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Ministry of Housing and Physical Planning
DEPARTMENT OF WATER SUPPLY AND SEWERAGE
and

The Government of Finland
Ministry for Foreign Affairs
FINNISH INTERNATIONAL DEVELOPMENT AGENCY
(FINNIDA)

RURAL WATER SUPPLY AND SANITATION PROJECT

LUMBINI ZONE

ANNUAL REPORT 1992



Butwal, February 1993
Consultant: PLANICENTER LTD Helsinki

822 -NPLU93-10588

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1. GENERAL

During the year 1992 the Project experienced a build up phase of all the activities, especially of the construction of the water supplies and sanitation facilities.

The year also brought interesting development in the political and decision making field of Lumbini Zone, as the District and village level decision making bodies were elected and started their work during the year. This was seen in a more organized approach of the villagers towards the water supply implementation. It can be said, that community participation became more formalized, as the elected bodies like the District and Village Development Committees took interest and were in-charge of the situation. It was also observed by the Project workers, that the District decision making bodies have main responsibility in the water supply planning and implementation and that the central level line agencies have some what less important role to play nowadays.

The first District Water Supply and Sanitation Development plan was prepared during the year. The results of the field survey were interesting and also invaluable to the Project in many ways. The Project policies and activities were assessed and re-evaluated due to the findings of the field survey and District Development Plans.

2. PROGRESS OF THE WORK

The progress of work in terms of the population covered by different activities is presented in the table 1 below:

Activity	Total Cumulative Population:		Population during 1992
	by December 1991	by December 1992	
Prefesibility studies	208,000	261,000	53,000
Fesibility Studies	138,000	249,000	111,000
Field Surveys	64,000	142,000	78,000
Design Reports and Cost Estimates	35,000	116,000	81,000
Construction Started	25,000	105,000	80,000
Construction Completed		33,000	
Handed Over	0	9,000	9,000

Table 1 Progress of planning, design and construction activities by population.

Figures 1a and 1b present the same development in a form of curves.

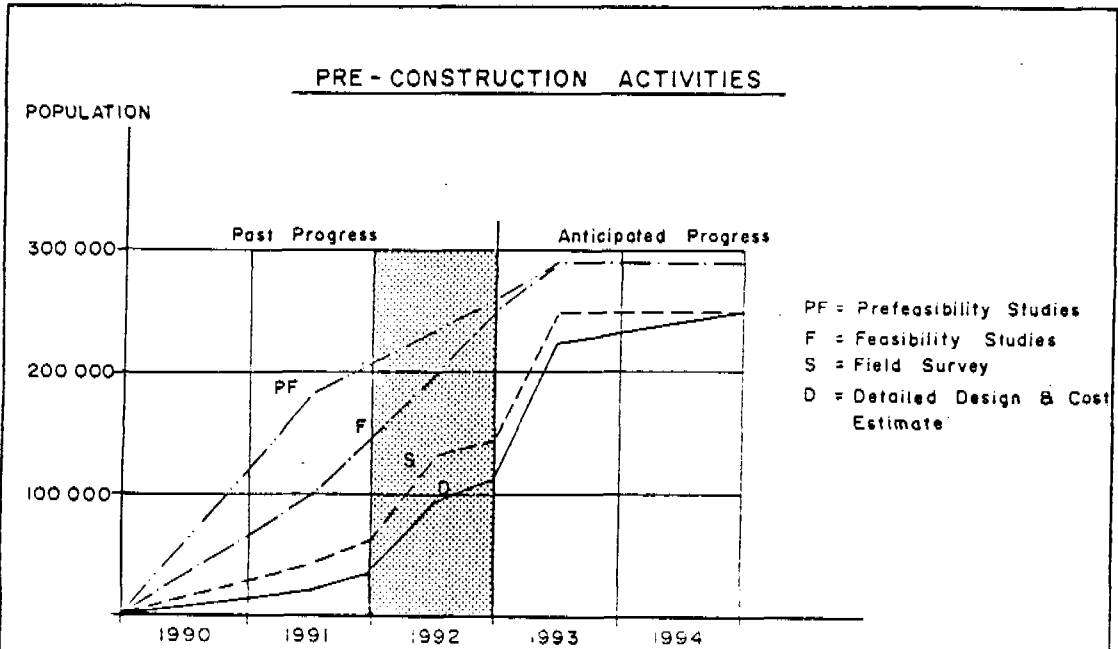


FIGURE 1a Progress of Pre-construction Activities
 (Phase I nominated VDCs 54)

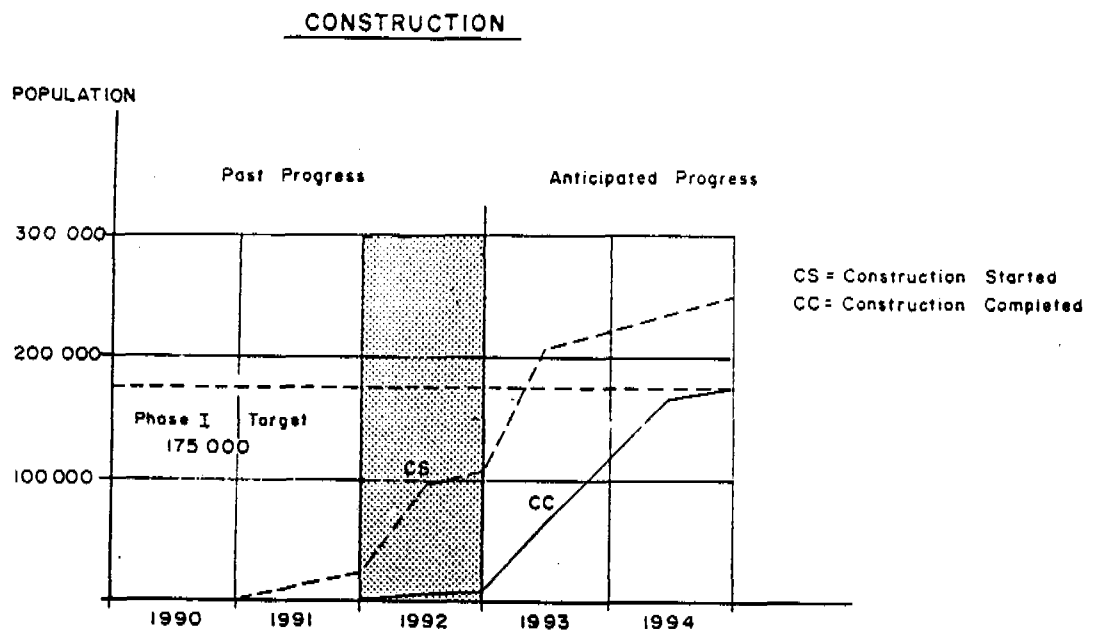
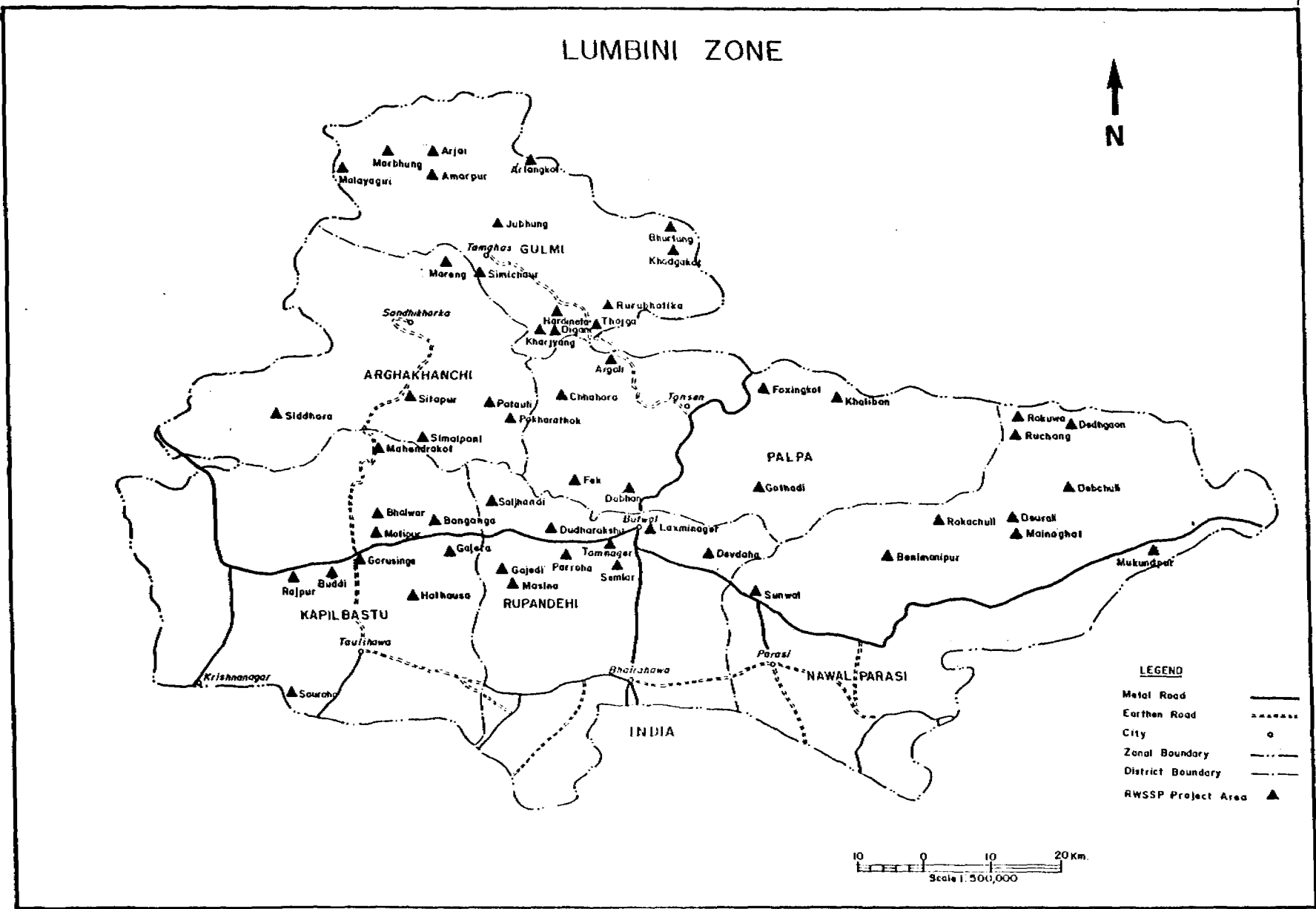


FIGURE 1b Progress of Pre-Construction Activities
 (Phase I nominated VDCs 54)

Figure 2.



