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Operation, Impact and Financing of Sulabh

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Mode of Operation :

In respect of basic documentation of the organization and its size the facts stated below give a picture and an idea about it.

Sulabh International Social Service Organisation is a non-profit society registered under the Societies Registration Act – XXI of 1860 bearing no. 73/1970-71. It was founded in 1970 by a sociologist, Dr. Bindeshwar Pathak, in Bihar, India.

The Society has a Board of Governors. (Organogram is enclosed at Annexure-I) The Governing Board comprises of Chairman, Vice-Chairman, General Secretary and Treasurer with the Administrative Wing led by President, Executive President, Senior Vice-Presidents/Vice-President, Advisors assisted by Secretary, Accountant, Technical Officers like Planners, Administrators, Engineers, Architects, Doctors, Scientists, Social Scientists, Associate Members and Social workers etc.

It is a self-reliant organization. The income or profit earned is not shared among the members of the Board; rather, the money is ploughed back on research and development, education, welfare measures and to fulfill the primary objectives viz. on sanitation activities and to achieve the social purpose of abolition of scavenging in the country. The organization is not funded by receipt of grant from the State or Central Governments or national or international agencies. The accounts of the organization are audited every year by a qualified Chartered Accountant and sent to the Income Tax Department, Govt. of India for clearance.

It has 1080 town branches, spread over 455 districts in 27 States and 5 Union Territories of India, with international branches in Bhutan and Afghanistan. It has created employment for about 50,000 persons (25,000 full time, 10,000 part time, plus 15,000 volunteers engaged in activities related to construction, motivation and awareness creation, maintenance, management and R&D etc.). Under its sanitation training programme, persons from Ethiopia, Uganda, Mozambique, Burkina Faso and Cameroon have already been trained. So far it

has converted 1.2 million bucket toilets into 'twin-pit pour-flush compost toilets' now known popularly as 'Sulabh Shauchalayas', thereby liberating about 60,000 scavengers (or persons who clean human excreta manually) from their sub-human and health-hazardous occupation, and thus uplifting and re-integrating them into the mainstream of society. Already, it has constructed more than 7500 Public Toilets which are run and maintained by it on the 'pay and use' basis under the cross-subsidization method. Both the converted toilets and the public toilets are now being used by about 10 million people daily. Besides, 160 Public Toilets in non-sewered areas have been linked with Bio Gas plants and Sulabh Effluent Treatment plants. (Micro & Macro Chart is enclosed at Annexure – II).

Eradication of Scavenging: Scavengers¹ have been cleaning human excreta manually from the bucket toilets, a practice called scavenging since the *Pauranic Period* in India, and were given the nomenclature of and treated as, untouchables, the lowest amongst the low castes called '*Antyajias*', before independence of the country. Still 7.36² lakhs scavengers in India clean 13,210,867³ bucket toilets daily. **Scavengers get hardly 10 US dollar per month for cleaning bucket privies.** Scavengers' appalling hardship, humiliation and exploitation have no parallel in human history. Living in the filthiest of surroundings under most trying circumstances, scavengers are hated even by those whose excreta they carry on their heads. Their story is the sordid story of the utmost violation of human rights. While working, to clean the excreta, they stretch their hands and thrust their head inside the privy chamber through a narrow opening, only to clean the stinking excreta in the privy, at times stuck at the sides. This in a way was and continues to be the depth of occupational degradation and demeaned self-respect. This unclean and health hazardous occupation continued in Mauryan, Mughal and British periods. Although sewerage was introduced in India about 135 years ago and the entire Five Year Plan allocation for urban sanitation was almost spent on sewerage system, either ongoing or new, hardly 232⁴ towns and cities, out of 5161 towns (2001 census) stand served by sewerage, and that too partially. While fighting for the freedom of the country the attention of Mahatama Gandhi was drawn towards the plight of scavengers and he wanted that Indian society should accord scavengers the prestige and status which others have. Due to Mahatama Gandhi's intervention, the movement for liberation⁵ and the rehabilitation of scavengers started in India in the 1925s; but no tangible results emerged during his lifetime. After independence of India many Committees were formed to find out the solution to the scavengers' problem but they could not provide any concrete solution. Dr. Bindeshwar Pathak, a sociologist while working for Bihar Gandhi Centenary Celebrations Committee in 1968, on the basis of the literature available, innovated, modified and developed a technology of Sulabh Shauchalaya which fulfils all the conditions laid down by WHO⁶ to be treated as a Sanitary latrine.

This technology based toilet is appropriate, affordable, indigenous and culturally acceptable. The Sulabh Shauchalaya consists of a pan on raised platform; it has a steep slope and a trap with 20 mm water seal needing just 1.5 to 2 litres of water for flushing as compared to 10-12 litres required in the conventional design. The excreta is carried into leach pits through pipes or covered drains with one pit being used at a time. The liquid infiltrates and gas disperses into the soil through the holes in the pit lining. No vent pipe is required as gases disperse into the soil thereby removing the nuisance of foul smell spreading in the neighbourhood. When one pit is full, excreta is diverted into the second pit. In two years period, the content of the filled pit gets digested to organic manure that is safe for manual handling. It dispenses with the need to engage a scavenger to clean excreta manually. The pit can then be conveniently emptied and is ready to be put back into use, after the second pit is full. The pits can be constructed with bricks or any locally available material like stones, woodlogs, burnt clay rings, concrete rings or even used coal tar drums. Similarly, the quality of superstructure ranges from simple gunny bag sheet or thatch to well-finished tiled walls with R.C.C. roof, doors, wash basin, etc. The excreta in the pit is almost free from pathogens when taken out after two years of resting period. The biofertiliser (containing 1.8 p.c. nitrogen, 1.6 p.c. phosphorous and 1.00 p.c. potash) increases the humus and water holding capacity of the soil. It has also a high potential for up-gradation because it can easily be connected to a sewerage system whenever required. The cost of Sulabh toilets ranges from US\$ 10 to 500 per unit to suit people of all economic strata. It depends upon materials of construction of pits and seat as well as of superstructure.

