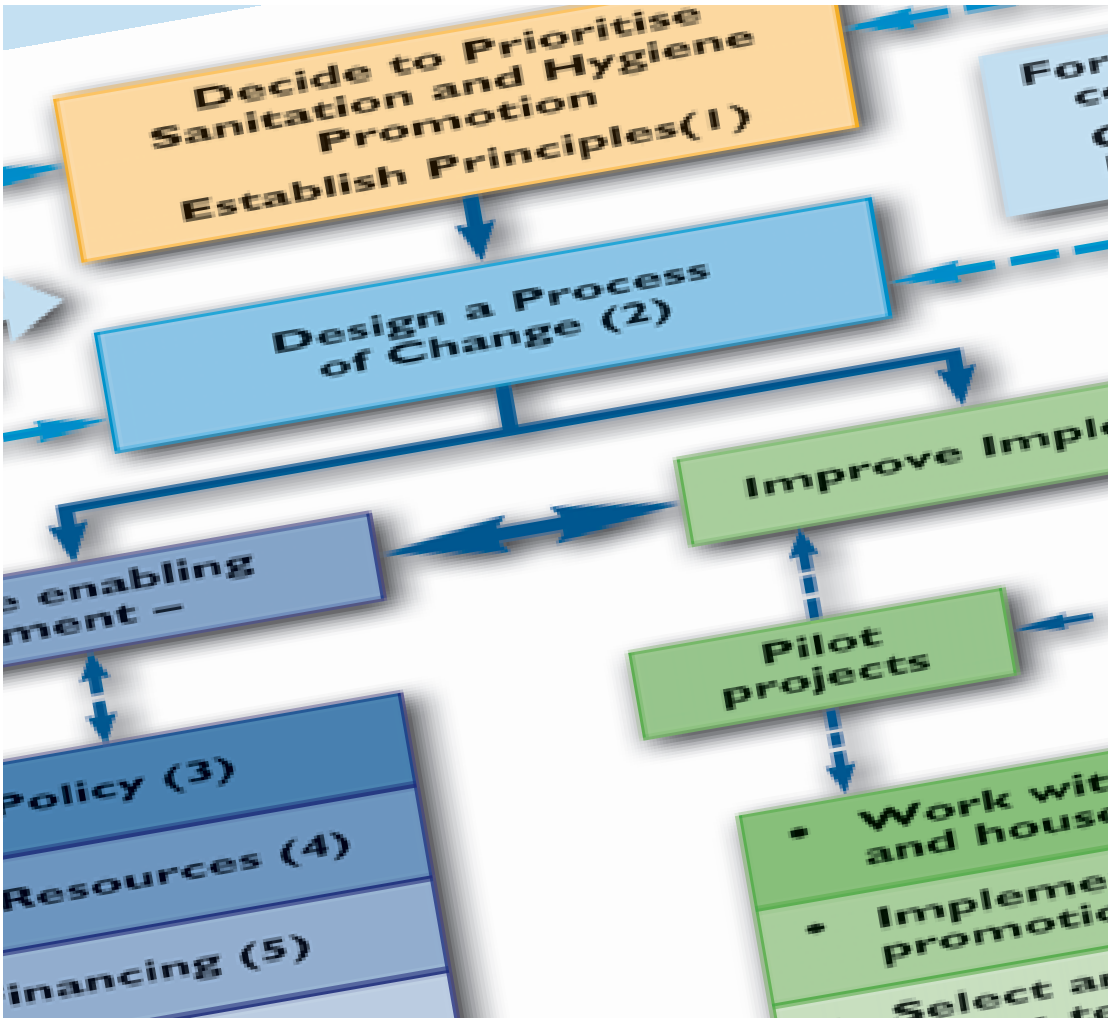
Water, Sanitation and Hygiene

Sanitation and Hygiene Promotion



Programming Guidance

WHO

Dedication

This volume is dedicated to the memory of Dr. John H. Austin of USAID (1929-2004) in recognition of his contributions to the water supply, sanitation and hygiene sector in a career spanning over six decades working in all corners of the globe.

Sanitation and Hygiene Promotion

Programming Guidance

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Feedback

Sanitation and Hygiene Promotion are amongst the most challenging development sectors in which to work. This is partly because effective sanitation requires the development of public policy in an arena which is intensely private and where results are only achieved when the household makes appropriate choices. Because of the complexity of the sector, and in light of the relatively small body of public policy experience, it is inevitable that the current document will represent a work in progress. Hopefully with the new interest in the sector, there will be new ideas and experiences to reflect on in the coming few years. Where readers feel that the current document can be usefully updated, changed or amended in any way to reflect such experience they are encouraged to contact:

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Glossary

The following glossary provides the reader with guidance about what is meant by various terms used in this document. The list is not intended to be exhaustive, nor the definitions definitive, rather this list is designed to help the reader to understand what is intended in the current text. Where the definition is taken from a published reference, this is noted.

Advocacy: is a continuous and adaptive process of gathering, organizing and formulating information into arguments to be communicated through various interpersonal and media channels, with a view to raising resources or gaining political and social leadership acceptance and commitment for a development programme, thereby preparing a society for acceptance of the programme [i].

Civil Society: individuals and organisations who are not part of the government apparatus including but not limited to community organisations and informal groups, non-governmental organisations, voluntary agencies, small scale independent providers, private sector, media organisations and professional bodies.

Ecological Sanitation: sanitation whose design builds on the concept of protecting ecosystems, and which treats excreta as a valuable resource to be recycled.

Empowerment: is a process of facilitating and enabling people to acquire skills, knowledge and confidence to make responsible choices and implement them; it helps create settings that facilitate autonomous functioning.

Enabling Environment: Policies, financial instruments, formal organisations, community organisations and partnerships which together support and promote needed changes in hygiene practices and access to technology.

Environmental Sanitation: a range of interventions designed to improve the management of excreta, sullage, drainage and solid waste.

Excreta: faeces and urine.

Gender Equity: the process of being fair to women and men. To ensure fairness measures must be often available to compensate for historical and social disadvantages that prevent women and men from otherwise operating on a level playing field. Equity leads to equality [ii].

Groundwater: water found below ground level in the sub-soil.

Groundwater Table: the level at which the subsoil is saturated.

Hygiene Promotion: a planned approach to preventing diarrhoeal diseases through the widespread adoption of safe hygiene practices. It begins with and is built on what local people know, do and want [iii].

Off-site sanitation: system of sanitation where excreta are removed from the plot occupied by the dwelling and its immediate surroundings.

On-site sanitation: system of sanitation where the means of collection, storage and treatment (where this exists) are contained within the plot occupied by the dwelling and its immediate surroundings.

Pit Latrine: latrine with a pit for collection and decomposition of excreta and from which liquid infiltrates into the surrounding soil.

Pour-flush Latrine: latrine that depends for its operation of small quantities of water, poured from a container by hand, to flush away faeces from the point of defecation.

Private Benefits: benefits (of hygiene improvements) which accrue to the household or individual (for example savings in the household budget for health-related expenses).

Private Sector: individuals, companies or organisations who provide goods and services relating to hygiene improvements on a commercial basis for profit.

Programming: the establishment of a set of rules and conventions under which all sanitation and hygiene promotion projects and investments can be made, such that they all work towards and agreed long-term vision for improved health and dignity for the entire population.

Public Benefits: benefits (of hygiene improvements) which accrue to society as a whole (for example, improvements to the health of the population at large resulting from a significant proportion of individuals adopting hygienic behaviours such as hand washing).

Public Policy: decisions enshrined in laws, regulations and policy documents which express the will of government towards public concerns such as sanitation and hygiene promotion.

Sanitation: interventions (usually construction of facilities such as latrines) that improve the management of excreta.

Septic Tank: a tank or container, normally with one inlet and one outlet, that retains sewage and reduces its strength by settlement and anaerobic digestion.

Sewer: a pipe or other conduit that carries wastewater from more than one property.

Sewerage: a system of interconnected sewers.

Small-scale Independent Provider: individual, company or voluntary/non-profit organisation providing goods or services relating to hygiene improvement operating independently of the system of public provision.

Social Mobilisation: is a process bringing together all feasible social partners and allies to identify needs and raise awareness of, and demand for, a particular development objective.

Sullage: dirty water that has been used for washing, cooking, washing clothes, pots, pans etc)

Ventilated Improved Pit Latrine: pit latrine with a screened vent pipe and darkened interior to the superstructure which is designed to keep flies out and minimise smell.

Endnotes

i UNICEF, WHO, USAID, BASICS (2000) *Communication Handbook for Polio Eradication and Routine EPI:* UNICEF, New York

ii Lidonde, R., D. de Jong, N. Barot, B. Shamsun Nahar, N. Maharaj, H. Derbyshire (2000) *Advocacy Manual for Gender and Water Ambassadors* Gender and Water Alliance, Delft

iii UNICEF (1999) A Manual on Hygiene Promotion UNICEF, New York

List of Abbreviations

APL	Adaptable Program Loan
BASICS	II Basic Support for Institutionalizing Child Survival
CHC	Community Health Clubs
DWAF	Department for Water Affairs and Forestry
EHP	Environmental Health Project
ESA	External Support Agency
GWA	Gender Water Alliance
HIF	Hygiene Improvement Framework
HIPC	Highly Indebted Poor Countries
IDWSS	International Decade for Water Supply and Sanitation
IRC	International Water and Sanitation Centre
ITN	International Training Network
lpcd	Litres per capita per day
LSHTM	London School of Hygiene and Tropical Medicine
MDG	Millennium Development Goal
MPA	Methodology for Participatory Assessment
MTEF	Medium Term Expenditure Framework
NGO	Non-governmental Organisation
PEAP	Poverty Eradication Action Plan
PHAST	Participatory Hygiene and Sanitation Transformation
PLA	Participatory Learning and Action
PRA	Participatory Rural Appraisal
PRSC	Poverty Reduction Support Credit
PRSP	Poverty Reduction Strategy Paper
RSM	Rural Sanitary Mart
SADC	Southern African Development Community
SECAL	Sector Adjustment Loan
SIM	Sector Investment and Maintenance Loan
SWAp	Sector Wide Approach
TOM	Technician for Operation and Maintenance
TPPF	Twin-Pit Pour Flush (Latrine)
UNDP	United Nations Development Program
UNICEF	United Nations Childrens Fund
USAID	United States Agency for International Development
VIP	Ventilated Improved Pit (Latrine)
WASH	Water, Sanitation and Hygiene for All; global advocacy campaign of WSSCC
WEDC	Water, Engineering and Development Centre, University of Loughborough
WELL	Water and Environmental Health at London and Loughborough
WHO	World Health Organisation
WSP	Water and Sanitation Program
WSSCC	Water Supply and Sanitation Collaborative Council

A Note to the Reader

International Commitments to Sanitation

At the World Summit on Sustainable Development at Johannesburg in September 2002 the World Community committed itself to "halve by 2015 the proportion of people without access to safe sanitation". Since 1990 an estimated 747 million people have gained access to sanitation facilities (equivalent to 205,000 people every day). Despite this huge achievement, a further 1,089 million rural and 1,085 million urban dwellers will need to gain access in the coming 15 years if the 2015 target is to be realized.

Many governments are now asking what they can do to systematically respond to the challenges laid down in Johannesburg.

The Water Supply and Sanitation Collaborative Council (WSSCC), in partnership with the United States Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), the Environmental Health Project (EHP), the World Bank and the Water and Sanitation Program (WSP) have agreed to collaborate on the production of a new updated document which can provide the sort of practical guidance which is being requested. Much of the material presented here is based strongly on an earlier UNICEF Handbook [i] but the text has been revised, updated and shortened, with new material added based on both recent experience and feedback from users of the earlier handbook.

What is this document about?

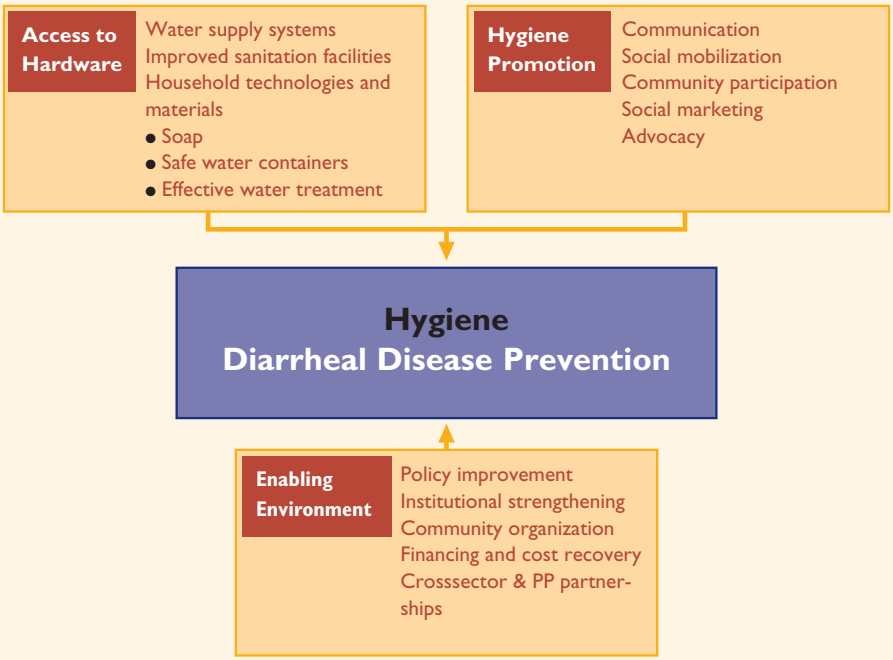
This document is about Sanitation and Hygiene Promotion

It is about setting in place a **process whereby people (women, children and men) effect and sustain a hygienic and healthy environment for themselves.** They do this by erecting barriers to prevent transmission of disease agents (broadly by means of *sanitation*) and by reducing the main risky hygiene practices and conditions which they face (usually the main focus of *hygiene promotion*) [ii].

Safe disposal of excreta and hygienic behaviours are essential for the dignity, status and wellbeing of every person, be they rich or poor, irrespective of whether they live in rural areas, small towns or urban centres.

The primary direct impact of sanitation and hygiene promotion is on health, and of all health impacts, the most significant is probably the prevention of diarrhoeal disease. Primary barriers to diarrhoeal and other water-related disease transmission include both physical infrastructure (amongst which household sanitation is important), and hygienic practices (washing of hands with soap or a local substitute after contamination with excreta). Experience has shown that sustained improvements in access to sanitation and sustained changes in hygienic behaviours require an appropriate enabling environment (of policy, organisations, finance, management and accountability). The Hygiene Improvement Framework is a conceptual model developed by USAID to help programmers visualize the relationship between these three elements (see **Figure i**) [iii].

Figure i: The Hygiene Improvement Framework



The Hygiene Improvement Framework (HIF) states hygiene improvement (and hence health benefits to society) arise when three things are in place:

- hygiene promotion;
- improved access to hardware for water supply, sanitation and hygiene; and
- an enabling environment.

This document focuses on a selection of the interventions identified by the HIF (improved sanitation at the household level, access to soap, hygiene promotion and the enabling environment), while recognizing that others (such as improved water supply, solid waste management, better drainage, school sanitation and so on) are also important if the health benefits of sanitation and hygiene promotion are to be realized [iv].

This document is about Programming

This document talks about developing a programme for more effective investment in sanitation and hygiene promotion. It is not about developing projects and it does not give blue-print solutions for project-level interventions. Rather it lays out a process for long term change which may encompass institutional transformation of the policy and organizational arrangements for provision of goods and services. It argues that the objective of policy makers should be to:

> *establish a consistent set of rules under which all sanitation and hygiene promotion projects and investments can be made, such that they all work towards an agreed long-term vision for improved health and dignity for the entire population.*

This document recognises that sanitation and hygiene promotion may happen within broader poverty alleviation strategies

The document recognizes that in many countries and regions, sanitation and hygiene promotion may well be planned and managed within a broader social development agenda, by local governments, national ministries or by specialized agencies. However, it argues that specific attention needs to be paid to the promotion of hygienic behaviours and to improving access to sanitation hardware as a key element of poverty reduction efforts. This document is intended as a resource for anybody working with this aim in mind.

The document also acknowledges that regional, provincial or local programmes may be appropriate, while in some countries the logical level for programming is national. Many urban areas may be autonomous and programming may take place at the city-level (such an approach is often politically expedient [v]). This document will use the term programme to imply a programme developed *at whichever level is appropriate*.

This document recognises that it has a broad audience

Recognising that in different institutional contexts, sanitation and hygiene promotion programmes will be organized in different ways, this document aims to reach a broad general audience. It is designed to help

> *Those people with some **responsibility** in sanitation and hygiene promotion (whether they are directly engaged or working in wider social development or economic programmes), and with **resources** (of time, money or expertise), who are **committed** to achieving the outcome that households and communities in **rural areas, small towns and cities** gain **equitable access** to sanitation and hygiene promotion services that are **sustainable**, at a **scale** which contributes to achievement of the Millennium Development Goals*

The authors recognise that stand-alone sanitation and hygiene promotion programs are rare and unlikely to be effective. They also recognise that many people who take responsibility for improving access to sanitation and promoting hygienic practices may not be specialists in the field. Therefore this document has been written with the non-specialist in mind.

This document is biased because the authors believe that certain approaches to sanitation and hygiene promotion are more effective than others

Our biases are laid out in Section One but in summary we believe that:

- sanitation and hygiene promotion are a vital element in poverty alleviation;
- sanitation hardware alone is ineffective as a tool to alleviate poverty; what is needed is changes in behaviour coupled with improved access to sanitation;
- the needed changes (investments and behaviours) largely happen at the household level; the role of government is to facilitate good decision-making at this level;
- in the absence of well functioning public provision, people have been providing their own solutions and an understanding of this should form the basis of new programmes of support. For many households and service providers sanitation is a business which needs to be supported;
- every country or locality needs to build a new approach which has policies, money, organisations and trained people who can create demand for sanitation and support rational decision making at the household level; and
- a programming process needs to develop both short-run interventions to maintain progress and increase access, and long-run interventions which set in place a radically new institutional framework to support sustained service delivery over time.

How to use this document

Sanitation and hygiene promotion programming is a *process* carried out by a wide range of people and organisations. At the outset most of the people and organisations concerned will probably not regard sanitation as their priority activity (despite their commitment, most people and organisations have a range of other responsibilities to undertake). It is unlikely therefore that many people will have the motivation or time to read the entire document presented here.

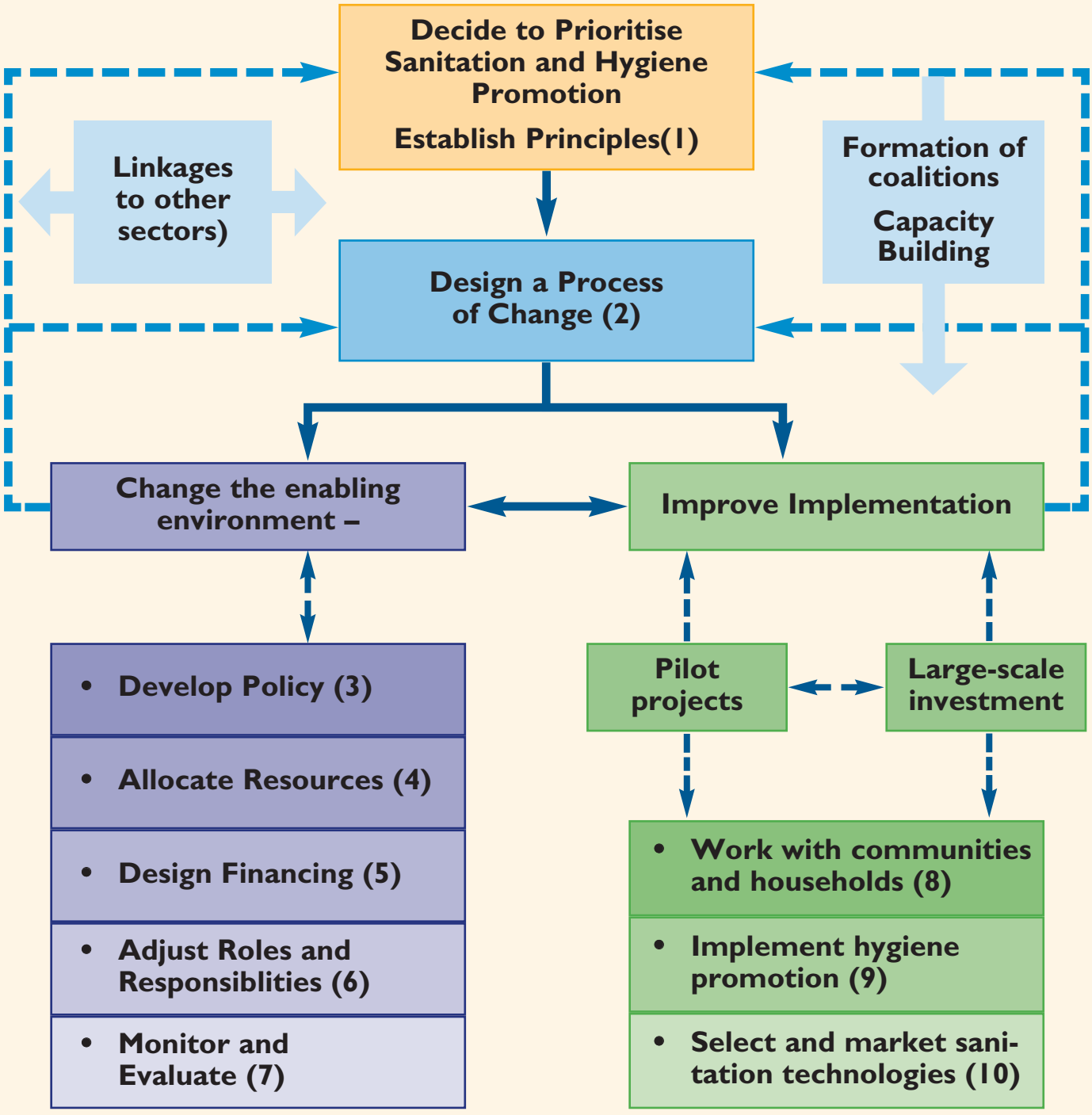
To assist readers a summary or generic programming process is shown schematically in **Figure ii**. Broadly the document is organized in sections which reflect the key steps in the programming process. Different actors may be involved in each of these key stages. Figure ii, along with **Table i**, indicate which sections may be of most interest to each reader.

Additional Information

The text contains information on where to find additional specific information. This is flagged in the **Reference Boxes**. Reference material is also presented in the notes.

Users of the document are encouraged to use whatever elements are appropriate to their particular situation. Sections of the document can be freely copied and reproduced, and the authors encourage this as part of a wider programming and capacity building effort.

Figure ii: Navigation Guide – The Programming Process



Note: Numbers in brackets indicate the chapter containing additional discussion of the topic

Table i: Who should read this Document (Navigation Table)

Section	Chapters	Content	Illustrative Users
1: Sanitation and Hygiene Promotion in a wider context	1 The Basics	Puts sanitation and hygiene promotion in context, and shows how effective hygiene improvements result in socially, economically and environmentally sustainable development. Broadly states what is known about how to effectively implement sanitation and hygiene promotion.	All readers Non-specialists wishing to get up to speed on key thinking in sanitation and hygiene promotion Specialists wishing to make themselves acquainted with the views and biases of the authors of this document
2: The Process of Change	2 Getting Started	Lays out a process for programme development, including a discussion of the key contextual factors which will determine how programming can be best carried out	Programme catalysts, (ie senior operational staff in national level government departments or at municipal level, representatives of national NGOs, ESAs etc)
3: Creating the Enabling Environment	3 Sanitation and hygiene promotion policies 4 Allocating resources strategically 5 Financing 6 Roles and responsibilities – restructuring organisations 7 Monitoring and Evaluation	Provides detailed guidance on programming. In each case, specific guidance is provided as to how the principles outlined in Section One can be implemented practically through policy level decisions.	Programme catalysts High level policy makers Senior staff of NGOs and ESAs
4: Improving Implementation	8 Working with communities and households 9 Hygiene promotion 10 Selecting and marketing technologies	Discusses briefly some of the practical implementation details which will be determined at programme level, but implemented locally through projects. This information, including specific details on hygiene promotion, selection and marketing of technologies and community management, is specifically linked to programming decisions.	Programme catalysts Staff working on the details of programming National and local NGO, ESA and government staff working at project level who wish to make contributions to the programming process.

Endnotes

[i] UNICEF and USAID (1997) *Towards Better Programming: A Sanitation Handbook,* Water, Environment and Sanitation Technical Guidelines Series No.3, EHP Applied Study No. 5. UNICEF New York. The handbook benefited from inputs from the World Health Organisation (WHO), the United Nations Development Program (UNDP) and the World Bank and was subject to a wide consultation. Many of the original ideas for the handbook were developed by the environmental sanitation working group of the Water Supply and Sanitation Collaborative Council (WSSCC). The Handbook was aimed at UNICEF field officers and was widely disseminated through the UNICEF network.

[ii] The concept of sanitation as a process is drawn from the 1997 Handbook. The description of hygiene promotion is developed from Appleton, Brian and Dr Christine van Wijk (2003) Hygiene Promotion: Thematic Overview Paper IRC International Water and Sanitation Centre,

[iii] Environmental Health Project (2003) The Hygiene Improvement Framework: a Comprehensive Approach for Preventing Childhood Diarrhoea.

[iv] Throughout the text the reader is directed to sources of information on wider water supply and sanitation issues where these are important. The focus of this document is on the safe management of human excreta, primarily at the household, not because other interventions are not needed, but because the nature of the institutional interventions for management of household excreta are sufficiently different from those required for the management of other public services to merit separate treatment and different institutional interventions.

[v] Where regions or urban areas have sufficient autonomy they may be able to implement programmes which are more advanced than those implemented at central government level. Indeed this is sometimes the most effective way to make progress.

SECTION ONE:

SANITATION AND HYGIENE PROMOTION – GENERAL PRINCIPLES

This section provides some information that may be useful in designing advocacy programmes at national level. It also introduces some of the basics of sanitation and hygiene promotion and lays out the authors' biases in terms of new approaches to making programmes more effective. Non-specialists are particularly encouraged to read this section.

The section sets out to explain why sanitation and hygiene promotion are important. Selected results are provided to show how improved sanitation and hygiene impact positively on health, education and economic development. These data could be used by advocates for sanitation and hygiene promotion, to attract more investment and needed institutional attention to these subjects.

After this the document looks at what is known about how to make investments in sanitation and hygiene promotion effective. This includes the basic theories about disease transmission, the reasons why management of excreta and hygienic practices in the home are important, and some key principles which are likely to make sanitation and hygiene promotion programmes more effective. The authors argue that in many parts of the world, sanitation is a business, and that key investment and behavioural decisions are made at the household level. The role of government is primarily to support rational decision making at the household level.

Chapter 1 The Basics

1.1 More than 2 billion people lack access to hygienic means of personal sanitation

At the World Summit on Sustainable Development at Johannesburg in September 2002 the World Community committed itself to "halve by 2015 the proportion of people without access to safe sanitation". Since 1990 an estimated 747 million people have gained access to sanitation facilities (equivalent to 205,000 people every day). Despite this huge achievement, a further 1,089 million rural and 1,085 million urban dwellers will need to gain access in the coming 15 years if the 2015 target is to be realized. Today, sixty percent of people living in developing countries, amounting to some 2.4 billion people, have no access to hygienic means of personal sanitation[i].

Reference Box 1: The scale of the problem

For: information on sanitation coverage statistics and health indicators
See: UNICEF/WHO Joint Monitoring Programme *Global Water Supply and Sanitation Assessment Report WHO (1999)*
Get this reference on the web at:
http://www.wssinfo.org
See also: The WASH Campaign and *Vision 21: A Shared Vision for Hygiene, Sanitation and Water Supply and A Framework for Action* Water Supply and Sanitation Collaborative Council (2000)
Get this reference on the web at:
http://www.wsscc.org

1.2 Increased access to Sanitation and Better Hygienic Practices Have Significant Positive Impacts

The water supply and sanitation sector has long recognized the importance of investing more effectively to bring services to poor people around the world. A document known as "Vision 21" lays out some specific collective learning from the sector and emphasizes that progress is possible provided governments and civil society can work together and recognize both the social and economic aspects of water supply and sanitation services[ii]. What is needed now is for these lessons to be implemented within wider poverty reduction programmes throughout the world.

The Water Supply and Sanitation Collaborative Council has provided the rallying point and has spearheaded a campaign to get sanitation and hygiene promotion onto the world's political map. The Campaign, known as "WASH" is a global initiative which has had a huge impact on the level of awareness of the international community to issues of hygiene and household health.

In every country, advocates for sanitation and hygiene promotion now need to find locally-generated information to make the case for more and better investments. Often, there is a need to show policy-makers what sanitation and hygiene promotion really can achieve. In many rural areas, a good way of doing this for example, is to develop "latrine acquisition curves" – by asking households when they first had a latrine and started using it. From this data it is possible to plot a curve showing the cumulative % of households in any given community who use a latrine over time. Similar investigations can provide information about use of a wider range of sanitation interventions, the use of soap, beliefs about hygiene and so on. Such exercises generate important information about how and why people adopt (or fail to adopt) sanitary behaviours (in this case using a latrine). Even more importantly they get officials into the habit of visiting households and asking questions about hygiene. This is vitally important because most people are reluctant to talk about sanitation and hygiene practices, and often remain unaware of what is really happening on the ground.
Before reaching this stage, sanitation "champions" may need to use more generalized data about the positive impacts of sanitation and hygiene behaviours, in order to stimulate interest in the subject. Some of the startling facts about sanitation and hygiene promotion are presented below. Additional sources of information are in in **Reference Box 2**.

