International Conference on Water – Harvesting, Storage, and Conservation (WHSC 2009)

Workshop on:

SANITATION TECHNOLOGIES

"Sulabh Experiences on Sanitation, Health and Water"

Jointly Organised by:

IIT Kanpur & UNICEF Lucknow

25th November, 2009

By:

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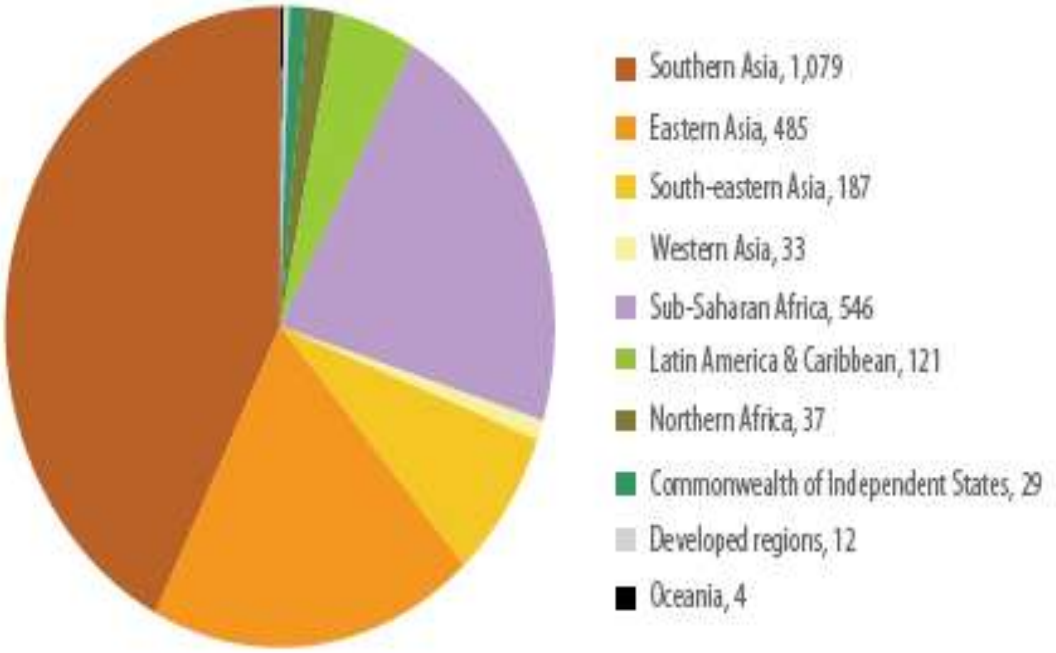
Founder Sulabh Sanitation & Social Reform Movement

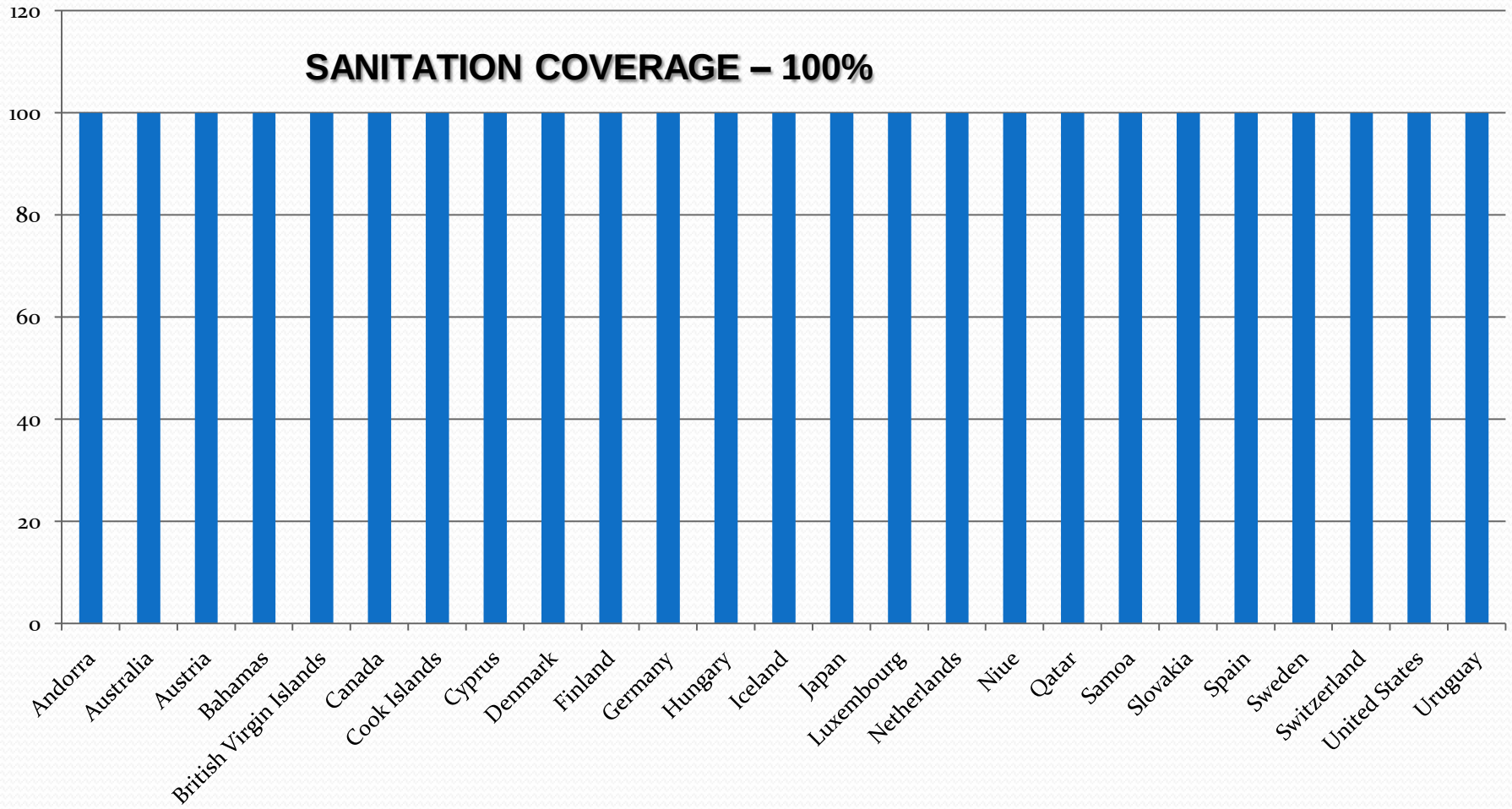
FACT: Access to Sanitation Provision



Population without improved sanitation, (region wise) in 2006 (millions) – UNICEF-WHO JMP 2008

- **Over 2.5 billion people lack basic sanitation worldwide – of which 650 million people reside in India.**

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



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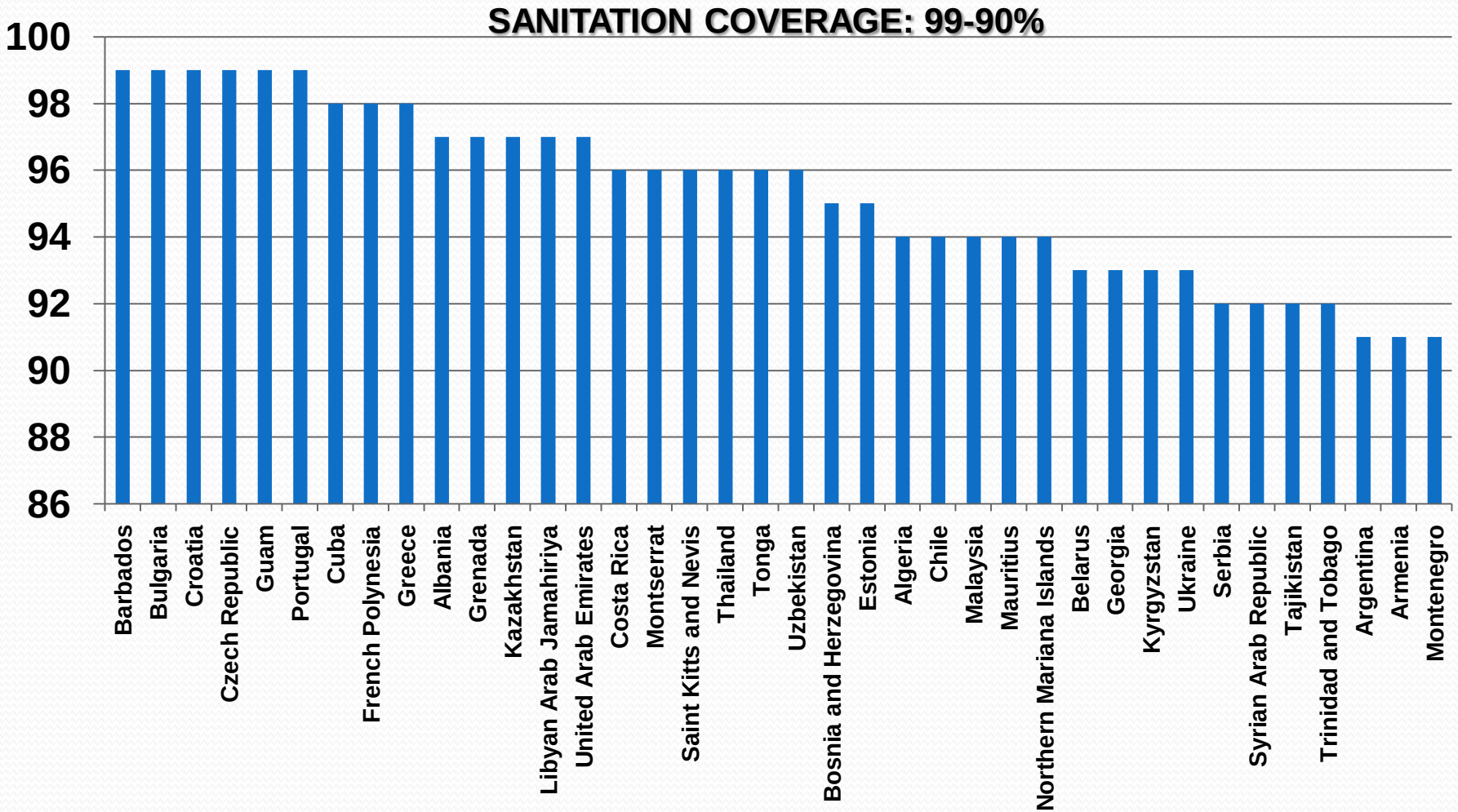

