, Galle

RELOCATION SITE: HIJARATH PURAM, PUTTALAM 16.08.06

Approximately 100 families live here. They came 1990 from Jaffna.

Location:	7 km to Puttalam, 100 yards to lagoon
GW Level:	App. 300 feet
Climate:	Dry, hot
Gardening:	Not seen
Other building projects:	50 yards away
Private Space for gardening:	Yes
Public space for composting:	Yes

The people living in Hujarath Puram now mostly own the land and want to stay. According to the respondents of the interview nearly all of them have toilets. The few which do not have any sanitation facilities would dump the excreta inside their compound.



Relocation Site Hijarath Puram



Toilet of respondents



House of respondents

QUESTIONNAIRE RESIDENTS of RESETTLEMENT / RELOCATION AREAS and TSS

Feasability of Ecosan in Sri Lanka, Constanze Windberg on behalf of UNICEF

Date/Place of Interview: 16.08.06, Home of Ms. Al Shaariitaa	Questionnaire No .:	1

Present Persons: Interviewer, respondents, daughter, 2 RDF employees, three women from community

Respondents:	Ms. Al Shaariitaa, Ms. A. Saburama,	District:	Puttalam
Respondents.	Three women joined later	Relocation Site:	Hijarath Puram

1 Questions related to the interviewee (Statistics: Family size, Religion, source of income)						
Native language: Tamil	Religion: Muslim					
Household Head: Mother and Grandmother	Martial Status: Widowed	Age: -				
Grandmouler	Educational background: -	Occupation: -				
No. of HH members: 2	Male: 0	Female: 2				
Current occupation and Income:	Current occupation and Income: Make breakfast and sell it					
Income per month: 100 LKR/month from government, 70-75 LKR from small business						
Generated by whom: Mother and	grandmother					
How do you cook and heat? With	Firewood					
What do you do with the ash?	Thrown away					
2 Housing – Before / Now / Futur	e					
Type of House: Before: Brick Wall Tileo Now: Cadjan Wall and						
Ownership: Landlord						
		1. 1				

Water supply and waste water disposal: Tube well, waste water discharged in compound

How much water do you need a day? How much do you need for your toilet? 40 litres/day for laundry, bathing, cooking...., 15 litres for toilet

Solid waste disposal:

-

Solid waste is burned

Are	you involved in any agricultural activity? Were never involved in agricultural activities. At the moment it is not possible because of water scarcity.
4 ′	Γoilet
Тур	e of Toilet: Pour flush + cesspit, built 1995
Did	members of your household build or assist in building this toilet? No, the organisation built it.
Cou	Ild you choose the model? Yes
Но	w much did the toilet cost? 10,000 LKR (1995), now the same toilet would cost around 20,000 LKR
Hov mor	v did you finance the installation? Subsidy of 5,000 LKR from certain organisation other 5,000 LKR private ney
Did	you have to invest anything for the maintenance of the structure? Roof got broken, no door. Did not repair anything, since there is not enough money.
Wh	o is responsible for the cleaning and maintenance of the toilet? Both women
Wh	ere do you dispose off children's feaces? Dump it in compound
Wh	at are the major sanitation problems you are experiencing in your household? Diseases like skin disease and diarrhoea from bad water, water borne diseases, well gives brackish water
5	Ecosan
Do	you know / did you ever see an ecosan toilet? No
Wh	at do you know about it? Nothing

6 Decision making –Community Participation

Gardening and agriculture

3

Are you or any other family member involved in any community activities? Women (saving) society

Are you taking part in regularly meetings? 1 x month

RELOCATION SITE: KARAMBE, PUTTALAM 17.08.06

The displaced people living in Karambe came 1990 from Mannar.

App. 400 feet
Dry, hot
Not seen
Yes
Yes

According to RDF employees the majority of the residents of Karambe have pit latrines.



