DEFINITIONS, CONCEPTS AND ABBREVIATIONS

A

Adequate sanitation: refers to the situation where there is provision and ongoing operation and maintenance of a system of removing and managing human faeces, solid waste and wastewater which is acceptable and affordable to the users.

Access to Improved Sanitation: Refers to the percentage of total population with access to sanitation facilities

Activated sludge: Activated sludge itself is an aqueous suspension of microorganisms cultivated in a waste treatment process to break down organic matter into carbon dioxide, water, and other inorganic compounds. The activated sludge process has three basic components: 1) a reactor in which the microorganisms are kept in suspension and aerated; 2) liquid-solid separation; and 3) a sludge recycling system for returning activated sludge back to the beginning of the process. The activated sludge process is a common method of secondary (biological) sewage (wastewater) treatment.

Advanced (tertiary) treatment: Treatment step added after secondary treatment stage to remove specific pollutants, such as nutrients, suspended solids, organics, heavy metals or dissolved solids (such as salts).

Aerobic: Living or taking place in the presence of air or free oxygen.

Anaerobic: Living or taking place without air or free oxygen.

Aquaculture: Raising plants or animals in water (water farming)

B

Basic sanitation facility
A basic sanitation facility is described as "The infrastructure necessary to provide a sanitation facility which is safe, reliable, private, protected from the weather and ventilated, keeps smells to the minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating appropriate control of disease carrying flies and pests, and enables safe and appropriate treatment and/or removal of human waste and wastewater in an environmentally sound manner".

Basic sanitation service
A basic sanitation service is "The provision of a basic sanitation facility which is easily accessible to a household, the sustainable operation of the facility including the safe removal of human waste and wastewater from the premises where this is appropriate and necessary, and the communication of good sanitation, hygiene and related practices".

Biogas: Gas consisting mainly of methane produced by anaerobic digestion of organic waste. Biogas can be produced and collected at community wastewater treatment works, or in smaller scale household biogas plants, as has been practiced widely in China and South Asia.

Black water: Wastewater from the toilet, which contains heavy fecal contamination and most of the nitrogen in sewage.

Biochemical Oxygen Demand (BOD): BOD is the measure of the amount of oxygen required by bacteria to stabilize material that decomposes under aerobic conditions. BOD is a commonly used determinant of the organic strength of a waste, as it serves as an indicator of the waste's capacity to remove oxygen from water. Oxygen concentrations in water determine the quality of fish and other organisms that can survive and flourish in the water; severe oxygen depletion can create offensive conditions, including bad smells.

C

Composting latrine/composting toilet: (also called biological toilets, dry toilets and waterless toilets). These contain and control the composting of excreta, toilet paper, carbon additive, and, optionally, food wastes. Some composting toilets aim to separate urine (urine diversions toilets) to control the moisture of the compost.

Constructed Wetlands: Engineered systems designed to optimize the physical, chemical, and biological processes of natural wetlands for reducing BOD and TSS concentrations in wastewater.

D

Desludging: Removing accumulated sludge from septic tanks, aqua-privies, etc.

Disability adjusted life years (DALYs): Public health metric of healthy life years lost to disease due to both morbidity and mortality, adjusted for disability.

Disinfection: The inactivation of disease-causing organisms using chemicals, radiation (also solar), heat or physical separation processes.

E

Ecological Sanitation (ecosan): Sanitation the design of which strives to protect ecosystems, and treats excreta as a valuable resource to be recycled. The term is widely understood to reflect this general approach to excreta management, but ecosan technology often implements the approach through the separation of urine and feces at the level of the individual toilet.

Effluent: Out flowing liquid.

Enabling Environment: Policies, financial instruments, formal organizations, community organizations and partnerships which together support and promote needed changes in hygiene practices and access to technology.

Environmental Sanitation: A wide range of interventions designed to create and maintain an environment conducive to human health. This includes sanitation (defined as the infrastructure and services required for the safe management of human excreta) but also includes solid waste management, drainage of surface water and sullage, vector control, air pollution control, etc.

Escherichia Coli (E.coli): A bacterium found in the gut of warm blooded living beings, used as an indicator of fecal contamination.

Excreta: Feces and urine.

F

Facultative Pond: A pond which is aerobic near the surface, but anaerobic at lower depths.

Facultative: The ability of microorganisms to live under either aerobic or anaerobic conditions.

Fecal Coliform Bacteria: Common, harmless forms of bacteria that are normal constituents of human intestines and found in human waste and in wastewater. Fecal coliform bacteria counts are used as an indicator of the possible presence of pathogenic microbes. (see E.coli above).