The flow chart of Project activities, showing the design and implementation steps referred to in the Table 1. is presented in the Appendix 1.

The Village Development Committees with the Project Activities are presented in the map of Figure 2.

The numerical achievements of the different project components are presented in the Appendix 2.

2.1 District Water Supply Development Plans

The field survey to assess the present water supply situation from the users' point of view as well as the condition of existing improved water supplies was undertaken as follows:

DISTRICT	FIELD SURVEY	
	STARTED ON	COMPLETED ON
Arghakhanchi	23.11.1992	25.3.1992
Gulmi	17.4.1992	30.7.1992
Kaplibastu	16.9.1992	12.12.1992
Paipa	16.12.1992	ongoing

The Arghakhanchi report was finalized and distributed in September 1992. A seminar for the decision makers to familiarize them with the use of the Water Supply and Sanitation Plan for their district was organized. It was observed in the seminar in Sandikharkha, Arghakhanchi, that the decision makers found the document very technical and their perception was, that FINNIDA would undertake the implementation of the plan. Lot of discussion was needed to clear, that the plan was a tool for them to plan the future investments in the water supply and sanitation sector, taking into account all the available resources.

The Project undertakes to produce maps of the present improved water supply situation in the scale of 1:25 000. The basic information of the maps (contours, rivers, infrastructure) is copied from old existing maps. Information on improved water supplies, cluster and population data and administrative boundaries are obtained through the field survey.

The mapping work was started on 14th of January 1992 and by the end of the year the work of two hill districts i.e. Gulmi and Arghakhanchi was completed.

The desk study on physical and environmental features of the three Hill Districts and the preparation of the Environmental Impact Assessment guidelines were completed in January 1992 by the Cemate Consultants, Kathmandu.

2.2 Water Supply Programme

A lot of development work was done during the year to simplify and clarify the design procedure of water supply schemes. The format of design reports was standardized and so called "VDC approach" was introduced to facilitate the utilization of water resources in a most economical way.

Since the number of water supply schemes under preparation and construction is growing rapidly, a work planning and progress follow up system for the District Water Supply Offices was developed and introduced at the end of the year.

A set of standard designs for school and public latrines was prepared during the year.

The construction of water supplies was undertaken in all six districts during the year. The implementation of 27 new schemes in 19 VDCs were started and 9 schemes were completed during the year.

The division of water supply schemes into different categories is presented in Figure 3. The Figure 3a shows the situation at the end of the reporting period, 3b at the end of Phase I of the project and 3c at completion of all so far nominated schemes. 64 % of the population now under construction will be served by shallow tube wells, 25 % by gravity schemes, 7 % by deep tube wells and the balance of 4 % by dug wells and rehabilitation schemes. At completion of all the nominated schemes the figures will be 36 %, 44 %, 7 % and 13 % respectively. This development is due to the quick completion of the shallow tubewell schemes. The gravity systems take longer to start and also complete.

The progress of studies, surveys, designs and construction work, in relation to the numerical targets is presented in the Appendix 2.

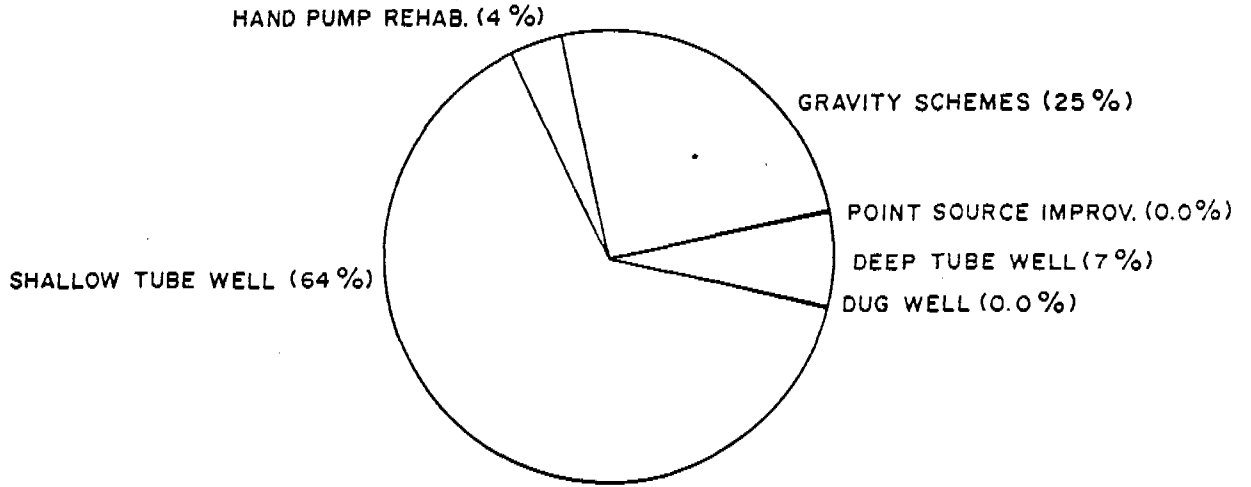
The progress of the implementation in each district, as per the step-by-step implementation procedure, is presented in the Appendix 3.

2.3 Health Education and Sanitation Programme

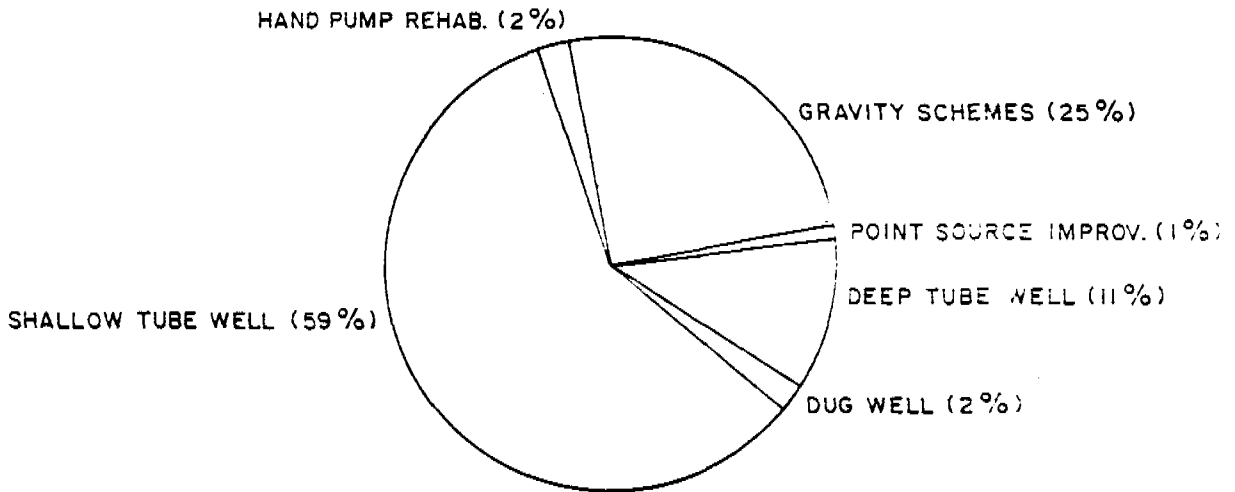
2.3.1 Health Education

The health education programme was continued on the basis of principles created during the first year.