In 1970 Dr. Pathak started the Sulabh Sanitation Movement and founded Sulabh International Social Service Organisation (formerly known as Sulabh Swatcch Shauchalaya Prashikshan Sansthan) to carry out the objectives of the movement and to restore human rights and dignity to the scavengers and to bring them in the mainstream of society.

By now more than 1.2 million bucket toilets have been converted into Sulabh Shauchalayas and 60,000 scavengers have been released from the sub-human occupation of scavenging. They have been provided alternative employment. Their wards are being imparted training in various vocations like Short-hand, Typing, Beauty-parlour running, Fashion technology, Food processing etc. so that they can become self-employed or gain employment elsewhere. It ensures that they do not revert to the profession of their parents. An English Medium School has been started to impart quality education to the children of scavengers and others who are admitted normally in the ratio of 60% and 40% with a view to achieving social integration. For socially upgrading their status in the society and to bring them in the mainstream they are taken to Temples for prayers and allowed to draw water from common wells. Their dining with others, frowned upon till in the recent past is now accepted by the society. The most important change that has taken place is that people of India who used to shy away even from the shadow of the scavengers now buy and eat the food-stuff material prepared by the scavengers. This amounts to a sea change in the attitude of the people in India.

Elimination of Open Defecation: At present 63.6%³ people in India go for defecation in open as they have no latrines in their 12,20,78,136³ homes. Apart from male members, ladies have to suffer the most. They have to wake up early in the morning almost before sunrise for going to defecation or wait until sunset to attend to the call of nature. The ladies use road-sides, railway tracks, national highways, parks, lanes and by-lanes for the purpose of defecation, a practice that violates their dignity and modesty. Sometimes they had to face criminal assault by anti-social elements and at times fell pray to wild, dangerous and unpredictable behaviour of bulls and cows. Most of the schools in rural areas are without toilets and therefore the girl students do not feel encouraged to go to schools. Drop-out rate in the schools in large cases is due to the absence of toilets. Because of absence of toilets 0.7 million children die every year because of diarrhoea, dehydration, etc. Reference to open defecation amounting to a religious sanction is to be found in “***Devi Puran***”, a sacred writings on Hindu mythology in Sanskrit language. It is said therein that no one should defecate near a human habitation; rather, one should go outside for defecation, dig a small pit, put some grass and leaves in it and then defecate; and, after defecation again put some grass and leaves over the human excreta and cover it with soil⁷. Though the ritual fell into disuse, the practice of defecation in the open continued. In the early days when population was sparse in villages, the bushes, trees and raised earthen field boundaries provided a screen and thus privacy at the time of defecation. With rising population and fields being put to agricultural use such cover started vanishing. The result was the continued practice of defecation in the open, but now it was generally, near the place of residence. Only because of religious sanction accorded in Devi Puran, house in rural India, it being immaterial whether it is pucca, semi-pucca, of mud, or thatched lacks toilet facility. This non-availability applies to houses both of rich and poor. The Sulabh technology developed for elimination of scavenging system is also suitable for with people going for defecation in open.

Public Toilets : In 1878 an Act was passed in Bengal during the British period to maintain public toilets on “pay & use” basis. It was tried at some places in Kolkata but could not create an impact either in the city or in the country and the maintenance of public toilets remained a subject of gross neglect. So much so that public toilets used to be regarded as hell on the earth and nobody liked to use public toilets even when forced to answer the call of nature. People avoided going near the public toilets or urinals because of the foul smell emanating from the public conveniences. No municipal body was interested in encouraging the use of public toilets. Therefore, public places like Railway Stations, Bus-stands, Market yards, places of religious and tourist importance and place where people congregated remained devoid of facilities of urinals or toilets. Foreign tourists were reluctant to come to India because of the absence of toilets at tourist places. The Nobel Laureate V.S. Naipaul in his book “An Area of Darkness” has vividly described how Indians defecate in open on both sides of railway tracks and roads.

In 1974 after a lapse of 96 years, Sulabh intervened in the field of construction and maintenance of public toilets; and, for the first time established a Sulabh Public Toilet Complex at Patna, Bihar, with the help of Patna Municipal Corporation. The land and the cost of construction was provided by Patna Municipal Corporation and responsibility for construction and maintenance of a large toilet block was given to Sulabh. The biggest community toilet complex of the world has been built by Sulabh at Shirdi, Nasik (Maharashtra), provided with 120 WCs, 108 bathing cubicles, 28 special toilets, six dressing rooms and 5000 lockers and other facilities coupled with a biogas generation system. Public toilets have been built in small towns also. They have become a boon for the slum dwellers especially for the women. **The Public Toilets are run on “Pay & Use” basis.** The funds garnered are channelised for day-to-day maintenance viz. providing sanitation material and other facilities like broom sticks, cans, soap powder etc. Electricity and water too are provided, cost over which is met from the funds received by way of payment of user charge. Of late, besides, toilet and bath facilities additional amenities have been provided catering to the needs of

disabled, crèches, lockers, laundry. An important facility provided has been utilizing the premises of a public toilet complex for setting up health centre where health check up of the user is conducted, blood group details recorded, health card maintained etc etc. At some places even telephone facility has been added. Thus public toilets at a number of places have become multipurpose centers. These services are specially useful in slum areas.

Sulabh is maintaining more than 7500 community toilets-cum-bath complexes on the `pay-and-use' basis, round the clock, without putting any burden on the public exchequer for their maintenance. Sulabh's `pay-and-use' toilet complexes represent a good example of people's participation in community management; for, it is the community which pays for the daily upkeep of toilets-cum-bath facilities.

