Lessons from DFID water and sanitation programmes in Bangladesh:

Supporting the provision of safe hygiene, sanitation and water for all

Introduction and scope

This is one of a series of briefing notes that summarize lessons from DFID water and sanitation programmes in Bangladesh, India, Nepal and Pakistan. The DFID document 'Water and Sanitation in Asia' (2005) highlighted the need for regional lesson-learning from DFID-supported water and sanitation projects, focusing particularly on governance issues. This is also the aim of this series of briefing notes, including the highlighting of innovative approaches of wider interest to DFID, its partners and other professionals in the sector.

The focus of this report is to summarize the experiences of DFID-Bangladesh and its partners in relation to hygiene, water and sanitation programmes that: have successfully applied integrated approaches to community- and school-based hygiene, sanitation and water needs; have worked through collaborative partnerships with government, NGOs, CBOs and the private sector; and have influenced government, through high quality technical and advisory support, innovative strategies and successful approaches, to adopt pro-poor policies.

Lessons are drawn from a variety of programmes and approaches taking place in Bangladesh, to inform the development of DFID's future engagement in Bangladesh and other countries in the region.

Headline lessons from Bangladesh

- *Influencing government* can be assisted by a consideration of the lessons below:
  - Large scale rural hygiene, sanitation and water supply programmes through UNICEF/ DPHE have influenced policy in favour of a pro-poor approach
  - Specialist advisory support by DFID has developed dialogue with government and built capacity for reform
  - Addressing key knowledge and skills gaps is integral to capacity development for reform
  - Inter-sectoral collaboration has created synergies within and between interventions

- *To reach the most vulnerable*, the following lessons are useful:
  - Integrated programmes addressing community-wide and school-based needs have improved sustainable sanitation and hygiene for whole communities
  - A range of hygiene and sanitation improvements ensuring affordable provision for the 'hardcore' poor, has encouraged hygiene improvements even where there is no formal infrastructure
  - An enabling environment for innovation has allowed local solutions to solve local problems, by integrating community initiatives with local private sector technical and management capacity
  - Aiming only at ambitious targets such as the MDGs may jeopardize provision of services for the poorest

- *Complementary inputs,* provided by key stakeholders working in partnership in a well-designed programme, have been essential to their success.

- *Innovative approaches have been pilot tested, with lessons learned incorporated into implementation at scale.* The potential benefits to be gained far outweigh the initial resource inputs.

Integrated rural hygiene, sanitation and water supply

The DPHE/UNICEF programme (RHSWSP)

Since 1999, DFID support to the RHSWSP has been implemented by the Department of Public Health Engineering (DPHE) and UNICEF in 10 districts. The project purpose is:

"*to improve standards of hygiene practices and behaviour, particularly for the poor, on a sustainable basis whilst ensuring adequate sanitation and safe water supply in low water table and saline areas and Chittagong Hill Tracts (CHT)*".

An integrated approach combines awareness-raising about hygiene behaviours and health impacts, improving access to appropriate sanitation facilities and water supplies, and institutional strengthening. Community Action Plans and Para[2] Action Plans underpin the shift within both UNICEF and DPHE towards this demand-led approach.

Globally, the RHSWSP in Bangladesh is one of the largest demonstration projects for sanitation and hygiene behavioural change. It is divided into development and implementation phases. The development phase was to test new approaches to broader improvements in public health related to sanitation, against traditional water and sanitation projects.

Achievements and impact of RHSWSP

The Mid-Term Review of the RHSWSP project conducted in 2005 found many positive developments. The review assessment with the scorings "2" (likely to be largely achieved") and "1" (likely to be completely achieved") is shown in Table 1.

Within the development phase (2001-03), the project became well established in all 10 pilot districts, plus 300 paras in the Chittagong Hill Tracts, successfully demonstrating innovative models of integrated hygiene, sanitation and water. It showed that sustainable change in hygiene behaviour can be achieved by whole communities. Community Hygiene Promoters (CHPs) have been key to this, by motivating communities, assisting with the Community/Para Action Plans and providing the necessary information to support hygiene behaviour change, including vital information for women on menstrual hygiene.

