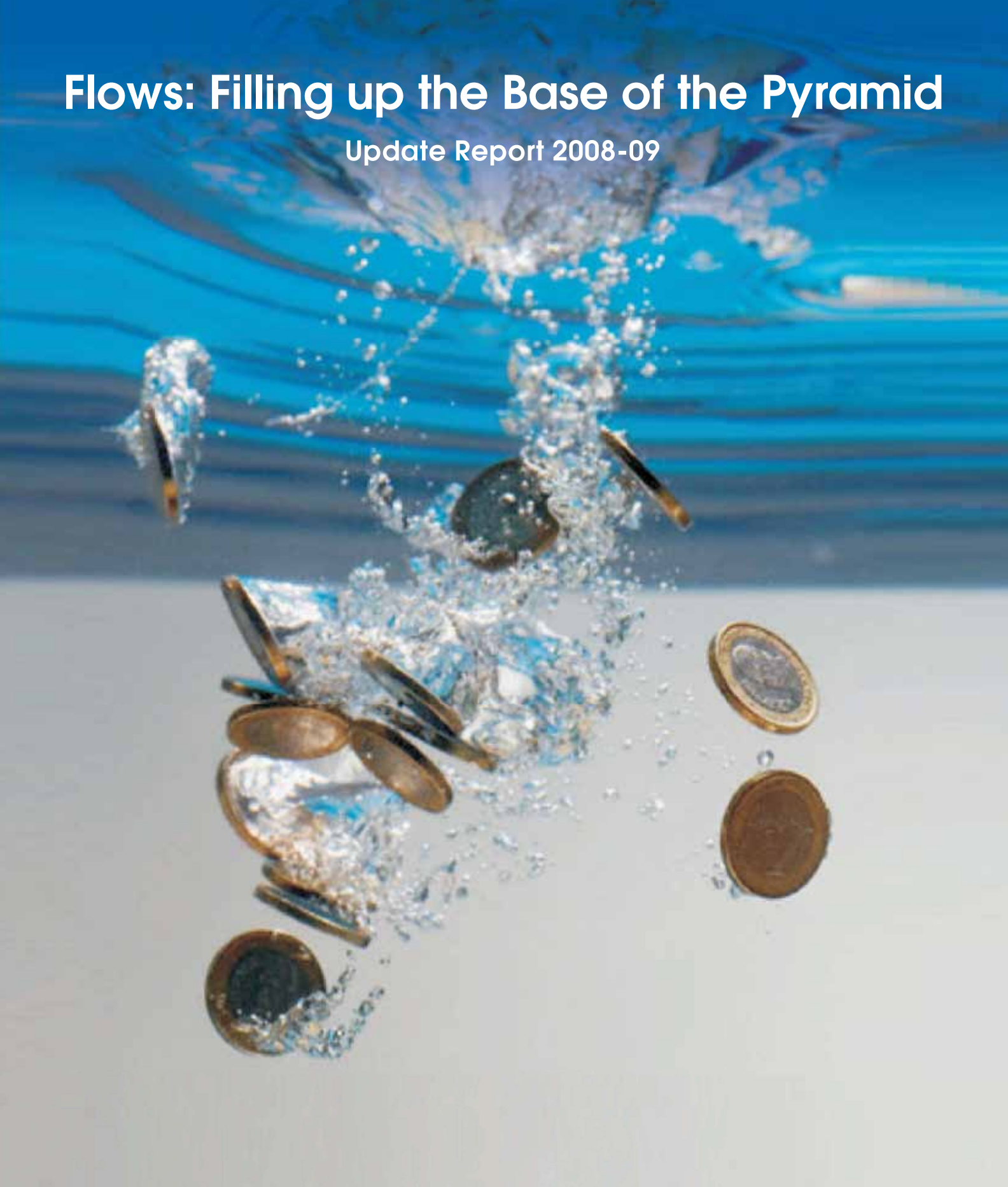


# Flows: Filling up the Base of the Pyramid

Update Report 2008-09



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## Introduction

Project FLOWS set out in 2007 to survey the landscape of the water and sanitation sector in India, and to identify high potential models to provide access to safe drinking water and basic sanitation to the Indian populace at the bottom of the socio-economic pyramid. In its current phase, project FLOWS aims to identify two workable, financially sustainable, and impactful models effectively capable of increasing water and sanitation access to the lower social and economic segments of the population.

