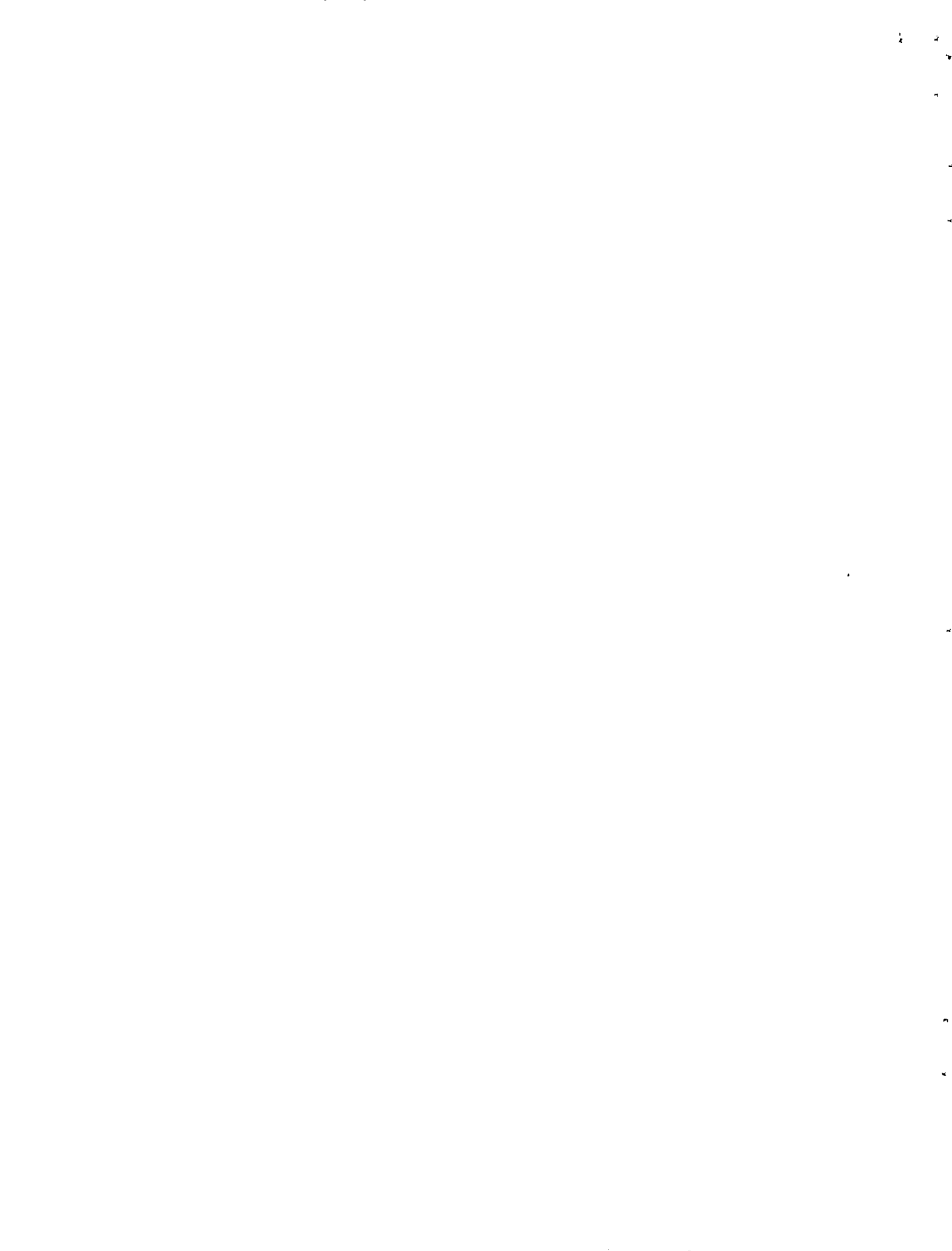
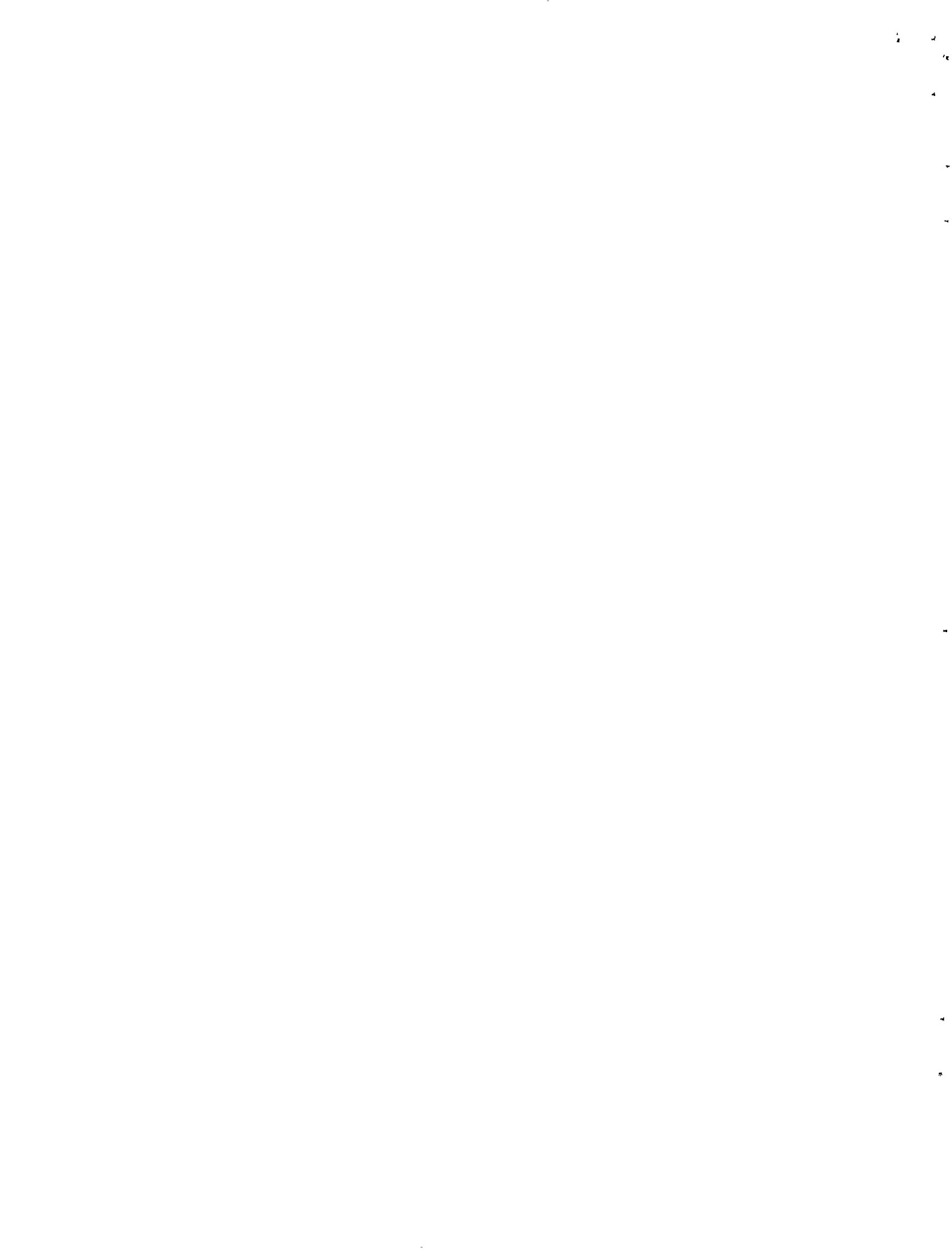


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Contents

I	Introduction	1
II	Project Matrix	2
III	Sectoral Background	3
IV	Project Description	6
V	Project Budget	9
VI	Implementation	10
VII	Sustainability	15
VIII	Assumptions	17





I Introduction

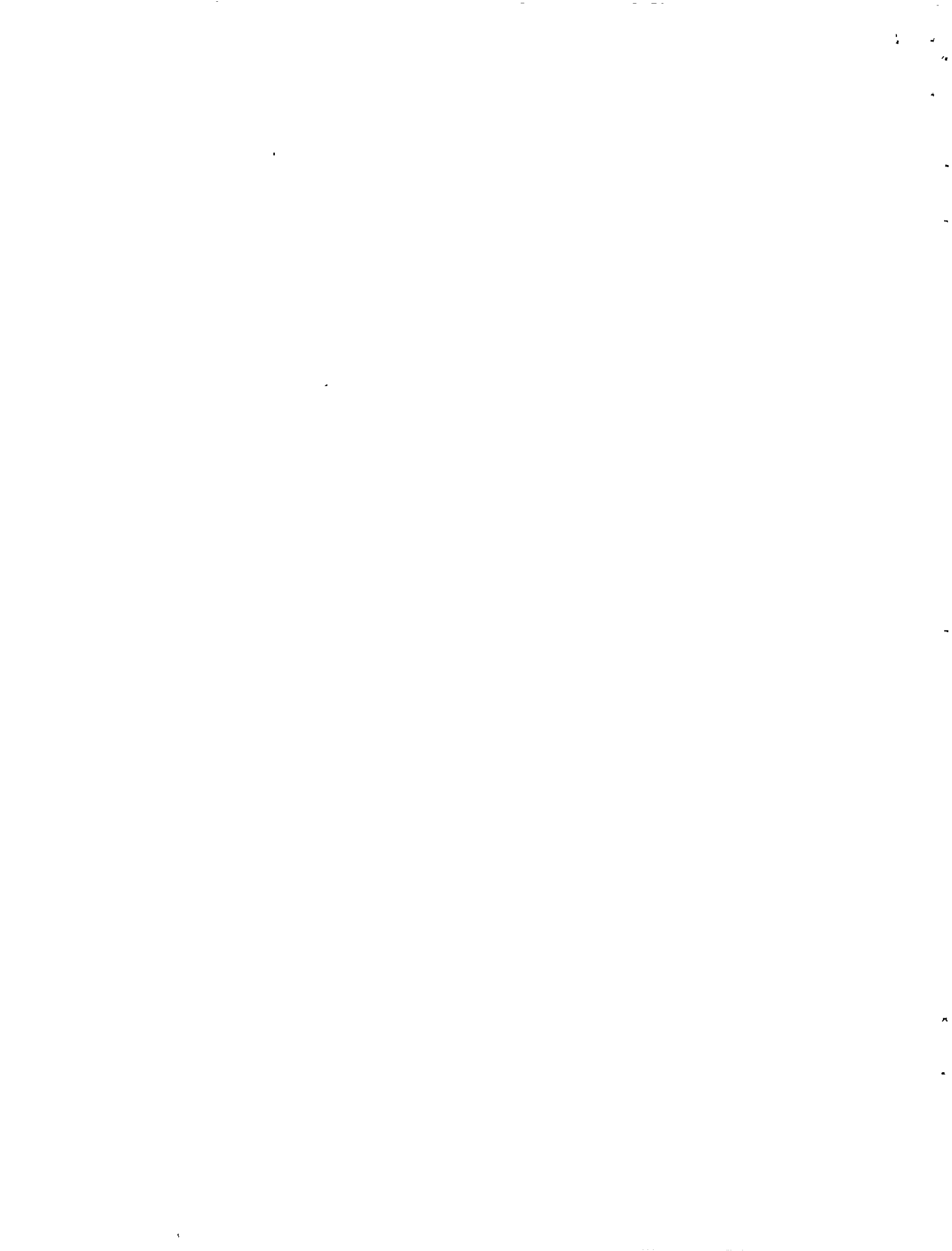
This discussion paper outlines UNICEF/Government of Bangladesh's School Sanitation Project which is now ready for scaling up.