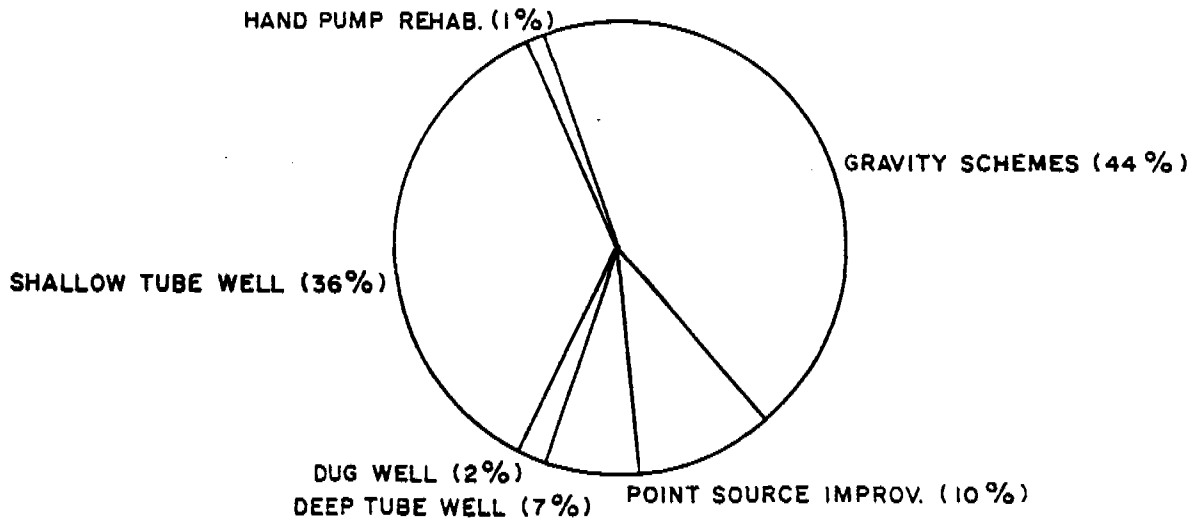
**3a DIVISION OF WATER SUPPLY SCHEMES
UNDER CONSTRUCTION POPULATION 100000 (DEC.92)**



**3b DIVISION OF WATER SUPPLY SCHEMES
COMPLETED POPULATION 175000 (DEC.94)**



**3c DIVISION OF WATER SUPPLY SCHEMES
COMPLETED POPULATION 250000**



DIVISION OF WATER SUPPLY SCHEMES INTO DIFFERENT CATEGORIES WITH UNDERTAKEN POPULATIONS OF 100 000, 175 000 & 250 000.

FIGURE: 3

Regular schemewise activities

Health behaviour study, an assesment of the habits related to the water use, sanitation, nutrition, care of illness etc., was undertaken in 17 scheme Village Development Commitees. The purpose of this study is to create information for the Community Health Volunteer and other training.

School and health post assesment, to find out the capabilities and requirements of the schools and health posts, was undertaken in 77 schools and 10 health posts respectively.

The first training course was given to 68 Community Health Volunteers, 137 school teachers , 31 Village Health Workers.

Orientation meeting was held with 290 Users' Commitee members during the year. The purpose of this orientation was to educate the Users' Commitee members in their role as the supporters and managers of the Community Health Volunteers. The Users' Commitee members were also motivated to become a role model of the village and start this work by constructing themselves a latrine.

Special activities

Household latrine promotion campaign was held in Kapilbastu District in March 1982. There were 33 participants, including Community Health Volunteers, Users' Committee members , Village Health Workers and District Water Supply Office staff. The campaign was hosted by the District Engineer. The purpose of the campaign was to raise the villagers' awareness towards the Environmental Sanitation.

Health and sanitation related mass education was carried out in scheme areas in Gulmi, Arghakhanchi, Kapilbastu, Rupandehi and Nawalparasi. This type of activity consists of mass meetings in the village, video and slide shows of the subject matter. Discussions of the common activites to improve the village surroundings, like sanitation, drainage and village path improvment is held.

School teachers and Community Health Volunteers from selected scheme areas were taken for an observation tour in Kathmandu. The purpose of the observation tour was to familiarize the participants with the exisitng health facilities in th country. Places like large hospitals, leprocy rehabilitation centre etc. were visited. The tour was found fruitful, as the participants could see in practice the health care available for the villages and were educated in village level health problems e.g. early stages of leprocy.

Orientation meetings with the District and central level public health sector people were held, and the Steering Committee level

decision of integrating the Ministry of Health and Ministry of Education staff within the Project activities was achieved. Full implementation of the Project's health and sanitation programme through His Majesty's Government still needs some work.

Follow-up activities

The Project's follow-up officer was undertaking the field visits to observe the activities of the formerly trained Community Health Volunteers, school teachers and health post staff.

The results of the Community Health Volunteer follow up were encouraging. After two years of training, only few of the visited 83 women were found inactive (10 %). The total drop out rate was however, 27% due to the women moving away. First aid boxes were retrieved from two scheme areas, due to them being not refilled with medicines. It has been observed, that the collection of the revolving fund for the maintenance of the first aid box considerably improves the situation. In the scheme areas first started by the Project in 1990, the fund was not collected, and there the Community Health Volunteers have most problems. In places, where the fund is collected, there are hardly any inactive Community Health Volunteers. It seems, that when the individual households have to contribute to the health fund, they also are aware of the service available and also have expectations to get their money's worth. One problem observed during the follow-up, was that the user's committees in some places were not fully committed to the community health volunteers programme. This hampered the activity.

18 schools with the Project trained school teachers were visited. Special emphasis was given to the schools with Project constructed latrine. The latrine maintenance was found a problem just after construction of the new latrine, but the situation seemed to improve after a few visits. It is evident, that school latrine programme needs close supervision, otherwise the promotion of use and latrine cleanliness will suffer.

11 health posts were also visited to observe the efficiency of the Project's training.

2.3.2 Sanitation programme

The sanitation programme of the Project had two components which were implemented during the year.

Institutional latrine programme

The school and health post latrine programme was started during 1992. A set of standard designs for the institutional latrines was prepared. The District Water Supply Offices technicians were trained, total of 52 people, for the school/health post latrine

construction.

Total of 11 institutional latrines have been constructed during 1992.

Together with the construction work, a training, motivation and monitoring programme of the school latrines was started. Several problems of the school latrine use and maintenance were reported. Some latrines were not taken into use, the teachers locked them and some latrines were never cleaned. The school teachers need to be advised on a continuous basis.

The household latrine programme

The programme continued on the basis agreed during the first two years of the Project, i.e. providing only education, technical advice and motivation without subsidies or material support. The motivational message is disseminated through several channels and training exercises to the communities of the Project's Village Development Committees.

The following people have been instrumental in constructing their own latrines and hence providing a model and example to the rest of the villagers:

- 44 % of all trained Community Health Volunteers have constructed themselves a latrine
- 30 % of all school teachers, who have received the Project's health training, have constructed themselves a latrine
- Users' Committee members
- Water Supply and Sanitation Technicians (temporary residents in the village during the scheme implementation)

About 6 % of the general population in the scheme areas have constructed themselves a latrine, after the Project's health programme has been introduced there.

On this basis a total of 380 household latrines were recorded to have been built by the above groups of people.

The household latrine programme encountered technical problems in the scheme areas situated in some areas of the Terai. The groundwater levels during the rainy season raise so high that the kachha (non-permanent) type latrines, not having any concrete or brick reinforcement, collapse. Different technical solutions, e.g. raising the latrine high above the ground has been tested and the next rainy season will show their durability.

2.3.3 Water Quality Monitoring

The laboratory has been functioning as a service unit for the water supply implementation. The laboratory undertakes only

bacteriological (E. Coli and total coliform) analysis. Samples for chemical analysis have been sent to Kathmandu. The proposed sources of the gravity systems were checked in areas accessible within 6 hours. In the ground water supply areas, the existing wells were checked before the construction starts and all Project wells have been checked after the completion.

The laboratory produced trimesterly follow-up reports. A summary of the water quality data has been enclosed as Appendix 4.

2.4 Human Resources Development

District Water Supply Office, Technical Staff

The training activities had more or less been designed during the first two years of the Project, so the previous training courses were repeated. New training was undertaken in latrine construction.

The training was mostly organized by the District Water Supply Offices' personnel. The principle was, that the training activities are organized in alternate districts and the district office in question takes the responsibility. So the groundwater training was organized by the Kapilbastu District Engineer, the overseers design training by the Gulmi office etc. Apart from the Helvetas input and one resource person from the Ground Water Project, all the trainers were from the District Water Supply Offices or the Project Implementation Unit.

A total of 11 courses were organized during the year. The time table of the courses and number of participants in each course is presented in the appendix 5.

A short description of the courses undertaken by the Project to the District Water Supply Offices staff is presented in the Appendix 6.

Foreign training programme

The foreign training programme was implemented during the year. The participants found the trainings interesting and useful and also the Project found especially the motivational value extremely useful.

Three trainings were organized.

- Two engineers, Mr. J. Paudel and Mr. D. Subedi visited the Loughborough University for a three months course in Project preparation for Environmental Engineering. This course also formed the first part of the M.Sc. course in water supply.

- 10 overseers and 2 training officers visited rural Thailand on an orientation tour organized by the Asian Institute of Technology.
- 12 technicians visited India to familiarize with deep and shallow tube well pumps, sanitation and health education projects.

2.5 Community Involvement

Community involvement has been implemented as a method of the scheme implementation. No study, survey, design or construction work has been done without the consultation with the villagers.

As the community involvement has a certain pattern and set procedures in the RWSS Project, it has become easier for the technical field staff during the years. It has been noticed during this year of field work, that the procedures like resource mapping, design meeting etc. have been accepted and increasingly practised by the District Water Supply Offices' staff. The training officers of the Project have been supporting and facilitating staff and, it seems, appreciated by the District Engineers. There have been discussion from the District Offices, that each district should have one training officer. It would naturally be better these specialized in community mobilization staff should be appointed by the Department of Water Supply and Sewerage becoming an integral and continuous component of the District Water Supply Office manpower resource.

It is possible that in the future the Terms of Reference of the Community Training Officers will be extended to include assistance to those District Water Supply Office staff implementing schemes where the materials for construction are provided by HMG/other donars. In regard of the present and anticipated work load in the districts it is anticipated that the recruitment of additional Training Officers may be necessary. The actual requirements will be assessed on a District by District basis in 1993.

The local elections took place in May 1992. This resulted in hectic political activity in the village level and also somewhat affected the users' committees of the RWSSP schemes. Disputes over the membership and representation between different political parties rose in some cases. It could also be noticed, that newly elected Village Development Committee and ward learders were elected in the users' committees.