Fecal sludge: Fecal sludge is the solid or settled contents of pit latrines and septic tanks. Fecal sludge differs from sludge produced in municipal wastewater treatment plants. Fecal sludge characteristics can differ widely from household to household, from city to city, and from country to country. The physical, chemical and biological qualities of fecal sludge are influenced by the duration of storage, temperature, intrusion of groundwater or surface water in septic tanks or pits, performance of septic tanks, and tank emptying technology and pattern.

Fecal-oral: Transmitted by any route enabling fecal material to reach the mouth.

G

Greywater: Water from the kitchen, bath, laundry and other domestic activities which should not normally contain much urine or excreta. (Note that laundry wash water is likely to carry some fecal contamination).

Grit: Heavy mineral matter such as sand and gravel, usually removed before primary treatment.

Groundwater Table: The level at which the subsoil is saturated with water.

Groundwater: Water found below ground level in the soil.

H

Hygiene Education: An element of hygiene promotion concerned with teaching people about how diseases spread; for example through the unsafe disposal of excreta or by not washing hands with soap after defecation. Although this type of awareness-raising may be part of a larger hygiene promotion program, it should not be the sole focus of the program.

Hygiene Promotion: A planned approach to preventing sanitation-related diseases through the widespread adoption of safe hygiene practices. It begins with and is built on what local people know, do and want.

Hygiene: Behaviors related to the safe management of human excreta, such as hand washing with soap or the safe disposal of children's feces. Hygiene thus determines how much impact water and sanitation infrastructure can have upon health, because it reflects not the construction, but the use, of such facilities.

M

Maturation Pond: An aerobic pond for wastewater treatment, usually the final pond in a waste stabilization pond system.

N

Night Soil: Human excreta transported without flushing water

O

Off-site sanitation: System of sanitation where excreta are removed from the plot occupied by the dwelling and its immediate surroundings.

On-site sanitation: System of sanitation where the means of collection, storage and treatment (where this exists) are contained within the plot occupied by the dwelling and its immediate surroundings.

Organic Matter: Materials which come from animal or vegetable sources. Organic matter generally can be degraded by microorganisms.

P

Pathogens: Disease causing organisms. The main organisms that pose a threat to health related to poor sanitation are pathogenic bacteria, viruses, parasitic protozoa and helminths that are excreted in large numbers from infected individuals. Many of these organisms have low infectious doses (e.g., helminths, protozoa and viruses) which means that only small quantities of infectious agents are needed to infect a new host (the infective dose varies between organisms and with respect to the susceptibility of the exposed individual).

Pit Latrine: latrine with a pit for collection and decomposition of excreta and from which liquid infiltrates into the surrounding soil.

Pour-flush Latrine: Latrine that depends for its operation of small quantities of water, poured from a container by hand, to flush away feces from the point of defecation.

Primary Treatment: Initial wastewater treatment process to remove solids which settle by sedimentation, and floating objects by physical screening and skimming.

S

Sanitation: refers to the principles and practices relating to the collection and management of refuse, human excreta and wastewater, as they impact upon communities, users, operators and the environment.

Sanitation system: is defined as compromising the users of the system, the toilet infrastructure, the collection, transport, treatment, and management of end products (human excreta, solid waste, grey water, storm water and industrial wastewater).

Sanitation Marketing: The use of marketing techniques to promote the construction and use of sanitation facilities. Sanitation marketing considers the target population as customers. It borrows private sector experience to develop, place and promote an appropriate product: in this case the product is a toilet and excreta disposal system, be it sewerage connection, pit latrine or other mechanism. Critically the facilities must be readily available at an affordable price in the right place.

Secondary treatment: Wastewater treatment step following primary treatment to remove biodegradable dissolved and colloidal organic matter by using biological processes, such as activated sludge, trickling filters, or various kinds of ponds and lagoon systems.

Sanitation Promotion: Activities undertaken to stimulate household demand for, and the supply of, the sanitation hardware necessary to maintain a healthy environment: latrines, toilets, sewer connections, etc.

Septage: Fecal sludge removed from septic tanks

Septic Tank: An underground tank that treats wastewater by a combination of solids settling and anaerobic digestion. The effluents may be discharged into soak pits or small-bore sewers, and the solids have to be pumped out periodically. Emptying septic tank sludge and final disposal of this septage is a challenge to many countries, developed and developing alike.