Access to water and sanitation facilities is every child's basic right. This project is crucial in helping to fulfill this right, and meet this need, as it not only deals with the issue of access to water and sanitation facilities, but deliberately sets out to create a new mind frame and indeed environment that will support and sustain improved hygiene practices in individuals and together as a community. Facilitating the construction and maintenance of water and sanitation facilities in primary schools, experiential learning and participation, community mobilization, and the development of primary schools as a resource center for supporting improved sanitation and hygiene practices are the activities at the center of this project.

As part of the project's earlier activities, a series of implementation innovations have been tried out. Outputs and processes have been carefully and thoroughly monitored and the emerging trends and results have had a substantial impact on the emerging design of the School Sanitation Project.

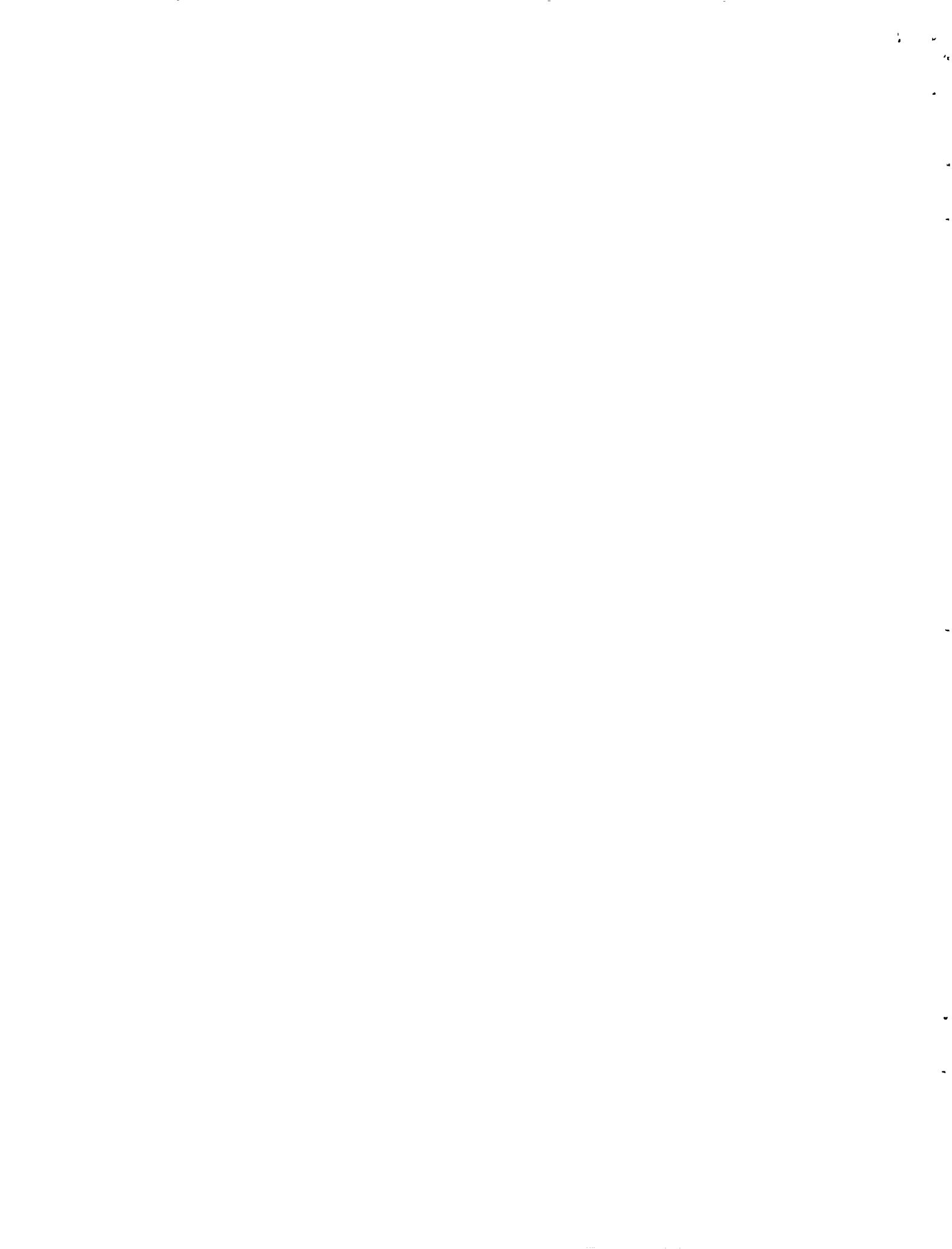
It is envisaged that this paper will serve as a basis for discussions and will, in some part, form the basis of an appraisable funding proposal that will subsequently be produced for consideration, within an agreed time frame.

D I S C U S S I O N P A P E R



II PROJECT MATRIX - SCHOOL SANITATION AND SAFE LEARNING ENVIRONMENT PROGRAMME

	Narrative Summary	Performance Indicators	Monitoring and Supervision	Assumptions
Development Goals	<ul style="list-style-type: none"> ● Improve environment and quality of life, especially of children and women, by reducing risks of diarrhoeal incidences and parasitic worm infestations ● Enable every household to have access to safe water and sanitation as well as to decide on hygienic behaviors, 	<ul style="list-style-type: none"> ● Reduction in diarrhoea ● Reduction in malnutrition ● Reduction in worm infestation ● Reduction of women's time in water collection ● Universal access and safe water use (drinking and domestic purpose) ● Use of sanitary latrines by all ● Safe excreta disposal (including children's faeces) ● Proper hand washing by all ● Clean nails 	<ul style="list-style-type: none"> ● Annual multiple indicator cluster survey (MICS) ● Sample survey (before and after the project) ● MICS ● Study of knowledge, attitude and practice (KAP) before and after the project 	<ul style="list-style-type: none"> ● Strong Political will and intersectoral coordination among government agencies towards policy making, planning and implementation ● Availability of affordable technology and means within the reach of the poorest and the most vulnerable
Program Goal	<ul style="list-style-type: none"> ● Make the primary school a resource center for developing hygienic behaviors among children and teachers and promoting such behaviors in their own households and the community 	<ul style="list-style-type: none"> ● Improved Curriculum contents ● Extent and quality of students' and teachers' involvement in school projects and community activities 	<ul style="list-style-type: none"> ● Regular monitoring by DPE ● Sample Survey ● Self monitoring by students and teachers 	<ul style="list-style-type: none"> ● School teachers and SMC members utilize the potentials of the school and their own positions in society towards behavioral development and change
Purposes	<ul style="list-style-type: none"> ● Meet basic requirements of water and sanitation facilities (including privacy for girl students and women teachers) in all primary schools ● Create awareness among school children, teachers and SMC members about health/nutrition benefits due to clean environment, safe water use, and hygienic behaviors ● Enable them to take personal action and motivate household and other community members 	<ul style="list-style-type: none"> ● Use/maintenance of drinking water facilities and latrines for girls & boys ● Increased attendance and completion, especially among girl students ● Change in knowledge, attitude and practice among students, teachers and SMC members ● Change in knowledge, attitude and practice among parents and other community members due to students and teachers 	<ul style="list-style-type: none"> ● Regular Monitoring by DPHE ● Quarterly enrollment/ attendance report by DPE ● Sample survey ● KAP study before and after project ● Action research: selected areas ● Sample survey ● School/ community surveillance by students and teachers ● Action research in selected areas ● Regular monitoring by and DPE ● KAP study before and after project 	<ul style="list-style-type: none"> ● Teachers and SMC members mobilize locally available resources and use external contributions responsibly ● Teachers and SMC members utilize experiential learning methodology for active participation of students and behavioral development ● Teachers and SMC members are innovative in directing children to experiment in the local context with available resources
Outputs	<ul style="list-style-type: none"> ● 26,000 watsan facilities constructed over 5 years through SMCs in schools that don't have them ● Participation of students and teachers in school projects on hygiene, sanitation and safe water ● Household/ community mobilization by students, teachers and SMC for clean environment/ healthy behaviors 	<ul style="list-style-type: none"> ● Availability of watsan facilities in all schools ● Enthusiasm for learning among students and teachers ● Behavioural change among students ● Increase in access to water and sanitation facilities ● Adoption of hygienic practices 	<ul style="list-style-type: none"> ● Regular monitoring by DPHE ● DPE annual school survey ● Sample survey ● Regular monitoring by DPE ● Self-monitoring by students ● KAP study before and after project ● MICS ● Sample survey ● KAP Study (before and after project) 	<ul style="list-style-type: none"> ● Effective alliance of all stakeholders ● Provision in school for innovations ● TEOs/AEOs mobilize school projects in all schools ● Community members have access to necessary means and ability for adopting behavioral change
Inputs	<ul style="list-style-type: none"> ● Guidance and motivation by DPHE, PMED, DHS as well as political and social/religious leaders at all levels ● Materials and other resources for 26,000 watsan facilities <ul style="list-style-type: none"> - From outside hand pumps, PVC materials, cement - Locally procured sanitary latrines, iron rods, sand, khoa, brick, labour by masons/mistris, unskilled labour ● Materials for 57,600 schools <ul style="list-style-type: none"> - Deworming tablets - Nail clippers ● Information, Education and Communication materials for 57,600 schools <ul style="list-style-type: none"> - Training packages - Resource materials for school projects ● Trainings/orientations for human resources development <ul style="list-style-type: none"> - District level officials - Thana level officials - Contractors/masons - Teachers/SMC/PTA/UP members 	<ul style="list-style-type: none"> ● Guidelines for Implementation ● Construction as per design ● Deworming schedule, no of students ● Use pattern of nail clippers ● Use pattern of IEC materials ● Regular Schedule and sufficient number of trainings 	<ul style="list-style-type: none"> ● Sample survey to assess use and effects of guidelines ● Monitoring of school plans ● Supply/procurement/distribution records ● School records kept by SMCs ● Monitoring by DPHE/DPE ● Sample survey of delivery mechanisms, installations, and end use ● Self monitoring by students/teachers ● Reports by Civil Surgeons ● School records ● Sample monitoring of materials and their influences ● School records ● Distribution of training package and resource materials ● Sample survey of skills and motivation ● Sample survey of training/orientations, types of participants, effects 	<ul style="list-style-type: none"> ● Proper coordination among concerned agencies and planning at school, community union level ● Required amounts of quality materials are delivered in time through private sector or public sector initiatives ● Satisfactory services for installation/repair ● Deworming and nail clipping are used as entry points for students' behavioural development ● Materials produced are inspiring and innovative ● Timeliness, synchronization and mutual reinforcement of trainings: (technical aspects, DPHE; educational aspects, DPE; organizational/motivational aspects, NGOs) ● Trained persons practice what they have learned



