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## Strategies for a sanitation master plan

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### COUNTRY BACKGROUND

1. Nepal is a land-locked country sandwiched between two great neighbours, viz., China to the north and India to the south, east and west, covering an area of 147,100 sq. kms. There is a wide variation in both climate and physiography, with the plains of the Terai in the south, the Siwaliks and the Mahabharat range of the midlands, followed by the high mountains and the high Himalayas of the mountainous region to the north. The climate too varies from sub-tropical to alpine and tundra as a result of great elevation variations, ranging from 70 m in the Terai to 8,848 m in the Himalayas. (See Fig. 1).

2. There have been remarkable demographic changes as well, the population increasing by 64 % from 11.5 million to 18.9 million, during the period 1971 to 1990. By 2000 A.D. this is expected to reach 23 million. The urban population is increasing even more rapidly - 1.4 million in 1990 to 2.4 million in 2000, a rise of 71 %. Urbanisation in Nepal is the highest among the SAARC countries - increasing from 7.3 % in 1990 to 10.5 % in 2000. (See Fig. 2).

3. Nepal, being one of the poorest and least developed countries of the world, has one of the highest infant and child mortality rates. Though the country did see a spurt of activities during IDWSSD, national water supply coverage is presently 37 % only and that for sanitation is much lower at 6 %. The infant mortality rate is presently 107 per 1,000 live births, life expectancy is 51 years and the combined literacy rate is 35 per cent.

### EVALUATION OF SOME SANITATION PROGRAMMES

#### Rural sanitation programmes

4. These programmes have and still form only small components of the overall government and non-government activities. One such programme is the health education and sanitation programme of the Rural Water Supply and Sanitation Project in Lumbini Zone being implemented with FINNIDA assistance. The objective is to improve household and community health and a sanitary environment through "ilaka" (service centre) and village based formal and informal primary health care and educational set-up (ref. 1). The Project, however, provides support services

like additional training and other facilities that may be lacking. This approach has been well received but doubts have been expressed as to whether the village health workers and the community health volunteers would be able to cope this additional burden, given that they already have innumerable other duties. The project being in the initial stages would require a longer gestation period to come to any firm conclusion.

5. An entirely different methodology was attempted in the Eastern Region Water Supplies Project carried out with Overseas Development Administration - UK Government - assistance. The health education for water use and sanitation activity employed one expatriate health co-ordinator, one national counterpart, one project health co-ordinator and numerous groups of male and female health workers (ref. 2). During a short period of three years, the achievements were quite remarkable. But the cost-effectiveness was questionable because of the high cost. It would be quite difficult to replicate in the normal government programmes and has, therefore, not been sustainable.

6. The Community Water Supply and Sanitation Programme with UNICEF assistance is one of the more successful activities currently under implementation as far as mobilization of peoples' participation is concerned. Though the sanitation component has been a modest one, it has also had its quota of successes and failures. UNICEF's involvement is the water supply and sanitation programme goes back to twenty years but the combination of water supply to a strong sanitation and health part, as an integrated programme, is more recent. The male water supply and sanitation technicians, though given the necessary training, could not perform well when it came to involvement of women. This, therefore, led to the recruitment and training of sanitation women workers for achieving the following (ref. 3):

improvement in the health situation of the community by providing health education on personal, domestic and environmental hygiene, mainly through the women,

strengthening of the social position of women by involving them in the planning and implementation of the projects as members of

the users committees, and as members of groups specifically for sanitation promotion,

training women to be members of tap-stand users committees for better operation and maintenance of the systems.

7. Institutional capabilities have not, however, been built up as yet and expatriates continue to play the lead role in the districts and the regions. The activities have had to be limited to specific sub-project sites only.

#### Urban sanitation programmes

8. Besides the sewerage systems in the core areas of the three towns within the Kathmandu Valley, on-site sanitation have been limited to two approaches. The DWSS programme covering eight urban and semi-urban centres envisaged the promotion of the twin-pit pour-flush type latrines on a subsidized basis, which was launched as a pilot project (ref. 4). It was observed that technical supervision was not to the desired level resulting in wrong siting, poor workmanship and mal-functioning of some of the latrines. There was a demand for more subsidy and the better-off section of the community seemed to be the main beneficiaries, indicating a deficiency in the selection process. Most of the households appeared to be satisfied with the latrines but the cleaning of the pits was not being done satisfactorily. Though the beneficiaries did appreciate the health benefits, the health education and hygiene components were lacking in the programme.

9. The other programme which had been undertaken with UNICEF assistance consisted of a government (SUSP) and a non-government organization (EASTAP) implementing the sanitation programme in separate and a few specific localities (ref. 5). Besides very similar findings as mentioned above, some of the other interesting observations were SUSP site families were relatively poorer, latrine distribution was far more heavily subsidized and a significant percentage of the adult population use non-water means of anal cleansing. SUSP had a limited health education programme in the beginning but this was completely lacking in EASTAP though more than one-third of the households think this as important. An initial base line study was not carried out in both the approaches.