[2] A para is a group of homes within the CHT region.

Table 1. Project outputs and mid-term rating of the DPHE/UMICEF RHSWSP

Project Outputs	MTR Score
1. Whole communities practice improved key hygiene behaviours	2
2A. Whole communities have access to, use and maintain affordable safe excreta disposal options	2
2B. Whole communities have year round access to and use adequate water for key hygiene & sanitation practices	2
3. Supportive institutional framework is functioning especially at Union level	1
Overall Project Outputs Assessment (Developmental Phase)	2

More than 90,000 household latrines have been built or repaired in the project area; More than five thousand new water points in communities and more than one thousand in schools were constructed. (MTR, 2005)

The Development Phase has established effective, integrated strategies on which to base the scaled-up programme in the Implementation Phase. The Community Action Plan approach and health and hygiene promotion capture the risks to water quality and the actions required to minimize them. As issues central to the WSP approach, this will facilitate use of WSPs in the Implementation Phase.

Although there is evidence of improved understanding about hygiene behaviour amongst school children, women and men in the community, closing the gap between the high retention of messages and practices remains a huge challenge.

School sanitation and hygiene education (SSHE) in the RHSWSP

SSHE is an integral component of RHSWSP; increased attendance is reported in schools with improved water and sanitation facilities. Funding limitations however restricts progress in many schools, which has implications for the uptake of improved hygiene practices by children at home.

Although schools have designated water and sanitation budgets, facilities are often poorly managed. Linking CHPs with School Management Committees enhances sustained hygiene improvements at school and can link schools to the broader community-based hygiene improvement strategy.

More than four thousand schools in the plainlands and 443 schools in CHT are now covered under the School Sanitation and Hygiene Education component of RHSWSP. (Mid Term Review report)

Achievements in influencing sector policy to be put into practice

RHSWSP has influenced the development of sector policy, giving greater emphasis to pro-poor, gender-sensitive, demand-responsive sanitation and water services. While the constitutions of Watsan committees have been revised to adopt such approaches, translating policy into practice remains a key challenge. Government spending outside of the RHSWSP programme is likely to see a continuing focus on supply-driven, hardware-based approaches that have less chance of achieving sustainable services that reach the poorest.

DFID Engagement in Bangladesh

Support to poverty reduction

DFID has been an active development partner in Bangladesh, supporting the poverty alleviation programme of the Government of Bangladesh (GoB), since it gained independence in 1971. DFID's current priority is to assist the Government through various aid routes, seeking to meet the Millennium Development Goals (MDGs) within the framework of the national Poverty Reduction Strategy (PRS). Key to addressing poverty is closing the gender gap, enabling the advancement of poor women so that their voice is increased and incorporated within programmes.

Support to hygiene, sanitation and water service provision

Improved hygiene behaviour, access to sanitation and safe water for women and girls are essential for addressing gender disparity and form the main thrust of DFID's Country Assistance Plan (CAP). The CAP (2003-06) seeks to work through government and a broad spectrum of non-governmental partners, including civil society, to advocate for pro-poor delivery of water and sanitation services. DFID funding is primarily through strategic non-governmental local partners, with some direct support to GoB initiatives.

Types of engagement

The current CAP identifies the importance of engaging with a broad range of influential agencies to bring about change. Improved co-ordination between donors and development partners can maximize the efficiency and impact of aid investments, especially when a commitment to long-term engagement is reflected in a realistic approach to setting objectives and timescales – enabling incremental and sustainable change.

Reaching the poorest and most marginalized does not just happen, so specific short term strategies with a commitment to the long-term, are being applied.