III Sectoral Background

Situation Analysis

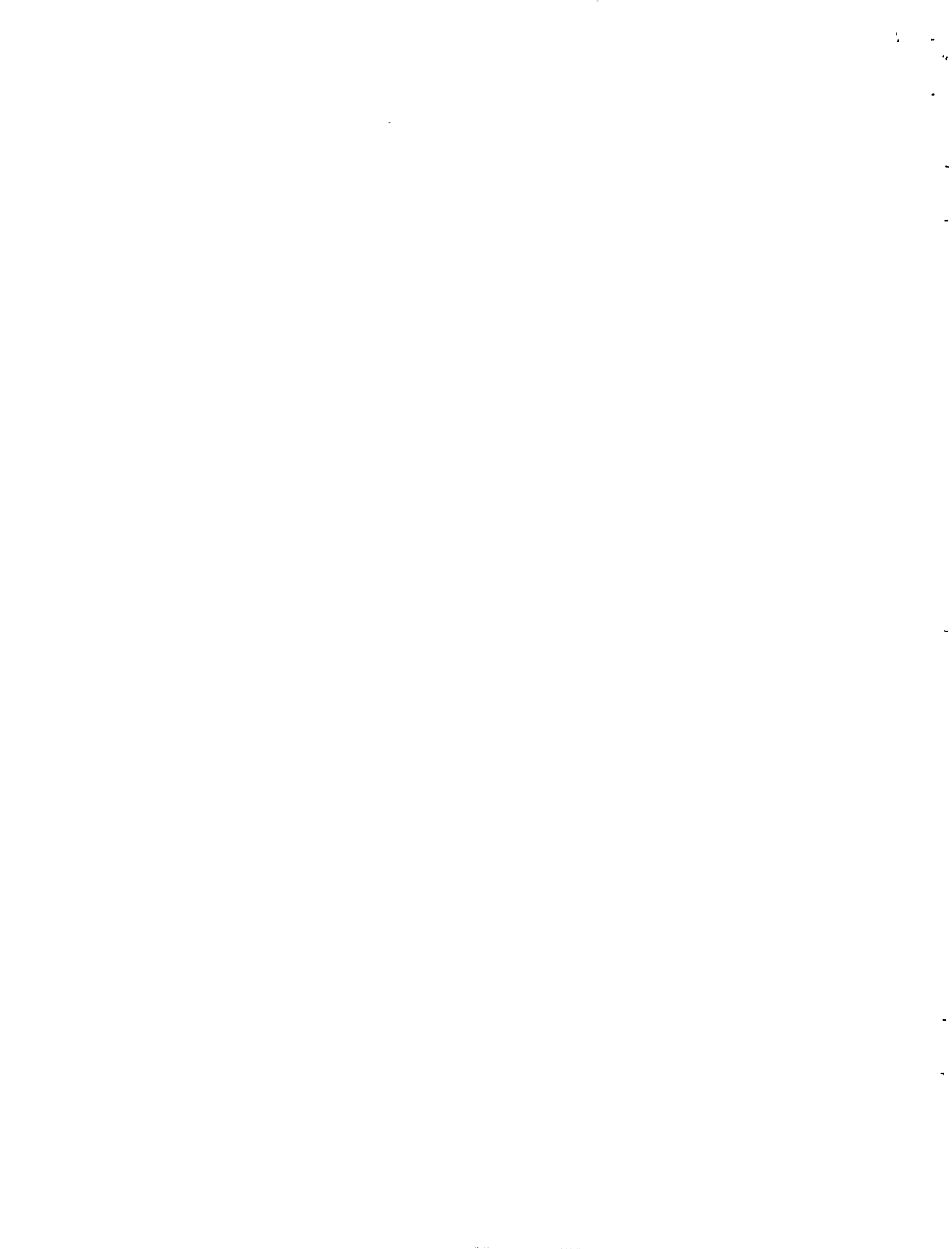
Poor environmental sanitation and hygiene practices, combined with limited use of safe water contribute to high diarrhoeal incidence and parasitic infestation, particularly among children. On average, each child under five years of age has more than 3 diarrhoeal episodes per year, leading to 260,000 deaths - a third of all child deaths - and causing child growth interruptions which in turn results in malnutrition. The prevalence of parasitic infestations in children can be over 85%, which contributes massively to the nutritional problems facing the children of Bangladesh.

Sustained efforts have resulted in high water supply coverage throughout Bangladesh. Just a generation ago people drank from open ponds and streams. Today nearly everyone (97%) has access to, and drinks from, a protected tubewell (BBS 1996). This behavioral change was promoted through the widespread installation of the handpump tubewell. However despite this high coverage, there has been surprisingly little reduction in water-borne and hygiene-related sickness.

but no change?

Poor human waste disposal is even more influential in spreading disease. Here too there has been significant success in recent years with access to sanitary latrines in rural areas increasing significantly from just 21% in 1990 to 44% in 1995 (BBS 1995). Ninety per cent of families with a sanitary latrine use it regularly (Mitra 1992). However over two-thirds of the rural population still pollute the environment through the use of non-sanitary latrines or open defecation. Furthermore it is estimated that only about 27% of the rural population wash their hands using soap and water after defecation (BBS 1996). There is a low understanding of the relationship between good sanitation, hygiene and water, and health, although most people are aware that drinking unsafe water can cause diarrhoea.

DISCUSSION PAPER 3



Source

Nearly half of all rural primary schools do not have basic sanitation and water facilities. This is not only a missed opportunity to promote good sanitation and hygiene practices amongst school children, their parents and the wider community; it is also an important factor in discouraging girls from attending school.

The "hardware" revolution - the provision of safe tubewell water and sanitary latrines - is now well established. Bringing about a "software" revolution - changing personal hygiene habits - is now the major environmental and health challenge in Bangladesh

Current Programmes

UNICEF has two major Sanitation, Hygiene and Water Supply programmes in Bangladesh, one focusing on rural areas and the other on urban slums and fringe areas. As part of the rural programme, UNICEF initiated the School Sanitation Project in 1992.

At the start of this project, emphasis was placed on the construction of water and sanitation facilities with the belief that these facilities constitute a basic requirement in the schools. Today, construction activities are being supplemented by a more deliberate focus on behavioral development among school children, so that personal hygiene, sanitation and safe water use become integral to their life style. Experiential learning is being promoted by encouraging their active participation in extra-curricular activities in partnership with teachers, parents and members of the School Management Committee (SMC).

This evolution mirrors the changing emphasis in the UNICEF-assisted programme on Water and Environmental Sanitation. Bangladesh is already renowned worldwide for the spectacular success in having achieved 97% national coverage for access to a safe water supply within 150m of the household. The last few years have also seen a sharp rise in sanitary latrine coverage. However, the challenge remains in so far as the daily deposit of 20,000 MT of fresh human excreta still contributes to a heavy pathogen load on public land and all water sources through open defecation or hanging latrines.

Main issues & Govt. Strategy

With the Prime Minister recently stating that all primary schools must have water supply and separate lavatories for boys and girls, the commitment of the Government to the outcomes of this project is clear. This commitment also finds its expression in the Government's support for the achievement of the Year 2000 goals for children, its ratification of the Convention on the Rights of the Child and its signing of the joint UNICEF/Government Master of Plan of Operations for the current Country Programme (1996 - 2000).

Rationale for UNICEF's involvement

The intersectoral nature of this project provides strong grounds for UNICEF's involvement. UNICEF continues to hold programmatic leadership in the provision of safe water supplies and sanitary latrines. The School Sanitation project is a major component in bringing about desired behavioral change throughout the community in order to increase the provision of, and correct use of safe water and sanitation facilities and bring about improved personal hygiene practices.

As a major component of the evolving Safe Learning Environment initiative, this is enhancing the quality of schools and the education available to students by introducing experiential and project-based learning and teaching practices. It is also a key ingredient in increasing the enrolment and retention of girls in schools and therefore crucial in enabling Bangladesh to reach its ambitious goals for the education of its children.