As a first effort for the current phase, it was decided to investigate how the sector has evolved since the end of Phase I of the project in 2008, in terms of most prominent changes in economic and social variables and the most recent activity of both the public and the private sector. This document, dated January 2010, is intended as a supplement to the report "Flows: filling up at the Base of Pyramid" and summarizes the activity in the sector since the report was created.



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# Evolution of Watsan Landscape in 2008-09

FLAWS in its first phase highlighted a dramatic gap between the demand for safe water and basic sanitation in India and the supply of such services and facilities, despite the efforts on the part of various levels of government, NGOs, communities and the growing involvement of the private sector. New research suggests that, as of 2009, water supply and access to sanitation in the country is still drastically below the level of adequacy for a population of 1.16 billion, and growing every year at the rate of 1.6%.

## Demand for drinking water and basic sanitation

The amount of water that people use depends not only on their basic needs and how much water is available, but also on levels of urbanization and economic development<sup>2</sup>. By 2030, water demand in India will grow to almost 1.5 trillion m<sup>3</sup>, driven by a projected growth rate of 2.8% (CGAR) since 2005<sup>3</sup>, which is much greater than the growth rate of the population.

Safe drinking water is essential for the survival and wellbeing of a household. While in most developed countries the entire water supply is of drinking standard, in India many sources are contaminated with disease vectors, pathogens or unacceptable levels of dissolved chemicals or suspended solids, which make the water unsuitable for drinking use. Approximately 14% of the population of India, over 150 million people, still lack access to safe drinking water. In rural areas 18% of the population is without safe drinking water as opposed to 4% in urban areas<sup>4</sup>.

Throughout the developing world, the most common contamination of raw water sources is from human sewage and in particular human faecal pathogens and parasites. In India, open defecation is still a common practice and, while mostly a rural phenomenon<sup>5</sup>, contributes to the contamination of water sources. Waterborne diseases in India are one of the main causes of mortality in children under the age of five: 1,000 Indian children die of diarrhoeal sickness every day owing to poor sanitation<sup>6</sup>.

In 2009, access to sanitation has increased in both rural and urban areas, driven by public and private sector initiatives. Nevertheless, an estimated 55% of all Indians, or close to 600 million people, still lack access to adequate sanitation facilities<sup>7</sup>. According to a study by the Asian Development Bank (ADB) US\$ 7.9 billion is needed to provide toilets for all households that currently lack toilets in India<sup>8</sup>.

## The supply side

On the supply side, the core activities related to water access include: provision of new infrastructure for water extraction, harvesting and distribution, and purification of unclean water; and in sanitation, construction of toilets. Both kinds of interventions can be made at the household level or with the engagement of entire communities in the use and the management of the facilities.

By the year 2030 the estimated water supply in India from accessible and reliable sources will amount to 744 billion m<sup>3</sup>, or 50% of the projected demand. The total water resource base available to India, including surface and groundwater, amounts to 2,518 billion m<sup>3</sup>, which is substantial but is highly variable. The ability of the current infrastructure to serve the current demand for water, buffer the variability in availability of resources and guarantee drinking quality from the source all the way to the consumers is very low<sup>9</sup>.

1. <http://geography.about.com/od/obtainpopulationdata/a/indiapopulation.htm>
2. <http://www.peopleandplanet.net/doc.php?id=671&section=14>
3. 2030 Water Resources Group, McKinsey
4. WHO/UNICEF JMP - Latest country profile for India
5. MDG assessment report, WHO/UNICEF JMP - 2008
6. [http://www.economist.com/specialreports/displaystory.cfm?story\\_id=12749787](http://www.economist.com/specialreports/displaystory.cfm?story_id=12749787)
7. <http://timesofindia.indiatimes.com/india/600-million-lack-toilets-in-india/articleshow/5246171.cms>
8. <http://sanitationupdates.wordpress.com/2009/12/15/india-us-7-9-billion-needed-to-provide-toilets-to-everyone/>
9. 2030 Water Resources Group, McKinsey



The progress made in bridging the sanitation gap in India can be gauged by the achievements made toward meeting the Millennium Development Goals (MDGs). Notably, almost 200 million people in India gained access to improved sanitation facilities between 1990 and 2006<sup>10</sup>. In 2009 numerous public and private sector interventions to build sanitation facilities for households and communities were launched and made progress in providing toilet facilities. Because the main challenge in sanitation remains that of bringing about a behavioural change in the society by instilling a culture of valuing and adopting sanitation practices, interventions based on education and awareness creation continue to be necessary and must be coupled with creation of infrastructure.