The CAP focuses on a range of engagement mechanisms:

- **increased *dialogue* with the government**: to develop direct sectoral budget support and move towards a Sector Wide Approach (SWAp) where appropriate;
- **providing a *mix* of support**: working with partners including NGOs and government agencies to address economic, technical and policy concerns;
- **supporting an '*interface*' between government and non-governmental partners**: ensuring a place for the voice of civil society and the private sector;
- **improved *monitoring and evaluation***: maximizing the impact of development programmes for the poor and marginalized.

Source: DFID (2003)

DFID's engagement in Bangladesh emphasizes reaching the poorest and addressing governance constraints. This strategy has emerged in response to the fragile working environment in Bangladesh, fragile in terms of both the physical environment and current governance practices (Box 1).

Box 1: Bangladesh's fragile environment

During the mid 1980s and 1990s, Bangladesh progressed in aspects of poverty reduction to achieve increases in life expectancy, adult literacy, primary school enrolment (for boys and girls), per capita economic growth and other key development indicators.

Progress was supported by strong growth in the private sector, an active NGO sector and moves towards greater efficiency within certain government institutions. But progress was set against general poor performance within the public sector and a growing inability of the Government to effectively utilize public funds. Progress was also uneven, leading to increased inequality within the population.

Poverty, together with a shift in household income sources (e.g. the construction and textiles industries) is fuelling both internal migration from rural areas to urban centres, and short-term external migration (primarily to the Gulf States) as people search for employment opportunities. Internal migration is creating rapid urbanization, leading to growing levels of urban poor. As one of the world's most densely populated countries, such population pressures, increased industrial pollution and poor levels of sanitation all contribute to degradation of the natural environment, which is already fragile, risky and not amenable to easy stabilization.

Opportunities for progress towards poverty alleviation are hindered by aspects of poor governance, which allows a continuing degree of inherent corruption within government and other state enterprises. A lack of accountability within the public sector, together with limited capacity to turn policy into action and limited sectoral reform to stimulate markets, exacerbates economic growth and an environment conducive for moving towards SWAps (DFID, 2003)

Addressing significant Challenges in the Water and Sanitation Sector

The arsenic problem

Levels of arsenic posing a risk to health were first found in shallow groundwater in parts of Bangladesh in 1993. Following this, DFID funded the British Geological Survey to map the severity of the problem throughout the country. Arsenic is now known to affect extensive water resources throughout Bangladesh and its neighbouring countries.

Box 2: The extent of arsenic contamination

Of a total population of approximately 144 million in 2002, about 20 million people (15% of the population) were at risk (i.e. with access to contaminated tubewells) from arsenic contamination in drinking water. The number of people exposed (i.e. who consume water with excess arsenic) is lower. Inevitably, the poorest are most affected, due to limited access to alternative, safe water supplies.

Various initiatives to address the problem were launched. With DFID-funding, WaterAid played an important role in mapping the activities of government, donors and NGOs, resulting in the Arsenic 2000 report, later managed by the NGO Forum. DFID also funded research into household water treatment technologies as an emergency response to the crisis.

4.7 million tubewells were tested, with the handpumps on contaminated tubewells painted red and those uncontaminated painted green. Many of the technology solutions developed were often expensive and not validated.

DFID along with WHO, Danida, CIDA and the World Bank worked with the Ministry of Local Government, Rural Development and Cooperatives (MLGRD&C) in a co-ordinated approach to the arsenic crisis throughout 2001 and 2002. In 2002, an international workshop of experts was convened to develop a national strategy for arsenic mitigation. A key principle was that as no single solution exists, water supply technologies should be selected case-by-case based on local technical, social and environmental conditions. The Risk Assessment of Arsenic Mitigation Options (RAAMO) by the Arsenic Policy Support Unit (APSU) (published 2005) assists in this process.

Major early constraints to the design and implementation of arsenic mitigation were due to limited knowledge of the nature of the problem, how to mitigate its impact on health, poor coordination, and limited capacity to implement a national programme.