10. Comparing the efficiency of the two approaches, EASTAP's implementation was relatively more efficient in view of lower (and declining) subsidy levels, less delay and management problems, and sites being more suitable to the technology adopted. With respect to effectiveness too, EASTAP appeared to be relatively more effective in influencing defecation habits, in validating the cost-

effectiveness of a private sector approach (by creating employment), and a higher degree of utilization perhaps as a result of the higher degree of household contribution in installation. Furthermore, EASTAP appears to be more sustainable because of the much higher percentage of satisfied beneficiaries, the population were more knowledgeable regarding sanitary practices, better utilization of pit compost, and a relatively better demonstration effect. A majority of the beneficiaries in both the programmes preferred sanitation intervention by non-governmental organizations with the support of local communities.

#### SANITATION MASTER PLAN - GOALS AND STRATEGIES

11. The National Workshop on Sanitation (Human Excreta Disposal) held in January 1989 has spelt out clear-cut goals and policies (ref. 6) as follows:

It is the basic right of each citizen to have both an understanding of sanitation, personal hygiene and acquire adequate sanitation facilities.

The overall national goal should be to strive towards providing the above facilities by the turn of the century.

Proper collection and disposal of human excreta is the most important single measure to achieve the primary objective of improving community health and environment.

The water supply and sanitation sector, in particular the sanitation sub-sector, needs to be accorded higher priority in order to meet the goal of providing health for all the people by the year 2000.

Sanitation, of necessity, must be integrated with drinking water supply, health and other related development activities. Increasing the general awareness among all levels of society about sanitation and hygiene.

Promotion of sanitation using all available communication means, including the printed and electronic media.

Provision of at least one demonstration latrine in each ward of all village development committees by the year 2000.

Strengthening health education in primary schools by expanding and further developing health related curriculum.

Training at least one teacher in each of the primary schools by the year 2000.

Ensuring better out-reach of the sanitation

programme by mobilizing women in development and, in particular, in the promotion of sanitation.

#### IMPLEMENTATION STRATEGIES

12. The evaluation studies that have been referred to have very explicitly addressed the issues that need to be considered urgently. The following will, therefore, need to be adopted (ref. 7) :

water supply and sanitation programmes implementation to be based on an integrated approach including pragmatic hygiene and health education activities,

government agencies should play the role of facilitators only providing support services like technical advice, training and other relevant facilities,

a plan of operations and/or implementation procedures for maximum involvement and mobilization of the non-government organizations to be formulated and implemented,

for more effective participation of women, adequate representation in the government organizational structure at the central, regional, district and field levels to be ensured with the creation of suitable posts for female social science and health education workers (see Fig. 3),

there should be an effective co-ordination committee at the district level with representation from all sector-related agencies, chaired by the Local Development Officer and with the district water supply engineer as the member-secretary of the Committee,

appropriate on-site low-cost technological options to be promoted using locally available materials and know-how like simple VIPs in the rural areas and the twin-pit pour-flush latrines in the urban and semi-urban areas, provision of subsidies to be discouraged except in the case of health post, school, institutional and demonstration latrines; subsidies, if provided, should be low and to be withdrawn gradually, at the field level, the existing peripheral health personnel to be utilized in the best possible manner by providing support by way of additional training and other facilities; and with the active participation of an all-women health education and sanitation committee, to be formed by the beneficiaries themselves.

#### MODEL RURAL SANITATION PROGRAMME

##### Scope

13. The Phase I programme will cover three

districts in each of the five regions and is planned for three years. It will be directed to establishing an institutional framework for a sustained sanitation and health education initiative to raise awareness and bring about improved hygienic practices as well as the use of household latrines built on a self-help basis (ref. 8).

##### Organization

14. The central sanitation and health education unit is to function as the Central Management Team and will have a three-member core staff, including one female social scientist. Both the regional and district offices will also have similar units headed by a senior supervisor and two assistants - all female. The districts will have two additional pairs of female workers. The programme will formalise the regular operational monitoring of activities and progress review, to be conducted jointly with other government and non-government agencies (NGO). (See Fig. 4).

##### Implementation

15. The programme will include first, hygiene and sanitation education of householders and raising their awareness for improving hygienic practices and second, activating and organising householders for group or community action for household latrines on a self-reliant basis.

16. The first activity will rely on a combination of inputs provided by the five-member all female sanitation and health education group (SHEG), chaired in rotation, by the two female members of the water users committee; the Ministry of Health peripheral personnel at the village level; the health, hygiene and sanitation education provided in schools; the village level personnel of programmes of other government and NGOs; district level staff of all government agencies, particularly schools; and water users committee members. They will be trained and sufficiently motivated for the work.