Sanitation, Hygiene Promotion and health:

- WHO data on the burden of disease shows that "approximately 3.1% of deaths (1.7 million) and 3.7% of disability-adjusted-life-years (DALYs) (54.2 million) worldwide are attributable to unsafe water, sanitation and hygiene." In Africa and developing countries in South East Asia 4–8% of all disease burden is attributable to these factors. Over 99.8% of all the deaths attributable to these factors occur in developing countries and 90% are deaths of children[iii].

- A 1993 WHO/SEARO meeting of health specialists gave safe excreta disposal, especially by diseased people and children, and more water for personal hygiene, especially handwashing, and protecting water quality, in that order as *the most influential factors on reducing morbidity and mortality of diarrhoeal disease*.

- A 1991 review of 144 studies linking sanitation and water supply with health, clearly states that the "role [of water quality] in diarrhoeal disease control [is] less important than that of sanitation and hygiene"[iv]. The study identified six classes of disease where the positive health impacts of water supply, sanitation and hygiene have been demonstrated **(Table 1)**.

- A 1986 study emphasizes the importance of sanitation specifically, as compared to stand-alone water supply interventions. Seventy-seven percent of the studies which looked at sanitation alone, and seventy-five percent of those which considered sanitation and water supply, demonstrated positive health benefits, compared with 48 percent of those which considered water supply alone[v].

- A recent report states that "adding hygiene promotion is particularly efficient and effective in reducing morbidity and mortality from child diarrhoea" and goes on to cite a 1996 study which gave a cost of USD21 per disability-adjusted life year saved, against costs of USD 24 for oral rehydration therapy and USD15–35 for expanded immunization[vi].

Table 1: Impacts of Improved water supply, sanitation and hygiene on morbidity and mortality for six common diseases: evidence from 144 studies (after Esrey et.al 1991)

	Expected reduction in morbidity and mortality from improved water supply and sanitation (%)					
	All studies			Methodologically more rigorous studies		
	N	Median %	Range %	N	Median %	Range %
Ascariasis	11	28	0–83	4	29	15–83
Diarrhoeal disease	49	22	0–100	19	26	0–68
Morbidity	3	65	43–79	–	–	–
Mortality						
Dracunculiasis	7	76	37–98	2	78	75–81
Hookworm infection	9	4	0–100	1	4	–
Schistosomiasis	4	73	59–87	3	77	59–87
Trachoma	13	50	0–91	7	27	0–79
Child Mortality	9	60	0–82	6	55	20–82

Sanitation, Hygiene Promotion and Education

- Children in the age range of 5–14 are particularly prone to infections of round worm and whip worm [vii] and there is evidence that this, along with guinea worm and other water-related diseases, including diarrhoea, result in significant absences from school [viii]

- School exclusions have a gendered aspect; girls who are unable to access clean, safe and separate toilets and handwashing facilities, may disproportionately drop out of school at puberty, or even earlier.

- Nokes et. al. (1992) found that helminth reduction programmes in schools can have a dramatic impact on health and learning among school children.

- The 1993 World Development Report estimated that maternal education was highly significant in reducing infant mortality and cites data for thirteen African countries between 1975 and 1985 which show that a 10 percent increase in female literacy rates reduced child mortality by 10 percent.

Sanitation, Hygiene Promotion and Economic development

- WHO analysis shows a strong link between lower initial infant mortality rates and higher economic growth. **Table 2** shows growth rates in a selection of several dozen developing countries over the period 1965–1994. The table shows that for any given initial income interval, economic growth is higher in countries with lower initial infant mortality rates.

- WHO estimates that a 10 year increase in average life expectancy at birth translates into a rise of 0.3–0.4% in economic growth per year.

- Appleton and van Wijk (2003) state that "Peru's 1991 cholera epidemic is estimated to have cost the national economy as much as US$1billion in health costs, tourism and production losses. [In India] outbreaks of plague in 1994 meant a loss of two billion dollars due to import restrictions. On top of that came the loss from thousands of cancelled holidays and public health costs."

- The WHO Commission on Macroeconomics and Health cites research showing a strong correlation between high infant mortality and subsequent state collapse.

Table 2: Growth Rate of per capita Income 1965–1994 by income (GDP) and infant mortality rate, 1965 [ix]

Initial GDP, 1965
(PPP-adjusted 1990 US$)

	Infant Mortality Rate			
	≤50	50–≤100	100–≤150	>100
750–≤1,500	–	3.4	1.1	-0.7
≤750	–	3.7	1.0	0.1
750–≤1,500	–	3.4	1.1	-0.7
1,500–≤3,000	5.9	1.8	1.1	2.5
3000–≤6000	2.8	1.7	0.3	–
>6,000	1.9	-0.5	–	–

Reference Box 2: Impacts of Improved Sanitation and Hygiene Promotion

For detailed Information on the Impacts of Sanitation on Health, Education and the Economy see:

Cairncross, S., O'Neill, D. McCoy, A. Sethi, D. (2003) *Health, Environment and the Burden of Disease: A Guidance Note* Department for International Development (DFID), UK

Howard, G. and Bartram, J. (2003) *Domestic Water Quantity, Service Level and Health* World Health Organisation

WHO (2002) *World Health Report*

Esrey, S.A., J.B. Potash, L. Roberts and C. Schiff (1991) *Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookwork infection, schistosomiasis and trachoma* in Bulletin of the World Health Organisation, 69(5): 609–621

Esrey, S.A. and J.-P. Habicht (1986) *Epidemiological evidence for helath benefits from improved water and sanitation in developing countries* in Epidemiological Reviews, 8:117–128

Murray C and Lopez AD (1996) *Global Health Statistics.* WHO, Harvard School of Public Health, and the World Bank

WHO (1997) *Strengthening interventions to reduce helminth infections: an entry point for the development of health-promoting schools*

Dickson R, Awasthi S, Williamson P, Demellweek C, Garner P. (2000) Effects of *treatment for intestinal helminth infection on growth and cognitive performance in children: systematic review of randomised trials* British Medical Journal 2000 Jun 24; 320(7251): 1697–701

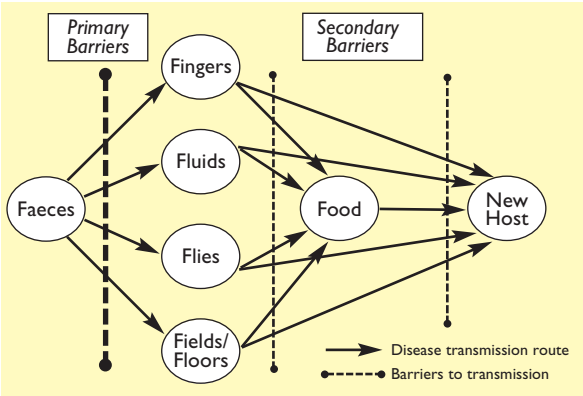
WHO (2001) *Macroeconomics and Health: Investing in Health for Economic Development* Report of the Commission on Macroeconomics and Health

Get these references in good technical libraries or on the web at
www.who.int/water_sanitation_health/en/

1.3 Improved Access to Hardware and Changes in Behaviour at the Household are Critical Interventions

Most of the diseases which result in diarrhea are spread by pathogens (disease-causing organisms) found in human excreta (faeces and urine.) The faecal-oral mechanism, in which some of the faeces of an infected individual are transmitted to the mouth of a new host through one of a variety of routes, is by far the most significant transmission mechanism: it accounts for most diarrhoea and a large proportion of intestinal worm infections. This mechanism works through a variety of routes, as shown in **Figure 1** – the "F" diagram[x].

Figure 1:
The F-diagram of disease transmission and control (after Wagner & Lanoix)

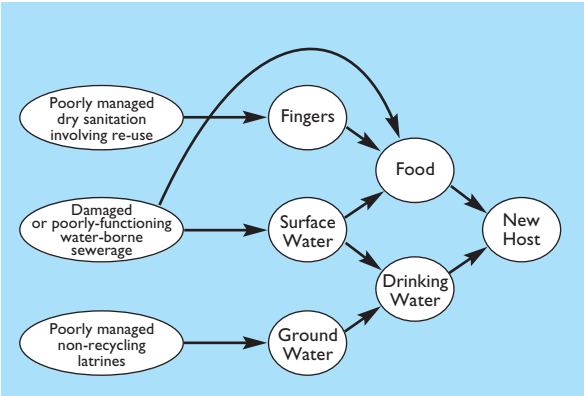


The most effective ways of reducing disease transmission is to erect "primary" barriers which prevent pathogens from entering the environment. This can be done by:

- washing hands with soap after defecation or after cleaning children's bottoms after their defecation; and
- constructing sanitation facilities which can prevent the spread of disease by flies and the contamination of drinking water, fields and floors[xi].

Where sanitation facilities are badly planned and constructed, poorly maintained, used wrongly or not used at all, their construction can set up further potential disease transmission routes, and lead to contamination of the environment (**see Figure 2**)[xii]. Selection of the right technologies, good design, appropriate use and proper management are required to protect against these additional risks[xiii].

Figure 2:
Additional transmission pathways due to poorly-managed sanitation (after Prüss et al.)



Primary interventions which have the greatest impact on health often relate to the management of faeces at the household level. This is because (a) a large percentage of hygiene related activity takes place in or close to the home and (b) first steps in improving hygienic practices are often easiest to implement at the household level. However, to achieve full health benefits and in the interests of human dignity, other sources of contamination and disease also need to be managed including:

- Sullage (dirty water that has been used for washing people, cloths, pots, pans etc);
- Drainage (natural water that falls as rain or snow); and
- Solid Waste (also called garbage, refuse or rubbish)[xiv].

All these sources of contamination must be managed in all the locations where they are generated.
Thus a full-scale programme to improve hygiene would need to address the management of excreta, sullage, drainage and solid waste at:

- Households (both formal and informal);
- Schools;
- Semi-public places (such as hospitals);
- Public places (such as markets, bus stations etc); and
- Refugee communities.

Sanitation and hygiene promotion would also have to be geared up in many cases to handle "emergency" situations. Such emergencies could relate to the outbreak of epidemic disease (such as cholera) or to a physical event such as a hurricane or earthquake.

Although environmental sanitation in its broadest sense is important, this document will focus on programming for the better management of faeces at the household level. Reference to other areas of intervention will be made where this provides useful guidance for the reader.

Reference Box 3: "Hygiene" and "Sanitation"

For a comprehensive introduction to hygiene improvement, and links to additional references

See: Appleton, Brian and Dr Christine van Wijk (2003) *Hygiene Promotion: Thematic Overview Paper* IRC International Water and Sanitation Centre

Get this reference on the web at: http://www.irc.nl

See also: Environmental Health Project (2003)
The Hygiene Improvement Framework: a Comprehensive Approach for Preventing Childhood Diarrhoea

Get this reference on the web at: http://www.ehp.org

For a discussion of the cost-effectiveness of targeting various risky practices in hygiene promotion

See: Curtis, Valarie, Sandy Cairncross and Raymond Yonli (2000) *Domestic hygiene and diarrhea: pinpointing the problem* Tropical Medicine and International Health, volume 5 no 1 pp 22–32 January 2000.

For an introduction to the basics of sanitation in developing country contexts

See: Cairncross, S. and R. Feachem (1993) *Environmental health engineering in the tropics: an introductory text.* (2nd edition) John Wiley & Sons: Chichester.

Get these references from: good technical libraries or bookshops

For further information on school sanitation

See: *UNICEF School SanitationWebsite* **on the web at: http://www.unicef.org**

For further information on sanitation in emergencies

See: Wisner, B., and J. Adams (Ed) *Environmental Health in Emergencies and Disasters: A Practical Guide* WHO, Geneva

Thomson. M.C., *Disease Prevention through Vector Control, Guidelines for Relief Organisations* Oxfam Practical Health Guide No. 10, Oxfam, UK

Ferron, S., J. Morgan and M. O'Reilly (2000) *Hygiene Promotion: A practical Manual for Relief and Development* Intermediate Technology Publications on behalf of CARE International

Harvey, P., S. Baghri and R. Reed (2002) *Emergency Sanitation* WEDC, Loughborough University, UK

Get these references on the web at: www.who.int/water_sanitation_health/hygiene/emergencies/emergencies2002/en or in good bookshops stocking IT publications

1.4 Lessons for effective sanitation and hygiene promotion programming: Supporting investments and behaviour changes within the household

Public investments in sanitation and hygiene promotion are at a very low level but what is probably more important is that much of the money is being spent ineffectively (see **Reference Box 4**).

Despite low levels of investment, households continue to provide themselves with means of sanitary disposal of excreta. The available data suggest that, particularly where public agencies are failing, people have been finding their own solutions and in many countries small-scale entrepreneurs have stepped into the market to provide services. While many of these solutions are not perfect, they show that households have the potential to invest responsibly and make changes in personal hygienic practices (see **Reference Box 4**).

> ***Lesson One:*** *the role of government may often need to shift away from direct service provision towards: creating supportive arrangements for households to make decisions; promoting demand for sanitatoin; promoting behaviour change; and stimulating systems of local supply and management which provide better facilities for management of wastes at the household level* [xv].

In most European countries, investments in early sanitation systems were heavily supported by private interests or governments, anxious to maintain the health of the workforce, particularly in industrial urban centres. This led to a "supply-driven" culture amongst public health officials and technicians which persists to this day. In addition, in countries which have long enjoyed the benefits of near total coverage of household facilities, attention has moved on to focus on the management of the external environment. This is why the emphasis in public health engineering education in many countries is on wastewater collection, treatment and disposal. This emphasis has tended to skew investments in sanitation in developing countries towards these more expensive elements of the sanitation system, to the detriment of the development of appropriate approaches to the management of wastes at household and local level (see **Reference Box 4**).

> ***Lesson Two:*** *Where coverage is low, governments may need to switch priorities back towards increasing access to services and changing behaviours at the household level, and reduce expenditure on costly reticulated systems and wastewater treatment facilities.*

The real challenge for many countries and localities may be to work out how household investments and changes in behaviour can best be supported. Such household changes need to become more effective, and importantly begin to occur at scale so that coverage does finally start to increase in line with needs. Programmers need to start to see sanitation as a business, which can effectively be run outside government and move beyond latrine building programmes.

Reference Box 4: Lessons learned

Levels of Investment

- WHO/UNICEF estimates that the overall level of effective investment in sanitation may have to increase by as much as 28% in urban areas and by 400% in rural areas in order to achieve the 2015 target. This suggests annual investment rates almost double those which were achieved in the nineties. The Global Water Partnership estimates that the needed investments are even higher, when municipal wastewater and industrial effluent are also included, along with the costs of operating and maintaining existing infrastructure (an increase from US$22 billion to US$117 billion annually)[xvi].
- In 2000 WHO/UNICEF estimated that in Africa only 12% of the money invested in water supply and sanitation went specifically to fund sanitation. In Asia the figure was higher at 15%, while Latin America and the Caribbean spent 38% on sanitation.
  This higher figure probably reflects more expensive levels of service commonly provided in countries in the Latin American region and the lower levels of self-provision (see below).

Quality of Investment

- Figures compiled from OECD/DAC data by the USAID Development Information Service show 52% (US$52 billion) of donor aid in the overall water sector went to support "large system" water supply and sanitation over the period 1995–2000 as compared to 6% to "small systems" water supply and sanitation. It is reasonable to assume that in general "large" water supply and sanitation schemes do not include community or household management, suggesting a persisting bias towards top-down supply-driven schemes. There is some evidence that this is beginning to change. A 2000 review of World Bank funding for sanitation observed that expenditure on software (non-construction activities including community development, hygiene promotion etc) "increased markedly in the nineties" jumping from 6% to 14% of total costs for projects prepared after 1994[xvii].
- A 1995 review of global evaluations of sanitation programmes[xviii] found that investment in sanitation has been inadequate and often misdirected, due in part to a lack of perceivable demand and also in part to the fact that most development institutions are not geared to respond to a demand-led approach. To quote the study: *"Most decision-makers are not clear about an overall strategy for sanitation programming, have not reached a consensus on the definition of sanitation, and differ on the optimal role for governments, NGOs, communities, the private sector, and donors in programme implementation."*
- The review specifically found that: programmes lacked strategies for addressing hygiene and sanitation behaviour change and were often narrowly focused on latrine construction; there was often an emphasis on specific technologies; there was little data on the economics and financing of sanitation; and coordination between sanitation and water supply was challenging because demand for water generally outpaced demand for sanitation. However, good links had sometimes been established with the health and education sectors.
- Interestingly the review found that programmes implemented by NGOs or the private sector with communities, sometimes in collaboration with government, were more likely to succeed than programmes implemented by government alone.

→

Reference Box 4: Lessons learned

Self-Provision

- A striking aspect of many of the better known of the sanitation success stories is the absence of large scale public funding. The Orangi Pilot Project in Karachi Pakistan, mobilized communities to invest in sewers, while in Midnapore West Bengal India, households were supported to invest in on-plot latrines[xix]. The common feature of these two well-known cases was that, while external funding was used to support technical innovation, participatory research, hygiene education and social marketing, direct funding of hardware was not included; households were responsible for the local investment themselves.
- Recent research in India indicates that of the household sanitation which does exist only a tiny proportion has been financed by governments. In the six years from 1985/86 to 1991/92 the government of India constructed 2.26 million latrines in rural areas, raising coverage from 0.5% to 2.7% overall. In 1988/89 the 44th round of the National Sample Survey found that just under 11% of the rural population had a latrine, suggesting that as many as 8% of rural households across the country had invested their own money and used small private providers to construct latrines[xx]. Research in Africa confirms that the role of the small scale private sector in sanitation provision is significant[xxi]. Importantly, many households already invest in sanitation facilities themselves, outside of government or donor funded programmes.

For a summary of lessons learned in hygiene, sanitation and water supply since the early 1980s

See: Cairncross, A.M. *Sanitation and Water Supply: Practical Lessons from the Decade.* World Bank Water and Sanitation Discussion Paper Number 9. World Bank: Washington, D.C.

Bendahmane, D (Ed.) *Lessons Learned In Water, Sanitation and Health: Thirteen years of Experience in Developing Countries* USAID, Water and Sanitation for Health Project (WASH) (1993)

La Fond, A. (1995) *A Review of Sanitation Program Evaluations in Developing Countries* Environmental Health Project and UNICEF, EHP Activity Report no. 5, Arlington VA.

Water Supply and Sanitation Collaborative Council (2000) *Vision 21: A Shared Vision for Hygiene, Sanitation and Water Supply and A Framework for Action* Water Supply and Sanitation Collaborative Council, Geneva

WELL (1998) *Guidance Manual on Water and Sanitation Programmes* WEDC Loughborough University, UK

Luong, T.V. (1996) *Reflections on the Sanitation and Hygiene programme in Bangladesh* UNICEF, Water and Sanitation for Health Project (WASH) Technical Report No. 86, Arlington VA.

Get these references from: good technical libraries,
and on the web at www.ehp.org, www.whelpdesk.org, www.wsscc.org, www.unicef.org and www.lboro.ac.uk/wedc

For information on the nature and scale of small-scale independent service providers in sanitation and hygiene promotion

See: Collignon, B. and M. Vezina (2000) *Independent Water and Sanitation Providers in African Cities: Full Report of a Ten-Country Study* WSP

Solo, T.M. (2003) *Independent Water Entrepreneurs in Latin America: The Other Private Sector in Water Services* WSP

Get these references from: http://www.wsp.org

1.5 The Role of Government – some principles

Much of the evidence presented above suggests that investments and decisions made at the household level are critical to achieve improved sanitary conditions. However, improved access to sanitation, and better hygienic practices have benefits that reach beyond the immediate household to the entire population. A reduction in infection and disease among some part of the population will reduce the risk of infection in others. The construction of a sanitation system may also have *negative* health externalities especially where inappropriate designs are used or maintenance is poor. Poorly maintained silt traps and uncovered sewers, for example, can act as breeding grounds for disease vectors such as mosquitoes.

These external health implications are the reason why investments in sanitation and hygiene promotion are often seen as a "public" responsibility. These and other "public good" aspects of sanitation, such as safety and environmental protection, remain the responsibility of society as a whole. Governments need to establish incentives that enable *individual household choices to achieve public policy objectives* and to uphold and regulate principles and policies for the public good. They may also continue to finance investments in shared infrastructure (such as trunk sewers and wastewater treatment facilities) and support interventions which raise household demand for sanitation, promote improved hygienic practices, and facilitate service providers to deliver appropriate services.

> ***Principle One:*** *The role of government is to balance public and private benefits of sanitation to ensure increased access at the household level while safeguarding society's wider interests.*

Having established that there is a "public" benefit to achieving high levels of coverage of sanitation and hygienic practices, it is surprising to find that access to sanitation is patchy and that this is a persistent problem even in areas where overall coverage is improving. Data for Latin America (a region where many countries have already achieved impressive overall coverage) for example show a consistent bias against rural and poor populations[xxii]. Where segments of the population consistently fail to access better sanitation facilities and improved hygienic practices, health benefits to the population as a whole are likely to be limited.
There is however, an even stronger case to be made, in the interests of *justice*, that such inequities be addressed by sanitation and hygiene promotion programmes. The burden of poor hygiene falls more heavily upon poor populations who tend to have a higher dependency on daily-wage labour, and few financial reserves to manage periods of ill health or the costs of treatment for sick family members. Inherent biases in sanitation coverage against women- and children-headed households further deepen their poverty and may lock them into cycles of ill health and dependency. Addressing the needs and aspirations of these segments of the population may be the most challenging aspect of programming for governments, but is probably also the most important.

> ***Principle Two:*** *Many groups are excluded from the benfits of traditional 'sanitation' programmes. The role of government is to balance the interests of different groups in society and redirect resources to those who are systematically excluded*

It is often tempting to start a new programme from scratch identifying "ideal" solutions (either technical or institutional). In reality existing practices, habits and customs are probably an important part of the solution. Disregarding them risks failure; they are unlikely to be easily changed or abandoned, and in failing to respect them programmers may already be alienating potential partners and communities[xxiii]. The first rule must always be to look hard at what currently exists and plan to build and improve from there. Once there is understanding of current practices, it will be easier to map out a path to improve the situation.

> ***Principle Three:*** *It is no good selling (or even giving) people something that they don't want. The role of government is to identify and support what already exists.*

Recognising that people are already investing in sanitation and changing their behaviours also means recognizing that many actors are already involved. In many cases (particularly in urban areas) sanitation services are already provided by a mix of small scale entrepreneurs, government departments, NGOs, community groups and individuals while many of the same actors, along with soap manufacturers, schools and health workers may already be engaged in trying to change behaviours. All of these actors may have something to contribute to the design of a new programme for sanitation and hygiene promotion.

Partnerships are hard to forge and even harder to maintain and strong leadership will be needed. Government can play a key role in drawing in multiple actors to solve problems and design a new programme.

> ***Principle Four:*** *Many actors may have knowledge and experience which can inform a sanitation and hygiene promotion programme. The role of government is to identify and forge partnerships with any organisation or individual who can be part of the solution.*

All of the above suggests that major changes are needed in the way in which hygiene improvement services are formally supported. The role of many actors is likely to change, and significant reorganization may be needed. Importantly, in the longer term, changes may result in significant reductions in the numbers of staff employed in government agencies; a shift in the skills required; a recognition of a greater role for new actors (perhaps the small scale private sector, civil society, local government); and a change in the way decisions are taken and action is effected. Crucially there will need to be a serious increase in the accountability of all service providers towards the household.

> ***Principle Five:*** *New approaches may result in a shift of power and resources. It is the role of government to promote and support this shift including finding resources to build capacity and support institutional change.*

Reference Box 5: Principles

For a thorough discussion of the relationship between water supply and sanitation programming and equity

See: van Wijk-Sijbesma, C. (1998) *Gender in Water Resources Management, Water Supply and Sanitation: Roles and Realities Revisited.* (especially chapters 5, 6 and 7). Technical Paper Series No. 33-E, IRC, Delft

Get this reference on the web at: www.irc.nl/products/publications/title.php?file=tp33e

For ideas on how partnerships work in the water and sanitation sector

See: Caplan, K., S. Heap, A. Nicol, J. Plummer, S. Simpson, J. Weiser (2001) Flexibility by Design: Lessons from Multi-sector Partnerships in Water and Sanitation Projects BPD Water and Sanitation Cluster, London.

Get this reference from: Building partnerships for Development at **www.bpd.org.uk**

See also: Janelle Plummer (2002) *Focusing Partnerships – A Sourcebook for Municipal Capacity Building in Public-Private Partnerships* Earthscan Publications Ltd, London

Saadé C.,M. Bateman, D.B. Bendahmane *The Story of a Successful Public-Private Partnership in Central America: Handwashing for Diarrheal Disease Prevention* USAID, BASICS, EHP, UNICEF, The World Bank Group

Get these references from: good technical libraries

Notes for Chapter One:

i UNICEF/WHO Joint Monitoring Programme (2000) *Global Water Supply and Sanitation Assessment 2000 Report*

ii Water Supply and Sanitation Collaborative Council (2000) *Vision 21: A Shared Vision for Hygiene, Sanitation and Water Supply and A Framework for Action* Water Supply and Sanitation Collaborative Council, Geneva

iii WHO (2002) *World Health Report*

iv Esrey, S. A., J. B. Potash, L. Roberts and C. Schiff (1991) *Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookwork infection, schistosomiasis and trachoma* in Bulletin of the World Health Organisation, 69(5): 609–621

v Esrey, S. A. and J.-P. Habicht (1986) *Epidemiological evidence for helath benefits from improved water and sanitation in developing countries* in Epidemiological Reviews, 8: 117–128

vi Murray C and Lopez AD (1996) *Global Health Statistics.* WHO, Harvard School of Public Health, and the World Bank

vii WHO (1997) *Strengthening interventions to reduce helminth infections: an entry point for the development of health-promoting schools*

viii Nokes C, Grantham-McGregor S. M., Sawyer A.W., Cooper E. S., Bundy D. A.(1992) *Parasitic helminth infection and cognitive function in school children* Proc R Soc Lond B Biol Sci. 1992 Feb 22; 247(1319): pp 77–81

ix WHO (2001) *Macroeconomics and Health: Investing in Health for Economic Development* Report of the Commission on Macroeconomics and Health

x Wagner, E. G. and J. N. Lanoix, (1958). *Excreta disposal for rural areas and small communities.* WHO:Geneva.

xi Earth floors contaminated with children's wastes are favourable for the development of intestinal worm eggs.

xii Prüss, A., Kay, D., Fewtrell, L., and Bartram, J. (2002) *Estimating the Burden of Disease from Water, Sanitation and Hygiene at a Global Level* Environmental Health Perspectives Vol 110, No 5 pp 537–42

xiii the reader is directed to Chapter 13 for a fuller discussion of technology choice.

xiv Modified from Pickford J. (1995) *Low Cost Sanitation: A Survey of Practical Experience* Intermediate technology Publications, London.

xv This is true even in congested urban areas where "networked" solutions such as sewers may be used. People at the household level will still need to invest in household facilities (toilets, taps, connections to sewers) and change behaviours, the challenge here is to respond to this household action, and provide the wider "network" actions needed to support them.

xvi UNICEF/WHO (2000) ibid. GWP estimates were assembled from data presented in Global Water Partnership (2000) *Towards Water Security: A Framework for Action,* and Briscoe, J. (1999) *The Financing of Hydropower, Irrigation and Water Supply Infrastructure in Developing Countries,* cited in Winpenny, J. *Financing Water for All: Report of the World Panel on Financing Water Infrastructure* World Water Council, 3rd World Water Forum, Global Water Partnership

xvii Word Bank (2000) *The State of Wastewater and Sanitation at the World Bank* in Investing in Sanitation: World Bank Water Supply and Sanitation Forum, Staff Day April 5, 2000.

xviii La Fond, A. (1995) *A Review of Sanitation Program Evaluations in Developing Countries* Environmental Health Project and UNICEF, EHP Activity Report no. 5, Arlington VA.

xix Hasan, A. (1997) *Working with Government: The Story of OPPs collaboration with state agencies for replicating its Low Cost Sanitation Programme* City Press, Karachi; UNICEF (1994) *Sanitation, the Medinipur Story, Intensive Sanitation Project,* UNICEF-Calcutta, India; Ramasubban, K. S., and B. B. Samanta (1994) *Integrated Sanitation Project, Medinipur,* UNICEF, India

xx Kolsky, P., E Bauman, R Bhatia, J. Chilton, C. van Wijk (2000) *Learning from Experience: Evalutaiton of UNICEF's Water and Environmental Sanitation Programme in India 1966–1998* Swedish International Development Cooperation Agency, Stockholm

xxi Collignon, B. and M. Vezina (2000) *Independent Water and Sanitation Providers in African Cities: Full Report of a Ten-Country Study WSP*

xxii For the Latin America region as a whole, it is estimated that 30,000 people every day are gaining access to some form of improved sanitation (of these 20,000 are connecting to sewerage). Despite this impressive record, 103 million people still lack access to any form of sanitation, and of these a disproportionate number (66 million) live in rural areas. (Gerardo Galvis, PAHO, presentation to WaterWeek 2003, World Bank, Washington DC).

xxiii Examples of ill-designed sanitary facilities falling into disrepair abound. See for example Pickford, J. (1995) ibid. pp 23–34

SECTION TWO:
THE PROCESS OF CHANGE

Chapter Two talks about how to make a start in changing the way sanitation and hygiene promotion happen. It presents a generic approach to programming for change, and discusses how you can decide what approach to adopt, given the circumstances of the country or region where you work. It also provides some practical pointers for those wishing to launch a programming process, and provides examples of approaches taken in other countries and regions.

