

School-Based Safe Environment and Improved
Sanitation/Hygiene/Health Programme
Deworming of School Children and use of nail clippers as
Entry Point to promote Safe Environment,
Improved Sanitation and Hygiene

1. BACKGROUND

Bangladesh has already achieved universal safe water supply. Today, over 97% of the rural population drink safe tubewell water. Yet, only 48% of population use sanitary latrines and the prevalence of communicable diseases such as diarrhoea and intestinal worm infections remain high. Every day more than 700 children under the age of five die of diarrhoea and about 80% of children are infected with intestinal worms. Heavy worm load of *Ascaris lumbricoides* (roundworm) and *Ancylostoma duodenale* (hookworm) infection in human can result in malnutrition and anemia. It is obvious that improved public health can not be achieved by provision of safe water alone unless people take actions to clean up the environment and adopt good hygiene to break the disease transmission routes.

Sanitation and hygiene are the basic elements of Primary Health Care and the provision of sanitary facilities and hygiene education are essential preconditions for child survival and development. Experience has shown that schools provide an effective avenue to promote sanitation and hygiene among the students, their families, and the community members. School, therefore, plays a very critical role on broadening the knowledge and bringing about behavioural development among children. The provision of sanitary latrines to primary schools will reinforce student's behavioural development, will translate their sanitation and hygiene concepts into practices, and will encourage girls' enrollment too. The provision of sanitary facilities in schools will not only benefit students and teachers but will also serve as a model for the community.

Poor environmental sanitation and poor personal hygiene are the root causes of diarrhoea and intestinal parasitic worm infection. Millions of worm eggs in human excreta are discharged daily into the environment through open defecation. Worm eggs and larvae can be transmitted directly and indirectly from person to person. Experiences in other countries show that the deworming of school children can be an effective entry point and educational tool to promote improved sanitation and hygiene not only to the students but also their parents, siblings and the community members. The main routes of intestinal worm eggs transmission are:

- * Direct transmission -- from faeces to mouth through exposed excreta and poor personal hygiene such as dirty hands and long dirty finger nails
- * Indirect transmission -- through drinking polluted water, eating contaminated food due to exposed excreta and dirty hands as well as bare foot walking on contaminated soil.

The key interventions/actions to break the worm infection cycle are:

- * Practice safe human excreta disposal--use sanitary latrine and always keep it clean; and dispose children's faeces into sanitary latrine to eliminate the exposed excreta/pathogen load in the environment.
- * Wash hands with soap/ash before eating and handling food; after defecation and after cleaning child's bottom.
- * Wear slippers to prevent hookworm larvae entering the body through bare foot walking and children playing in the field.

2. OBJECTIVES

General Objective

- * Deworming and use of nail clipper as ENTRY POINT to promote safe environment and improved sanitation and hygiene through sustained behavioural development/change of children and communities.

Specific objectives:

- * To create awareness on the need of building and using sanitary latrines and to always keep them clean.
- * To create awareness on disposing children's faeces into sanitary latrine.
- * To promote healthy habits of washing hands with soap/ash, cutting finger nails short and wearing slippers.
- * To monitor the use of sanitary latrines and improved hygiene practice and its relation to diarrhoea reduction and children nutrition status.
- * To activate and to strengthen the School Authority and the School Management Committee (SMC) to take up responsibility for school-based and community-based development activities for safe environment, better education and quality of life.

3. PROGRAMME APPROACH

The programme adopts the integrated approach of providing water supply and sanitary facilities in schools and educating school children, parents and community members for behavioural development/change for improved sanitation and hygiene practices.