Painting a detailed picture of the overall supply side activity in the drinking water and sanitation space is challenging due to high fragmentation of the sector and the diversity of interventions under investigation. Through the following paragraphs the aim is to substantiate the trends presented here with evidence found during our research, and to showcase how both the public and the private sector both contribute in different manners to bridge the wide gap between the demand and the supply.



## Update on Models Identified in Phase I

In Phase I of FLOWS, Intelicap identified six high potential models for private enterprise – access to water through small scale water networks, point-of-use filters, decentralized treatment plants, total sanitation: household toilets, 'pay and use' toilets and ecosan toilets, which have bio-digesters or are directly linked to decentralized treatment systems. Intelicap surveyed among various organizations and programs in each of these models in order to deeply understand them.

In this initial stage of Phase II, we need to assess the change in the Watsan landscape in the past year and update our knowledge of these models. The summary of our findings on various models is given below.

### Access to Water: Small Scale Water Networks

Last year, more people have been provided with water access through small water networks along with increased microfinance activity in providing micro-loans specifically designed for water access.

The government is also actively participating in this sector with an aim to achieve the MDGs, supported by grants from various not-for-profit organizations. The government is working in both managing the demand for drinking water and also in creating access to safe water sources.

#### Key Findings

##### Growth and expansion

- Dushtha Shasthya Kendra (DSK) has grown to provide water access to 200,000 people in 70 slum communities through small water networks/ kiosks in Bangladesh<sup>11</sup>.
- The community managed water network project has provided water access to 4,000 households in India.

##### Investments:

- UN Habitat has allocated \$ 1 million for 07-09 to provide water access in Madhya Pradesh (MP)<sup>12</sup>.
- ADB has financed a loan of \$181 million in the state of MP to UN Habitat for water reforms<sup>13</sup>.

##### Government Initiatives:

- After the success of the UN Habitat water network project, the MP Government has decided to support 40 slums in 4 cities<sup>14</sup>.
- The Andhra Pradesh (AP) Government has initiated a project to provide water and sanitation access to rural areas across 6 districts in 2009<sup>15</sup>, for which the World Bank has approved a loan to the tune of US\$ 150 million<sup>16</sup>.
- The Government of Bengaluru, Karnataka, has allotted a sum of Rs 1,000 crore for providing recycled water for non-potable purposes. The government has planned to establish 20 supply points to promote its use and make it mandatory through a policy change at later stages<sup>17</sup>.
- The Government of Gujarat has been awarded by the UN for its successful project on providing safe water access to rural population, more than 4,000 people have been provided with community owned water networks<sup>18</sup>.

10. MDG assessment report, WHO/UNICEF JMP - 2008, p.13

11. [http://www.g8italia2009.it/static/G8\\_Allegato/Water\\_Group\\_0.pdf](http://www.g8italia2009.it/static/G8_Allegato/Water_Group_0.pdf)

12. [http://www.unhabitat.org/downloads/docs/5780\\_20859\\_Partnership%20between%20ADB-UN-HABITAT%2017June2008.pdf](http://www.unhabitat.org/downloads/docs/5780_20859_Partnership%20between%20ADB-UN-HABITAT%2017June2008.pdf)

13. <http://www.google.co.in/url?q=http://www.unhabitat.org/prms/getElectronicVersion.asp%3Fnr%3D2635%26alt%3D1&ei=dNhB58vblYr-6QOJrWXCg&sa=X&oi=nsrc&resnum=1&ct=result&d=1&ved=0CA8sQzgQoAA&usq=AFQjCNHkHmA5nrx6ZJhRub2Znm9Y45tQ>

14. [http://www.unhabitat.org/downloads/docs/6606\\_38725\\_Volume%20II%20-%20Outputs%20and%20Outcome%20Tables%20-%20Latest%20Version.doc](http://www.unhabitat.org/downloads/docs/6606_38725_Volume%20II%20-%20Outputs%20and%20Outcome%20Tables%20-%20Latest%20Version.doc)