This chapter has been written for people who are willing and able to take a lead in the programming process.

Chapter 2 Getting Started

2.1 Changing the way services are delivered

The Challenge

In Chapter 1 we saw that new approaches to sanitation and hygiene promotion may require fundamental shifts in policies, financing, organisational arrangements and implementation approaches. We also saw that the benefits of making sanitation and hygiene promotion work at scale can be huge and will play a significant role in poverty alleviation. As sector professionals we need to find ways to effect this change.

Developing sanitation and hygiene promotion programmes may require changes at a number of levels. In any given country there may be a need for:

- an explicit decision at the highest level, to prioritise hygiene improvement;
- a process to manage fundamental institutional change;
- changes to the enabling environment including design and implementation of new policies, changes in resource allocation, design and use of new financial instruments, changes in roles and responsibilities, and new monitoring and evaluation systems; and
- specific efforts to improve implementation through either pilot projects or restructuring of large scale investment programmes.

While this task may seem daunting most countries or local jurisdictions will probably be able to identify quick-win opportunities to show progress while working on more systematic changes.

The Process

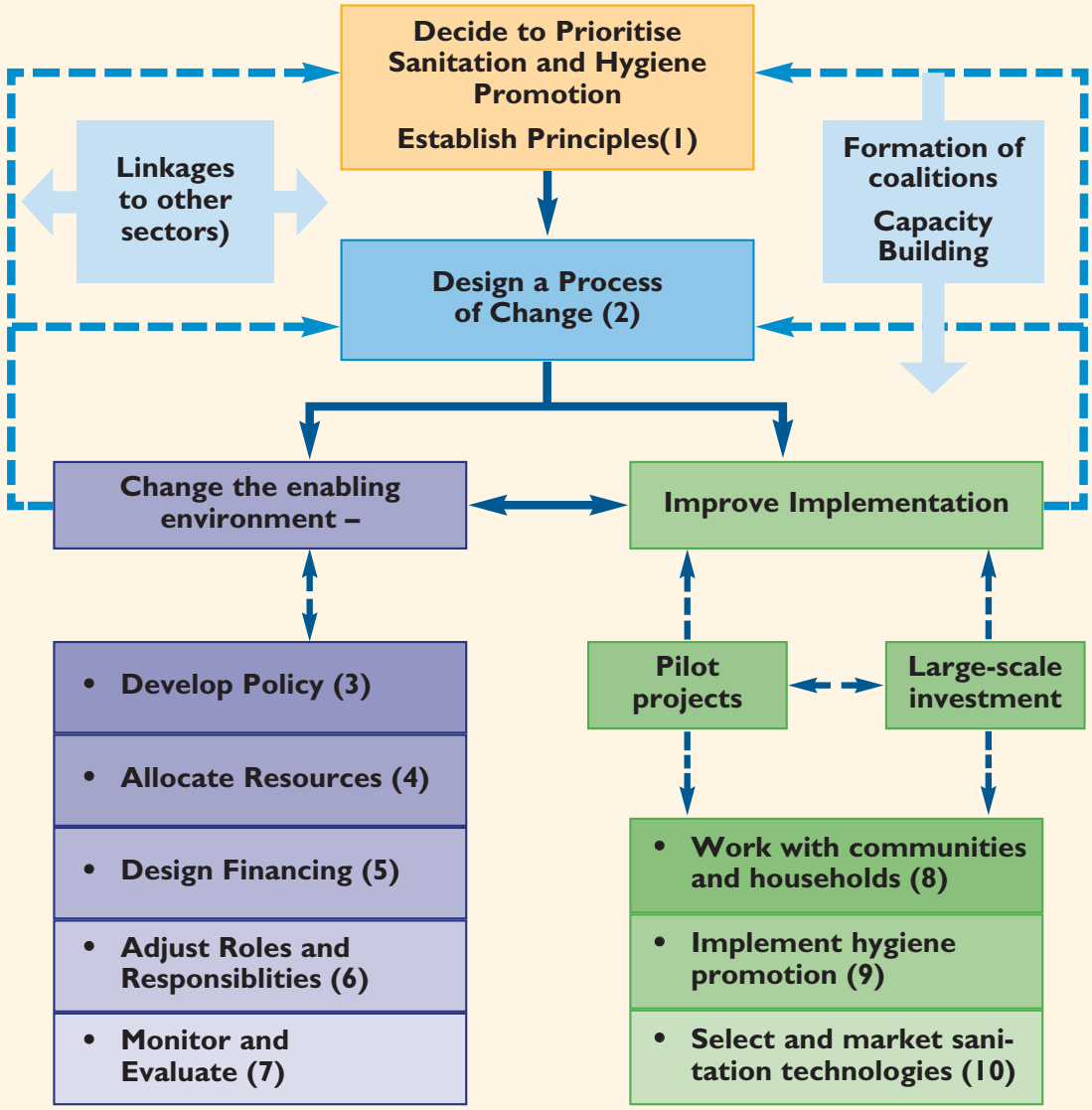
Figure 3 shows a schematic representation of the steps needed to effect such changes. While this diagram suggests a linear process, in reality the process may be cyclical, with changes in some areas feeding in to subsequent changes in other areas. It may be easier to consider Figure 3 as representing all the elements of programming.

- **Prioritise Sanitation and Hygiene Promotion**

The first step may be a decision that things need to change. This may happen at national level, or in decentralized situations, at local government level. This decision may be taken in response to lobbying from within the health sector or from water supply and sanitation specialists, or it may arise out of a process of assessing overall strategies to alleviate the effects of poverty and support growth. Once it is agreed that sanitation and hygiene promotion are important, it will be useful to agree on the ground rules and principles. Defining what is meant by

"sanitation" and "hygiene promotion" and being explicit about the links between sanitation hardware and hygiene behaviour change may be an important step. (See Section 1 for a discussion of why sanitation and hygiene promotion improvement should be prioritized and a discussion of what may make sanitation and hygiene promotion programmes work).

Figure 3: The Programming Process



Note: numbers in brackets indicate the chapter containing additional discussion of the topic

- **Design a Process of Change**

Good programming flows from a solid understanding of the current situation, a realistic assessment of what is possible, and through drawing in expertise from many actors. Information needs to be assembled and analysed, strategies must be developed, capacity will need to grow, and all this must happen in a linked and mutually reinforcing way. For this to happen some sort of structured approach to the process will certainly be helpful. (**Section 2** – this section – contains some ideas for process and information management).

- **Change the enabling environment**

If new approaches are to become embedded and effective at scale, structural changes may be needed. Making such changes (to policy, financial instruments, organizational roles and responsibilities, and monitoring systems) may take a long time and will be politically and technically difficult. Importantly, it will almost certainly result from an iterative process, where new ideas are developed tested and evaluated as part of a process of long-term change. (**Section 3** contains a more detailed discussion of the enabling environment).

- **Improve Implementation**

There is usually a pressing need to make rapid progress, even though getting the enabling environment right may be a long-run objective. At the same time, the programming instruments that are put in place at the institutional level (the elements of the enabling environment) need to be tested through ongoing investment projects. Where the new approaches are radically different from what has gone before, this may best be effected through well designed and carefully evaluated pilot interventions (although care is needed to ensure that these occur at sufficient scale and in a replicable context so that findings can reflect accurately back into systematic investments and institutional decisions). In other cases, new approaches can be rolled out at scale, always with the proviso, that the programming process may result in subsequent alterations and changes to the overall approach. The key issue here is to link programming of the enabling environment, with a realistic evaluation of the elements of investment projects (both pilot and at scale). Thus, as investments mature, a new round of information and analysis may be required to move the sector further forward, or a re-evaluation of the underlying programming principles which would then result in more long-term changes to the enabling environment. (**Section 4** includes a discussion of the programming implications of short-run investment implementation).

Reference Box 6: The Process of Programmatic Change

For a comprehensive discussion of hygiene promotion, sanitation and water supply programmes

See: WELL (1998) *Guidance Manual on Water supply and Sanitation Programmes* Department for International Development, UK

UNICEF (1999) *Towards Better Programming: a Manual on Hygiene Promotion,* Water, Environment and Sanitation Technical Guidelines Series No. 6 , New York

Yacoob, M. and F. Rosensweig (1992) *Institutionalising Community Management: Processes for Scaling Up* WASH Technical Report No. 76, USAID, Washington DC

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2.2 Contextual Factors – selecting the right approach

Different countries / regions / municipalities will find different programming approaches more or less appropriate depending on the context. Those leading the process may need to assess the situation prior to launching a programming process.

● **Decentralisation / Government structures**
The level of decentralization and the structure of national/ regional and municipal or local government will determine how programming should be organised. In countries where both responsibilities and resources are decentralized local government will play a central role in the process and local coalitions will be the most important vehicle for change. A few key policy decisions may still need to be taken at national level (for example setting of fiscal and trade policies that influence the ability of local manufacturers to produce appropriate goods and services, environmental legislation, legislation for private sector participation in hygiene improvement, safety standards, approaches to technical education, organizational change in national agencies etc). Where programming happens at the local level it may be advisable to design a process than enables local actors to influence regional or national policy.

Where government is centralized decision making may be easier, but turning programming decisions into effective local action may be more challenging. One approach might be to work in limited geographical area initially, to develop new ideas and build local capacity before scaling up to a national level programme.

Where multiple actors are involved (as they often will be), the challenge is to draw in the appropriate actors from a range of disciplines/ ministries without creating institutional stasis. Here a lead or champion agency may need to take responsibility to oversee the process. Where possible the choice of agency should not preclude radical new approaches (using the national utility to lead the process may limit the ability to debate breaking up that organisation into smaller units for example). The key idea is to keep the process as simple as possible while at the same time ensuring the real participation of the key actors at the lowest (most local) level possible.

● **Institutional Confidence**
The degree to which households and individuals have confidence in the institutions which support the delivery of goods and services is important. This "confidence" often relates to the maturity of the institutions concerned. In some situations for example, water and sanitation utilities may have a good track record of delivering appropriate services at reasonable cost. In this situation, there may be strong confidence from households (even those awaiting connections to the sanitation system) that the utility can take responsible decisions on their behalf. Similarly the delivery of health and hygiene messages by that utility may be quite effective. The biggest risk in this situation is to pockets of the population are persistently unable to access services. Programmers may need to focus very explicitly on these excluded groups and draw in a range of non-conventional partners who may be better able to serve them than the traditional utilities.

In other situations the track record of public agencies may be very poor, with low coverage, poor sustainability, high costs and high perceived levels of corruption. The legal and regulatory regime may be very weak. In this situation, households may not have confidence in a programming process which does not provide them with a specific mechanism to make their voice heard Recommendations coming from a process seen to be dominated by these organisations may be discounted by those not involved in the process. In such cases, in the interests both of justice and of finding workable solutions, programming needs to provide specific mechanisms for inclusion.

● **Technical and cultural issues / consumer expectations**
Related to the maturity and confidence of the institutions, is the technical situation. This has two dimensions; the physical conditions which determine what technologies might work; and the expectations of consumers.

Technology choice may be constrained by a number of factors including: availability of water and congestion – which determines the availability and location of space for treatment facilities. (A more detailed discussion of physical conditions and technology choice is in **Chapter 13.**)

Consumer expectations also affect technology choice. In countries which already have high levels of coverage with flush toilets and (for urban areas) sewers, households may aspire to advanced systems and be willing to

cover some at least of the costs. In other situations where there is limited experience with sanitation, incremental improvements starting with simple systems, may be more appropriate and a greater emphasis on hygiene promotion may be needed. Different regions of the same country may adopt different technologies (perhaps small bore sewers in congested slums, Ventilated Improved Pit Latrines in rural areas etc).

The probable technological choices to be made will influence decisions about how to organize the programming process, because it will determine what types of organisations need to be most heavily involved. In regions where there is high demand and the resources to pay for networked solutions the role of sanitation "utilities" may be central, whereas where on-site systems are likely to predominate, the small scale private sector, NGOs and health extensionists may play a more central role.

- **Resources**

The availability and structure of finances is important because it determines who should be involved in decision making. In countries/localities without adequate financial resources of their own, potential funding partners need to be involved as early as possible to ensure that they too have ownership of the ideas and approaches in the programme.

Where human resources are weak, and additional people or new skills are required, professional bodies, training and educational organisations and other sector agencies who may provide skilled staff will be central to the programming process.

- **Environment and Vulnerability**

In countries or regions prone to natural disasters such as hurricanes and earthquakes, the ability to respond quickly with appropriate hygiene and sanitation interventions may be one of the most significant contributions to health; this may determine some of the organisational decisions to be taken. Pulling in key players such as disaster response agencies, international NGOs and ESAs may be critical.

Vulnerability of this sort can also have a strong influence on the type of technical approaches used (large sewered sanitation systems may be more vulnerable for example in earthquake prone areas, than smaller decentralized or on-plot systems). These in turn may also dictate the most appropriate organizational approaches to hygiene improvement.

Society's attitude to the wider environment will also influence programming. In countries and regions where household coverage of sanitation is relatively high, focus may fall on the need to protect vulnerable ecosystems from poor quality sanitation interventions. Attention must then be paid to preventing:

- over-regulation leading to spiraling costs and stifled investment
- environmental regulation which is unrealistic or can easily be ignored.

In countries and regions where the protection of the wider environment is a priority, environmental agencies need to be drawn into the programming process, to build their capacity to regulate in an effective and constructive manner. In regions where coverage is very low, it may be more appropriate to focus initially in solving access problems first, and only draw in wider environmental agencies later.

- **Rural areas, small towns and urban communities**

The degree of urbanisation, and the nature of communities (in terms of their physical economic and social characteristics, geographical distribution and linkages) will influence both the focus and the outcome of the programming process.

Approaches to sanitation vary widely according to the density and size of communities, while approaches to hygiene promotion will vary according to how cohesive communities are and whether a "traditional" or a more "urban" culture dominates. The structure of local government will play a key role in determining how programming can best be organized for each type of community. The approach to programming must be informed by the range of circumstances under which people live and the reach of the proposed programme.

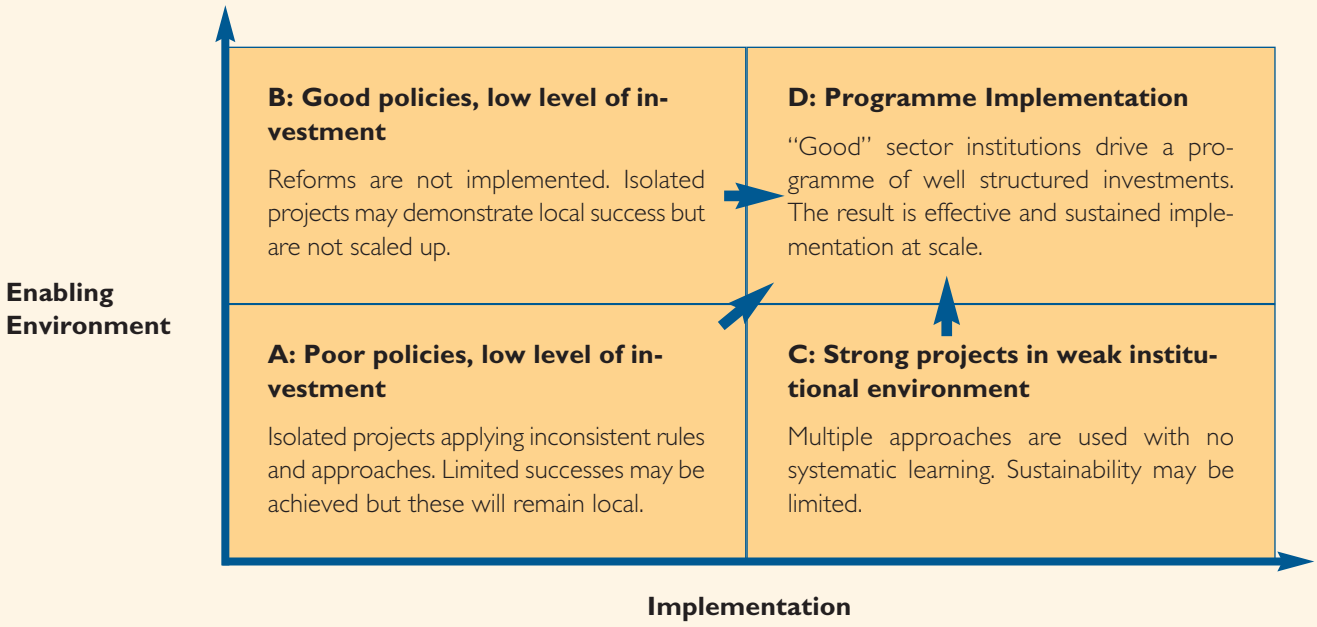
- **Status of the Sector**

Some countries already have excellent policies but lack the right institutional context to turn them into reality. Others have excellent projects but fail to scale them up because of the existence of inappropriate policies and the wrong institutional context.

For countries with poor policies and low levels of investment ("A" in **Figure 4**) change may start with the development of some critical pilots to demonstrate new approaches, and an advocacy effort for the sector to attract additional investment from domestic or external

sources. In countries where policy development is quite well advanced, (B) pilots may not be needed but the focus would fall on designing financial instruments, identifying new sources of needed investment and building the capacity to roll out implementation at scale. Where there is a programme of investment but the enabling environment is weak ("C") the focus would naturally fall on long term institutional change. In each case the objective would be to move towards a situation where an appropriate enabling environment supports a programme of well-structured investments, delivered at scale.

Figure 4: Reform and Investment: Country Typology



2.3 Before You Start – Building political will

Programme development can continue for some time in the absence of high level political support but sooner or later it will probably come up against an impossible policy barrier unless there are high level allies to support it. It may be useful to anticipate this early in the process and try to overcome it by:

- Identifying High-Level Allies: People in official positions can often cut through red tape, overcome constraints, and provide a strong impetus to sanitation programmes. It is important to build relationships at the highest level and promote critical thinking and awareness of the issues so that when assistance is needed, it can be quickly provided;
- Holding Effective National-Level Meetings to Legitimize Programming Work and develop policy: Special meetings on key topics can attract higher level staff and give greater priority to sanitation. Sometimes the presence of a high profile national commentator, or "international experts" may be useful at such a meeting to increase its profile;
- Linking Sanitation Programming to International Movements: Politicians may feel more comfortable supporting radical change in sanitation and hygiene promotion if they feel that it is part of an internationally mandated movement. The Millennium Development Goals for example provide a useful "peg" to

show that efforts in sanitation are highly valued by the international community. Linking national programmes to regional bodies may also provide needed profile for national champions; and

- **Linking Sanitation to Existing Public Health Priorities and Cultural Norms:** Identifying health problems that are already recognized as national crises, and showing their relationship to sanitation can generate a lot of public and policy level support. Similarly, emphasizing the strong links between hygienic behaviours and cultural traditions or religious beliefs can increase the level of support from traditional and religious leaders, and will probably result in better solutions which are more acceptable at the local level.

2.4 When You Start – Generating a Vision

Vision is important, it provides a pointer for what the sector is collectively trying to achieve. At the very least it provides a "reality check" for programmers working on the details of policy, programmes or projects. If what is proposed does not contribute to the agreed vision it is probably not right.

Visioning is all about taking a bold stand and aiming for an ambitious target. To define a broad vision it may be useful to start by describing where the sector should be in the coming period:

- *Where does the sector want to be in the next five, ten and fifteen years.*

Then consider the current situation broadly to help identify the constraints to achieving this vision:

- *Why is this vision not achievable today? What are the constraints to people accessing sanitation and hygiene promotion services? Who is excluded and who benefits from current financial, institutional and social arrangements?*

This should then point to some key areas where additional information is needed:

- *What are the main features of sanitation and hygiene promotion currently? Broadly who is responsible for what, who is entitled to what? how is service being delivered? Who is being excluded? How is the sector financed? Is more money needed? How are people coping? Is there political will to improve the situation?*

2.5 Ideas for Process

Facilitation

A skilled facilitator can assist the policy development process by building rapport and trust, listening to people's priorities and concerns and identifying the motivations of each actor. The facilitator can then assist in bringing institutions together and assisting in the organisation of dialogue. In some cases the facilitator may also help individuals and organisations to express their positions more effectively, and may also be able to bolster capacity. A facilitator (individual or organisation) should be widely respected and considered as far as possible a "neutral player" in the process. It may be best to avoid using the existing lead agency or a major donor to play this role as this may limit the effectiveness of the process when it comes to discussing significant institutional changes.

Creating fora for information exchange and decision making

For partners to participate effectively in decision making, information exchange and capacity building need to be part of the programming process. Probably the most effective way of achieving this is to design a series of events that allow participants to share information and debate possible developments in an interactive environment. Creating this environment may be challenging at first, and it may be necessary to start with smaller groups working together to build confidence before bringing larger groups together. (For example it may be advantageous for community group leaders to work together to develop a common position before they have to interact with government staff).

Forming national-level working groups
The recommendations of an informal coalition may be insufficient to effect major institutional change and it is therefore worth considering establishing a formal working group which can act as the vehicle through which sector recommendations are translated into policy change. These groups need to be inclusive and find ways to draw in experience from the local level while interacting at the policy level.

Building special interest groups
Building coalitions of specific groups, such as NGOs, community-based organisations (CBOs), private sector agencies, or individuals with specific technical skills, is an important option as part of this programming process. Apex or umbrella groups can emerge from such coalitions to strengthen the work of member agencies and build capacity over time. As such, small working coalitions can start up during the programming process itself, dedicated to specific tasks such as studies, field tests, information sharing, participatory investigations, etc. This then helps both to set the stage for these groups' broader involvement in implementation stages and to build partner commitment along the way.

Conducting Consultations among NGOs, Government, and the Private Sector
Where NGOs or small scale entrepreneurs are interacting with government for the first time in a planning arena, it will be important to develop mutual trust and overcome resistance at high levels. The experience of Government, NGOs and the private sector must be shared so that each comes to be seen as a national resource and part of the solution rather than part of the problem. It may be necessary to facilitate a large number of smaller meetings between groups so that discussions can be held in a non-threatening environment and leaders can develop better understanding before being asked to respond and comment in large public fora.

Making a start even if progress seems difficult
Creating a coherent national/ regional or municipal program for sanitation and hygiene promotion may seem to be a daunting task. However, where it seems that real progress cannot be made it is important to remember that even small changes can have a big influence in the long run. If major change is not possible today, it may be possible to pull together small successes and create some momentum and pressure for change. Where institutions are so heavily entrenched that it seems they will never change, success at the local level can help maintain optimism and will also continue to make a very real difference in the lives of those households which are directly affected.

Reference Box 7 contains pointers towards more ideas for process.

2.6 Applying the Principles

Those leading the process retain responsibility to ensure that it delivers on public policy priorities, including ensuring that wider societal interests are protected and that the poor and disadvantaged are adequately represented in the process. **Table 3** sums up how governments and their partners can do this.

2.7 Identifying and implementing solutions

The rest of this document discusses in more detail what a Sanitation and Hygiene promotion Program might actually contain. It is important to note that there are no blue-print solutions to be offered, and the development of new ideas and solutions will continue to be an iterative process, with new ideas being continually tested and reviewed. The identification and implementation of solutions in effect becomes the starting point for a renewed programming process.

Table 3: Applying the Principles to the Change Process

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Consult widely and be inclusive but recognize that government may retain responsibility for delivering public policy outcomes (such as safeguarding health and safety). Those representing communities and households must show discipline in representing their views.	Ensure the voice of the "unserved" is heard in the process- Include individuals and organisations not currently part of the "formal" system of service delivery	Participants must be aware of the existing situation and represent it accurately in the programming process	Be patient when developing the programming partnership - recognize it will be hard to forge and maintain	Create mechanisms for transferring ideas from the field to the programming process and vice versa. If programming changes are too difficult start with smaller scale interventions

Reference Box 7: The Programming Process

For ideas about programming for sanitation at city level

See: GHK Research and Training (2000) Strategic Planning for Municipal Sanitation: A Guide GHK Research and Training, WEDC, WSP South Asia

Rosensweig, F., and Eduardo Perez with Jeanine Corvetto and Scott Tobias (2002) Improving Sanitation in Small Towns in Latin America and the Caribbean – Practical Methodology for Designing a Sustainable Sanitation Plan Environmental Health Project Contract HRN-1-00-99-0011-00, Washington D.C.

Cotton, A. and K. Tayler (2000) Services for the Urban Poor: Guidance for Policy Makers, Planners and Engineers WEDC, Loughborough, UK.

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For examples of what can go wrong

See: WSP-South Asia (2002) *Strategic Sanitation Planning: Lessons from Bharatpur, Rajasthan, India* WSP South Asia Field Note

Get this reference from: www.wsp.org

For ideas about how national or regional programming can be organised

See: Derbyshire, H. J. Francis, R. A. Villaluna, P. Moriarty, C. van Wijk-Sijbesma (2003) *Policy Development Manual for Gender and Water Alliance Members and Partners* Gender and Water Alliance, Delft

Get this reference: on the web at www.genderandwateralliance.org/english/training.asp

See also: Edwards, D.B. (1988) **Managing Institutional Development Projects: Water and Sanitation Sector** WASH Technical Report No.37 USAID, Washington DC

DFID (2003) **Promoting Institutional and Organisational Development** Department for International Development, London, UK

2.8 Practical Examples from the Field: How did they organize the programming process?

In 1994 the government of the Republic of South Africa was very clear that it did indeed need a programme to rapidly improve delivery of water supply and sanitation. The precise circumstances of South Africa at that time were undoubtedly unique, but this does not take away from the achievement of the new administration, in delivering a coherent programme which included policy development, new financial arrangements, organisational transformation, decentralization to local government bodies and implementation of an intensive capital works programme. The programming process was led by the Department of Water Affairs and Forestry, which itself stands to be completely reorganized in the long-run. In tandem with the long-term programming process, DWAF has also been able to deliver on a significant and intensive capital works programme through a variety of organizational partners and a range of institutional arrangements. To give some idea of the scale of this programme the allocation in 2002 was over US$ 230 million, although a majority of these funds were spent on water supply.

Another country which has been able to put together a comprehensive national programme for water supply and sanitation is Uganda. In 1998 the government of Uganda began to reform the water supply and sanitation sector in response to its own Poverty Eradication Action Plan (PEAP). Policies enshrined in the PEAP are based on three key approaches; decentralization, privatization and poverty alleviation. The interesting thing about Uganda's programming process is that it is so firmly rooted in an overall poverty-alleviation strategy. This enables planners and sector specialists alike to find innovative ways of working across sectors which have traditionally been separated. The proposed reforms are based on a suite of studies which looked at rural, urban water supply and sanitation, water for production and water resources management. These studies were important tools both for analysis and for building consensus. The other key element is the move towards a sector-wide approach (SWAp) which replaces existing project-based approaches with a sector-wide programme involving coordinated funding of water and sanitation provision through government budgets.

The Ugandan model of participatory programming for poverty alleviation is now being replicated in a number of countries currently participating in the Debt Relief process (as part of the initiative for Heavily Indebted Poor Countries (HIPC)). In most cases this results in the development of a Poverty Reduction Strategy Paper (PRSP) which lays out the policy, institutional, financial and implementation details of poverty alleviation programmes at the national and local level. This type of national level programming is attractive but can be challenging. Recent research by the Water and Sanitation Programme in countries in Africa who have participated in the HIPC process, found that very few had succeeded in linking people's strong identification of water supply and sanitation as priority needs at the local level, with corresponding institutional and financial commitments in the PRSP. This suggests that sector specialists have failed to step in to help national government (usually led by Planning and Finance ministries) articulate pragmatic approaches to improving water supply and sanitation coverage.

While South Africa and Uganda took a systematic stand to develop new programmes for (in these cases) water supply and sanitation service delivery, other countries and regions have experienced programming 'from the bottom up' as it were. In 1997 the state of Kerala in India saw five of the fourteen district panchayats (local government administrations) launch panchayat-managed programmes for total sanitation. In 1998 this translated into a state-wide program called "clean Kerala". In the same year the People's Planning Campaign saw 1793 sanitation projects, with a total value of INR 303 million (US$ 459,000), identified by 990 local panchayats in local meetings. The impetus for this massive shift in emphasis on the part of the state government, came, in part, from the experience of an externally–funded community-managed sanitation programme. The Indo-Dutch project had tried out a range of strategies and identified an effective local management model which built on the strengths of the local panchayats. Visible successes of the program (which helped 85,000 households construct latrines between 1991 and 1996) resulted in the uptake of the approach across the state. Importantly latrine construction was only one (small) part of the approach which also built capacity and provided intense support for hygiene behaviour change.