4. PROJECT AREAS

The programme will be implemented in the five Integrated District Approach on Education for all programme (IDA) districts as below:-

4.1. All 6 Thanas in Noakhali district

4.2 Two IDA thanas in each of the remaining four IDA districts.

Table 1 Allocation of Abendazole Tablets for Primary Schools in IDS Districts and Thanas
(One tablet per child every six months for the year)

IDA Districts/Thanas	Number of Schools				Total Students	Tablets allotted
	GPS*	RPS**	DNFE	Total		
Noakhali (all Thanas)	776	303	165	1244	282652	565500
Patuakhali - Sadar - Bauphal	155	69	105	329	59984	120100
Mymensingh - Sadar - Ishwarganj	132	41	75	248	47791	95700
Jhenidaha - Sadar - Court Chandpur	98	55	120	273	41365	83000
Dinajpur - Sadar - Parbatipur	177	42	90	249	43977	88100
Total	1278	510	555	2343	475769	952400

* Government Primary School

** Registered Primary School

5. ROGRAMME ACTIVITIES

5.1 Construction of Water Supply and Sanitary Facilities in Primary Schools

Water supply and sanitary facilities will be constructed in selected primary schools of the above mentioned project areas to supplement the educational and promotional aspects. This component is not described here.

5.2 Promotional Activities through deworming and use of nail clippers

Deworming and use of nail clipper are implemented as an integral part of the School-based safe environment and improved sanitation/hygiene/health programme with intensive involvement of School Management Committees (SMCs), parents, teachers and school children.

5.2.1 Training/Orientation

Training/orientation on aspects of worm infection, sanitation and hygiene will be organised for the project implementation personnel as listed below:

- * School level - SMC members/teachers
- * Union level - Health and family planning workers, WATSAN Committee members and NGO field workers
- * Thana level - medical officer/TEO/ATEOs/SAE
- * District level - Civil surgeon/DPEO/XEN

Education officers (DPEO/TEO/ATEOs) will be the focal points and resource persons ^{to} for organise training/orientation. Civil surgeons/Health officers will provide necessary support and also as resource persons for the training. EEs/SAEs of DPHE will be resource persons on technical aspects on sanitary latrine construction.

5.2.2 Educational/Promotional materials

Educational and promotional materials particularly focus on round worm and hook worm infection (routes of transmission, harmful effects on children's health and preventive measures) will be developed with the support of the Directorate of Health Services and PMED. Promotional/educational package (kit) can be in the forms of poster, slide set, film and "life worms" or "preserved worms with alcohol in glass jar".

5.3 Activities

5.3.1 Deworming of school children

School children will be given deworming tablets by qualified medical personnel/health worker on the "School Deworming Day". The deworming day is to be organised by SMC and school authority with support of TEO/ATEOs and Union WATSAN Committee. During the "Deworming day", parents are invited to the school. The qualified medical personnel/health worker with the help of teachers/SMC will explain to the school children, their parents and community members WHY and HOW these worms can enter into their children's stomach and WHAT serious damages these intestinal worms can do to the health of their children. At the same time the medical personnel/doctor can point out that it is NOT ONLY the children

who are affected, the adults in the entire community are also infected with worms as the worm eggs are every where in the environment because most of the people are defecating in the open and using the hanging latrines. By taking the deworming tablet, the worms inside the children's stomach will be removed, but the most important thing that communities, parents and children can do is to prevent the worm re-entering into people's body by practicing good sanitation and hygiene habits. After the school children are given the deworming tablets, parents and children are told to observe the discharge of round worms by some of the children who have taken the deworming tablet during the next day or two. A "Reporting day" can be organised say 2-3 days after the "Deworming day" for parents and children to report to the school whether their children have discharged worms. Parents and children are encouraged to bring worms to school for education session. Each school will keep record on students infected with worms for monitoring purpose.

The medical personnel/doctor will then explain the key actions that children and parents can take to break the transmission cycle of worm eggs/larvae getting into people's bodies.

