

Phase I Findings: WASH Landscape Research for Strategic Planning

Prepared for
CNHF
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www.fsg-impact.org

Boston

Geneva

San Francisco

Seattle

Agenda

I. Background: The Problem and Current Approaches

A. Scope and Burden

B. Populations Affected

C. Trends in Intervention

II. The Funding Landscape

2.5 Billion People Live Under Poor Sanitary Conditions and Nearly 1 Billion Have Insufficient Access to Clean Water

Billions of people in developing countries lack access to basic sanitation



- 2.5 billion people (38% of the world's population) do not have access to improved sanitation
- Many defecate in fields, ditches, buckets, and into plastic bags that litter the streets
- Women often wait until dark to fulfill their sanitation needs, which can be unsafe; girls often abandon school when menstruation begins

Millions also lack access to the minimum adequate daily quantity of clean water



- 884 million people (13% of the world's population) do not have the 20 liters of clean water per day necessary to meet basic human needs
- On average, they live on less than 5 liters of unclean water per day – one-tenth of what the developed world uses merely to flush toilets
- Many draw water for consumption from ditches, rivers and lakes used by animals or polluted with excrement

The health risks from poor access to water and sanitation are exacerbated by unhygienic behaviors such as not washing hands after defecation or cleaning babies

Sources: UNICEF/WHO and Human development report, UNDP, 2006

Inadequate Water, Sanitation and Hygiene Reinforce Poverty By Undermining Health, Education and Productivity

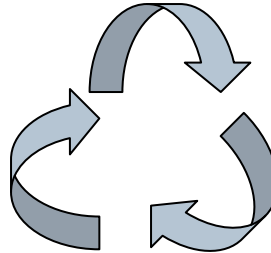
Millions of children suffer from poor health

- 5,000 children die every day due to infectious diarrhea; and thousands more of pneumonia and acute respiratory infections
- As many as 130 million children are infested by thousands of parasitic worms which cause malnutrition, anemia and chronic colitis
- Many existing health conditions such as HIV/AIDS, anemia, and malnutrition are exacerbated by lack of water and sanitation

Children frequently miss school

- Nearly 200 million school days are lost due to poor water and sanitation
- One in four school girls do not complete primary school -- compared with one in seven boys -- due to their increased need for privacy in schools without adequate sanitation facilities

Poor health limits progress in education and productivity



Low productivity leads to poverty and inability to afford medical care or education

Poor education lead to low productivity and lack of understanding about the importance of hygiene

Productive time gets wasted

- 40 billion hours are lost every year due to time spent fetching water in sub-Saharan Africa
- 5.5 billion adult productive days are lost every year due to diarrheal diseases.
- Adult productivity is limited due to low educational outcomes, illness, and caretaking

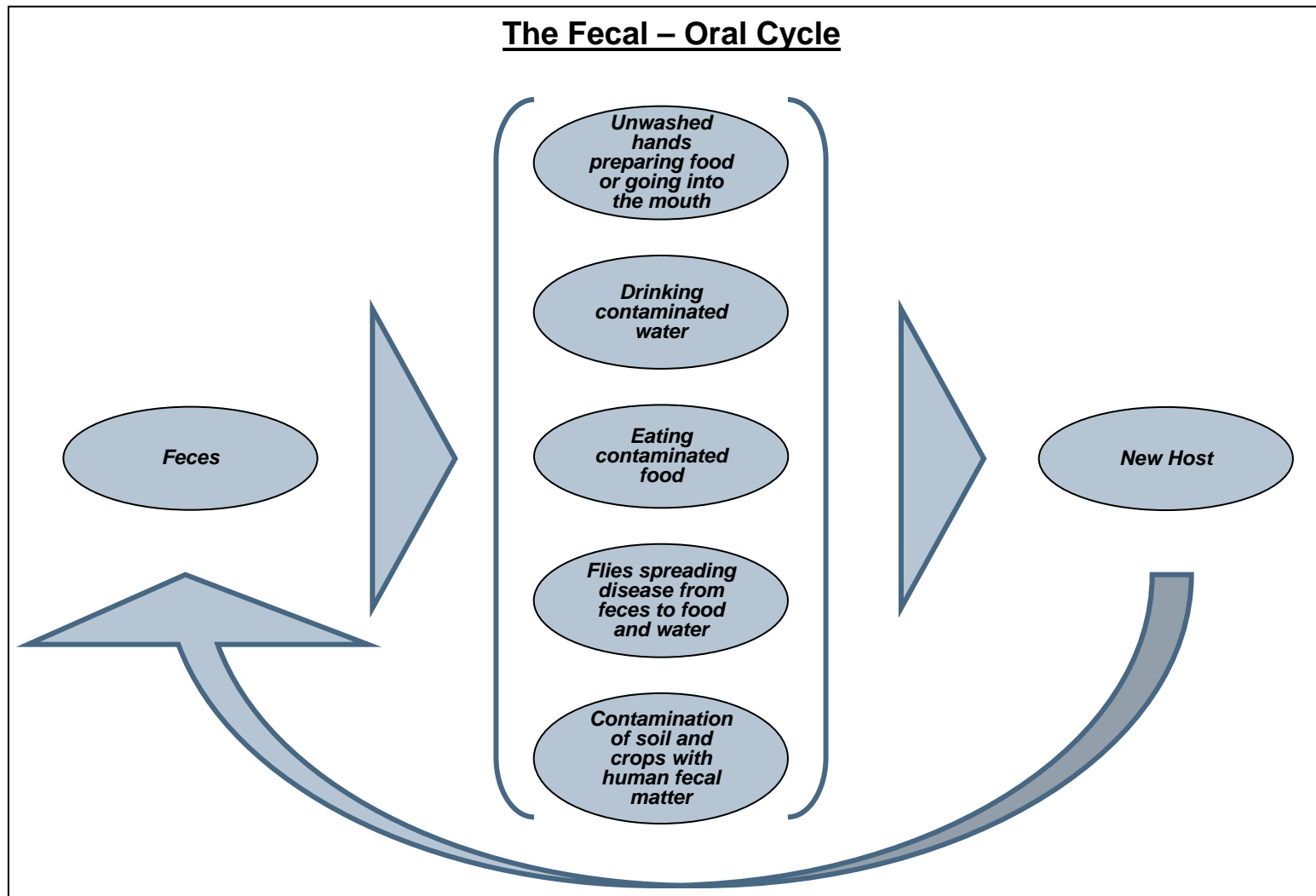
The result is a vicious spiral of community decline

Source: Human development report, UNDP, 2006, Sanitation.org, FSG Analysis

Unclean Water, Poor Sanitation and Bad Hygiene Contribute Directly to the Spread of Debilitating and Often Fatal Diseases

- Diseases spread through water, sanitation and hygiene include:
 - Diarrhea
 - Malaria
 - Intestinal Parasites
 - Trachoma
 - Shistosomiasis
 - Guinea Worm
 - River Blindness
 - Arsenic and Fluoride Poisoning

These Diseases Are Transmitted through Multiple Pathways



Handwashing, disposal of excreta and waste water, control of flies, and point-of-use water cleaning all act as barriers to interrupt this cycle

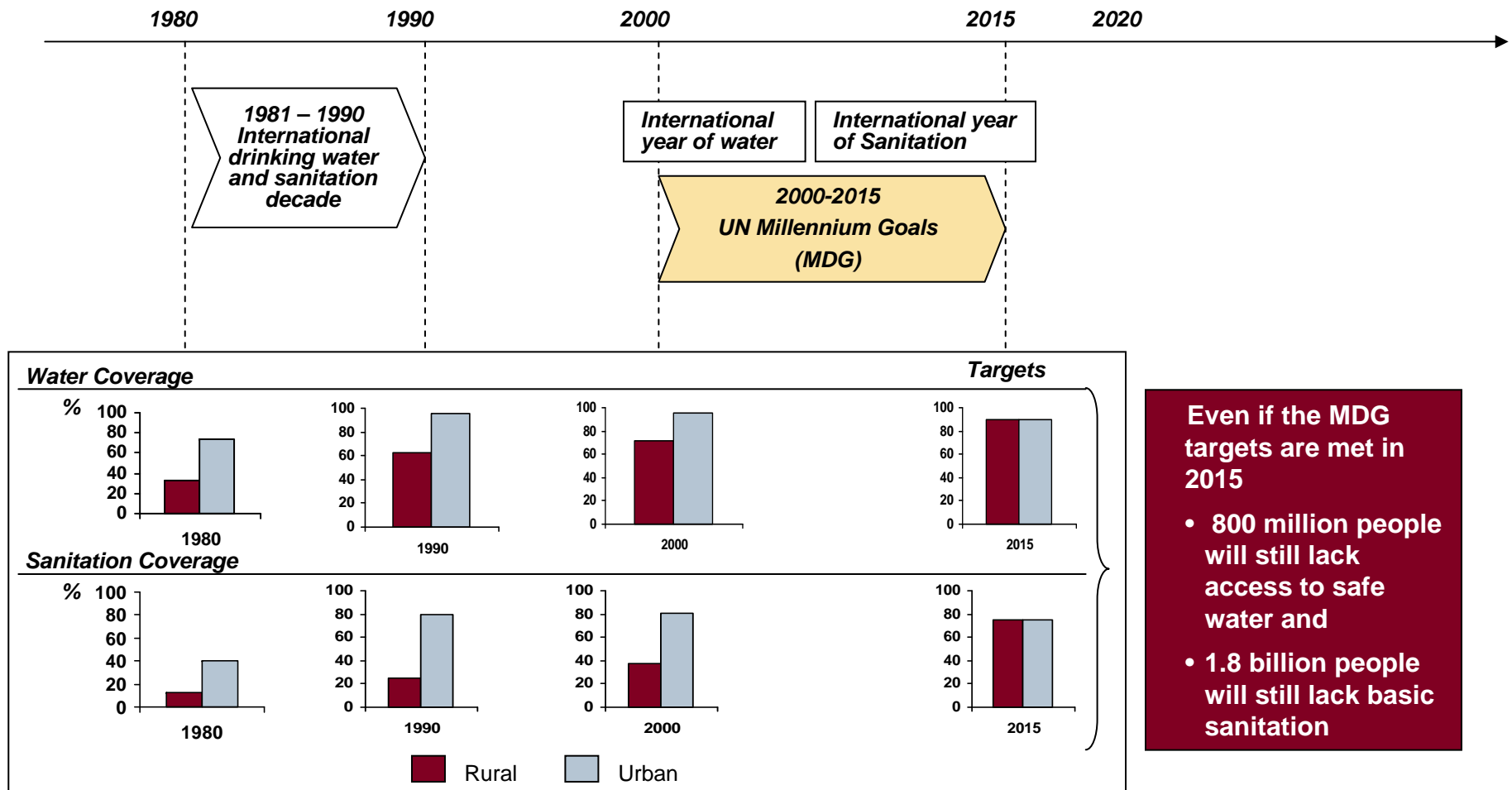
Source: Eisenberg et al 2007

Meeting the Millennium Development Goals (MDGs) Depends on Increased Access to Water and Sanitation

MDGs	Targets
① Eradicate extreme poverty and hunger	<ul style="list-style-type: none"> ▪ Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day ▪ Halve, between 1990 and 2015, the proportion of people who suffer from hunger
② Achieve universal primary education	<ul style="list-style-type: none"> ▪ Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary Schooling
③ Promote gender equality and empower women	<ul style="list-style-type: none"> ▪ Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015
④ Reduce child mortality	<ul style="list-style-type: none"> ▪ Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate
⑤ Improve maternal health	<ul style="list-style-type: none"> ▪ Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio
⑥ Combat HIV/AIDS, malaria and other diseases	<ul style="list-style-type: none"> ▪ Have halted by 2015 and begun to reverse the spread of HIV/AIDS ▪ Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
⑦ Ensure environmental sustainability	<ul style="list-style-type: none"> ▪ Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources ▪ Halve, by 2015, the proportion of people without sustainable access to safe drinking water ▪ To have achieved a significant improvement in the lives of at least 100 million slum dwellers
⑧ A global partnership for development	<ul style="list-style-type: none"> ▪ Develop further an open, rule-based, predictable, non-discriminatory trading and financial system ▪ In co-operation with developing countries, develop and implement strategies for decent and productive work for youth ▪ In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries ▪ In co-operation with the private sector, make available the benefits of new technologies, especially information and communications

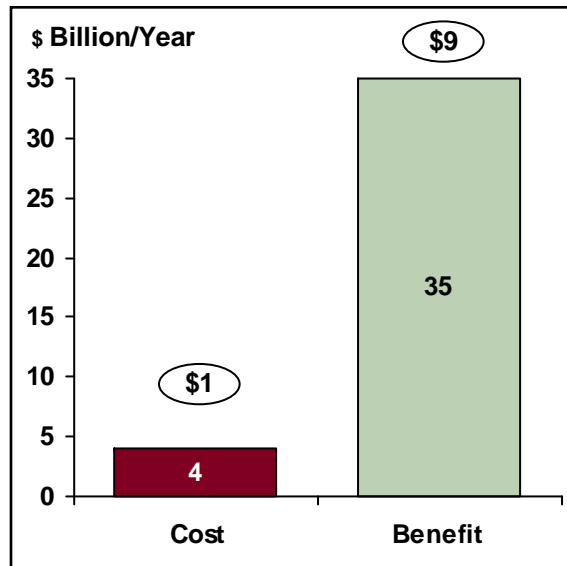
Targets for sanitation were added to MDG 7 in 2002

As of 2008, the World Is on Track to Meet the MDG Target for Drinking Water, but Lagging Behind in Sanitation



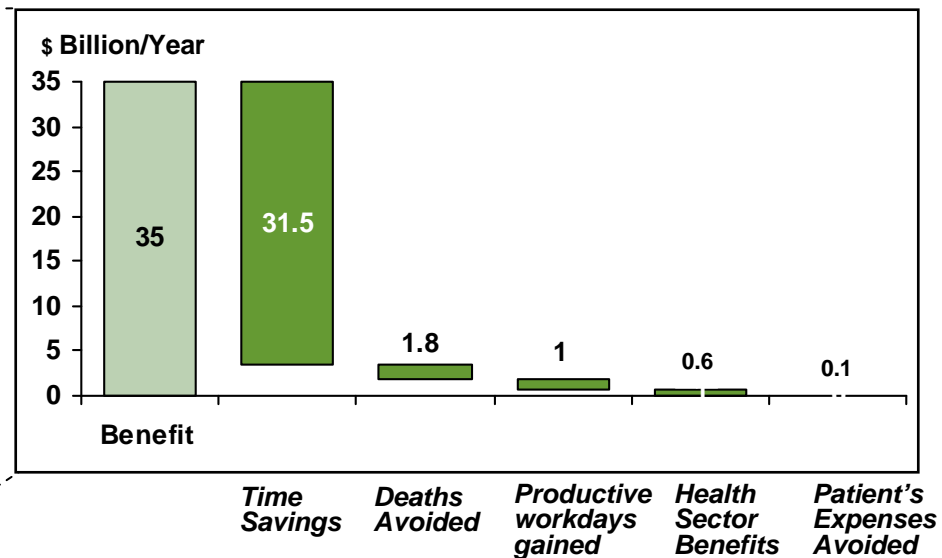
Improved Access to Water, Sanitation and Hygiene Yields \$9 in Benefits for Every \$1 Invested