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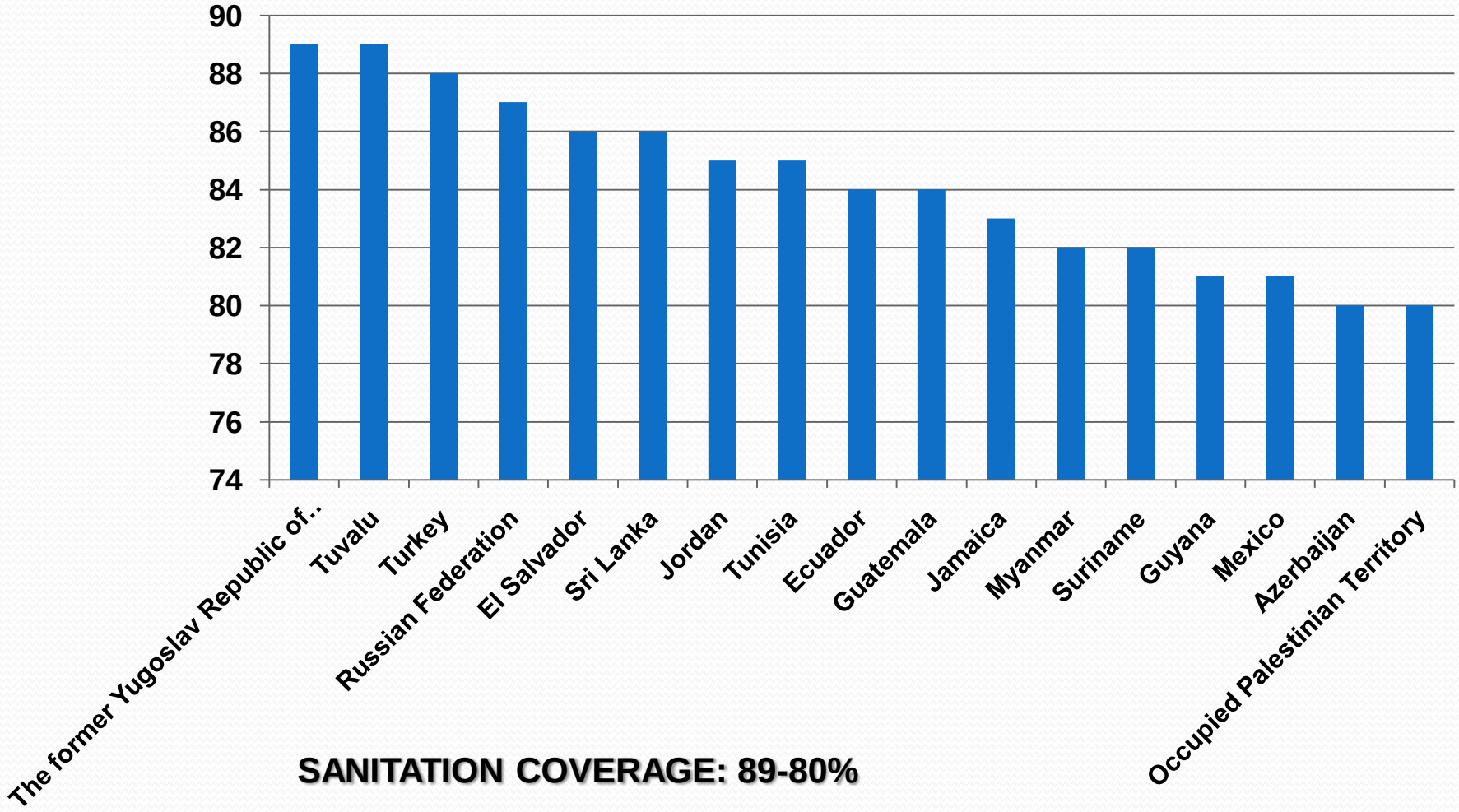
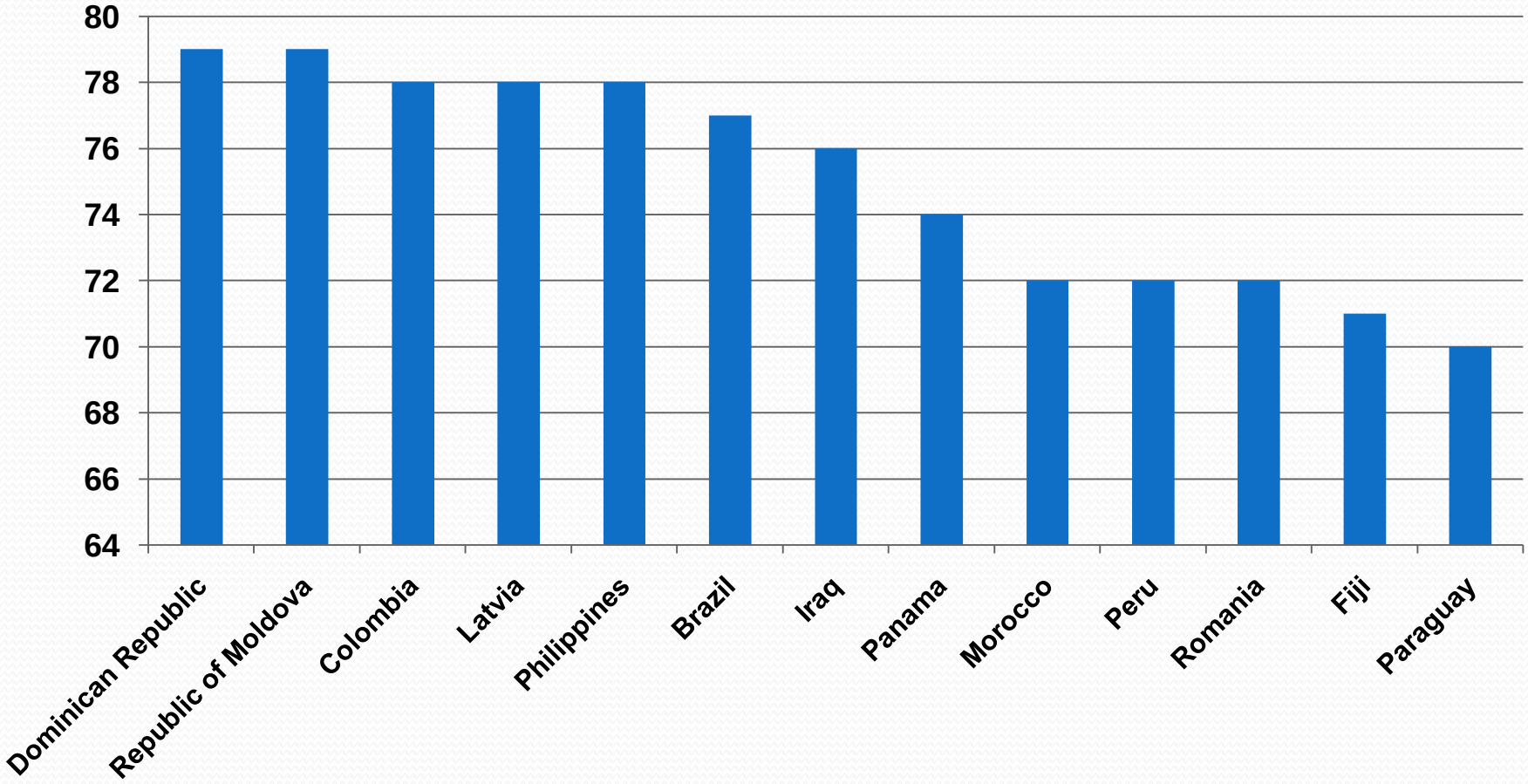


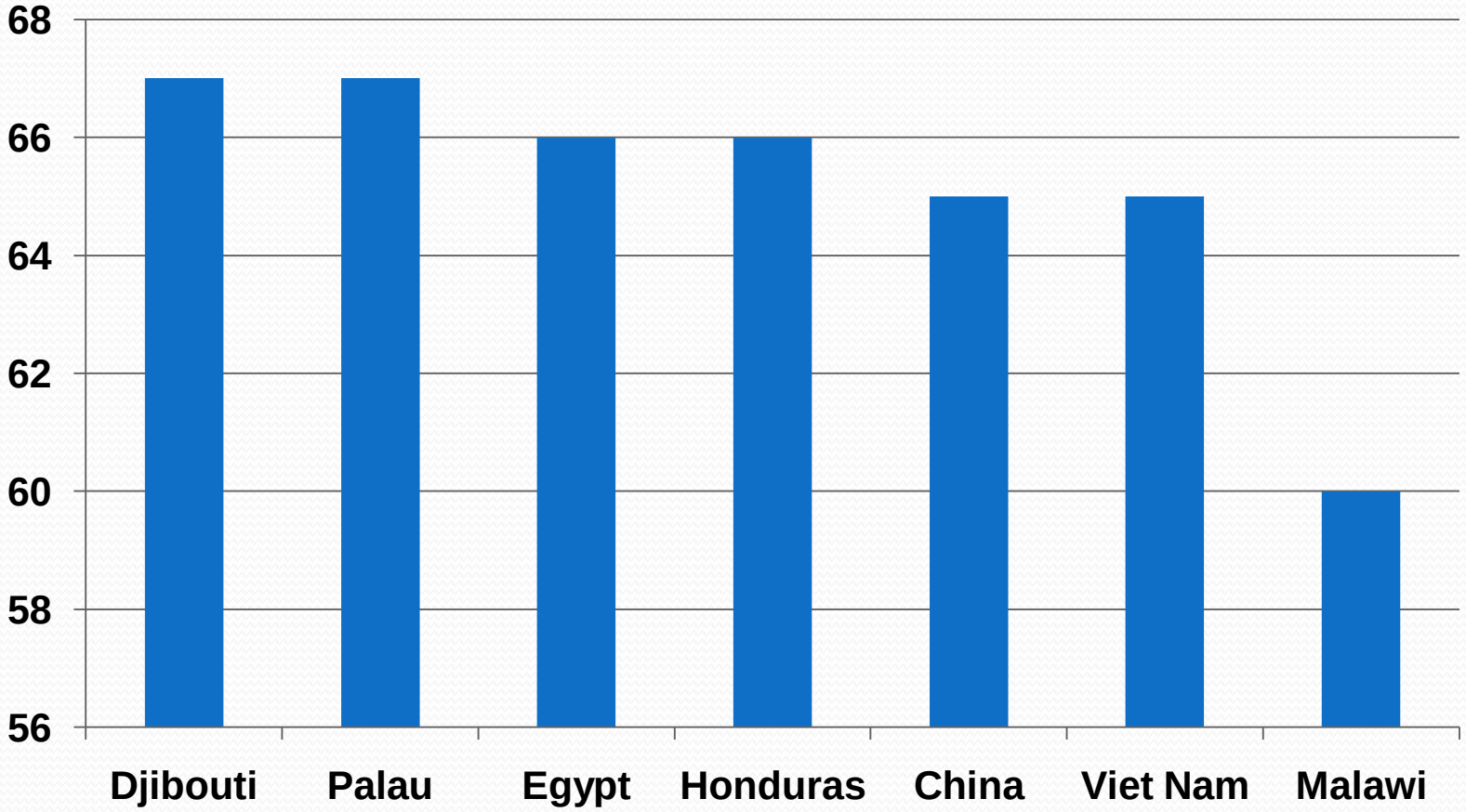
SANITATION COVERAGE: 89-80%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