Relocation Site Karambe



Open Space



Toilet of Respondent

QUESTIONNAIRE RESIDENTS of RESETTLEMENT / RELOCATION AREAS and TSS

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Feasability of Ecosan in Sri Lanka, Constanze Windberg on behalf of UNICEF

Date/Place of Interview: 17.08.06, Home of Ms. M.Ramsiya Questionnaire No.: 2							
Present Persons:	Present Persons: Interviewer, respondent, two children, 2 RDF employees						
	District: Puttalam						
Respondents:							
1 Questions rela	ated to the intervie	wee (Statistics: Fa	mily size, Religio	on, source of	f income)		
Native language	: Tamil	Religion: Musl	im				
Household Head	: Husband	Martial Status:	Married	Age: 37			
Occupation: Ho	usewife, small bus	iness	No. of HH	members: 7	7 (Husband, wife	e, 5 children)	
Income per mon How do you coo	Current occupation and Income: employed in coconut estate (half day) Income per month: 10,000 / month Generated by whom: Husband How do you cook and heat? With Firewood What do you do with the ash? Some times dumped in pit latrine some times thrown away						
2 Housing – Be	fore / Now / Futur	e					
Type of House: Before: Now:	Cement Wall Til Brick Wall Iron						
Ownership: Government owns land							
Water supply Before:every house had well with drinking water every 1km well, some are dry, well in compound only for toilet (salty water)							
How much water do you need a day? How much do you need for your toilet? 4-6 pots (1pot 4-5 litres) for drinking and bathing, 25 -30 litres for toilet							
Solid waste disposal: There is no solid waste management. Was the same in Mannar.							

3 Toilet

Type of Toilet: Before: Now:	"Pit latrine" (Pour flush + cesspit?) Pour flush + cesspit, built 1995
Did members of	your household build or assist in building this toilet? No.
How much did the	ne toilet cost? 7,000 LKR (1995)
	ance the installation? RDF paid 3,500 LKR for the underground construction, the family paid naterial and labour of the substructure.
Roof and	invest anything for the maintenance of the structure? I door broken. Not repaired yet. s full and overflowing. So they dug another pit
	ets: What liked, what not? e is okay. But somebody should pay for everything
Where do you di	spose off children's feaces? Put it in toilet
No smel repair (le Would y	bect of a good toilet? (written in order of statement) l, easy to clean, should be usable by children, privacy, likable by others, fewer assistance for by maintenance), you prefer an attached version? Better attached to the house, you prefer a sitting version? Sitting better for joint paints
-	

What do you know about it? Nothing

What is your opinion on the re-use of human urine / human feaces?

"The word itself does not smell well". But if there would be enough knowledge people would except it. No knowledge on the use of urine.

But saw in TV how to do manure using human waste, 6-7 months ago. They said you have to dig a little hole around plant and dump the manure.

If there would be a workshop on the use of human fertilizer, she would participate.

Do you have any doubts eating food produced with human organic materials? No

Do you know anybody who has doubts?

Thinks other people would have doubts about produce. However, most people know that potatoes in Kandy are fertilized with human waste/compost.

5	Gardening and agriculture

Are you involved in any agricultural activity? Did home gardening in Mannar but not here.

Are you interested in gardening? Would like to start in her compound. Got seedlings from participant of agricultural training.

Did you ever use fertilizer? Used little chemical fertilizer Urea in Mannar.

What do you know about compost? Learned about compost in RDF workshop and from others

6 Decision making –Community Participation
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Are you or any other family member involved in any community activities? Treasurer of Women Society of Karambe

Are you taking part in regularly meetings? 2 x month

WELFARE CENTRE: SALTERN, PUTTALAM 17.08.06

In Saltern live 125 families. 16 years ago they came from Jaffna and Kilinochi. The residents of Saltern would like to stay in this place. Approximately 100 families already own the land. To own the land they have to pay 30,000 LKR per 10 perches. The maximum size of the compounds is 10 perches.

25 toilets were built by RDF but a fire destroyed these RDF built 17 new toilets. Bowsered water is supplied by the Urban Council.

GW Level:	App. 25 feet
Climate:	Dry, hot
Gardening:	Not seen
Private Space for gardening available:	Yes
Public space for composting available:	Yes

The majority of the families live on food stamps from the government. According to the community leader about 30 families have an extra income from labor on private land.