Success at the level of the project does not, however, guarantee that projects can be scaled up to program-

matic levels. In Jamaica, USAID supported a local NGO, the Construction Resource and Development Centre to implement a sanitation program in two peri-urban communities in Montego Bay. Despite implementing an effective, comprehensive community-based project and successfully supporting more than 600 households in the construction and use of sanitary solutions for excreta disposal, so far, the approach has not been replicated or brought to scale in Montego Bay. The positive experience of the project, which was able to offer land title to those households willing to invest in sanitation, has not led to a change in housing policy in Montego Bay. This is perhaps partly due to the fact that the project took place outside the ordinary remit of the local administration which "never became a stakeholder in this process".

Organisational approaches which build capacity to lobby for and effect programming change have also been used. In 1982, as part of the International Decade for Water Supply and Sanitation, UNDP sponsored a series of national consultations of NGOs in the South Asian region. In Bangladesh, the national consultation was one of the first vehicles for NGO-government dialogue on water and sanitation. As a result, the NGO community decided to launch the NGO Forum on Water and Sanitation, which over several years developed as a service agency and apex body. It now has over 600 partners, mostly NGOs and community-based organisations, with some private organisations. Collectively the NGO Forum members have more than 38,000 people engaged in hygiene improvement work. Initially the forum provided training, materials, and technical assistance and helped link NGOs to donors, including UNICEF and the government. The NGO Forum continues to play an important role in strengthening the quality and quantity of effort in community water and sanitation.

Another spin-off from the International Decade for Water Supply and Sanitation was the formation of the International Training Network which brought together national training centres, each of which had received both financial and technical support from a variety of agencies. The ITN centres did not grow into a network as extensive as the one originally envisaged by their supporters, but a number of the ITNs have become major resource centres and key participants in the global effort to promote hygiene improvements. They remain important and active advocates for appropriate approaches to sanitation and water supply, and are active in linking developing country decision makers with new ideas and capacity.

Programmes which grow from the development of appropriate technical approaches have also had success in a number of cases. The National Sanitation Programme in Mozambique took off when detailed analysis of constraints led to a realization that peri-urban households were willing to build and use latrines but needed assistance to be able to afford, and safely construct, the slab. In Zimbabwe, the development of a locally-appropriate latrine model (the so-called "Blair" latrine, or Ventilated Improved Pit Latrine) enabled the government of Zimbabwe to roll out a national programme which has had impressive results. This type of technology-led programming can be risky however; a 2002 evaluation in India found that a similar approach which led to the government of India standardizing the Twin-Pit Pour Flush latrine constrained the sanitation programme in India for many years, because the model was too expensive and too complex for many poor households to make effective use of it.

Nonetheless India has seen a number of ambitious national efforts to roll out programmes for water supply and sanitation in rural areas. The most recent national push grew from a major pilot project in the state of Uttar Pradesh. The Uttar Pradesh Rural Water and Environmental Sanitation Project (known as "Swajal") used innovative institutional arrangements, developed from experience with an earlier pilot project in Nepal known as "Jakpas" to reach more than 1000 villages. While Swajal had many unique features, was housed in a specialized project management unit, and benefited from financial and technical support from the World Bank, the government of India was nonetheless able to convert lessons from Swajal, for use in the national programme. This happened because government was able to develop an understanding of the elements of the project which had been effective, and it resulted in a shift in national policies, financing approaches and institutional arrangements. Supporting this effort were a number of semi-formal capacity-building and networking initiatives including a rural water supply and sanitation forum, known as "Jal Manthan" and a sector-wide newsletter entitled "Jalvaani" both of which created space for information sharing and debate.

No country would wish to have to replicate the political upheaval of the new South Africa, simply to put in place bold development programmes, but South Africa and Uganda both provide a powerful reminder that solid and visionary political leadership can overcome what may seem like an insurmountable challenge. Where this lead-

ership is lacking it may also sometimes be possible to work "from the bottom up" and use local success to drive programmatic change as happened in Kerala. However, whichever path is taken, it is essential to understand the intensely political nature of all development, and ensure that the process is led by, or at the very least has the tacit support of, legitimate local stakeholders who can realistically play a part in driving forward programmes and their implementation.

Case Study Box 1: Do We Need a Programme?

The section on South Africa's Reforms was based on:

Muller, M. (2002) *The National Water and Sanitation Programme in South Africa: Turning the 'Right to Water' into Reality* Field Note 7 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi

Elledge, M.F., Rosensweig, F. and Warner, D.B. with J. Austin and E.A. Perez (2002) *Guidelines for the Assessment of National Sanitation Policies* Environmental Health Project, Arlington VA p.4

Information on Uganda's Reform Programme came from:

Robinson, A. (2002) *Water and Sanitation Sector Reform in Uganda: Government Led Transformation* Field Note 3 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi

Elledge, M.F., Rosensweig, F. and Warner, D.B. with J. Austin and E.A. Perez (2002) *Guidelines for the Assessment of National Sanitation Policies* Environmental Health Project, Arlington VA p.5

The description of the origins of the Clean Kerala Campaign is in:

Van Wijk-Sijbesma, C. (2003) Scaling Up Community-managed water supply and sanitation projects in India presentation to the IDPAD Water Seminar, IHE, Delft, The Netherlands, May 12-13, 2003.

An assessment of the Montego Bay Project is described in:

Environmental Health Project (2003) *the Hygiene Improvement Framework: a Comprehensive Approach to Preventing Childhood Diarrhoea* USAID Washington DC

Information about the International Training Network is on the web at:

www.ihe.nl/vmp/articles/projects/PRO-ICB-ITN-PH.html
www.wsp.org/english/partnerships/itn.html

The National Sanitation Programme in Mozambique is described in:

Colin, J. (2002) *The National Sanitation Programme in Mozambique: Pioneering Peri-Urban Sanitation* Field Note 9 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi

and in Saywell, D. (1999) *Sanitation Programmes Revisited* WELL Study Task No: 161 WELL – Water and Environmental Sanitation – London and Loughborough, London.

Information about the use of VIP latrines in Zimbabwe is taken from:

Robinson, A. (2002) *VIP Latrines in Zimbabwe: From Local Innovation to Global Sanitation Solution* Field Note 4 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi

The Swajal Pilot Project is described in various publications:

A useful starting point is WSP-SA (2001) *Community Contracting in Rural Water Supply and Sanitation: The Swajal Project, India Water and Sanitation Program.*

Further information on the government of India's rural water supply and sanitation programme is available with the Rajiv Gandhi National Drinking Water Mission on the web at **www.rural.nic.in/rgndw.htm**. Back numbers of Jal Manthan and Jalvaani can be found on the web at **www.wsp.org**

SECTION THREE:
CREATING THE ENABLING ENVIRONMENT

Changing the enabling environment so that investments in sanitation and hygiene promotion are consistently more effective, is a challenging task. In many countries or regions, the sort of high-level changes which are required (in policies, financial instruments, organizational arrangements and so on) may require changes to legal and regulatory instruments. Even if this is not required, for such changes to be translated into reality they have to be widely owned and accepted. For this reason such systematic changes may have to develop slowly. Programmers may have to find pragmatic ways of making progress on the ground in the meantime.

This section discusses the sorts of changes which might be needed in the long run to secure consistent and effective sanitation and hygiene promotion programmes. **Chapter 3** talks about changes in policies which may be needed to facilitate a new role for government and the inclusion of new actors in sanitation in hygiene promotion. **Chapter 4** discusses how to make decisions about allocating resources between regions and between activities. **Chapter 5** discusses what is known, and what you need to know, to design and roll out new financial instruments which can promote effective sanitation and hygiene promotion. **Chapter 6** talks about appropriate arrangements for delivering services in terms of roles and responsibilities for different types of activity. **Chapter 7** discusses the requirements for monitoring and evaluating sanitation and hygiene promotion at the programmatic level.

This section should be read selectively by people who are involved in making long-term changes to the way sanitation and hygiene promotion are carried out. Many readers will of course be considering the subject within the context of wider poverty alleviation strategies, so the ideas and recommendations included here should be read in the context of other changes you may be making to the delivery of social services.

Chapter 3 Sanitation and Hygiene Policies

3.1 The Policy Context

Policies are defined as the set of procedures, rules, and allocation mechanisms that provide the basis for programmes and services. They set priorities and provide the framework within which resources are allocated for their implementation. Policies are implemented through four types of instruments:

- **laws** that provide the overall framework;
- **regulations** in such areas as design standards, tariffs, discharge standards, practices of service providers, building codes, planning regulations and contracts;
- **economic incentives** such as subsidies and fines for poor practices; and
- **assignment of rights and responsibilities** for institutions to develop and implement programs.

More details on the development of economic incentives and assignment of rights and responsibilities can be found in Chapters 5, 6 and 7.

In order to work out whether changes are needed to the policy framework, programmers need to provide answers to the following core questions:

- Are existing policies adequate?
- Will they result in the implementation of the vision for sanitation and hygiene promotion?
- How are these policies translated into programmes?
- How effective are these programmes in improving services?

3.2 Signaling Public Policy Objectives

The policy framework provides the instruments (guidance, positive incentives and penalties) which turn public priorities into reality. Policy may deal with:

- **Targeting of Resources** (see Chapters 6 and 9)**:** Policies can be used to signal where resources are to be spent (which aspects of sanitation and hygiene promotion are to be funded, to what levels) and which communities should be targeted.

- **Equity:** Policy statements, laws and budgetary allocations can be used to steer resources to specific social groups or geographic areas. They can also support an equitable programming process by enabling the participation of marginalized groups or organisations (it could for example, require that public consultations on hygiene issues are always attended by an umbrella body which represents the interests of indigenous people).

- **Levels of service** (see Chapter 10)**:** Appropriate interventions may range from hygiene promotion alone, through the provision of simple sanitation systems, to improved levels of service including indoor flush toilets. School sanitation and hygiene promotion will be a key element in most programmes. Policy can signal (a) what levels of service are acceptable (ie are there minimum health, safety and environmental standards which need to be maintained?); and (b) what activities will be promoted (through the provision of subsidy perhaps, or support to specific providers). Levels of service decisions are usually reflected in technical norms and standards used by engineers, in building codes, planning regulations and in allocations of funding (see above). Historically, technical standards have tended to prohibit anything but the "highest" levels of service which stifles innovation and prices most households out. This may need urgent review. Adopting standards which focus on outcomes rather than those that specify inputs (ie defining safe separation of faeces from human contact, rather than discussing bricks and mortar) may help to promote innovation and enable flexibility if the situation changes (due to emergencies, influx of refugees, change in school populations etc) See Section 4.7 for examples of where this has happened in practice.

- **Health considerations:** The policy framework needs to provide for the full range of interventions (access to technology, promotion of hygienic behaviours and the enabling environment) which will enable households to improve their health status. Policy statements and even laws may be particularly useful in providing incentives for hygiene promotion to take a more prominent role over "traditional" latrine construction or ahead of curative health care.

- **Environmental considerations:** Sanitation is increasingly seen as a key issue in environmental protection. Improper disposal of human wastes can pollute water bodies, groundwater, and land surfaces and affect the quality of life for those living in the area. In addition, the economic impact of environmental degradation on tourism, fisheries, and other industries sensitive to pollution is a growing problem. Policies may be needed to address environmental protection, but these should be placed in the context of priorities (care is needed to ensure that environmental regulations do not inadvertently preclude incremental progress in household sanitation for example).

- **Financial considerations** (see Chapter 6)**:** Policies may be needed to provide guidance on who will pay for what. This is particularly important where there is a shift away from a traditional 'subsidised latrine' approach – but will also be necessary where a particular revenue stream is to be allocated to financing aspects of the programme. Whether or not such allocations need to be enshrined in law depends on the context.

- **Institutional roles and responsibilities** (see Chapter 7)**:** Policies, or at the least, a high level policy discussion may be needed to ensure that roles and responsibilities are clearly defined (a) between public agencies; and (b) between public and private/civil society agencies. A policy forum may also be able to provide effective interagency coordination. Importantly policy change may be needed to enable small scale independent providers, non-governmental organisations and other civil society groups to effectively play a role in promoting and implementing household level and community sanitation and hygiene promotion activities. Some of these organisations may need legal recognition in policy. The development of institutional policy must also consider how organisations charged with given responsibilities will implement them, and how their capacity may need to be strengthened. Again, explicit attention must be paid to how organisations are to be funded.

3.3 Locating Policy

Very few countries currently have explicit stand-alone "sanitation and hygiene promotion policies". Recent research by USAID and EHP found only three examples (Nepal, Republic of South Africa and Uganda) where such a policy could be said to exist. Such a unified policy may not be required in every case. Well known examples of successful programmes often pull in expertise from the health, education, water supply and sanitation, and social development fields, and make use of staff from a range of organisations. Policy dialogue could thus take place in a number of ways through:

- the development of a single unifying policy framework around which all organisations can develop their appropriate approaches and inputs (as for example in South Africa);
- the inclusion of sanitation within a wider poverty-reduction and economic development framework (as for example in Uganda, and at the local level in the city of Johannesburg); or
- through inclusion of aspects of sanitation and hygiene promotion in policy relating to all relevant sectors (including health, education, housing, urban and rural development etc).

While it is not possible to define *for every situation* how policy should be framed, a useful principle might be to minimize policy at every level, to ensure that, wherever possible, responsibility is delegated downwards (to local governments, communities and ultimately households). In some cases, however, the existence of policy at a "higher" level may be a useful incentive to improve performance (examples might include national regulation for protection of the environment, and regulatory oversight of private sector providers provided at a level higher than where the day-to-day contractual relationship with the public sector is managed).

3.4 Building on what exists

The legality of the policy framework is a key determinant of its legitimacy. Policies must therefore be rooted in the conventions of local laws, legislative acts, decrees, regulations, and official guidelines. For this reason information about existing legal conventions is essential to the development of effective policies (see Reference Box 8).

Policy development also needs to be based on a good understanding of: the basic situation (population, coverage, investments; health status); institutional contexts (including the performance of service providers); how people are currently accessing services; what works (even on the small scale locally); and what has potential to be scaled up.

Importantly, there is no point in developing policies that are beyond the capacity of the current institutional set up. This returns us to the theme of a cyclical process – policy is needed to improve *current performance in the short run,* and to create incentives to *strengthen the overall institutional context in the longer run.*

Reference Box 8: Sanitation policies

For: approaches to assessing current policy

See: Elledge, Myles F., Fred Rosensweig and Dennis B. Warner with John Austin and Eduardo A. Perez (2002) *Guidelines for the Assessment of National Sanitation* Policies Environmental Health Project Contract HRN-1-00-99-0011-00, Washington D.C.

Get this reference from: Environmental Health Project at www.ehp.org

3.5 Applying the Principles

Policy development as a process can provide opportunities to analyse and debate what works at the implementation level. When approaches are recognised as part of the long-run solution to the sanitation and hygiene promotion challenge they can be converted into policy. Those leading the policy development process can ensure that the principles of good programming are applied both in the process and in the outcome (see Table 4)

Table 4: Applying the Principles to Policy Development

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Use policy to signal • Targeting of resources· • Levels of service· • Health aspects· • Environmental priorities· • Financial approaches • Institutional roles and responsibilities	Use policy instruments to steer resources to areas which have been neglected Provide protection for marginalized groups of individuals within organisations or for marginalized organisations	Root policy on good understanding of the existing legal framework, institutional context and existing practices Align policy with appropriate financial and institutional instruments	Make efforts to link policy upwards (to gain political support) and downwards (to gain acceptance and implement on the ground)	Consider policies which will build capacity, and use policy development as part of the capacity building effort

3.6 Programming Instruments

Policy reform takes time. Strong political support will accelerate the timeframe, but policy change is a long-run objective of programming. Where possible, programmers should maintain support for efforts to make practical progress on the ground in parallel with the policy development process. This can be achieved through:

- creating space and 'waivers' of existing regulations to enable localized innovation and testing of new ideas;
- policy-related evaluations of pilots and investment projects;
- establishing technical working groups to review technical norms and standards, building codes, professional training etc; and
- capacity building for regulators.

3.7 Practical Examples from the Field: What policy changes should we make?

The government of Bangladesh has long been committed to improving the sanitation situation in the country. However recent research by WaterAID, showed that while subsidies (the core plank of government sanitation policy) gave people the "opportunity" to construct latrines they did nothing to generate the "capacity" to do so. In contrast the Bangladeshi NGO Village Education and Resource Centre (VERC) has shown that communities acting together can take steps to significantly improve their sanitation situation[i]. Villages where VERC has worked have developed a whole range of new approaches to solving sanitation problems, including the development of more than 20 new models for low-cost latrines. These achievements took place with almost no policy direction at all, almost as if the absence of any policy *constraint*, coupled with the commitment of VERC to find solutions to the problem, unlocked communities' ability to solve a problem for themselves. Analysis of this story might lead one to think that no policy is sometimes better than some policy. Another interpretation is that the most useful policy changes would relate to a redirection of some public funds from subsidies, to support to participatory planning, and an evaluation of whether technical norms and standards could be reorganized to generate incentives for technicians to add their expertise to local efforts to develop new latrine models.

The critical nature of technical norms and standards in determining sanitation outcomes is very clear. In India the widespread adoption of the Twin-Pit Pour Flush Latrine (with its associated high cost and high level of subsidy) may have been the single biggest constraint on scaling up access to rural sanitation in the past 15 years. By contrast, in La Paz-El Alto, Bolivia, the efforts of the private oper-

ator of the water and sanitation network, with support from the Swedish International Development Cooperation Agency (SIDA) and the Water and Sanitation Program (WSP) resulted in the development of the condominial approach to sewered sanitation in the poorest neighbourhoods of the city (The approach was pioneered in Brazil, and this project was an important step in its replication as it was expanded into Bolivia for the first time). This experience enabled sanitation to be provided to indigenous groups who had hitherto been excluded from service provision, and resulted in adoption of the low-cost technology as a standard for the utility for all income groups. The specific provision of funds from SIDA to support WSP in technical training and advocacy of the approach, resulted in a change in the national norms and standards, which have enabled condominial sanitation to be rolled out in other municipalities.

Outside technical norms and standards, housing and planning policy probably ranks highly in terms of influencing sanitation outcomes. Where access to sanitation is bound up with land title (or lack of it) some poor populations are consistently excluded. On the other hand where land title is positively linked to household investment incentives to improve sanitation may result. In Burkina Faso, eligible communities can gain land title if they construct latrines inside their houses while in Montego Bay, Jamaica, USAID had considerable success in generating demand for household sanitation in poor neighbourhoods by providing the incentive of land title.

At the highest level though, a thorough review and overhaul of sanitation and hygiene promotion policy has been rare. Interestingly, in a review of 22 African countries, WSP found that only two (South Africa and Democratic Republic of Congo) included hygienic practices in their definition of access to "improved sanitation", an indicator in its own right that policies are not yet dealing with hygiene improvement as a whole in many cases.

Case Study Box 2: What Policy Changes should we make?

The analysis of the impacts of India's use of the TPPF latrine is based on **Kolsky, P., E Bauman, R Bhatia, J. Chilton, C. van Wijk** (2000) *Learning from Experience: Evaluation of UNICEF"s Water and Environmental Sanitation Programme in India 1966-1998* Swedish International Development Cooperation Agency, Stockholm

South Africa's systematic reforms are described in **Muller, M.** (2002) *The National Water and Sanitation Programme in South Africa: Turning the 'Right to Water' into Reality* Field Note 7 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi and Elledge, M.F., Rosensweig, F. and Warner, D.B. with J. Austin

and E.A. Perez (2002) *Guidelines for the Assessment of National Sanitation Policies* Environmental Health Project, Arlington VA p.4

Information on Uganda's Reform Programme can be found in **Robinson, A.** (2002) *Water and Sanitation Sector Reform in Uganda: Government Led Transformation* Field Note 3 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi and Elledge, M.F., Rosensweig, F. and Warner, D.B. with J. Austin and E.A. Perez (2002) Guidelines for the Assessment of National Sanitation Policies Environmental Health Project, Arlington VA p.5

The El Alto experience is described in **Foster, V.** (n.d.) *Condominial Water and Sewerage Systems – Costs of Implementation of the Model* Water and Sanitation Program, Vice Ministry of Basic Services (Government of Bolivia), Swedish International Development Cooperation Agency

The review of definitions of access can be found in Water and Sanitation Program – Africa (2003) *Water Supply and Sanitation in Africa: How to Measure Progress toward the Millennium Development Goals?* Paper presented to SADC Meeting on Water Supply, Sanitation and Hygiene, Gaborone, Botswana August 4-7 2003

Notes for Chapter 3:

i One of the core tools of the approach is the use of participatory exercises which explicitly look at how and where people defecate. A public transect walk which sees the whole community walking through the village identifying where each household defecates, the so-called "walk of shame", has become the "most important motivating tool, and in almost every case results in the setting up of the first community meeting to discuss solutions".

Chapter 4 Allocating Resources Strategically

4.1 Focusing on objectives

Introduction
In a world of limited resources it is necessary to develop an approach to sanitation and hygiene promotion which yields the maximum possible health benefit. The vision and objectives of the programme need to be matched with financial and human resources. This invariably means setting boundaries and steering resources to specific areas or activities. The following decisions need to be taken:

1. What resources will be made available for sanitation and hygiene promotion?
Allocations of funds and people to sanitation and hygiene promotion are usually made within a wider process of budgeting (for social programmes in general, or from a water supply and sanitation sector budget for example). To secure the needed resources for sanitation and hygiene promotion you will need to:

- work out roughly how much money and how many people are needed to meet the objectives of the programme; and
- be prepared to make, and repeatedly prove, the case for sanitation and hygiene promotion as a significant contribution to the achievement of overall poverty reduction goals.

To strengthen your case it may be useful to be able to explain how resources will be spent when allocated, and also to show what sort of coverage you could achieve with different levels of budgetary allocation.

2. What is the balance of activities to be funded?
Where funds are used to **leverage household investment** (ie where public funds are to support household investments rather than substitute for them) rates of coverage may increase significantly. A smaller proportion of public resources will now be spent on construction of hardware and subsidies for household latrines. Instead public funds may increasingly be used to market sanitation, promote hygienic behaviours and support small-scale independent providers. The disadvantage of this approach, from a political perspective is that the direct link between funds and coverage will become less clear. To ensure that politicians (who control funding decisions) remain comfortable with the approach, household investments in sanitation must be closely monitored, and selected investments in trunk infrastructure and facilities in schools and public places should continue to be made. This will enable politicians to demonstrate that their funding decisions are yielding tangible results.

Resource allocations should also keep pace with institutional capacity. Getting more sanitation facilities in schools is critical for example, but in some cases policies and experience in the Department of Education may constrain progress and mean that investments made today may be wasted as facilities fall into disrepair. In such a case some resources must be allocated to the long-term goal of changing the Department's approach to school sanitation while resource allocations for construction of facilities are progressively increased over time. Similarly, if funds are to be diverted towards hygiene promotion, and if the best vehicle for this is the Department of Health, allocations should only be made in line with the human resources available in the department to go out and deliver hygiene promotion activities. A step-by-step approach may be needed so that increased financial resources can be matched with growing human capacity.

3. Will the program target specific regions and if so which?
Where resources are stretched, it may be appropriate to work, at least in the short term, in selected regions or locations. Greater health benefits may accrue from a more geographically focused programme.

Piloting: Focused programmes may be justified if new approaches need to be tested and demonstrated ahead of wholesale institutional change. This "pilot" approach may help to "shift gears" and increase the speed of progress in the sector but may well conflict with equity concerns in the short term. Identifying areas where the chances of success are high is hard. Allowing the informal sector and civil society to lead the process may work in some contexts along with the use of formal indicators such as:

- existence of community organisations/ past experience of collective interventions etc;

- presence of well-trained outreach workers who can extend their interventions effectively to include hygiene promotion and sanitation marketing;
- pre-existence of sanitation practices and technologies which can be effectively scaled up;
- existence of small scale independent providers; and
- potential for simple small-scale interventions to achieve benefits (such as selecting areas where on-plot latrines are a potential solution rather than addressing areas which require networked solutions).

Equity and Targeting: It is already known that demand for sanitation hardware is low – that is one reason why coverage is so poor. But it is also clear that where demand exists provision may follow rapidly through the efforts of households themselves and the small scale private sector.

For these reasons, while available public subsidy for sanitation could probably be steered towards those areas of highest demand, a much more pressing issue in most countries is probably to work towards *stimulation of demand in areas of greatest need.* This means that both hygiene promotion, sanitation marketing and support for the enabling environment, should be targeted towards those areas.

The real problem then comes in assessing *which* areas fall into this category. A number of approaches can be used including targeting communities/ households with:

- poorest health status as indicated by incidence of epidemic disease such as cholera;
- poorest overall health status as indicated by formal assessments using internationally agreed indicators;
- lowest access as assessed through formal empirical research into numbers and use of latrines, incidence of hygienic behaviours etc;
- highest incidence of poverty (as defined by agreed national norms and assessed nationally or regionally); or
- highest incidence of other proxy indicators of poverty and/or poor access, such as low ownership of capital assets, poor school attendance, or incidence of women- and children-headed households.

Equity may also demand that support is specifically targeted towards those households/communities more affected by a specific health/poverty related situation – such as Acquired Immune Deficiency Syndrome (AIDS). More ideas about assessing needs and demands can be found in **Reference Box 9.**

4. Will the program target specific types of communities and if so which?

Depending on the institutional and demographic shape of the country, it may sometimes be appropriate to programme specifically for rural, small town or urban situations. Better programming may result from different approaches being used for each type of community. On the other hand, it may be that better coverage could be achieved at lower costs if elements at least of the program (some aspects of hygiene promotion and sanitation marketing for example) were developed for use nationally or across an entire region.

Targeting can also be used to reach communities who are persistently excluded. Good information about coverage in rural, small town and urban areas may indicate a need to focus on one of these for example.

5. Will the program target specific segments of society and if so which?

Some countries and regions may take a specific policy decision that public funds should be steered exclusively, or substantially, towards a specific segment of society. It is not uncommon for countries to have a policy of targeting the poorest, indigenous groups or specifically of those without access to a minimum level of service. It is sometimes difficult and costly to identify target communities, in which case proxy indicators (such as targeting sub regions where the incidence of poverty is high) may have to be used. Sometimes the rich and powerful are able to subvert such targeting, so if this approach is to be taken, explicit notice must be taken of how targeting is to be monitored and what incentives might be needed to secure funds for the stated objectives.

4.2 The need for transparent rules

One of the most important mechanisms for establishing and maintaining trust between partners is to ensure that, where money is being allocated, there is a clear and transparent process and a set of known rules. Whatever programming decisions are taken all partners should be confident that (a) decisions about the rules for resource allocation had a sound basis (even if the individuals disagree with the final decision); (b) resources are being allocated on the basis of these rules; and (c) both the initial decision and the ongoing allocation of resources are carried out within an institutional arrangement which precludes collusion and encourages the optimum use of resources in the public interest.

In many cases political reality may dictate the allocation of resources. This may mean that resources have to be shared equally between competing regions, or that more resources must be steered towards areas of greater poverty. In such cases, where the case for resources allocation is not specifically technical, it is important to be as up-front as possible; most organisations and individuals will accept that political processes are an important part of the institutional landscape.

Reference Box 9: Needs and demands

For a discussion of demand in the context of water supply and sanitation projects

See: Katz, T. and Sara, J. (1997) *Making Rural Water Supply Sustainable: recommendations from a Global Study* UNDP-World Bank Water and Sanitation Program

Get this reference at: whelpdesk@worldbank.org

For a discussion of the challenges of assessing and responding to needs and demands

See: Cairncross, S. and Kinnear, J. (1992) *Elasticity of Demand for Water in Khartoum, Sudan,* Social Science and Medicine, 34 (2): pp183-189

Dayal, R., C. van Wijk and N. Mukherjee (2000) *Methodology for Participatory Assessments: Linking Sustainability with Demand, Gender and Poverty* WSP on the web at **www.wsp.org**

Coates, S., Sansom, K.R., Kayaga, S., Chary, S., Narendaer, A., and Njiru, C. (2003) *Serving all Urban Consumers – a Marketing Approach to Water Services in Low and Middle-income countries. Volume 3 PREPP*, WEDC, Loughborough University, UK. on the web at **www.lboro.ac.uk\wedc**

Whittington, D. (1998) *Administering Contingent Valuation Surveys in Developing Countries* World Development 26(1): pp21-30

Whittington, D. (2002) *Improving the Performance of Contoingent Valuation Studies in Ddeveloping Countries* Environmental and Resource Economics 22 (1-2): pp323-367

Willing to Pay but Unwilling to Charge: Do Willingness to Pay Studies Make a Difference? WSP Water and Sanitation Program – South Asia Field Note (1999) on the web at **www.wsp.org**

Wedgewood, A. and K. Samson (2003) *Willingness-to-pay Surveys – A Streamlined Approach: Guidance notes for small town water services* WEDC, Loughborough, UK. on the web at **www.lboro.ac.uk\wedc**

4.3 Applying the Principles

Table 5 sums up the principles as they apply to resource allocation.