- * Human excreta contains thousands of worm eggs -- To stop these worm eggs from getting into the environment, build and use sanitary latrines as well as disposal of children faeces into sanitary latrine, as the excreta which contains many worm eggs will then be confined into the latrine pit and cannot pollute the environment.
- * Dirty hands and dirty long finger nails harbour germs and worm eggs -- To prevent ingesting droplets of excreta of yourself or other person's, one should wash hands with soap/ash before eating and handling food; after defecation and after washing child's bottom. Finger nails should be always kept clean and cut short.
- * Hookworm eggs in the exposed excreta will hatch into larvae in the moist soils on the ground. These larvae enter into human body by penetrating the skin of feet or hands when walking bare foot or playing in the field. Wearing slippers will prevent hookworm larvae come into contact with feet.
- * Advise to take preventive actions on:
 - .. building and using waterseal or home-made sanitary latrines and always keep them clean.
 - .. Disposal of child's faeces into a sanitary latrine
 - .. proper handwashing and cutting finger nails short
 - .. wearing slippers and use tubewell water for hygiene purposes

After six months, organise another round of "Deworming Day" and "reporting day" for administration of second dose of deworming tablet to school children and continue to conduct promotional and educational activities.

After 12 months, organise "School Sanitation/hygiene/health Day" to inform the progress and success on deworming activities. Teachers, children, parents and SMC will review/revise the school and community action plans to sustain the achievement gained and hygiene behavioural development/change as well as to further reduction of worm eggs and pathogen load in the environment.

5.3.2 Diarrhoea Disease Management

Awareness will be created among school children and community members to take actions for improved sanitation and hygiene as preventive measures for diarrhoeal diseases. However, oral rehydration therapy (ORT) and the use of oral rehydration salt (ORS) will be promoted for diarrhoea management.

On rare occasion, some children may develop diarrhoea after taking deworming tablet due to side effect. For promotion of diarrhoea management through ORT, ORS packages can be provided to children/parents on the "deworming day" after taking the deworming tablet. Doctors, health workers and teachers can explain to students and parents on the proper use of ORS, continue feeding and giving more fluid/water as well as good sanitation and hygiene practices to prevent diarrhoeal diseases.

School children are encouraged to report/monitor the diarrhoeal cases among themselves and in their neighbourhood. A mechanism needs to be developed.

5.3.3 Use of Nail Clipper

Each project primary school will be given 5 nail clippers, one for each class (class I-V) and each DNFE centre 1 nail clipper. In the primary school, the class teacher of each class will be responsible to ensure the use and maintenance of the nail clipper. The DNFE teacher will have the same responsibility for her/his learning centre.

The class teacher will divide her/his class into groups of about 10 students each, on average, and one student will be elected as the group leader for one month. The leadership will rotate every month to give every child the opportunity to develop leadership quality and responsibility. The class teacher, in consultation with her/his group leaders, will designate a day of the week as the nail clipping day for the class. On the appointed day the students will utilize their free time or stay back after class, say, half an hour to cut their nails. Each group leader will obtain the nail clipper from the respective class teacher and ensure that every member of the group cuts his/her nails properly. Each group leader will then take responsibility for cleaning the nail clipper using clean water or dipping into the

dettol solution, if available, and dry it properly, and return to the class teacher for safe keeping. Each class teacher will supervise the nail cutting and help the younger children of grades I and II, if necessary.

X 5.3.4 Promotion of safe environment by school children

- a. Child to child - Activities to be developed with inputs from Education Section.
- b. Children Project-based activities in school and outside school -Activities to be developed with inputs from Education Section.

5.4 Monitoring

On deworming -- School/SMC and Thana/District medical personnel will keep own record on numbers of children dewormed, balance of available deworming tablets, follow up on improvement of worm infestation among school children and to continue the promotional activities.

On improvement of school children's nutrition status -- Some classes in certain selected schools will be identified by District/Thana medical officers for close monitoring of the children nutrition status by weight gained after taking deworming tablets. Weighing scale will be provided to teacher of the identified class for the purpose. The teachers will be trained on using the weighing scale and recording the weight of each student in their classes. Data will be analyzed by District/Thana medical personnel.