IV Project Description

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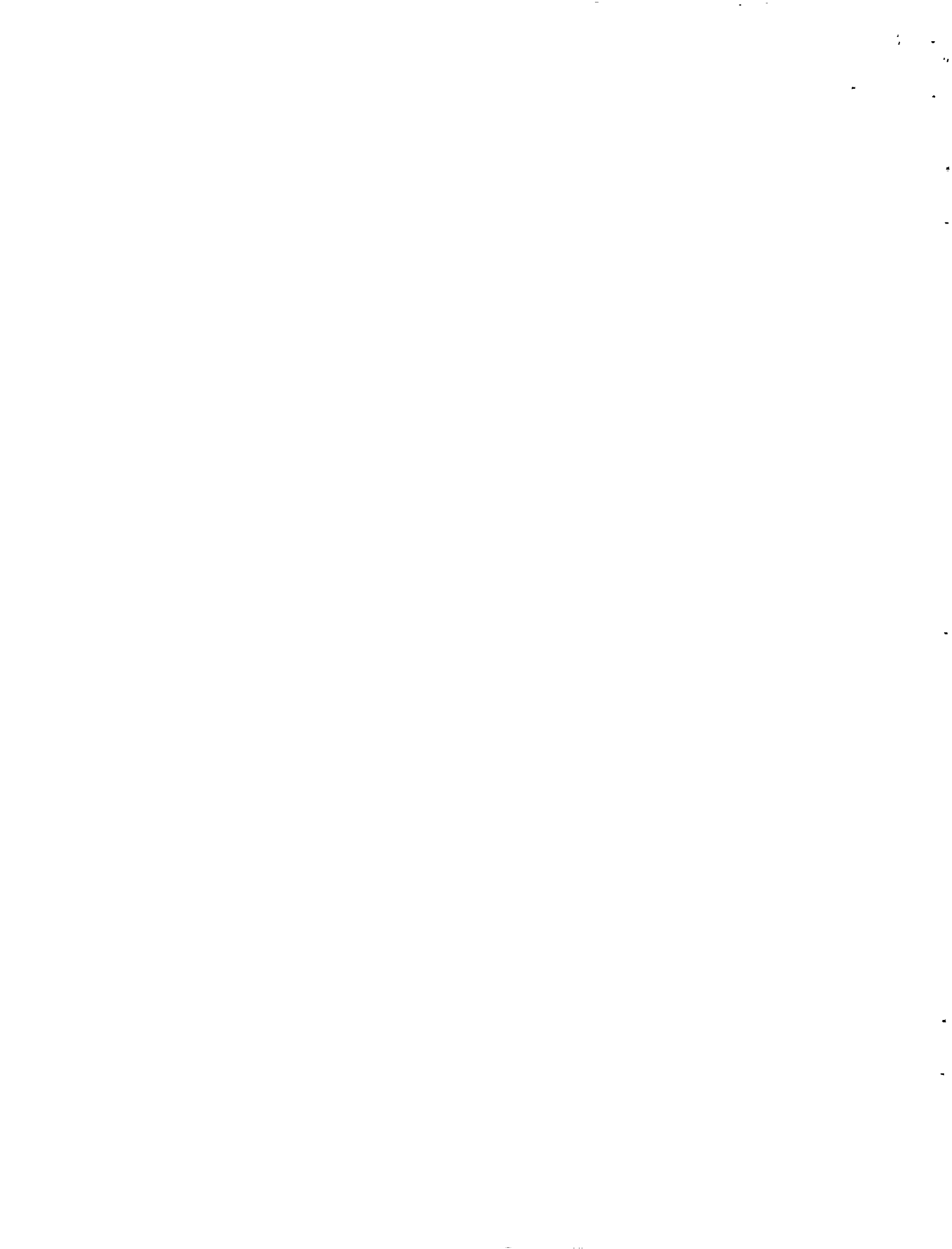
Conceptual basis

It is now clearly recognized that it is not the presence of a pump or a latrine alone which makes a critical difference in improving people's health. What is vitally important is people's understanding of these amenities' health-improving virtues, and whether and how they use them. Hygienic behavior, including hand washing, is the key.

The current emphasis is hence on (i) creating a "mind frame" which leads to a clean environment and healthy behaviors and (ii) on bringing about greater convergence with such efforts as oral rehydration therapy, diarrhoeal case management, breast-feeding, immunizations, and nutritional supplements. In this respect, attention is being placed on the potentials of primary school students themselves to learn appropriate behavior and through them to motivate parents and other community members towards these desirable behavioral changes.

Objectives/targets/Year 2000 goals

- To increase sanitary latrine coverage from the current 44% in rural Bangladesh to 80% by the Year 2000
- To improve personal hygiene practices, particularly increasing the level of hand washing with soap after defecation from the current 27% to 80%
- To make primary school a resource centre for developing hygienic behaviours among students, teachers and School Management Committee (SMC) members as well as parents and other community members.



Geographic Scope

This project will cover all schools in all 64 districts of Bangladesh in a phased manner, that will mirror the implementation of a number of UNICEF programmes through the ADA strategy. Programming work for the School Sanitation Project has already been undertaken in more than 120 thanas in 51 districts.

Gender perspective

An assessment done in 1994 shows that the attendance of girls in Class III to V in the sample schools where water and sanitation facilities had been installed rose on average by 11%. This was due in part to the active social mobilization campaign for compulsory primary education for all. But what is remarkable is that the girl respondents indicated that the privacy provided by separate latrines for girls was an important contributory factor. This alone provides a strong impetus for accelerating the School Sanitation Programme.

Rights perspective

This project has a direct impact on meeting a number of universally accepted "rights" that children have, as detailed in the Convention on the Rights of the Child. These relate particularly to rights to access quality education, to attain an adequate standard of living and the highest possible standards of health care (Articles 24,27,28 and 29 of the Convention on the Rights of the Child)

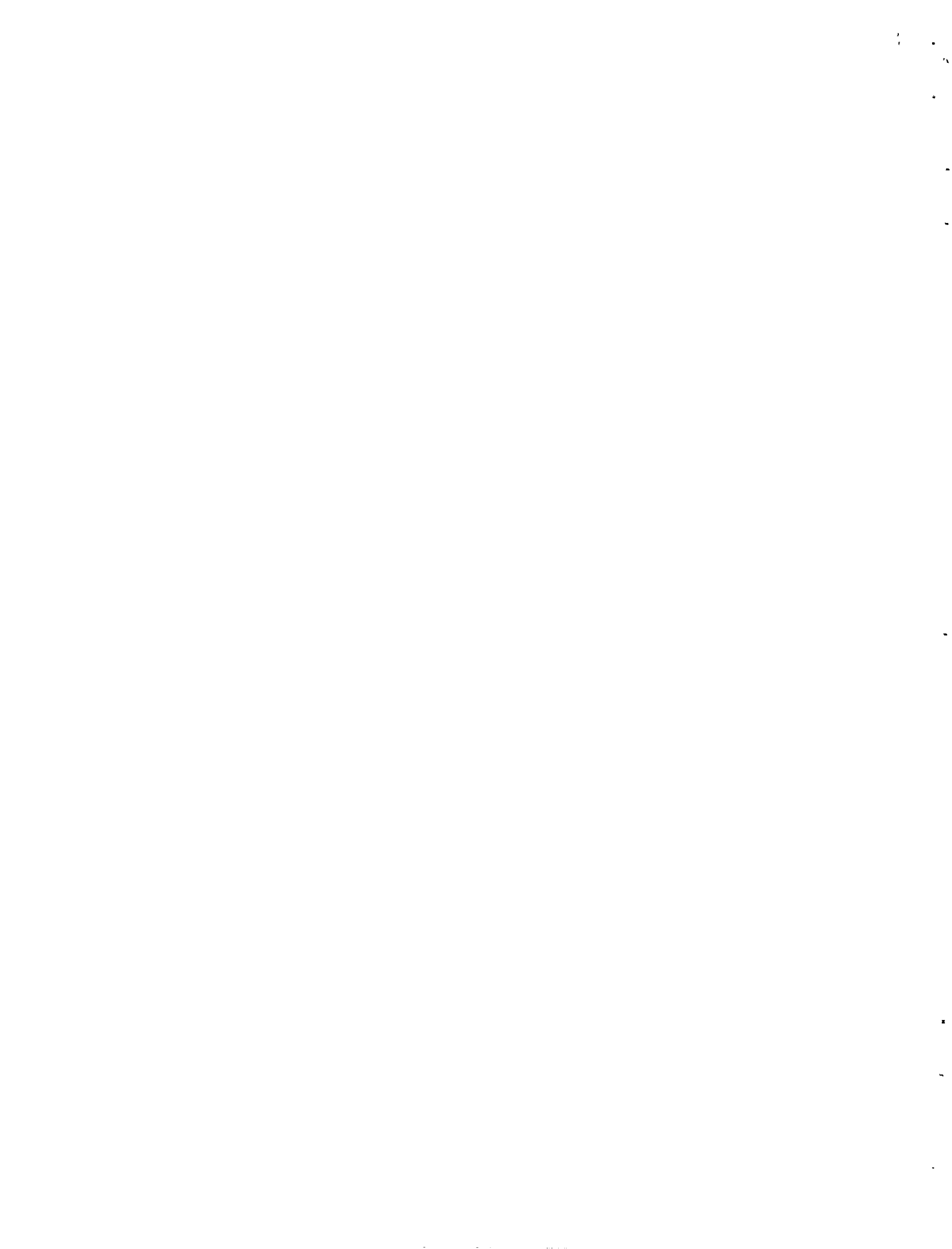
Environmental perspective

The environmental impact of this project is explicit and significant. The immediate impact will be a reduction in the pathogen load within the school or learning environment. Through programmed behavioral change, first in students, teachers and then parents and eventually the wider community there will be an increase in demand for sanitary latrine hardware, a decrease in the pathogen load within the environment and a decrease in hygiene related disease incidence and malnutrition.