A National Policy for Arsenic Mitigation (NPAM) and Implementation Plan for Arsenic Mitigation in Bangladesh (IPAMB), published in 2004, provided an overall framework for addressing arsenic. Despite this, there is not yet a shared vision for implementation between GoB and donors, with GoB favouring a fully subsidized arsenic-specific national programme for those villages considered to be in an emergency (i.e. where over 80% of shallow tubewells have arsenic above the Bangladesh standard). Donors propose a more holistic approach to water safety that considers poverty, as well as contamination, as an important criterion for prioritization. There remains disagreement over technology selection in the IPAMB.

The Arsenic Policy Support Unit (APSU)

In response to these problems, the GoB requested DFID to support the establishment of a national APSU, within the Local Government Division (LGD) of the MLGRD&C. A DFID specialist adviser was deputed to APSU to design a national, multi-sectoral programme of arsenic mitigation.

APSU identified key constraints to an effective national programme relating primarily to:

- the need for improved co-ordination and collaboration to achieve a cross-ministry programme;
- an understanding of the relative health risks from arsenic, leading to the development of Water Safety Plans (WSPs) (see Box 3) and Quality Health Risk Assessments (QHRAs) to set a broader water quality, risk and disease burden policy framework.

Box 3: Water Safety Plans (WSPs)

WSPs provide the basis for safe water management by considering the risks and hazards in the process of drinking water production and distribution, rather than relying on testing the end product.

WSPs call for operator training, changes in design and construction criteria, investment in new systems or improvements to the existing ones. Supporting programmes ensure that the operating environment, the equipment and the people themselves do not become potential hazards.

The WSPs apply a holistic approach to safe water management, which accounts for broader water quality, safety and management needs.

Source: APSU (2005); Davison et al. (2005)

Unable to fully address these constraints, APSU refocused its work on to these key areas:

- ***improved co-ordination***: engaging with a range of agencies/donors;
- ***dialogue with government***: e.g. through the Arsenic Core Group;
- ***improved analysis of the problem***: to develop viable technical solutions;
- ***access to information and knowledge***: research into sustainable arsenic mitigation and health care; and
- ***supporting strategy development***: for scaling up the WSP approach.

By being located within LGD, APSU provided a focal point for DFID to engage with the GoB in aspects of policy, strategy and implementation. GoB is adopting WSPs to improve rural and urban water quality.

Lessons from the experience of APSU:

1. Strategically positioned policy support can influence policy;
2. Support can be advisory and technical rather than project-based;
3. Sector reform requires knowledge gaps to be addressed;
4. Specialist advisers are important for gaining credibility and effective dialogue;
5. Increased donor and GoB coordination is key to progress.

While advisory inputs through APSU have been effective, further reforms are required if policies and strategies are to be implemented at scale. Additional policy support at senior government level is needed to achieve this.

The sanitation challenge

Rural sanitation coverage is reported to have risen from 11% in 1990 to 39% in 2002 (WHO/UNICEF, JMP, 2004). Although access to safe sanitation is less than this, it does denote the high degree of attention given to sanitation in recent years. Measurement of improved sanitation is made typically by counting the number of latrines constructed. Since the late 1990s, DFID has supported WaterAid-Bangladesh (WAB) in its partnership with the local NGO Village Education Resource Centre (VERC) and their approach to sanitation that challenges these more traditional methods – that is, the Community-Led Total Sanitation (CLTS) approach. This is in response to the lack of success of the top-down latrine construction approach of previous programmes.

Box 4: The Community-Led Total Sanitation Approach (CLTS)

CLTS takes a community-based approach to achieving 100% sanitation coverage. It adopts the principle that the community has the resources and ability to address sanitation (and associated hygiene and water) problems if it comprehends the nature of the associated health and environmental problems of open defecation and how these affect everyone in the community, whether latrine users or not.