Table 5: Applying the Principles to Resource Allocation

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Use public funds to leverage, rather than substitute household investment Leverage expenditures across a range of social sectors	Consider targeting resources towards excluded populations and specific activities that support the excluded within communities	Invest in information gathering Test ideas first when information base is weak Steer resources to areas where there is institutional capacity to spend	Ensure clear and transparent processes for allocation of funds Establish water-tight processes for tracking expenditures Communicate financing decisions unambiguously	Use resource allocation to signal new approaches and build confidence in them

4.4 Programming Instruments

Once decisions are made on what balance of resources will be steered towards activities, regions, communities and segments of society, what sort of instruments can the programme use to ensure that the programme aims are achieved? Clearly, this depends to some extent on the way in which programmes are to be financed and how organisations are to be structured but some possible instruments would include:

- Setting up targeted regional programmes or projects – setting aside funds specifically to be spent by local jurisdictions or by national agencies for designated regions;
- setting rules for externally funded interventions which encourage funding to specific regions or in support of agreed programming priorities;
- establishing demand-responsive funds which regions/urban centres or agencies could apply to use, where the rules of the fund reflect specifically the programming allocation priorities;
- creating (financial) incentives for staff of agencies to work in specific regions or communities; and
- setting aside funds to provide financial or other support to non-governmental organisations and the small scale private sector where these organisations seek to build their capacity in agreed programming priority areas

Chapter 5 Financing

5.1 What needs to be financed

Sanitation and hygiene promotion come with a range of costs which can be covered from various sources. The programme has to identify sources of funding for:

- **Enabling Environment** including the costs of programming, monitoring and evaluation, regulation, technical oversight, organizational change, training, co-ordination with other sectors, and public advocacy (to generate understanding of and support for the sector).
- **Promoting Hygiene Behaviours** based on a solid understanding of what current conditions are, and how they need to change to bring in the anticipated health benefits. Thus financing is required for assessing the current situation, development of materials, training programmes, staff costs, transport and office overheads along with the ongoing costs of operating in communities and supporting a dynamic change process at local level.
- **Improving Access to Hardware** including **sanitation marketing** (costs include staff, transport, office overheads, preparation of materials, cost of media placement, training, construction of demonstration facilities and other pilot interventions), **capital costs** (of household and shared facilities including materials and labour)[i], and **operation and maintenance** costs (which will vary widely depending on the technology chosen)[ii].

5.2 Where will the funds come from?

The financing arrangements for the programme need to:

- be self sustaining (ie have internal integrity so that funds are always available for the key elements of the programme, and funding matches the responsibilities and capacities of different institutional partners);
- provide funds for all the agreed elements of the programme; and
- be consistent with the agreed principles.

In fact, the financing structure needs to be more than *consistent* with the agreed principles – the financing arrangements are likely to be one of the most powerful programming instruments for *driving* the application of those principles which is why getting financing arrangements right is such an important step in programming.

Costs may be covered from a range of sources including:

- central government;
- regional / local / urban government;
- large scale private sector;
- shared community resources;
- small scale private sector; and
- the household.

Note however, that any private sector investment will ultimately be repaid from one of the other sources (government, community or household).

5.3 Assigning Programme Costs

Sanitation and hygiene promotion have public and private costs and benefits. As a useful principle, public funds (government funds, external donor funds and so on) should generally be used to maximise *public* benefits; private funds should be used for essentially private elements of the system (soap, individual latrines etc).

While the focus of financial planners may fall on financing household investments in hardware, it is vitally important that adequate funding is available for all the other elements of the programme and that household investment is not out of scale with other supporting activities. For example, if investments are urgently needed in sanitation for schools, public latrines in market places, and hygiene promotion programmes, these are areas which, almost by definition, need financial support from public sources or explicit policy support to generate private funding (for privately- constructed and managed public

latrines for example). Only once the financial structure of the whole programme has been established, will it be possible to judge whether financial support to household investments are appropriate or can be provided from available sources.

In particular it is worth considering how grant and concessionary funding (available domestically or through external support mechanisms) can be most effectively harnessed to support the programme within the context of wider poverty-reduction goals. The ultimate scale and nature of the programme should be decided on this basis and not in isolation.

Broadly costs might be allocated as follows:

- **Enabling Environment**

These costs would normally be covered from national government budgets, except in cases where federated states or autonomous urban areas take full responsibility for programmes and have the financial means (through local taxation) to support these costs.

- **Promoting Hygiene Behaviours**

Because hygiene promotion has a strong "public good" element, it would normally be part of the supporting role of the programme and be covered from government sources at the appropriate level. This is a good area for targeting soft or grant-funding from external sources since these costs are unlikely to be recovered from users.

- **Improving Access to Hardware**
  - **Sanitation marketing** costs may be covered from government sources or from the private sector[iii].
  - The financing of **capital costs of sanitation hardware** has traditionally been the significant element in many sanitation programmes. What is argued here is that this is counterproductive and in most cases sanitation hardware should be the responsibility of households. However this places a responsibility on programmers to support and promote goods and services which are appropriate. A further discussion of subsidies is included in **Section 6.5**[iv].
  - In most cases households would be expected to cover operation and maintenance costs[v].

Table 6 illustrates four financing models, not to suggest that these are the only approaches but rather to show how a range of solutions may be employed in different cases.

Table 6: Illustrative Financing Models

Role	Urban, higher levels of subsidy to utility and household	Urban, no household subsidy	Rural, household subsidy	Rural, no household subsidy
Enabling Environment	National government	Urban government	National government	National government
Hygiene Promotion	Urban government	Urban government	Local / regional government	Local / regional government
Sanitation Marketing	Urban government	Utility, repaid by household	Local / regional government	Local / regional government
Capital costs	Utility, repaid by urban government	Utility, repaid by household	Household and local government	Household
Operation and maintenance	Utility with grants for trunk services, Household for household services	Utility with grant for waste water treatment, Household for all other	Household	Household

It is important to note here, that even the "no subsidy" model comes with significant public costs in the shape of administration, regulation, monitoring and evaluation and so on. The public benefits of sanitation and hygiene promotion (and the corresponding public cost if no action is taken) mean that, whatever financial regime is adopted, government retains significant responsibilities and attendant costs.

5.4 Household self-financing – sanitation

Where demand is sufficiently high, households may be willing to meet the full capital and operational costs of sanitation. Formal willingness-to-pay surveys can provide information about this, but they are expensive and difficult to administer. As a first step, informal discussion, and participatory evaluations can be used to confirm whether self-financing is viable. Some proxy-indicators of appropriate levels of willingness-to-pay include:

- ownership of consumer durables of equivalent value;
- high percentage of private house ownership;
- extremely poor sanitary conditions, linked to high levels of dissatisfaction; and
- general awareness of health problems and the links with poor sanitation.

Where households are expected to finance sanitation the message must be clearly articulated and unambiguously applied. Many households may be reluctant to make the needed investments if they believe that (a) former subsidy programmes are still operating; (b) subsidies are likely to be reinstated; (c) alternative agencies may provide subsidies; or (d) subsidies can be made available if pressure is brought to bear through local politicians.

5.5 Subsidies for sanitation

Relying on household investments for hardware interventions can be problematic where:

- demand is low (due to conflicting demands on household resources, high levels of poverty or low levels of awareness);
- household action will have limited effect due to congested conditions (often in urban areas this problem is exacerbated because the only viable technical option is piped sewerage of some sort); or
- there is a high percentage of rented accommodation – householders may be unwilling to invest in a house which is not their own, owners may be unwilling to invest where tenants are readily available to rent poor quality housing.

In such cases subsidies may be advocated to jump-start latent demand or in the interests of equity – to encourage increased access for targeted segments of society. Many "sanitation" programmes have provided capital cost subsidies which were either available universally (this is always the case for piped sewerage for example), available through means- testing which linked subsidies to "poverty", or linked to specific levels of service. These programmes have consistently exhibited a set of problems including:

- lack of financial sustainability; a policy which states that certain, usually poor, people are entitled to free or reduced cost services, is meaningless if there are inadequate public funds to support it;
- the relationship between poverty and access is more complex than programmers imagine - there may be many reasons why people do not access services - cost may not be the most important. In this situation subsidies may not increase access;
- subsidised facilities built during a pilot phase may actually suppress demand as other households wait and see if a subsidy will also come their way;
- subsidies often create expectations that cannot be fulfilled in surrounding areas and among other income groups;
- the use of subsidies for construction of "standard" facilities distorts the market and suppresses innovations that might bring down costs;
- substandard construction of "subsidized" latrines may suppress demand;
- subsidies aimed at helping the poorest sometimes associate a certain technology with poverty and the need for assistance further distorting demand;
- means-testing for subsidies is expensive and extremely difficult; and
- requesting a down payment or contribution to assess demand before a subsidy is released may exclude the poorest households.

If subsidies are to be used, programmers need to think carefully and select a subsidy mechanism which is likely to (a) achieve the intended policy outcome; (b) reach the intended target group; (c) be financially sustainable; and (d) be implemented in a clear and transparent manner.

The following general principles should always be applied:

- in the public interest use subsidies to maximise health benefits and increase access specifically to groups who are persistently excluded;
- subsidise the lowest possible level of service to maximise spread and avoid distortions to the market. Leave room for households to make incremental improvements over time;
- base subsidies on solid and rigorous information about what types of service people want and are willing-to-pay for, what is the affordability for the target group, and what can be scaled up in the long term.

The range of sanitation subsidy instruments are summarized in Table 7 and discussed further in the notes section[6].

Table 7: Subsidy Mechanisms

Mechanism	Strengths	Weaknesses
Subsidies for latrine construction	Direct link between input and output-Targets those households without access	Expensive and complex Overdesign and high costs Inadequate funds to complete latrines Stifles innovation and the local market Prone to corruption Limited reach
Social subsidies	Lower per-latrine costs. May support latent local suppliers	Targeting may be poor Requires national social policy framework
Consumption subsidies through the tariff (Urban networks)	Uses existing tariff collection and payment system	Poor targeting (does not reach the unconnected) May not overcome access barriers Does not support in-house costs
Access subsidies through the tariff (urban networks)	Addresses access problem directly and may be better targeted	Usually links water and sanitation - may not reach some households who require sanitation alone.

5.6 Supporting self-financing through micro-finance

The alternative to subsidies is the provision of appropriate financing services – commonly credit, but also extending to savings, insurance and so on. Many micro-finance programmes have failed in the past. This is often because financial services were provided by organisations which lacked the appropriate financial skills and failed to offer an appropriate mix of services, or failed to establish their own financial integrity. In addition, provision of financial services can be very difficult in situations where:

- inflation has been or still is very high;
- interest rates are high;
- it is uncommon to borrow money for capital goods;
- legal/ regulatory controls limit the activities of small scale specialist credit agencies or prohibit lending for "non-productive assets"; or
- many ad hoc financial obligations make planned household expenditures very difficult for low-income households.

If micro-finance is likely to be an important element of the programme then it is important to consider the following possible programming interventions:

- policy / legal / regulatory changes to encourage small scale financial service providers;
- capacity building for financial service providers to assist with a move into infrastructure service provision

- capacity building for non-governmental organisations working in infrastructure to assist with a move into micro-finance;
- provision of seed funds, partial or full guarantees or other financial instruments to encourage on-lending to small scale borrowers;
- pro-active use of concessionary development funds from External Support Agencies to finance or guarantee micro-finance services.

5.7 Generating revenue for sanitation and hygiene promotion

Moving away from the household as the focus of financing, it may still be possible to use cross-subsidy or other mechanisms to generate some revenue which can be used to support hygiene promotion and sanitation investments. Examples of possible tools include:

- levying a surcharge on water bills to finance new connections to sanitation networks, or hygiene promotion activities;
- cross subsidizing from richer households paying for sewered connections, to provide funds for on-site and lower costs public services; and
- building costs of extension of sanitation and hygiene promotion services into general utility tariff structures.

5.8 Financial instruments to promote reform

Financial instruments can also be used to promote reforms which are needed to improve the enabling environment. This can be done, for example, by making funds available in a way that creates incentives for local jurisdictions to change policies and innovate. Examples of these types of instruments include:

- conditional grants (either tied to specific sectors and activities, or granted on a discretionary basis) from higher to lower-tiers of government or departments;
- conditional grants linked to demonstrated improvements in performance;
- social investment funds/ special projects, independently managed and able to provide grants *to communities* in response to demand;
- community development funds, focused on creating social capital in the poorest communities with operational costs covered through fund income;
- institutional-reform-linked challenge funds[vii], to meet the transactions costs of institutional reform;
- sector-wide frameworks within which poverty reduction is linked to overall sector finance strategies – including: the sector-wide approach (SWAp) and Medium Term Expenditure Framework (MTEF) which are linked to debt relief; investment lending (from development Banks) for sector investment and maintenance (SIM) and adaptable program lending (APL); and adjustment lending through sector adjustment loans (SECAL) or poverty-reduction support credit (PRSC).

Reference Box 10: Financial instruments

For more details on some of the available financial instruments

See: Mehta, M., (2003) *Meeting the Financing Challenge for Water Supply and Sanitation: Incentives to Promote Reforms, Leveraging Resources and Improve Targeting* World Bank, WSP Water and Sanitation Program

New Designs for Water and Sanitation Transactions: Making Private Sector Participation work for the Poor WSP Water and Sanitation Program, PPIAF (2002)

Varley, R.C.G. (1995) *Financial Services and Environmental Health: Household Credit for Water and Sanitation* EHP Applied Study No.2, Arlington VA.

Credit Connections: Meeting the Infrastructure Needs of the Informal Sector through microfinance in urban India. Issues Paper and Field Notes, WSP Water and Sanitation Program South Asia

Get these references on the web from: www.wsp.org or www.whelpdesk.org

5.9 Applying the Principles

Table 8 shows how the principles can be applied when designing financial instruments.

Table 8: Applying the Principles to Financing

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Use public funds to maximise public benefits; private (household) finance should generally be reserved for private elements of the system (soap, latrines)	Ensure the financial regime is stable and sustainable Use subsidies only where they increase access for the excluded Distribute adequate funds to ensure software support reaches remote and poor regions	Understand what people want and are willing to pay for and promote appropriate goods and services	Involve potential funding partners in programming decisions	Use specialized financial skills in programme design Allocate specific resources to capacity building

5.10 Programming Instruments

Whatever financing mechanisms are chosen, they will need to be established through the programming process. This might require a number of interventions including:

- the development of specific policies backed up with regulations and possibly a regulatory structure for monitoring (this might be the case for subsidies for example);
- the establishment of a specific fund mechanism for handling either programmatic or household financing;
- the strengthening of an existing subsidy or fund mechanism (for example social funds) to enable them to handle the new arrangements for financing of sanitation and hygiene promotion; and
- capacity building.

5.11 Practical Examples from the Field: How will we pay for the programme?

In Lesotho a quiet revolution has been underway for the past twenty years. In that time, the government has successfully increased national sanitation coverage from 20% to approximately 53%. The goal of reducing morbidity and mortality attributable to diseases associated with poor sanitation through health and hygiene promotion and the promotion of VIP latrines appears to be being achieved. During this time the policies of the government of Lesotho have specifically shifted away from subsidizing latrines; much more money is now channeled towards promotion and training.

Key financial aspects of this story include; consistent significant allocation of the regular government budget to sanitation; and earmarking of these funds for promotion, training local artisans, and monitoring. In rural areas, government funds are also used "to supply basic latrine components 'at cost' to households" to keep prices as low as possible. The government also provides a subsidy through its operation of the "loss-making pit-emptying service". No direct subsidies are provided to households. The main challenge of the arrangement appears to

be that the sanitation budget is mainstreamed at district level in the health budget – which means sanitation competes with curative care for allocation of funds and many decision makers view the latter as a priority. The sanitation budget has therefore experienced a decline over recent years. In addition the government separately provides a 50% subsidy to the school sanitation programme. The total investments made by households is estimated to be in the range of 3 to 6 times the government contribution.

In Mozambique the success of the National Sanitation Programme has been attributable in part to the ability and willingness of external support agencies to provide funds for the subsidized provision of the domed latrine slab. A 1999 review of the program estimated that donor funds accounted for a little over 50% of the costs of the programme with users contributing a little less than 40% and the government less than 10%. Nonetheless, the ability of the programme to deliver the direct subsidy in a transparent manner and without massive overhead costs, appear to have resulted in a fairly cost-effective transfer of resources to households. Furthermore, the subsidies appear to have been effective because they were specifically linked to the delivery of the component of hygiene improvement whose cost was the major barrier to many households accessing latrines at all. This understanding, developed through thorough research at the outset of the programme resulted in a well-designed and targeted subsidy, and consequently an effective programme delivered at scale.

By contrast, the high cost of twin-pit pour flush latrines, adopted as a standard technology in India, resulted in the need for a massive subsidy programme. This resulted in "fundamental difficulties of sustainability, bureaucracy and suppression of any real demand for sanitation".

Micro finance (both credit, savings and insurance) can play a part in supporting household investment in sanitation where there is demand. Micro finance providers in India have conventionally been excluded from providing credit for infrastructure which is not deemed to be a productive asset. Recent efforts by micro finance providers and the government with support from the World Bank have resulted in a realignment of policies and incentives so that provision of services can become more effective. In the isolated cases where investments in household sanitation have been documented, the productive value of the increased safety and convenience afforded by a household latrine are reported to be significant, particularly for those employed in the informal economy.

In South Africa the long-term reform process has been supported by a consistent allocation of government funds for capital works (mostly, it must be said, expended on water supply). This ability of the government to support investments in parallel with a programming process has had a significant positive effect on the level of support for reform. Investment funds can be used to support reform in other ways too; in India the government is establishing a city challenge fund which will be available to support the activities of cities undertaking difficult local reforms and reorganizing service delivery arrangements. Where public funds are scarce, internal cross subsidies are sometimes used to support sanitation; Burkina Faso applies an internal cross subsidy in the form of a sanitation surcharge on the water bill of all connected water consumers, the resultant resources are earmarked to provide sanitation to excluded populations.

Case Study Box 3: How will we pay for the programme?

The description of the financing arrangements in Lesotho comes from Pearson, I. (2002) *The National Sanitation Programme in Lesotho: How Political Leadership Achieved Long-Term Results* Field Note 5 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi

The National Sanitation Programme in Mozambique is described in: Colin, J. (2002) *The National Sanitation Programme in Mozambique: Pioneering Peri-Urban Sanitation* Field Note 9 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi and in Saywell, D. (1999) *Sanitation Programmes Revisited* WELL Study Task No: 161 WELL – Water and Environmental Sanitation – London and Loughborough, London.

The analysis of the impacts of India's use of the TPPF latrine is based on Kolsky, P., E Bauman, R Bhatia, J. Chilton, C. van Wijk (2000) *Learning from Experience: Evalutaiton of UNICEF"s Water and Environmental Sanitation Programme in India 1966-1998* Swedish International Development Cooperation Agency, Stockholm

More information on microfinance for infrastructure can be found in World Bank (forthcoming) *Sustainable Private Financing of Community Infrastructure in India Report to the Government of India*, World Bank, DFID. Examples from India are in WSP-South Asia (2000) *Credit Connections: Meeting the Infrastructure Needs of the Informal Sector through microfinance in urban India*. Issues Paper and Field Notes, WSP Water and Sanitation Program South Asia

Reference is made to the city challenge fund in Mehta, M., (2003) *Meeting the Financing Challenge for Water Supply and Sanitation: Incentives to Promote Reforms, Leveraging Resources and Improve Targeting* World Bank, WSP Water and Sanitation Program

For more information on South Africa's Reforms see Muller, M. (2002) *The National Water and Sanitation Programme in South Africa: Turning the 'Right to Water' into Reality* Field Note 7 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi and Elledge, M.F., Rosensweig, F. and Warner, D.B. with J. Austin and E.A. Perez (2002) *Guidelines for the Assessment of National Sanitation Policies* Environmental Health Project, Arlington VA p.4

The sanitation surcharge in Burkina Faso is described in Ouedraougo, A.J., and Kolsky, P. (2002) *Partnership amd Innovation for on-site sanitation in Ouagadougou, Burkina Faso* Waterlines, Vol21, No2, pp9-11, October 2002

Notes on Chapter 5:

i Capital costs for construction may be limited in rural areas to household level facilities (although some investment in shared facilities, and for the treatment and disposal of wastewater may be required). In urban areas, in addition to household investments there may be substantial costs associated with connecting to a sewerage network or in formal collection and management of pit and septic tank waste. Labour and materials may be more expensive and attract greater overheads if contractors are involved in construction. Where waste water treatment and disposal is included costs will rise significantly.

ii For simple rural schemes operation and maintenance costs may be relatively low but they will rise in urban areas and where shared facilities are constructed. In extreme cases with pumped sewerage, costs are likely to be prohibitively high.

iii In urban areas where there is an autonomous utility the costs of marketing sanitation to all consumers are likely to be covered from the utility budget (public or private). In those rural areas where the potential for local small scale provision is high, these costs may also ultimately be covered by small scales businesses which stand to recoup them through the sale of sanitary goods. In the short term some supporting funding or credit may be needed from government to help private sector providers launch sanitation marketing efforts. Where there is no private sector with the requisite skills and where non-private sector solutions are to be used, then these costs will probably be part of government support to the programme.

iv Note that in urban areas, there is almost always an element of subsidy, particularly where networked solutions are used. Even in Western Europe no cities fully recover the costs of wastewater treatment from consumers.

v In rural areas or urban areas with on-site solutions this is easy to organize through direct payment for pit emptying if it is required. In urban areas the situation may become more complicated with some elements of the costs being recovered directly (for example where households pay a fee for emptying of septic tanks or pits), some through the tariff (where households have water connections as well as sanitary services they may pay a surcharge on the water bill for sanitation) and some being subsidized (for example by grant payments from government to a utility which is operating a sewerage system.)

vi **Types of Sanitation Subsidy**

Subsidies for latrine construction

Direct Subsidies for latrine construction have been provided for many years in many countries. In this approach, public funds are usually made available to households to cover all or part of the cost of construction of a "standard" latrine. The funds may be delivered to the household in advance, in installments during construction, or in arrears. Alternatively, the household can apply for a latrine which is then built under the direct supervision of government engineers with no money handled by the householder at all. These subsidy arrangements are characterized by a number of problems. They tend to be: expensive and complex to administer (usually a government engineer needs to certify each latrine, often more than once);prone to cost related problems – standard designs may be over-designed and over-priced, or underpriced because standard rates used in the estimate may be outdated; and unresponsive to the bulk of demand, because costs are too high, or because there is insufficient capacity to respond.

Nonetheless they have proved popular because they deliver a quantifiable product and, particularly in rural areas, are one of the only ways in which many technical departments of government have been able to respond to the sanitation challenge.

Social subsidies

In a very few cases, social subsidies based on overall poverty indicators are available to the poorest households. These can then be spent on whatever services are most needed by the household. These systems (of which Chile has the best known example) have lower per capita costs than dedicated sanitation subsidy schemes and do not distort the market for sanitation goods and services in the same way, as households are free to purchase whatever they require on the open market. However, such a system is only feasible if there is a national policy framework in place across all the social sectors.

Subsidised Consumption in Urban Areas

In areas with piped water and sewerage, government subsidies are commonly delivered via the tariff. In these cases the subsidy on the use of sanitation is usually achieved by proxy through subsidised consumption of water. The most common form of this is a cross-subsidy linked to overall water consumption (by means of an increasing block tariff). This type of approach only benefits those people already connected to the network – which usually excludes the poor. It also contains a number of inherent biases against poor households who may use less water and thus benefit from a lower proportion of the subsidy, and against poor households who share connections and who may therefore end up paying at the higher rate. It also does little or nothing to help households with the costs of in-house facilities (taps and toilets) which are needed if private health benefits are to be realized.

Subsidised access to piped networks

More interesting approaches have been developed in some cases, to support new customers connecting to the water and sewerage network in urban areas. Historically, the real costs of connecting to urban water and sewerage networks were not borne by consumers. In contrast much or all of the technical costs of connecting may now be transferred to new consumers. This is unfair and contains a strong bias against the poor who are usually the ones who are not yet connected to the network. In view of this, some utilities are attempting to structure subsidies by increasing the general tariff and removing or reducing the one-off connection fees associated with joining the network. This is an important step forward, recognizing as it does, that poverty and lack of access often go hand in hand.

vii A challenge fund, usually provided by central government, provides financial support to local administrations who show a willingness to reform themselves in line with certain agreed general principles. The funds would usually be used to finance the actual process of institutional reform – including working out what needs to be done, and making the necessary policy, financial and organizational changes.

Chapter 6 Roles and Responsibilities – Restructuring Organisations

6.1 Who is going to deliver your Programme?

With the right skills and well organized arrangements the vision of an effective sanitation and hygiene promotion programme can become a reality on the ground. Working out which organisations should be involved, what they should do, and what support is needed to develop human resources is a critical and exciting part of programming for change.

New organizational arrangements need to be:

- consistent with your chosen vision and principles;
- designed to make best use of government, NGOs, the private sector, and grassroots organisations;
- organised in a way which supports rather than subverts community-level institutions and promotes household decision making;
- staffed and funded adequately to deliver the agreed programme; and
- consistent with the political organisation of the country, particularly the level of decentralization.

Building the right institutional arrangements is one of the most critical steps in programme development but it is usually the most difficult. Costly and difficult institutional reorganizations should only be undertaken as a last resort. Much of what you need probably already exists. Programmers need to ask themselves:

- are there front-line units who can deliver elements of the programme?; and
- are there agencies/organisations who can support these units and provide the needed enabling environment within which they can function?

The human resources you need may be found in a wide variety of places including:

- **government agencies:** including water and sanitation agencies, health departments, education departments, environmental agencies, rural development teams, urban planning departments, local government. Human resources may be available at *all levels of government from the national down to the local level*;
- **civil society:** households themselves, NGOs (working in water supply , sanitation, social development, health, education etc), community based groups, self-help groups, local/community government, micro-finance organisations etc; and
- **private sector** - small scale private providers, soap companies, building contractors, advertising agencies, media etc.

6.2 What will define successful organisations in your Programme?

However, much of what exists may not be geared up to reflect the principles of good sanitation and hygiene promotion. Key aspects of many organisations may need to change; the challenge is to find effective ways to make this happen. Some of the characteristics of the new breed of organisations include:

A focus on equity

Organisations working locally, require specific skills and personnel to be able to focus on household needs and reach all segments of society (women and men, youth and the elderly, different ethnic groups, those with access to services and those without). One of the key and pressing needs in many organisations is to realign responsibilities and build capacity so that the currently excluded segments can become the focus of interventions.

This lack of local level skill, is mirrored *within* organisations, where ironically it is often staff with precisely the profile to address these concerns, who are marginalized because of their professional profile, or on the grounds of gender or age. It is crucial that the gendered nature of sanitation and hygiene promotion is acknowledged

and action is taken to change the orientation of traditional organisations, so that they can effectively work with the groups who most need their support.

A focus on working in partnership
It takes more than a single organisation to support sanitation and hygiene promotion. A huge number of people need to start to act in a different way, which requires a massive realignment of the incentives which drive them. This discussion is about more than "inter agency coordination", it is about creating an interlinked web of people all of whom are acting in response to the needs and demands of households.

Accountability and Performance
For this partnership to work the vision should be for institutions which have:

- clear and distinct organizational responsibilities;
- adequate accountability (checks and balances) to safeguard resources and ensure effectiveness; and
- incentives to perform.

6.3 Allocation of Responsibilities

Examples of novel arrangements that emphasize a role for a range of partners do exist although few have extended to national level. There is no "blue-print" solution but the following broad allocations of responsibility are currently a popular approach:

- **National government:** facilitation of programming, policy development, creation of facilitative laws and regulations, publication of verified national data on coverage and progress, financing for technical assistance to small scale providers, community groups etc;
- **Regional / local government:** management of hygiene promotion and community development activities (which may be carried out by in-house staff or outsourced), monitoring of technical issues, licensing of small scale providers, certification of community support organisations, coordination of local monitoring and collation of data for planning purposes, etc;
- **Urban government:** provision and management of trunk services and facilities in some cases (either directly or through a utility), management of wastes, licensing of small scale providers, oversight of credit providers, technical assistance to communities etc
- **NGOs:** technical support to communities, delivery of hygiene promotion and community development support, provision of credit services, oversight of progress through participatory monitoring and evaluation etc;
- **Small Scale Private Providers:** sale and delivery of sanitation goods and services, contribution to planning and programming activities, may also provide credit directly or through dedicated credit providers etc;
- **Communities;** participatory planning, identification of appropriate local institutions for management of resources and facilities, assessment and negotiation of local demands, management of internal cross subsidies if needed etc;
- **Households;** key investment decision making, financing and management of facilities, hygiene behaviours and outcomes.

6.4 Capacity Building Approaches

It has already been stated that capacity should be built in the process of organisational change. While some capacity building occurs because of structural changes to organisations themselves, specific support can be provided through two broad approaches. The first is training to build individual skills, and the second could be termed organizational capacity building and would include such interventions as strategic planning, management development, strengthening of systems and procedures (e.g. information and financial systems), development of technical approaches and methodologies, restructuring, and staff development[i].
Capacity building can be particularly challenging when responsibilities are decentralized. You may need to allocate a large percentage of resources and effort to strengthen the performance of front-line teams if you want the new vision of sanitation and hygiene promotion to become a reality.