Toilet in Saltern with corroded bricks

QUESTIONNAIRE RESIDENTS of RESETTLEMENT / RELOCATION AREAS and TSS

Feasability of Ecosan in Sri Lanka, Constanze Windberg on behalf of UNICEF

Date/Place of Interview: 17.08.06, Home of Abu Bueker NiyasQuestionnaire No.:3							
Present Persons: Interviewer, Respondents, 2 RDF employees							
	Abu Bueker Niyas District: Puttalam						
Respondents:	(Community Ms. Y Jeleela	,	Welfare centr	re:	Saltern		
Comments: The i	interview was perr	manently interrupte	ed by people con	ning and go	bing.		
1 Questions rela	ted to the interview	wee (Statistics: Far	nily size, Religio	on, source o	of income)		
Native language:	Tamil	Religion: Muslin	n				
Household Head:	Husband	Martial Status: M	Aarried	No. of HI	H members: 5 ((3 children)	
Current occupation	on and Income: No	one					
Income per month: Food stamps from government worth 1260 LKR/month and family of 5 or more (160 LKR for 1 person, 420 LKR for 2 persons, 650 LKR for 3 persons)							
How do you cook and heat? With Firewood							
What do you do with the ash? Some times dumped in pit latrine some times thrown away somewhere							
2 Housing – Bef	fore / Now / Future	e					
Type of House: Before: Now:	Masonry (area w Brick Wall Iron	as called "Small S Roof	ingapore")				
Ownership: Land belongs to person in Kalapittya, but they don't pay rent. It could go on like this, since if you live longer than 10 years on the land it is yours. Nevertheless, they are buying the land now							
Water supply:Now:Future:Central tank filled by Ministry of Resettlement, 3 wells with salty water are existingSoon as they bought land they will extent the pipe							
How much water do you need a day? 140 litres for cooking and bathing							
How much do you need for your toilet? 200 litres/day for toilet = water from well							

Г

3 Toilet
Type of Toilet: "Pit latrine" (Pour flush + cesspit?), built 1995
Did members of your household build or assist in building this toilet? No.
How much did the toilet cost? Nothing
Did you have to invest anything for the maintenance of the structure? No, everything done manually
Status of old toilets: What liked, what not? Pit damaged, Bricks corrode because of salt
What do you expect of a good toilet? (written in order of statement) "Out of marble"Individual toilet, masonry, tiled floor, sanitary equipment Would you prefer an attached version? Would you prefer a sitting version? Squatting and outside preferred.
4 Ecosan
Do you know / did you ever see an ecosan toilet? Yes, they heard about it. Attended a meeting over ten years ago. Former GA was talking about it.
What do you know about it? But never seen. And no idea how it works. If it would be provided they would happily take one.
What is your opinion on the re-use of human urine / human feaces? (Laugh at question.) Somebody said in Nuvara Eliya (?, central Province) they fertilize potatoes with human fertilizer. He thinks if these potatoes decay they smell like "this". Where as other potatoes don't smell.
Do you have any doubts eating food produced with human organic materials? What they eat is mixed with other chemicals anyway. So they would it. And if MoH says it is okay, tha it is okay.
5 Gardening and agriculture
Are you involved in any agricultural activity? No. In Jaffna people are not involved in agriculture. Mannar people know more. Here there is no land for agriculture.
6 Decision making –Community Participation

Are you or any other family member involved in any community activities? Wife is president of Women society

Are you taking part in regularly meetings? Not very active at moment, little saving, now 1 x month earlier 1 x week In 90 acres live 200 families. The residents of 90 acres came 19990 from Mannar. They all own their land. The minimum size of a plot is 10 perch the maximum 20 perch.

7-8 houses are brickwork. The other houses have Cadjan roofs and wooden walls. Care built 150 toilets. Households which do not have a toilet use the toilet of the neighbours.

The toilet technology is a pour flush with collection pit (round pit, bottom is not lined) pit consisted. The structure, the base and the surroundings were provided by Care. The roof had to be provided by the household.

Care International started a composting project in July 2006. One compost tank will be built per 10 houses.



Compost Station at 90 Acres

QUESTIONNAIRE RESIDENTS of RESETTLEMENT / RELOCATION AREAS and TSS

Feasability of Ecosan in Sri Lanka, Constanze Windberg on behalf of UNICEF

Date/Place of Interview: 18.08.06, Public space in 90 acresQuestionnaire No.:4	4
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Present Persons: Interviewer, Respondents, 2 RDF employees, several bystanders

Respondents:	Mr. M.A.M. Latif (Community leader)	District:	Puttalam
	Mr. M.I.A. Razak (Resident)	Relocation Site:	90 acres

Comments : The interview focused on the situation in the camp and was not focused on one family.