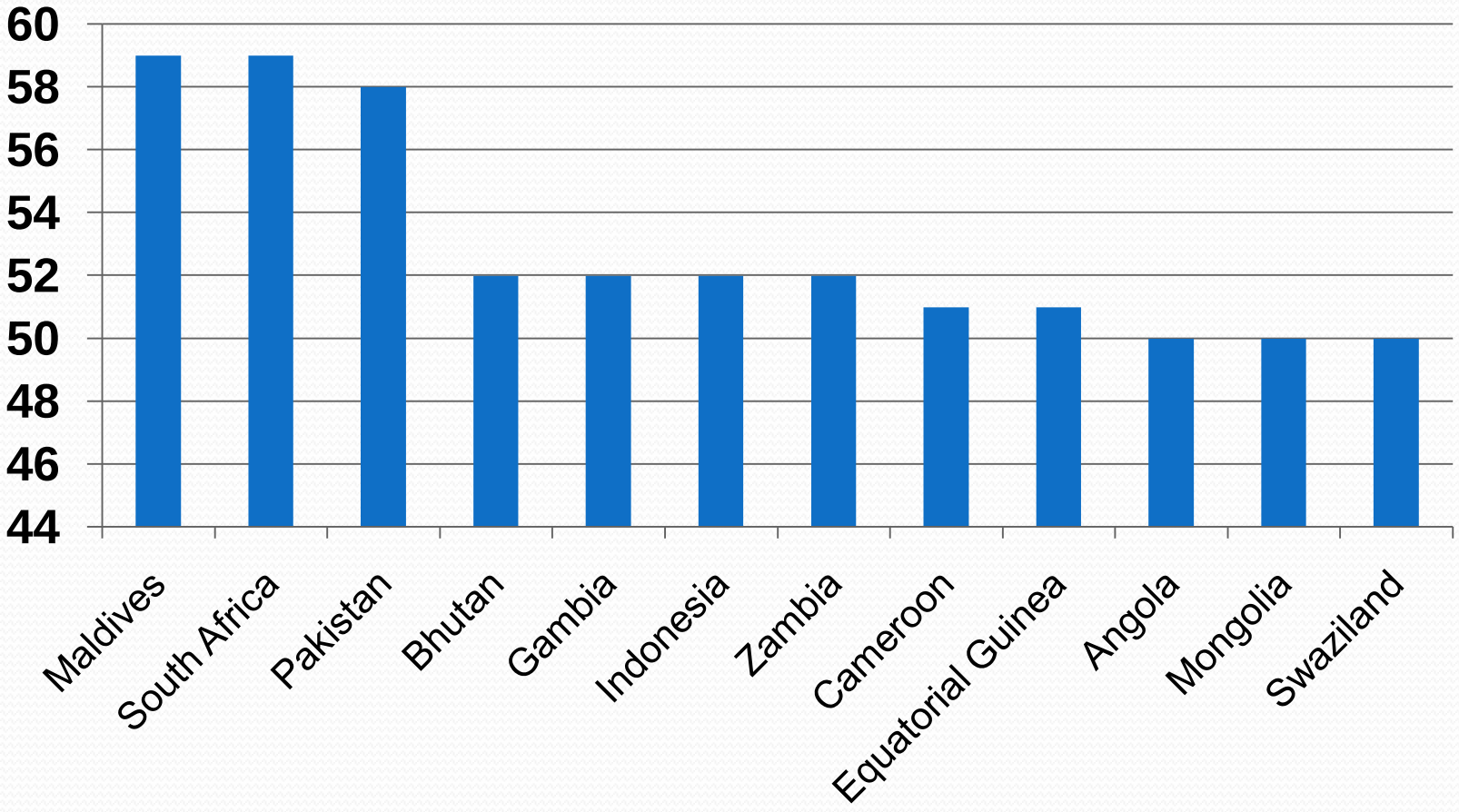
SANITATION COVERAGE: 79-70%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



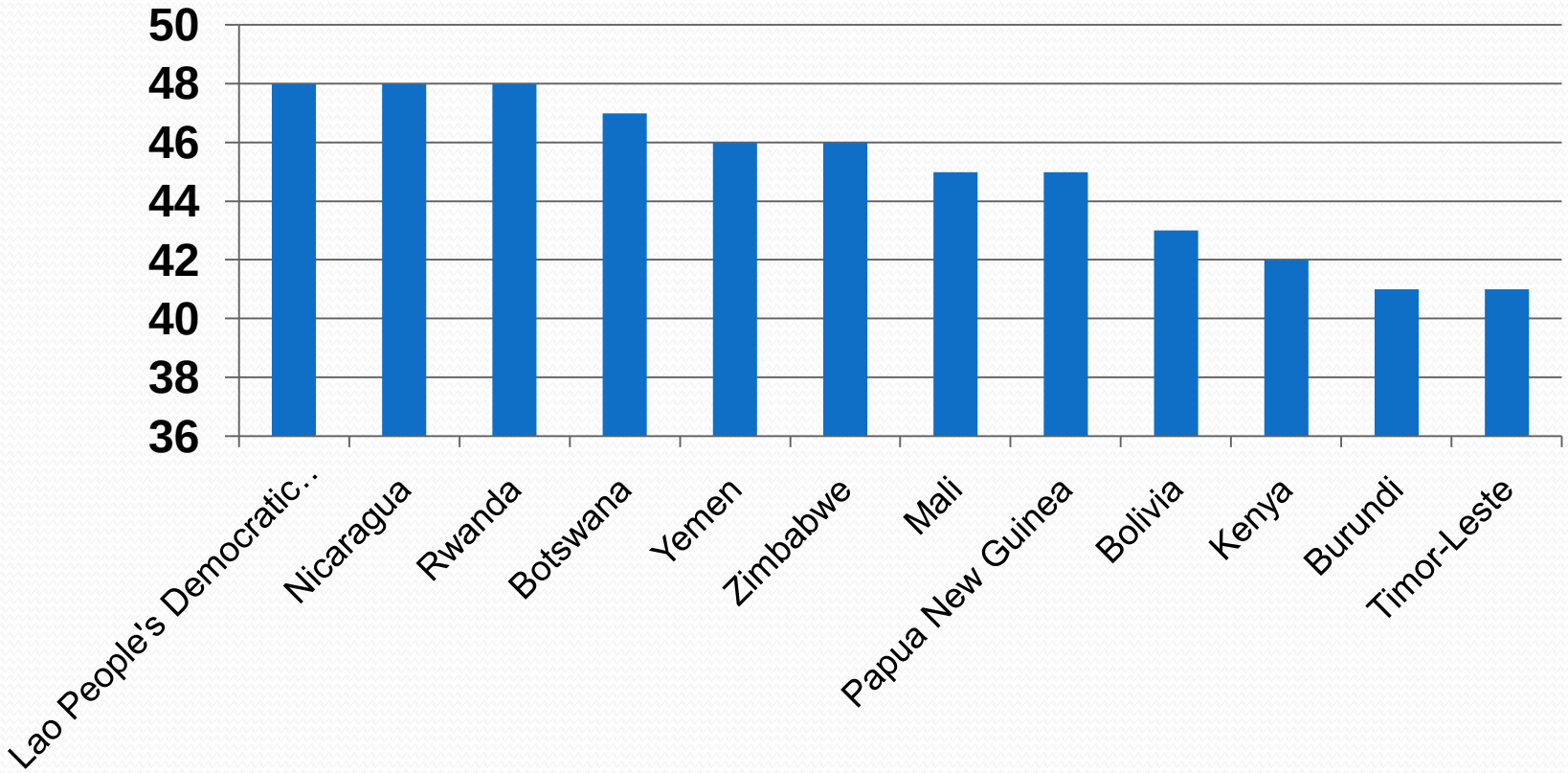
SANITATION COVERAGE: 69-60%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