Annual Cost/Benefits for Achieving the Sanitation MDG for the “Off-Track” Countries



- Hygiene and sanitation interventions are amongst the most cost-effective
- Hygiene promotion costs \$5/disability adjusted life year averted
- Basic sanitation costs \$10-100/disability adjusted life year averted
- Water treatment costs \$20-30/disability adjusted life year averted

Breakdown of Economic Benefits from Sanitation and Hygiene Interventions



Other Benefits

- Increase educational achievement
- Protect the environment
- Build community pride
- Contribute to poverty eradication

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The Populations Affected by Poor Water, Sanitation and Hygiene Vary by Geography, Population Density and Economic Standing



Geography



- There is a huge disparity in coverage between the different geographic regions of the world
 - Sub-Saharan Africa has the lowest water coverage
 - South India has the lowest levels of sanitation



Population Density



- The issues vary by population density in urban, small town and rural communities
 - Urban areas are densely populated and have access to better connectivity for water but often worse conditions for sanitation
 - Small towns offer opportunities for communal projects and small scale providers
 - Infrastructure in rural areas is largely undeveloped

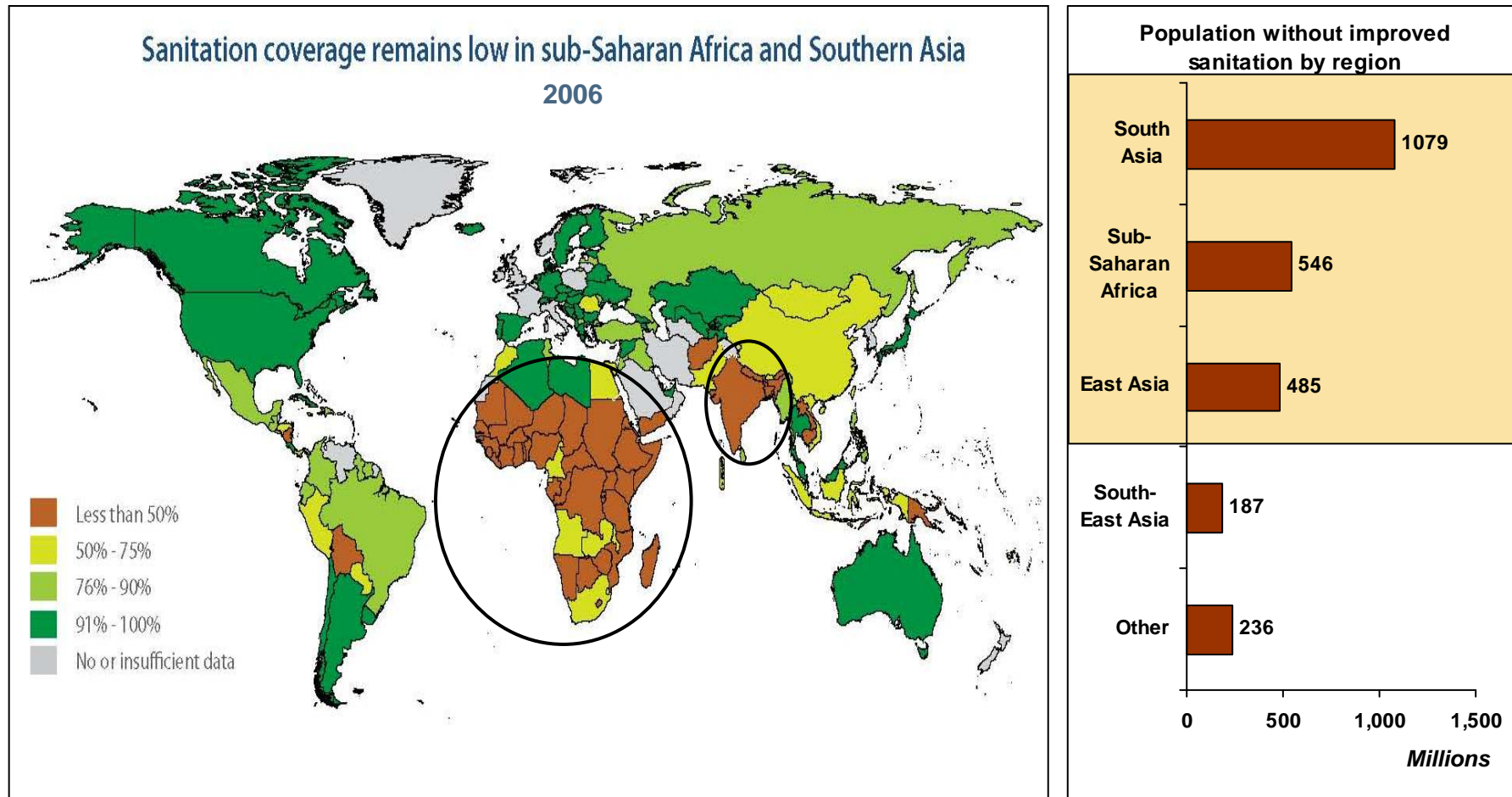


Economic Standing



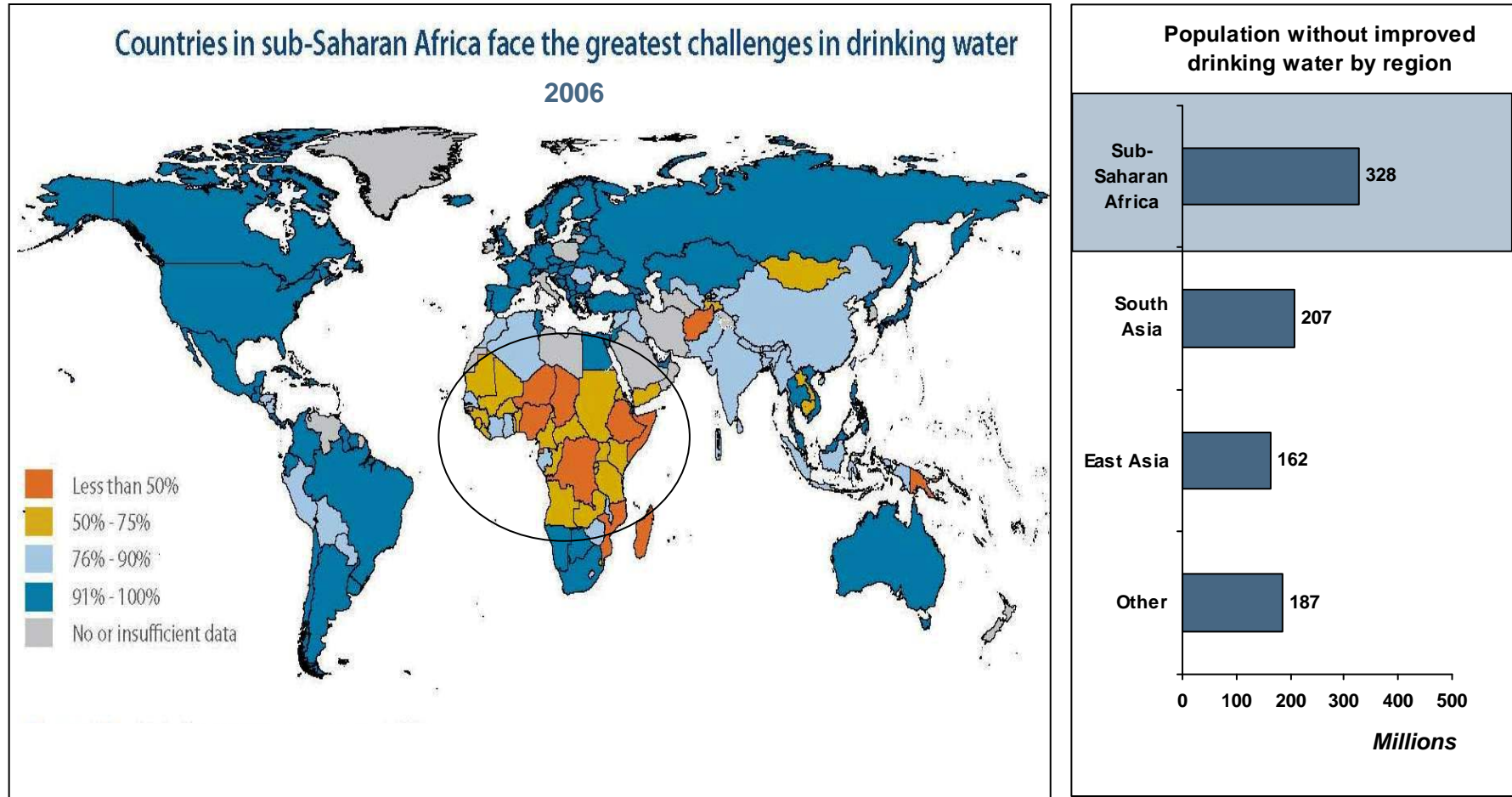
- The issues vary by level of poverty
 - Occasional, Fluctuating and Chronic Poor
- Especially in urban slums, the poor often pay more than higher income populations for water access
- The Chronic Poor have the least access to services
 - Entrepreneurial solutions that generate revenue are the most sustainable but they cannot serve the poorest populations

Sanitation Coverage is the Lowest in South Asia, Sub-Saharan Africa and East Asia



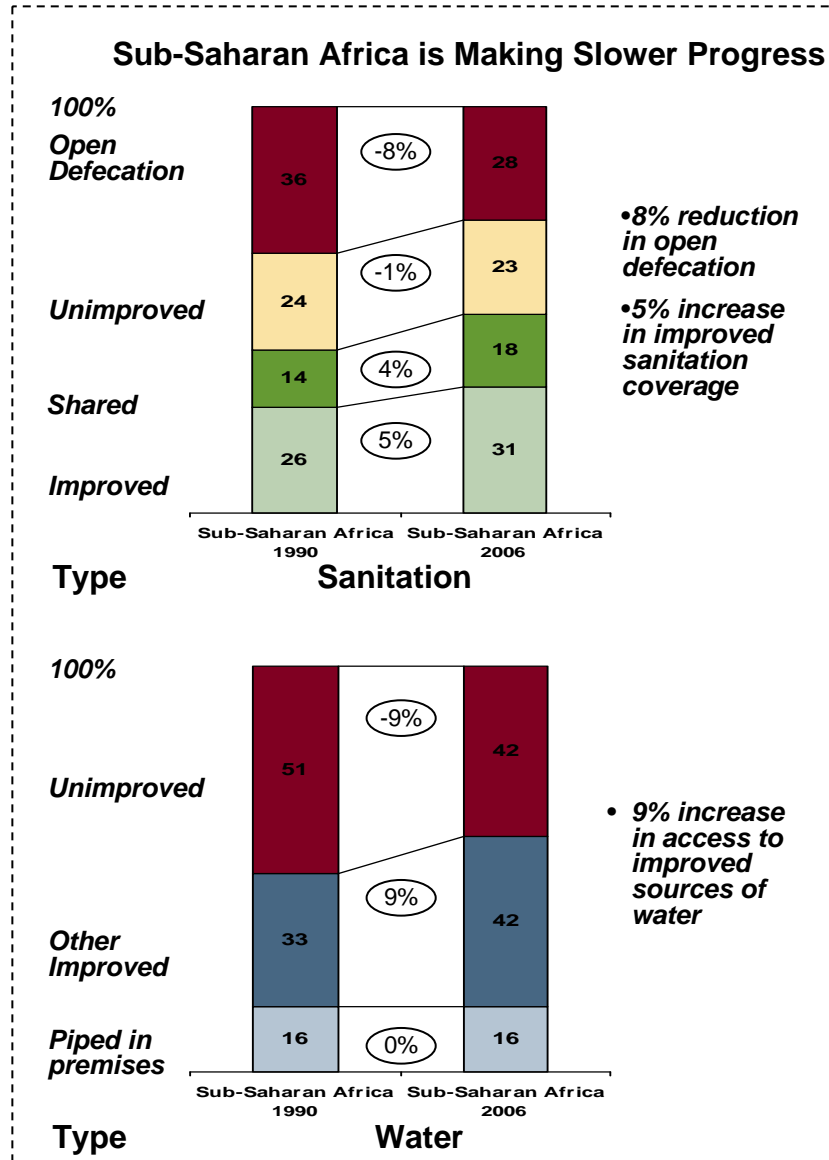
The countries with the poorest sanitation outside of these regions are Yemen, Bolivia, Nicaragua, Cambodia, Laos and Papua New Guinea

Clean Water Access is Lowest in Sub-Saharan Africa



The countries with the least water access outside of this region are Afghanistan and Papua New Guinea

Of the Two Regions Lagging Behind, Sub-Saharan Africa is Making Slower Progress in Sanitation and Water Supply

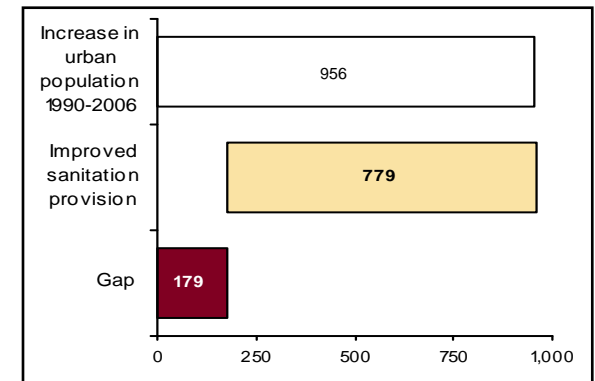
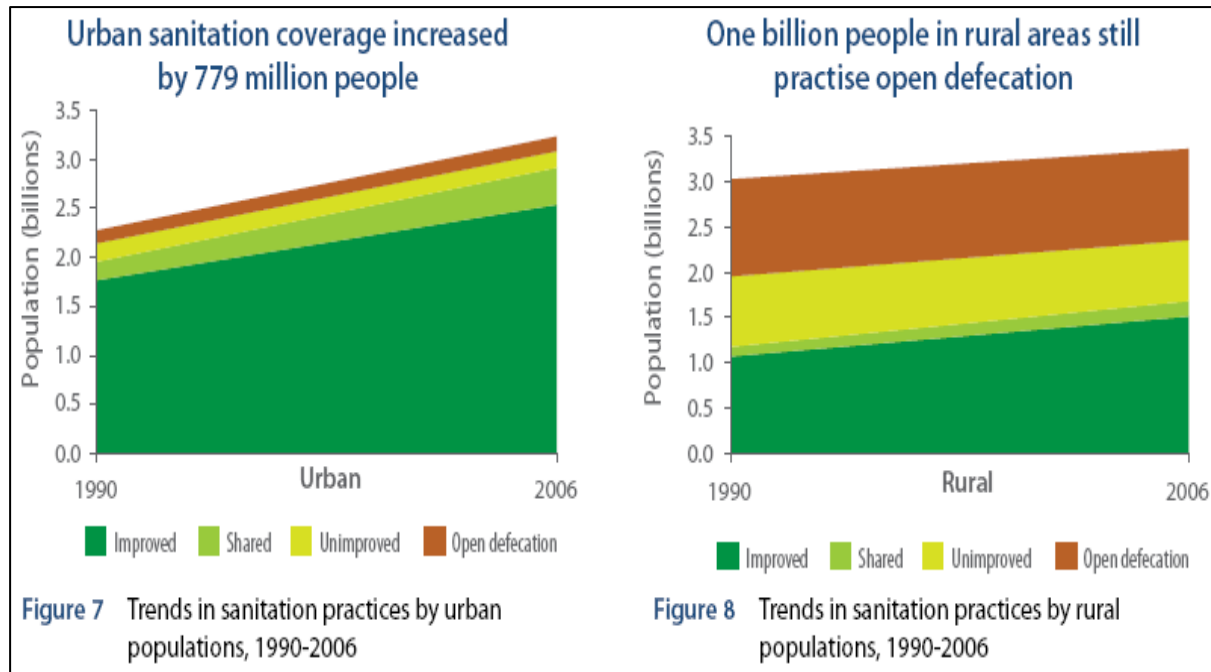