15. <http://web.worldbank.org/external/projects/main?pagePK=64283627&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P101650>

16. <http://washasia.wordpress.com/2009/09/23/india-andhra-pradesh-us150-million-for-rural-water-supply-and-sanitation/>

17. <http://washasia.wordpress.com/2009/11/02/india-bangalore-use-of-recycled-water-to-be-mandatory/>

18. <http://southasia.oneworld.net/todayshheadlines/un-awards-indian-water-and-sanitation-body/?searchterm=>



### Point of Use Water Filters

Last year this model has seen more corporations venture into this space with innovative products designed specifically for the BOP. This, coupled with commercial investments, indicates the large potential of the market for water purification and quality improvement. Partnerships with microfinance institutions to finance and promote purifiers emerged successful and also scaled up.

There is a need for companies to focus on delivering after sales services to the BOP clients who have purchased their products. It is a challenge for these companies to reach out in remote rural areas for after sales servicing of the water purifiers.

#### Key Findings

##### Growth and expansion

- Hindustan Unilever (HUL) has evolved from distributing its water purifiers through 1 MFI and multiple pilots in 2008, to enrolling 11 MFIs in AP. It currently plans to partner with 110 Access MFIs across India<sup>19</sup> going forward.
- Eureka Forbes has partnered with World Vision, a non-profit organisation working to improve livelihoods of BOP<sup>20</sup> and Basix, a large microfinance institution<sup>21</sup>; to finance and distribute purifiers.

##### Technology:

- Tata has announced to launch a water purifier for the BOP – Swach, using low cost materials and nano technology<sup>22</sup>.

##### Investments:

- HaloSource with its water purifier, HaloPure – distributed by Eureka Forbes, has raised US\$ 11.5 million from India focused PE investors<sup>23</sup>.

##### Variation in Model:

- Water Purifier Disinfectant - PuR/Safewat  
A powder disinfectant available in sachet form to purify water.
  - Its price is very low approx. US\$ 0.1/10 L of water<sup>24</sup>, which is lesser than the cost of boiled water<sup>25</sup>. Further, BOP doesn't need funds to install equipment; people can use home methods to filter the water.
  - Distribution of the product is easier – Public Health care centres, local distributors, etc. and does not require after-sales services.
  - P&G has distributed 85 million sachets from 05-07 worldwide<sup>26</sup>.

19. [http://www.google.co.in/url?sa=t&source=web&ct=res&cd=5&ved=OCB4GfJAE&url=http%3A%2F%2Fwww.indiaenvironmentportal.org.in%2Ffiles%2FSafe%2520drinking%2520water%2520in%2520rural%2520areas.doc&ei=DxUyS7qtL17q7APo9smwDA&usq=AFGjCNFfu82Kq7x5OrwRr73vly-Jg1zvg&sig2=0nh1sAZ3qPd27e3x\\_HZ1G](http://www.google.co.in/url?sa=t&source=web&ct=res&cd=5&ved=OCB4GfJAE&url=http%3A%2F%2Fwww.indiaenvironmentportal.org.in%2Ffiles%2FSafe%2520drinking%2520water%2520in%2520rural%2520areas.doc&ei=DxUyS7qtL17q7APo9smwDA&usq=AFGjCNFfu82Kq7x5OrwRr73vly-Jg1zvg&sig2=0nh1sAZ3qPd27e3x_HZ1G)

20. <http://www.worldvision.in/?1136>

21. <http://business.outlookindia.com/article.aspx?240795>

22. <http://compareindia.in.com/latest-launches/kitchen-water-purifiers/safe-drinking-water-for-millions-of-indian-families/45742/0>

23. <http://archive.vccircle.com/wordpress/2008/07/21/water-purifying-company-halosource-raises-115m-from-india-focused-funds/>

24. <http://www.wbcscd.org/web/publications/case/png-pur.pdf>

25. <http://www.scis-jhu.edu/bin/m/j/gregallgood033109.pdf>

26. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1417185](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1417185)



### Decentralized Treatment Plants

This model has seen the maximum activity in the past one year. There has been tremendous growth in the number of people reached. Corporates are currently exploring this as a viable business instead of an intervention led by not-for-profits. The investments made by funding agencies also reiterate the profitability of this space.