Demographic perspective

In Bangladesh demographic growth remains problem number one. This project will have a positive impact on demographic growth in two ways. The relationship between higher levels of education for girls and a reduction in the number of children they may subsequently give birth to is well documented and understood. The positive effect on girls enrolment and attendance in schools from the provision of secure and sanitary latrines has been clearly shown in the indicative programming phase of this project.

Equally well documented and understood is the link between child survival and a lowering birth rate. For example it is estimated that if the goals for under five mortality were to be achieved, Bangladesh's total population for the year 2000 would be 127 million, eight million less than the UN's own low projection. Improvements in hygiene practices and a reduced pathogen load in the environment, both outcomes of this project, will contribute directly to a decrease in childhood disease incidence and therefore have a positive impact on child mortality rates.



V Project Budget

Indicative Budget

This budget is based on cost incurred during the programming of the school water and sanitation facilities in 5 districts in different parts of the country where the Accelerated District Approach (ADA) will be pursued intensively in 1997. The characteristics in ADA districts are as follows.

Average no of schools per Thana in ADA districts	160 on average
Average population per Thana in ADA districts	260,000 on average
Total number of primary schools in Bangladesh	57,600
Average percentage of schools without WATSAN facilities	
Before UNICEF intervention in ADA districts	50%
National average	45%
Average unit cost of watsan facility	
Shallow tubewells (including software cost of \$220)	\$1,060
Tara handpumps (including software cost of \$220)	\$1,200
Deep tubewells (including software cost of \$220)	\$1,720
Percentage where	
Shallow tubewells are applicable	62%
Deep tubewells are applicable	11%
Tara handpumps are applicable	27%
Total no of schools where watsan facilities required	26,000
Shallow tubewells	16,000
Deep tubewells	3,000
Tara handpumps	7,000
Estimated costs	
Total	\$30 million
Shallow tubewells	\$17 million
Deep tubewells	\$ 5 million
Tara handpumps	\$ 8 million
Average cost per district	\$470,000



VI Implementation

Institutional Arrangement

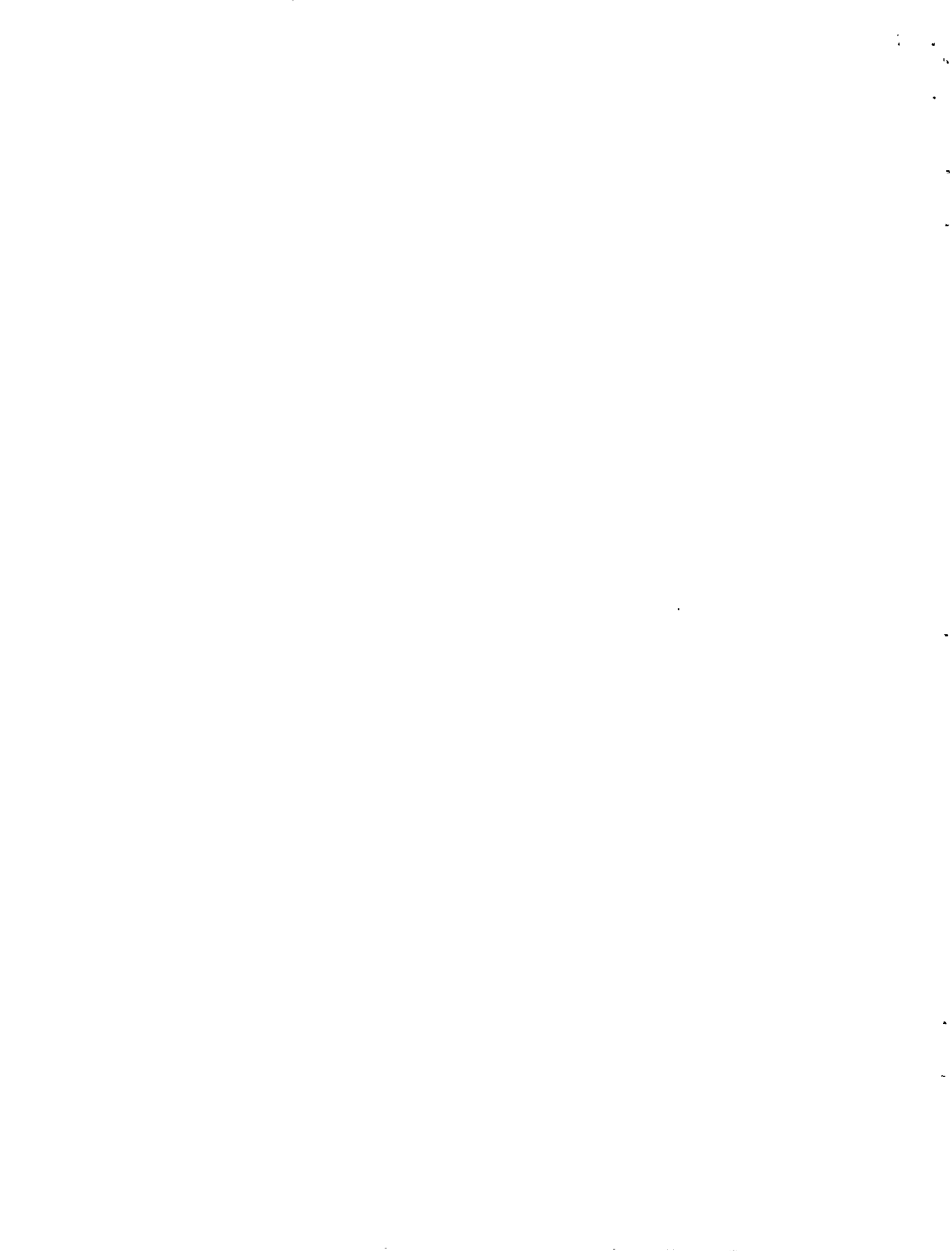
See Figure on the next page for details on the institutional arrangement that is currently being pursued. This provides the basis for the scaling up proposed here.

Distribution of deworming tablets and nail clippers

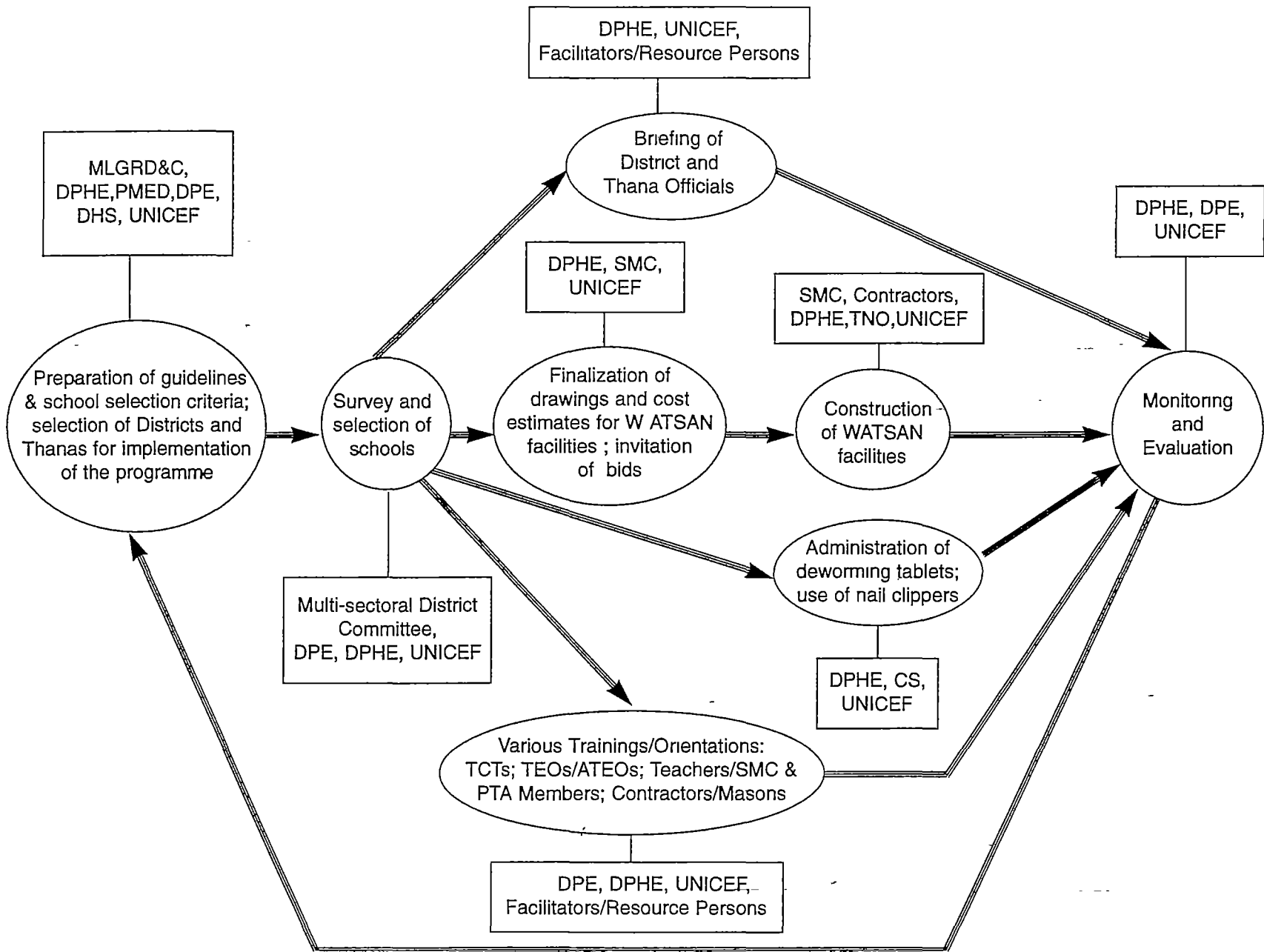
These act as an entry point and educational tool to promote improved sanitation and hygiene among the students as well as their siblings and parents, thus reinforcing behavioral change to be brought about by the construction of Water and Sanitation facilities.