Source: WHO/UNICEF (2008) JMP
 CNHF - Phase I Research 7.9.09

Rural Areas Have the Least Sanitation Coverage but Urban Areas Are also Beginning to Fall Behind

Rural population represents more than 70% of the population using non-improved sanitation

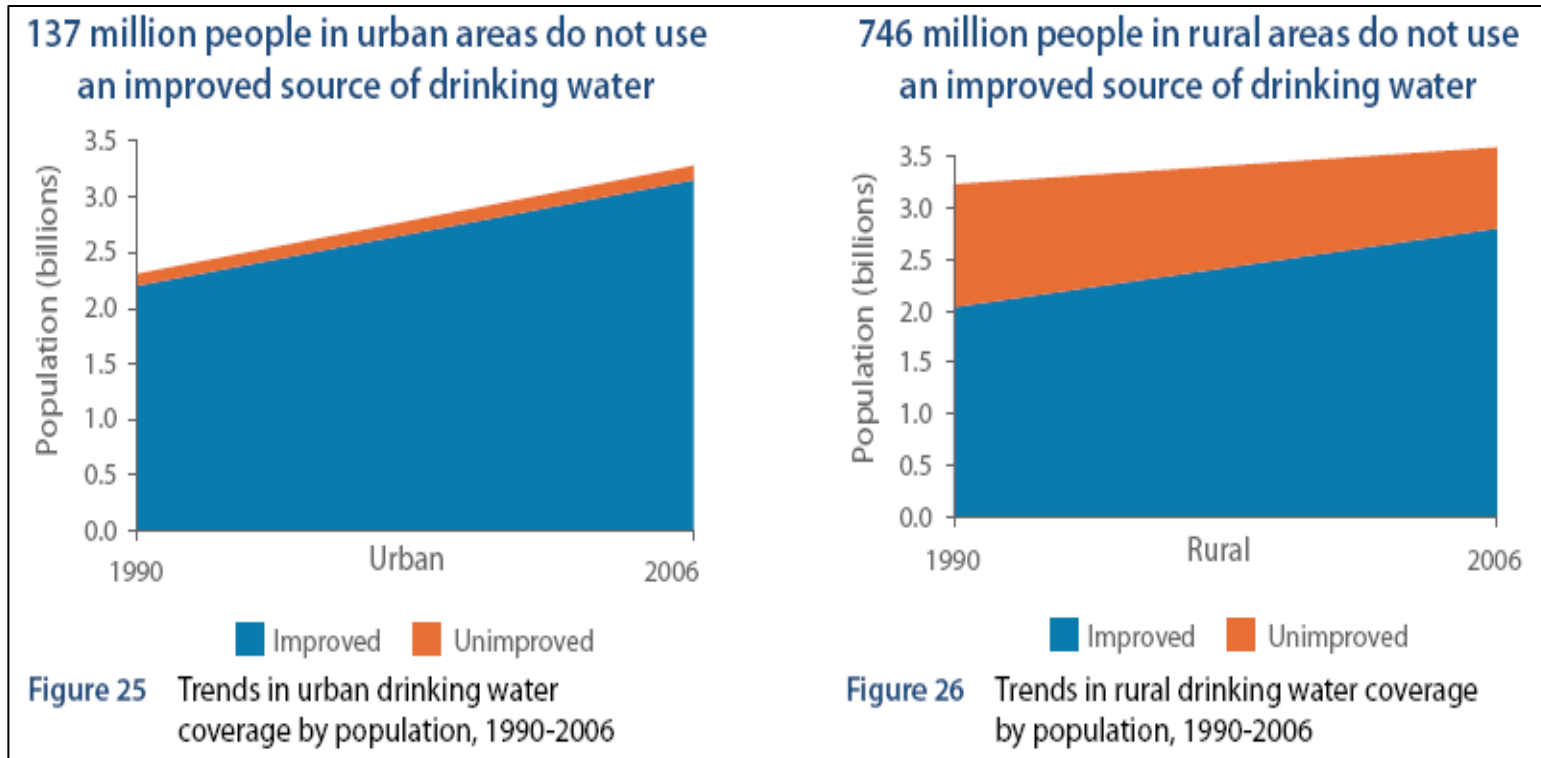
However, the growth of urban population has not been matched by the pace of improved sanitation



The rate of improvement in urban areas is higher than that of the rural areas

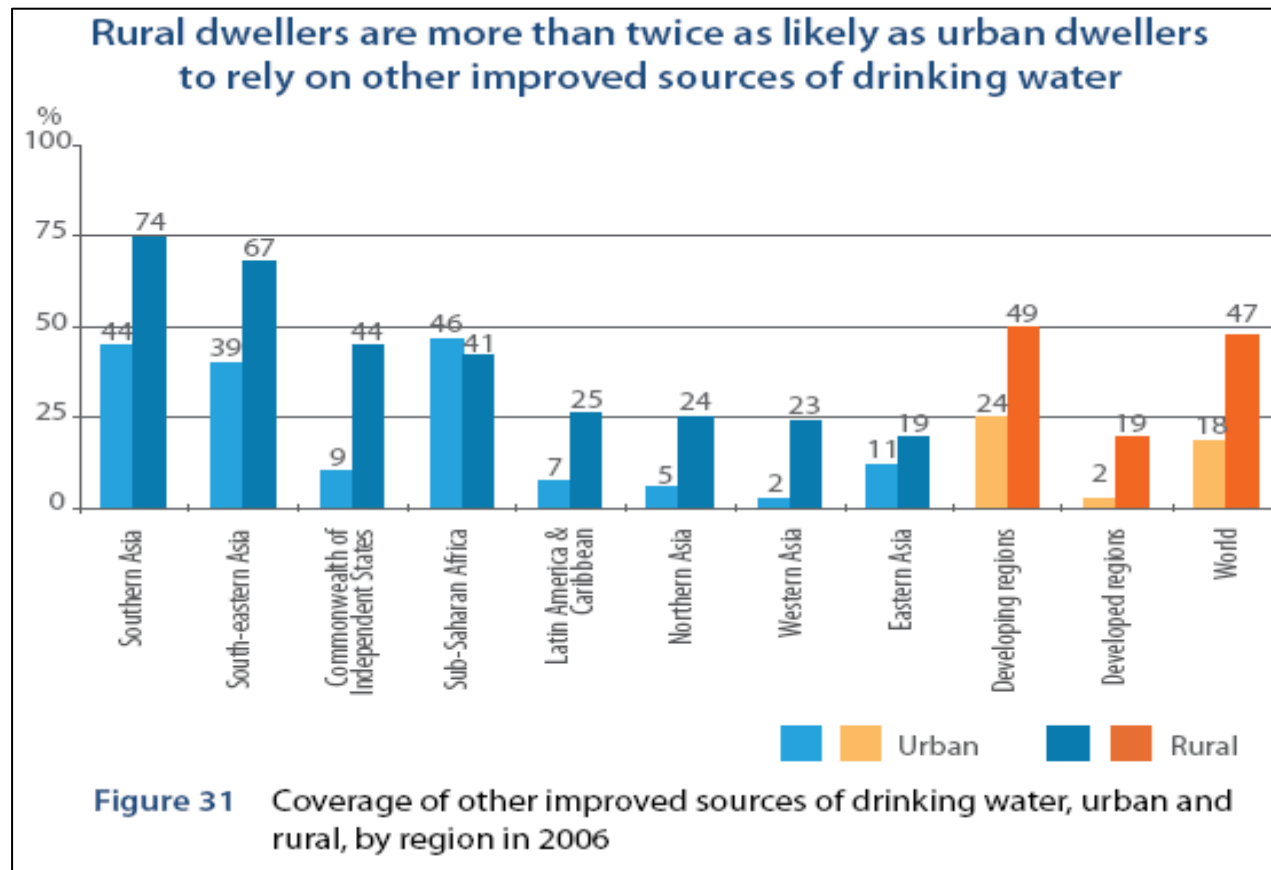
Rural Areas also Have the Least Improved Water Coverage

Rural population represents 84% of the population using unimproved sources of water



However, improved water provision has kept pace with the growth of urban populations

Rural Dwellers Often Depend on Non-Piped Sources with Less Reliable Water Quality



Water transported from improved sources is also prone to contamination from the point of collection to consumption

Source: Based on data drawn from Multiple Indicator Cluster Surveys (MICS) and Demographic and Health Surveys (DHS) in 38 developing countries in 2005 and 2006, WHO/UNICEF (2008) JMP

The Chronic Poor Have the Most Challenges In Prioritizing and Accessing Clean Water and Adequate Sanitation

Types of Poor

Characteristics

Occasional Poor
Size: 1.5 bn

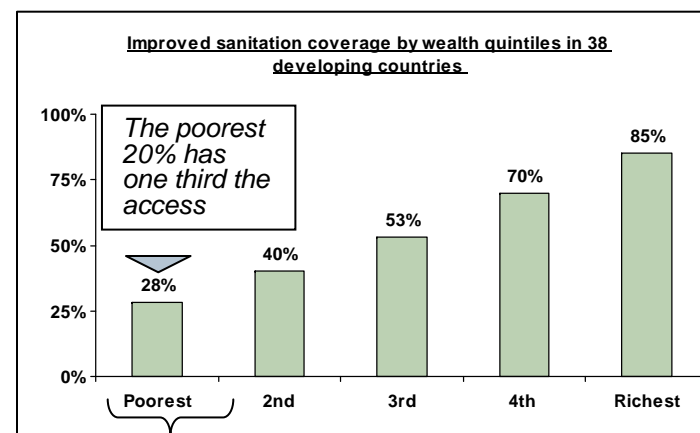
- Households in a slum with some income or rural household with sufficient land to produce some surplus
- Able to **contribute some amount to construct WS&H services and pay some amount for operating costs**

Fluctuating Poor
Size: 800m

- Rural and urban slum-based households who have access to seasonal employment leading to irregular income
- Able to **contribute some amount for operating costs of water and sanitation**

Chronic Poor
Size: 420m

- Single parent families, or families with too many children or chronic illness and little access to income or employment; street sleepers and children;
- **Unable to afford to pay for any WASH services**



Chronic

- The **richest are three times more likely** to use improved sanitation **than the poorest**
- In **Sub-Saharan Africa**, the **inequality is higher** – the **richest quintile is 5 times as likely as the poorest** to use an improved sanitation facility

Revenue producing interventions tend to be more sustainable because sellers are motivated to keep them operational – but the Chronic Poor have no ability to pay

There Is No Single Answer: Solutions Must Be Tailored to Specific Regions, Population Density and Income Levels

- Cultural and environmental conditions differ dramatically among different regions – solutions that work in one country may not work in another
 - West Africa, Mexico and India, where CNHF works, each have different cultural sensitivities
- Rural locations require a different set of solutions than small towns which can better support small scale providers or urban settings where piping and sewage treatment are more feasible
- Economic models that are sustainable cannot serve the lowest income populations while donation-only models tend to fall into disrepair

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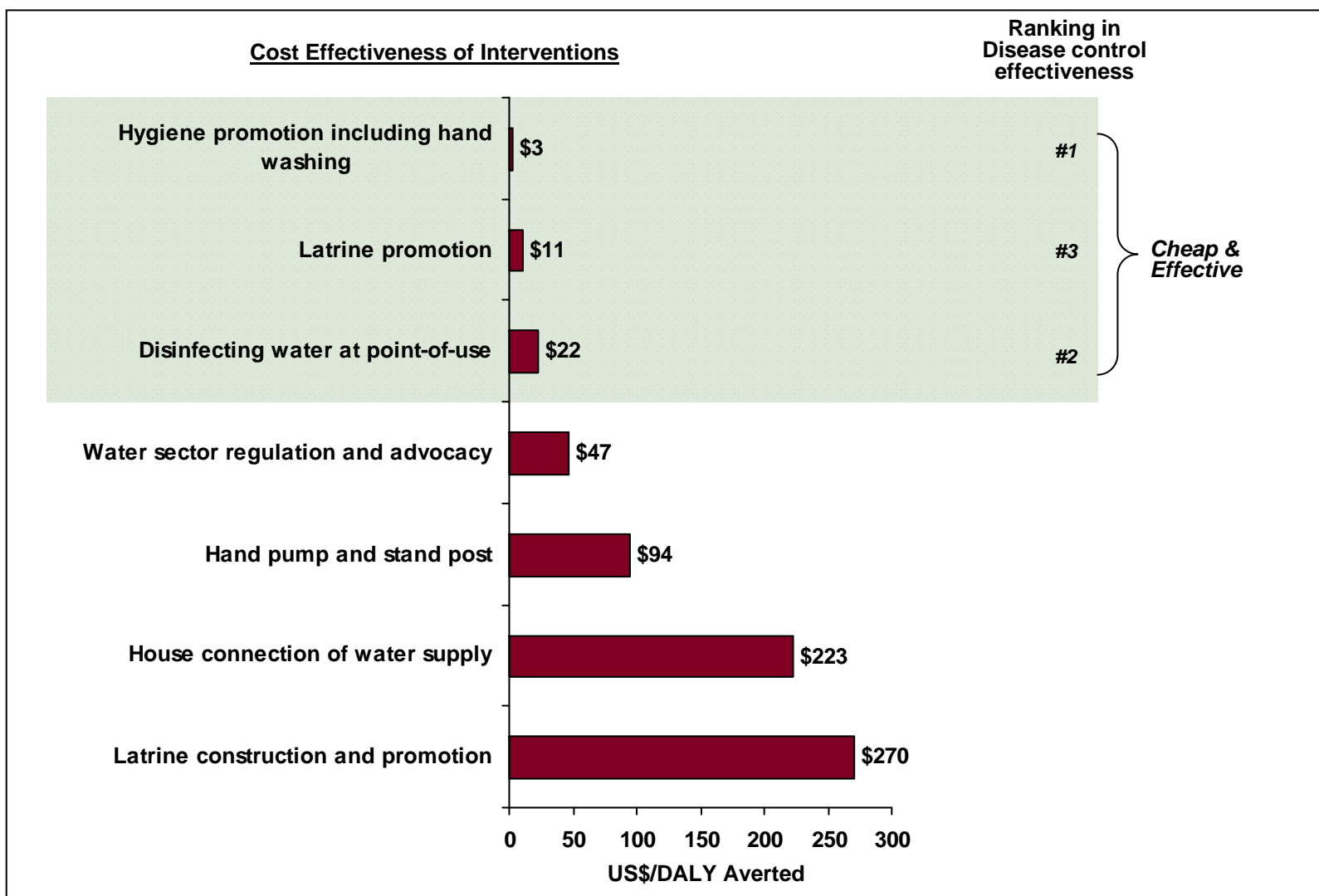
Interventions to Date Have Suffered from a Number of Shortcomings