Sewage: Human excreta and waste water, flushed along a sewer pipe.

Sewerage: A system of sewer pipes, manholes, pumps etc for the transport of sewage.

Social Marketing: has been defined as the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society" (Andreasen, 1995)

Sludge: A mixture of solids and water deposited on the bottom of septic tanks, ponds, etc. The term sewage sludge is generally used to describe residuals from centralized wastewater treatment, while the term septage is used to describe the residuals from septic tanks.

Sullage: Domestic dirty water not containing excreta. Sullage is also called grey water.

Suspended Solids: Solids that are in suspension in water or other liquids.

T

Total Solids: The sum of dissolved and suspended constituents in a sample usually stated in milligrams per liter or percent.

V + W

Vector: Insect or organism that carries disease from one animal or human to another (such as a mosquito, fly, or bilharzia-infected snail.)

VIP Latrine: (Ventilated Improved Pit latrine.) A VIP is a pit latrine with a slab and a ventilation pipe to remove foul smells from the pit and vent them to the air above the superstructure roof line. A fly screen is added to the top of the ventilation pipe to control flies.

Wastewater: The spent or used water from homes, communities, farms and businesses that contains enough harmful material to damage the water's quality. Wastewater includes both domestic sewage and industrial waste from manufacturing sources.

Water table: The level in the ground at which water is found when a hole is dug or drilled (same as Groundwater Table).

Calculating shit and medical expenses: These **are** two exercises used in triggering. In calculating shit, community members are asked to calculate the amount of shit each family produces per day/week/ month/year. The amounts can then be added up to estimate the amount of shit produced by the whole community.

Certification:is the official confirmation and recognition of open defecation free (ODF) status.

CLTS refers to Community-Led Total Sanitation. This is an integrated approach to achieving and sustaining open defecation free (ODF) status. CLTS entails the facilitation of the community's own analysis of their sanitation profile, their practices of defecation and the consequences, leading to collective action to become ODF. CLTS processes can precede and lead on to, or occur Simultaneously improve latrine design; the adoption and improvement of hygienic practices; solid Waste management; waste water disposal; care; protection and maintenance of drinking water sources; and other environmental measures. In many cases CLTS initiates a series of new collective local development actions by the ODF communities.

Food and shit: These are an exercise commonly used during triggering to illustrate the contamination of food through flies. It makes clear that no one, even those who have a toilet, is protected against the impact of open defecation on health and that what is needed is an open defecation free community.

Hand washing: has also been recognized as a key component of CLTS, a factor that has gained prominence since the approach was first developed. Hand washing after shitting and before handling or eating food is just as important in preventing the spread of communicable diseases as stopping open defecation. If people use a latrine but do not wash their hands, they still eat their own shit and spread bacteria. A hand washing facility can consist of e.g. a water-filled jerry-can with a hole that is plugged with a stick and which is hung upside down outside the latrine. Where water is scarce and soap unavailable, ash can also be used for hand washing.

Ignition moment: This is the critical moment during triggering when there is a realization that due to open defecation allare ingesting each others' faeces and that this will continue as long as open defecation goes on. Disgust, shock and embarrassment are written large on the faces of those present. A sign of ignition is that some community members start to come forward and talk about stopping open defecation and how this could be done.

Natural leaders (NLs) (also sometimes known as spontaneous leaders) are activists and enthusiasts who emerge and take the lead during CLTS processes. Men, women, youths and children can all be

natural leaders. Some natural leaders become community consultants, and trigger and provide encouragement and support to communities other than their own.

Open Defecation means open defecation – defecating in the open and leaving shit exposed.

Open Defecation Free: means open defecation free, that is, when no faeces are openly exposed to the air. A direct pit latrine with no lid is a form of open defecation (fixed point open defecation), but with a fly-proof lid (with or without the use of ash to cover the faeces after defecation) qualifies as ODF.Defecating into a trench and covering the faeces (also known as 'dig and bury' or the 'cat method') can be part of the transition from OD to ODF.

Mapping. This is one of the main tools for involving all community members in a practical and visual analysis of their sanitation situation. A simple map of the community is drawn, usually on the ground, and all households are asked to locate their homes, indicating whether they have latrines and where they go for defecation. The map can highlight how people are defecating virtually on each other's doorstep, how far they have to walk to defecate (and related safety issues), and how water sources are at risk of contamination.