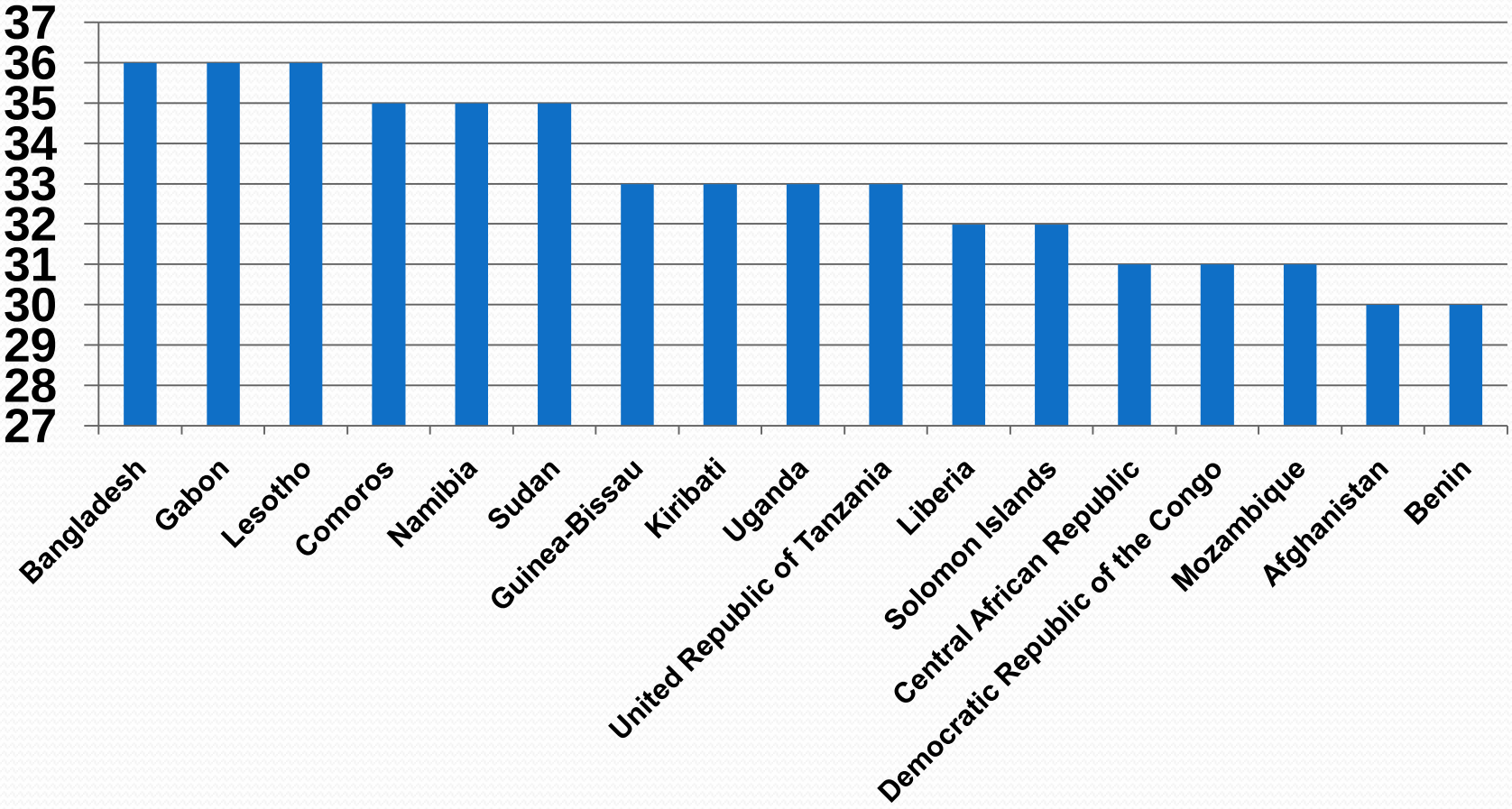
SANITATION COVERAGE: 59-50%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



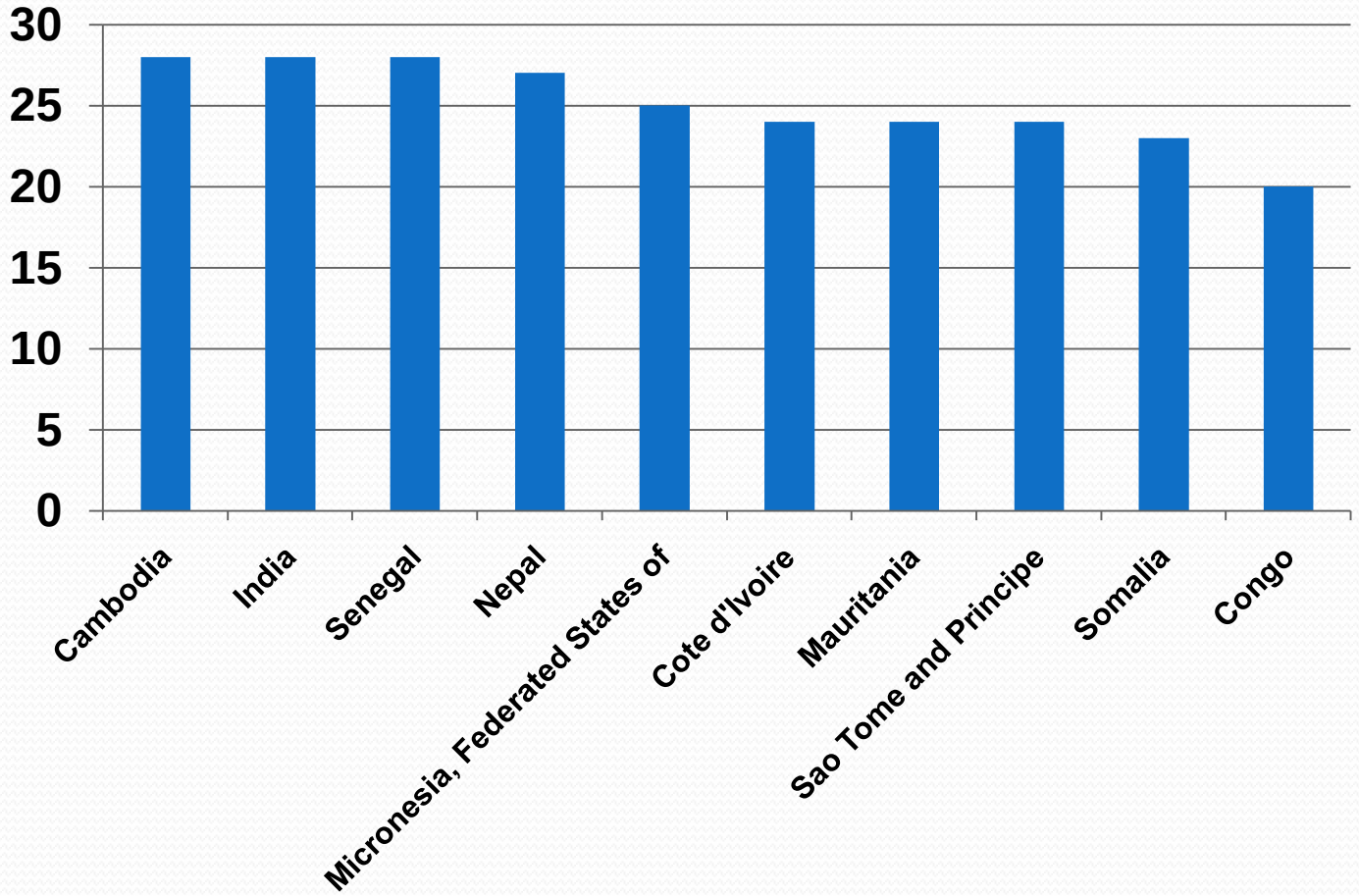
SANITATION COVERAGE: 49-40%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



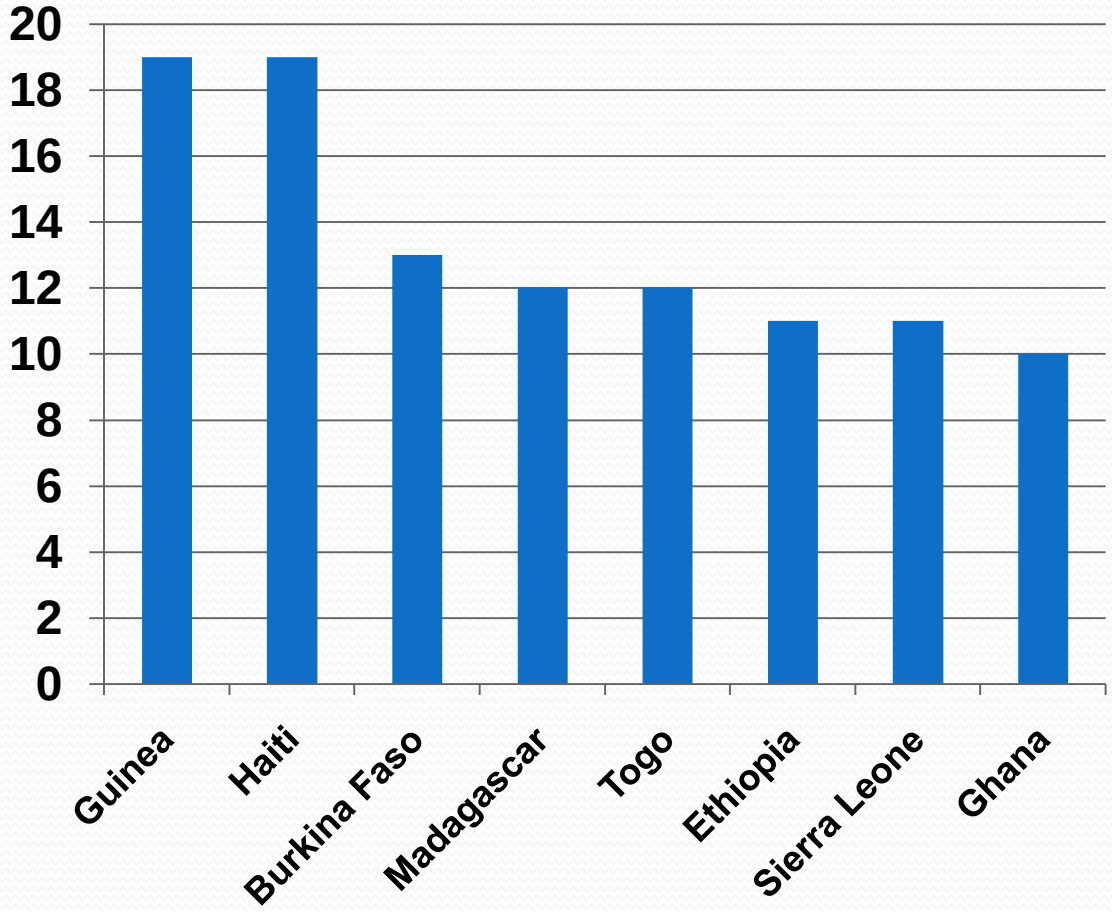
SANITATION COVERAGE: 39-30%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