6.5 Managing the Change Process

Organisational change can be costly, time consuming and, if handled badly, deeply dispiriting for staff and the general public alike. While managers in the private sector can take unilateral decisions and act rapidly, this is rarely possible in the public sector. Change may have to occur within the context of complex public- service rules and regulations. Organisational changes may only be possible once wider policy/ legal changes have been made. Most commentators agree that the best approach to organizational change involves eight broad steps: establishing a sense of urgency, forming a guiding coalition, creating a vision, empowering others to act on the vision, planning and creating short-term successes, consolidating improvements; and institutionalizing new approaches. This list echoes the programming process discussed in **Section Two** and suggests that reshaping organisations should be seen as an integral part of the new sanitation and hygiene promotion programme.

Different countries and contexts will demand different approaches, but you may consider some of the following tools:

- formal working groups at the highest level which maintain transparency, ensure people feel represented and to lend legitimacy to the process;
- specialized sub-committees to represent specific interest groups (organized around services or interest groups); and
- wide consultation.

6.6 Applying the Principles

The principles of good programming can be used ot guide both the process and the outcome of organizational restructuring as shown in Table 9.

Table 9: Applying the Principles to Organisational Restructuring

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Reflect the central importance of household decision making Invest in capacity building at local levels. Build capacity of regulators and others setting public policy	Build capacity within organisations to engage with all segments of society Change the orientation of traditional organisations to reflect the gendered nature of sanitation and hygiene promotion	Understand the existing institutional landscape Look at non-traditional actors (small scale independent providers, voluntary organisations etc) while analyzing organisations	Establish organisations which have: clear responsibilities; adequate accountability; and incentives to perform.	Invest in capacity building and managing the change process. Allocate resources for this up front

6.7 Programming Instruments

Organisational restructuring will rarely take place for sanitation and hygiene promotion alone. Ideally it should occur within a wider review of how social sector support in general is delivered. It may be appropriate to wait for a wider social development catalyst (such as the preparation of a Poverty Reduction Strategy Paper for example). Once it is clear that organizational restructuring is required a number of long term programming instruments could be brought to bear including:

- Restructuring of organizational profiles of public agencies, through proactive hiring and redundancies, to gradually shift the balance of skills;
- Realignment of resources and priorities in training or-

ganisations (schools and higher education) to change the balance of skills entering the workforce;
- Provision of incentives (usually financial) to encourage staff of public agencies to move into specific regions, or into the private sector, in response to programmatic priorities;
- Provision of incentives to encourage innovation and local level coordination between agencies;
- Hiring of specific management skills to support a shift in the approach to service provision;
- Financial and other technical support to build the capacity of potential programme partners (public sector, small scale private sector, NGOs etc);
- Explicit provision of funds (usually from central government) to support the above restructuring interventions;
- Capacity building of existing organisations specifically to increase their effectiveness in sanitation and hygiene promotion (for example, training water supply regulators to work more effectively in sanitation, twinning utilities in different regions of the country so that lessons learned in one region can be effectively passed on); and
- Linking as many staff as possible to participatory programming activities so that capacity can be built in a shared environment of learning and change.

Reference Box 11: Organizational roles and responsibilities

For ideas on a range of approaches to organizing the sector and managing organizational change

See: Blokland M., Lilian Saade and Meine Pieter van Dijk (2003) Institutional Arrangements for Municipal Wastewater and Sanitation - case studies from Argentina, India, Mexico, Philippines, South Africa, Switzerland and Zambia, Institutional and Management Options Working Group, Water Supply and Sanitation Collaborative Council

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Yacoob M. and Rosensweig F., (1992) *Institutionalising Community Management: Processes for Scaling Up*, WASH Technical Report No. 76, USAID, Washington.

Get these references on the web from:
www.wsp.org or **www.whelpdesk.org** and good technical libraries

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Russell-Jones, N. (1995) *The managing change pocketbook.* Management Pocketbooks Ltd, Alresford, Hants

Senior B. (2002) *Organisational Change, second edition,* Pearson Education Limited (), UK

Get these references from:
good technical libraries and on the web at **www.lboro.ac.uk and www.dfid.gov.uk**

6.8 Practical Examples from the Field: Who's going to deliver our programme?

Examples of root-and-branch restructuring are rare, largely because such changes are politically difficult, technically challenging and can also be expensive in the short term. Many governments would hesitate before instituting a complete overhaul of service delivery arrangements. However, such reforms can yield impressive results, and there have been successful examples. In Chile for example, the government carried out a complete overhaul of water supply and sanitation service delivery arrangements for urban areas which paved the way for privatization which occurred about ten years after the restructuring. In Nicaragua, reforms have also been made in the way both water supply and sanitation are overseen. There is a concensus that while Nicaragua did a very good job of addressing planning and regulatory functions, service delivery remains a problem.

For many countries, such complete reforms may seem too daunting. In many cases it seems unlikely that real progress can be made without some sort of reorganization, but some countries have managed to develop innovative organizational arrangements within the framework of existing formal structures.

In 1995 and 1996 USAID carried out an evaluation of an organisation which it had been supporting in Cambodia. The Program officer for USAID in Cambodia concluded that the organisation, whose name is "Partners for Development" "take their name…very seriously in working with villagers, NGOs and the government of Cambodia". The review noted that PFD had been instrumental in "revitalizing and stablising some of the most remote and under-served areas of Cambodia….using a demand responsive approach to rural community development." The role of PFD has been to introduce and promote technologies appropriate to the village communities. But PFD has gone beyond this, constantly working to improve the technologies and approaches and evolving their approach to fit with communities needs. Here it is possible to see that a flexible but highly professional non-governmental organisation has been able to influence the approach to rural community development within a government programme.

In the Swajal Project in Uttar Pradesh in India, the government of Uttar Pradesh developed a highly formalised approach to selecting, training and contracting with support organisations who then worked with communities to build their capacity to plan and implement rural water supply and sanitation projects. The approach developed in Swajal is now widely applied across India – almost any organisation is eligible to apply to become a support organisation – in Swajal the majority were NGOs but private sector and governmental organisations also participated. The arrangement was challenging; many NGOs were uncomfortable with the contractual relationship, while government was often uneasy with the outspoken views of the support organisations. Inherent in this experience is the challenge of finding ways to work together which safeguard public funds and agreed policies, while enabling the creativity and flexibility of non-governmental partners full play to influence the approach.

In Kerala, where the Dutch government supported the establishment of decentralized support organisations, known as Socio Economic Units as part of a long-term project, the SEUs were able to evolve into a permanent and effective support organisation for rural development in the State. Here the SEUs themselves were instrumental in devising approaches which then became part of a state wide programme.

Non-governmental organisations may also seek engage formal or government agencies in programmes they have developed but here too the experience is mixed. Perhaps the best known urban sanitation programme, the Orangi Pilot Project in Pakistan, has persistently struggled to get the utility in Karachi to recognize the investments already made by households in the Orangi neighbourhood in sanitation, and this experience has been replicated in many places across the country.

On the other hand, in West Bengal the experience of the Rama Krishna Mission, with support from UNICEF, has had a fundamental influence on State and ultimately national policy. The original project, which was launched in the early 1990s and continues to this day, shifted institutional responsibilities to the local level—successfully forging an action coalition between local NGOs, community-based organisations, and Panchayats (the lowest form of local government, usually covering three villages). Existing local youth groups and their cluster organisations, working together with local panchayats, were galvanized by an effective intermediary NGO, the Ramakrishna Mission Lokashiksha Parishad (RMLP). The youth clubs conducted much of the implementation in coordination with the panchayat, and a subcommittee called the "WATSAN committee" was responsible for community-level implementation. Cluster organisations of the youth clubs, at block level, backstopped with logistics and coordinated hardware inputs. They were, in turn, supported by RMLP. The role of the central and state governments and district officials was to provide financial and technical support and to help adjust appropriate supportive policies. UNICEF provided technical and financial assistance for the overall effort.

Formal partnerships for specific hygiene activities, which involve both government, non-governmental and private bodies, are gaining prominence. In Central America, USAID, UNICEF and the World Bank supported an innovative partnership between private soap manufacturers and the public sector to promote handwashing with soap. A 2001 evaluation of the partnership concluded that the public and private benefits had been high compared with costs. The evaluation also listed the following critical factors in the success of the partnership; pres-

ence of an experienced and neutral catalyst; a good cause; a clear road map; solid market research; public health backing; clear allocation of roles, responsibilities and expectations; joint decision making; sequencing which enabled timely progress to be made.

Working with private sector providers of goods and services is challenging however. The main problems seem to revolve around finding mechanisms to support private providers (for example, masons, pit emptying contractors, vendors of soap and other hardware) which do not stifle the private sector market. A 2000 evaluation of UNICEF's water supply and sanitation programmes in India noted that support to the Rural Sanitary Marts (a "one-stop" retail outlet which sells sanitation construction materials and hygiene products) was "an intuitively attractive idea" as it linked service provision to a revenue stream and would seem to reduce the need for public subsidy. However, progress in setting up RSMs was slow (between 1994 and 1999 UNICEF established only 558 RSMs in various states). Many of these subsequently went out of business or barely managed to break–even. The problem seems to have been that early successes with the approach were not analysed in sufficient detail to determine the critical features of success. UNICEF's experience with RSMs globally is extremely important for countries seeking ways to work with and support small scale entrepreneurs in the hygiene improvement business.

In Honduras the government decided to reorganize the public utility to develop a flexible and responsive approach to supporting rural water supply and sanitation at community level. The "TOM" program established mobile "Technician in Operation and Maintenance" positions, based in regional offices of the national utility. These regional offices have substantial authority to make decisions. Based on the "circuit rider" model of the USA, the mobile technicians have been able to provide consistent support to communities seeking to manage their own systems and the arrangement has been operating successfully since 1995. The arrangement was first piloted for two years in one department, and this is a useful lesson in how to test and then roll out innovative organizational arrangements.

Most of these experiences show us that in any programme which relies on multiple organisations to deliver a coordinated array of goods and services, the quality of the partnerships between them may be at least as important as their individual performance in determining the outcome.

Case Study Box 4: Who's Going to Deliver our Program?

The reforms in Chile are described in detail in Bitrán, G.A. and Valenzuela E.P. (2003) *Water Services in Chile: Comparing Public and Private Performance* World Bank Private Sector and Infrastructure Network, Public Policy for the Private Sector Note No. 255

The reforms in Nicaragua are described in Walker, I. and Velásquez, M. (1999) *Regional Analysis of Decentralisation of Water Supply and Sanitation Services in Central America and the Dominican Republic* Environmental Health Project Activity Report No. 65, Washington D.C.

More information on Partners for Development can be found in Environmental Health Project (2002) *Northeast Cambodia Community Water and Health Educational Program, USAID Grant No. 442-G-97-00008-0, Final Evaluation.*

The Swajal Pilot Project is described in various publications. A useful starting point is WSP-SA (2001) *Community Contracting in Rural Water Supply and Sanitation: The Swajal Project*, India Water and Sanitation Program. Further information on the government of India's rural water supply and sanitation programme is available with the Rajiv Gandhi National Drinking Water Mission on the web at **www.rural.nic.in/rgndw.htm** . The SEUs in Kerala are described in Van Wijk-Sijbesma, C. (2003) Scaling Up Community-managed water supply and sanitation projects in India presentation to the IDPAD Water Seminar, IHE, Delft, The Netherlands, May 12-13, 2003

The Midnapore experience has been written up in many places, but an interesting perspective from the mid 1990s can be found in UNICEF (1994) *Sanitation, the Medinipur Story*, Intensive Sanitation Project, UNICEF-Calcutta, India, and Ramasubban, K.S., and B.B. Samanta (1994) *Integrated Sanitation Project, Medinipur*, UNICEF, India.

The handwashing partnership in Central America is described in detail in Saadé, C., Massee Bateman, Diane B. Bendahmane (2001) *The Story of a Successful Public-Private Partnership in Central America: Handwashing for Diarrheal Disease Prevention* USAID, BASICS II, EHP, UNICEF, The World Bank Group

The experience of RSMs in India is described in Kolsky, P., E Bauman, R Bhatia, J. Chilton, C. van Wijk (2000) *Learning from Experience: Evalutaiton of UNICEF"s Water and Environmental Sanitation Programme in India* 1966-1998 Swedish International Development Cooperation Agency, Stockholm

The institutional arrangements in Honduras are described in Fragano, F.,C. Linares, H. Lockwood, D. Rivera, A. Trevett, G. Yepes (2001)*Case Studies on Decentralisation of Water Supply and Sanitation Services in Latin America* Environmental Health Project Strategic Paper No. 1, Washington D.C.

Notes for Chapter 6

i Training approaches might include:

- Formation and strengthening of training networks – these might involve numerous disciplines and attract participation from public, private and civil society organisations, or alternatively they may be more focused, providing a "safe space" for colleagues to work together to build internal capacity;
- Twinning and/or secondment of staff – to facilitate practical sharing of experience and build up mutual understanding of how different partners work; and
- Formal in-service and continuing education – one of the real constraints in many public sector agencies and in NGOs is that staff are so focused on working at field level that they are not able to keep up with new ideas and find time to think about how they might undertake their jobs more effectively. Creating a culture of inquiry is challenging, particularly where organisations have a tradition of top-down command and control, but the capacity to question how things are done can be built. It may be best to launch efforts at a formal level – responding to the prevailing culture of the organisation, if successful, the process can move on to become more acquisitive over time.

Chapter 7 Monitoring and Evaluation

7.1 Thinking about Monitoring and Evaluation

Monitoring and evaluation enable programmers to see whether things are happening on the ground as planned and whether activities are resulting in the expected outcomes. Results from both monitoring and evaluation are needed as inputs to the ongoing programming process.

While evaluations can be handled on a periodic basis, monitoring systems are needed to generate regular reliable datasets which can provide a picture of what is happening in real time and over time. As a general rule the monitoring system should be:

- **simple** – providing just enough information for decisions to be taken;
- **decentralised** - operating at the lowest appropriate level and providing information where it is needed to make necessary decisions;
- **responsive** – providing information where it is needed in real time;
- **transparent** – providing access to information both upwards and downwards; and
- **relevant** – based on the vision and objectives of the programme.

There is some truth in the saying that "what gets monitored, gets done" – the design of the monitoring system could have a profound effect on how well the programme is actually implemented. For this reason key outcomes and activities must be monitored.

7.2 What is Monitoring and Evaluation?

Monitoring systems provide a rapid and continuous assessment of what is happening. Monitoring is primarily needed at the implementation (project) level to show whether:

- inputs (investments, activities, decisions) are being made as planned;
- inputs are leading to expected outputs (latrines built, behaviours changed); and
- inputs are being made within the agreed vision and rules.

Evaluation provides a more systematic assessment of whether visions and objectives are being achieved in the long run in the most effective manner possible. "Formative" evaluation aims to diagnose problems, and is best done internally for maximum learning and capacity building. "Summative" evaluation is aimed at deciding which outcomes have been achieved (it measures, for example, whether resources have been spent as intended) and is an important tool in generating confidence in the programme. It is usually best done externally, to increase credibility.

Neither monitoring nor evaluation are designed to establish causal links between interventions and outcomes (proving for example a link between handwashing and reduced incidence of diarrhoea). This type of causal connection is the subject of research which should be used as the basis for programme design. Where there are gaps in the empirical evidence base for sanitation and hygiene promotion, specific research may have to be commissioned to prove such relationships.

Table 10 sums up the main uses of monitoring and evaluation within both programmes and at the project (implementation) level.

7.3 What to Monitor and Evaluate?

At the programmatic level it is essential to monitor key results (ideally improved health) to ensure that public investments are resulting in public benefits. However, monitoring long term health trends is difficult and can probably only be the subject of periodic evaluation. Instead, it is often more practical to measure service coverage, use of facilities and hygiene behaviors.

Table 10: Uses of Monitoring and Evaluation

	Monitoring	Evaluation
Programme planning, development and design	Measure crude inputs and outputs (use a progamme performance monitoring plan with agreed indicators) Track processes and instruments (use the monitoring system, and information management systems with periodic reporting)	Asssess needs, problems and assets (through situation analysis) Establish a baseline reference point (use baseline quantitative data collection) Explore programming options and identify solutions (carry out formative, qualitative studies)
Project level implementation	Assess whether programme is on track, delivering services, conforming to standards and targeting the right people (establish a routine monitoring system) Motivate communities to solve problems (use participatory community monitoring) Quality assurance (through supervision)	Check whether implementation is resulting in the delivery of the programme vision and objectives (mid-term evaluations or periodic reviews can be used to correct approaches) Assess whether projects resulted in the desired impact and outcomes (final evaluations, covering quantitative and qualitative assessments) Solve technical or programmatic problems (through operations research).

Based on available research and experience, most sector experts agree that if certain key behaviours occur at the household level then it is reasonable to assume that health benefits will follow. The Environmental Health Project suggest that the following four essential household practices are key to the reduction in diarrhoeal disease:

1. wash hands properly with soap (or local alternative) at critical times (includes the availability of a place for handwashing and soap);
2. dispose of all faeces safely – especially those of young children who cannot easily use a toilet;
3. practice safe drinking water management in the household (includes the use of an improved water source, safe water storage, and possibly water treatment at the point-of-use; and
4. practice safe food management in the household.

A sanitation and hygiene promotion programme will clearly influence the first two of these behaviours, and, if well designed, should also impact on water and food hygiene.

Monitoring and evaluation can thus focus on these key behaviours, and on a selection of easy-to-measure inputs to generate a picture of what is happening on the ground and what are the primary results. While the exact approach may vary with your programme **Table 11** suggests a generalized framework for monitoring which would provide simple and robust information at the programmatic and at the implementation level. While most of these indicators can be monitored using regular monitoring tools (**see Table 12**) those marked in bold may require verification through periodic evaluations.

Note that at the implementation level you may need more detailed information about changed behaviours at the household level. These should be the subject of detailed *project* monitoring systems. For more information on the design and use of indicators see **Reference Box 12.**

Table 11: Indicative Programme Performance Monitoring Plan for Sanitation and Hygiene Promotion

	Objective	Suggested indicator (inputs)	Suggested indicator (outputs)
Programme Results			
Improved Health	i) Reduced incidence or prevalence of diarrhoeal disease ii) Reduced incidence or prevalence of other key disease groups		**i) % of children under 36 months with diarrhoea in the last 2 weeks** **ii) Incidence (number of new cases) of trachoma, guinea worm, etc.**
Essential Household Practice	i) Incidence of handwashing ii) Proper disposal of adult faeces iii) Proper disposal of children's faeces		**i) % householders washing hands at appropriate times** **ii) % of adults whose feaces are disposed of safely** **iii) % of children under 36 months whose feaces are disposed of safely**
Creation of Enabling Environment			
Programming and Policy	i) Development of real partnerships for optimum policy development ii) improved equity of access	i) total public investment in strengthening regulatory/oversight role ii) New policies dealing explicitly with securing access for poor and vulnerable households	i) number of positive changes made in policy, legal and regulatory instruments **ii) distribution (on geographic, social, gender and communal grounds) of** **- improved sanitation coverage** **- range of technologies available and affordable by poor households** **- primary schools with safe water and improved sanitation**
Financial Instruments	i) Improved efficiency ii) Financial sustainability (100% of operation costs for providing improved sanitation and hygiene promotion funded on a continuous basis)	i) - total cost of programme-funding provided by source (government, private, household) - number of agencies involved	i) sanitation coverage - poor households ii) percent of operating costs recovered from users/households
Organisational Restructuring	i) Alignment of organisations to support household decision making	i) front-line staff with skills to work effectively with households and communities in all necessary organisations.	**i) % of household heads knowing:** **- who to contact to access sanitation goods and service** **- who to contact if sanitation facility breaks down**
Implementation Outcomes			
Access to Sanitation technology	i) Acces to improved sanitation facilities	i) - total household and public expenditure on sanitation facilities - communities covered by sanitation marketing	i) % of households with access to an improved sanitation facility
Hygiene Promotion	i) All households show a substantial improvement in essential household practices ii) All primary schools comply with basic water supply, sanitation and hygiene standards	i) total public expenditure on hygiene promotion ii) communities with active hygiene promotion through community-based promotors	**i) % of adults in households who know critical times for handwashing** **ii) % of households who use improved sanitation facilities** **iii) % of schools with** **- sanitation facilities** **- separate sanitation facilities for boys and girls** **- handwashing facility** **- sanitation and hygiene teaching**

7.4 How to do the Monitoring and Evaluation?

There are a wide range of tools available which can be used to generate information for monitoring and evaluation purposes. It is important to locate the responsibility for these tasks in an appropriate institutional home. Where possible monitoring should be carried out by agencies who can make immediate use of the information. As mentioned above, some evaluation is best carried out externally. Furthermore it is important to have in place a process for disseminating the results of monitoring and evaluation exercises, to increase accountability and to ensure that data is used as widely and effectively as possible. **Table 12** provides examples of the broad range of tools available. **Reference Box 12** points to sources of more information on this important topic.

Table 12: Some Tools for Monitoring and Evaluation

	Monitoring	Evaluation
Tools	• Sanitation surveillance questionnaires • Network/ system operation and maintenance checklists • Supervision checklists • Financial summary/ audits • Participatory monitoring tools	• Situation analyses, technical, social and institutional reviews • Participatory impact assessments/ Participatory rapid appraisals • Sanitation and hygiene model questionnaires • Qualitative studies, mid-term and final evaluations
Responsibility	• Ministry of health/ water and sanitation/ rural development/ urban development etc • Utility • Local government· Communities	• As for monitoring but use should be made of independent public or private sector organisations with skills in evaluation techniques • Non-governmental organisations· Umbrella/ apex professional bodies • Universities • National statistics or census bureaus
Dissemination of results	·• Public score cards and report cards • Publish in newspapers/ radio/ TV spots • Provide fliers or other information in community locations in rural and urban communities ·• Annual/ regular institutional reporting • Internet	• As for monitoring plus • Journal articles/ conference papers etc • TV/ Radio profiles

Reference Box 12: Monitoring and evaluation

For information on the global monitoring system
See: Joint Monitoring Program of UNICEF and WHO and the Global Assessment (2000) Report
Get this reference on the web at: www.wssinfo.org

For ideas on setting up monitoring and evaluation systems including the selection and design of indicators
See: Kleinau, E., D.Pyle, L. Nichols, F. Rosensweig, L. Cogswell and A Tomasek (2003) *Guidelines for Assessing Hygiene Improvement At Household and Community Level* Environmental Health Project Startegic Report No. 8
on the web at: www.ehp.org

Reference Box 12: Monitoring and evaluation

WELL (1998) *DFID Guidance Manual on Water Supply and Sanitation Programmes* WEDC Loughborough University, UK **on the web at: www.lboro.ac.uk\wedc**

Kathleen Shordt (2000) *Monitoring for Action* IRC, Delft, Netherlands

For other ideas about monitoring and evaluation tools

See: Naryan, D. n.d. *Participatory Evaluation: Tools for Managing Change in Water* Technical Paper No. 207, World Bank

Roark, P. (1990) *Evaluation Guidelines for Community-Based Water ad Sanitation Projects* WASH Technical Report No. 64, Arlington VA.

Hutton, Guy (undated, c.2002) *Considerations in evaluating the cost effectiveness of environmental health interventions* cited in Appleton, Brian and Dr Christine van Wijk (2003) *Hygiene Promotion: Thematic Overview Paper* IRC International Water and Sanitation Centre

Get this reference on the web at: www.irc.nl

Dayal, R., C. van Wijk and N. Mukherjee (2000) *Methodology for Participatory Assessments: Linking Sustainability with Demand, Gender and Poverty* WSP

Get this reference on the web at: www.wsp.org/english/activities/pla.html

7.5 Applying the Principles

Principles of good programming can equally be applied to the monitoring and evaluation systems, both in the design of the approach and in the aspects of the programme which are the focus of monitoring and evaluation efforts (see Table 13).

Table 13: Applying the Principles to Monitoring and Evaluation

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Design a system which is • Simple • Decentralised • Responsive • Transparent • Consistent with the programme vision and objectives Measure public and private benefits	Ensure information is available upwards and downwards to empower participants as much as possible Ensure coverage data take into account distribution of access between different groups	Use existing monitoring and evaluation mechanisms and processes. Base on existing evidence of causal relationships Link upwards to international monitoring systems (ie JMP)	Make use of all available institutional capacity for monitoring and evaluation	Link monitoring information to capacity building; make information available and use it to analyse performance

7.6 Programming Instruments

The most important programming decisions relating to monitoring and evaluation are probably allocating adequate resources, elevating status to an M&E system, and credible technical competencies. Programmers need to decide early on in the programming process:

- Who will be responsible for M&E;
- What will be monitored and at what scale;
- How will M&E be funded; and
- How and when will the information be used in the programming process.

Key to the success of monitoring and evaluation are systematic planning and implementation. This means that these activities such the development of a performance monitoring plan, a baseline and impact data collection, and the development of a monitoring system are included in the program strategy and work plans including the necessary human and financial resources.

7.7 Practical Examples from the Field: How will we know whether our programme is working?

Monitoring systems are only as good as the information they contain. Because of this, simple and relevant indicators must be identified and adapted for each situation, drawing as much as possible on existing indicators. This increases the ability to compare findings within a country and over time. A recent evaluation of definitions of "access" to "improved sanitation" in sub-saharan Africa found that there was little consistency between definitions used in different countries or with the definitions contained in the Joint Monitoring Program (JMP). On reflection this is not surprising, as national definitions will fall in line with national approaches to investment and with local cultural and social norms. So for example, while the JMP does not include "traditional latrines" in its definition of improved sanitation, some African countries feel that this is a good first step on the sanitation ladder, and count households with access to a traditional latrine as covered.

Data collected can be used in many ways for making program decisions. Two environmental health assessments conducted by Save the Children and EHP in 2001 and 2002 in the West Bank of Palestine found serious contamination of drinking water with thermotolerant fecal coliform bacteria. The quality was much worse for water delivered by tanker than for other sources. These findings led to program interventions that focus on the chemical treatment of tanker water and cisterns used by households to store water.

Formative research and household surveys in the DR Congo suggested that soap was widely available to households in rural and urban areas, but that handwashing behaviors were largely inadequate. Sanitation facilities were present, but mostly unusable. The SANRU program decided to start hygiene promotion by integrating behavior change for handwashing into an existing Primary Health Care program and to address sanitation at a later point until the resources to improve sanitation facilities were available.

While definitions of access and coverage must be worked out in each case, these must be translated into simple formats to enable information to be collected consistently and reliably. In Honduras for example, the M&E *system for water supply* defines four categories of system:

A – in full working order
B – possibly not working but actions of the Mobile Maintenance Technician could easily bring it up to "A"
C – possibly not working and requires investments which are within the economic capacity of the community
D – not working-substantial investment required probably beyond the economic capacity of the community.

This simple typology enables the mobile technicians who visit them periodically to easily keep account of the status of all the systems under their remit thus rapidly building up a national picture of who is covered with functional systems. The beauty of this approach is that it is simple; allows for continuous real-time monitoring, takes into account the condition of the system, not just whether it was originally constructed; and makes use of the existing op-

eration and maintenance arrangement to collect data rather than setting up a separate M&E function.

Getting hold of information on sanitation coverage and hygienic practices is likely to be much more challenging than getting information on water supply. A study in three countries in East Asia used participatory techniques to uncover a range of inherent biases hidden beneath generalized coverage statistics. Nonetheless, with careful design, a few key indicators can almost certainly be devised in most cases to generate manageable information for monitoring programmatic outcomes.

Case Study Box 5: How will we know whether our programme is working?

The Joint Monitoring Programme of UNICEF and WHO provides some guidance on what is to be monitored, and also gives access to global information on progress towards the Millennium Development Goals. It can be found on the web at **www.wssinfor.org**.

Definitions of Access are discussed in Evans, B. and J. Davis (2003) *Water Supply and Sanitation in Africa: Defining Access Paper* presented at the SADC conference, Reaching the Millennium Development Goals

Experiences from the West Bank and DR Congo are summarised in the following two documents which also provide links to other resources: Camp Dresser McKee (2003) West *Bank Village Water and Sanitation Program: Findings from Environmental Health Assessments* Environmental Health Project Brief No. 17, July 2003 and Camp Dresser McKee (2003) *Improving Urban Environmental Health in Democratic Republic of Congo* Environmental Health Project Brief No. 16, June 2003.

The institutional arrangements in Honduras are described in Fragano, F.,C. Linares, H. Lockwood, D. Rivera, A. Trevett, G. Yepes (2001) *Case Studies on Decentralisation of Water Supply and Sanitation Services in Latin America* Environmental Health Project Strategic Paper No. 1, Washington D.C.

Sanitation experiences in East Asia are described in Mukherjee, N. (2001) *Achieving Sustained Sanitation for the Poor: Policy and Strategy Lessons from Participatory Assessments in Cambodia, Indonesia and Vietnam* Water and Sanitation Program for East Asia and the Pacific

Notes for Chapter 7:

i Additional monitoring indicators dealing with access to water and other sanitary facilities can be added, to provide a more comprehensive picture of progress towards wider hygiene improvement goals (see Kleinau et.al. (2003) for detailed ideas on how to establish a full scale monitoring system at both project and programme level).