Bio-Gas Plant attached to Public Toilets Also Useful for Housing Colonies and High-Rise Buildings:

Sulabh during the last three decades has tried leaching pit, Septic Tank and Bio-gas technologies in public toilets and found by experience that leach pit system is not suitable for public toilets. Septic tank technology either is not suitable for public toilets because the filling of the septic tank is as frequent as in the leach pit, and secondly there is no use of human excreta in a septic tank which has to be cleaned periodically and a suitable place, like trenching ground is required for its final disposal. Therefore, Sulabh has tried the technology of Sulabh Biogas digester alongwith effluent treatment plant attached to public toilets. This has become successful. Sulabh is a pioneer organization in the world in the field of biogas generation from public toilet complexes. The biogas can safely be used for cooking, lighting gas lamps, body warming when necessary, or generation of electricity. These biogas plants are an important means to get rid of health hazards from human excreta which contains a full spectrum of pathogens, which cause over 50 infections when transmitted from a diseased person to a healthy one. During biogas generation, due to anaerobic conditions inside the digester, most of the pathogens are eliminated from the digested effluent. The digester is located underground into which excreta from public toilets flows under gravity. Inside the digester, biogas is produced due to anaerobic fermentation by the help of methanogenic bacteria. Approximately one cft. of biogas is produced from the human excreta of one person per day. Human excreta based biogas contains 65-66% methane, 32-34% carbon dioxide and the rest is hydrogen sulphide and other gases in traces. A public convenience visited by about 2000 persons per day would produce approximately 60 cum of biogas which can run a 10 KVA genset for 8 hours a day, producing 65 units of power. Sulabh has constructed 160 biogas plants of 35 to 60 cum capacity across the country linked to its public toilets. Thus, biogas technology from human wastes has multiple benefits - sanitation, bioenergy and manure. Biogas is an eco-friendly fuel. Besides the effluent of the biogas plant can be used as fertilizer, as it contains a good percentage of nitrogen, potash and phosphate.

The Sulabh model of Biogas Plant does not require manual handling of human excreta and there is complete recycling as well as resource recovery from the wastes. This design of biogas plant has been approved by the Ministry of Non-conventional Energy Sources, Government of India, for its implementation through state nodal agencies. It affords the recycling and reuse of human excreta (a waste material) as manure (a resource), with the additional cost recovery by sale/use of manure. These biogas plants are ideally suited for human waste management in housing colonies, high rise buildings, hotels, hospitals, slums etc. where there is no sewerage treatment system.

Sulabh Effluent Treatment (SET) technology - Besides different uses of biogas, effluent of biogas plant is also being used as fertilizer, as it contains good percentage of nitrogen (5.5%), potassium (2.4%) and phosphate (4.2%). The biogas plant has been linked with Sulabh Effluent Treatment system which renders the effluent free from odour, colour and pathogens and lowering its Biochemical Oxygen Demand (BOD) around 10mg/l only. The technology is based on sedimentation and filtration of effluent through sand and activated charcoal followed by ultraviolet rays. This treated effluent can easily be used for agriculture, horticulture, or aquaculture. The yield of crops, vegetables and fruits increases considerably when this effluent is used for their cultivation. By using this effluent agriculture productivity in a country can considerably be increased with reduced burden on chemical fertilizers. Where such reuse is not required, such treated effluent can safely be discharged into any water body without causing water pollution.

Water economy: Sulabh toilet technology has been able to save lot of water for flushing excreta. In a conventional system around 15 litres of water is required to flush excreta whereas in Sulabh toilet it ranges from 1.5 litres to 2 litres only i.e., per person per use 13 litres of water is saved. In a family having 5 members who use toilet twice a day, 130 litres of water is saved per day. From 1.2 million household toilet constructed by Sulabh a calculated quantity of 35 Million Gallons of water is saved per day. Presently, in India about 120 million household lack toilet facility. If this system of Sulabh toilet is implemented in all the families, per day 3500 Million Gallons of water can be saved

Manure from Pits: From a pit used by 5 members of a family about 250 kg of manure is taken out for agricultural use, after 2 years from 1.2 million toilets a calculated total 300 million kg of manure would produce that can be used for agricultural productivity, and save huge amount on import of chemical fertilizers.

Urine fertilizer: Utilization of urine as fertilizer is another way of improvement of environment through resource recovery. Sulabh is collecting urine from urinals of public toilets and after its easy processing, used for horticulture / agriculture purposes.

Duckweed-based Waste Water Treatment : One of the major problems with waste water treatment methods is that none of the available technologies has direct economic return. The available technologies are unaffordable due to high capital and maintenance costs. Sulabh has successfully developed and demonstrated duckweed based cost-effective wastewater treatment technology in rural as well as urban areas with direct economic return from pisciculture. Although duckweed is found in ponds and ditches, due to absence of know-how in the country, the potential of duckweed for waste water treatment had not been exploited earlier. Duckweed is a small, free-floating and fast growing aquatic plant that has tremendous ability to reduce BOD, COD, suspended solids and bacterial and other pathogens from waste water. It is a complete feed for fish and due to high content of proteins and vitamins A & C is a highly nutritious feed for poultry and animals. The yield of fish increases two to three times when fed with duckweed than when fed with conventional feeds. Reduction of BOD, COD of effluents varies from 80-90% for a retention time of 7-8 days. It is ideally suited for settlements with population varying from 50 thousand to 100 thousand. The first project funded by the Ministry of Environment & Forests, Government of India, was completed by Sulabh in collaboration with the Central Pollution Control Board (CPCB), with three more such projects, one each in the States of Delhi, Harayana and Orissa, successfully completed, in collaboration with All India Institute of Hygiene and Public Health, Culcutta. A similar project for treatment of total waste water of Hoshiarpur town, Punjab is underway. Based on Sulabh's study, CPCB has published guidelines to assist the States and local bodies adopt the Sulabh Duckweed-based Waste Water Treatment technology.