On proper use and upkeep of nail clippers -- a self reporting system/mechanism by students and teachers needs to be developed.

On sanitation coverage and improved hygiene/sanitation practices/habits and diarrhoea disease incidence -- A participatory monitoring on self reporting (by students, teachers and SMC members) mechanism needed to be worked out by SMC and school teachers on diarrhoea incidence, behavioural development/change on sanitation and hygiene practices by students, teachers, SMC members and community members.

On quality of training -- by DPEO/TEO/ATEOs to identify constraints, if any for improvement.

5.5 Review Meeting

Monthly meeting will be conducted at school, Union, Thana and District levels to review progress (monitor progress against target set), constraints, if any, and action plan for improvement. Frequency of meeting will be decided by the committee of respective level.

5.6 Logistic for Distribution of Deworming Tablets, Nail Clippers and Promotional Materials

5.6.1 Deworming Tablets

Deworming tablets (Albendazole 400 mg) are to be procured by UNICEF. The tablets will be delivered to Civil Surgeons for distribution to respective Thana Medical Officers. The Thana Medical Officers will distribute the tablets to respective SMC/school authority. The SMC together with the school authority will organise the school "deworming day". The school children will be given the tablet on the "deworming day" by the Thana Medical Officer or qualified private doctor or health workers.

5.6.2 Nail Clippers

The ^{selected} project schools in all 5 IDA districts will be provided with nail clippers as ~~below~~. Table 2 shows the distribution of nail clippers.

- * 5 nail clippers for each Govt. Primary school
- * 5 nail clippers for each Registered Primary School, and
- * 1 clipper for each DNFE centre.

Table 2
Distribution of Nail Clippers by Type of Institutions

Schools by Type	in 5 IDA Districts
1. Govt. Primary Schools	3871 Schools x 5 = 19,355 nail clips
2. Reg. Primary Schools	2093 Schools x 5 = 10,465 nail clips
3. DNFE	555 Schools x 1 = 555 nail clips
Total Nail Clippers	30,375 nail clippers

to be decided by
The nail clippers will be delivered to respective District Primary Education Officers (DPEOs) for distribution to their respective TEO/ATEOs. The TEO/ATEOs will then distribute the nail clippers to school authority. The School authority will allocate the nail clippers to respective class teachers.

5.6.3 Promotional Materials

Promotional materials will be delivered the District Primary Education Officer for distribution to their respective TEOs/ATEOs. The TEO/ATEOs will then distribute the materials to SMC/school authority. The SMC/School authority will allocate the materials to teachers/SMC members for educating the children and the communities.

6. Action Plan

Teachers, children, parents and respective SMC will together develop an action plan for promotion of safe environment, improved sanitation and hygiene with set physical target in the school and in the school catchment communities. The action plan includes a self/participatory monitoring mechanism on progress of household sanitary latrine built against target set, incidence of diarrhoea and the progressive development of good sanitation/hygiene habits among school children and community members. Activities can be, for example:-

Within the School and at home

- Deworming day and reporting day
- clean hands and finger nails day
- Clean school day and clean students' home day
- Use and maintenance and cleanliness of water supply and sanitary latrines in school and at home by all family members
- Wash hands with soap or ash before eating/handling food and after defecation and after cleaning child's bottom by all family members.
- Students participate in self monitoring/surveillance of diarrhoea incidence and environmental cleanliness.

In the School Catchment Communities

- Set physical targets on building and using of sanitary latrines by the families of students/parents, teachers, SMC members and community members.
- Clean village -- encourage families who use hanging or open latrines to convert into sanitary homemade or water seal type.
- Advise community members to develop habits of cleaning and cutting their finger nails short and washing hands with soap or ash before eating/handling food and after defecation and after cleaning child's bottom by all family members.
- Students, teachers and SMC members participate in self monitoring/surveillance of diarrhoea incidence and environmental cleanliness.