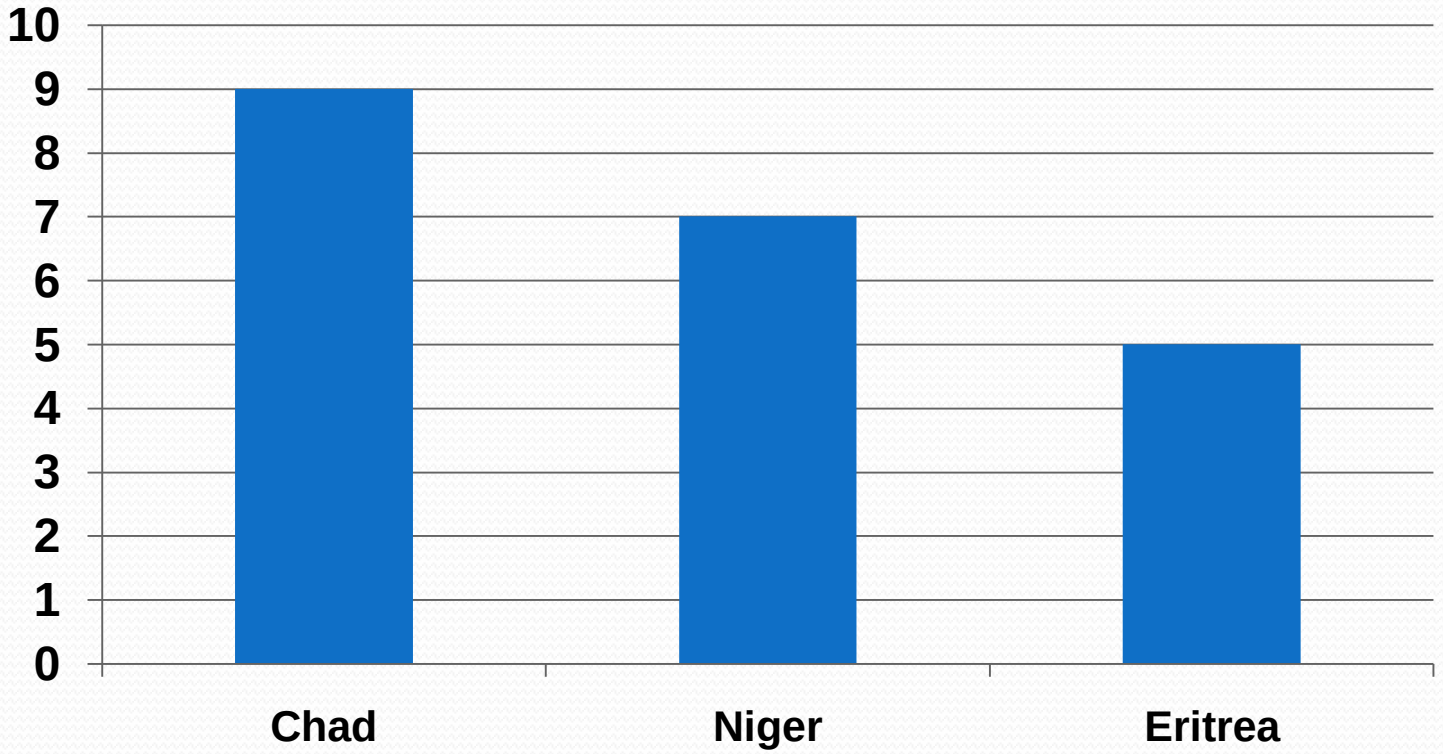
SANITATION COVERAGE: 29-20%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



SANITATION COVERAGE: 19-10%

Proportion of population (country wise) using an improved sanitation facility (%) – UN MDG Indicators 2008



SANITATION COVERAGE: < 9%

Sanitation Status – India

Census	Total Coverage (%)	Urban (%)	Rural (%)
1971	15.70	50.00	Insignificant
1981	18.70	58.15	Insignificant
1991	23.70	63.85	9.48
2001	36.40	73.70	21.90

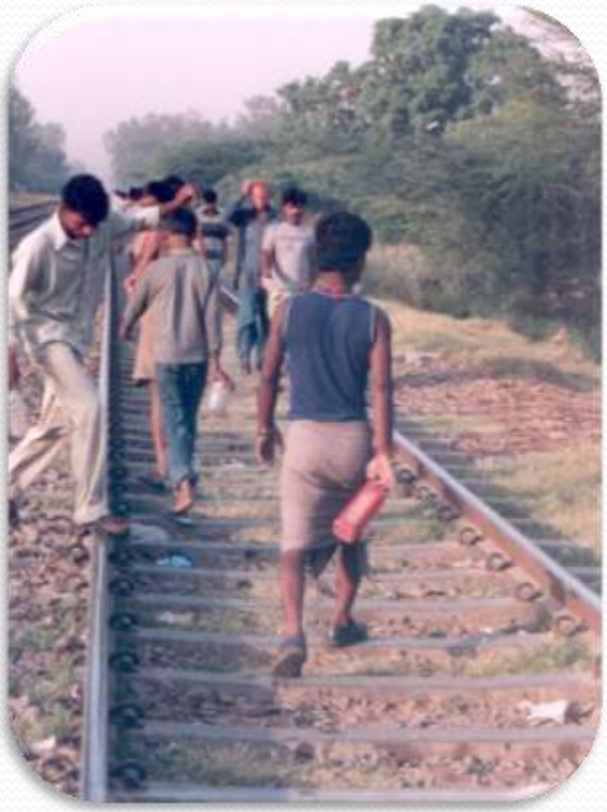
Year	Urban (%)	Rural (%)
2008	63*	57**

* Source: *CPHEEO, Ministry of Urban Development, Government of India.*

** Source: *Department of Drinking Water Supply, Ministry of Rural Development, Government of India .*

Introduction

- In the beginning of new civilisation defecation in the open started everywhere in the world.



- By 20th century Europe, U.S.A. and Australia solved the problem of sanitation with the help of sewer and septic tank technologies.

- Asia, Africa and Latin America could not solve the problems, hence, till today 2.6 billion people in these continents do not have access to safe and hygiene toilets.

- Because the cost of construction and maintenance of sewerage treatment is very high and the water requirement to flush human excreta is enormous, hence through these technologies, the MDG target of “Toilet to All” by 2025 cannot be achieved.

- In India, the 1960s, no houses in rural areas had toilet facilities. The Women had to suffer the most as they had to go out before sunrise or after sunset for defecation.
- Girls did not go to schools because of lack of toilets. Mortality rate, especially amongst children, was very high because of diarrhea, dysentery and other diseases.

- Fifty diseases have been reported because of defecation in open that is lack of toilets.
- In urban areas, only 15% of the population used septic tank and a large number of people used to go outside for defecation. The remaining population had dry/bucket toilets, cleaned manually human scavengers.
- Because of this human scavengers were treated as untouchables. They were hated, humiliated and ostracized by society.

The Unfathomable Plight of Scavengers!!

The appalling hardship, humiliation and exploitation the scavengers face, have no parallel in human history.

- No public places like railway stations, bus stands, religious and tourist places had the facilities of public toilet complexes. Foreigners used to get discouraged to visit India.
- A letter written by a British woman to a local school master in India which is as follows expresses the position vividly:

In the days when you could not count on a public toilet facility, an English woman was planning a trip to India – She registered to stay in a small guest house owned by the local schoolmaster. She was concerned as to whether the guest house contained a WC (Water Closet).

She wrote to the schoolmaster inquiring of the facilities about the WC. The school master, not fluent in English asked the local priest if he knew the meaning of WC.

Together they pondered possible meanings of the letters and concluded that the lady wanted to know if there was a "Wayside Chapel" near the house. That the letters could mean a bathroom, never entered their minds. So the schoolmaster wrote: -

“Dear Madam,

I take great pleasure in informing you that the WC is located 9 miles from the house. It is located in the middle of a grove of pine trees, surrounded by lovely grounds. It is capable of holding 229 people and is open on Sundays and Thursdays. As there are many people expected in the summer months, I suggest you arrive early. There is, however, plenty of standing room. This is an unfortunate situation especially if you are in the habit of going regularly. It may be of some interest to you that my daughter was married in the WC, since she met her husband there.

It was a wonderful event. There were 10 people in every seat. It was wonderful to see the expressions on their faces. My wife, sadly, has been ill and unable to go recently. It has been almost a year since she went last, which pains her greatly. You will be pleased to know that many people bring their lunch and make a day of it.

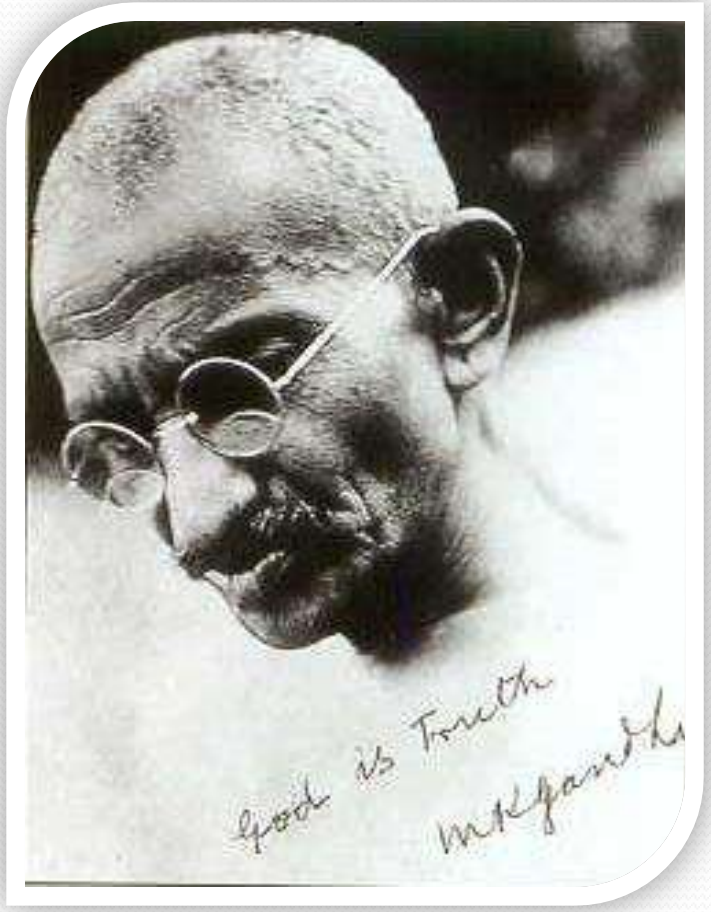
Others prefer to wait till the last minute and arrive just in time! I would recommend that your ladyship plan to go on a Thursday, as there is an organ accompaniment. The acoustics are excellent and even the most delicate sounds can be heard everywhere. The newest addition is a bell which rings every time a person enters. We are holding a bazaar to provide plush seats for all since many feel it is long needed. I look forward to escorting you there myself and seating you in a place where you can be seen by all.