17. SHEG will play the lead role and activate the beneficiaries to plan and construct the facilities. The SHEG members will be selected jointly by village leaders, peripheral health staff and programme organizers, who will then be given intensive training. The programme will provide other support like establishing linkages with similar efforts of NGOs and the private sector, providing drawings and specifications for the construction and sale of latrine components. In close collaboration with SHEG, the programme will also launch a well planned construction activity of demonstration, school and other institutional as well as

public latrines.

### Technology

18. This will be based on the available appropriate designs ranging from the dry (direct) pit latrine to the pour-flush twin-pit latrine and would differ from area to area, considering factors such as affordability, previous latrine use, post-defecation cleansing habits, water availability, etc. The concept of "children's latrines" will also be introduced - this essentially being a shallow hole in the ground and a squatting platform with an opening of appropriate size. This is to serve as a monitoring and surveillance tool and would be a fore-runner to the main adult latrine.

### Monitoring and evaluation

19. It will be the responsibility of the regional and district sanitation and health education units to pay regular visits to the villages on a planned basis for stimulation and providing the necessary support. There will also be a two-day consultation at least twice a year at every health post between the SHEG members, peripheral health staff and the programme authorities.

### Training

20. Training will be conducted for SHEG members from each village, for orientation of S&HE Units of the region and district offices, and for district training teams as trainers for the first type. These will be initially provided by central training teams recruited or contracted for this purpose. Thereafter, the first type will be the responsibility of the district training teams covering all the programme districts concurrently within three to four months.

### Work Plans and Budget

21. A detailed work plan is to be prepared by the Central Management Team for the initial phase covering preparation of work plans, setting up sanitation units, implementation of training courses, dissemination of educational and promotional materials, planning collaborative programmes, construction of demonstration, schools and public/institutional latrines, and monitoring. Budgeting will have to take all these factors into consideration as well as staff salaries, contractual costs, travel and daily allowances and other administrative costs.

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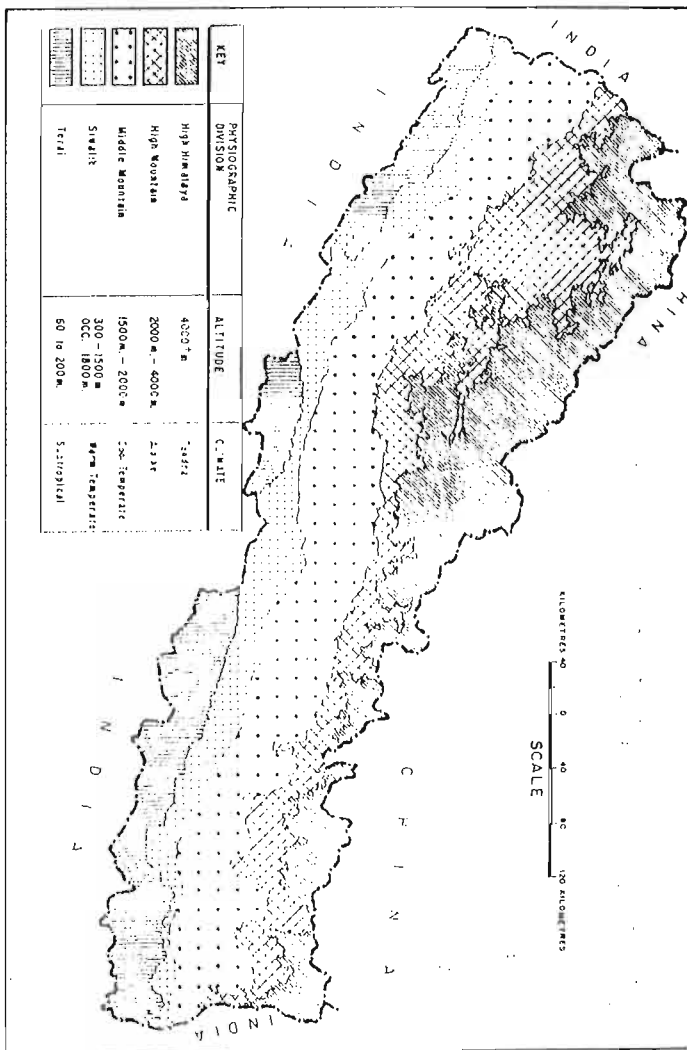