Millennium Development Goal (MDG) for Sanitation: The MDGs set out eight concrete, numerical benchmarks which are meant to tackle extreme poverty in its many dimensions. MDG 7 is 'to ensure environmental sustainability'. One of the targets of this goal is to reduce by half the proportion of people without sustainable **access** to safe drinking water and basic sanitation by 2015. This is indicated by the proportion of the population using an improved drinking water source; and the proportion of the population using an improved sanitation facility.

PHAST :(Participatory Hygiene and Sanitation Transformation) is a participatory training method that uses visuals to demonstrate the relationship between sanitation and health status. It is geared towards increasing the self-esteem of community members and empowers them to plan environment improvements and to own and operate water and sanitation facilities. See PHAST Step-by Step Guide, WHO 1998.

The sanitation ladder: The ladder shows a range of different latrines that people can adopt, no matter what their circumstances. It is important that people get on to the sanitation ladder and start on the rung that is appropriate for their situation and context – even simple, affordable latrine models can protect against disease and other negative side effects of open defecation. People may move up the ladder, onto more expensive designs, if, as and when they can afford it. Some steps on the ladder are:

Pit latrine: has a squat slab cover to stop contact with excreta by humans, animals and insects, a shelter around it for privacy and protection, and a gauze covered vent pipe to stop smells and prevent flies from entering. The hole may be lined to prevent it collapsing. Regularly adding ash to the pit speeds up the process of decomposition kills off fly larvae and keeps odours at bay. The pit latrine is cheap and easy to build and maintain but the pit must be moved or emptied regularly.

Self ventilated improved pit latrine (VIP): a little more expensive and uses slightly more complicated technology. A vent pipe higher than the shelter reduces the smells and flies. They are still cheap to build and easy to maintain but are dependent on wind and are dark inside.

Pour-flush latrine: uses a pan with a water-seal connected to a pit by a pipe. This stops flies and smells from coming out of the pit, but a water source is needed.

Composting toilets: vary greatly in construction and expense. They all use micro-organisms to break down the waste into organic compost or manure. Various systems of vents or fans may be used to speed up the process of composting. Advantages of composting toilets include reuse of the compost as fertilizer, reduced pollution of ground water and lack of dependence on water, but skilled labour is required for the construction.

Arborloo: uses a very shallow pit (less than one metre in depth) and has an easily movable superstructure (shelter). Once the pit is three-quarters full the slab and shelter are removed and the pit filled in with soil. A young tree is then planted over the contents of the pit and the toilet is erected in another place. As the toilet is moved around, a sanitary orchard or wood lot appears over time. The trees can either provide fruit or construction and fuel wood. The advantages of this system are that there is no handling of excreta and the risk of groundwater contamination is reduced because of the shallowness of the pits. The arborloo has been used in Zimbabwe.

Sanitation marketing introduces conventional marketing approaches to stimulate demand and supply for sanitation products and services by encouraging households to use their own resources to improve their services suppliers to develop the range of choices that satisfy consumer needs. It is based on the premise that many people, including the poor, are willing to pay for good sanitation that will satisfy their requirements if the technology is packaged and marketed appropriately and the supply mechanism is easily accessible. Applying a marketing approach to sanitation is not just about advertising; it is also about ensuring that appropriate sanitation options are made available and that suppliers have the necessarily capacity to provide the desired services. Sanitation marketing is about ensuring a balance between demand and supply.

Transect walk: As part of CLTS triggering, facilitators and community members conduct a transect walk through the village's open defecation areas. A discussion of village sanitation is easily prompted by asking questions to establish who uses which areas for defecation, where women go, and what happens during the night or in bad weather. When people see the extent of open defecation, and that there are no faeces-free areas, this usually creates a desire to stop open defecation.

Triggering refers to the facilitated process that usually includes a community meeting, mapping, a transect walk to areas of open defecation, exercises that illustrate the faecal-oral contamination route, e.g. 'Food and shit' or 'Water and shit'

Verification refers to inspection to assess whether a community is ODF (compare with 'Certification').

Water and shit is an exercise commonly used during triggering to illustrate the faecal-oral contamination route and the fact that people routinely drink contaminated water without being aware of it. The facilitator will offer a glass or bottle of water to a community member and ask her/him to take a sip. After the person has drunk some water, the facilitator will then take a hair, a very small stick or a blade of grass and wipe it through some shit before dipping it into the water. He then offers the water for drinking again, but of course no one wants to touch it now. To make this an even more powerful exercise, some facilitators compare the hair to a fly's leg, pointing out that a fly has six legs, i.e. that it transfers even more shit to food and water when it comes into contact with it.