SECTION FOUR:
PROGRAMMING FOR BETTER IMPLEMENTATION

This section focuses on the challenges of working with communities and households, hygiene promotion and selection and marketing of sanitation technologies. The practical implications of adopting a new approach which focuses on household behaviour change and investment, are significant and will be briefly reviewed here. It is not the intention of this section to provide detailed guidance on project level implementation but rather to highlight where the realities of working at the local level with households and communities, can impact on programmatic decisions. By reviewing what is now known about working effectively at this level the recommendations of Section Three can be seen in their right context.

Chapter 8 discusses the implications of the new approach in terms of how front-line units need to interact with both households and communities. The types of tools and resources they need to do this effectively are briefly discussed. **Chapter 9** briefly introduces some approaches to Hygiene Promotion – what is currently known about how to make it effective and how to organize it so that it achieves the maximum possible impact are also covered. **Chapter 10** talks about how to select and market technologies. For detailed implementation guidance the reader is directed to other sources; the information presented here is intended as an introduction for those professionals who do not have experience or knowledge about what has been learned about effecting sanitation and hygiene promotion and also to stimulate sector professionals to think about the wider programming implications of what is known in the field.

Chapter 8 Working with Communities and Households

8.1 The different roles for communities and households

The shift away from public construction of latrines to a more complete approach to sanitation and hygiene promotion places the household at the centre of decision making. But it also implies a strong role for the community in planning and management of interventions. While many of the needed changes will happen at the household level, in some contexts some decisions and actions may need to be taken collectively by the community. Such shared action may relate to:

- local decision making about the most appropriate range of sanitation solutions (communities may need to decide whether they are willing and able to manage shared facilities or whether they can all afford to invest in private household facilities);
- local management and oversight of the household actions as they relate to the communal environment (preventing discharge of household excreta in public places for example);
- management of solid wastes, sullage and storm water drainage;
- management and financing for operation and maintenance of facilities which impact on the shared environment (this may include operation of shared facilities such as drains, but might also include a shared commitment to support maintenance and operation

of household facilities such as latrines); and
- organisation of joint action to lobby service providers to perform at the margins of the community (for example, creating pressure for a utility service provider to operate and manage trunk sewers in an urban context, or lobbying for public support to regional operation and maintenance service providers).

There are a range of approaches to management of shared or community facilities including:

- direct community management through elected or appointed committees or other groups;
- delegated management to a trained member or members of the community;
- delegated management to a professional voluntary, private or public service provider.

Depending on the context (including whether the community exists in a rural or urban environment, and the type of technologies which are feasible) each community needs to work out the best way to approach issues of shared responsibility.

8.2 Building capacity at the community level

While there are often clear advantages to collective community action in sanitation and hygiene promotion, it is often challenging to provide the right sort of support to enable communities to reach their full potential in these new roles. As well as the need to build up specific skills (such as planning or book-keeping), communities may need support to overcome entrenched biases and internal conflicts, or they may need support as they begin to engage with other local institutions (such as local government bodies, field units of technical agencies, bankers, shop keepers, private suppliers of goods and services etc). Capacity building needs at this level will vary enormously, but will need to be addressed (planned for, financed, staffed and implemented), if collective action is to be successful.

8.3 Communicating Effectively

To achieve the vision of placing communities and households at the centre of behavour change, service providers and other support agencies have primarily to become expert at communication. Programmers may consider that the objective of working with the community is to:

- promote changes in hygiene behaviours;
- market and deliver sanitation technologies; and
- build systems of community management.

However, communities and households may have difference perspectives, and see a sanitation and hygiene promotion programme as an opportunity to engage with a wider social development process. It may often be preferable to organize work in the community in this way, so that a range of social objectives can be achieved by the community, with the proper priority placed on each.

Communication also has to be two-way because each of the areas of intervention above involve decisions to change how things are done within the house and within the community. Facilitators of hygiene improvement will not be able influence these decisions without a thorough understanding of the environment and contexts within which they will be taken. Households and communities have much to offer programmers in terms of providing the keys which enable changes to take place through joint effort.

8.4 Selecting Community Level Tools

The type of community level interventions required will be determined by a range of factors. These include:

- **the types of behaviour that are to be changed:** for example where unhygienic practices are deeply entrenched in cultural norms a more intensive hygiene promotion programme would be needed as compared to a situation where personal hygiene is good but sanitary facilities are lacking – in this case more emphasis might be placed on marketing sanitation goods;

- **the magnitude of the problem and levels of awareness:** for example where the situation is very poor and people are already aware of its impact on health, there will be more focus on facilitating changed behaviours, whereas where awareness is low, the focus will be much more on promoting awareness of previously unknown risks;

- **the nature of the communities (rural/ urban) and technologies likely to be used:** for example in scattered rural communities where on-site technologies have been identified as appropriate, there may be less need for up front mobilization of community "organisation" for their installation than in dense urban communities electing to use communal latrines or condominial sewers. Conversely, in the first case, more work may be needed to help the community establish a viable long-term system for pit emptying and management of wastes, than would be needed in an urban community using condominial sewers emptying into a working main sewer line;

- **the institutional environment:** for example where the small scale private sector is likely to be a key provider of services, marketing and local support skills may derive from them, and additional community level interventions may not be required. Importantly, where hygiene promotion is emphasized there may need to be stronger involvement of health staff and a shift in roles for staff from technical water supply and sanitation agencies;

- **the skills available amongst field-workers locally:** what skills do field-workers (who may be located in government departments, NGOs or local organisations) already possess, and what skills do they have the potential to learn;

- **the nature of existing local organisations:** village development committees, savings groups, water user and tapstand committees, handpump/waterpoint caretakers and mechanics, agricultural and forestry groups, population and health committees already abound, and sometimes their number and demands tax a community's time and resources. Some of these groups could usefully place a priority on hygiene and sanitation. Linking into existing credit groups may prove a valuable means to channel credit and subsidies for sanitation—and ensure equity as well as accountability—without creating a separate effort; and

- **the availability of funds to support community level interventions:** resources will ultimately determine what interventions can be used at what intensity for how long. In general local participatory approaches will have higher costs than remote, mass media type approaches but are likely to be an essential element in achieving real change at the household level.

8.5 The Tools

Having identified the available resources and agreed on the objectives of community level interventions, generic tools and approaches can be selected and modified for use in the specific context under consideration. The tools commonly used in the water supply and sanitation sector include a full range from participatory planning and monitoring through to advertising and the use of mass media (**see Reference Box 13**).

Participatory Techniques[i]

A range of participatory tools/techniques can be used in hygiene improvement programmes. Commonly used tools include focus group discussions, neighbourhood social mapping; transect walks; and household/school hygiene self surveys.

Participatory Rural Appraisal (PRA), is a generalized description for a wide range of techniques especially aimed at involving community members in decision-making and self-assessment and in the development of stakeholder partnerships. PRA evolved through a simplification of conventional techniques for data collection and analysis. Community action planning, which requires active roles by community members, is well served by PRA techniques such as mapping of local problems and resources, wealth ranking, and similar tools. The "PRA" philosophy informs much of the thinking about participatory techniques in the sector and has been translated into a wide variety of contexts including urban slums.
Many of the elements described above have been refined for the use of the water supply and sanitation sector and the three the most commonly used combined approaches are:

- **PHAST** (Participatory Hygiene and Sanitation Transformation) which was developed in Eastern and Southern Africa in the mid-late 1990s. PHAST toolkits can be used at the local level to bring about behavioural changes in hygiene and sanitation.

- **SARAR** (Self-esteem, Associative strength, Responsibility, Action planning, and Resourcefulness) stimulates involvement in community-based activities of all kinds, not only by the more prestigious and articulate participants (such as community leaders or serious staff), but also by the less powerful, including the non-literate community members. SARAR is widely used in participatory water, hygiene, and sanitation programmes;

- **Methodology for Participatory Appraisal (MPA)** a selection of participatory techniques which have been refined and assembled for the participatory appraisal of projects and programmes.

Schools and Education systems
Use of schools, parent-teacher associations and children themselves, are increasingly recognised as powerful tools in promoting changed behaviours and greater awareness of hygiene issues. These channels, and specialized tools to utilize them, can be a key component in a communication programme.

Mass Media and Advertising
The use of mass media, and straight forward advertising can also play a role in hygiene improvement. These didactic interventions emphasize transmittal of messages to promote awareness, market products and transfer knowledge. When used well these approaches can play an important role in overall behaviour change but should usually be used in tandem with more intensive local marketing techniques.

Marketing
Marketing in the water supply and sanitation sectors has long revolved around "social marketing" – where a range of tools are used in combination to target specific behaviours such as hygienic practices or the use of a particular technology. Once it is recognized that the most effective interventions in sanitation may be achieved through development of a viable sanitation business, marketing may become a major element of a hygiene improvement programme. New approaches which link commercial marketing of goods and services at the local level, with national awareness campaigns and hygiene promotion programmes, may be effective in stimulating the demand-side of the market. The challenge will of course be to match this demand-side support with suitable approaches to build up the supply-side business to ensure a ready supply of effective and appropriate goods and services.

8.6 Scaling Up

Scaling up successful experiences of working with communities is notoriously difficult. By its very nature this type of work is resource intensive – it requires a range of specialist skills, time and energy to build up real management capacity within most communities in a new and challenging field such as the management of sanitation. Most practitioners emphasise the need for a slow and steady approach. This seems to contradict the urgent need to scale up this type of work and roll it out to an increasing number of communities. Furthermore, the task may become progressively harder as the most challenging (remote, poor, socially divided or technologically challenging) communities are likely to be left to the last. Programmers can be proactive in ensuring that suc-

cessful pilot experiences are not translated into ineffective "generic" packages for scaling up by:

- emphasizing and planning for the fact that working at the community level always requires time;
- ensuring that capacity building of potential front-line units and partners is built in to every positive experience so that the number of skilled workers increases exponentially as time passes;
- working to ensure coherence between efforts in a range of social sectors so that front line units building capacity to organize education for example, can also contribute and reinforce community needs in sanitation management and vice versa; and
- allocating sufficient funds to this important aspect of sanitation and hygiene promotion.

Reference Box 13: Communications approaches

For: participatory tools and approaches

See: IRC. (1996). *The community-managed sanitation programme in Kerala: Learning from experience.* IRC, Danida, SEU Foundation, Kerala.

NGO Forum for Drinking Water and Sanitation. (1996) *Social mobilisation for sanitation projects. (Annual Report, 1995-1996.)*, Dhaka, Bangladesh.

Simpson-Hebert, M., R. Sawyer, and L. Clarke. (1996). *The PHAST Initiative. Participatory hygiene and sanitation transformation: A new approach to working with communities.* WHO, Geneva, Switzerland.

Sawyer, R., M. Simpson-Herbert, S. Wood (1998). PHAST *Step-by-Step Guide: a participatory approach for the control of diarrhoeal disease.* WHO, Geneva, Switzerland.

Srinivasan, L. (1992). *Tools for community participation.* UNDP/PROWWESS.

Ferron, S., J. Morgan and M. O'Reilly (2000) *Hygiene Promotion: A practical Manual for Relief and Development* Intermediate Technology Publications on behalf of CARE International

8.7 Programming Instruments

Selection of communications approaches to community and household interventions are best made at the local level in the context of projects and local investments. However where the skills and knowledge of those organisations and individuals charged with this interaction are weak, programmers may be able to influence the situation through a number of simple programmatic interventions including:

- Supporting institutional analysis at local level which enables realistic strategies for community intervention to be developed;
- Carrying out an overall assessment into the local-level constraints and barriers to hygiene improvement so that locally-tailored interventions can be designed appropriately based on a solid understanding of the demand side of the "market";
- Supporting participatory research into the most appropriate field-based tools and approaches;
- Directing funds to training/ research bodies to develop and disseminate locally-specific versions of generic tools;
- Providing funds for training of field-level generalists in the specifics of the hygiene improvement programme approach so that they can use their skills effectively; and
- Earmarking funds for national/ programmatic level elements of the communications strategy (such as mass media campaigns etc:
- Developing and disseminating manuals and guidelines for the development of local strategies;
- Providing adequate public funds at local level to support participatory planning, local capacity building and ongoing support to communities;
- Providing frameworks to support community operation and maintenance and the development of confederations of communities who wish to access support services for sanitation; and
- Funding training and capacity building for (a) community development organisations in aspects of hygiene improvement; and (b) technical service agencies in community development approaches.

8.8 Practical Examples from the Field: What will the community do?

A key challenge for sanitation and hygiene promotion professionals is to see how activities and community management organised around hygiene behaviours and sanitation hardware can and should be linked to existing community and government structures. In Kerala, a Dutch-government-supported sanitation programme, resulted in significant improvements in hygiene conditions in a number of villages. Subsequently the approach was adopted across the state, through pressure exerted by village panchayats (local government organisation) on the state government. The strength of the initial project had arisen in part because it took explicit notice of existing structures and provided a clear role for the panchayat while also taking explicit action to support target groups in the community, including women who wished to become masons and technicians.

In another Indian project; the Uttar Pradesh Rural Water and Environmental Sanitation Project (SWAJAL), communities in the mountainous parts of Uttar Pradesh, were empowered to plan and construct their own water supply and sanitation systems. Groups from some villages traveled to the plains to purchase pipes and other materials, in some cases these journeys were undertaken by women-members of the Village Water and Sanitation Committees (VWSC) who had previously never left their villages. Swajal also published a quarterly magazine for participating villages which served as a news and communication tool in a dispersed rural area. While the specific community-empowerment support-mechanisms set up in Swajal were clearly effective, there were some problems because the institutional link to local government was not clarified. The government of India subsequently took a much clearer line while rolling out some of the lessons from Swajal, in specifying the connection between VWSCs and Panchayats.

In situations where water supply and sanitation institutions are stronger, it may be more challenging to develop local community-level capacity, unless the capacity of the utility itself is strengthened in this regard. In El Alto, Bolivia, a major investment of time and resources went into supporting the private water company as it developed the condominial model for sanitation in the city. Input from a specialized support organisation, the Water and Sanitation Program, was needed to build capacity for social mobilization, community contracting, participatory planning and monitoring, and in general to enable staff to work more effectively with communities.

In Burkina Faso, the Programme Saniya, used a combination of local radio and face-to-face domestic visits, coupled with the transmission of messages in a traditional social event called a djandjoba, to communicate well-crafted hygiene messages to carefully identified target audiences. In Zimbabwe, ZimAHEAD make use of the existing structure of Environmental Health Technicians of the Ministry of Health who establish Community Health Clubs which become the focus for communication and capacity building. In Mozambique the National Sanitation Programme took a low key approach to sanitation marketing, relying on word-of-mouth and the impact of fabrication centres located in peri-urban localities to generate demand. In central America a partnership with private soap manufacturers gave governments access to commercial marketing skills for public health messages.

Key to any successful communication is clearly understanding of what is to be communicated (what key practices shall we try to change?); who is the target audience; and what are their existing communication habits and practices. From this type of formative research tailored communication strategies can grow.

Case Study Box 6: How shall we work with communities and households?

The description of the origins of the Clean Kerala Campaign is inVan Wijk-Sijbesma, C. (2003) *Scaling Up Community-managed water supply and sanitation projects in India* presentation to the IDPAD Water Seminar, IHE, Delft, The Netherlands, May 12-13, 2003

The Swajal Pilot Project is described in various publications. A useful starting point is WSP-SA (2001) *Community Contracting in Rural Water Supply and Sanitation: The Swajal Project,* India Water and Sanitation Program

The El Alto experience is well documented on a dedicated website at **www.wsp.org**

For an introduction to the programme, and information on the costs and benefits of the approach see Foster, V. (n.d.) *Condominial Water and Sewerage Systems – Costs of Implementation of the Model Water and Santitation Progam,* Vice Ministry of Basic Services (Government of Bolivia), Swedish International Development Cooperation Agency.

Programme Saniya and ZimAHEAD are described in Sidibe, M. and V. Curtis (2002) *Hygiene Promotion in Burkina Faso and Zimbabwe: New Approaches to Behaviour Change* Field Note No. 7 in the Blue Gold Series, Water and Sanitation Program – Africa Region, Nairobi

The handwashing partnership in Central America is described in detail in Saadé, C., Massee Bateman, Diane B. Bendahmane (2001) *The Story of a Successful Public-Private Partnership in Central America: Handwashing for Diarrheal Disease Prevention* USAID, BASICS II, EHP, UNICEF, The World Bank Group

Notes for Chapter 8

i Much of this section draws on Brian Appleton and van Wijk, Christine (2003) Hygiene Promotion – Thematic Overview Paper IRC International Water and Sanitation Centre

Chapter 9 Hygiene Promotion

9.1 Introduction

Changing hygiene behaviours is a key element and, as we have seen, may often be *the most crucial step* in achieving health gains. Hygiene promotion is all about changing behaviours. Despite this it is often neglected or marginalized in programmes which state that they aim to improve hygiene; many of these programmes place much greater emphasis on the construction of hardware (often prioritizing water supply over sanitation). Not only does this mean that there is insufficient resources available for effective hygiene promotion, but it also means that the hardware which is installed may be inappropriate because it is not planned within an overall "hygiene improvement" framework. In some cases these interventions may even make it more difficult for communities and households to improve hygiene and enjoy real health benefits. This may happen for example when designs are inappropriate and facilities cannot be used or where sections of the community are excluded. To be effective then, sanitation and hygiene promotion programmes need to be designed with the hygiene improvement framework in mind – ensuring adequate resources for all three elements, and perhaps in some cases, focusing on hygiene promotion ahead of construction of physical infrastructure which may be a secondary, more long term strategy.

Furthermore, hygiene promotion should be seen as a major element in the programme requiring not only adequate financial resources, but also the requisite levels of professional expertise and effort. Too often, engineers may seek to "add on" a hygiene promotion component to what is essentially a latrine construction programme, without due attention to the complexities of making hygiene promotion effective. Importantly it is often neglected during the planning phase with insufficient attention paid to gathering the types of information which are needed to design really effective behaviour change strategies. At the other end of the scale, insufficient time may be made available for the needed changes in behaviour to take root. Changes hygienic practices is often a long term process, and it may not be achieved for example within the three year planning horizon of a conventional water supply project, or indeed the common term for a local political administration.

9.2 Making Sure Hygiene Promotion Works

Much has been learned about making hygiene promotion effective. Many of the key ideas are summarized in a useful Fact Sheet published by WELL[i]. These ideas are summarized below:

- **Build on what exists:** A hygiene promotion programme should be based on a thorough understanding of:
  - the most important risky practices which should be targeted;
  - who are primary/ secondary and tertiary audiences for key messages;
  - who can most effectively motivate behaviour change;
  - what may prevent behaviours;
  - how can audiences be most effectively reached; and
  - how can the effectiveness of the programme be measured.

Formative research is one approach which can be used to develop the hygiene promotion strategy. Formative research is a pragmatic approach to planning programmes which has attributes that "make it a particularly useful component of…..sanitation programmes". The approach is flexible and allows researchers to devise key questions which are specific to the community in which they are working. Answers can be used to develop a plan of action[ii].

- **Target a small number of risk practices:** The priorities for hygiene behaviour change are likely to include handwashing with soap (or a local substitute) after contact with excreta, and the safe disposal of adults' and childrens' excreta.

- **Target specific audiences:** audiences may include mothers, children, older siblings, fathers, opinion leaders, or other groups. An important group is those

people primarily involved with child care. Audiences need to be identified in each particular case.

- **Identify the motives for changed behaviour:** As mentioned elsewhere, these may have nothing to do with health. People may be persuaded to wash their hands so that their neighbours will respect them, so that their hands smell nice, or for other reasons. Participatory planning with target groups can be used to discover local views about disease, and ideas about the benefits of safer hygiene practices. This can form the basis for a hygiene promotion strategy.

- **Hygiene messages need to be positive:** people learn best when they laugh, and will listen for a longer time if they are entertained. Programmes which attempt to frighten audiences will probably alienate them. Furthermore, messages consisting of "dos" and "don'ts" can be frustrating and demoralizing for the poor particularly where they urge actions which are unrealistic for poor families[iii].

As with all elements of the hygiene improvement programme, monitoring will be needed at the local level to ensure that inputs are delivered and that they result in the expected outcomes. At the programmatic level, it will be essential to provide oversight that ensures that hygiene promotion is integral to the overall programme, and that where hygiene promotion activities indicate the need for additional inputs in terms of hardware these can follow in a responsive manner (see **Reference Box 14**).

9.3 Applying the Principles

Table 14 shows how the principles of good programming can be applied to decisions about hygiene promotion.

Table 14: Applying the Principles to Hygiene Promotion

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Use hygiene promotion as a two-way process of communication to: (i) inform and influence household behaviours and (ii) gauge effective ways of harnessing communal effort for the public good	Support approaches to hygiene promotion which empower people rather than those which present elitist or patronizing messages	Support information gathering so that hygiene promotion can be based on a thorough understanding of: key behaviours to change; key audiences; key motivators; ways to change behaviours; how to reach audiences; and how to measure outcomes	Expand the range of participants in hygiene promotion to ensure that messages are reinforced and delivered in the long term	Invest in capacity building to improve approaches to hygiene promotion

Reference Box 14: Hygiene promotion

For: A summary of current thinking on hygiene promotion, and links to other resources and references

See: Appleton, Brian and Dr Christine van Wijk (2003) *Hygiene Promotion: Thematic Overview Paper* IRC International Water and Sanitation Centre

Curtis, V. and B. Kanki (1998) *Towards Better Programming: A Manual on Hygiene Promotion* Water, Environment and Sanitation Guidelines Series No. 6 UNICEF

Get thes reference on the web at www.irc.nl and www.unicef.org

For: Summary of seven "key messages" about hygiene which can be easily incorporated into a well-designed advocacy campaign.

See: *Facts for Life* UNICEF

Get this reference from: Local UNICEF offices or on the web at http://www.unicef.org/ffl/09/

9.4 Programming Instruments

In most cases the most important programming decision to be taken will be to allocate adequate resources to hygiene promotion, along with the needed institutional analysis, monitoring and feedback systems. In addition however, a recognition of the importance of hygiene promotion, should also be linked to decisions about: allocating responsibility for overall programme management and project investments; institutional and organizational arrangements; and coordination mechanisms. Specific additional actions might include:

- commissioning baselines studies on current hygiene practices;
- commissioning formative research to determine key behaviors to focus on;
- developing behavior change strategies including social marketing, social mobilization, and community-level education;
- integrating hygiene promotion efforts in Ministry of Health programs;
- determining roles and responsibilities for carrying out hygiene programs;
- ongoing monitoring of program effectiveness; and
- training at all levels for program implementation

9.5 Practical Examples from the Field: How will we promote hygienic behaviours?

The Sanitation and Family Education Project was developed and implemented by CARE Bangladesh, with technical assistance from the International Centre for Diarrhoeal Disease Research (Bangladesh). The SAFE project had no hardware component but was designed as a supplementary or follow-on activity after an earlier cyclone relief project which provided tubewells and latrines. SAFE worked by targeting a small number of specific behaviours including: drinking pond or open well water, improper storage of tubewell water, adding pond water after cooking, using unhygienic latrines, poor handwashing practices and low use of latrines by children under the age of five. The project area saw a two-thirds reduction in diarrhea prevalence when compared with control areas, and a substantial increase in hygienic behaviours including handwashing and hygienic latrine use. What is interesting about the SAFE experience, was that it operated in an area which had already been targeted with hardware and showed significant health benefits. Without the additional push on hygiene promotion, it is unlikely that the investment in latrines and water supply would have yielded expected benefits.

In comparison, the Environmental Health Project (EHP) was able to implement a full range of 'HIF' interventions in Nicaragua during a two –year project which was set up in the aftermath of Hurricane Mitch. The project provided: hardware, through water supply and environmental projects implemented by local NGOs; hygiene promotion, using trained community members and schools as the two primary mechanisms to deliver messages; and strengthening of the enabling environment, through capacity building of local water committees and at the national level. Here the benefits were substantial and the advantages of the coordinated approach did not preclude a range of innovative institutional arrangements and partnerships being established.

In general hygiene promotion is a long-term process, which links an understanding of the current situation with a vision of what behaviours can be changed, and how this can happen. In Zimbabwe, ZimAHEAD have pioneered the Health Club approach to provide a framework for this needed long-term change. Community Health Clubs provide a forum for community-members to learn about simple and effective ways of improving hygiene in the house and community, and they also provide the community with a focus for planning and implementing water supply and sanitation activities. But perhaps more significantly the CHCs also provide support for wider economic activities, and provide a more interesting and stimulating framework within which the Ministry of Health Environmental Health Technicians can see long term structured change occurring in the communities with which they work. The CHC approach has proved to be extremely robust, and even with the recent decline in development budgets and the loss of funds from external support agencies, the CHCs have been able to sustain their activities and keep operating.

Ensuring a robust structure for hygiene promotion is important, but, as was the case in Bangladesh, this may be outside or in parallel with a programme of hardware provision. Investments in increasing access to hardware, and promoting hygienic practices need to be coordinated but can sometimes be successful when they are carried out by different agencies. In Ghana, the Northern Water Supply and Sanitation Project (NORWASP) integrated health and hygiene into water supply and sanitation for rural communities. A thorough evaluation of baseline data was carried out before a community-based hygiene education programme was developed, and this in turn was first piloted, and evaluated by the community. The approach drew from PHAST and PLA methods, but was tailored to local conditions, and made use of a locally-developed health and hygiene game. Identifying and training a cadre of committed fieldworkers is crucial, and this is a key strategy in NORWASP. The project was not bound to one particular agency, but sought out the best institutional "homes" for different activities, while providing an overall coordinating framework.

As well as getting the institutional structure right, hygiene promotion needs to apply appropriate approaches. In some contexts for example, shocking messages may work well; in Zimbabwe, the CHCs use a slogan which is often "chanted at health club meetings" in the local language, which when translated states baldly "don't share your shit". In Bangladesh, VERC carry out village transect walks during which households discuss where each family member defecates, and identify areas in the village which are regularly soiled with faeces. Such approaches may not work in other situations, and each case must be assessed on its own merits.

Case Study Box 7: How will we promote hygienic behaviours?

The Community Health Clubs and ZimAHEAD are described in Sidibe, M. and V. Curtis (2002) *Hygiene Promotion in Burkina Faso and Zimbabwe: New Approaches to Behaviour Change* Field Note No. 7 in the Blue Gold Series, Water and Sanitation Program – Africa Region, Nairobi. Further discussion of CHCs, along with information about NORWASP and the EHP project in Nicaragua is available in the case studies in the IRC Thematic Overview Paper (TOP) available on the web at **www.irc.net**

VERC's experience in Bangladesh is discussed in Kar, K. (2003) *Subsidy or self respect? Lessons from Bangladesh* id21insights, issue 45 on the web at **www.id21.org/insights/insights45**

i This section draws heavily on Appleton, Brian and Dr Christine van Wijk (2003) Hygiene Promotion: Thematic Overview Paper IRC International Water and Sanitation Centre drawing particularly on Appendix 2. This excellent reference is recommended as a starting point for more detailed programme planning.

ii Sidibe, M. and V. Curtis (2002) Hygiene Promotion in Burkina Faso and Zimbabwe: New Approaches to Behaviour Change Field Note No. 7 in the Blue Gold Series, Water and Sanitation Program – Africa Region, Nairobi

iii Appleton and van Wijk point out that messages such as "wash hands with soap" or "use more water for washing" may simply make people more frustrated and disempowered in situations where for example soap is not commonly used or available or where every drop of water has to be carried long distances.

Chapter 10 Selecting and Marketing Technologies

10.1 Introduction

In many parts of the world conventional 'sanitation' programmes have tended to focus on the public provision of latrines, either through direct construction, or by providing subsidies based either on a needs-assessment, or on the completion of a latrine of "acceptable" standard. In a few regions, where progress in the water supply and sanitation sector has moved faster, sanitation has been viewed more as a "utility" issue often with a focus on regulating to prevent 'unauthorised' construction or, in urban situations, to preserve the exclusive right of the utility to provide.

Once sanitation is seen within the context of hygiene improvement however, it becomes clear that latrines alone are not very effective, and their provision needs to be coupled with, and often subordinate to, an increase in awareness about hygienic practices in general and a change in the way hygiene is managed locally. Furthermore, even where latrines are clearly urgently needed, direct public provision has been shown to be problematic in many cases. The sheer scale of the need swamps most public providers[i] and this, coupled with suspicions of corruption and inefficiency in many programmes, suggests that new approaches need to be tried, in tandem with an improvement in public provision where this appropriate.

Where it exists, the small scale private sector provides some hope that provision can be scaled up, and made more effective through local innovation and the ability of local providers to be more responsive to household demand. Where this small scale business does not exist, programmers may want to devote some of their effort and resources towards stimulating and supporting its growth, to relieve the pressure on public provision. The potential for this sanitation "business" is easier to understand in rural areas or less congested urban slums, where on-plot provision makes a straight forward business relationship between the household and the supplier possible. In congested urban areas where off-plot provision is needed, this relationship is less clear, and there will almost certainly be a responsibility retained by the public provider or utility. Nonetheless new institutional and technical approaches mean that there may still be a role for an intermediary or small scale private provider at the local level to facilitate the development and management of and appropriate local network system. For more information on the basic technology issues of sanitation see **Section 10.2** below.