Water Hyacinth Technology: The water hyacinth too can be used for treating the waste water as well as for increasing the production in a biogas plant based on cow dung or human excreta. The water hyacinth should be dried and powdered to be used in the biogas plant mixed with a little quantity of cow dung. The use of water hyacinth enhances the production of gas 3-4 times. So even with one cow and one calf a family may get bio-gas for 8 -10 hrs. From experience it was found that most of the biogas plants were not functioning properly in India because of improper feed.

Impact :

Scale of Impact : The impact of the Sulabh Sanitation Movement has been so deep and pervasive that Sulabh has become a household name in India and has become almost synonymous with a sanitary toilet. Sulabh has been able to change the thoughts, behaviour and attitude of the Indian people towards sanitation and those who work for it. Earlier people were afraid of even the shadows of scavengers, whereas now they eat the food materials prepared by them without any hesitation. The change has been so remarkable that earlier the work for toilet was reserved only for untouchables, but now the elite castes and industrialists are vying to build the toilets; apparently signaling the vanishing of the caste barrier. In a religion and caste ridden country people from every religion and caste are using the public toilets freely together. There is absolutely no discrimination practised in their use. Again, earlier toilets and sanitation were not favoured as subjects for a career, but now even Master of Business Administration (MBA) students are taking them up as their professional careers. The change in the mindset has been so radical that the subject of toilets which was earlier treated as a taboo subject is now freely discussed even on dining and coffee tables. All in all, the top priority with people today is to have and use a good, neat sanitary toilet. Thus the scale of impact has been truly phenomenal.

The Success of Sulabh has been described as a “Revolution” by Dr. Bimal Jalan, Former Governor, Reserve Bank of India and Member of Parliament, Rajya Sabha in his book *Future of India: Politics, Economics And Governance*.

“In India, two noteworthy examples of public-private collaboration in the area of public services are the public call offices (PCOs), which revolutionized the availability of telephone services all over the country in the 1990s, and the Sulabh Sauchalayas, which are estimated to have provided sanitation facilities to ten million people at very low cost.”

The principal thrust of Sulabh’s Sanitation Movement has been to devise the appropriate sanitation technology to end both open defecation and scavenging, in which it has succeeded to a great extent. The liberated scavengers, due to the rapid implementation of the technology and the creation of an awareness of emancipation and social elevation has raised the status of the liberated and rehabilitated scavengers after their absorption into alternative vocations. As regards impact Sulabh activities have made, it may be stated that through Sulabh’s multi-pronged agenda of planned and programmatic action in several sanitation sectors, especially with the construction of 1.2 million household Sulabh Toilets, and over 7500 “pay-and-use” community toilets, the number of beneficiaries runs into well over 10 million people using the facilities on a daily basis. Moreover, 60,000 scavengers have been liberated from the traditional occupation of manual cleaning of human excreta and have been trained and resettled in several economically gainful and socially acceptable occupations. Further, 6,000 wards of liberated scavengers have been provided vocational training through the training centres established by the organization.

Sulabh’s efforts in solving the problem of defecation in the open of over 10 million beneficiaries has led to the improvement of the quality of life of people, especially of the womenfolk, who had to face embarrassment while defecating in the open at the cost of their self-respect, dignity and even physical security. The health and hygiene benefits of the safe sanitation services provided by Sulabh have been numerous, especially for the poorer and disadvantaged sections of society who had earlier been exposed to excreta-related diseases. Sulabh has

also impacted the life of about 10 million people who use its “pay-and-use” community toilets and household toilets daily.

The acceptance has been widespread considering adaptation of its sanitation related technologies and social work by millions. Recognition too has been forthcoming as will be evident from the fact that Sulabh technology was declared as “**Globally Urban Best Practice**” (from amongst 625 entries from all over the world) by United Nations Centre for Human Settlements (UNCHS) at its Habitat-II Conference in 1996 in Istanbul (Turkey). And again, it was declared as “**Cost Effective And Appropriate Sanitation Systems**” (**Best Practices**) from amongst 1125 entries from all over the world in 2000 and won the Award of Dubai Municipality and UNCHS. The Planning Commission, Government of India in its 2001 Human Development Report recommended use of Sulabh technology while mentioning successful technologies and methodologies. The National Commission of Population constituted by the Planning Commission in 2003 too has recommended that other NGOs on Sulabh model should be involved to become self-reliant to implement the programmes of sanitation.

In recognition of the contributions made by Sulabh International, the Founder of the Organisation, Dr. Bindeshwar Pathak was accorded recognition by being bestowed upon with “Habitat Scroll of Honour” Award by UN-Habitat for developing and instituting over 1.2 million twin pit pour-flush toilets in India and the “Global 500 Roll of Honour” Award of United Nations Environment Programme (UNEP) in Beirut, Lebanon in 2003. Impressed with the success of Sulabh programme, the Governments of Sri Lanka, Nepal, Bhutan, Afghanistan, Sought Africa, Burkina Faso, Cameroon, Ethiopia, Mozambique and Uganda have sought assistance from Sulabh to improve the sanitation status in their countries by following the Sulabh Model. The Sulabh toilet technology has been globally accepted and recommended as the most suitable, affordable and absolutely safe technology for developing countries by international agencies like the UNDP, World Bank, UNICEF and WHO. In recognition of work done by Sulabh Economic and Social Council of United Nations has accorded special consultative status to Sulabh. Dr. Pathak has been honoured by being appointed

Special Advisor on Sanitation to Water Supply and Sanitation Collaborative Council. He has also been nominated as a member of various committees set up by the Government of India prominent amongst which are: High Power Committee on Urban Solid Waste Management, Tenth Plan Steering Committee on the Empowerment of Scheduled Castes, Other Backward Classes and Minorities and Monitoring Committee on the Liberation and Rehabilitation of Scavengers.