- Misalignment with users
 - Poor understanding of user behaviors and motivations
 - Technologies that are not well adapted to local context
- Lack of coordination among government, NGOs, donors, and private sector
- Political pressures and corruption
- Alienation – foreign donors impose policy directives that can undermine local ownership and responsibility
- An emphasis on privatization that may not bring any additional benefits
- Poor maintenance and sustainability
- Inadequate and unreliable data

Often the Lowest Technology Interventions Are the Most Successful

- The Barefoot College has built rooftop collection systems that have collected 29 million liters of rainwater in 470 schools and community centers and trained handpump mechanics to repair more than 45,000 water pumps already in place
- Pit latrines and pour flush toilets are easy to install and maintain
 - Compost toilets, although more complex, require no water, sewers or electricity and produce disease-free compost for local agricultural use
- In Kenya, 650 small scale provider entrepreneurs sell water from kiosks to half a million people
- Bio-sand filters, from local materials, can provide point-of-use water purification and last for 20 years with minimal maintenance
- Total sanitation and school sanitation programs can make open defecation unacceptable in rural communities through peer pressure and the influence of school children

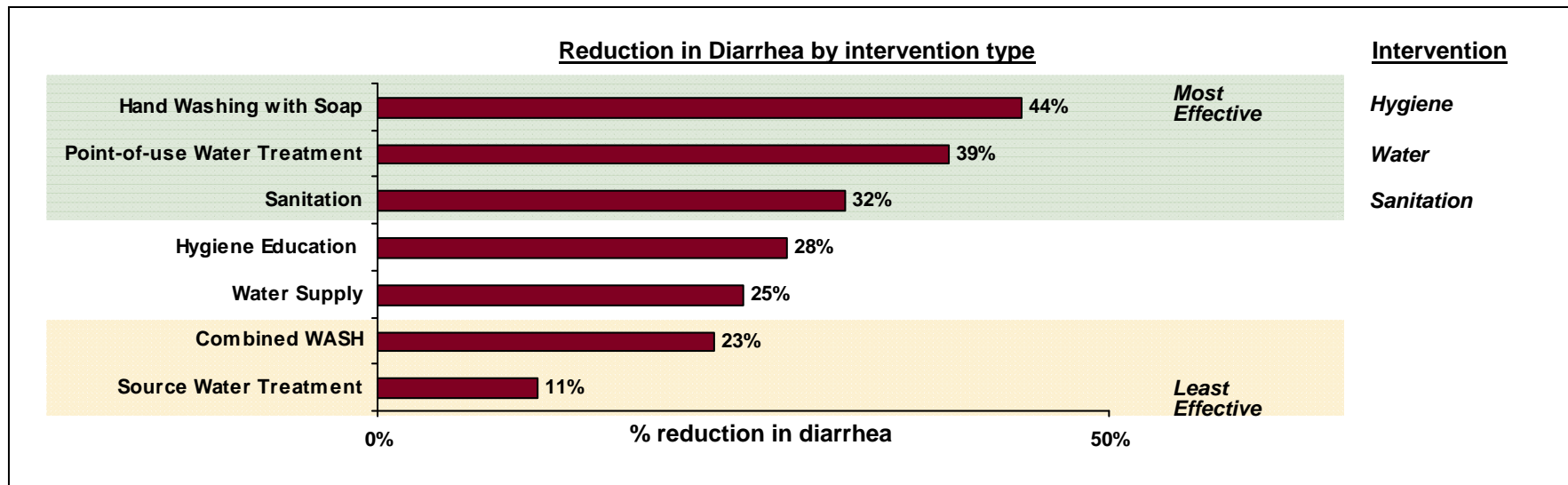
Some of the Most Effective WASH Approaches are Also the Cheapest



The success factors of these interventions need to be better understood for the specific contexts

Source: Literature review/Working document on Sanitation and Hygiene interventions, UNICEF, December 2007

Some Approaches are Highly Effective in Reducing Disease



Effective Interventions

- Hand washing with soap (HWWS) has been proved to be most effective in reducing diarrhea morbidity (42%).
 - Other practices such as hygiene education seem less effective than HWWS
- Treating water and dis-infecting it at home/at communities is found to be 39% effective. This could explain that water gets contaminated enroute from the source to households
- Using private/communal latrines is found to be 32% effective

Evidence Shows that Integrated WASH programs are less effective than single interventions

- This is an important finding since WASH interventions are commonly manifold
- Potential reasons include
 - The piecemeal implementation of more ambitious programs results in an overall lack of focus or attention
 - The recipients demand water but not sanitation

While Integrated Water Supply, Sanitation and Hygiene Projects Increased the Amount of Activity Towards Reaching Multiple Goals, They have been Less Effective

Different Time Horizons

- A new water supply can be installed and completed in a matter of weeks; both sanitation and hygiene are more complex forms of behavior change which can require years to achieve.

Different decision-making processes


- Water supply decision-making is based at community level, while sanitation is made at household level and most hygiene behavior change at individual level. The promotion techniques needed are different for each level.

Time to create demand

- Demand for a water supply already exists and often it is difficult for an organization to meet the high levels of demand. Demand for sanitation or hygiene is hidden, weak, and needs to be created and vocalized before systems can be designed and constructed.

Different Skill Sets

- The water sector has been dominated by engineers who feel comfortable with technical problems and tend to lean towards technical solutions.
- Sanitation requires people skills, cultural sensitivity and adaptive leadership with which engineers may feel uncomfortable.

- 
- Less success of the overall program
 - Less focus on key components that need attention

Source: "Rethinking Sanitation: Lessons and Innovation for Sustainability and Success in the New Millennium", Marion W. Jenkins and Steven Sugden

In the Integrated WASH Projects, Sanitation Lagged Behind

Example 1: Supply led-WASH with little attention to hygiene promotion

- The supply-led WASH model paid little attention to understanding and stimulating demand for sanitation improvements before building sanitation infrastructure
- A hardware subsidy was often used to induce sanitation changes at the household level, but rarely worked to create willingness to pay for, maintain and use the new sanitation facilities
- To motivate changes in sanitation behavior, health education programs with messages about the public health benefits of having and using a toilet were hastily tacked on to construction projects
- However, individual households seldom decided to use sanitation or better hygiene due to health reasons

Example 2: Unsustainable changes sanitation supply chains

- Project implementers, when faced with lack of demand and limited time, looked for short cuts to make the latrine building process as easy as possible for the householder
- They provided access to a mason, free delivery of latrine components and told families the type of latrine they would be provided with
- When the project ended, these support mechanisms dissolved and the community lacked latrine component supply chains, technology options and faced cost constraints similar to when the project started

Poor Results

- Many continued to not use the toilets built
- Any expected public health benefits were only partly achieved
- Benefits declined as the proportion of the community without access to safe sanitation increased
- The poorer, less well educated, more risk adverse members of the community (who are generally slower to take advantage of unfamiliar technologies and often disenfranchised in one way or another from access to such new opportunities) were the least benefited from the programs

Source: "Rethinking Sanitation: Lessons and Innovation for Sustainability and Success in the New Millennium", Marion W. Jenkins and Steven Sugden

Nevertheless, Some Countries and Regions Have been Successful in Achieving Dramatic Improvements in Coverage and the Related Impact

Brazil has proven that sanitation projects lead to better health outcome

- In a recent, 7-year long city-wide sanitization drive raised sanitation coverage rates from 26% to 80%
- This led to a overall decrease of diarrhea in the region by 22%
- The regions with the poorest sanitation coverage however saw double the reduction - almost 43% decrease

Thailand achieved close to 100% water and sanitation coverage (1950- 2000)

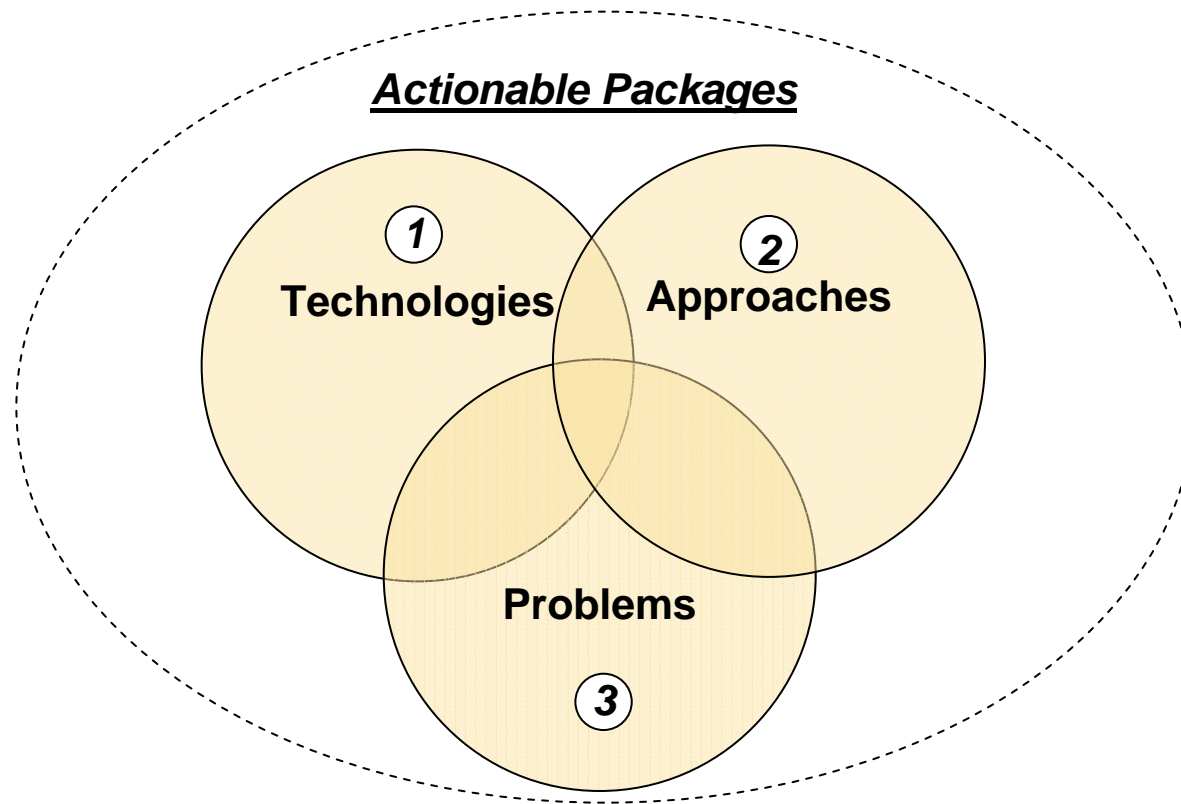
Key success factors include...

- Strong political commitment and good leadership in government at all levels and at the grassroots
- Intensive and effective health education reaching most families and communities for behavior change
- Establishment of revolving funds at grassroots to shift financial investment from the government to the people to set up sanitation
- Active NGO and private sector involvement
- Mobilization of resources and coordination between government agencies, NGOs and private sector

The successes were possible due to strong government leadership, partnerships on the ground and use of effective interventions

Source: Barreto, M. et al., Effect of city-wide sanitation program on reduction in rate of childhood diarrhea in northeast Brazil: assessment by two cohort studies, The Lancet, 2007, Universal sanitation-Thailand Experiences, 2000, T.V.Luong

A Recent Report Commissioned by the Bill & Melinda Gates Foundation Recommended that Interventions Combine Three Components



The report documented more than two dozen promising interventions

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

1 Landscape of Technologies

	Technology	Explanation (example)
Water	Resource Assessment	<ul style="list-style-type: none"> Data collection on water resource, handling, storage and access
	Water sources	<ul style="list-style-type: none"> Groundwater source construction (bore wells, and tube wells)
	Water Lifting and Carrying	<ul style="list-style-type: none"> Lifting the water from the ground water sources through pumping (hand pump and solar) Household water carrying (rollers)
	Water Storage	<ul style="list-style-type: none"> Rain water storage containers (jars, large containers, concrete tanks)
	Water Delivery	<ul style="list-style-type: none"> Water supply technologies that act as alternatives to traditional underground piped systems (inexpensive metering systems, over the ground pipe systems)
	Water Treatment	<ul style="list-style-type: none"> Point-of-use water treatments for households and communities to remove water contamination to make it drinkable and usable for cooking (chlorine, PUR)
Sanitation	Excreta Disposal	<ul style="list-style-type: none"> On-site sanitation technology (Pit latrines, VIP latrines, eco-san), school-friendly sanitation, latrine emptying (vacuum, manual), bio-additives for composting
	Waste Water Disposal	<ul style="list-style-type: none"> Technologies to dispose waste water generated from the household activities (latrines, open drains, sewers)
	Solid Waste Disposal	<ul style="list-style-type: none"> Technologies to dispose solid waste generated from the household activities (recycling, transporting, composting)
Hygiene	Personal and Household hygiene	<ul style="list-style-type: none"> Hygiene hardware (soaps, non-water based hand washing products, sanitary products relating to women)
	Hygiene behavior change	<ul style="list-style-type: none"> Hygiene promotion tools (posters, radios, small microscopes to visualize germs)

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

② Landscape of Service Delivery Approaches

	Service Delivery	Explanation (example)
Water	Self-service	<ul style="list-style-type: none"> • Individuals collect their own water from water sources
	Community controlled	<ul style="list-style-type: none"> • Communities collect their own water from water sources
	Small Scale Private	<ul style="list-style-type: none"> • Households purchase water from small scale private vendors
	Private Utility	<ul style="list-style-type: none"> • Households purchase water from private utility companies (piped or other types of water delivery)
	Municipal Water Supply	<ul style="list-style-type: none"> • Households get access to free or paid for water through municipality-built infrastructure (piped water)
	NGOs and Donor Supported Projects	<ul style="list-style-type: none"> • Households get access to free water through projects supported by donors
Sanitation and Hygiene	Self-service	<ul style="list-style-type: none"> • Individuals build their own latrines, maintain them and operate them
	Community controlled	<ul style="list-style-type: none"> • Communities build their own latrines, maintain them and operate them
	Small Scale Private	<ul style="list-style-type: none"> • Households depend on small scale private operators providing construction and waste management services
	Private Utility	<ul style="list-style-type: none"> • Households depend on large private utilities from the industrialized countries for construction and waste management services
	Municipal Supply	<ul style="list-style-type: none"> • Operate sewerage systems, pit and septic tank emptying services
	NGOs and Donor Supported Projects	<ul style="list-style-type: none"> • Assist in constructing latrines, hygiene promotion, provide access to hygiene materials
	School sanitation	<ul style="list-style-type: none"> • Assist schools in constructing latrines, hygiene promotion, and provide access to hygiene materials