1 Questions related to the residents (Statistics: Family size, Religion, source of income)

Native language: Tamil Religion: Muslim

Current occupation and Income: None

Income per month: The majority of the residents work in farms and generate an income of 3000 LKR/month. Additional to that they receive ration stamps from the government (250 LKR/ person, up to five persons per family).

How do you cook and heat? With Firewood

What do you do with the ash? Normally just thrown away, but now workshop to put ash in compost tank.

2 Housing – Before / Now / Future

Type of House:

Now: Wooden Walls Cadjan Roof

Ownership: Land belongs to residents

Water supply: had tube wells, now every compound has its own well

How much water do you need a day? 250 litres / day and 5 persons (50 litre / person) 500 litre / day and family, 50 litres / day for toilet

3 Toilet

Type of Toilet: "Pit latrine" (Pour flush + round pit, base not lined)

Did members of your household build or assist in building this toilet? The structure, the base and the surroundings were provided by Care. The roof had to be provided by the household.

How much did the toilet cost? 25,000 (met by Care)

Did you have to invest anything for the maintenance of the structure? No, everything done manually

Status of old toilets: What liked, what not?
No problems with existing toilets. But they need more. (Everybody will have 10 perches of land. According to PHI the latrine has to be located in the opposite corner of the well.)
What do you expect of a good toilet? (written in order of statement)

Covered, superstructure, concrete on top, standard way (pit, superstructure, tank), "toilet should be in one part, urine in another" (=pit should have two compartments, excess water goes to one side = septic tank?), overhead tank for water Would you prefer an attached version? Would you prefer a sitting version? Squatting preferred, better attached to house

4	Ecosan

Do you know / did you ever see an ecosan toilet? No.

What do you know about it? Nothing. But after explanation, respondents

What is your opinion on the re-use of human urine / human feaces?

Use of compost: Not sure about. But they do not like to reuse urine. It will be difficult to get peopleused to it. First they where trained not to dump somewhere and now they should use it!? (Where is logic? How to explain?)

Do you have any doubts eating food produced with human organic materials?

First the question was not understood. The respondents explained that the compost has to be clean. Different question: If you see nice fruit, but it is fertilized with human manure / urine would you eat it? For him okay, but for uneducated will be problem

5 Gardening and agriculture

Are you involved in any agricultural activity?

No. 10 perches of land are too small. If you have 20 -30 perches of land than yes. However, every house has a fruit tree and there is a home gardening programme by Care. Besides the program around 10 people are individually involved in home gardening.

In Mannar farming and home gardening was practised on mainland on the island there was only fishing.

Did you ever use fertilizer?

For fruit trees they use Urea three times a year. Per year one tree needs 1 kg. 1kg Urea cost around 70 LKR (?).

Since Urea pollutes the water they got the advice to use compost. They started to use compost and spend money for cow dung. The community does not have to pay for compost. If more people want compost, then they will sell.

6 Decision making –Community Participation

Are you or any other family member involved in any community activities? The men are organised in the Mosque committee. They meet every Friday after juma for the passing of messages. There is also a youth committee and a Women Development society.

RESETTLEMENT AREA: GALLADAWATTA, GALLE 23.08.06

Located in the most Tsunami affected area. Resettlement area for over 1500 houses. 800 houses finished by more than ten companies. The minimum number of houses a company has to built is ten. Each plot is 10 perch. The residents own the houses but did not receive the deed yet. Water should be supplied by the government.

The open space planning includes a playground. UDA did the layout. Depending on the donor the residents were involved in the planning. The sanitation concept varies by each donor. The built toilets are attached or not attached to the house. Solid waste management is normally not considered by donors.

The residents are social mixed. They are fishermen, own shops in town, produce koya ropes, are self employed or government employees and labors.

Big donors organized committees with future residents. Small donors did not. So these residents are not organized. Normally there should be a government office until housing program is finished. But the office left already. Therefore requests have to be made through official channels.