With deepest regards,

The Schoolmaster."

No wonder the woman never visited India!!!

Mahatma Gandhi's Efforts for Eradication of Scavenging



- Mahatma Gandhi was the first person whose attention was drawn towards the insanitation and plight of human scavengers.

- Mahatma Gandhi had said ***"Sanitation is more important than independence"***. He also wanted to get human scavengers relieved from this sub-human occupation of cleaning human excreta manually to give them education, training and bring them into the mainstream of society.

- My journey begins from the inspiration of Mahatma Gandhi. It was difficult for me to work in the sector of sanitation because this subject was reserved only for ‘untouchables’. In India, because I belonged to a Brahmin family, it was a taboo to touch ‘untouchables’. I touched an untouchable lady Dome for that matter my grandmother forced me to swallow cow-dung, cow-urine and Ganges water.

The Genesis:

Sulabh Sanitation And Social Reform Movement

To solve these problems, I developed two technologies - one for individual houses and the other for public places.

- ***Sulabh twin- pit, pour-flush, compost toilets*.**
- ***Public toilet complexes with biogas digester*.**

Sulabh twin-pit, pour-flush, compost toilet (Sulabh Shauchalaya)

- In individual toilets there are two pits, one used at a time and the other is kept standby. When the first one fills up, the excreta is switched over to another one. After two years in the first pit human excreta gets converted into manure on contact with earth at the bottom and also holes in the wall.

Sulabh Toilet with circular pits.

Sulabh Toilet with rectangular pits.

- So, alternately both pits are used. As water-seal or trap used in a Sulabh toilet is of 20 millimetres, therefore it requires only 1-1.5 litre of water to flush per use. So it saves enormous quantity of water compared to sewerage or septic tank systems where in 10 litres of water is used for flushing per use.

PVC P – trap having 20 mm water seal

- The fertilizer taken out from the pit contains 1.8% nitrogen, 1.6% phosphate and 1% potassium, so this is a good fertilizer to raise the productivity of the field and the fruits and flowers.

- If there is water supply through pipelines then there is no chance of water pollution.

- Toilets should be located 5 metres away from the hand pumps and 10 metres from the open wells.

- If the space is constraint then well should be plastered from inside up to 30 feet so that there is no chance of pollution at all.

- In coarser soils (effective size more than 0.2 mm), the same safe distances can be maintained by providing 500 mm thick sand envelope of 0.2 mm sand all round the pit and sealing the pit bottom by some impervious material like puddled clay, lean cement concrete or cement stabilised soil.

- Normally bacteria do not move beyond 3 metres horizontally in homogeneous soil and vertically they do not permeate more than 1 metre, however there can be marginal deviations depending upon the types and compaction of the soil. It may me noted that chances of ground water occur due to higher hydraulic load. Since in this system hydraulic load is only 1 to 1.5 litre per use, there is no such chance of ground water pollution.

- Because of the presence of small quantity of gases inside the pits, the gases keep contact with water in the water seal, therefore it does not allow the water to freeze during winters. In 1984, in Srinagar, India, temperature went down to -14^{0}C and all the 1000 Sulabh toilets functioned very well whereas septic tanks and sewerage pipelines got frozen.

Global Warming:

1 Person produce 1 cft biogas perday

So, 6 billion people produces 6 billion cft biogas per day

In Biogas, 65% is Methane Gas
So from 6 billion people - **3.9 billion cft Methane** produces per day

0.11143 billion cum methane produces per day

In One Year (365 days) = 0.11143 X 365 = **40.67 billion cum methane per Year**

Emission of methane gas in the atmosphere = 40.67 billion cum methane per Year

Since, Methane damages the Ozone Layer of the atmosphere, from environmental point of view, it became harmless when it is used for different purposes like cooking, heating, or electricity generation.

Contribution of Sulabh to Save Global Warming:

1 person produced 1 cft biogas per day

So, 8.4 million persons produced	=	(1 x 8.4) million biogas per day
	=	8.4 million cft biogas
	=	240000 cum.
So, total biogas absorbed in soil per day	=	0.24 million cum Biogas
Total Biogas absorbed in soil in million cum	=	(0.24 x 365)
one Year	**=**	**87.6 million cum**

Total gas saved by Sulabh technology = 87.6 million cum

Economics of Sanitation:

Conservation of Water:

Water Saved From Existing Sulabh Two-Pit Toilet in One Year:

Sulabh has implemented over 1.2 million two-pit toilet, where per flush only 2 litres of water is required. Assuming 7 persons of a family per toilet it save 56 litres of water per flush in comparison to septic tank system. Assuming two litres flush per day one unit save 112 litres of water per day i.e. (1.2 X 112) million litres = 134.4 million litres per day i.e. 49,056 million litres per annum.

Details:

No. of Two-pit Toilets constructed by Sulabh	= 1.2 million
No. of persons who use one toilet (average)	= 7
No. of times use toilet (average)	= 2
Total No. of users per day, 1.2 million x 7	= 8.4 million
Water used in Sulabh two-pit toilet	= 2 Litres
So, water used by 8.4 million people	= 2 litres x 8.4 million

= 16.8 million litres

Cost of Manure from existing Sulabh two-pit toilet in one year:

No. of toilets constructed by Sulabh (Twin-Pit)
= 1.2 million

Average family members = 7

Manure obtained from a person in a year
= 40 kg.

Cost of manure = Rs. 5.00 per kg.

Hence, the Cost of Manure by our twin-pit technology is =

1,20,000 x 7 x 40 x 5

= **Rs. 1,680 million in 1 year**

Cost recovered from for 1000 users biogas plant in the form of *Liquid Fertilizer*:

1 person can produce 3 litres of liquid fertilizer per-day

So, 1000 person can produce 3 litres x 1000 = 3000 liquid fertilizer per-day

So, In 365 days = (3000 x 365) litres of liquid fertilizer per year.

= 10,95,000 liquid fertilizer in an year.

Suppose, 1 litres of Biofertilizer cost is Rs. 1.00

So, 10,95,000 x Rs. 1.00 = **Rs. 10,95,000.00 per annum**

Cost recovered from biogas plant for 1000 users in form of ***Energy*** in a year:

One person produce	=	1 cft of biogas per day
So, from a Public Toilet of 1,000 users we get	=	1000 Cft of Biogas (30 cum)
30 cum of Biogas	=	4.6 gallons of diesel
4.6 gallons of diesel	=	4.6 x 4.55 litres of diesel
	=	21 litres of diesel

So, in a day we get 21 litres of diesel

Hence, total diesel obtained in a year	=	21 x 365
	=	7,665 litres/year
Cost of diesel @ Rs. 34.00 per litre	=	7,665 x 34
	=	**Rs. 2, 60,610 per year for one biogas plant of 1000 users**

Different designs of Sulabh twin-pit, pour - flush, compost toilet:

- The toilet has been designed in such a way that poorest of the poor, middle class and the rich people can have the facilities of Sulabh toilets because the cost of construction varies from US$ 15 to US$ 1100.
- The technology remains the same, only the building materials differ and the period of cleaning of the pits. The minimum period of cleaning a pit is 2 years and maximum **40** years. Because the pits in the Sulabh toilet are earth based, having holes in the walls, gases are absorbed in the soil. This helps reduce global warming and improves the climate change.

Different designs of Sulabh twin-pit, pour - flush, compost toilet:

Cost – US $30 (Rs. 1500)

Cost – US $35 (Rs. 1750)

Cost – US $32 (Rs. 1600)

Cost – US $50 (Rs. 2500)

Cost – US $53 (Rs. 2650)

Cost – US $145 (Rs. 7250)

Cost – US $152 (Rs. 7600)

Cost – US $160 (Rs. 8000)

Cost – US $185 (Rs. 9250)

Cost – US $190 (Rs. 9500)

Cost – US $1100 (Rs. 55000)

Panoramic View – Different Designs of Sulabh Two-Pit Pour Flush Compost Toilets

The Sulabh Shauchalaya can be constructed in the minimum possible space – in a narrow lane, courtyard of a house or in the bedroom.

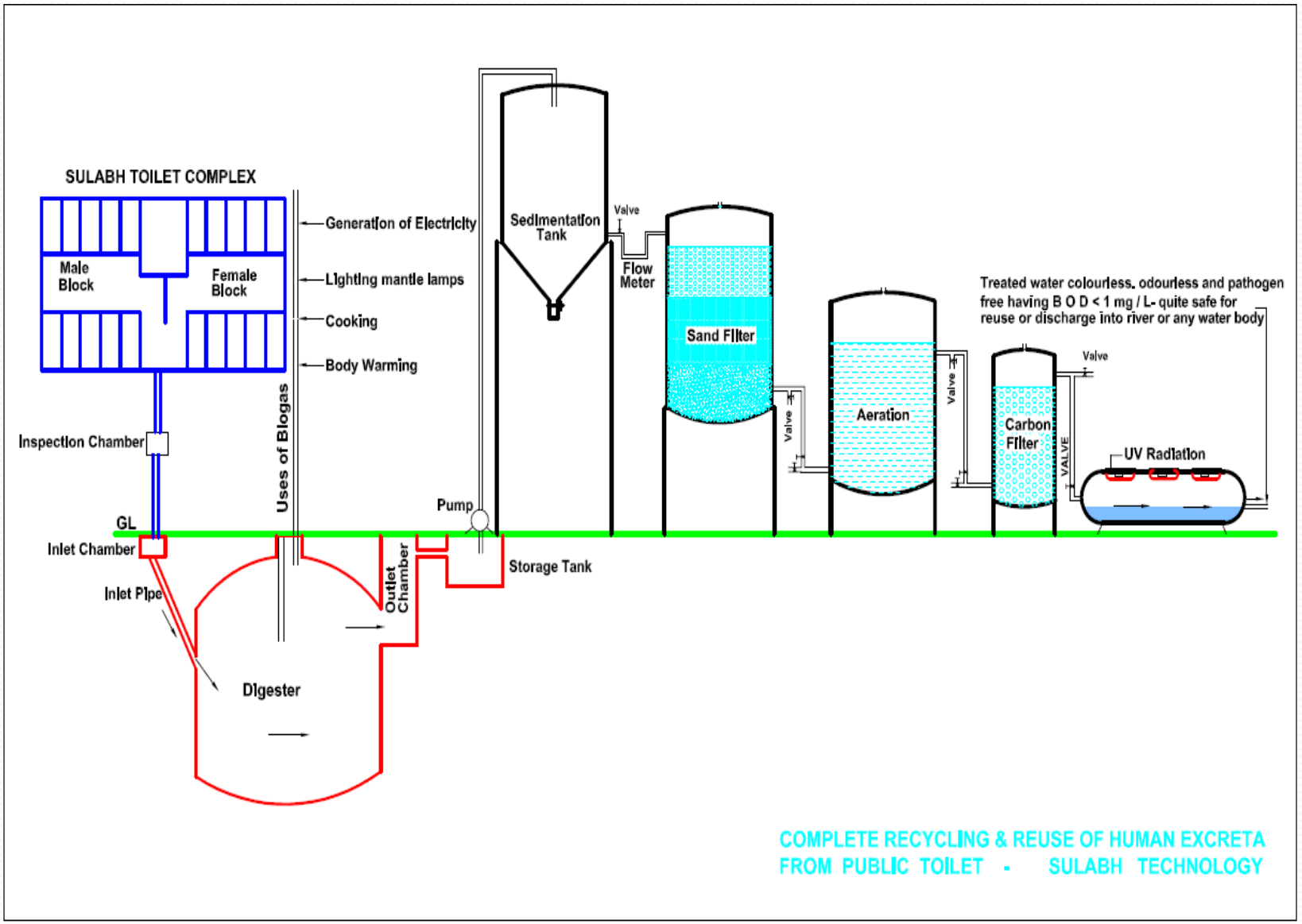
The Sulabh toilet can be constructed in areas where the water table is high and even in upper floors of buildings.