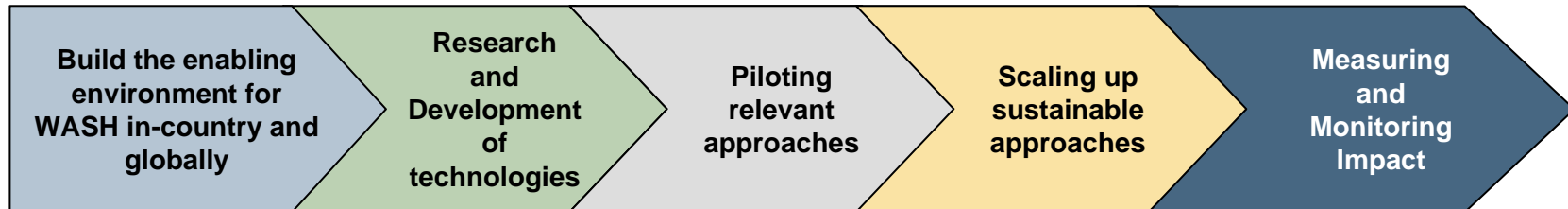
Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

③ Landscape of Problem Areas

	Problem Areas	Explanation (example)
Water	Ground water dependant (Rural)	<ul style="list-style-type: none"> Water solutions applicable for people dependant on ground water (a majority of Sub-Saharan Africa and Asia)
	Water Carrying (Rural)	<ul style="list-style-type: none"> Water solutions applicable for people dependant on carrying water from sources (rivers, lakes, ponds and hand pumps)
	Small Town	<ul style="list-style-type: none"> Water solutions applicable for people living in small towns (mix of ground water, water vending and piped systems)
	Urban Slum	<ul style="list-style-type: none"> Water solutions applicable for people living in slums in urban areas (piped systems and water vending)
Sanitation	Rural	<ul style="list-style-type: none"> Sanitation solutions applicable for people living in rural areas (total sanitation approach, upgrading household solutions through self-help)
	Small town	<ul style="list-style-type: none"> Sanitation solutions applicable for people living in small towns (entrepreneurial sanitation provision, school sanitation)
	Urban	<ul style="list-style-type: none"> Sanitation solutions applicable for people living in urban areas (commercially franchised sanitation points, reduced cost sewerage)
Hygiene	All	<ul style="list-style-type: none"> Solutions for populations who could benefit from improved hygiene behaviors (social marketing, commercial provision of hygiene products)

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

Implementing a WASH Strategy Requires a Continuum of Interventions



- There is lack of political commitment in many countries to make WASH a priority
- There is a lot of research going into technologies of WASH that can be commercialized to a section of population with affordability
- However, there is a need for research going into low-cost technologies that might serve the poorest of the populations
- The traditional approaches have not created a lot of impact
- Plenty of successful approaches are being piloted at small scale
- There is a huge deficiency in taking approaches to scale
- The lack of appropriate institutions involved in extension, operation, and maintenance of water supply and sanitation services at all levels
- Chronic dysfunction of existing institutional arrangements
- More technically challenging in poor communities than in rich ones
- Non- technical issues such as financing and institutions are equally important
- There is insufficient data about effectiveness of interventions and their impact on the economic, health and educational burdens
- There is no international pressure to improve

Source: FSG Analysis, “*Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene*” – Main report, Cranfield University, AgualConsult, IRC, September 2006

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A Wide Range of Actors Are Engaged in the WASH Sector

External

In-Country

Donors – ODA

Bilaterals

- Japan
- USAID
- France
- Germany
- DFID
- Netherlands

Multilaterals

- IDA (World Bank)
- European Commission
- African Development Bank Fund
- Asian Development Bank Fund
- IDB Special Fund
- UNICEF
- WHO
- UNDP

Donors – Private

- Conrad N. Hilton Foundation
- Bill & Melinda Gates Foundation
- Case Foundation
- Robbins Foundation
- Ford Foundation
- Mott Foundation
- Howard G. Buffett Foundation
- Rockefeller Foundation
- Packard Foundation
- Hewlett Foundation
- Environmental Grantmakers Association
- Wallace Genetic Foundation
- Atlantic Philanthropies
- Kind World Foundation
- Acumen Fund
- Ashoka

Formal Private Sector

- Thames Water
- Suez
- Coca-cola
- General Electric
- Dow Chemical
- Pepsi
- Procter & Gamble
- Starbucks
- Johnson & Johnson
- SAB Miller

Public Sector

- National Government
- Public Utilities

NGOs/Think Tanks/Networks/Other

- Cranfield University
- World Water Council
- International Water and Sanitation Center
- Global Water Partnership
- SIWI
- WaterAid
- Water Advocates
- The Global Water Challenge
- Safe Water Network
- World Vision
- CARE

Informal Private Sector

- Small Scale Providers
- Entrepreneurs

Traditionally, Funders have Supported Three Levels of Water, Sanitation and Hygiene Improvement Projects

<i>Project Category</i>	<i>Examples</i>	<i>Comments</i>
1 Water Resources Management	<ul style="list-style-type: none"> • Water resources protection • River development • Waste management/disposal • Water resources policy/administrative management 	<ul style="list-style-type: none"> • Macro-level/systemic focus • Large-scale projects, which need high levels of financial investment • Cost-benefits unclear • Long term time horizon for change • Expected outcome <ul style="list-style-type: none"> • Better use of resources and preservation of the ecosystem • efficient/improved use of resources by agriculture/industry • Increased access to water and sanitation
2 Large-scale infrastructure	<ul style="list-style-type: none"> • Large water supply and sanitation systems 	
3 Individual or Community based	<ul style="list-style-type: none"> • Basic drinking water supply and sanitation • Education and training on water supply sanitation 	

Unfortunately, many projects have not led to sustainable health, economic or educational improvements

Individual/Community Based Approaches to Water and Sanitation Provision Have Often Focused on Providing the “Hardware” ...

Interventions of Individual/Community level Projects	Examples of Interventions	Program Objectives	Deficiencies
<p>Water Access</p>	<ul style="list-style-type: none"> • Dig wells • Provide house connection to water supply • Construct hand pumps or stand post • Provide access to point-of-use water treatment such as chlorination, boiling, safe storage etc. 	<p><i>To increase ...</i></p> <ul style="list-style-type: none"> • Quantity/household • Quality <p><i>... of water access</i></p>	<ul style="list-style-type: none"> • Maintenance of systems • Reliability of operations
<p>Sanitation Access</p>	<ul style="list-style-type: none"> • Construct communal and private latrines 	<p><i>To increase ...</i></p> <ul style="list-style-type: none"> • Coverage <p><i>... of sanitation practice</i></p>	<ul style="list-style-type: none"> • Maintenance of systems

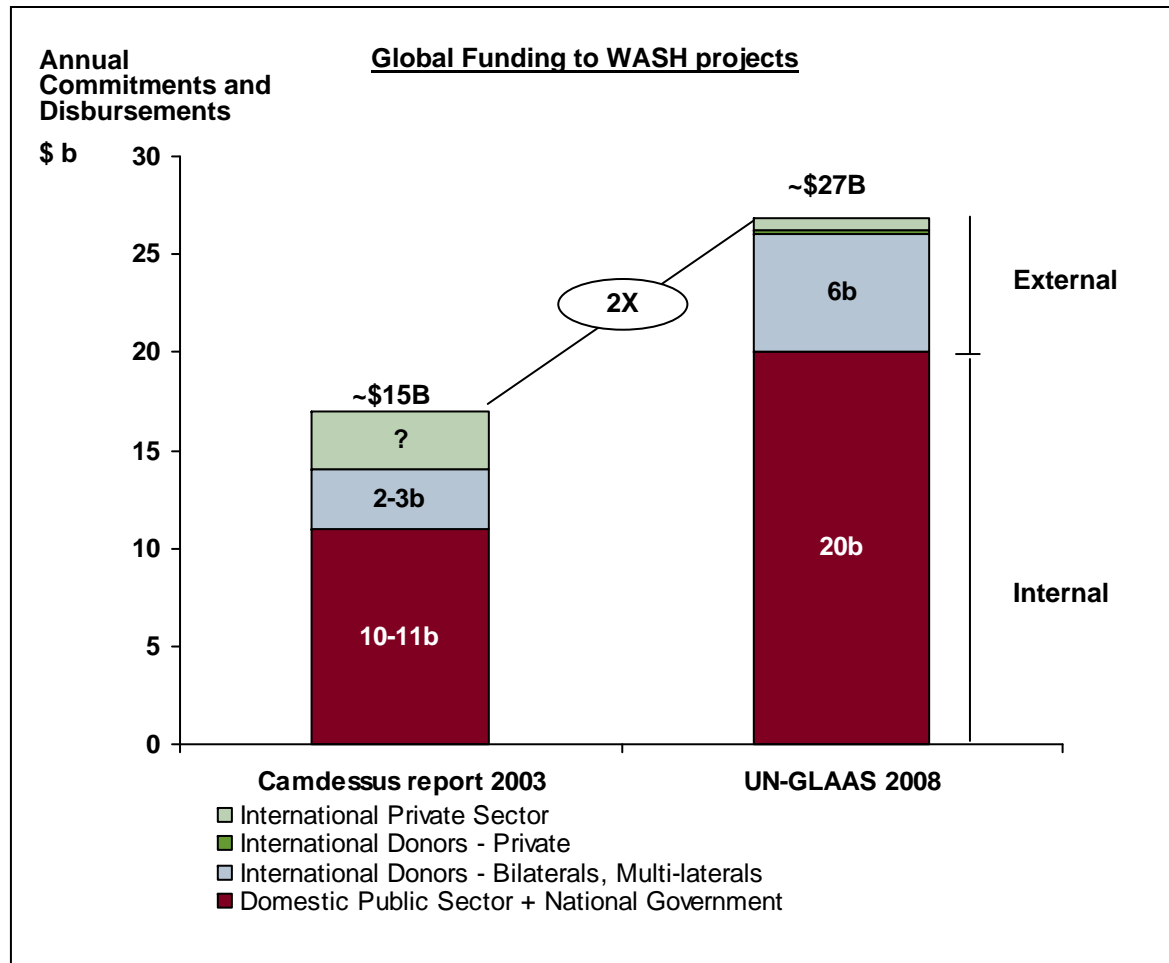
Maintenance

“Hardware” focused

**... Without adequate attention to sustainability over time --
As a result, 20-50% of installed infrastructure is no longer functional**

Source: “Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene” – Main report, Cranfield University, AgualConsult, IRC, September 2006

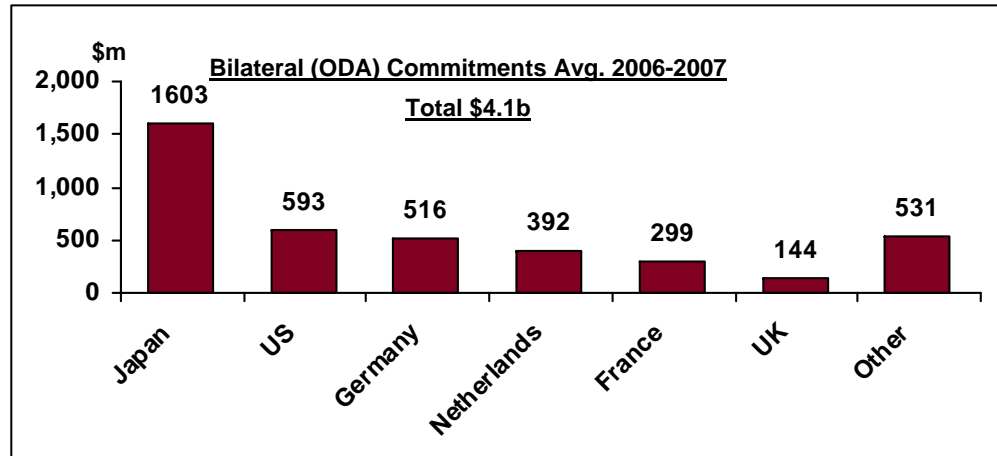
Global Funding For WASH Doubled from 2003-2008



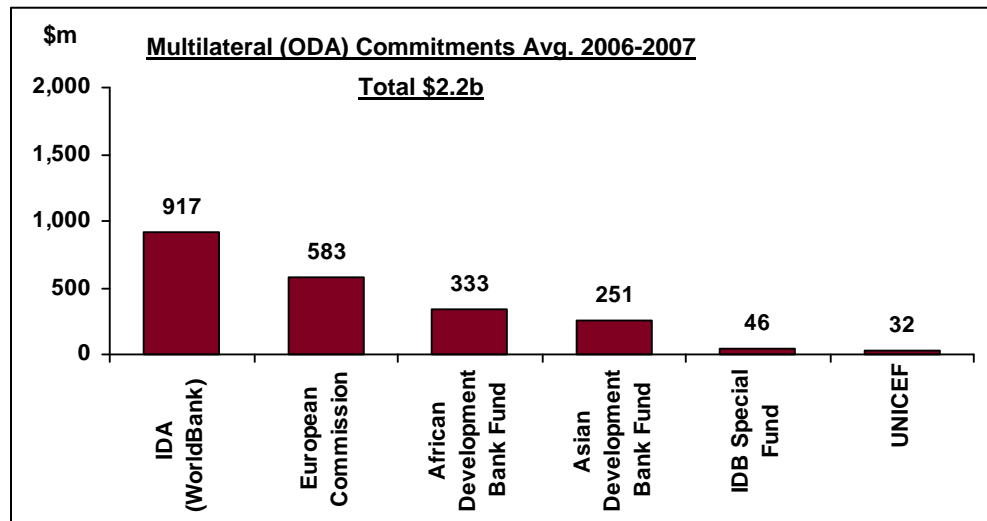
- It is estimated that a majority of the investments come from in-country sources
 - The domestic public sector - government investment and public utilities form the large part
 - The user fees are expected to be another large part, however its size is not known
- External actors form the next large source of funding
 - The largest donors are the bi-laterals and multi-laterals
 - Private foundations are estimated to be spending ~250m year
 - Formal private sector is estimated to be spending 7-10% of the external spending

The two reports may not be comparable as they use different methodologies

Multi-Lateral and Bi-Lateral Donors Provided ~\$6 Billion to WASH projects in 2007