The progress of the community involvement is shown together with the general follow-up of the scheme implementation in the Appendix 3. The certain key points of community involvement are followed in the schemewise progress tables i.e the design meeting, users' committee training and the agreement.

The numerical achievement of the users' committees and village maintenance workers training is given in the Appendix 2.

Short description of the community participation of the project activities is given in Appendix 7.

3. SUPPORT SERVICES

3.1 Offices

The construction work of the conversion of the water tank basement into office space in the District Water Supply Office compound in Yogikuti, Butwal was completed and taken into use.

The telephone exchange board was installed and is in operation.

The extension of District Water Supply of Rupendehi office building and laboratory building construction was started during the year and is expected to be completed at the end of February 1993.

3.2 Stores

Store computerization was finalized during the year. It is now possible to follow the material flow with great detail and account each item released from the store either to a particular scheme area or supporting (training, health education etc.) activity.

3.3 Workshop

As previously described, it is not thought relevant that the workshop facilities should be developed beyond a minimum level as adequate facilities exist in Butwal town.

3.4 Vehicles and Transportation

Three new Toyota double cabin vehicle arrived from Japan and were put into operation from 1st of July 1992.

The two lorries previously purchased have proved to be insufficient and the rainy season makes the hill schemes inaccessible to lorries for a considerable time when construction work can still continue. In order to facilitate the timely supply of construction materials to the scheme sites and to extend the construction season by making access to the sites possible for as long as possible 1 tractor and trailer were purchased per district.

A list of Project vehicles is presented in Appendix 8.

3.5 Support of District and Regional Offices

The Project has continued to provide the necessary stationary,

technical survey equipment, drafting equipment, calculators, individual camping equipment, field allowances, and other logistical support to the District Water Supply Office's as requested and agreed by the Project Implementation Unit (PIU).

3.6 Procurement Policy and Quality Control of Materials

The Project participated the standardization meetings in Kathmandu in the attempt to agree upon uniform material and equipment specifications. This was not yet materialized during 1992, but resulted in discussion about the community handpump model to be installed by the donor agencies.

The Project set as its target to install only pumps which could be maintained by the community and spareparts for which could be obtained in the local market. The presently installed UNICEF Improved Nepal No 6 does not meet this requirement. The modification work of the Improved Nepal No 6, in cooperation with the Regional Office of the World Bank started during 1992.

The Project has worked together with Development Consultant Services (DCS) and Mr. Jan Lam (Mechanical Engineer) on modifications to the UNICEF modified Nepal No. 6 using locally available spare parts. The modified Hand pump is known as the VLOM No.6. The VLOM No. 6 allows for conversion to the UNICEF Nepal No. 6 as and when spare parts become available.

A survey of the HDPE pipe manufacturers in Nepal was commissioned to be done by Crown Agents. The report was submitted in the end of 1992.

During 1992 Societe Generale de Surveillance (SGS) was used as the inspection agency for the materials procured in India.

4. PROJECT PERSONNEL

The Project is jointly funded by FINNIDA and HMG/N. The project funds are channeled through the Project Implementation Unit (PIU), which is composed of HMG/N staff and Consultant's staff. The direct FINNIDA funds are administered by the Project Coordinator of the consultant. The FINNIDA fertilizer/HMG funds are administered by the Project Manager DWSS/HMG. The implementation of the schemes is done by the District Water Supply Offices.

4.1 Consultant's Staff

The Consultant has provided the staff for training, health education and sanitation programme, support services, district development plan preparation and two engineers for advisory work for the District Offices. The consultant's team is headed by the Project Coordinator.

The list of the consultant's staff is presented in the Appendix 9.

The consultants long term staff has been the following:

- Consulting and administrative staff, 12½ persons.
(10 Nepalese) (2½ expatriates)
- Supports services and other assistant staff, 46 persons

The consultant's short term staff has been the following:

- District Development planning staff, including the enumerators, 57 persons (temporary staff)
- District Development Plan consultants, total 10 man months.

4.2 HMG/N Staff in the Project Implementation Unit

The HMG/N staff, headed by the Project Manager is, jointly with the Consultant's staff, supporting the government line organizations in their work.

The staff records of the HMG/N staff is shown in Appendix 9. At the end of the year the number of HMG/N staff was 10 people.

4.3 District Water Supply Offices' Staff

The manpower situation of the Project improved considerably during the year. Firstly the department issued a letter to the district water supply offices, to nominate exclusive staff for the RWSS Project implementation. This made the manpower planning and training easier than the year before. Also it could be guaranteed, that the persons receiving training could then use their skills in implementing the RWSS schemes.

35 new technicians and 6 new overseers were employed or transferred from other districts to Lumbini Zone.

The total of the District Water Supply Office's staff nominated to work in the RWSSP schemes was in 1992 as follows:

- Engineers 11 (part time)
- Overseers 31
- Technicians 89

5. MEETINGS, SEMINARS AND VISITS

February

Short term consultant, Mr. Osmo Purhonen, came to the Project for one month's consultancy for writing up the draft report on the Argakhanchi District Development Plan. First draft report was

prepared by the end of the month.

March

Ms. J Tamsang, National level coordinator at the Institute of Medicine, Kathmandu and Mr. Dhakal, Campus Chief, CMA Campus Tansen visited HESP to finalise procedural details in coordinating CMA students Field Training with HESP Ilaka Programme.

A high level delegation from Padma Kanya Campus, Tribhuvan University led by Dr. Leela, Dr. K.C. Director, Women's Development Division visited HESP to discuss future programme of the campus and possible coordination and cooperation between HESP and the Campus for the same.

Ms. M. Krantz, Nutrition Advisor from United Mission to Nepal Kathmandu paid a visit to HESP Office and HESP field activities.

April

Pakistani Delegates had visited Butwal Office on 21st April and discussed with the Project staff and inspected Dudrax/Gajedi shallow tube well scheme and Argeli gravity system in Palpa.

June

World Bank Director Mr. Kurt Carnemark and Mr. Peter Lochery, World Bank Representative from the Regional Office, New Delhi, visited the Project.

The Two-Day long orientation and coordination meeting and visit programme was held at the Project Head Office, Yogikuti Butwal on 24 - 25th June 1992. The meeting was participated by Public Health Directors from Western Development Region, and District Education Inspectors from all the six districts of Lumbini Zone.

July

A delegation from Myanmar consisting of 5 members visited the Project from 20th July to 22nd July 1992.

August

Two persons the delegation from Myanmar visited the Project.

September

11 persons from the Project participated the WEDC Conference in Kathmandu, during the 30.8. - 3.9.1992

Two engineers, Mr. D.P. Subedi PIU/HMG and Mr. I.P. Poudel, DE, Gulmi had participated WEDC Diploma Course in "PROJECT PREPARATION

FOR ENVIRONMENTAL ENGINEERING" running from 28th September 1992 to 18th December 1992 at "Loughborough University of Technology" in England.

Two training officers and ten overseers had took part in the observation tour in Thailand from 9th October 1992 to 23rd October 1992.

Two team leaders and twelve technicians visited India from 9th October to 23rd October 1992 for the training and Project visits.

November

Mr. Wihuri (Finnida Advisor for Water Supply) visited the Project.

Honorable Vice-Chairman of National Planning Commission Mr. Ram Saran Mahat and honorable member Mr. Shree Krishna Upadhyay visited the Project office.

The Orientation Meeting of Political Officials was organised on 2nd November, 1992 at Yogikuti, Butwal. Special Guests during the orientation meeting were:

- Honorable Assistant Minister Mr. D.P. Badu, Housing and Physical Planning;
- Mr. T.P. Upadhyay, Secretary, Ministry of Housing and Physical Planning;
- Charge De' Affaires, Embassy of Finland, Mr. K. Ahti

Resource Persons:

- Mr. R. Dutta, DG, Department of Water Supply and Sewerage
- Dr. B.B. Karki, Regional Director, Ministry of Health
- Mr. N.N. Singh, Regional Director, Ministry of Education and Culture
- Mr. B.P. Shah, Regional Director, Department of Water Supply and Sewerage
- Mr. D.B. Shrestha, Project Manager (HMG), RWSSP, Butwal

December

Mr. Antero Jarsta, the Head of Accounting and Financial Planning Department of Finnida, had visited our Project on 8th December 1992.

The World Bank resident representative in Nepal Mr. Joe Manickavasagam visited our project office, Butwal on 29th December 1992.

6. FINANCIAL REPORT

The budget for FINNIDA allocation is prepared for each calendar year starting on January 1st. The budget for HMG/N allocation is prepared for each Nepalese Fiscal year starting on July 16.

Both Finnida expenditure and HMG/N expenditure are monitored monthly, but the monthly periods do not coincide, they have about 15 days difference. This difference in the auditing periods does not, anyhow, cause any problems, because the auditing of FINNIDA contribution and HMG/N contribution are not interrelated.