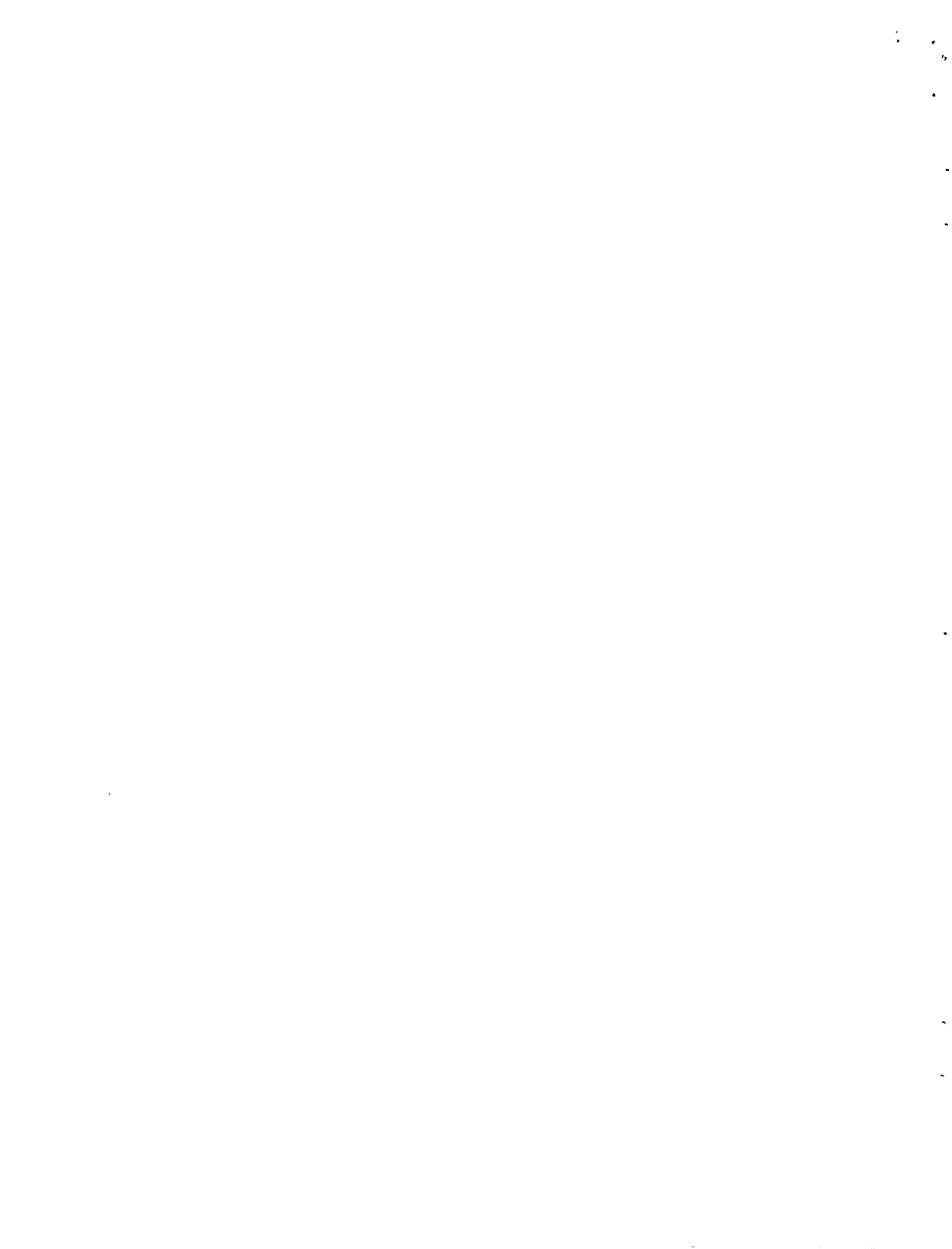
Project Based Approach to Safe Learning Environments

Teachers and students in each school will identify a school based project for learning about hygienic behaviour, safe disposal of waste, contamination and preservation of environment, and disease prevention. Children will identify an entry point for start up of each project and then branch out to other related areas so that they understand in a practical project how safe water, waste disposal, hygienic behaviour disease prevention are all related to each other. Several entry points have been identified and are being used. These include the introduction of nail clippers, deworming tablets, water pumps in the school and improved latrines. This new approach will be more meaningful for children, and engage the children's multiple intelligences in a practical and interesting set of activities.



The Process and Concerned Agencies/Actors in the School Sanitation Programme





Each teacher will be given an orientation on the new project based methods, and provided with a resource kit which includes a description of the project, project ideas, information on facts for life, guidelines on project development, and ideas on entry point and relationship maps to other related activities.

School as a resource centre and agent for change in the community

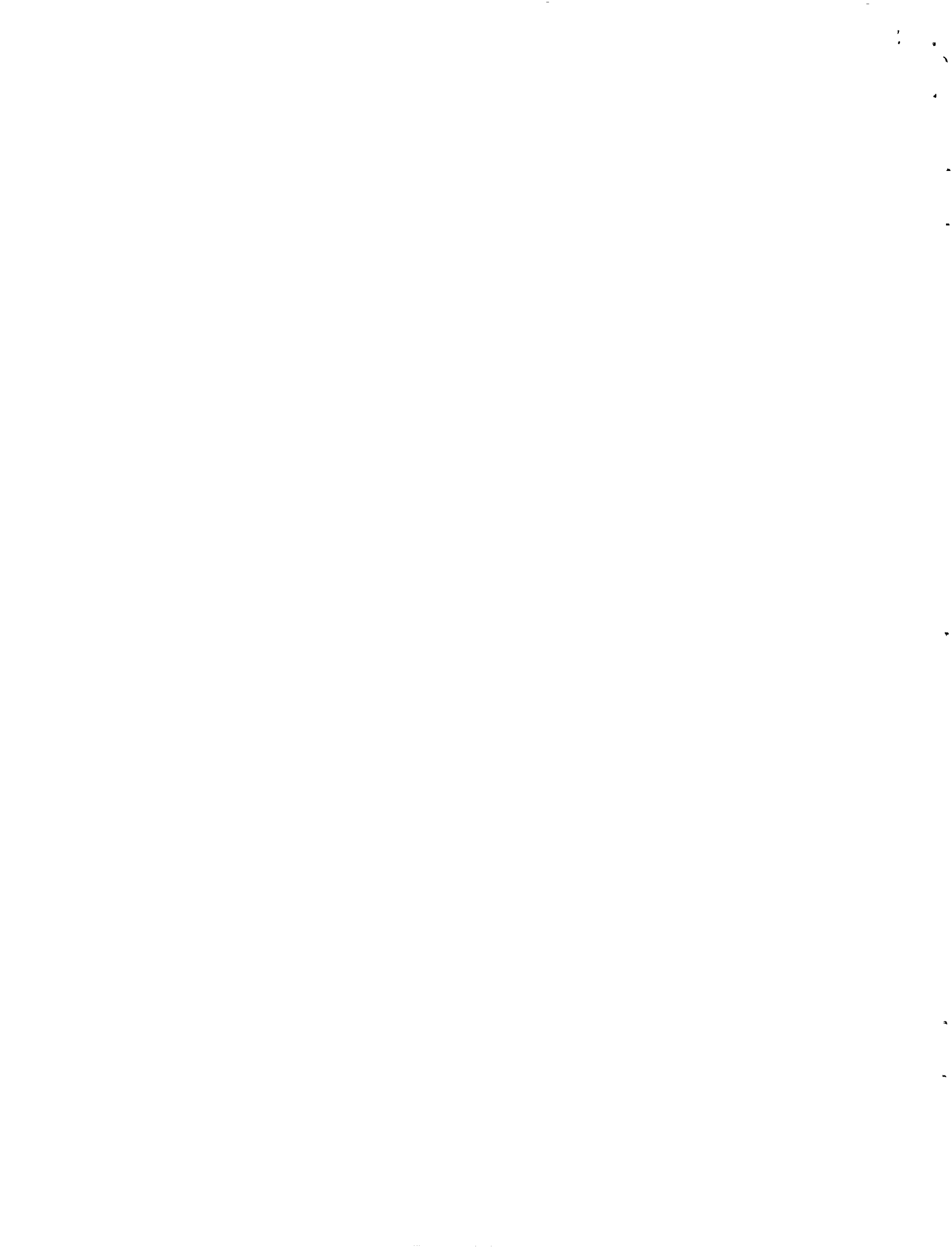
The projects will initiate community extension activities to involve families and the community in the project activities so that the children and their families reinforce each other in the new skills learned through the project and the community is supportive of children to address some of the wider issues which only the community at large could meaningfully tackle. The school will be a setting in which many of the social services converge. It will become a resource centre for the community where children and adults will interact to learn from each other.

Financing plan

So far this project has been funded by UNICEF through its own General Resources. Scaling up of this project will be funded through Supplementary Funds from external donors.

Procurement and Disbursement Mechanisms

At the moment UNICEF procures the supplies for this programme and these are dispersed through DPHE stores. The School Management Committees access these supplies from DPHE's Thana level stores. However UNICEF believes that there is much merit in experimenting with developing private sector capacity to provide supplies for this programme. Cost and quality levels could be controlled through a bidding process and quality could be monitored by an independent agency contracted by UNICEF. Another issue that is being looked into is how to ensure consumer protection and operationalize an accountable funding mechanism through the School Management Committees on a large scale.



Timetable

The implementation of the School Sanitation Project will be phased over five years (1997 - 2001), by which time all schools in all 64 districts of the country will be participating. This implementation schedule mirrors that of UNICEF's Accelerated District Approach to programme implementation.