The scale of impact of the pioneering work that Sulabh has done towards both eradication of manual scavenging through innovation and implementation of the sanitary toilet technology and liberation and rehabilitation of scavengers is momentous. It has also implemented a well-planned strategy for comprehensive dissemination of its programmes which has created a far-reaching impact both on national and international levels.(1) It has spread sanitation-related education by publishing literature on the themes of sanitation, hygiene, etc in the 22 regional languages of India.(2)It has all along been holding workshops, seminars and conferences to promote these concerns.(3)It has also propagated the ideas in the media, and through road shows, drama troupes, etc..

Impact on Health & Hygiene:

In most of the developing countries it has been observed that community health cannot be improved with the supply of safe water alone. In fact our experience tells us that in places where sanitary human excreta disposal system has been provided, to the community along with safe water supply, the impact on community health has been maximized. This has been demonstrated in India through a number of studies.

Perhaps one of the drawbacks of the water supply and sanitation decade during the 1980s was to accord greater priority to water supply over sanitation and hygiene education. This became one of the reasons for health benefits, in countries like India, not accruing commensurately with the investments made in water supply sector. To enhance health benefits we need to integrate water supply and sanitation with hygiene education.

The sanitation projects implemented by Sulabh bear out what has been started afore. Another great impact has been on the health and life style of the scavengers. With the improved technology of human excreta disposal introduced by Sulabh, which does not require manual handling consequential occupational health hazards for the scavengers have been eliminated. The rehabilitation with alternate employment opportunities provided for the scavengers by Sulabh, reinforces the above benefits.

Health and Hygiene Promotion: in a slum - a Sulabh initiative: Poor health in the slums is a function of lack of awareness and lack of treatment facilities. Sulabh International strives to tackle and remedy these shortcomings through many health related programmes geared towards hygiene, family planning, health education, prevention and treatment of illnesses. The programme was carried out in slum areas of Delhi for 5 years continuously. The impact of these programmes was encouraging and apparent. The IMR (Infant Mortality Rate) and MMR (Maternal Mortality Rate) were reduced to zero in Prayog Vihar slum area. The family medical folder was introduced as a new approach for annual check up of all members of a family. This has resulted in early detection of diseases leading to and reduction in cost of treatment. Training of women volunteers (about 15,000 from urban slums) has produced a positive impact in community health & lowered the incidence of diseases. Awareness, education & communication programme of safe drinking water project reduced the incidence of water borne diseases.

Breaking Cultural Barrier: Sulabh made it possible overcoming the barrier by suitable social marketing through awareness, motivation, and education programmes. Initially people from lowest socio-economic strata were supposed to be involved with the sanitation work. Through the introduction by the efforts of Sulabh of 'pay & use' public toilets, income generation became possible and employment opportunities were created in the sanitation sector. This has

attracted people from different socio-economic groups, who now are involved in the sanitation area. This effort has overcome the cultural barriers in India.

Gender Sensitivity: In the absence of toilets women suffered the most, since they are constrained to go out for defecation before sunrise or after sunset. Further women are involved mainly in scavenging in a scavenger's family. Sulabh started campaign to convince women about the importance of toilet to restore their dignity (privacy) and health aspect. They were involved in decisions of selection of models as well. Further, liberated scavengers who are mostly women were provided vocational training in various market oriented trades to make them economically self-reliant.

Empowerment of Women: Sulabh International aims to provide a better world for women and children in accordance with the spirit of UN MDG on poverty eradication, improvement of health particularly in relation to pre and post natal periods. Various initiatives have been taken to promote overall welfare of women and children to ensure better sanitation, social justice and individual dignity of women for their financial upgradation, they are encouraged to make Self Help Group (SHG) and provided vocational training for preparation of market-oriented low investment products for household use.

Making Knowledge Accessible and Demand Creation: Sulabh has developed fine affordable technologies in the field of sanitation and waste water treatment and biogas generation from human wastes. Details of all these technologies are available in Sulabh booklets / brochures which are distributed to people free of cost. Further, Sulabh provides technical details to any body who needs it. One of the major hurdles in achieving sanitation target is the lack of awareness motivation and consequently lack of demand from beneficiaries. Sulabh has a separate department exclusively meant for conducting awareness / motivation programmes and creating demand for toilets.

Evaluation Studies:

The working and the impact of Sulabh International Social Service Organisation have been examined and evaluated by number of independent

national and international organisations and agencies from time to time. Two types of evaluations have been done - one, a detailed evaluation and the other containing observations. The list of the evaluation study and the observations are enclosed at annexures given below: -

- I. Annexures I & II are mentioned in the text
- II. Selected extracts of a case study titled “A Revolution in Low-Cost Sanitation: Sulabh International, New Delhi by the National Institute of Urban Affairs, undertaken in collaboration with UNDP/World Bank/Habitat Urban Management Programme (1990) (Annexure – III)
- III. An evaluation of Sulabh International Low-Cost Sanitation Project in Bihar by Edgar F. Ribeiro. (Annexure – IV)
- IV. Observations of the young Indian American girl student of New York school (2005). (Annexure – V)
- V. UNDP Human Development Report (2003) (Annexure – VI)
- VI. National Human Development Report 2001 Planning Commission (Annexure – VII)
- VII. Dr. Bimal Jalan, Former Governor of the Reserve Bank of India, in his latest book – The Future of India (2005) (Annexure – VIII)

Financing and Service Delivery:

The organization is financially self-sustaining. It has not received any financial assistance from any agency viz. local, the State, the Central Government, International agencies or other donor organizations for running the establishments. It generates funds from the conversion of dry latrines into Sulabh toilets/construction of new household toilets and construction of public toilets. Sulabh performs eight functions: designing, estimation, motivation, education, communication, implementation, maintenance and follow-up and for performing all these functions Sulabh charges 10-20% as supervision charge. It also saves some amount from the user's charge of public toilets. The organization also does consultancy work and undertaking survey work. Besides, it also gets amounts from Government of India and outside organizations for R&D work. The organization gets income for executing training programmes for sanitation workers, oversea engineers and a variety of other professionals from the sanitation sector. Funds even with an element of subsidy received by the beneficiaries for projects executed for public use are essentially for execution for work. No element of grant is involved in it. Funds are utilized for maintenance work and for up-keep of the maintainers. Surplus left, if any, is utilized for socially useful work like running schools, training programmes and other projects.