6.1 FINNIDA Expenditure

Following financial presentations are attached:

- Budget 1992, matrix, January 1992, Appendix 10
- Projected expenditure 1990-93, January 1992, Appendix 11
- Expenditure matrix 1992, Appendix 12
- Expenditure matrix 1990,1991,1992, todate, Appendix 13
- Projected budget for 1993, 1994, Appendix 14

FINNIDA EXPENDITURE in million Finnish Marks Re:c:\symphony\fin'exp

Year	1990	1991	1992	1993	Total
Estimate					
Project Document	7,000	10,000	10,000	10,000	37,000
June 1990	6,235	-	-	-	-
September 1990	5,500	-	-	-	-
January 1991	3,952	12,180	12,000	8,868	37,000
August 1991	3,952	7,263	13,559	12,226	37,000
January 1992	3,953	7,265	11,242	14,540	37,000
Expenditure	3,953	7,265	11,699		22,917

6.2 HMG/N Expenditure

Following financial presentations on HMG/N are attached

- HMG/N budget 1991/92, Appendix 15
- HMG/N expenditure to 16 November 1992, Appendix 16

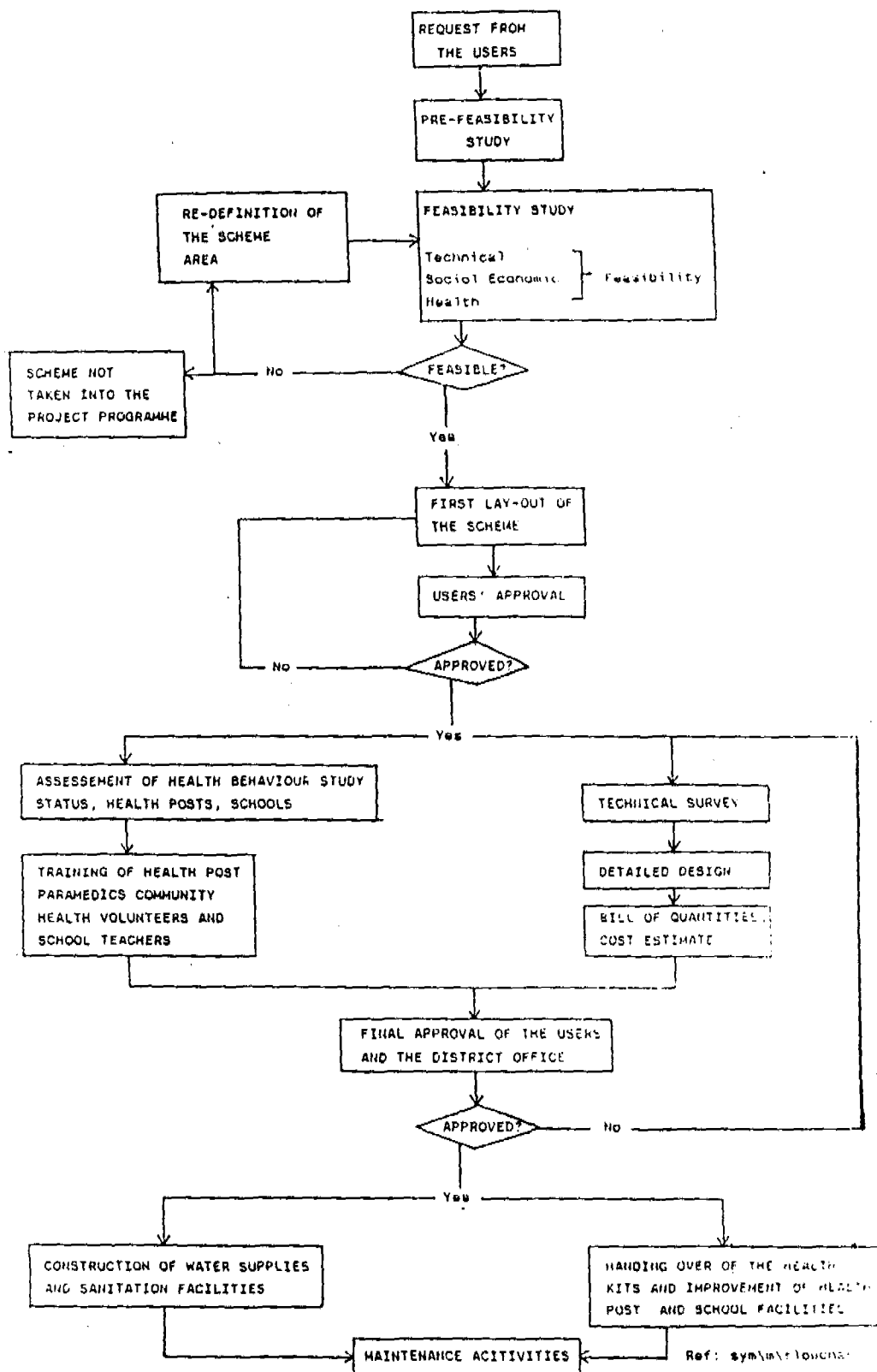
A summary of HMG/N budgets and expenditure is given below:

HMG/N BUDGET AND EXPENDITURE to Nov. 1991 in million Nepalese

Rupees

Year	1989/90	1990/91	1991/92	1992/93	Total
Budget	248	7,462	5,285	4,789	17,784
Expenditure	212	6,001	4,968	.84	11,181

FLOW CHART OF THE PROJECT ACTIVITIES



NUMERICAL TARGETS AND ACHIEVEMENTS

Revised January 1993 mn\trirep\nunfu3

ACTIVITY	Total Completed by 1.1.1992	Completed during the Year 1992	Total Completed by Dec 1992	Total Target by Dec 1993	Percentage Coverage of Target
STUDIES AND SURVEYS					
Prefeasibility Studies	69	32	101	120	84%
Feasibility Studies	63	14	77	120	64%
Detailed Design Surveys	32	36	68	120	57%
Health Behaviour Study	53	14	67	80	84%
Health Post Assessment	10	10	20	27	74%
School Assessment	68	70	138	298	46%
Water Quality Tests	174	156	330	(Target setting not relevant)	
DESIGN WORK					
Sets of Design Drawings	25	21	46	120	38%
Bills of Quantity	25	21	46	120	38%
IMPLEMENTATION (CONSTRUCTED)					
Hand Pumps with Slab	22	364	386	750	51%
Tap Stands	0	113	113	750	15%
Intakes	0	20	20	30	25%
Reservoirs	0	22	22	60	37%
Latrines and Urinals	3	17	20	460	4%
TRAINING					
Health Related Training					
Community Health Volunteers	88	59	147	744	20%
Village Health Workers	67	56	123	246	50%
Health Post Staff (Parameds)	55	40	95	54	176%
School Teachers Health Training	50	108	158	800	20%
Human Resource Development Training					
User Committee Training	85	416			ERR
Village Gravity Maintenance Workers	0	5	5	40	13%
Village Well Maintenance Workers	2	64	66	200	33%
Water Supply and Sanitation Technicians	48	27	75	60	125%
Basic Ground Water Training	10	21	31	45	69%
Overseer and other Senior Staff	18	53	71	60	118%

The coverage target will be revised following the Steering Committee Meeting 17.12.92. (Falling outside this reporting period).

Our ref: SNV\LOTUS\0_DATE

CODE #	SCHEME NAME	DIST/ YEAR	SCH TYPE	WARDS	BASE POP	REQUEST RECEIVED/ OR RENEWAL	PRE-FEAS- BILITY STUDY	FEASIBILITY STUDY				DESIGN MEETING IN VILL.	DETAIL SURVEY	HEALTH BEHAV. STUDY	DETAIL DESIGN	HEALTH TRAINING				UC SEMINAR	AGREEMENT	CONST- RUCTION STARTED	CONST- RUCTION COMPLETED
								RESOURCE MAPPING	HEALTH MAPPING	SOURCE MEASUREM	SOCIAL FEASIB.					CHV	SCHOOL TEACHERS	VHM	HP PARAMEDS				
11010	DUDARAKSIA I/Ram	Rup 47/48	hp	7	2717	SEP 90	SEP 90	DEC 90	DEC 90	NA	JAN 91	FEB 91	MAR 91	NOV 90	MAR 91	NOV 90	NOV 90	OCT 90		JUN 91	APR 91	APR 91	MAR 92
11020	DUDARAKSIA II/Ram	Rup 47/48	hp	59	2233	AUG 91	SEP 90	DEC 90	DEC 90	NA	JAN 91	FEB 91	MAR 91	NOV 90	MAR 91	NOV 90	NOV 90	AUG 91	AUG 91	FEB 92	FEB 92	FEB 92	
11050	DUDARAKSIA/Ram	Rup 47/48	ds	16	800	SEP 90	SEP 90	DEC 90	DEC 90		JAN 91												
11051	DUDARAKSIA III/Ram	Rup 47/48	hp	12348	5062	SEP 90	AUG 90	DEC 90	DEC 90		JAN 91	DEC 92			DEC 92								
11060	SALJHANDI/Ram	Rup 47/48	hp	1	420	JUL 90	AUG 90	AUG 90	AUG 90	NA	AUG 90		-	OCT 90	DEC 91	OCT 90	NOV 90	OCT 90	AUG 91	DEC 90	FEB 91	FEB 92	JUL 92
11070	SALJHANDI/Bhusal	Rup 47/48	grav	127	2060	JUL 90	AUG 90	AUG 90	AUG 90	FEB 91	AUG 90	AUG 90	SEP 90	OCT 90	FEB 91	OCT 90	NOV 90	OCT 90	AUG 91	DEC 90	FEB 91	FEB 91	
11075	SALHANDI/	Rup 49/50	hp	589	1591			OCT 92							DEC 92								
11076	SALHANDI/	Rup 49/50	ds	36	1647			OCT 92							DEC 92								
11080	DEVDAHA/Ram	Rup 48/49	hp	14689	6789	JUN 91	FEB 91	AUG 91	AUG 91	NA	AUG 91		DEC 91	MAY 92	DEC 91		DEC 92	AUG 91	AUG 91	FEB 92	FEB 92	JAN 92	
11085	DEVDAHA/Ram	Rup 48/49	hp	2357	5962									MAY 92			DEC 92						
11090	DEVDAHA/Ram	Rup 48/49	grav	39	1600	JUN 91	FEB 91	AUG 91	AUG 91	JUN 91	AUG 91			MAY 92			DEC 92	AUG 91	AUG 91				
11095	DEVDAHA/Ram	Rup 48/49	dset	123459													DEC 92						
11100	PORAHAW/Ram	Rup 48/49	hp	12345789	10194	MAR 91	MAR 91	MAY 91	MAY 91	NA	APR 91	FEB 92	FEB 92	DEC 91	MAR 92	OCT 92	SEP 92	AUG 91	AUG 91	APR 92	APR 92	APR 92	
11110	PORAHAW/Ram	Rup 48/49	dv	456	2100	MAR 91	MAR 91	MAY 91	MAY 91	APR 91	APR 91			DEC 91		OCT 92	SEP 92	AUG 91	AUG 91				
11120	MASINA/Ram	Rup 48/49	hp	123456789	4237	JUN 91	JUN 91	AUG 91	AUG 91	NA	AUG 91	NOV 91		DEC 91	FEB 92		DEC 92	AUG 91	AUG 91	MAR 92	MAR 92	MAR 92	
11130	TANNAGAR/Ram	Rup 48/49	hp	123	804	FEB 91	APR 91	MAY 91	MAY 91	NA	MAY 91	JUL 91		DEC 91	MAR 92			AUG 91	AUG 91	APR 92	APR 92	APR 92	
11150	TANNAGAR/Ram	Rup 48/49	reha	35789	2527	APR 91	MAR 91	MAY 91	MAY 91	JUN 91	JUN 91	JUN 91	MAY 92		DEC 92			AUG 91	AUG 91	DEC 92	JAN 93		
11151	TANNAGAR/Ram	Rup 48/49	grav	6																			
11155	TANNAGAR/Ram	Rup 48/49	dv	349	5035	FEB 91	APR 91	MAY 91	MAY 91	NA	MAY 91							AUG 91	AUG 91				
11140	GAJEDI/Ram	Rup 48/49	hp	1	1151	JUL 91	JUL 91	JUL 91	JUL 91	NA	JUL 91	JUL 91	AUG 91	DEC 91	JUL 91	SEP 92	SEP 92	AUG 91	AUG 91		JUL 91	JUL 91	SEP 91
11145	GAJEDI/Ram	Rup 48/49	hp	23456789	7000	JUL 91	JUL 91	NOV 91	NOV 91	NA			DEC 91	DEC 91	DEC 91					DEC 91	DEC 91	DEC 91	
11190	REDCROSS D/W REHAB	Rup 48/49	reha		3960		MAR 92						MAR 92		APR 92							APR 92	
11180	SIMALAR	Rup		123456789	6941																		
11170	LAXMI NAGAR	Rup			6941							DEC 92	JAN 92										