Government is also increasingly using technology to provide safe drinking water through decentralised purification systems. The large investments, along with the government interest, indicate the market potential of water purification sector.

#### Key Findings

##### Growth and expansion

- Naandi Foundation has started its operations in 7 other states including Punjab, UP, Rajasthan, etc. benefiting 40 lakh people<sup>27</sup> from its presence in AP in 2007-08. Each of the plants breakeven within 5 years of operations.
- Piramal Foundation's pilot in decentralized treatment plants has been converted into a new Private Limited company<sup>28</sup> with presence in 30 villages in Rajasthan and Gujarat<sup>29</sup>, operating under a franchisee model<sup>30</sup>.
- Naandi Foundation is also planning to set up a kiosk-based model for distribution, similar to that of Piramal Water<sup>31</sup>.
- Dow Chemical has set up 4 plants since last year for the purification of water using Reverse Osmosis technology (RO)<sup>32</sup>.

##### Investments:

- International Financial Corporation has invested US\$ 15 million for water purification in Water Health International<sup>33</sup>.
- Aavishkaar has invested in Waterlife India, a company engaged in the installation and maintenance of water purification plants<sup>34</sup>.

##### Government Initiatives:

- In 2009, the State Government of Punjab has planned to install RO treatment plants and double ultra filtration technology in all villages in the Malwa and Majha regions. RO systems have already been installed in 327 villages of 8 districts at a cost of Rs. 34.82 crore (US\$ 7.2 million)<sup>35</sup>.

27. <http://www.tribuneindia.com/2009/20090224/punjab.htm>

28. <http://www.snre.umich.edu/node/8381>

29. <http://www.socialedge.org/features/job-listings/archive/2009/01/22/piramal-water-private-limited>

30. Intellect Primary Interview

31. <http://www.globalwaterchallenge.org/newscenter/news-detail.php?id=1018>

32. [http://news.dow.com/dow\\_news/corporate/2009/20090525b.htm](http://news.dow.com/dow_news/corporate/2009/20090525b.htm)

33. <http://www.nextbillion.net/news/ifc-approves-15m-financing-for-waterhealth-india>

34. <http://www.priog.org/10386144-aavishkaar-invests-in-waterlife-india-coengaged-in-installation-of-water-purification-system.html>

35. <http://washasia.wordpress.com/2009/09/09/india-punjab-every-village-to-have-water-storage-tank-with-15-days-usage-capacity-sukhbir/>



### Total Sanitation: Household Toilets

Most organizations in this model work with the government under the total sanitation campaign to create open defecation free villages. The government also has multiple initiatives under this plan to promote toilet use and provide sanitation access. Several government pilots have scaled up in the past year.

#### Key Findings

##### Growth and expansion

- Gram Vikas, a not-for-profit, has reached to 57,335 households from 26,850 households in 2008, providing total sanitation in 895 villages, also has presence in two other states – MP and Jharkhand<sup>36</sup>.

##### Government Initiatives:

- Himachal Pradesh has achieved Total Sanitation with access to sanitation to over 90% of the population, with the total expenditure of Rs. 149.62 crore<sup>37</sup>.
- In order to create awareness about toilet use, the government of Haryana initiated the “No Toilet, No Bride” program. After the campaign started about two years ago, 1.4 million toilets have been built in Haryana<sup>38</sup>.
- Under the Low Cost Sanitation Scheme by the government of India, the government has planned to convert 241,931 dry latrines into pour-flush latrines and install 32,305 new pour-flush latrines during 2008-2009 and 2009-10<sup>39</sup>.

36. [http://www.gramvikas.org/data\\_coverage.php](http://www.gramvikas.org/data_coverage.php)

37. <http://sanitationupdates.wordpress.com/2009/12/04/india-himachal-pradesh-school-sanitation-reward-scheme-launched/>

38. <http://sanitationupdates.wordpress.com/2009/10/14/in-india-new-seat-of-power-for-women-the-success-of-the-no-toilet-no-bride-program-g/>

39. <http://sanitationupdates.wordpress.com/2009/12/16/india-government-announces-that-four-more-states-have-no-dry-latrines/>



### Pay and Use Toilets

This intervention has also scaled up under joint efforts by the public and the private sector. Most organizations in this intervention area are still dependent on government bodies to cover the cost of initial investments, such as land acquisition and infrastructure development.