Delivery of Services :

Delivery of services is most crucial factor in the success of cost-effective appropriate sanitation system. It has been found world-wide, as well as in India, that wherever there is an NGO or company or individual to deliver the service, then there is success of the programme. In absence of catalytic agency only by the Government the program is not gaining momentum. Only by beneficiaries themselves or by the government agencies it is not possible. The success of Sulabh Sanitation Movement lies in the delivery system. Generally the NGOs are involved in the software component i.e. motivation, education and communication and therefore they are unable to deliver the goods. In case of Sulabh it provided both the software i.e. motivation, education and communication and the hardware i.e. implementation, maintenance and follow-up. In 1969-74 the Government of Bihar gave Rs, 40 lakhs to different local bodies to get the bucket toilets converted into pour-flush toilets but the amount could not be utilized because the beneficiaries were not interested to go to local bodies to face the harassment of the bureaucratic dealings, and, on the other hand, local bodies were also unable to find the solutions. Therefore the amount sanctioned was diverted for other purposes. Seeing the success of Sulabh in two municipalities of Bihar, Arah and Buxar, the Government accorded recognition to Sulabh International Social Service Organisation to act as a catalytic agent between the Government local bodies and the beneficiaries and then success started.

To implement the programme of conversion/construction anew of a toilet the State Government recognizes the NGO to enable to do its work since it works as a catalytic agent between the Government, local bodies and the beneficiaries. Thereafter Local Bodies allow the NGO to work in their area.

In case of conversion of household toilets much groundwork has to be done by Sulabh workers to the educate the people about the environmental hazards in use of bucket privies as well as defecation in the open. The people have to be convinced and motivated about the usefulness of conversion of dry latrines into pour flush toilets as well as construction of individual toilets where

none exist. Information, Education, and Communication (IEC) constitute an important element in the implementation of the programmes.

The dissemination of information and motivating the people to the required extent cannot be done by government agencies. These require door to door contacts by social workers with the house-owners, persuading them to agree to the conversion of dry latrines into water pour flush latrines as well as construction of new toilets. Sulabh workers also obtain application forms from them for being processed in Municipalities/ Corporations for sanction of loan and subsidy to them. It is our experience that the beneficiaries do not find it convenient to go to the Municipal offices and get the work done. It is on account of this that Sulabh workers contact them for sanction of loan and subsidy. After sanction, construction work is taken up by Sulabh workers and the work is completed to the satisfaction of beneficiaries. Thereafter a copy of certificate of completion is given to the beneficiaries. Verification of construction work is done by another set of people belonging to Sulabh with a view to ascertaining if the work has been done to the satisfaction of the beneficiaries. In course of verification if some defects are noticed, steps are taken to rectify them. Sulabh has also the system of mailing card (with reply paid-postcard) sent to the beneficiaries with a request to reply, if the work has been done to their satisfaction. The postcards are sent direct to them by the Head office so that they can tell in confidence the exact position. Guarantee cards covering 5 years are given to them. If in the course of five years, some defects are noticed, Sulabh workers rectify them without charging anything from them. This elaborate procedure in conversion of individual dry latrines into and construction anew of water-seal pour-flush toilets ensures that Sulabh's doorstep service delivery is efficient, effective and measure upto the satisfaction of the beneficiaries. Sulabh performs all the functions from design, estimate, motivation, education, communication, implementation, maintenance and follow-up and that is the reason for the success of the programme.

The operational details of the aforementioned community oriented sanitation facility are that here too an institution first is accorded recognition by

authority concerned, namely, the local body. This when done is followed by site selection which is jointly done by the local body and Sulabh representative. The selection of a place is primarily guided by two factors, namely, where it is noticed that at the site, defecation in the open takes place on a large scale and secondly where there is necessity of providing a public toilet viz. at places of community congregation like railway stations, bus stands, cinema halls, hospitals etc. Land is then provided by the local body or by the agency which wants construction of the toilet facility. Fund is also provided by the local body or any other agency which is interested in construction of the toilet facility – at times it can be a corporate body too. In the course of last few years Sulabh has also taken up construction of public toilets on BOT (build, operate & transfer) basis. A thirty year guarantee is accorded for running and maintaining the toilet facility.

The delivery of services has become so successful in India that Sulabh Shauchalayas has been called as one of the two successful services in the country by Dr. Bimal Jalan, Former Governor, Reserve Bank of India and Member of Parliament, Rajya Sabha. The relevant extract is as follows :

“This is sage advice, based on experience, and deserves to be followed in all sectors of the economy. In addition, it is also necessary to make a distinction between policy direction (that is, laying down policy guidelines and monitoring performance), and the actual implementation of programmes. In addition to lack of adequate resources, the most important problem in the public delivery system is the mismanagement and theft of the available facilities and resources. For example, in respect of as essential a service as drinking water, distribution and transmission losses are estimated to be 40 to 50 per cent. The same is true of electricity supply to rural areas in most states. If transmission and distribution losses were reduced by even half through better management of the available capacity, the improvement in the supply of services and financial savings would be immense.

International experience in the management of public services shows that the objective can be achieved if a distinction is made between the ownership of these services (by the government) and the delivery of such services (by private and local enterprises). A compilation of twenty-four case studies from twelve countries all over the world has concluded that in every case where the management of a public service was contracted out to private enterprises, the distribution and quality of the service improved and the net cost to the public was reduced. What is more, a large number of jobs and many new enterprises were also created. In most cases, the public authorities retained the responsibility for regulating and monitoring the activities, providing subsidies where necessary and laying down distribution guidelines. In India, two noteworthy examples of public-private collaboration in the area of public services are the public call offices (PCOs), which revolutionized the availability of telephone services all over the country in the 1990s, and the Sulabh Sauchalayas, which are estimated to have provided sanitation facilities to ten million people at very low cost.