KAPILBASTU SCHEME FOLLOW UP AT END OF JANUARY 93

Our ref: SNV\LOTUS\O_DATE

CODE #	SCHEME NAME	BIST/ YEAR	SCH TYPE	WARDS	BASE POP	REQUEST RECEIVED/ OR RENEWAL	PRE-FEAS- IBILITY STUDY	F E A S I B I L I T Y S T U D Y				DESIGN MEETING IN VILL.	DETAIL SURVEY	HEALTH BEHAV. STUDY	DETAIL DESIGN	H E A L T H T R A I N I N G				UC SEMINAR	AGREEMENT	CONST- RUCTION STARTED	CONST- RUCTION COMPLETED	
								RESOURCE MAPPING	HEALTH MAPPING	SOURCE MEASUREM	SOCIAL FEASIB.					CHV	SCHOOL TEACHERS	VHW	HP PARAMEDS					
13010	BANGANGA/Ram	Kap 47/48	hp	15789	2282	OCT.90	OCT.90	DEC.90	DEC.90	FEB.91	DEC.90	FEB.91	FEB.91	DEC.90	JUL 91	NOV.91	MAR.91	OCT.90	MAR.91	MAY.91	JUN 91	JUN 91		
13020	BANGANGA/Ram	Kap 47/48	dw	12679	4338	OCT.90	OCT.90	DEC.90	DEC.90	FEB.91	DEC.90	FEB.91	APR.91	DEC.90	AUG.91		DEC 92	OCT.90	MAR.91	MAR.91		APR 92		
13030	BHALWAR/Ram	Kap 47/48	hp	12345	2282	OCT.90	NOV.90	DEC.90	DEC.90	MAR.91	DEC.90	MAR.91	APR.91	DEC.90	MAY.91	NOV.91	OCT.90	OCT.90	JUL.90	MAY.91	JUN 91	JUN 91		
13040	BHALWAR/Ram *	Kap 47/48	dw	678	1306	OCT.90	NOV.90	DEC.90	DEC.90	MAR.91	DEC.90	MAR.91	APR.91	MAR.91	AUG.91		NOV 92	OCT.90	JUL.90					
13050	GORSINGHE/Ram	Kap 47/48	hp	1234589	5009	OCT.90	SEP.90	MAR.91	NOV.90	NA	MAR.91	MAY 91	MAY 91	NOV.90	FEB.91	NOV.90	MAR.91	OCT.90	JUL.90	MAR.91	APR.91	MAR.91		
13070	MOTIPUR/Ram	Kap 48/49	hp	1234589	2200	OCT.91	JUN.91	APR 92	APR 92		APR 92						NOV 92	OCT.90	MAR.91					
13080	MOTIPUR/Ram	Kap 48/49	dw	67	1826	OCT.92	JUN.91	APR 92									NOV 92	OCT.90	MAR.91					
13100	GAJERA/Ram	Kap 48/49	hp	123456789	7600	DEC.91	DEC.91	MAR 92	MAR 92		MAR 92	NOV 92			DEC 92			OCT.90	MAR.91	DEC 92				
13120	SHOURA/Ram	Kap 48/49	hp	123456789	2280	JAN.92	APR.91	MAR 92	MAR 92		JUN 92	JUN 92	JUN 92		AUG 92			OCT.90	MAR.91	AUG 92	AUG 92	AUG 92		
13130	HATHOUSA/Ram	Kap 48/49	hp	123456789	8000	DEC.91	DEC.91	FEB 92	FEB 92		MAR 92	MAY 92	JUN 92	SEP 92	AUG 92		DEC 92	DEC 92	DEC 92	MAY 92	JUN 92	AUG 92		
13140	BAKORIA/Ram	Kap 48/49	hp	12	790	JUL 91	JUL 91	JUL 91	JUL 91	NA	JUL 91	JUL 91	JUL 91		JUL.91	JUL.91	JUL.91	AUG.91	AUG.91		JUL.91	JUL.91	MAR 92	
13060	MAHENDRAKOT REHAB/	Kap 47/48	grav	6789	2650	OCT.90	NOV.90	DEC.90	DEC.90		DEC.90	MAR.91	DEC 90	DEC.90	FEB.91	DEC.90	MAR.90	OCT.90	JUL.90	MAR.91	MAR.91	APR.91		
13150	MAHENDRAKOT/Ram	Kap 48/49	hp	12345	3757	OCT 90	NOV 90	MAR 92	MAR 92		MAY 92	MAY 92	MAY 92		MAY 92					JUL 92	JUN 92	JUN 92		
13160	RAJPUR	Kap 49/50	hp	123456789	2737		MAY 92	JUN 92	JUN 92		JUN 92	JUN 92			JUN 92					JUN 92	JUN 92	JUN 92		