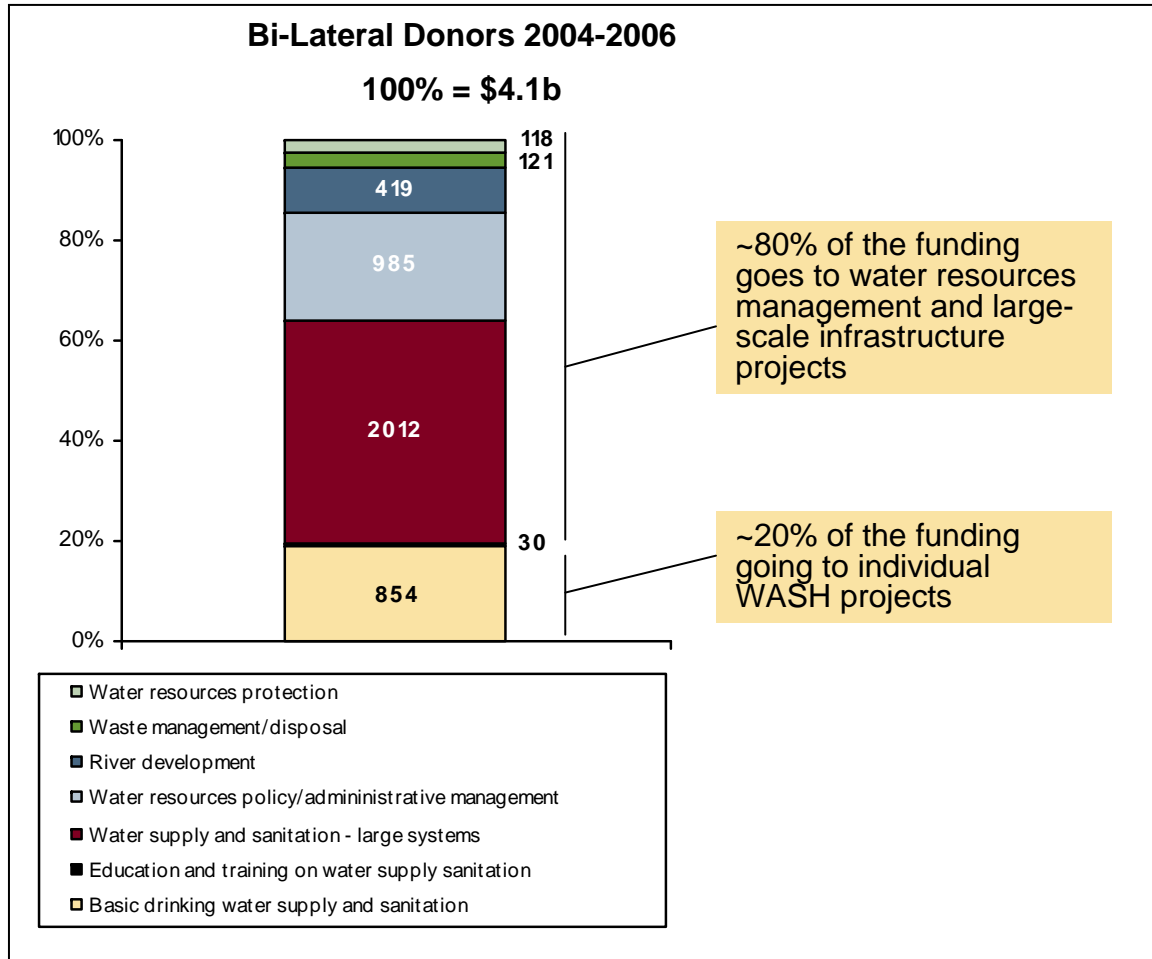
- Annual Bi-lateral Overseas Development Assistance (ODA) commitments for water are dominated by Japan
 - Japan provided 26% of global funding to water and sanitation sector in developing countries in 2006-07
- The US, Germany, Netherlands, France and the UK are the other leading donors



- Annual Multi-lateral Overseas Development Assistance (ODA) commitments for water are dominated by the World Bank's International Development Association (IDA)
 - IDA provided 15% of funding to the Water Sector in developing countries in 2006-07

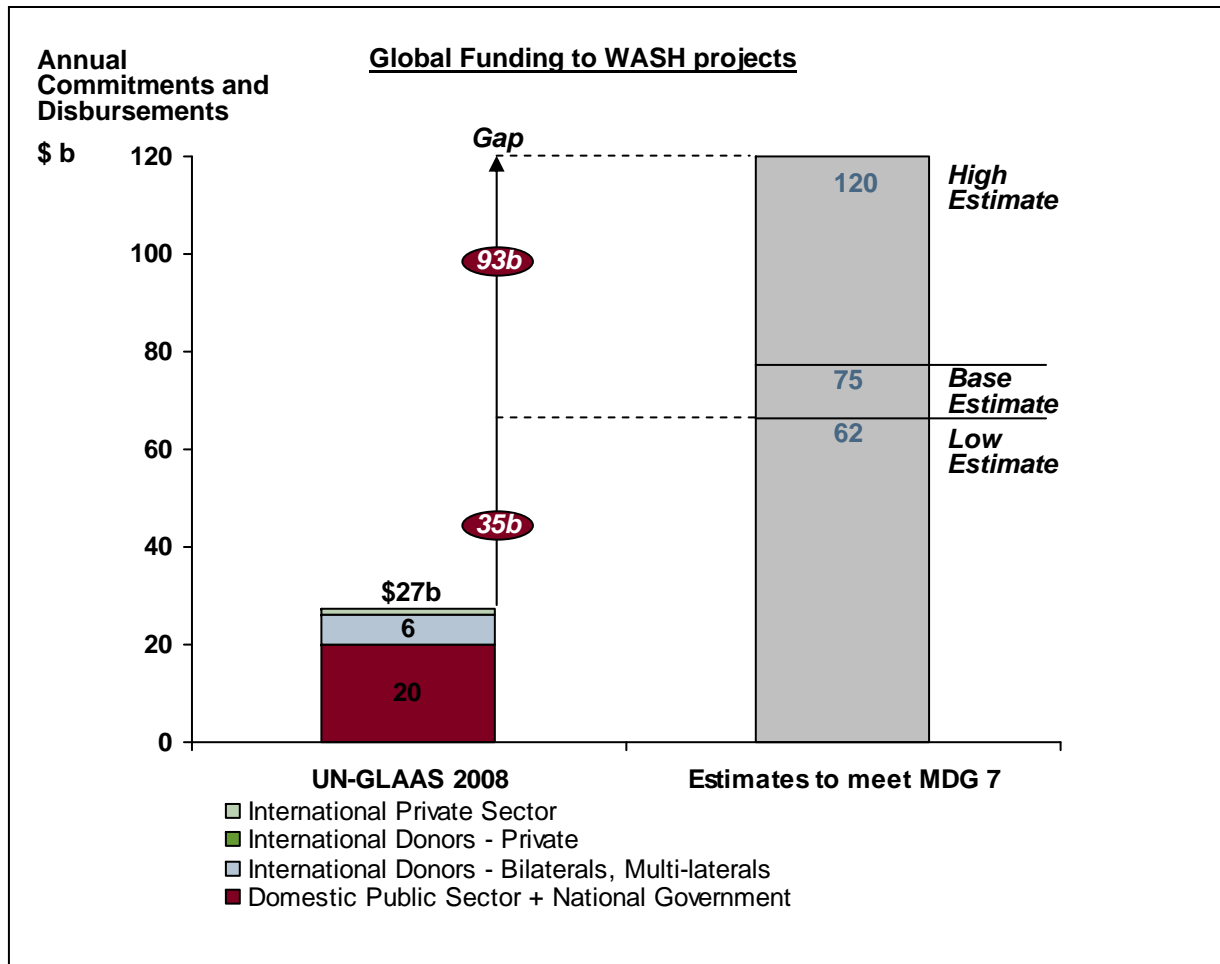
A Detailed Look into the External Funding Shows that a Majority is Spent is Building Infrastructure

Only 20% of the funding goes to individual/community based WASH projects



- Analysis of the strategy of the funders showed that very few focus on individual WASH projects
- USAID, DFID and France seem to be focusing on hygiene promotion and sanitation
- The rest focus on IWRM projects and large scale infrastructure provisioning projects
- Analysis of the funders strategy and operations of the individual/community related WASH projects show that very few support cost-effective interventions such as hand-washing promotion, latrine promotion and point-of-use water treatment

Global Funding For WASH Falls Far Short of the Needs



- The funding needs estimates dwarf the available funding
- The gap ranges from \$35b to \$93b a year to meet MDG target 7 on water and sanitation coverage
- The bulk of the funding need may have to come from the countries and the users
- The (private) donors need to find innovative ways to leverage their (small) amounts of funding

Actors Play Specific Roles and Have their Strengths and Weaknesses (1/2)

<i>Actors</i>	<i>Role</i>	<i>Strength</i>	<i>Weaknesses</i>
Donors – Bi/Multi-Lateral	<ul style="list-style-type: none"> • Provide funding to the WASH sector • Advocate for more resources for WASH 	<ul style="list-style-type: none"> • Influence the policies of recipient countries • Fund innovative approaches and private sector based approaches 	<ul style="list-style-type: none"> • Primarily fund large-scale projects • Focus on selected geographies
Donors - Private			
National Government	<ul style="list-style-type: none"> • Invest between 1-2% of national GDP/year into infrastructure, institutions and projects 	<ul style="list-style-type: none"> • Central to the progress and change 	<ul style="list-style-type: none"> • Do not invest sufficiently in WASH today • Sector suffers from low levels of motivation and interest
Public Utilities	<ul style="list-style-type: none"> • Account for 85% of the funding and 90% of the water and sanitation coverage globally • Supply water to urban and peri-urban populations, often for a fee/tariff 	<ul style="list-style-type: none"> • Enjoy a higher degree of legitimacy and acceptance than the private sector 	

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

Actors Play Specific Roles and Have their Strengths and Weaknesses (2/2)

<i>Actors</i>	<i>Role</i>	<i>Strength</i>	<i>Weaknesses</i>
Informal Private Sector	<ul style="list-style-type: none"> • Small-scale providers serve about 25% of urban population with water in LATAM and East Asia, 50% for water and 80% for sanitation in urban Africa 	<ul style="list-style-type: none"> • Seen as the “the engine for future growth” with user groups with spending power 	<ul style="list-style-type: none"> • They currently have insufficient government support, favorable policies and external assistance
Formal Private Sector	<ul style="list-style-type: none"> • Expected to 7-10% of the external WASH investment 	<ul style="list-style-type: none"> • High levels of interest in the urban markets 	<ul style="list-style-type: none"> • Do not reach out to poorer consumers • Have piloted innovative and flexible approaches to work with the poor – but have not been scaled up
NGOs	<ul style="list-style-type: none"> • Work on provision of WASH and advocacy (human rights focus and stimulate demand for service improvements) • Large NGOs act as funding agencies in selected countries 	<ul style="list-style-type: none"> • Piloting innovative approaches • NGOs who act as funding agencies can have a significant policy influence 	<ul style="list-style-type: none"> • Need to build more effective linkages to other stakeholders especially to local and central government and private sector businesses

Source: “*Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene*” – Main report, Cranfield University, AgualConsult, IRC, September 2006

Agenda

- I. Background: The Problem and Current Approaches**
 - A. Scope and Burden**
 - B. Populations Affected**
 - C. Trends in Intervention**

- II. The Funding Landscape**

The Countries Supported by CNHF's WASH Programs Have Varied Levels of Water and Sanitation Coverage

Country	Sanitation Coverage	Rate of growth of sanitation coverage ('90 –'06)	Water Coverage	Rate of growth of water coverage ('90 –'06)	Population Millions	Geography	%Rural	% Urban	Human development Ranking
Burkina Faso	44%	12%	72%	66%	14	SSA	81%	19%	173/178
Ethiopia	11%	10%	42%	41%	81	SSA	84%	16%	169/178
Ghana	10%	8%	80%	51%	23	SSA	51%	49%	142/178
India	28%	20%	89%	41%	1,200	SA	71%	29%	132/178
Mali	45%	29%	60%	49%	12	SSA	69%	31%	168/178
Mexico	81%	39%	95%	27%	105	LATAM	24%	76%	51/178
Niger	7%	7%	42%	25%	14	SSA	83%	17%	174/178

With the exception of Mexico, all countries are predominantly rural and rank low on human development – but they vary widely in population and rate of improvement

Other SSA countries, such as Eritrea, Chad, Sierra Leone, Madagascar, Guinea and Togo also have extremely low sanitation and water coverage

Appendix

I. Donor Profiles

II. Technology Approach Combinations

Donor Profile - Japan

Japan	
Mission	<ul style="list-style-type: none"> • Japan aims to achieving water security at home and Worldwide <ul style="list-style-type: none"> – Water-oriented Climate Change Adaptation... – IWRM Governance in Japan – Helping to Achieve Water and Sanitation MDGs
Annual Giving	<ul style="list-style-type: none"> • Largest Bi-lateral Donor for water • Donated a total of US\$4.9 billion of ODA from 2001 to 2005; Average giving of \$1.6b in 2006-2007
Countries Present	<ul style="list-style-type: none"> • 86% of the aid goes to Asia, 4% to Sub-Saharan Africa • Overlap with CNHF: India
Strategy	<p>Japan's work predominantly focuses on IWRM and large-scale infrastructure building programs; and lends some support to individual/community based WASH programs</p> <ul style="list-style-type: none"> • Promotion of integrated water resource management (IWRM) Implementation of IWRM; Support for structural development of trans-boundary watercourses • Support for water use for food production and other purposes <ul style="list-style-type: none"> –Multi-faceted use of water including agricultural water, electricity generation, industrial water, and water transport, etc. –Water pollution prevention and ecosystem conservation –Water pollution prevention by sanitary facilities and effluent regulations, etc.; Support for greening and sustainable forest management • Mitigation of damage from water-related disasters • Establishment of early warning systems; Strengthening disaster response capacities of local communities; Infrastructure development including flood control facilities and drought management facilities • Supply of safe drinking water and sanitation <ul style="list-style-type: none"> – 1. Rural communities: Supply of water and sanitation with consideration to local conditions and capacity development – 2. Urban areas: Utilization of private sector funds to meet large-scale funding needs; Support for transitional measures

Donor Profile - USAID

USAID	
Mission	<ul style="list-style-type: none"> The goal of water supply program is to achieve water security: Three interrelated dimensions of water management must be addressed to reach this vision for a water-secure world: <ul style="list-style-type: none"> – Improving access to water supply and sanitation, and promoting better hygiene (individual/community based WASH) – Improving water resources management, including allocation among competing needs (water resources) – Improving water productivity in agriculture and industry – (water resources)
Annual Giving	<ul style="list-style-type: none"> Second largest Bi-lateral Donor for water Average commitment and disbursements in 2006-2007: \$593 Mio
Countries Present	<ul style="list-style-type: none"> > 50 countries Overlap with CNHF: Ghana, Ethiopia, Mali, India (Grants amount to <\$3m in total)
Strategy	<ul style="list-style-type: none"> USAID's WASH activities will support the three pillars required for sustainable access and use of improved water supplies and sanitation: <ul style="list-style-type: none"> –Access to appropriate hardware – municipal and community water supply systems and sewers, household sanitation facilities, and other household-level technologies and products. –Behavior change and hygiene promotion – community mobilization for sustained management of water supply and sanitation infrastructure, social marketing of products and behaviors, and school and health clinic hygiene promotion programs. –Enabling environment – improved policies, institutional support, community organization, finance and cost recovery, and public-private partnerships for improved water supply, sanitation, and hygiene.
Relevant Projects in WASH	<ul style="list-style-type: none"> Hygiene Improvement Project (HIP) aims to reduce diarrheal disease prevalence and improve child survival through sustainable improvements in three key hygiene behaviors: hand washing with soap, safe feces disposal, and safe storage and treatment of drinking water at the household level. Currently active in Ethiopia and Madagascar USAID has re-launched Sûr'Eau, a safe-water solution that reduces the risk of diarrhea. Sûr'Eau is a water purification solution that prevents waterborne diseases. The chlorine solution can be added to water immediately before use and is designed to protect people—principally young children and people living with HIV and AIDS—from deadly diarrheal diseases.