External agencies such as NGOs often help communities to identify their current sanitation situation, frequently leading to both a feeling of disgust combined with a desire for action. Considerable peer pressure is applied for compliance by all, and the community plans and implements its own solutions.

The motivational message is that the behaviour of an individual affects the well-being of others. Total sanitation coverage is therefore achieved by addressing the key behaviour of **no open defecation**, with other supporting behaviours such as effective hand washing, hygienic rubbish disposal and safe storage of food and water. The definition and focus of improved sanitation is behaviour-focused, rather than infrastructure focused.

CTLS makes no provision for a direct government subsidy for household hardware. Vulnerable groups (such as the "hardcore" poor) are identified by the community and their needs included in the community plans. Financial support is instead given for the promotion, education, advocacy and marketing needs of sanitation, which together comprise a significant element in each programme.

Since VERC & WAB launched their CLTS programme in the late 1990s, over 400 villages throughout Bangladesh have achieved 100% sanitation coverage, without a general household-level subsidy for infrastructure. Households were offered an extensive range of latrine models, based on affordability, and many local latrine designs have emerged that satisfy the basic criteria, often at extremely low cost.

A large number of small-scale private entrepreneurs have also emerged, fabricating low-cost latrine components, available at local hardware shops and rural sanitation marts[1]. These entrepreneurs have responded to the increasing demand for toilets in the rural areas, so ensuring that delivery can keep up with the demand.

Lessons from the Community-Led Total Sanitation approach

Many aspects of CLTS are key to its success, with some being particularly relevant for DFID's ongoing engagement in Bangladesh:

1. The working partnership between small-scale entrepreneurs and community groups, supported by national and local government institutions, national and international NGOs;
2. The focus on behaviour change is much more successful than the previous top-down latrine construction focus;
3. Community-level innovation has resulted in a range of user-safe and hygienic latrines that are widely affordable; and
4. Increased private sector rather than NGO involvement enables the community to maximize benefits from employment and income-generating opportunities created by the market for sanitation components.

[1] These "one-stop-shops" provide a focal point where households can purchase sanitation and hygiene components, as well as receive information and advice.

Going to scale and replication

DFID-Bangladesh provides financial support to WaterAid-Bangladesh's Advancing Sustainable Environmental Health (ASEH) programme. This provides a means for CLTS to be applied at scale in both rural and urban communities, working through WaterAid's local partners. ASEH is also researching its impact as evidence to influence government approaches.

CLTS has been adopted by a number of other donor agencies and NGOs for application throughout Bangladesh and into neighbouring countries. It has been applied in an adapted form in India, affecting over 2 million people. The Government of Maharashtra has adopted aspects of CLTS as state policy, to change attitudes to sanitation, rather than constructing latrines.

The GoB is committed to full sanitation coverage by 2010, supported by a multi-sectoral strategy involving CBOs, NGOs and private entrepreneurs. High-level political support and its integration into the latest National Sanitation Strategy is instrumental to its success.

More recently however, there has been growing concern, that the "sanitation for all" policy emphasizes coverage targets through rapid latrine construction, rather than a sustainable behaviour-driven approach to hygiene improvements. Target-focused implementation must incorporate behaviour change and appropriate development processes.

Through its Rural Hygiene, Sanitation and Water Supply Programme (RHSWSP), implemented by GoB and UNICEF, the lessons learned from the CLTS programme are being adopted by the Government and other agencies. The CLTS approach remains valid, if correctly applied, and strategies to ensure its long-term sustainability need to be continually reviewed.

Key Emerging Lessons

Influencing government

Support to large scale rural hygiene, sanitation and water supply: The development phase of the DFID-supported UNICEF/DPHE programme has influenced government policy in favour of a pro-poor approach to integrated service provision. This has included institutional strengthening and the use of well tried implementation models, such as CLTS. Whether scaling-up translates policy into practice remains to be seen. DFID-Bangladesh can continue to engage with the GoB on many levels during this process.