CODE #	SCHEME NAME	DIST/ YEAR	SCH TYPE	WARDS	BASE POP	REQUEST RECEIVED/ OR RENEWAL	PRE-FEAS- IBILITY STUDY	FEASIBILITY STUDY				DESIGN MEETING IN VILL.	DETAIL SURVEY	HEALTH BEHAV. STUDY	DETAIL DESIGN	HEALTH TRAINING				UC SEMINAR	AGREEMENT	CONST- RUCTION STARTED	CONST- RUCTION COMPLETED	
								RESOURCE MAPPING	HEALTH MAPPING	SOURCE MEASUREM	SOCIAL FEASIB.					CHV	SCHOOL TEACHERS	VHM	HP PARAMETS					
14020	SINICHOOR/Thapa	Gul 47/48	ps	123456789	163	DEC.90	NOV.90	DEC.90	DEC.90	JAN.91	DEC.90	FEB.91	NOV.90	JAN.91	MAR.91	JAN.91	JUN.91	MAY.90		APR.91	APR.91	APR.91		
14010	SINICHOOR REHAB/Th	Gul 47/48	grav	12345678	1616	DEC.90	NOV.90	DEC.90	DEC.90	JAN.91	DEC.90	FEB.91	NOV.90	JAN.91	MAR.91	JAN.91	JUN.91	MAY.90		APR.91	APR.91	APR.91	JUL 92	
14015	SINICHOOR II	Gul 47/48	grav	12345678	3046																			
14030	AMAPUR/Thapa	Gul 47/48	grav	12345678	2070	DEC.90	NOV.90	DEC.90	DEC.90	DEC.90	DEC.90	FEB.91	MAR.91	APR.91	APR.91		AUG.91			APR.91	APR.91	APR.91		
14040	AMAPUR/Thapa	Gul 47/48	grav	9	455	DEC.90	NOV.90	DEC.90	DEC.90	DEC.90	DEC.90	FEB.91	MAR.91	APR.91			AUG.91							
14050	AMAPUR/Thapa	Gul 47/48	grav	2	212	DEC.90	NOV.90	DEC.90	DEC.90	DEC.90	DEC.90	FEB.91	MAR.91	APR.91			AUG.91							
14060	THORGA/Thapa	Gul 47/48	grav	89	0	AUG.90	NOV.90	FEB.91	FEB.91	JUN.91	FEB.91	MAY.91	MAR.91											
14070	THORGA REHAB/Thapa	Gul 47/48	grav	123456789	1425	OCT 91	NOV.90	FEB.91	FEB.91	JUN 91	JUN 91	JUN 91	JUN 91	JUN 91	JUN 91	JUN 91	DEC.91	MAR 92	APR.92	APR.92	SEP 91	SEP 91	JAN 92	
14080	THORGA/Thapa	Gul 47/48	ps	123456789	1168	-	NOV.90	FEB.91	FEB.91	JUN 91						NOV.91	JUN.91	DEC.91	MAR 92	APR.92	APR.92			
14090	JHUBUNG/Thapa	Gul 47/48	grav	789	555	DEC.90	NOV.90	FEB.91	FEB.91	MAR.91	FEB.91	APR.91	MAR.91	NOV.91	JUN.91	DEC.91	MAR 92	MAY.90	APR.92	SEP 91	SEP 91	JUN.91		
14100	JHUBUNG REHAB/Thap	Gul 47/48	grav	12345678	4664	DEC.90	NOV.90	JUN.91	JUN.91	JUN 91	JUN.91	DEC 92												
14110	CHUREK/Thapa	Gul 47/48	grav	123	476	DEC.90	NOV.90	FEB.91	FEB.91	MAR.91	FEB.91	MAR 91	MAR.91	JUL 91	JUN.91	DEC.91	MAR 92	APR.92	APR.92	SEP 91	SEP 91	JUN.91		
14115	CHUREK II		grav		590																			
14120	BHATUKUNA/Thapa	Gul 47/48	grav	789	1426	JAN.91	NOV.90	JUN.90	JUN.91	JUN 91	JUN.90	JUN.91	JUN.91	NOV.91	JUN.91	DEC.91	MAR 92	APR.92	APR.92	SEP 91	SEP 91	DEC 91		
14130	KHADGAKOT/Thapa	Gul 47/48	grav	123456789	2800	MAR.91																		
14140	MARBHUGN/Thapa	Gul 48/49	grav	1234	1600	MAR.91	MAY.91	MAY.91	MAY.91	MAY.91	MAY 91	FEB 92												
14150	MARBHUGN/Thapa	Gul 48/49	grav	678	800	MAR.91	MAY 91	MAY 91	MAY 91	MAY 91	MAY 91	FEB 92												
14160	MARBHUGN/Thapa	Gul 48/49	grav	5	324	MAR.91	FEB 92	FEB 92	FEB 92															
14170	ARJE/Thapa	Gul 48/49	grav	56789	1860	FEB 92	APR.91	FEB 92	FEB 92	APR.91	FEB 92	MAR 92	MAR 92											
14175	ARJE/Thapa		grav	1234	719																			
14180	ARLANKOT/Thapa	Gul 48/49	grav	12	661	MAR.91	JAN.92	JAN.92	JAN.92	JAN.92	JAN.92	NOV 92	MAR 92	NOV 92										
14190	ARLANKOT/Thapa	Gul 48/49	grav	345	1020	MAR.91	JAN.92	JAN.92	JAN.92	JAN.92	JAN.92	NOV 92	JAN.92	Whole VDC	is under detail designing									
14200	ARLANKOT/Thapa	Gul 48/49	grav	6789	1510	MAR.91	JAN.92	JAN.92	JAN.92	JAN.92	JAN.92	NOV 92	MAR 92	Whole VDC	is under detail designing									
14210	ARLANKOT/Thapa	Gul 48/49	grav	6	175	MAR.91	JAN.92	JAN.92	JAN.92	JAN.92	JAN.92	NOV 92	MAR 92	Whole VDC	is under detail designing									
14220	BHURTUNG/Thapa	Gul 48/49	grav	123456789	856	MAR.91	-			APR.91														
14230	BHURTUNG/Thapa	Gul 48/49	grav	123456789	800	MAR.91	-			APR.91														
14240	KHARJYANG/Thapa	Gul 48/49	grav	123456789	2522			Detail study of the source dispute and it's discharge in						dry season should be checked finalise before undertaking										
14250	MALAYAGIRI/Thapa*	Gul 48/49	grav	1234	880	MAY.91	FEB 92				FEB 92	FEB 92	FEB 92											
14252	MALAYAGIRI/Thapa	Gul 48/49	grav	1	104		FEB 92				FEB 92	FEB 92	FEB 92											

RURAL WATER SUPPLY AND SANITATION PROJECT
LUMBINI ZONE

6.2.1993
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Summary Report of the
Hygienic Water Quality Data

February 1993

1. GENERAL

This report is concentrating on describing the research work done on the hygienic water quality in the Rural Water Supply and Sanitation Project's scheme areas in Lumbini Zone. The Project is running a zonal water laboratory, serving the needs of the water supply construction programme. Also other clients, like the Nepal Water Supply Corporation are using water quality laboratory.

The total number of samples analyzed so far (February 1993) is 409.

The laboratory is using the MPN method (also called the multiple tube method) for analysing the bacteriological quality of the water. It's capacity is 7 samples a week and it is run by two persons - the laboratory technician and his assistant. They are also responsible for the sample collection as per the requests from the Districts.

The physico-chemical water testing is not done in the same regularity as the bacteriological testing. Mostly the suspect cases for high calcium or iron content are tested. The samples for physico-chemical tests are sent to Kathmandu as good laboratory facilities exist there.

2. WATER QUALITY STANDARDS TO BE USED IN THE PROJECT

In the absence of other water quality standards, the WHO standards for the hygienical water quality have been used.

WHO standards for bacteriological quality of the rural water supplies:

- a) Untreated water entering the distribution system (spring and stream sources for the gravity water supplies)

faecal coliforms	0	number/100 ml
total coliforms	3	number/100 ml

- b) Unpipd water supplies (hand pump and other wells)

faecal coliforms	0	number/100 ml
total coliforms	10	number/100 ml

As many of the handpumps are, however serving quite a low number of users, the above requirements seem very strict. Especially in the view of the Project's private handpump improvement programme, the requirements should be relaxed.

3. SAMPLING ROUTINE OF THE LABORATORY

In principle the sampling routine should be as follows:

- a) All proposed gravity sources are tested during the feasibility stage, once during the rainy season and once during the dry season. Due to the inaccessability within 6 hours, fresh and reliable samples from all parts of the project area are not available. Especially the testing Arghakhanchi and Gulai scheme areas is suffering from this fact.
- b) Samples from existing water supply sources, to assess the pollution level of present water supply are taken on random basis. Especially private hand pumps have been under special interest recently.
- c) Sampling of the completed project handpump wells and gravity water supply systems.

4. DIFFERENT FACTORS INFLUENCING THE HYGIENIC WATER QUALITY

4.1 Source type and protection.

The distribution of the potable/suspicious/polluted samples by different source types is presented in the Table 1. Samples from completed gravity systems have not been taken in the quantity needed for any conclusions

Table 1. Bacteriological quality of the different source types

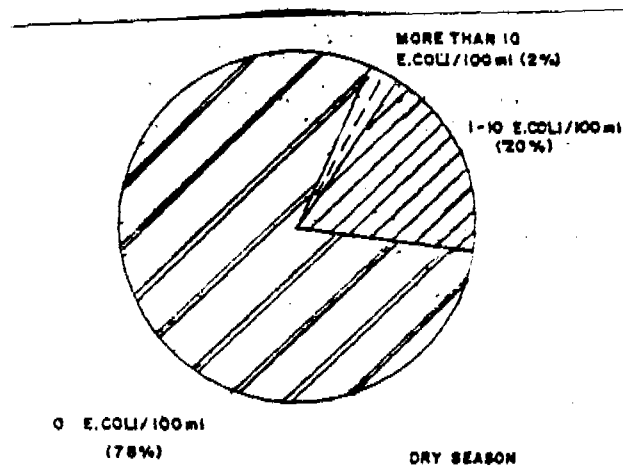
SOURCE TYPE	Total sampling	NUMBER OF SAMPLES IN DIFFERENT CATEGORIES of E.Coli pollution (E.Coli pc/100)ml. (% of all samples of the source type)		
		0 (%)	1-10 (%)	More than 10 (%)
GRAVITY SOURCES				
Unprotected springs	44	29 (67%)	15 (34%)	0 (0%)
Streams	52	29 (56%)	16 (31%)	7 (13%)
WELLS				
Tubewells with platform	99	90 (91%)	8 (8%)	1 (1%)
Tubewells without platform	50	38 (76%)	10 (20%)	2 (4%)
Open wells	23	11 (48%)	12 (52%)	0 (0%)

4.2 Season

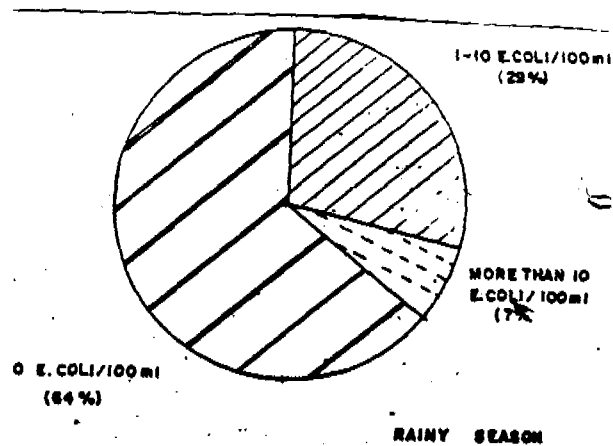
The affect of season in the total sampling is shown in the two pie charts of the Figure 1.