Donor Profile - Germany

Germany	
Mission	<ul style="list-style-type: none"> • German development co-operation in water is based on the concept of Integrated Water Resources Management (IWRM).
Annual Giving	<ul style="list-style-type: none"> • 452.7m in 2005-2007 • Third largest funder
Countries Present	<ul style="list-style-type: none"> • Supports water programs in 70 countries worldwide, and has made water a priority sector in 28 of these countries. Funding concentrates particularly on sub-Saharan Africa and countries in the Near and Middle East
Strategy	<ul style="list-style-type: none"> • The aim is to help translate people's right of access to drinking water and basic sanitation into reality. IWRM allows taking a flexible, process-oriented, holistic approach towards making optimum use of water resources and the eco-system. Its fields of action comprise: <ul style="list-style-type: none"> — Sustainable management of water resources — Giving water sector reforms a poverty dimension — Efficient and sustainable water supply and sanitation — Using water efficiently for food production — Enhancing effectiveness through co-operation • One top priority of German development co-operation is to make hygienic water and sanitation services accessible as rapidly as possible to previously undersupplied population groups. Germany stresses the importance of ensuring that this supply is sustainable and can be maintained by the people locally. • Another priority area of support is transboundary water co-operation. Support is provided in Africa for regional institutions that are concerned with the joint management of water resources by riparian states. Germany is also notably assisting the African Ministers' Council on Water (AMCOW) on transboundary co-operation. • German development co-operation is also an important player in the sanitation field, including in the promotion of ecological sanitation concepts (ecosan).

Donor Profile - France

France (Agence Francais de Developpement)	
Mission	<ul style="list-style-type: none"> Water and Sanitation is one of the 7 priority intervention sectors of French ODA defined in 2004 to support the achievement of the Millennium Development Goals (MDGs). The French definition of the water sector includes water supply, sanitation, IWRM, irrigation and pastoral hydraulics. It is based on strong principles such as implementing participatory approaches, developing adapted technologies, and training partners' personnel.
Annual Giving	<ul style="list-style-type: none"> Average commitment and disbursements in 2006-2007: \$299 Mio
Countries Present	<ul style="list-style-type: none"> The French government has set a Priority Solidarity Zone (PSZ) with most countries located in sub-Saharan Africa, others in the Near East, North Africa, South-East Asia and the Caribbean. Overlap in CNHF focused countries: Niger
Strategy	<ul style="list-style-type: none"> The Strategy sets quantitative objectives and prioritizes additional aid to Africa and the following themes: <ul style="list-style-type: none"> –Sanitation & Hygiene, because positive impacts on health, environment and even the economy cannot be achieved by focusing on drinking water only; –access to basic services (both sanitation and water supply) for the poorest people, particularly in rural areas, small towns and low income areas in large cities, without neglecting rehabilitation and extension of existing networks; –water resources management in order to meet large environmental, health and food security challenges AFD implements through the following ways: <ul style="list-style-type: none"> –Integrated Water Resources Management (IWRM) is considered as the framework through which equilibrium of the large water cycle can be reached. Efforts are concentrated on co-operative management and knowledge improvement in (trans-boundary) river basins –Ensuring access to water and sanitation for all, and quality of the service. AFD focuses on the very poor and its subsidies are allocated firstly to improving access to sanitation (hygiene education, sanitary equipments, collection systems). AFD also supports reduction of commercial losses, strengthening of operation and maintenance and implementation of affordable / economical tariffs. –Good governance. AFD provides assistance to partner countries in formulating their Poverty Reduction Strategy Plans (PRSP) and strives to channel financing towards poor and under-equipped areas. It supports the development of programming tools that help implement national policies, and values programme approaches and budget support. To enhance management efficiency, investments are consistently and systematically complemented by improvements to institutional and management frameworks. –Water for food, to meet the challenge of feeding the world's people and improving the efficiency of water use in agriculture. AFD supports policies aiming at food security through agriculture value chains rather than policies of food self-sufficiency.
Relevant Projects	<ul style="list-style-type: none"> Improving access to drinking water in the suburbs of Kinshasa – includes a hygiene education component

Donor Profile - UK

DFID	
Mission	<ul style="list-style-type: none"> • DFID has prioritized its actions for tackling water and sanitation issues to meet Millennium Development Goals and has identified three key areas to strengthen its commitment • Promote sanitation and help communities to build toilets; integrate sanitation with health and education programmes and to understand better what makes communities willing to adopt and maintain improved sanitation • Improving water resources management to boost economic growth, cope with climate change and improve security • Advancing water sector governance
Annual Giving	<ul style="list-style-type: none"> • 2005-2007 Average \$166m
Countries Present	<ul style="list-style-type: none"> • Focused on the poorest countries and the poor in those countries • Aims to give £200 million per year by 2010 for Africa; and aim to maintain it at this level for five years
Strategy	<p>DFID aims to:</p> <ul style="list-style-type: none"> • increase investment through country and multilateral programmes; • consolidate the contributions of leading international development agencies and improve coordination and coherence by promoting the 'Five Ones' strategy; • ensure water resources are integrated into our support for regional and country programmes on climate change adaptation; • support governments working to develop national plans for water and sanitation in at least five countries (starting with Ethiopia, Sierra Leone, Tanzania, Mozambique and Bangladesh); • play a lead role in the five focus countries in coordinating a response to the needs of the sector, and encourage UN agencies to coordinate their incountry efforts in water and sanitation through a single UN body; • ensure that national water resources management bodies in at least five countries have the tools and capacity needed to manage their water resources equitably and sustainably; and • develop a water research programme that helps to fill critical knowledge gaps.
Relevant Projects in WASH	<ul style="list-style-type: none"> • Community led total sanitation in Bangladesh and India • Programme in Sierra Leone, which links improved health outcomes with water and sanitation provision • Global hand washing project, run by the World Bank's Water and Sanitation Program. The project promotes hand washing in order to cut down the many intestinal and respiratory infections that can be avoided simply by washing hands with soap before eating and after defecating

Donor Profile – IDA, World Bank

IDA, World Bank	
Mission	<ul style="list-style-type: none"> • The International Development Association (IDA), is the concessional lending arm of the World Bank • Its mission is to achieve the MDG targets of water and sanitation for the poorest countries of the world • It has been working to improve access to water and sanitation in the world's poorest countries and has seen real progress in the last 15 years: access to improved water sources in IDA countries rose from 65 percent in 1990 to 75 percent in 2004. Progress in sanitation, however, has been slower • To ensure sustainable water and sanitation service delivery, IDA builds its projects with the following features <ul style="list-style-type: none"> – the use of demand-responsive approaches in service provision – adherence to cost recovery policies where necessary in combination with transparent subsidies targeted to the poor; – the use of appropriate technologies and standards to ensure cost effectiveness of investments – a shift from sewerage to on-site sanitation and hygiene promotion programs
Annual Giving	<ul style="list-style-type: none"> • 2005-2007 Average \$917m
Countries Present	<ul style="list-style-type: none"> • Present in more than 70 countries; WASH focus will be on Africa • Present in all CNHF focus countries
Strategy	<ul style="list-style-type: none"> • IDA lending is expected to grow further over the coming years • In the period covered by IDA15 (Fiscal Years 2008–11) IDA will mostly continue to focus on priorities set up during the previous cycle, with Africa remaining a major focus. • The provision of urban water supply will remain important, fueled by the rapid urbanization taking place in many IDA countries • Sanitation and hygiene promotion components in the overall IDA portfolio are likely to increase as previous projects are starting to show results and create demand. • There will also be an increased focus on improving governance so that the infrastructure investments can be operated and maintained in a long-term, sustainable fashion. • Diverse management models will be used to work together with the public and private sectors, and public-private partnerships
Relevant Projects in WASH	<ul style="list-style-type: none"> • Community-driven approach to improve water and sanitation services in rural Ghana • Development of private operators to support efficient, subscription based water supply in Urban Senegal

Donor Profile – EU Water Initiative

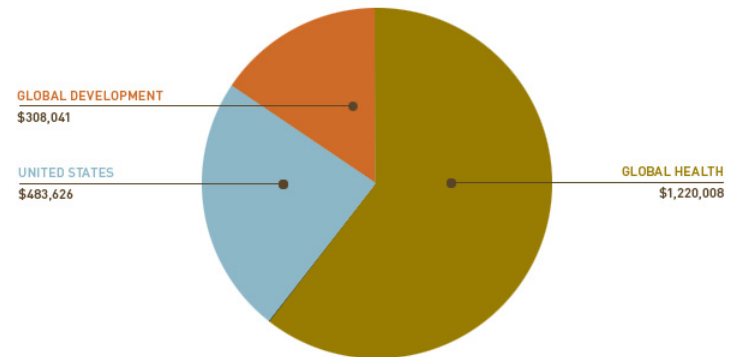
European Union Water Initiative (EUWI)	
Mission	<ul style="list-style-type: none"> • The EUWI is a political initiative which seeks to assist partner countries in the development and implementation of policies, strategies and priorities for the water and sanitation sector with which donors could align and support, so that existing resources will be more effectively utilized and new resources will be attracted to the sector to meet the specific requirements of individual developing countries and river basin organizations. • The EUWI has five specific objectives: <ul style="list-style-type: none"> (i) the reinforcement of political commitment towards action and innovation oriented partnership; (ii) the promotion of improved water governance, capacity building and awareness; (iii) improved efficiency and effectiveness of water management through multi-stakeholder dialogue and coordination; (iv) strengthened co-operation through promoting river basin approaches in national and trans-boundary waters; and (v) identification of additional financial resources and mechanisms to ensure sustainable financing. • The EUWI comprises four regional components (for Africa, Eastern Europe, Mediterranean and Latin America) and covers cross-cutting issues and components of research, finance and monitoring and reporting
Annual Giving	<ul style="list-style-type: none"> • 2005-2007 Average \$583m
Regions	<ul style="list-style-type: none"> • Africa, Eastern Europe, Mediterranean and Latin America
Strategy	<ul style="list-style-type: none"> • EUWI supports innovative projects through its aid funding coming from the European Community countries along four areas: <ul style="list-style-type: none"> –Water resources assessment and planning –Basic water supply and sanitation services, particularly in rural and marginal urban areas –Municipal water and wastewater services, addressing major urban installations and their management, –Agricultural water use and management • In basic water supply and sanitation services priority is given to increasing water efficiency in existing water supply and sanitation systems, technology transfer, institutional reform, incentive and cost recovery schemes • Focus on the poor or the poorest
Relevant Projects in WASH	<p>From a policy perspective</p> <ul style="list-style-type: none"> • The Africa Component has focused on continuing a good dialogue between the African Ministerial Council on Water Technical Advisory Committee (AMCOW-TAC) and the EU on the African –EU Strategic Partnership on Water Affairs and Sanitation that was signed by Heads of State in 2002. • In addition a successful thematic discussion on sanitation through an e-conference was held • A project of mapping EU Aid to Africa in the water sector is about to be finalized. The Africa Working group also prepared the Africa-EU statement on Sanitation that was launched in Spring 2008 and contributed to the AU and G8 summits • National Policy Dialogues were initiated in Congo Brazzaville and Central African Republic, and further developed in Ethiopia. Successful project examples can be seen in the bi-laterals (see France, UK for examples)

Donor Profile – African Development Bank

African Development Bank (AfDB)	
Mission	<ul style="list-style-type: none"> • The AfDB is a multilateral development bank that makes grants and loans to African governments and to public and private enterprises investing in Africa. • The AfDB is Africa's largest development finance institution which is dedicated to combating poverty and improving living conditions across the continent. • The AfDB is also engaged in mobilizing resources for the economic and social development of its Regional Member Countries (RMCs). • AfDB's Water and Sanitation Department (OWAS) aims to centralize the AfDB's water sector activities and to manage the large increase in financing for the sector. <ul style="list-style-type: none"> – It supports implementation of the Rural Water Supply and Sanitation Initiative (RWSSI) and ensure funding for projects and studies in the water sector – It serves as a trustee for the African Water Facility Special Fund (AWF) – It provides support to the NEPAD Water and Sanitation Programme, the multi-donor RWSSI trust fund (Denmark, France and the Netherlands) and a multi-donor Water Partnership Programme funded by the Netherlands, France, Denmark and Canada.
Annual Giving	<ul style="list-style-type: none"> • 2005-2007 average \$333million
Regions	<ul style="list-style-type: none"> • Africa • Focus on all CNHF supported countries in Africa
Strategy	<ul style="list-style-type: none"> • AfDB will give priority to agriculture and rural development, with special emphasis on water and sanitation initiatives in rural and peri-urban areas • Develop the regional water initiatives <ul style="list-style-type: none"> –RWSSI: The aim of the initiative is to provide safe water and basic sanitation to 66% of the rural population in Africa by 2010 and 80% by 2015, with the possibility of reaching 100% coverage by 2025 –AWF: The AWF is an initiative of the African Ministers' Council for Water (AMCOW) to mobilize financial resources for water resource development in Africa. AWF funds are primarily used to fund programs and projects concerned with water resource management with a long-term view to creating an enabling environment which will attract greater investment in Africa –NEPAD water resources management program: At the continental level, NEPAD provides the overarching framework for directing efforts to ensure water security across the whole of Africa through water resource development and management. –Infrastructure consortium for Africa: The ICA is a multi-donor initiative which focuses on infrastructure for water and sanitation, energy, transport, telecommunications and urban areas in Sub-Saharan Africa. It is not a financing agency but seeks instead to improve donor coordination, raise the profile of the sector, build capacity and mobilize finance.