Specialist advisory inputs: The secondment of a DFID adviser has influenced the GoB's arsenic policy programme, enhanced DFID's credibility and helped develop effective dialogue. Such support enables government to build capacity as it reforms the sector.

Addressing key knowledge and skill gaps: This is integral to capacity development for sector reform and involves training programmes for key staff, together with effective policy dialogue.

Inter-sectoral co-ordination: The various DFID-funded interventions have demonstrated that inter-sectoral collaboration creates synergies within and between interventions, with clear lessons for GoB programmes.

Reaching the most vulnerable

Community-wide approaches: The focus of water sector provision is mainly at community level, through social mobilization and empowerment. An integrated programme addressing community-wide and school-based needs has improved sustainable sanitation and hygiene behaviours in whole communities.

Working with the very poor: Approaches to hygiene, sanitation and water provision must take into account everyone's needs and demands. A range of hygiene and sanitation improvements, ensuring affordability by the poorest, encourages hygiene improvements even where there is no formal infrastructure provision.

Ambitious targets may jeopardize effective processes to reach the poor: The provision of services to the poorest must not be put at risk by focusing on MDG targets alone. Creative strategies can ensure the inclusion of all vulnerable groups.

Innovations for serving the poor. Creating an enabling environment for innovation can allow local solutions to solve local problems. Integrating community initiatives with the local private sector offers a wider range of technical and management solutions to match the needs and capacities of a broad spectrum of the population, as demonstrated by the CLTS approach.

Complementary inputs to partnerships

Provision of complementary inputs by key stakeholders working in partnership in a well designed programme, such as CLTS, is essential to its success. Government needs to own the problem and create an enabling environment for implementation at scale by endorsing approaches, setting rules and ensuring sufficient resources.

Scaling-up

The value of testing approaches prior to scaling-up is illustrated by the DFID-funded RHSWSP programme. Lessons were learned on community involvement, integration of new developments such as CLTS and WSPs, applicability of sanitation options and integration of community and school-based interventions. The benefits of incorporating lessons learned into the implementation phase far outweigh the resource inputs of the development phase.

WELL is a network of resource centres:

WEDC at Loughborough University UK
IRC at Delft, The Netherlands
AMREF, Nairobi, Kenya
IWSD, Harare, Zimbabwe
LSHTM at University of London, UK
TREND, Kumasi, Ghana
SEUF, Kerala, India
ICDDR, B, Dhaka, Bangladesh
NETWAS, Nairobi, Kenya
NWRI, Kaduna, Nigeria

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This briefing note presents experiences from DFID-Bangladesh in supporting the provision of safe hygiene, sanitation and water for all.

Key references

- APSU, (2005), *Risk Assessment of Arsenic Mitigation Options (RAAMO)*, final report September 2005, Arsenic Policy Support Unit, Dhaka, http://www.apsu-bd.org/risk_assessment_of_arsenic.htm (accessed Feb 2006).
- Davison, A., Howard, G., Stevens, M., Callan, P., Fewtrell, L., Deere, D., and Bartram, J., (2005), *Water safety plans: managing drinking water quality from catchment to consumer*, WHO, Geneva.
- DFID/GoB, (2005), *Rural Hygiene, Sanitation and Water Supply Project (RHWSWP)*, Mid-Term Review, not published.
- DFID (2003), *Bangladesh: Country Assistance Plan 2003-2006 'Women and Girls First'*, Department for International Development, London, UK.
- Kar, Kamal (2003), *Subsidy or self-respect? Participatory total community sanitation in Bangladesh*, IDS Working Paper 184, September 2003, Institute of Development Studies, Brighton, UK http://www.ids.ac.uk/ids/bookshop/wp/wp184.pdf
- WELL (2005) *PCR Arsenic Policy Support Unit, Bangladesh*, WELL Task 2788, Loughborough University, UK.

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