In several countries, the model of public-private partnership (or 'micro-privatization' under public supervision) has replaced the old system of public ownership and public delivery in certain important sectors. In India, in respect of telephones as well as sanitation services, the new initiatives were supplemental to the public sector facilities. In other words, they did not replace the public sector organizations responsible for the delivery of these services. In view of entrenched political and bureaucratic interests as well as for practical reasons (to avoid the disruption of existing public sector services), this was a wise decision. The supplemental approach expanded the availability of services and created a more competitive environment without affecting government employees and raising resistance. It is now necessary to adopt a similar approach in respect of all essential public services. No new facilities or employees should be added in the public sector, and additional budgetary allocations (over and above

the existing salary and maintenance expenditures) at the centre, states and local levels should be made for the delivery of services by private enterprises, including non-government professional organizations.”

(pp 110-112)

Cost Structure :

As regards cost structure, it may briefly be mentioned that when a twin-pit pour-flush toilet in an individual household was first built in Bihar, way back in 1973, it cost approximately \$ 5.5. Since then nearly 30 to 35 years have elapsed and naturally the cost has gone up. It (cost) now varies, depending upon the material used, and ranges from \$ 100 without superstructure, to \$ 300 with superstructure.

Similarly, cost varies in construction of a public toilet, ranging from \$ 1,000 per seat to \$ 1,500 per seat, including facilities of the seat, bathroom, urinal, washbasin, room of the care taker and store room. Besides, it also includes septic tank and boundary wall. If there is attachment of a biogas plant the cost addition is of \$ 2000.

In areas with sewerage facility the cost of septic tank is eliminated.

As far as expenditure of the organization is concerned, account has to be taken of that incurred over establishment, maintenance of building and the estate, the infrastructure, transport, printing of literature, holding of seminars and conferences etc.

Another item of major expenditure incurred is over running of Sulabh Public School (with expenditure of nearly \$ 0.133 million annually); besides, that incurred over Sulabh International Academy of Environmental Sanitation; training centres; for poverty alleviation and self-employment schemes, Rehabilitation of scavengers, running School for disabled children; over functioning of International Centre for Women and Child, Sulabh Foundation, People's Commission on Scavenging. Expenditure is also borne for running Sulabh International Museum of Toilets, Sulabh International Institute of Health & Hygiene & self help groups.

Organizing, running and functioning of Sulabh activities costs nearly \$ 5.3 million per annum. If the construction work connected with the Sulabh

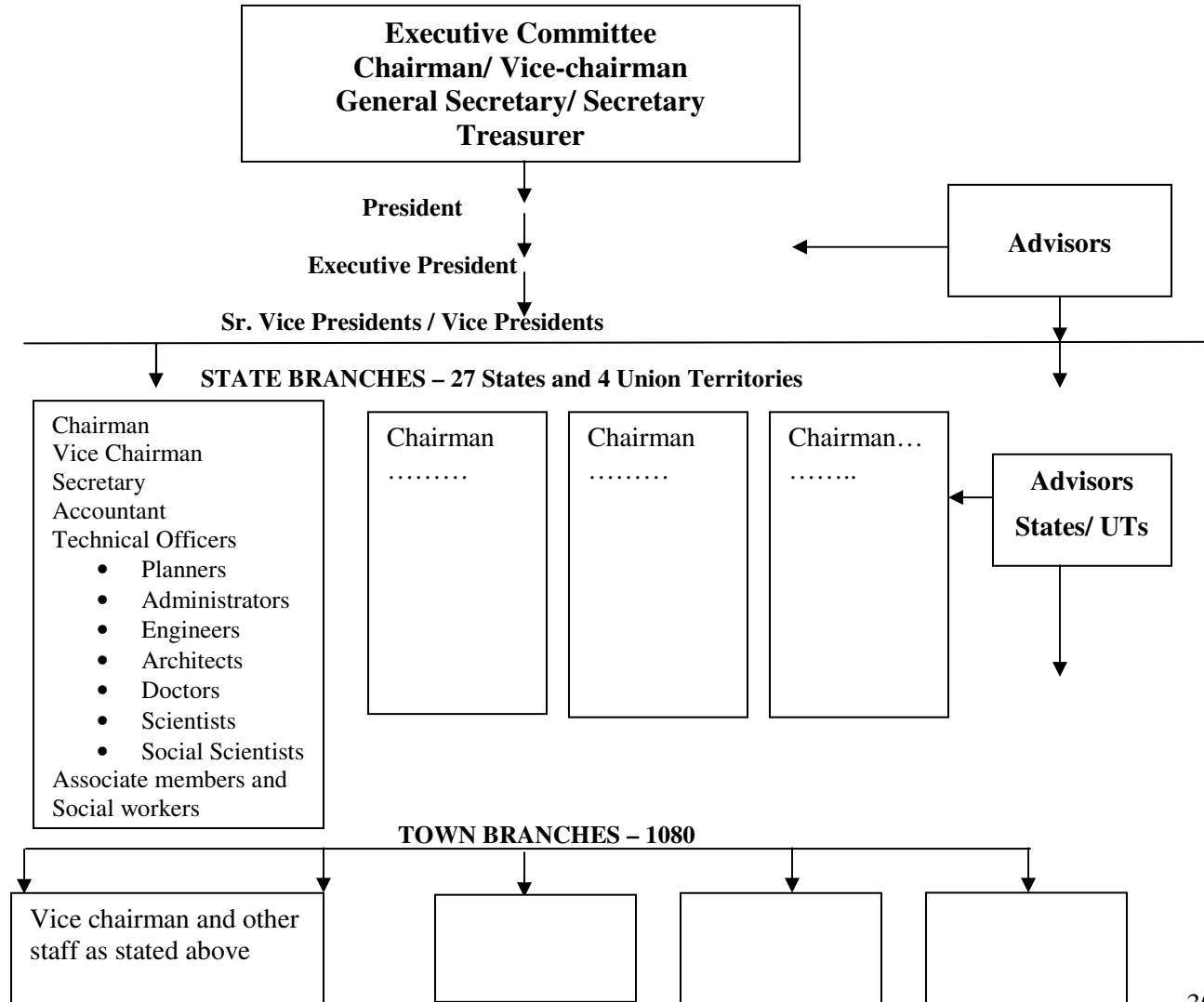
maintenance projects is also taken into account the expenditure works out to \$ 20 to 25 million per annum.