Sulabh pit platforms can be used for variety of purposes like cooking, chopping fish, chaffing grains and for running small shops.

Energy from Human Waste

- The other technology is human excreta based biogas technology with effluent treatment plant linked to public toilets. From public toilets human excreta goes inside the digester and biogas is produced without any chemicals, bacteria and change agents. Only 10-20 Kgs. of cow dung is required to put inside the digester the day of beginning of the use. The biogas is channelized for burning lamps, warming oneself in winter season, cooking food and also for conversion into energy for street lighting.

Diagram of Public Toilet Based Biogas Plant



- Initially, requirement to run the engine was 80% biogas and 20% diesel but now it runs on 100% biogas because it is ignited by battery.

- The water discharged is treated by passing it through sedimentation chamber, sand filter, aeration tank, charcoal and through ultra violet rays.

Biogas used for electricity generation

Use of Biogas

Biogas used to warm oneself in winter

Biogas used for cooking

Biogas used for lighting of mantle lamps

Sulabh Effluent Treatment Technology

- The water discharged from public toilets become so pure that it contains less than one milligram per litre Biochemical Oxygen Demand. This water is safe for irrigation purposes, using in the factories, installation and also cleaning of public toilets.

- This water is totally safe if it is discharged into river bodies. Hence, this also prevents water from pollution from the sewage.

- This technology could be applied in housing colonies, high-rise buildings, public places, schools, colleges, hospitals etc.

Sulabh Public Toilets

- In 1973, I introduced the system of maintenance of public toilets on "*pay and use*" basis. Initially, there was lot of apprehension of the success of this initiative. Initially there were skeptical views.

- On the first day 500 people used the toilets. Now more than 10 million people are using these facilities everyday.

- 7500 public toilets have been installed throughout the country and are being maintained successfully on a pay and use basis.

- We have put up a Sulabh public toilet complex in Bhutan and five toilet complexes with biogas digester in Kabul, Afghanistan and they are functioning very well. In 2007, in Kabul, Afghanistan, when the temperature went down to - 30^0C, the biogas plants functioned very well.

Sulabh Public Toilets: A Glimpse

Sulabh Toilet Complex at Kabul, Afghanistan

Sulabh Toilet Complex at Kabul, Afghanistan

Sulabh Toilet Complex using Biogas Plant at Kabul, Afghanistan

Sulabh has the credit of building & operating the world's largest Public Toilet at Shirdi, Maharashtra.

Largest Sulabh Toilet complex in the world at Shirdi (Nasik), Maharashtra, India.

Funded by SHIRDI TRUST, constructed and maintained by Sulabh International Social Service Organisation, it has 148 toilets with dressing, baby sitting, breast feeding facilities and 108 number of bathrooms, 5,000 lockers for keeping the belongings of pilgrims. The complex is lit by the electricity from the bio-gas generation from the human excreta. 50,000 persons can use these facilities daily.

Cloak Room facility at Sulabh Toilet Complex, Shirdi, Nasik, Maharashtra

Biogas generation at Sulabh Toilet Complex, Shirdi, Nasik, Maharashtra

Biogas generation at Sulabh Toilet Complex, Shirdi, Nasik, Maharashtra

At the behest of **ASI** and Tourism Department Sulabh had the privilege of offering one of the best **Sulabh Toilet Complexes** at World Heritage Monuments:

(1) Taj Mahal – Agra.
(2) Ajanta Caves near Aurangabad , Maharashtra.

Which has earned enormous appreciation from the tourist coming from all over the world.


SULABH TOILET

Inside View - Sulabh Toilet Complex, TAJ MAHAL, AGRA

Inside View - Sulabh Toilet Complex, TAJ MAHAL, AGRA

Inside View - Sulabh Toilet Complex, TAJ MAHAL, AGRA

Sulabh Toilet Complex, Ajanta Caves

Sulabh Toilet Complex, Mathura, Uttar Pradesh

Ultra Modern Sulabh Toilet Complex at Deoghar, Jharkhand.

Inside View- Ultra Modern Sulabh Toilet Complex at Deoghar, Jharkhand.

Inside View – ‘Lift’ Sulabh Toilet Complex at Deoghar, Jharkhand.

Inside View – ‘Dormitory’ Sulabh Toilet Complex at Deoghar, Jharkhand.

Sulabh Toilet Complex at Katra, Jammu & Kashmir.

Sulabh Toilet Complex at Worli Seaface.

Sulabh Toilet Complex at Donapaula, Panji, Goa.

Sulabh Toilet Complex with Night Shelter, Port Blair, Andaman & Nicobar

Main Entrance of Jubilee Park, Jamshedpur, Jharkhand

Sulabh Toilet Complex, Hoshangabad, Madhya Pradesh

MADHYA PRADESH

VIEW OF HI-TECH SULABH TOILET COMPLEX AT 10 NO BUS STOP , BHOPAL DURING 2005-06

Sulabh Toilet Complex, Bhopal, Madhya Pradesh

Sulabh Toilet Complex, Lucknow, U.P.

Sulabh Toilet Complex, Rewa, Madhya Pradesh

People using Sulabh Toilet Complex, Mumbai High Court, Maharashtra

Sulabh Toilet Complex - Premium Business Centre, Nariman Point,, Mumbai

Sulabh Toilet Complex – Chhoti Choupad, Jaipur

A view of Sulabh Toilet Complex at Sanaganeri Gate, Jaipur

Sulabh Toilet Complex, Dwarka, Gujarat

Sulabh Toilet Complex at Thanpanoor, Triruvanthapuram

CONSTRUCTED SULABH TOILET COMPLEX AT CIRCULATING AREA OF BILASPUR RAILWAY STATION BY SOUTH EAST CENTRAL RAILWAY IN CHHATTISGARH

Inside View - Sulabh Toilet Complex, Bilaspur Railway Station, Chattisgarh

Inside View - Sulabh Toilet Complex, Bilaspur Railway Station, Chattisgarh

Inside View - Sulabh Toilet Complex, Bilaspur Railway Station, Chattisgarh

Inside View - Sulabh Toilet Complex, Bilaspur Railway Station, Chattisgarh

Sulabh Toilet Complex – New Delhi Railway Station, Delhi.

Sulabh Toilet Complex – Andheri Kurla Metro Rail, Mumbai

Nerul Railway Station, Navi Mumbai

AMENITIES
INSIDE
SULABH TOILET COMPLEX

Toilets for Specially Challenged People

Urinals installed with sensor system

Water Tap fitted with Sensors

Wash Basin for Hand Wash – Inside view of Sulabh Toilet Complex, Delhi.

Girl combing her hair using mirror inside the Sulabh Toilet Complex

Hand Wash facility – Ethiopian Ambassador to India, Her Excellency Ms. Genet Zewide using the facility at Panch Batti Sulabh Toilet Complex at Jaipur, Rajasthan.

Sulabh Toilet Complex, Ratu Road, Ranchi, Jharkhand

Sulabh Initiative towards Rehabilitation of Scavengers

Quality Education to wards of scavengers

- ***Sulabh Public School:***
  - Premier English medium school.
  - Recognised by CBSE.
  - Tuition fee is waived and free uniforms, books are provided to children of scavenger community.
  - There is a 60:40 ratio of children from scavenger community to other sections of society.
  - Students share lunch with one another.
  - Messages of proper hygiene behaviour spread from children to parents and community.

Morning prayer at Sulabh Public School

REHABILITATION OF SCAVENGERS

The scavengers were weaned away from the demeaning practice of manual cleaning of human excreta and brought on a par with others – realization of a dream of Mahatma Gandhi.

Rehabilitation programme through training in various trades was then initated for them to bring them into the mainstream of society.

NAI DISHA: An Initiative towards Rehabilitation of Scavengers

- 'Nai Disha' Vocational Training Centre was set up at Alwar, Rajasthan in April 2003, to liberate and rehabilitate women hitherto engaged in the profession of scavenging till March end, 2003.

NAI DISHA

A comprehensive 2-year training is being provided to 56 women scavengers in food-processing, beauty-care, tailoring and embroidery, with a three year rehabilitation programme.

Economic Sustainability and Social Transformation

The social transformation brought about can be gauged by the incredible fact that the same society that was averse even to the touch of a scavenger, today readily purchases products (even eatables) prepared by the hands of these very scavengers'. This symbolises a fundamental change in the attitude nursed for centuries by the people.

Adult literacy classes are held to teach them English and Hindi.

SOCIAL INTERACTION

A monthly stipend of Rs. 2200 is paid to ensure that they do not return to their earlier profession. The stipend is directly put into their bank accounts which they operate themselves.