Fig. 1: Physiographic Divisions of Nepal

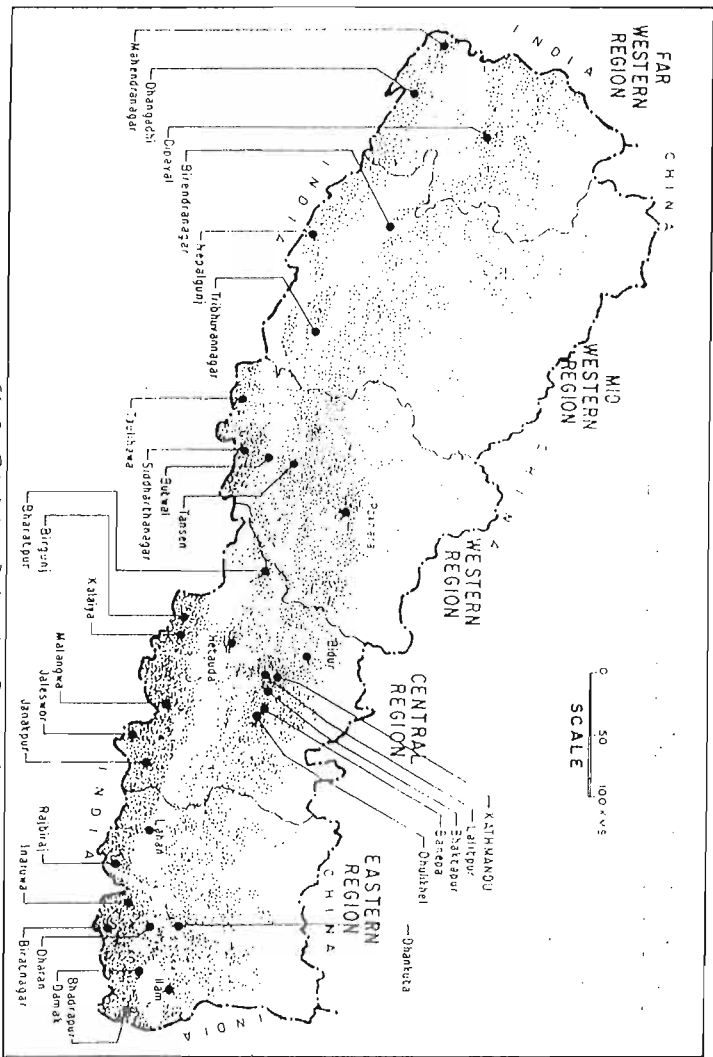


Fig. 2: Population Distribution & Major Towns

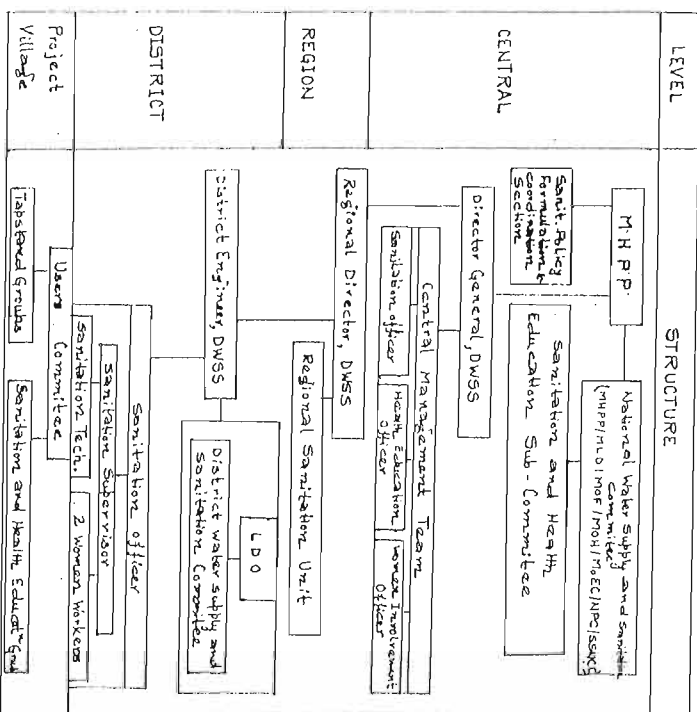


Fig. 3: Proposed Sanitation Organizational Structure.

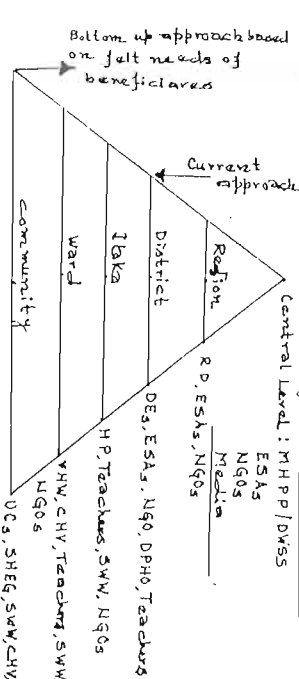


Fig. 4: Proposed Sanitation Programme - A Collaborative Effort.