7. Project implementation structure/body

Committees are to be formed, if not already, at school, Union, Thana and District levels to be fully responsible for quality implementation of the programme both construction and promotional activities. The roles and responsibilities of these committees are described as below.

The Committees at all levels will continue to function focusing on promotional activities after the completion of the construction work on school WATSAN facilities and beyond the project period.

SMC Implementation Committee (SMCIC)

It is recommended that at school level, all 11 members of School Management Committee (SMC) together with one selected member of the Union WATSAN Committee shall form a SMC Implementation Committee (SMCIC) to take up the task.

- * Chairperson -- SMC chairperson
- * Secretary -- Head teacher
- * members -- all SMC members
- * member -- one selected member from the Union WATSAN Committee

Role and responsibility

On use and maintenance of school watsan facilities and promotional activities

- * Co-operate with Thana Committee.
- * Ensure use, upkeep and maintenance of WATSAN facilities by students, teachers and the school authority.
- * Participate in orientation on aspects of sanitation/hygiene and deworming/promotional activities
- * Ensure the distribution, use and upkeep of nail clippers and promotional materials.
- * Arrange the administration of deworming tablets among the students under the advice of private qualified doctors or Thana medical officer (Govt.) (deworming tablets will be supplied to the Thana Committee by UNICEF)
- * Assist/organise school deworming day involving parents
- * Organise courtyard meeting/promotional activities in school catchment communities.
- * Monitor and follow up physical target of sanitary coverage (including students, teachers and SMC members) and behavioural development/change by students and community members through self reporting/participatory action.
- * Monitor the distribution and use of promotional materials in school and in communities.

On Construction of water supply and sanitary facilities.
(These are listed under the Construction activities)

UNION WATSAN COMMITTEE

The Committee structure -- Refer to the publication on Guideline of the Union WATSAN Committee which was developed by the DPHE in collaboration with the Ministry of LGRD&C.

Role and Responsibility

- * Responsible for the preparation of priority list of schools and submit to Thana Committee. (Schools should be selected from Govt. and Registered primary schools where there are no sanitary latrines. ~~However~~, existing school latrines requiring renovation shall not be included.)
- * Select one member to participate as member of the concerned SMCIC.
- * Provide support to SMCIC as and when necessary

THANA COMMITTEE

- * Chairperson -- Thana Nirbahi Officer (TNO)
- * Member Secretary - SAE, DPHE
- * Member -- TEO
- * Member -- Thana Medical Officer
- * Member -- Thana Health/Family planning
- * member -- All Union chairpersons

Role and responsibility

On use and maintenance of school watsan facilities and promotional activities

- * Provide all necessary support to SMCIC.
- * Receive deworming tablets, nail clippers and promotional materials and distribute them to respective SMCIC.
- * Organise orientation on aspects of sanitation/hygiene and deworming/promotional activities for SMCIC members.
- * Supervise deworming activities and use of nail clippers and promotional materials in Schools
- * Provide support to SMCICs when necessary
- * Monitor/follow up progress on construction work on school watsan facilities and promotional activities by SMCICs. (TEO is the focal person)

On construction of water supply and sanitary facilities
(These are described separately under the construction activities)

DISTRICT COMMITTEE

- * Chairperson -- Deputy Commissioner
- * member secretary-- XEN, DPHE
- * member -- Civil Surgeon
- * member -- District Primary Education Officer
- * members -- All TNOs

Role and responsibility on promotion and construction works

- * Provide support and as resource persons for orientation/training to Thana Committees and SMCICs when necessary by XEN, DPHE; District Primary Education Officer (DPEO) and Civil Surgeon
- * Receive deworming tablets by Civil surgeon and nail clippers and promotional materials by DPEO and distribute them to Thana committees
- * Monitor progress/coverage and supervise quality training and promotional activities.
- * Monitor fund utilization and timely liquidation of fund