The government also plans to start providing community toilets and lease them for operations and maintenance. New model considering various constraints that communities face has evolved.

#### Key Findings

##### Growth and expansion

- Sparc, a Mumbai based NGO, has installed 500 community toilets in addition to providing finance to slum dwellers in Mumbai<sup>40</sup>.
- Sulabh International, a leading social service organization, is currently maintaining 7,000 community toilets across India and is expanding to other countries like Afghanistan and Uganda<sup>41</sup>.

##### Investments:

- Ecotact, a company focused on sanitation solutions, has mobilized debt from Acumen fund (US\$ 400,000) for setting up permanent toilet facilities on a Build-Operate-Transfer contract and plans to construct 200 toilets<sup>42</sup>.

##### Government Initiatives:

- The Municipal Corporation of Delhi plans to upgrade 1,000 urinals into waterless systems using a biodegradable sealant. The municipality expects to earn Rs.5 crore (US\$ 1 million) per year after leasing out these urinals for five years<sup>43</sup>.

##### New Variation:

- Portable Toilets – Saraplast

Portable toilets for community use, equipped with enzymes and bacteria to degrade the waste which needs to be cleaned regularly.

- The toilet can be operated by the community. The initial set up cost of the toilet is higher than that of normal toilets, Rs 40,000 to 60,000 per toilet<sup>44</sup>.
- Saraplast has also received equity funding for 21% stake from a Venture capital fund, Aavishkaar India Micro Venture Capital Fund<sup>45</sup>.
- There is additional cost of operation since the toilet needs to be cleaned regularly. However, Bio-digested waste can be used and sold as manure to help cover the operating cost.

40. [http://www.worldwaterweek.org/documents/WWW\\_PDF/2008/friday/K24/MULENGA\\_Stockholm.pdf](http://www.worldwaterweek.org/documents/WWW_PDF/2008/friday/K24/MULENGA_Stockholm.pdf)

41. Intellect Primary Interview

42. <http://www.acumenfund.org/investment/ecotact-limited.html>

43. <http://sanitationupdates.wordpress.com/2009/10/21/india-new-delhi-municipal-corporation-to-build-waterless-urinals/>

44. <http://www.thehindu.com/2009/03/06/stories/2009030661040500.htm>

45. <http://www.microfinancefocus.com/news/2009/08/18/aavishkaar-picks-up-21-stake-in-pune-based-saraplast/>



### Ecosan: Toilets with Biodigesters or Decentralized Treatment System

2009 saw greater adoption of this model, particularly in South India. Greater awareness generated around these toilets, especially in the coastal region where the need for them is greater than ordinary toilets, may act as a demand driver for this model.

The government, along with other organisations, is also developing new toilets based on ecosan technology to suit specific needs.

#### Key Findings

##### Growth and expansion

- 280 additional household and community toilets have been installed in the state of Tamil Nadu over the last year<sup>46</sup>.
- There has been greater awareness in people about ecosan. More NGOs are involved in training to women to set up such toilets<sup>47</sup>.

##### Technology:

- New no-discharge toilets being developed along with Indian Institute of Technology for trains, etc<sup>48</sup>.

46. <http://southasia.oneworld.net/fromthegrassroots/eco-friendly-toilets-in-rural-india/>

47. <http://www.plcwatsanuttthan.org/progress%20report%20%28English%29.pdf>

48. <http://www.worldplumbinginfo.com/article/india-trials-new-train-toilet?page=0%2C0>



### Increased Use of Microfinance in Watsan

According to a study by SEWA, an Indian MFI, around 15% of their total micro loans are used for water and sanitation activities<sup>49</sup>. Considering the synergies between microfinance and watsan markets, Microfinance institutions are increasingly venturing in the water and sanitation space, either by providing a specific loan product or tying up with a service provider.

There has been tremendous microfinance activity in providing micro-credit for water access and purchase of point of use water purifiers in last year. Commercial capital was infused in the market for water access as banks gave loans to institutes to provide credit for water connections. In the near future we foresee more MFIs partnering with other organizations and developing financial products specifically for water connectivity. There has also been interest in financing the SME sector for community based solutions such as water networks and community toilets.