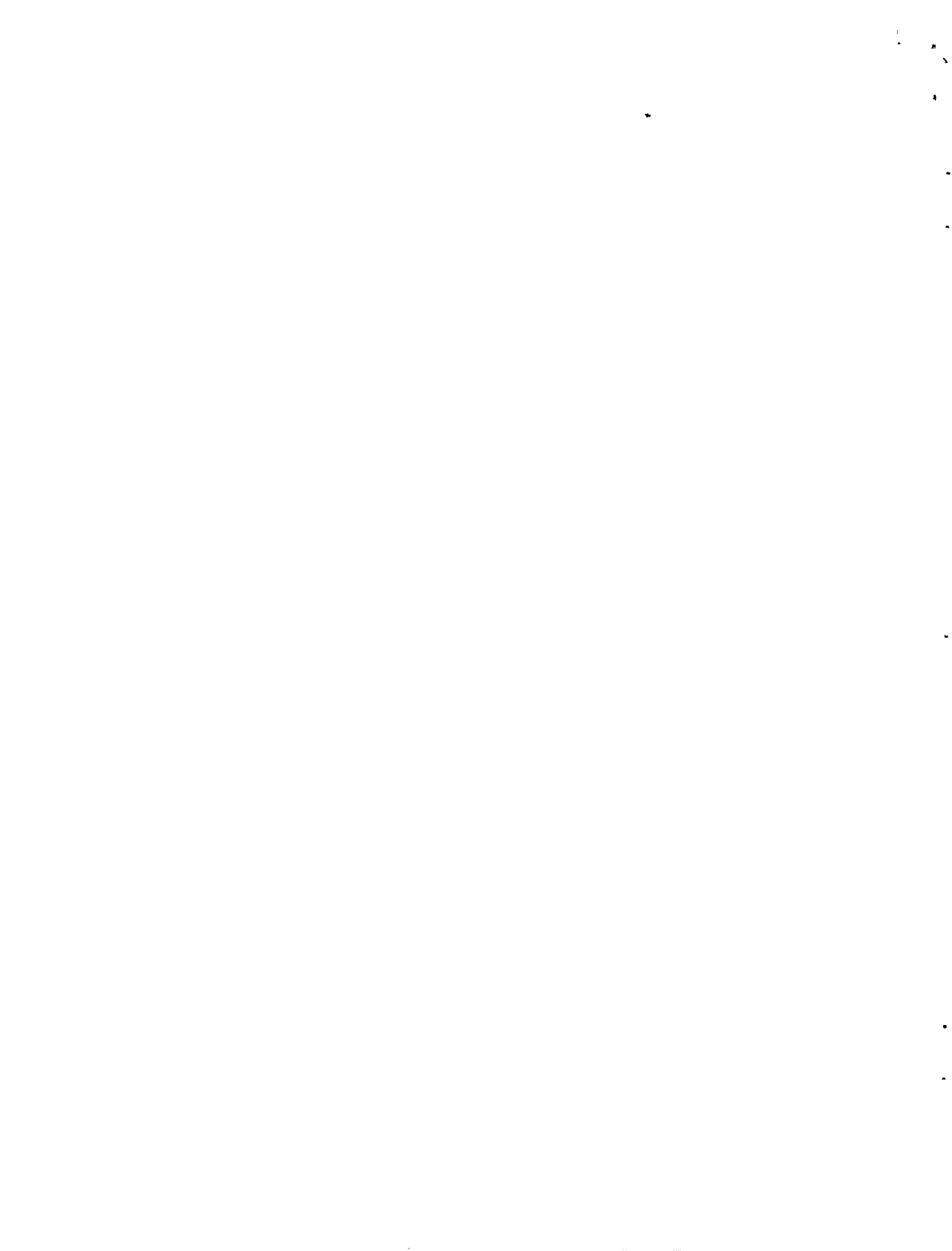
1997	5 Districts
1998	15 Districts
1999	15 Districts
2000	15 Districts
2001	14 Districts

Management of the Project

UNICEF: From within UNICEF this project will be managed by a team who will be responsible for coordination, monitoring and follow up. Team members will have expertise in Water and Environmental Sanitation, Education, Child Rights, Child Participation, Procurement and Supply. This team will be supported by Project Funds and will utilize UNICEF's ADA staff structure and field presence for coordination, monitoring and follow up.

DPHE: Four activities will be performed by DPHE. (i) They will undertake technical training at all levels; and (ii) they will undertake orientation activities at the district level; (iii) they will act as the channel through which disbursements will be made to the SMCs in cooperation with the Thana Nirbahi Officer; and (iv) regular monitoring, especially of the construction of water and sanitation facilities. For these the capacity already exists within DPHE. However for (iv) monitoring implementation and ensuring quality UNICEF will need to facilitate capacity building within for DPHE to be effective.

DPE: There are three major activities which will involve DPE (I)training teachers, (ii) distributing training materials and resource packages, (ii) monitoring school level activities through Thana Education Officers and Assistant Thana Education Officers. The capacity already exist within DPE to perform all these activities.



Monitoring indicators

Activities and outputs at all levels of this project will be monitored appropriately. Methods will include the already established annual Multiple Indicator Cluster Survey, Knowledge Attitude and Practice Studies, Monitoring by Thana Education Officers, the Union Watsan Committee chairperson and UNICEF staff. Please refer to the Project Matrix at the beginning of this paper for a more detailed breakdown of the various indicators to be used and methods of monitoring these.

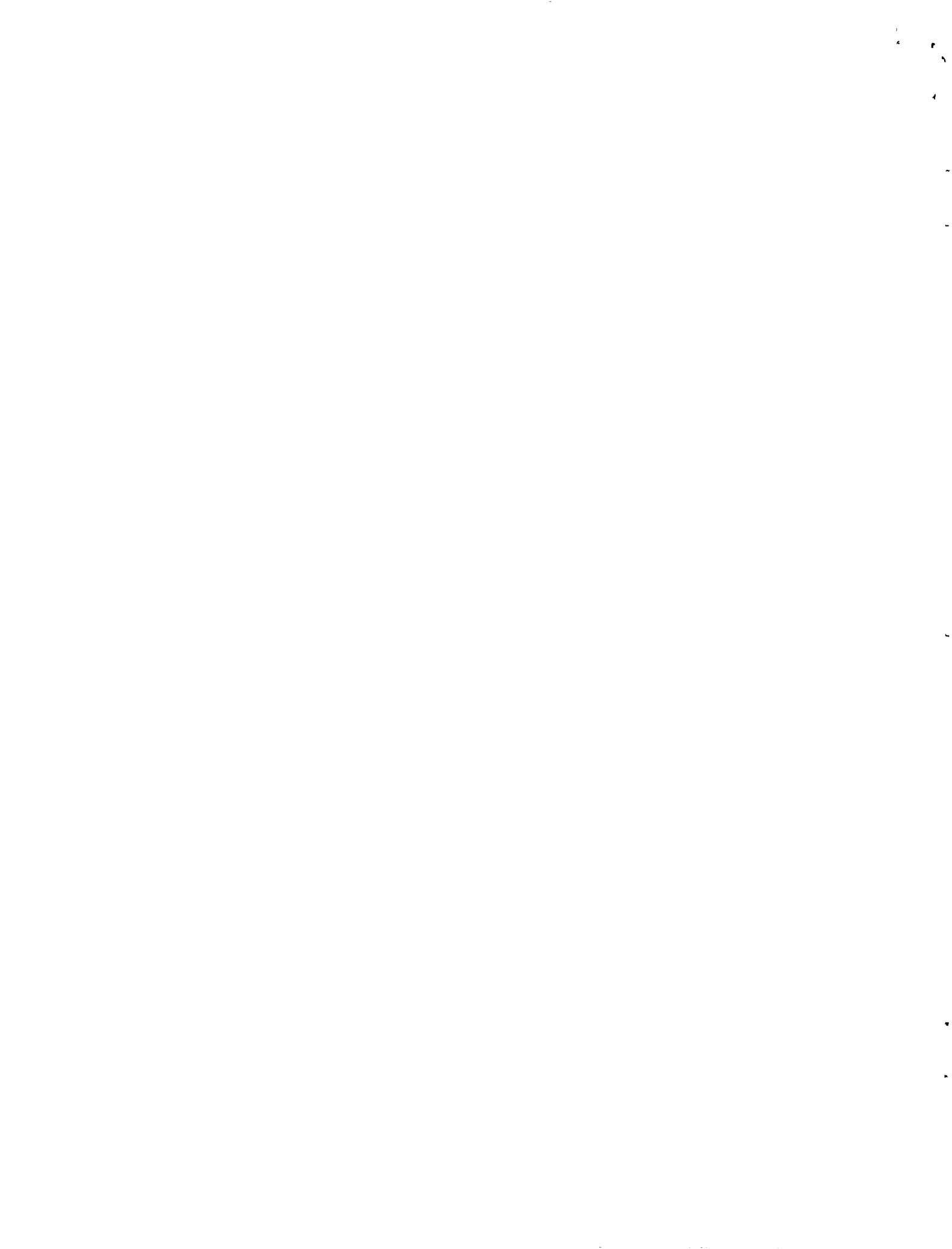
Evaluations/ Reviews

The School Sanitation Project will be subject to an annual internal UNICEF peer review, facilitated by the Chief of WES and Chief of Education. This will involve UNICEF staff, consultants and Government counterparts. This process will feed into the "annual" reporting process to donors.

It is also proposed that there be a bi-annual project review by donors. This would be facilitated by the Chief of WES.

Agreements with Govt/ other implementors

As this project is noted in the UNICEF/ Government of Bangladesh Master Plan of Operations, it already has the support of Government and therefore the Government implementing agencies, including DPHE.