GW Level:	App. 30 feet
Gardening:	Home gardening practised widely
Location:	2-3 km from sea
Private Space for gardening available:	Yes
Public space for composting available:	Yes
Space for pipelines:	Yes
Rainwater harvesting:	Possible (tiled roofs)



Respondents

QUESTIONNAIRE RESIDENTS of RESETTLEMENT / RELOCATION AREAS and TSS

Feasability of Ecosan in Sri Lanka, Constanze Windberg on behalf of UNICEF

Date/Place of Interview: 23.08.06, private house	Questionnaire No.:	5
Present Persons: Interviewer, Respondents, members of five fa	amilies, UNICEF Assistant Project O	fficer WASH

Respondents:	Six women, Five men, Two Children	District:	Galle
Kespondents:	(See list below)	Resettlement Area:	Gallagodawatta

The respondents gathered spontaneous in one of the respondents house. They are mebers of a community of 25 houses. Altogether members of nine families were present. Before the Tsunami these families lived in the same neighborhood. They requested to be included in the same housing project. Where they lived before i twas crowded. Now they feel alone.

1 Questions related to the residents (Statistics: Family size, Religion, source of income)

Native language: Sinhala Age: 0 - 75

Current occupation: Labourers, Government servants, small businesses

Income per month: Very diverse, some depend on food stamps since the Tsunami, some already received food stamps before the Tsunami

How do you cook and heat? With Firewood, but soon as area is developed this will not be available anymore

What do you do with the ash? Put as fertilizer on soil.

2 Housing – Bef	fore / Now / Future
Type of House: Now: Before:	Brick Wall with tiled roof Some had two storey houses, some had the same standard as now
Ownership:	Land belongs to residents
Water supply: Now: Before:	piped from Ground Water, untreated, Water free, electricity bill is shared piped supply from Waterboard
How much water	do you need a day? 500 litre / day and 3-4 ppl., most of it for bathing and clothes
Solid Waste Man Now: Before:	agement: Throw over the road, got training on compost bins, some have compost bins Buried and burned
Gardening: Now: Before:	Yes, vegetables (use no compost, because there is not enough organic material) Not possible

3	Toilet

Type of Toilet: Now: inside, attached, Pour flush + cesspit Before: Some used coast, some flush toilets, Very small children do not use the toilet, the excreta are flushed How much did the toilet cost? Eight years ago 100\$ Did you have to invest anything for the maintenance? Every three years gully sucker (40\$) Status of old toilets: What liked, what not? No problems with toilets What do you expect of a modern toilet? Tiled, Commode, attached, water, BD 4 Ecosan Do you know / did you ever see an ecosan/compost toilet? Know compost toilet when they were children (40 years ago), it was never emptied but abandoned, some were emptied by people of a certain cast = PIT LATRINE → Nobody heard of ecosan toilets After explanation: What do you think about it? If no smell, no germs, they would try, but have to see first What is your opinion on the re-use of human urine / human feaces? Would not use urine for palnts Do you have any doubts eating food produced with human organic materials? Yes, Fell bad to consume vegetable which is fertilized with human excreta. Would eat it, if they don't know. Would also not use sludge from WWTP. 5 Gardening and agriculture Are you involved in any agricultural activity? Home gardening Did you ever use fertilizer? Do not use chemical fertilizer since too expensive and scared of chemicals Got told to use waste from compost bins. But three years is too long to wait. If the compost is available in packets they use it. Chicken dung: 75 LKR / 50kg, enough for three months, bought from private person 6 Decision making –Community Participation

Are you or any other family member involved in any community activities? Agricultural association Saving schemes (too many private organisations for loans) No common committee, their 25 houses have committee, but there is no link to other committees

RESPONDENTS:

M.B. Kulusehara E. Sangeeetha Disna Ranjanec Hirty Suwineetha Badra de Silva Treeda L. de Silva Dasun Chamara R.H. de Zoysa Egret Mendis Lew son Mendis I. Premadasa

ANNEX II

TOOLS FOR STAKEHOLDER ANALYSIS

- Stakeholder table
- Definition of characteristics
- Questionnaire

Stakeholder Table

I.D. no.	Kno Le	owledge evel 1-3	Position (S,MS,N,MO,O)				Interests			Alliances	Resources (1-3)			Power (1-3)	Leader
	1-3	Definition	Self	Oth S…		Final	Advantages	Disadvantages	No support if	Organizations mentioned	Туре	Quantity	Ability to mobilize	Resources average	Y / N