Social Interaction

Taken to the best restaurants in town

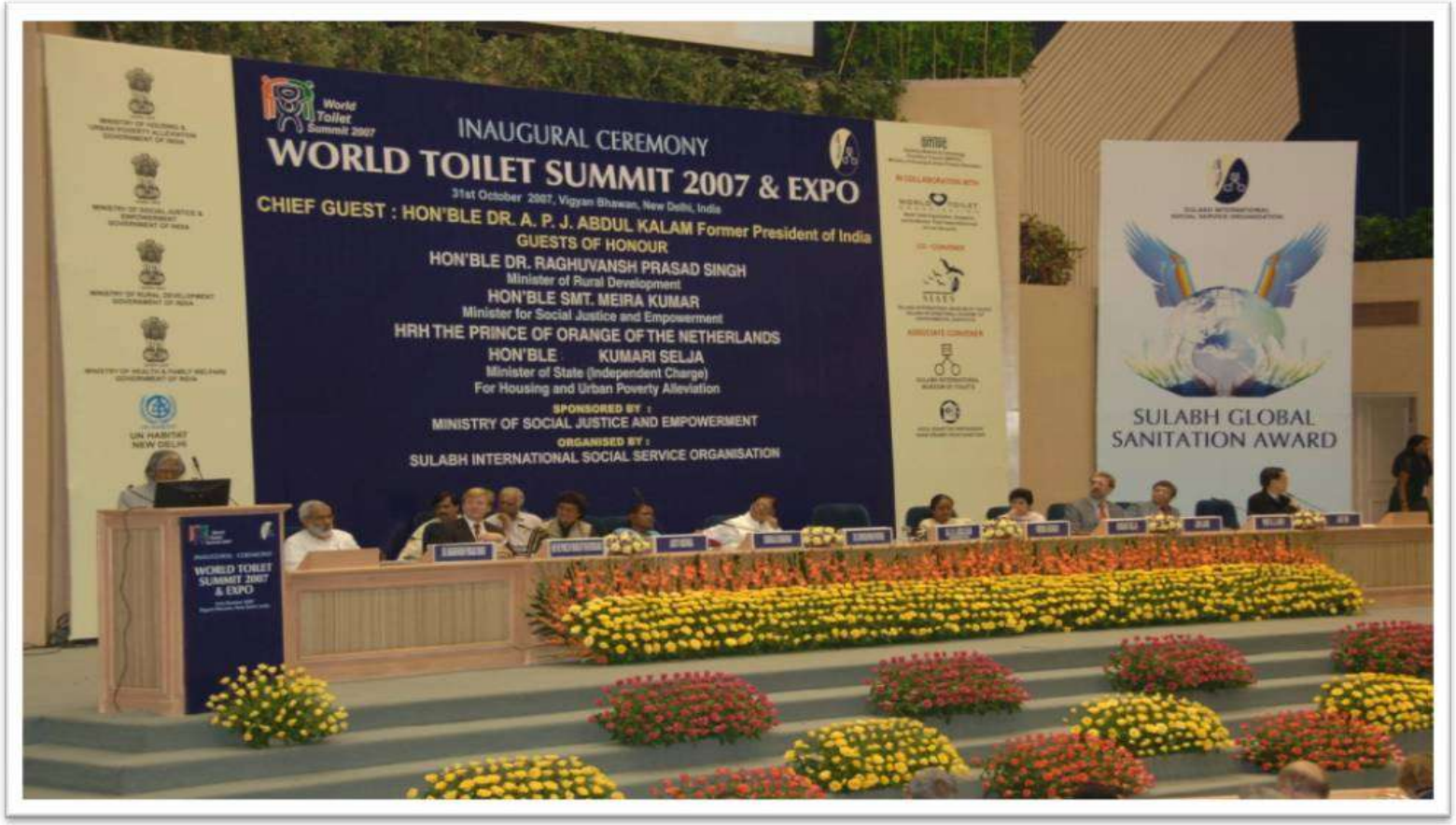
Social Transformation

The Hon'ble President of India, Smt. Pratibha Devisingh Patil crowning Smt. Usha Chaumar in the Rashtrapati Bhawan.

Social Acceptability

Hon'ble Prime Minister of India, Dr. Manmohan Singh, giving audience to the erstwhile scavengers of Alwar, Rajasthan, who used to clean nightsoil earlier: and now after education and training have become self-employed and lead a life of dignity.

World Toilet Summit 2007, October 31-November 2, 2007 at New Delhi



Mrs. Sushila Chauhan, shared the dais with former President of India, Hon'ble Dr. A. P. J. Abdul Kalam and addressed the gathering at the Inaugural Session of the World Toilet Summit at Vigyan Bhawan, New Delhi

World Toilet Summit 2007, October 31-November 2, 2007 at New Delhi

The erstwhile women scavengers walked the ramp with the top models who showcased their handiwork at the World Toilet Summit 2007 in New Delhi

Mission Sanitation

HRH the Prince of Orange of the Netherlands felicitating erstwhile women scavengers, who were liberated and rehabilitated by Sulabh, with bouquets of flowers, lending prestige to the scavengers who cleaned human excreta manually till March, 2003.

Mission Sanitation

Flying in the Sky – A journey to United Nations Head Quarters, New York, U.S.A.

Mission Sanitation

The erstwhile women scavengers walked the ramp with the models who showcased their handiwork at the United Nations in New York on July 2, 2008. With this their social status went up.

Fulfilling Mahatma Gandhi's Dream

H.E. Mr. Vijay Nambiar, Chef de Cabinet of the Executive Office of the Secretary General of the United Nations, crowning Mrs. Usha Chaumar, an erstwhile women scavenger of Alwar, Rajasthan on July 2, 2008 at the event "Sanitation for Sustainable Development" in the United Nations at New York.

Fulfilling Mahatma Gandhi's Dream

The liberated women scavengers showing the sign of 'V' for Victory as a sign of triumph, in front of the Statue of Liberty in New York, USA to show their liberation from the demeaning profession of cleaning dry privies and carrying human excreta (nightsoil) of others, to eke a living for their families.

PRAYAGAYA CEREMONY IN FRONT OF THE TEMPLE

Puja and hawan being performed outside the Jagannath Temple in Alwar, Rajasthan on December 21, 2008 by Dr. and Mrs. Bindeshwar Pathak, Mrs. Usha Chaumar and her husband alongwith other erstwhile scavengers of Alwar and Tonk, Rajasthan

ERSTWHILE SCAVENGERS GAIN ENTRY IN TEMPLE

Entering a temple – a dream fulfilled on December 21, 2008 of scavengers whose entry was banned for centuries due to the practice of untouchability.

PERFORMING POOJA

The age-old practice of untouchability and discrimination ends with priests of the upper ‘Brahmin’ caste accepting to offer their sweets to the deity for ‘prasad’..

Interaction with Swedish Prime Minister on 6th November, 2009 at Sulabh Gram, New Delhi

His Excellency Prime Minister of Sweden Mr. Fredrik Reinfeldt and his wife Ms. Filippa along with Dr. Bindeshwar Pathak, giving audience to the erstwhile scavengers of Alwar, Rajasthan, who used to clean nightsoil earlier: and now after education and training have become self-employed and lead a life of dignity.

Recognition of Sulabh Technology

- Sulabh's Cost Effective & Appropriate Sanitation Systems were recognised as "***Global Urban Best Practice***" from amongst 625 entries from all over the world by United Nations Centre for Human Settlements (UNCHS) in 1996 at Istanbul.

- The Dubai Municipality and UNCHS (HABITAT) awarded Sulabh technology '***Dubai International Award for Best Practices to Improve the Living Environment***' out of 1125 entries in the year 2000.

Recognition of Sulabh Technology

- UNDP has recommended the use of Sulabh technologies by international agencies like WHO, UNICEF, World Bank, UN – HABITAT, WSSCC, SIDA, CIDA, DANIDA , apart from national governments. All have appreciated the efforts of Sulabh.

- In 2009, Stockholm International Water Institute, Sweden has recognized our efforts and awarded The 2009 Stockholm Water Prize.

The Dubai Municipality and UNCHS (HABITAT) awarded Sulabh '***Dubai International Award for Best Practices to Improve the Living Environment'*** out of 1125 entries in the year 2000.

In 1991, Dr. Bindeshwar Pathak was conferred Padma Bhushan by the then President of India, Shri R. Venkataraman, for his 'distinguished social service'.

His holiness Pope John Paul –II gave audience to Dr. Bindeshwar Pathak before being awarded International St. Francis Prize for the Environment (Canticle of all creatures) in 1992

Dr. Bindeshwar Pathak receiving the UNEP Global 500 Roll of Honour Award for 2003 from Hon'ble Mr. Fares Bouez, Lebanese Minister of Environment. Hon'ble Mr. Kluas Topfer, Executive Director of UNEP is on the right.

Hon'ble Mrs. Anna K. Tibaijuka, Excutive Director of UN-HABITAT presenting the UN-Habitat Scroll of Honour 2003 Award to Dr. Pathak.

The United Nations' Inter-Governmental Renewable Energy Organisation (IREO) has awarded the prestigious Renewable Energy Award to Dr. Bindeshwar Pathak, Sulabh International for the year 2009 at New York.

Dr. Bindeshwar Pathak,, received the **2009 Stockholm Water Prize** from the hands of H.R.H. Prince Carl Philip of Sweden. Dr. Pathak was awarded for his life's work to improve the health, dignity and lives of millions of people.

- Sulabh has trained engineers, architects and other professionals from 14 countries of Africa namely - Ethiopia, Mozambique, Uganda, Cameroon, Burkina Faso, Kenya, Nigeria, Senegal, Ghana, Zambia, Tanzania, Cote d' Ivorie, Mali and Rwanda.

Conclusion:

- These technologies are the best example of sustainable sanitation model.

- Both the Sulabh sanitation technologies are self-reliant and commercially viable and can help to achieve the Millennium Development Goals on water and sanitation.

Follow Your Dream

Jonathan Livingstone Seagull – a story by Richard Bach. This is a story for people who follow their dreams and make their own rules; a story that has inspired people for decades.

For most seagulls, life consists of eating and surviving. Flying is just a means of finding food. However, Jonathan Livingstone Seagull is no ordinary bird. For him, flying is life itself. Against the conventions of seagull society, he seeks to find a higher purpose and become the best at doing what he loves.

This is a fable about the importance of making the most of our lives, even if our goals run contrary to the norms of our flock, tribe or neighbourhood. Through the metaphor of flight, Jonathan's story shows us that, if we follow our dreams, we too can soar.

THANK YOU

Sulabh International Social Service Organisation

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