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SULABH INTERNATIONAL SOCIAL SERVICE ORGANISATION

ORGANOGRAM



Annexure II

	<i>Micro Status (1970)</i>	<i>Macro Status (2006)</i>
1970 –	Dr. Pathak founded Sulabh International Social Service Organisation in Patna Started in	
	One town (Arrah)	Now has presence in 1080 towns in India
	One district (town Arrah) One State (Bihar)	Covers 455 districts today Today, it spreads over 27 States and 5 Union Territories in india
	One Country (India)	Branches operating in Bhutan and Afghanistan besides India.
1970 –	Technology dissemination/ replication	Technologies approved and recommended for global application by WHO, UNICEF, UNDP, UN-HABITAT, WSSCC, etc.
1973 –	Two Twin-pit, pour-flush toilets - (Sulabh Shauchalaya) built in Arrah Municipality in Bihar for demonstration	More than 1,200,000 (1.2 million) toilets built by now.
1974 –	First public toilet constructed in Patna	More than 7500 Sulabh Public Toilets constructed, spread all over the country.
1974 –	Number of users – 500	Each day, over 10 million people are using the 1.2 million individual toilets and more than 7500 public toilets constructed and maintained by Sulabh
	First day (on 2 nd September 1974)	
	Number of Scavengers' liberated	More than 60,000 scavengers have been liberated from scavenging and rehabilitated after proper counseling and vocational training.
	Towns made Scavenging-free	240 towns have been made scavenging-free till date.
	Employment created – one person (Dr. Pathak himself)	50,000 (25,000 full time, 10,000 part time and 15,000 volunteers) engaged in construction, motivation, awareness, maintenance, management and R&D etc.)

	Mandays created	More than 130 million mandays created.
1980 –	First Biogas plant constructed – on an experimental basis.	160 biogas plants linked with public toilets constructed in different parts of the country. Technologies of wastewater treatment, composting solid waste into fertilizer and use of dried water hyacinth in raising biogas production are now in use.
	Quality Education – English Medium Public School	500 children enrolled in Sulabh Public School, Delhi (60% students from scavenger community and the rest from other communities)
	Vocational Training Centre	
	Wards of Scavengers	Boys and girls (50% from scavenger community and the rest from other communities) at Vocational Training Centre at Delhi.
	Scavenger women	28 women, who were carrying human excreta manually till March 2003, have been trained and rehabilitated at Nai Disha – a Vocational Training Centre at Alwar in Rajasthan. These women have learnt to produce and market their goods (food products, sewing and stitching clothes etc.) by forming Self Help Groups.
	Foreigners Visiting Sulabh Campus	Persons from more than 100 countries have visited Sulabh Campus to learn more about the Sulabh sanitation technologies.
	Capacity building/ Training being imparted India:	Students and teachers from Schools, Engineering and Medical colleges, Nursing and Social work Institutes etc.
		Professionals from Government offices, Urban Local Bodies, Pollution Control Boards, other NGO's etc.

	Foreign nationals	International Workshop on Sanitation technologies organized in collaboration with UN-HABITAT for sector professionals from Burkina Faso, Cameroon, Ethiopia, Mozambique and Uganda.
		Regular summer training/ internships provided to students from France, Germany, USA, Kenya, Nepal etc.
1994	Sulabh International Museum of Toilets established	Over 1.5 million visitors have browsed the Museum website (www.sulabhtoiletmuseum.org) and 8938 physically been to this exclusive Museum located in Delhi.
	Health Centre associated with Toilet Complex	Two Health Centre's attached to Sulabh Toilet Complexes providing free medical services to slum dwellers in Delhi.
	Training of Women Volunteers from Urban Slums	Over 14,000 women from urban slums have been trained on the topics of health, hygiene, safe drinking water, HIV/ AIDS etc.
	ENVIS (Environmental Information System) Centre	Sulabh International is an ENVIS Centre of the Ministry of Environment & Forests, Government of India for data collection and dissemination on the topics of Hygiene, Sanitation and Sewage systems. (www.sulabhenviis.in)
	Duckweed Technology for Wastewater/ Public Toilet Effluent Treatment	Based on the results of the project on waste water treatment through Duckweed, by Sulabh, the Central Pollution Control Board (CPCB), Government of India, made a guideline to use this weed for waste water treatment.
	Special Consultative Status	Sulabh has been accorded Special Consultative Status by the Economic and Social Council (ECOSOC) of the UN
	Food Processing Training Centres	Centres in 6 blocks in Mewat area in Gurgaon, Haryana – Nuh, Taoru, Fiorzpur Zirka, Hathin,

Training to unemployed youth	<p>Nagina and Punhana. Over 300 women have already received training in food processing.</p> <p>A total of 600 youths have already been trained in Plumbing, Electrical and Motor Winding, Gardening, and Security Guard duties.</p>
Support to persons with disabilities	<p>50 hearing impaired children have been given five-year education based on the CBSE curriculum and then integrated in other reputed schools for further education.</p>
Children	<p>114 disabled women were trained in various revenue generating vocations. Twenty-four women trained in beauty care and hairdressing are now employed, earning between two to three thousand rupees per month.</p>
Women	