Stakeholder Characteristics

(adapted from Schmeer 1999)

- **I.D.** number (given to the stakeholder on the questionnaire)
- **Position** and organization
- **Knowledge** of ecoan: the level of accurate knowledge the stakeholder has regarding ecosan, and how each stakeholder defines ecosan. This is important for identifying stakeholders who oppose the policy due to misunderstandings or lack of information.
 - This column is divided into two parts. The first part, "1-3", is the level of accurate knowledge the stakeholder has regarding ecosan. This knowledge should be rated from 3 to 1: 3 = a lot; 2 = some; 1 = none. Final rankings should be reviewed to ensure consistent scoring among all of the stakeholders. The second part of the column, "Definition", is to record how each stakeholder defines ecosan. The information gathered in question #3 of the questionnaire should be noted here in the stakeholder's own words.
- **Position**: whether the stakeholder supports, opposes, or is neutral about ecosan, which is key to establishing whether or not he or she will block implementation
 - The position of the stakeholder can be obtained by gathering information directly from the stakeholder (i.e., self-reporting) and through information gathered indirectly from other stakeholders or secondary information (i.e., others' perceptions). Thus, the reporting in this column represents the self-reported classification (column "Self"), the classification by others (column "Others"), and a final classification considering both (column "Final"). The position of the stakeholder should be reported from this final classification. Stakeholders who agree with the implementation of ecosan are considered supporters (S); those who disagree with ecosan are considered opponents (O); and those who do not have a clear opinion, or whose opinion could not be discerned, are considered neutral (N). Those who express some, but not total, agreement with ecosan should be classified as moderate supporters (MS). Finally those who express some, but not total, opposition to ecosan should be classified as moderate opponents (MO). Thus the position of the stakeholder as they state it in the interview should be entered (S, MS, N, MO, or O).

The position of the stakeholder as perceived by other stakeholders and/or from secondary information should be entered with a reference to the ID number of the person who stated that opinion. For example, S 32 would mean that stakeholder number 32 stated in his or her interview that the stakeholder under analysis would support the policy. The position of the stakeholder as others perceive it should be entered (S, MS, N, MO, or O) with the ID number for each opinion.

Lastly the final determination for the position of the stakeholder should be entered (after entering data from all interviews). This position should take into account the self-reported position as well as other stakeholders' opinions. S, MS, N, MO, and O can be entered in this column.

- **Interest**: the stakeholder's interest in ecosan, or the advantages and disadvantages that implementation may bring to the stakeholder or his or her organization. Determining the stakeholder's vested interests helps to better understand his or her position and address his or her concerns.
 - Advantages and disadvantages mentioned by each of the stakeholders should be entered into this column in as much detail as possible, since the information will be used primarily in developing conclusions and strategies for dealing with the stakeholders' concerns.

- Alliances: organizations that collaborate to support or oppose ecosan. Alliances can make a weak stakeholder stronger, or provide a way to influence several stakeholders by dealing with one key stakeholder.
 - Any organizations that are mentioned by the stakeholder in the questions related to this item should be entered in this column.
- **Resources**: the quantity of resources—human, financial, technological, political, and other available to the stakeholder and his or her ability to mobilize them. This is an important characteristic that is summarized by a power index and will determine the level of force with which the stakeholder might support or oppose ecosan.
 - The analysts should consider the stakeholder's access to all of these resources. The resource category is divided into two parts: the quantity of resources that a stakeholder has within his or her organization or area, and the ability to mobilize those resources. The quantity of resources should be classified by the analysts as 3 = many, 2 = some, 1 = few. Final rankings should be reviewed to ensure consistent scoring among all stakeholders.

The ability of the stakeholder to mobilize resources should be quantified in terms of: 3 = the stakeholder can make decisions regarding the use of the resources in his or her organization or area

2 = the stakeholder is one of several persons that makes decisions regarding the use of resources

1 = the stakeholder cannot make decisions regarding the use of the resources. For example, if the stakeholder has personnel that work for him or her, it can be concluded that the stakeholder has the ability to mobilize these resources because he or she has direct influence over them.