Profile: The Bill and Melinda Gates Foundation in Water (1 of 2)

The Bill and Melinda Gates Foundation	
Mission	Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people’s health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life.
History	The Foundation was established in 2000 by Bill and Melinda Gates
Asset Size	\$35.9 billion (2007)
Annual Giving	\$2.007 billion (2007)
Key Funding Areas	<p>Global Development</p> <ul style="list-style-type: none"> • Agricultural Development • Financial Services for the Poor • Global Libraries <p>Global Health</p> <ul style="list-style-type: none"> • Priority Diseases and Conditions • Breakthrough Science • Other Initiatives • U.S. Programs <p>United States</p> <ul style="list-style-type: none"> • Education • Pacific Northwest • U.S. Libraries



Gates’ investments are expected to grow for the foreseeable future

Profile: The Bill and Melinda Gates Foundation in Water (2 of 2)

The Bill and Melinda Gates Foundation : Water Programs	
Annual Program Area Giving	\$60 million, across Global Development and Global Health (2007) Special Initiative in Global Development in Water, Sanitation and Hygiene
Areas of Stated Focus	“A range of initiatives to help poor people avoid illness and death by providing and promoting clean water and sanitation facilities, as well as healthy hygiene practices, in developing countries.” (Water strategy in development)
Top Grantees	2006 – PATH (\$17.1M over 5 years for water treatment products) 2006 – International Bank for Reconstruction and Development (42.8M over 4 years for handwashing promotion and sanitation products and promotion) 2007 – Water and Sanitation for the Urban Poor (\$11.3M over 4 years for sanitation and hygiene) 2007 – University of Bristol, (13.2M over 4 years for low-cost water quality test) 2008 – International Water and Sanitation Center, (14.5M over 5.25 years for WASH governance) 2008 – International Development Enterprises (\$27M, over 4 years for drip irrigation)
Example Projects	<p>WASH Governance, International Water and Sanitation Center (2008)</p> <ul style="list-style-type: none"> Improve access to accurate knowledge on disaggregated WASH costs and by embedding improved decision-making processes in lead organizations in the WASH sector at intermediate, national and international levels <p>Rainwater Harvesting EnterpriseWorks/VITA (2008)</p> <ul style="list-style-type: none"> Determine whether domestic rainwater harvesting has the potential to be an affordable and sustainable option for the poor with limited access to groundwater when supported through a market-based approach <p>Drip Irrigation International Development Enterprises (IDE) (2008)</p> <ul style="list-style-type: none"> Market and distribute an affordable irrigation system that can cost as little as \$37 per acre. Key innovations include the treadle pump, which draws ground water and is constructed of low-cost piping, and low cost drip irrigation technology

Gates is investing in developing a water strategy over the next two years

Profile: Case Foundation (1 of 2)

The Case Foundation	
Mission	The Case Foundation “supports giving to achieve sustainable solutions to complex social problems by investing in collaboration, leadership, and entrepreneurship. The foundation supports individuals and organizations that have the strategy, leadership, and commitment to make positive, widespread social change. The foundation seeks to meet the needs of families and children in poverty; create thriving and sustainable economic development for communities; bridge cultural and religious divides; expand civic engagement and volunteerism; and accelerate innovative approaches to health care.”
History	The Foundation was established in 1997 by Steve Case, co-founder of America Online
Asset Size	\$16.3 million (2006)
Annual Giving	\$5.8 million (2006)
Key Funding Areas	<p>International Affairs</p> <p>Community/economic development</p> <p>Education</p> <p>Philanthropy/Volunteerism</p> <p>Health care</p> <p>Youth development, services</p>


Case Foundation Funding, By Area (FY 2006, Millions)

Funding Area	Amount (Millions)
International/Foreign Affairs	3.3
Philanthropy/Voluntarism	0.6
Healthcare	0.5
Public Affairs	0.3
Youth Development	0.3
Other	0.7
Total	5.8

- Other
- Youth Development
- Public Affairs
- Healthcare
- Philanthropy/Voluntarism
- International/Foreign Affairs

Case is rumored to be shrinking its budget due to the economic downturn

The Case Foundation Work in Water (2 of 2)

The Case Foundation : Water	
<p>Annual Program Area Giving</p>	<p>\$2.3 million to PlayPumps International (2006)</p>
<p>Key Project</p> 	<ul style="list-style-type: none"> • “To improve the lives of children and their families by providing easy access to clean drinking water, enhancing public health, and offering play equipment to millions across Africa” • PlayPumps International has received significant international attention with its system of child-powered merry-go-round water pumps in South Africa, Lesotho, Mozambique, Swaziland, and Zambia • PlayPumps has installed 100 pumps to date, and aims to install 4,000 by 2010 to bring water to 10 million people in Ethiopia, Kenya, Lesotho, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Uganda, and Zambia.

Appendix

I. Donor Profiles

II. Technology Approach Combinations

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Water Provision (1/4)

Population	Approach	What is the approach?	Who does it target?	Has it been successful?
Ground water dependant (Rural)	1. Cost-reduction for groundwater development	<ul style="list-style-type: none"> • Reducing the cost of conventional drilling to make it more accessible for individuals for multiple use of water and small enterprises • Low-cost technologies: shallow drilling, auguring etc. • Private contractors, entrepreneur based 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating– with micro credit • Chronic poor - subsidy 	<ul style="list-style-type: none"> • Hand-drilled, entrepreneur based approach tested in Niger • Cost: \$500-1000 for a rig; \$100 for a shallow borehole for about 250 people (\$20-50 per capita) • Scale: over 5,000 hand-drilled wells in use
	2. Sustainable management of groundwater extraction	<ul style="list-style-type: none"> • Operating and maintaining hand pumps, motorized pumping solutions and solar pumping • Hand, motorized, solar pumps • Community managed, privately managed 	<ul style="list-style-type: none"> • Fluctuating and occasional poor 	<ul style="list-style-type: none"> • Solar water pumping tested in Honduras, Nicaragua, the Gambia – remains to be developed further • Nicaragua, project cost: \$29,000 to set up a project for 52 households; community contributes to the running costs - \$1.3/household
	3. Enhancement of groundwater information and understanding	<ul style="list-style-type: none"> • Create information from drilling programs to understand ground water data for monitoring water levels and quality 		<ul style="list-style-type: none"> • Insufficient evidence
	4. Treatment for chemical removal	<ul style="list-style-type: none"> • Community managed systems to remove arsenic and fluoride from water 		<ul style="list-style-type: none"> • Insufficient evidence

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Water Provision (2/4)

Water Carrying (Rural)	5. Improved household water carrying	<ul style="list-style-type: none"> • Sell improved water containers such as rollers to make water carrying easy • Cans, Buckets, clay pots, hippo-rollers, cheaper cans • Local production and sale of containers, social marketing to increase up take, provision of micro-credit to enable poor households 	<ul style="list-style-type: none"> • Chronic poor – free • Occasional poor • Fluctuating–with micro credit 	<ul style="list-style-type: none"> • Tested in Namibia and South Africa • Rollers are distributed to families with the greatest need (\$75/roller) • 27,000 Hippo rollers have been distributed so far
	6. Household and contracted water carrying and/or vending	<ul style="list-style-type: none"> • Develop models for entrepreneur-based transport and sale of water • Water trucks, donkey carts, modified bicycle trailers, low cost water quality testing kits • Local production and sale of new technologies, provision of micro-credit to enable poor households, water quality control through vendors 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating–with micro credit 	<ul style="list-style-type: none"> • Water vending by small entrepreneurs in Kibera, Nigeria • 650 entrepreneurs sell water through kiosks to half a million people • Estimated capital investment by each private vendor is about 2,000 US Dollars (a per capita cost of about US\$2.6)
	7. Rainwater harvesting and storage	<ul style="list-style-type: none"> • Provide containers to store and use rainwater • Corrugated roofing, plastic or concrete rain water jars, new and robust jars/tanks • Local mass production of containers, promotion of rain water harvesting and storage training 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating–with micro credit • Chronic poor - subsidy 	<ul style="list-style-type: none"> • Rainwater harvesting and successfully scaled up in Thailand through use of jars and training • Cost of jar: \$15/household • Scale: spread across north east rural areas of Thailand

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Water Provision (3/4)

Population	Approach	What is the approach?	Who does it target?	Has it been successful?
Small Town	8. Improvement of existing water service provision	<ul style="list-style-type: none"> • Improve efficient water use – repairs, metering, water saving devices; Strengthen system management; Enhance revenue collection • Water leak detection, metering, treatment • Public service delivery, group connections, flexible management models 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating poor 	<ul style="list-style-type: none"> • Installation of pre-paid metering in Abuja, Nigeria • Scale: installed 860 pre-payment meters • However, the results are mixed – forces the poor to make choices, often makes them choose contaminated sources
	9. Commercially franchised water vendors	<ul style="list-style-type: none"> • Local entrepreneurs treat and sell drinking water in containers through franchising models • Water trucks, donkey carts, modified bicycle trailers, low cost water quality testing kits • Franchised quality controlled water, small scale water treatment, subsidies targeting the poorest 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating–with micro credit • Chronic poor - subsidy 	<ul style="list-style-type: none"> • Water vending by small entrepreneurs in Kibera, Nigeria • 650 entrepreneurs sell water through kiosks to half a million people • Estimated capital investment by each private vendor is about 2,000 US Dollars (a per capita cost of about US\$2.6)
	10. Point of use household water treatments	<ul style="list-style-type: none"> • Providing cheap and effective house-hold water treatment • Boiling, bio-sand filters, ceramic filters, chlorine, PUR, arsenic filters, coating of containers • Improve supply chain of technologies, market through entrepreneurs 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating poor 	<ul style="list-style-type: none"> • Household biological sand filters tested in Haiti: 1,050 bio-sand water filters build and installed for 8,500 community members • \$20 per filter made of locally available materials; durability 20 years, low maintenance • Replicable through training

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Water Provision (4/4)

Popul-ation	Approach	What is the approach?	Who does it target?	Has it been successful?
Urban Slum	11. Utility reform for universal service (including cross-subsidies)	<ul style="list-style-type: none"> Increasing the price and service levels to non-poor customers to provide revenue base for investment in low income areas 	<ul style="list-style-type: none"> Occasional poor Fluctuating– with micro credit 	<ul style="list-style-type: none"> Successful approaches functioning – WSUP - PPP
	12. Complementary services for the very poor and destitute	<ul style="list-style-type: none"> Providing free access to water through water fountains and at water kiosks 	<ul style="list-style-type: none"> Chronic poor 	<ul style="list-style-type: none"> No examples seen
	13. Repeat from small towns:			
	<ul style="list-style-type: none"> Commercially franchised water vendors Point of use household water treatments 			

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

SANITATION

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Sanitation Provision (1/3)

Population		What is the approach?	Who does it target?	Has it been successful?
Rural	13. Provision/upgrading of on-site household solutions through self-help	<ul style="list-style-type: none"> • Support a large segment of households to build or upgrade on-site sanitation by giving materials so that they can build it themselves • San-plats, VIP latrines, pour-flush latrines, Eco-san, composting of excreta • Demand creation, social marketing, participatory methods, entrepreneurial based sanitation services 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating poor – micro credit 	<ul style="list-style-type: none"> • Needs to be developed further
	14. Non-latrine based excreta disposal	<ul style="list-style-type: none"> • Target those who can not build on-site solutions to bury the excreta 	<ul style="list-style-type: none"> • Fluctuating poor • Chronic poor 	<ul style="list-style-type: none"> • Not yet proven
	15. Total Sanitation Approach	<ul style="list-style-type: none"> • Promote improved total sanitation (no open defecation) through community self-help and local neighborhood, government financing schemes • Existing approach and technology promoted – community led total sanitation • Accelerated and continuous demand creation, involving entire community 	<ul style="list-style-type: none"> • All 	<ul style="list-style-type: none"> • Tested in Bangladesh; replicated in 30 developing countries • Thousands of communities practicing total sanitation effectively
	16. School sanitation	<ul style="list-style-type: none"> • Teaching benefits of sanitation and enabling long-term behavior change to create a strong demand for sanitation 	<ul style="list-style-type: none"> • All 	<ul style="list-style-type: none"> • UNICEF is testing school sanitation and hygiene education in Bangladesh • 7500 primary and secondary schools have benefited

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

SANITATION

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Sanitation Provision (2/3)

Population		What is the approach?	Who does it target?	Has it been successful?
Small Town	17. Entrepreneurial sanitation service provision	<ul style="list-style-type: none"> • Develop sanitation service provided by small entrepreneurs • Pit latrines, VIP, pour-flush, septic tanks, emptying devices, low-cost facilities and emptying solutions • Training of local masons in sanitation construction, create sanitation supply chains, hygiene promotion, training entrepreneurs in sanitation marketing and implementation, access to credit 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating poor – micro credit 	<ul style="list-style-type: none"> • Many successful models seen in Kenya, Tanzania, Mali and Uganda • In Uganda, a private company invested \$38,000 in rehabilitating 105 toilets • Scale: estimated 2,550 users per day; Makes \$50 profit per day
	18. Repeat from rural: <ul style="list-style-type: none"> • Total Sanitation Approach 			

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006

SANITATION

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Sanitation Provision (3/3)

Population		What is the approach?	Who does it target?	Has it been successful?
Urban	18. Condominial/ reduced cost sewerage	<ul style="list-style-type: none"> Design construct and operate sewerage systems in regularized slums 	<ul style="list-style-type: none"> Higher income 	NA
	19. Commercially franchised sanitation and hygiene points	<ul style="list-style-type: none"> Commercial approach to sanitation in high-density slums for populations that cant afford on-site latrines Block pit/pour-flush latrines, septic tanks, sewerage connections, shower facilities Social and commercial marketing, 'san-credit' or small scale loans 	<ul style="list-style-type: none"> All 	<ul style="list-style-type: none"> Franchise based pay and use toilet systems in India Scale: 4000 toilet complexes supporting more than 11million people a day Cost: NA
	20. Entrepreneurial services for disposal of sludge	<ul style="list-style-type: none"> Develop sanitation service provided by small entrepreneurs 	<ul style="list-style-type: none"> Occasional poor Fluctuating poor – micro credit 	<ul style="list-style-type: none"> Need to be developed further
	21. Bio-additives for on-site sanitation	<ul style="list-style-type: none"> To help on-site sanitation without sewerage connections to treat the fecal matter 	<ul style="list-style-type: none"> Occasional poor Fluctuating poor – micro credit 	<ul style="list-style-type: none"> Early stages; high potential but speculative and potentially costly
	22. Repeat from rural: <ul style="list-style-type: none"> Provision/ upgrading of on-site household solutions through self-help 			

Many Technology-Approach Packages Have Been Proposed By WASH Experts to Tackle Hygiene Promotion

Population		What is the approach?	Who does it target?	Has it been successful?
Urban, Rural, & Small Town	22. Demand acceleration for commercial provision of hygiene products	<ul style="list-style-type: none"> • Demand creation of products such as soaps, women hygiene products through social marketing, mainly through mass media • Toilet/latrine technologies, soap, hand/washing facilities, waste bins • Commercial and social marketing based on media, participatory, community approaches with strong private sector involvement, focus on men, women and children 	<ul style="list-style-type: none"> • Occasional poor • Fluctuating poor • Chronic poor - subsidy 	<ul style="list-style-type: none"> • Hand washing partnership in Ghana • Implemented in 110 districts, reaching thousands of children, school teachers and mothers • Cost: NA
	23. Social marketing for hygiene behaviors change for the poor	<ul style="list-style-type: none"> • Use locally produced, relevant methods to improve hygiene behavior – mass media, health clubs, religions/social networks • Low-cost latrine technology, locally made soap, low-water use hand washing facilities • Partnerships between government, NGOs, social networks, combining marketing with income generation, provide credit for products 	<ul style="list-style-type: none"> • Chronic poor – subsidy • Fluctuating poor 	<ul style="list-style-type: none"> • In development
	24. Non-soap low-cost alternative hand-washing products	<ul style="list-style-type: none"> • Promote super low-cost and other alternatives to facilitate behavior change • Local, natural, traditional cheap products (mud), synthetic materials as an alternative to soap – to be developed • Widespread social marketing, increase volume of sales of products to keep the price as low as possible 	<ul style="list-style-type: none"> • Chronic poor 	<ul style="list-style-type: none"> • In development

Source: "Landscaping and Review of Approaches and Technologies for Water, Sanitation and Hygiene" – Main report, Cranfield University, AgualConsult, IRC, September 2006