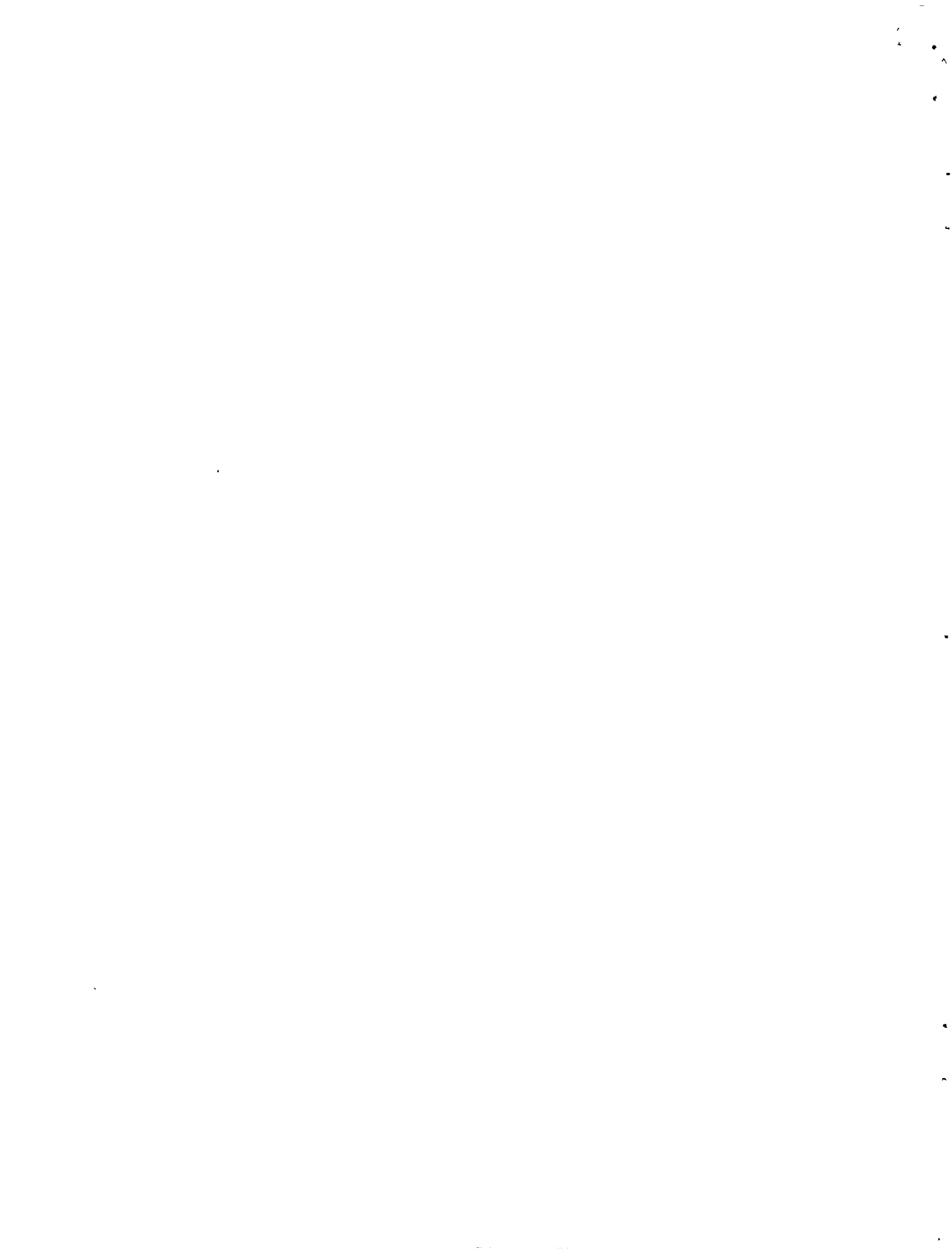
VII Sustainability

Appropriate technology

The technology used within this project is already being widely used throughout Bangladesh, indeed most of the handpump technology was developed within this country. Therefore the infrastructure needed to maintain and service these pumps is already in place at the village level. Water seal latrines will be used in all installations, which are also manufactured within Bangladesh. The maintenance of these will be the subject of training and participatory project work within the school environment.

Democratic participation and decentralization

In 1995, as part of the indicative programming phase of this project, an action-research study in Moulavibazar was carried out in 5 schools to engage SMCs in management and implementation of the School Sanitation Programme within their own schools. Several strong reasons were found that indicated the performance by SMCs to be far superior to that by contractors hired by DPHE. The time taken by SMCs for completion of construction was, for example, 28 days as opposed to 7-10 months by contractors. The quality of materials used and the overall construction by SMCs were proven to be cost-effective and as per specifications and plan-design. Contractors hired by DPHE generally quoted costs that were 80% higher. But most importantly, the initiative by the SMC promoted and ensured participation, empowerment and sense of ownership among the community while at the same time encouraging local capacity building as well as better management of the WATSAN facilities.



Community Participation

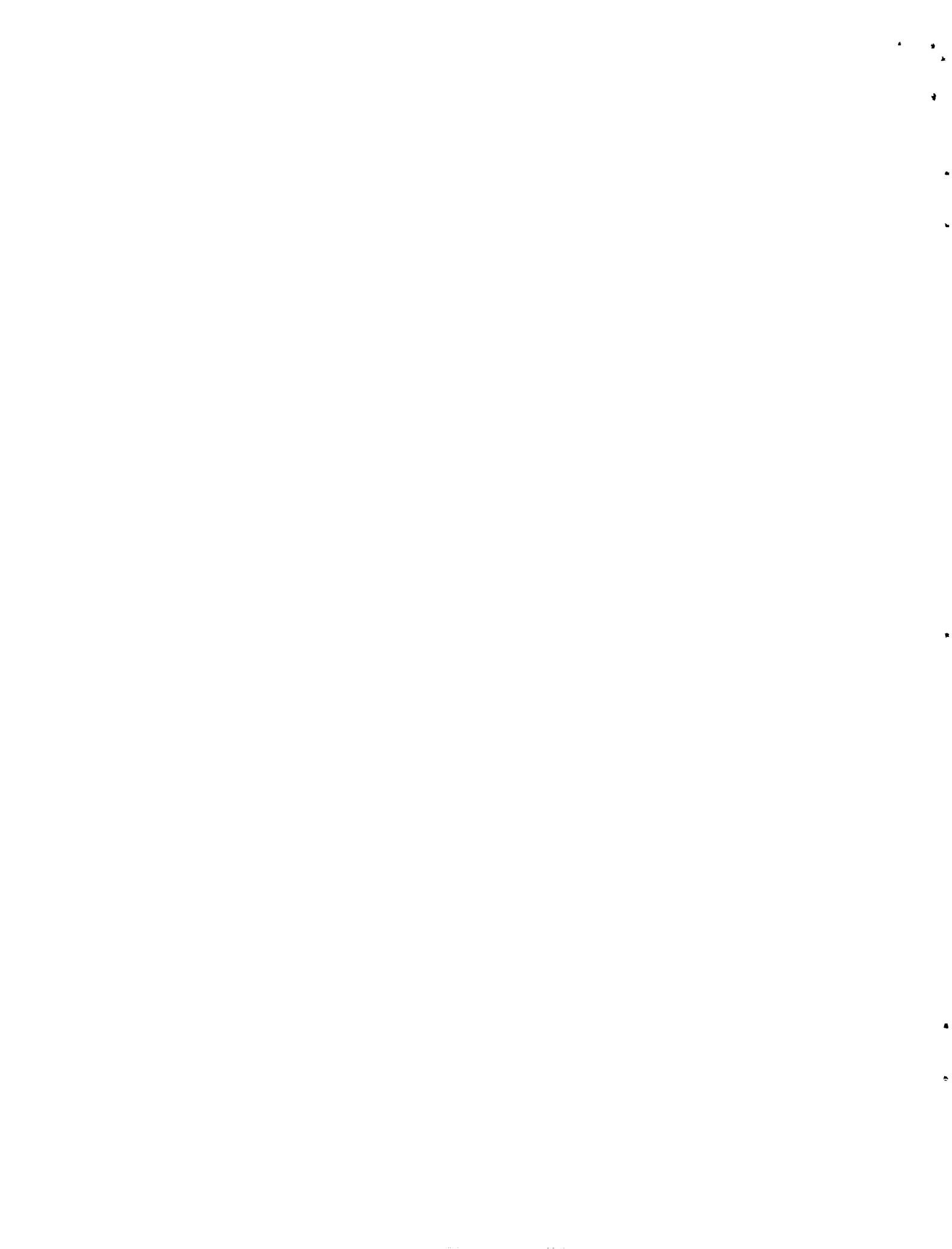
Community Participation at all levels of this project is crucial to the success of this project in terms of both effectiveness (making sure that the various activities occur) and efficiency (ensuring that the quality of work is high while costs are kept low). The action-research study in Moulavibazar in 1995 strongly supports this.

All three phases of the implementation process of this project has been designed to maximize community involvement, participation and ownership of the process.

Phase I - Pre construction. The School Management Committees made up of representatives of the local community will plan the construction process, engaging trained labor and liaising with Thana and DPHE officials with regard to funding and procurement of supplies. The community through the School Management Committee will also provide land for the school water and sanitation facilities.

Phase 2 - Construction. This process will be overseen by the School Management Committee, who may also facilitate the donation of labor and materials from the community. Where School Management Committees have been thoroughly involved in this process in the past, it has been noticed that the quality of the construction work is extremely high and a number of extra features are often added to the building enhancing the quality of the facilities provided.

Phase 3 - Post construction. Through children and teachers working on lesson-based projects, both in the school and community, promoting and improving their own hygienic behavior and giving practical demonstrations at home and the community the school will serve as a resource center and an agent for change in the community. Project-based learning will promote development and change in hygienic behavior among school children, their families and community to improve their health and quality of life through reducing morbidity, mortality and environmental degradation.



VIII Assumptions

The integration of access to safe water and sanitation facilities, clean environment and hygienic behaviors will lead to health and nutrition benefits and therefore contribute to enhancing the survival and development opportunities of the children of Bangladesh. Water and Sanitation facilities are basic necessities for students and teachers.

Awareness, behavioral development and community mobilization can be generated by demonstrating the use and maintenance of Water and Sanitation facilities and by promoting experiential learning about hygienic behaviors through the active participation of students and teachers in school and community based projects.

In schools that do not have water and sanitation facilities (45%), the process of building facilities and experiential learning based on school and community projects will inculcate behavioral change in students, teachers and the community. Extending training and learning resource packages to those schools that already have water and sanitation facilities will generate an equally effective behavioral change paradigm among students, teachers and the wider community.

Support for this initiative exists from the highest level of Government through to the village, though clearly a thorough understanding of the links between poor sanitation and hygiene practices to a child's health and nutritional status, to child mortality and morbidity, to population growth rates is more evident in the higher levels of government than at the village level. At the village level motivating factors for the School Management Committee are more related to a desire to develop their school and encourage their children to attend.