#### Key Findings

- Guardian, MFI dedicated for Water credits, has received favourable rating from rating agency with its 100% repayments<sup>50</sup>. Guardian has partnered with WaterPartners International, an international NGO, to provide water access to 40,000 people by 2011<sup>51</sup>.
- WaterPartners International has agreed to provide Rs. 1.34 crore to Grameen Koota, a Karnataka based MFI, to provide water credits<sup>52</sup>.
- WaterPartners International, with funding from PepsiCo, has received commercial loan from banks of Rs 1 crore to provide water credit<sup>53</sup>.
- Basix has piloted new water sanitation product across four locations in India and has been successful in three locations and has plans to scale it up<sup>54</sup>.
- WaterPartners International has started providing water credit facilities in four more states – AP, Karnataka, MP and Orissa as compared to only in Tamil Nadu during Phase I<sup>55</sup>.
- Hindustan Unilever (HUL) has evolved from distributing its water purifiers through one MFI and multiple pilots in 2008, to enrolling 11 MFIs in AP. It currently plans to partner with 110 Access MFIs across India<sup>56</sup>.
- Gramalaya in Tamil Nadu is facilitating linkages with banks and self-help groups to mobilise funds for household toilets. This model has been highly successful and now can get funds of US\$ 2 million from banks, which can serve 60,000 people<sup>57</sup>.
- SPARC, a Pune based NGO working on developing slums, has secured bridge financing of US\$ 1.5 million to smoothen the toilet construction process<sup>58</sup>.

49. <http://www.gatesfoundation.org/learning/Documents/assessing-microfinance-wsh-2008.pdf>

50. <http://guardianmfi.com/>

51. [http://www.worldwaterweek.org/documents/WWW\\_PDF/2009/tuesday/K23/Water\\_org\\_Subsidies\\_Presentation\\_for\\_SIWI\\_2009.pdf](http://www.worldwaterweek.org/documents/WWW_PDF/2009/tuesday/K23/Water_org_Subsidies_Presentation_for_SIWI_2009.pdf)

52. <http://www.microfinancefocus.com/news/2009/08/19/gk-venturing-into-water-credit-gets-rs-1-34-cr-from-waterpartners/>

53. <http://www.microfinancefocus.com/news/2009/07/22/microfinance-loans-for-water-starved-people/>

54. <http://www.gatesfoundation.org/learning/Documents/assessing-microfinance-wsh-2008.pdf>

55. <http://water.org/projects/india/>

56. [http://www.google.co.in/url?sa=t&source=web&ct=res&cd=5&ved=OCB4QFJAE&url=http%3A%2F%2Fwww.indiaenvironmentportal.org.in%2Ffiles%2FSafe%2520drinking%2520water%2520in%2520rural%2520areas.doc&ei=DxUyS7qtL7q7APo9smwDA&usq=AFQjCNFfu82Kq7x5OmwrRt73vly-Jg1zrVg&sig2=0nh1srAZ3qPd27e3x\\_HZTQ](http://www.google.co.in/url?sa=t&source=web&ct=res&cd=5&ved=OCB4QFJAE&url=http%3A%2F%2Fwww.indiaenvironmentportal.org.in%2Ffiles%2FSafe%2520drinking%2520water%2520in%2520rural%2520areas.doc&ei=DxUyS7qtL7q7APo9smwDA&usq=AFQjCNFfu82Kq7x5OmwrRt73vly-Jg1zrVg&sig2=0nh1srAZ3qPd27e3x_HZTQ)

57. <http://watercredit.org/case%20study%20pdf/WaterCredit%20India%20Case%20Study%202008.pdf>

58. <http://www.gatesfoundation.org/learning/Documents/assessing-microfinance-wsh-2008.pdf>



## Conclusion

Our research found evidence of significant growth in the number of initiatives taken by public and private sector players to increase water and sanitation access for the lower income segments of the population. All the six intervention models studied in Phase I of the project have been adopted with varied success. The projects wherein the community is actively engaged in running and maintaining the facilities and providing services, and those that received greater support from the government, are more successful in achieving impact in a shorter timeframe. Microfinance is also increasingly emerging as a financing option for the beneficiaries.



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