The key idea here is to move away from the direct provision of a pre-determined technology, to a situation where households and communities can choose from a range of appropriate options, supported by a range of suppliers who are highly motivated and skilled to provide them.

10.2 Making Sure that Technology Works

Broadly, sanitation technologies fall into four main types as shown in **Table 15**. The choice of technology will be strongly influenced by a range of factors, of which the two most important are:

- How much used water (wastewater) must be removed from the household?
- Will the disposal of the excreta be on-site or off-site?

Sanitation Technology Choices

(a) Limited water use and on-site disposal (latrines)

Many poor people have limited access to water, and do not enjoy the relative luxury of a household connection. Water consumption is thus limited to around 20 lpcd or less, and little wastewater will be generated. On-site toilet facilities offer substantial advantages over off-site facilities in terms of convenience, privacy, and management (family-owned latrines are in most cases better maintained than public ones). Basic pit latrines, pour-flush la-

trines, or variants of these basic types (e.g. Ecological Sanitation, VIPs, etc.) are usually the most appropriate types of technology to consider for on-site disposal of excreta with little water.

Latrines protect the environment from faecal contamination by isolating excreta in a pit. When the pit is full after five to ten years, it must be emptied before it can be used again. Where space permits, a new pit can be dug, and the contents of the full pit may be left to compost. After a year or more of composting, the pathogens in the waste will have been neutralized, and the contents may be safely handled. These contents may be used as agricultural compost. Ventilated Improved Pit (VIP) latrines improve on the basic design and limit nuisance from flies and odours.

Pour-flush latrines are those in which the excreta are flushed from the defecation area by water, and are particularly appropriate in cultures where water is used for anal cleansing. The water may be used to create a water seal between the wastes in the pit and the outside, thus eliminating problems with odours, flies and mosquitoes.

Pit latrines are difficult to build in areas of high groundwater table, or in rocky areas. High groundwater table not only makes construction difficult, but also raises the risk of groundwater contamination from the contents of the latrine These risks can, in most cases, be minimized if the bottom of the latrine is at least 2 m above the groundwater table, and the latrine is at least 15 m away from any well used for drinking water. Finally, sludge management (i.e. the transport and disposal of the latrine contents after emptying) should be carefully considered where space is limited, especially in urban or peri-urban areas. A variety of ecological ("EcoSan") toilets exist which are designed to improve the composting of the latrine's sludge, and thus turn the problem of sludge management into an opportunity to generate higher value compost.

(b) Limited water use and off-site disposal (bucket latrines, public toilets)

Where access to water is limited, and excreta disposal on-site is not feasible (due to either cost or space constraints), bucket latrine systems or public toilets are often used.

In the bucket system (or "conservancy system" as it is known in South Asia) excreta are deposited in a bucket or lined basket that is emptied several times a week by a "sweeper" who disposes of the waste elsewhere. In earlier times, elaborate plans were made for the collection of wastes to "bucket transfer stations" where the buckets were emptied into larger carts and cleaned prior to their reuse. The larger carts, in turn, were meant to transfer the waste to a sanitary disposal site. In current practice, however, the disposal is almost always to a nearby drain (eventually leading to drain blockage) or to a pile of solid waste, exposing rag pickers and children to faecal wastes. The system is generally considered an extremely unsanitary arrangement, and is officially illegal in India and a number of other countries. Where field surveys establish the continued existence of this system, however, sanitation planners need to address two questions before simply banning it:

1. What more sanitary option can realistically be offered?
2. During the transition period to the more sanitary option, how can the bucket system be rendered more hygienic?

Public or shared toilets are a second form of off-site disposal, and indeed, have been promoted in India by NGOs such as Sulabh International Inc, as an answer to the defects of the bucket system. Public toilets may involve any number of technological options, from common pits to sewer system connections. All public toilets, however, involve a number of difficult institutional questions, which have previously weighed against its widespread adoption by sanitation professionals.

Management of public toilets is a daunting challenge, although recent experience in South Asia shows that it can be overcome in some cases. While the responsibility for (and interest in!) cleaning private toilets clearly rests with the owner, responsibilities are often less clear-cut for public or shared toilets. It is often difficult to establish an effective maintenance regime for a toilet shared among five or ten families. Government or community run public toilets are often in an appalling state (in Europe and North America as much as anywhere else) because of the lack of interest and incentive for adequate maintenance.

Sulabh International has developed a public toilet franchising system whereby attendants and managers are reimbursed from a small fee for use levied on adult male customers; women and children can use the toilet for

free. The fee is sufficient to ensure a reasonable income for the manager, who has an interest in maintaining a clean well-run establishment; Sulabh's monitoring of performance means that s/he risks losing the job if performance slips. While the franchise arrangement works in a number of settings (e.g. railway or bus stations) it is unclear that the financial model can work to serve the urban poor, when competing with "free" open defecation.

Household toilets, where feasible, are preferable to public toilets for 3 main reasons:

- **convenience to the household,** which encourages use
- **clear accountability for cleanliness,** which also encourages use, as the cleanliness is within the control of the household
- **safe disposal of children's faeces** is more likely with a household toilet. Although a number of public toilet systems try to encourage use by children, it is less likely than a household toilet to work, especially for the disposal of young children's faeces.

(c) Substantial water use and on-site disposal (septic tanks, soakaways)

As access to water increases, water use will also increase, along with the requirement for its safe disposal. Sullage and grey water are the technical terms for household wastewater that is not used in toilets; sullage is made up of bathing water, water used for washing and cooking, etc. While it is less contaminated than toilet water, it is incorrect to think of it as "uncontaminated"; water used for cleaning the clothing and nappies of infants and very young children, is often heavily contaminated.

Pouring large quantities of sullage into a pit latrine pit is likely to lead to pit overflow, bad smells, and insect breeding. This is because latrine contents will quickly "plug" the soil, and limit the capacity of the soil to absorb large volumes of sullage. The construction of a separate soakaway for sullage is far more likely to work. A soakaway is a large pit or trench filled with boulders and/or gravel through which sullage may infiltrate into a larger surface area of soil. By keeping the sullage separate from the faecal wastes, the risk of soil plugging is reduced, and the soakaway can serve for a much longer time.

Septic tank systems (with soakaways or drainfields) are an alternative on-site solution for combined wastewater disposal. A septic tank is a concrete or masonry box in which some settling and treatment of faecal solids takes place; the wastewater leaving the septic tank is relatively clear and free of solids (although highly contaminated biologically). Sullage enters the septic tank after the settling of the solids, and the combined flow is discharged to the soil through a soakaway or drainfield. As the septic tank removes the faecal solids from the flow, the infiltration area of the soakaway is far less likely to become plugged.

Septic tanks are most commonly used by those with cistern-flush toilets and house connections for water. While traditionally each household has its own septic tank, a number of households with individual toilets and plumbing arrangements can connect to a single septic tank.

The capacity of both soakaways and septic tank systems to remove wastewater safely from the plot depends greatly upon the *infiltration capacity* of the soil. Soakaways and septic tanks work best in sandy soils, and cannot work well in tight clays. As with pit latrines, there is a risk of groundwater contamination, and this is particularly great when sullage and excreta are combined.

Sludge builds up in septic tanks as the faecal solids settle, and must be removed periodically. As with latrine sludge, the collection and disposal of septic tank sludge requires attention. Without good sludge management and enforcement, the public will be exposed to the effects of clandestine dumping of sludge into drains and piles of solid waste.

(d) Substantial water use and off-site disposal (sewers)

Sewers are common where water is readily available but suitable land and soil for septic tank systems are not. Sewers are pipes that carry wastewater (toilet wastes and sullage) away from the household to a centralized treatment and disposal point. Sewers are very convenient for the user, requiring a minimum of maintenance. They are often, however, a relatively expensive solution, especially if the wastewater is treated (as it should be) before its ultimate disposal to surface water. Sewers require a reliable water supply, and sufficient wastewater to ensure reasonable flushing of the solids through the system. Large systems, or systems in flat areas, often require pump or lift stations, to raise the sewage and thus reduce the depth and excavation costs of downstream

pipe. Such pump stations not only require careful operation and maintenance, but also a steady source of cash to cover significant power costs. Sewers should only be considered in cities and small towns and are not viable in rural villages.

There have been a variety of innovations in sewerage over the last two decades, particularly in Latin America, which have reduced its cost and operational complexity through a range of "condominial" technologies and institutional systems; Mara (see Ref. Box 15) is a good guide to some of the technical issues and debates involved in low-cost sewerage.

Table 15: Range of Technology Choices

Disposal point \ Water supply volume	Limited (< 20 lpcd)	Ample (>20 lpcd)
On-site	Pit latrine and variants, Pour flush latrines	Septic Tanks Pit latrines plus soakaways
Off-site	Conservancy/bucket system Public toilets	Sewers (including non-conventional variants)[ii]

10.3 Selecting Technologies – the sanitation ladder

The programmers' responsibility is to balance what is currently possible and desirable at the household or private level (ie what can be achieved in the short term) with long-term public policy objectives such as realization of full public health benefits, protection of the environment and maintenance of health and safety.

There is no such thing as an "ideal technology". In many countries standard designs and approaches, usually justified on the basis of long-run public policy objectives, have become entrenched in widescale national latrine construction programmes. They may appear to be the only viable solution and technicians may aspire to construct only facilities of the highest specification possible. However, programmes promoting these "ideal" facilities rarely achieve high rates of coverage – because demand for the high-cost technologies on offer is too low and there are insufficient funds to provide them universally on the public budget. One look at the latrines that people build for themselves however, illustrates that a wider range of solutions is possible. In many cases these home-built latrines may fail to improve the situation at all – but they may point to a viable first step on what is known as 'the sanitation ladder' ie the first intervention which will increase awareness of the benefits of sanitation, begin to lessen risks and start a household on the process that will lead to the installation and use of a sanitary latrine. In the long-run this is likely to result in much greater coverage and health improvement than would be the case if only "the best" were to be built or allowed to be built.

The balancing act for programmers is to judge what is acceptable and likely to be used by households, promote it appropriately and assess how best to move households as rapidly as possible up the sanitation ladder so that both private and public benefits can be realized. To do this government may retain a prominent role, beyond simply enforcing standards, in: promoting innovation; balancing local needs with national public policy priorities (for example intervening in emergency situations, enforcing standards in public places and schools etc); and steering household choice by supporting sanitation marketing efforts (see below).

Climbing the sanitation ladder in this way may not seem very glamorous but may in fact be the most effective means of making rapid and visible improvements in the situation. Furthermore the concept of the sanitation ladder is particularly important for the poorest households, where local conditions, lack of money and low levels of awareness may preclude the construction and effective use of latrines. Programmers need to support any incremental improvements, and may choose to steer public resources to the provision of appropriate school sanitation and public facilities so that some access is achieved while awareness is built.

10.4 Other Factors – community management

The interaction between technical constraints and organizational issues is also important. For example if people have no space but have proved that they can take concerted action in some other development sphere then the possibility of constructing and managing shared facilities should be considered (shared latrines, communal bathing facilities, condominial sewers etc). Where people are willing to give up space in their houses for sanitation but are unwilling or unable to collaborate with their neighbours a different (on-site) solution may be possible.

10.5 Building Capacity

It is quite obvious that capacity needs to be built amongst households, communities and even small scale independent providers so that they can participate more effectively in the provision of sanitation facilities that do achieve health improvements. What may be less obvious, though, is that there may be a need to build capacity amongst technical staff also, many of whom may be well trained in 'conventional' sanitation engineering. Unfortunately such conventional training tends to focus on expensive solutions, often with a heavy emphasis on piped sewerage (which is inappropriate in rural areas, and may not work in urban areas with low levels of water supply, unreliable power and low operating revenues). It may also place an emphasis on waste water treatment which (a) is inappropriate where on-site solutions are to be used; and (b) may be irrelevant where the public health imperative is to get as many households as possible to use a latrine as the first step. These staff may lack expertise in the complex area of 'making-do' and finding the best compromise in a less-than-perfect world. They may lack the skills to identify the best innovations and, worse, they may, in good faith, create barriers to the type of incremental improvements which are needed.

Reference Box 15: Sanitation technologies

For: Details of sanitation technologies and guidelines on choice of technology

See: Pickford, John (1995). *Low-cost sanitation.* Intermediate Technology Publications: London.

Mara, Duncan (1996). *Low-cost urban sanitation.* John Wiley & Sons: Chichester.

Cairncross, Sandy and Richard Feachem (1993). *Environmental health engineering in the tropics: an introductory text.* (2nd edition) John Wiley & Sons: Chichester.

Get these references from: Good technical libraries or the Water Engineering Development Centre (WEDC) at **www.lboro.ac.uk**

10.6 Sanitation Marketing

Why do people pay for sanitation?
As the emphasis shifts from "policing" and "providing" technologies to "marketing sanitation" and 'promoting innovation' technical roles may shift. Marketing of sanitation *as if it were a business* is a relatively new idea. Few countries have forged effective links between private providers and public agencies. Nonetheless this is may be infinitely more important, particularly in countries with vibrant small-scale markets for goods and services, than the ability of public-sector engineers to design and build urban sanitation systems.

Because the public interest in sanitation is linked to its role as a primary barrier of disease prevention health is often thought to be the principle driver of demand. However a World Bank survey[iii] in the rural Philippines established the following reasons for satisfaction with new latrines (in order of priority):

1. Lack of smell and flies;
2. Cleaner surroundings;
3. Privacy;
4. Less embarrassment when friends visit; and
5. Less gastrointestinal disease.

Some may regret that health education has been insufficient to raise the concern about gastrointestinal disease to a higher priority. Others, however, will quickly realize that all of the other reasons are excellent ways to market sanitation, and will accordingly review their marketing and product development strategy to take such practical concerns into account.

What influences household demand?
Figure 5 illustrates in a simplified way, the relationship between household demand and service delivery. It emphasizes that, where household demand is a driver for investment decisions, the role of the public sector (both on the supply side and in creating an appropriate enabling environment) remains crucial and may be more challenging than in traditional "public service delivery" type approaches.

In order to stimulate or create demand for a service, it is important in any situation to understand what is driving demand (or lack of it). Figure 5 suggests four main factors which will influence the depth and breadth of household demand for any particular good or service.

These are:

- **Awareness:** knowing that the goods/services exist and that they have benefits. For example, knowing that latrines exist and can be used to store excreta and knowing that a latrine can improve the health of children and have a positive impact on household income;

- **Priority:** deciding that the service is sufficiently important to merit needed investment For example, deciding to build a latrine rather than construct an additional room in the house or invest in a bicycle. Priority may be influenced by access to other priority services or a range of other factors such as status or social conventions. Priority may also vary between members of the households – and it is important to target demand creation and assessment activities appropriately (for example building a latrine requires a decision by the member of the household responsible for major capital investments in the home and that person should be a key target of a latrine marketing campaign);

- **Access:** having access to a service provider who will market and provide the specific service. For example having a local mason who knows what types of latrines can be built, help decide what is the most appropriate and build it; and

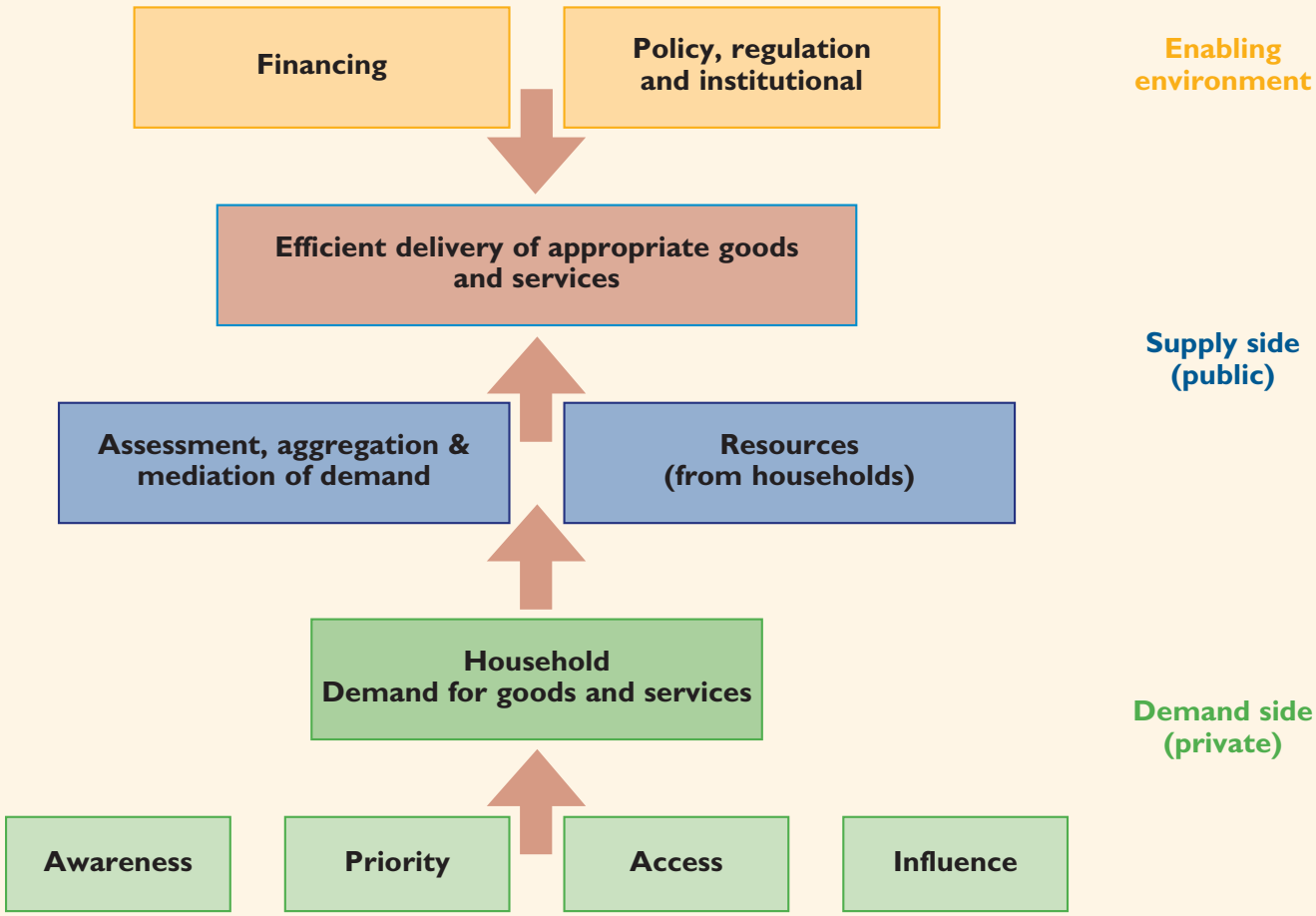
- **Influence:** being able to take effective individual action, or being in a position to participate in effective collective action. For example, having space to build an on-plot latrine, or being in a location where it is possible to participate in a condominial sewerage scheme.

Any sanitation marketing approach probably needs to address these four areas. While there is little empirical knowledge to date of how this can be done most effectively some ideas and suggestions are laid out in **Table 16** which shows an indicative approach to breaking down the four barriers listed above.

Sanitation marketing has to become more sophisticated. It has to move from the current approach which is heavily skewed towards public sector promotion of fixed ideas, to a more innovative approach which explores the

potential of the market to provide some of the solutions. Marketing expertise can be linked to technical expertise to create the right mix of messages and promotional approaches which can start to make purchasing and using a toilet a high-priority choice for households. The challenge for programmers at the moment is to come up with such new approaches almost from scratch since there is so little experience to build on. Ultimately the challenge is to turn toilets into attractive consumer items for those with some money to spare, while maintaining a focus on the supply-side of the market to ensure that cheap and appropriate versions are accessible by the poorest households.

Figure 5: Household demand in the context of service delivery



Importantly marketing latrines (along with all other changes in household hygienic practices) is a long-term undertaking and cannot be achieved in a short time frame. Programmers need to establish marketing systems that will have adequate resources to work with households in the long term to improve their awareness of sanitation, raise its priority, increase household access to providers of goods and services, and equip households to influence those providers as required.

Table 16: Illustrative sanitation marketing approaches

Demand Factor / Settlement/ Technology	Awareness	Priority	Access	Influence
On-plot/ rural	Mass media campaigns (based on a hygiene improvement framework) linking hygiene behaviour change and household investments in sanitation to improved lifestyle, higher earnings and status.	Household level participatory evaluations and planning to emphasise the need and potential of HH sanitation. Link to primary health care and micro-finance interventions.	Public schemes to support mason / plumber training, including business-support to small scale independent service providers. Public marketing of small scale private services.	Mass media campaign to emphasise the relative ease of household / shared sanitation in rural and some urban areas.
Networked/ urban		Household / community level participatory evaluations and planning to emphasise the need and potential of community sanitation.	Public schemes to licence and support small scale independent providers (ie pit emptying services). Public funds to train support agencies providing planning, micro finance and management support for low cost networks.	House-to-house communication to market appropriate shared- or collective approaches. Community planning coordinated with and supported by the utility.

10.7 Key issues and barriers

This chapter has emphasized that there needs to be a major shift away from the idea of public provision of latrines towards the idea of building, promoting, and supporting a sanitation business. Such a business will have the following key elements:

- Informed demand from households;
- Responsive supply from providers of goods and services; and
- Appropriate support from the public sector on both the demand- and supply- side.

In some countries this "business" already exists, and the real need is to ensure that it is legalized, appropriately supported so that it scales up, and then (and possibly only then) regulated to secure long term public policy objectives. In other countries the 'business' does not yet exist. Even where this "business" is likely to remain well within the public sector, much more emphasis is needed on promoting demand, supporting innovation and enabling local choice to drive incremental improvements in sanitation.

In most countries there will be a number of barriers to this including;

- Inappropriate skills (in public and private sector agencies);
- Excess of technical staff in public agencies;
- Lack of capacity in the small scale private sector (for both delivery and marketing);
- Lack of knowledge and experience of marketing sanitation;
- Technical norms and standards which preclude innovation and drive up costs; and
- Other regulations which hamper innovation including outdated building codes, planning regulations and environmental controls.

All of these barriers need to be addressed at the programmatic level.

10.8 Applying the Principles

The principles of good programming apply equally to the selection of technologies as can be seen on **Table 17**.

Table 17: Applying the Principles to the section and marketing of sanitation technologies

Maximising public and private benefits	Achieving Equity	Building on what exists and is in demand	Making use of practical partnerships	Building capacity as part of the process
Assess and promote sanitation technologies which are acceptable and likely to be used by households in the short term while developing longer term strategies to move households up the sanitation ladder.	Ensure that sanitation technologies are available which the poorest can access and use effectively. Specifically make sure technical norms and standards do not preclude solutions appropriate for poor households	Understand how people currently manage, what they aspire to, and invest in finding locally-appropriate solutions	Expand the range of participants – so that as much effort as possible goes into developing innovative new technologies and marketing approaches	Invest in building capacity of technical staff. Emphasise the importance and credibility of innovation and development of appropriate local solutions

10.9 Programming Instruments

Recognising that approaches to technologies have to change, may be difficult but could be one of the most significant programming decisions to be taken. Once it becomes clear that a different range of technologies could be employed to tackle the sanitation challenge, those working at field level may find a huge number of options opening up to make incremental improvements. But before this can happen people need to feel that they will be supported, that innovation will be rewarded rather than penalized, and that they are free to work with a range of non-traditional partners to develop new approaches. Programmers can help to signal this shift by:

- Instituting consultative processes to review and update technical norms and standards;
- Earmarking funds for sanitation marketing;
- Making funds available for training technicians in new and non-traditional technological approaches;
- Finding ways of working with small scale independent providers, and possibly establishing funds which can support them as they build up and improve their businesses;
- Making funds available for research and field-based trials of new technologies;
- Licensing providers and products;
- Training regulators (where they exist) to help them oversee appropriate sanitation interventions; and
- Finding ways to publicise and promote new and innovative technologies and approaches.

10.10 Practical Examples from the Field: What Sort of Sanitation do we Want?

The adoption of the Blair VIP latrine as a standard technological choice in Zimbabwe in the 1980s had a profound impact on the ability of the government's sanitation programme to go to scale. While the approach does allow for local innovation, in the choice of materials for the superstructure for example, the simplicity of the standard design, and the fact that it was developed *in Zimbabwe* from an analysis of the *existing approaches and sanitation conditions*, have both been significant factors in its success. Once the design had been proven, an explicit effort was made to roll out the program by building the capacity of extension workers from the health department, as well as through technical training of engineers and promotion of the technology at the national and local level. The impact of the Zimbabwean sanitation programme is clear; at the peak of the programme in 1987 nearly 50,000 latrines were built.

Despite the success of the Zimbabwean approach, standardizing on a single technology may be problematic. In many countries, a range of technologies may be needed to reach all those households who are excluded. When the NGO VERC started to work intensively in Bangladeshi villages to identify sanitation and hygiene improvements, people themselves developed more than 20 variations of low-cost latrines, which were both affordable and appropriate to their situation. By contrast the adoption of the TPPF as a standard in India led to high costs and constrained the roll out of the national program, despite the fact that the TPPF latrine is technically quite satisfactory as a rural technology. The TPPF was adopted after detailed research and benefited from the support of UNICEF and other external support agencies active in water supply and sanitation. But in this case technical training of engineers, which focused on the TPPF left little room for local innovation.

The perils of defining "acceptable" sanitation technologies may be avoided if policies and programmes focus on *outcomes* rather than *inputs*. The Government of South Africa defines "access to sanitation" in terms of the adoption of hygienic behaviours including safe disposal of excreta. This leaves projects and localities with freedom to adopt approaches which are locally appropriate, and for the impact to be evaluated using simple indicators.

In many Latin American countries, levels of services for sanitation are relatively high and many urban households expect to connect to a networked sewerage system. In many congested urban slums, this may be the only option as there is no room for on-site disposal. But sewerage is expensive. In Brazil an alternative approach to conventional sewerage, known as condominial sewerage, was developed over twenty years ago, and is now adopted as standard in many cities and towns. Condominial approaches are cheaper to build and operate than conventional systems, but have not expanded into neighbouring Latin American countries as fast as could have been expected. In Bolivia, the intervention of an external support agency (Swedish International Development Cooperation Agency - SIDA) and support from the Water and Sanitation Program (WSP) enabled the government and the private operator in La-Paz El-Alto to experiment with the condominial approach. External support agencies in such a case can provide access to skills (technical or social development skills) and provide funds for activities which perhaps cannot initially be funded from the governments' own programme because the rules and approaches being piloted fall outside the existing government rules and standards.

In the arena of sanitation marketing, there is much less experience than in the area of direct technology development. Research from Africa shows that many small-scale-independent providers are relatively good at tailoring their services to the needs of "customers", but few countries have looked at ways to use the skills of the private sector, and marketing experts in particular, as part of a sanitation marketing effort. More work is needed to explore this potentially important area of hygiene improvement.

Case Study Box 8: What Sort of Sanitation do we Want?

Information about the adoption of Blair VIP latrines in Zimbabwe is taken from Robinson, A. (2002) *VIP Latrines in Zimbabwe: From Local Innovation to Global Sanitation Solution* Field Note 4 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi

The analysis of the impacts of India's use of the TPPF latrine is based on Kolsky, P., E Bauman, R Bhatia, J. Chilton, C. van Wijk (2000) *Learning from Experience: Evaluation of UNICEF"s Water and Environmental Sanitation Programme in India 1966-1998* Swedish International Development Cooperation Agency, Stockholm

Definitions of Access are discussed in Evans, B., J. Davis and Cross, P. (2003) *Water Supply and Sanitation in Africa: Defining Access* Paper presented at the SADC conference, Reaching the Millennium Development Goals, August 2003

South Africa's systematic reforms are described in Muller, M. (2002) *The National Water and Sanitation Programme in South Africa: Turning the 'Right to Water' into Reality* Field Note 7 in the Blue-Gold Series, Water and Sanitation Program – Africa Region, Nairobi and Elledge, M.F., Rosensweig, F. and Warner, D.B. with J. Austin and E.A. Perez (2002) *Guidelines for the Assessment of National Sanitation Policies* Environmental Health Project, Arlington VA p.4

The El Alto experience is well documented on a dedicated website at www.wsp.org For an introduction to the programme, and information on the costs and benefits of the approach see Foster, V. (n.d.) *Condominial Water and Sewerage Systems – Costs of Implementation of the Model* Water and Santitation Progam, Vice Ministry of Basic Services (Government of Bolivia), Swedish international Development Cooperation Agency.

A discussion of the role of small-scale-independent providers is in Collignon, B. and M. Vezina (2000) *Independent Water and Sanitation Providers in African Cities: Full Report of a Ten-Country Study* WSP

Notes for Chapter 10

i In urban situations, the cost of providing what is sometimes the only 'allowable' technology – conventional sewerage – also swamps the provider (usually the utility) who may respond by doing nothing.

ii This option will have high operating costs if pumping is required. Non-conventional approaches to sewerage (variations on the "small bore" or "shallow" sewer) may reduce operating costs.

iii cited in Cairncross, A.M. Sanitation and Water Supply: Practical Lessons from the Decade. World Bank Water and Sanitation Discussion Paper Number 9. World Bank: Washington, D.C.

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