- **Power**: the ability of the stakeholder to affect the implementation of ecosan.
 - Here, power refers to the ability of the stakeholder to affect the implementation of ecosan due to the strength or force he or she possesses. Since "power" is defined here as the combined measure of the amount of resources a stakeholder has and his or her capacity to mobilize them, the two resource scores implied should be averaged, resulting in a power index between 3 and 1: 3 = high power, 2 = medium power, and 1 = little power. The final rankings should be reviewed to ensure consistent scoring among all stakeholders.
- Leadership: the willingness to initiate, convoke, or lead an action for or against ecosan. Establishing whether or not the stakeholder has leadership will help to target those stakeholders who will be more likely to take active steps to support or oppose ecosan (and convince others to do so).
 - The stakeholder either has this characteristic ("yes") or lacks it ("no"). This is represented with "yes" or "no."

Stakeholder Interview Questionnaire XXX

Date: XXX ID #:

Place:

Respondent:

Your Opinion:

- 1. Have you heard of Ecological Sanitation / Ecosan (Compost toilets)?
- 2. If so, how did you hear of it? (If No, explain and continue with Question 4)
- 3. What do you understand under "Ecosan / Compost toilet"?

Ecological **san**itation (ecosan) is based on the consistent implementation of the "closing the loop approach" (Nutrient Cycling), where urine and faeces are regarded as resources rather than waste. If collected separately and sanitized they can be used as organic fertilizer or as soil conditioner. The system used in Sri Lanka is the dry compost toilet.

- 1) It provides an affordable solution for the poor (alternative to conventional sanitation technologies),
- 2) for high groundwater areas, rocky and sandy soils and water scarce areas.
- 3) It also has the potential of livelihood improvement through the production of fertilizer.

4. Which of these categories best describes your opinion on ecological sanitation as I defined it earlier? (*Read the options and circle the answer given*.)

- a) I strongly support it
- b) I somewhat support it
- c) I do not support nor oppose it
- d) I somewhat oppose it
- e) I strongly oppose it
- 5. How could you support ecosan?

6. Where could you and your organization benefit from supporting ecosan?

7. What are the potential disadvantages to you and your organization of implementing ecosan?

For those who answer "a", "b," or "c" to question #4:

- 8. Which of the three aspects of ecosan is the most relevant for you?
 - a) Affordable alternative to conventional sanitation technologies (Solution for poor)
 - b) Permanent solution for problematic areas (high GWT, rocky, sandy soil, water scarcity)
 - c) Production of organic fertilizer and soil conditioner and reuse
- 9. For those aspects of ecosan that you do support,
 - a) In what manner would you demonstrate this support?
 - b) Would you take the initiative in supporting ecosan, or would you wait for others to do so?
 - c) Do you have financial or human resources available to support ecosan approaches?
 - d) Which resources are available and how quickly can they be mobilized?
 - e) Would this support be public?
 - f) What conditions would have to exist for you to express this support?
 - g) Would you ally with any other persons or organizations in these actions? Which persons/organizations?
 - h) What does hinder you support?
- 10. Under what conditions would you choose NOT to support ecosan?

For those who answered "d" or "e" to question #4:

11. Which of the following aspects of ecosan do you oppose:

- a) Affordable alternative to conventional sanitation technologies (Solution for poor)
- b) Permanent solution for problematic areas (high GWT, rocky, sandy soil, water scarcity)
- c) Production of organic fertilizer and soil conditioner and reuse

12. For those aspects that you oppose:

- a) In what manner would you demonstrate this opposition?
- b) Would you take the initiative in opposing ecosan, or would you wait for others to do so?
- c) Do you have financial or human resources available to oppose ecosan approaches?
- d) Which resources are available and how quickly can they be mobilized?
- e) Would this opposition be public?
- f) What conditions would have to exist for you to express this opposition?
- g) Would you ally with any other persons or organizations in these actions? Which persons/organizations?

13. Under what conditions would you come to support ecosan?

We would now like to ask you a few specific questions about your opinion regarding others' opinions of the implementation of ecosan.

Other Supporters:

14. What other organizations, departments within an organization, or persons do you think would support ecosan approaches?

15. What do you think these supporters would gain from ecosan approaches?

16. Which of these supporters would take the initiative to actively support ecosan?

Other Opposors:

17. What other organizations, departments within an organization, or persons do you think would oppose ecosan approaches?

18. What do you think these opponents would gain from preventing ecosan approaches?