Figure 1. Bacteriological levels (E. Coli count) of all samples in the dry season (pie chart a) and rainy season (pie chart b).

- a) Distribution of samples (% of total) in different pollution classes during the dry season



- b) Distribution of samples (% of total) in different pollution classes during the rainy season



4.3 Tubewell

The effect of the depth of the tubewells in relation to two other factors (season and protection) is demonstrated in the Table 2 below.

Table 2. Bacteriological quality of the tubewells in the Terai

Depth of the tube well (m)	Average value of E. Coli No./100 ml (in brackets the number of samples in each group)			
	Dry season		Rainy Season	
	Platform	No Platform	Platform	No Platform
0 - 10	0.73 (11)	0 (24)	0 (1)	0.73 (11)
11 - 20	0 (7)	0.14 (7)	0 (2)	1 (1)
21 - 30	- (0)	0 (3)	0.25 (16)	0.2 (5)
31 - 40	0 (10)	0 (2)	0 (16)	3 (2)
41 - 50	0 (3)	0 (1)	0 (9)	0.5 (2)
51 - 60	0 (1)	0 (1)	0 (5)	-
61 and more	0.25 (8)	0.3 (3)	0 (2)	-

Due to the small number of samples in each group, statistical analysis of Table 2. is difficult. In the groups of very shallow wells and generally the samples taken during the rainy season, there seems to be slightly more polluted samples. Also polluted samples in general in the tubewell data are very few and pollution levels of those are also low.

4.3 Gravity sources

Table 3. shows the influence of the season to the water quality of the unprotected gravity sources. Unfortunately number of protected sources analysed is too low to draw any conclusion.

Table 3 a) Unprotected gravity sources, influence of season to the pollution levels, number of samples in each group

TYPE OF SOURCE	DRY SEASON Number of E.Coli/100 ml			RAINY SEASON Number of E.Coli/100 ml		
	0	1-10	10 or more	0	1-10	10 or more
	Stream	27	13	3	2	3
Spring	22	3	0	7	12	0
Total gravity	49	16	3	9	15	4

Table 3 a) Unprotected gravity sources, influence of season to the pollution levels, % of samples in each group

TYPE OF SOURCE	DRY SEASON Number of E.Coli/100 ml			RAINY SEASON Number of E.Coli/100 ml		
	0	1-10	10 or more	0	1-10	10 or more
	Stream	63%	30%	7%	22%	33%
Spring	88%	12%	0%	37%	63%	0%
Total gravity	72%	24%	4%	32%	79%	14%

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Unfortunately the number of samples in each group is quite low, but still the effect of the rainy season can be seen. There are somewhat more samples in the categories of 1-10 and more than 10 E.Coli/100 ml during the rainy season.

5. Conclusion

From the available data the following conclusions could be drawn.

- generally water quality in all tubewells during the dry season is good.
- water quality in tubewells is generally very good, very few polluted samples were found. Wells less than 10m of depth seem to have pollution, during all seasons and with or without platform.
- water quality deteriorates somewhat in the unprotected gravity sources during the rainy season, although more rainy season sampling must be done to verify this.

6. Recommendation

More research should be done specifically for shallow depth wells with and without platform. With more attention being given to other possible influencing factors.

7. Future emphasis of sampling

More tubewell data to form shallow and deep, with and without platform tubewells is needed.

More data on protected and unprotected gravity sources, especially during the rainy season is needed.

COURSES ORGANIZED DURING 1992

15.2.1993

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1992

COURSE NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PARTICIPANTS
TECHICIANS													
Basic Foreman Training (1st WSST course)	****					**	****	**					42
Upgrading Course (2nd WSST course)											****	****	12
Final WSST Training (3rd WSST course)								****	****				12
Basic Groundwater Theory and Construction course for Technicians						****							16
Institutional latrine construction		****					**					****	21
Community participation for technicians							*						10
OVERSEERS													
Preliminary surveys and designs									*				20
Design of gravity water supplies; (Helvetas/Pokhara)	**												9 (started in 1991)
Design of gravity water supplies; (Butwal)										****			20
Basic Groundwater course						**	**						5
Groundwater for Overseers (Central HRD Unit)						****							4
COMMUNITY													
Users' Committee Orientation	* *	* *	* (When needed in the scheme areas)	* *	* *	* *	* *	* *	* *	* *	* *	* *	416
Village Maintenance Worker training (Gravity systems)		****											5
Village Maintenance worker training (hand pumps)		**							*	*			67

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SHORT DESCRIPTION OF THE COURSE CONTENTS

The following training activities have been undertaken during the year:

A. Orientation and training in community participation skills:

1. **Overseer course in preliminary surveys and designs.** A one week course to familiarize the DWSO overseers and assistant engineers with the RWSSP procedures. A pre-feasibility, feasibility study and a design meeting is undertaken in a scheme area during the course. Course organized by RWSSP/PIU. This course was meant to give insight into the pre-construction and community involvement activities.
2. **Community participation course for technicians.** A one week course for technician level staff in RWSSP procedures, communication skills and community mobilization. A field exercise in resource mapping is undertaken during the course. Course organized by RWSSP/PIU.

B. Technical training

1. **Water Supply and Sanitation Technician training.** The system to produce the Water Supply and Sanitation technicians is based on the three year programme - three two months courses are organized and the trainees are supposed to work in the field in the mean time. Water Supply and Sanitation Technician training courses:
 - 1.1 **Basic Foreman Training** A two months course in basic skills in constructing a gravity water supply scheme as a community effort. A small gravity scheme is constructed during the course. Course organized by Helvetas/RD in Pokhara. This year the course was organized in Makaanpur, Tanahu District.
 - 1.2 **Upgrading Training.** Second stage in the WSST training. A two months course giving more practice in gravity schemes and sanitation construction. A small gravity scheme is constructed during the course. Course organized by Helvetas/RD in Pokhara. This year the course was organized Tanahun District.
 - 1.3 **Final Foreman Training.** This is a two months course and those who pass this will get the certificate of the Water Supply and Sanitation technician. A small gravity scheme is constructed during the course. Course organized by Helvetas/RD in Pokhara. This year the course was

organized Tanahun District.

Other courses in technical training:

3. **Design of Gravity Water Supplies.** One months course in technical survey and design of a gravity scheme using the CWSS/RWSSP design criteria. In the year 1992 this course was organized in Butwal as a cooperation of the Helvetas/Pokhara and RWSS Project.
4. **Basic groundwater training.** A one month course in survey and construction of a tubewell scheme with a sludging method. A groundwater scheme area is surveyed during the training and 3 - 5 tubewells, complete with platforms and drainage, are constructed during the training. Course organized by RWSSP/PIU in Rajpur village in Kapilbastu.
5. **Institutional latrine construction.** This was organized twice during the year. A practical course in how to mobilize the school/health post for the latrine construction and actual construction techniques of the VIP latrines. 4 - 5 latrines were constructed during each course. Courses were meant for technician level staff.

C. Village level training

1. **Users Committee training.** Three different seminars, each one to two days, is organized in each scheme area:
 - first seminar is before the construction activities start. All the responsibilities of each party and the rules of the project implementation are made clear. Agreement between the village and the District Engineer is signed after this seminar.
 - second seminar is organized during the construction to find out possible problems. Two large seminars of several project areas were organized last year, one in Gulmi and one in Kapilbastu.
 - third seminar, after the construction is completed, is emphasising the operation and maintenance.
2. **Village Maintenance Worker training.** Village maintenance workers are trained in Pokhara by Helvetas/RD for one month in case of the gravity water supplies. For the hand pumps schemes a two days course is organized by the District Water Supply Office in the scheme areas.

SHORT DESCRIPTION OF THE COMMUNITY PARTICIPATION ACTIVITIES IN EACH RWSSP SCHEME AREA

As described in the previous work plans, the community involvement is not considered to be a separate subproject, but a method of implementation of the water supply, sanitation and health education programme. A step-by-step procedure of project implementation has been developed to guarantee the involvement of the communities in the planning, implementation and management work of the schemes. This step-by-step procedure is briefly presented in a form of a flow chart in the Appendix 1.

The community involvement activities are present in all subprojects, and especially emphasized in the human resource development and health education and sanitation programmes. Obligatory community involvement activities are also being implemented during the water supply programme.

The community participation activities in each scheme area are, in short, as follows:

1. A request must be received from the villagers before the project enters into any negotiations with the village.
2. Discussions with a number of villagers and key-informants during the pre-feasibility study, to verify the genuine request and need (present coverage of water supply).
3. Users' Committee formation (by the community)
4. Resource mapping (including water resources, health resources, population etc.) done by the inhabitants in all the clusters of a Village Development Committee, during the feasibility study. Focus group discussions. Source selection and solving the possible source disputes done by the community.
5. Design meeting with the villagers. Decisions over the type of water supply, lay-out and location of main structures and tap stands/wells done in a wardwise meeting by the community.
6. Collection of the maintenance and health fund by the community.
7. Community selects candidates for Village Maintenance Worker and Community Health Volunteer training.
8. A seminar organized to the users' committee, to introduce the design of the scheme and the construction procedures. Management, manpower etc. issues discussed.
9. Agreement made between the DWSO and the Users' Committee.
10. Community organizing the manpower, skilled workers, collection of local materials and generally the management of the construction work together with the DWSO technician. Village Maintenance Worker's on-the-job training. CHV training.
11. A discussion meeting for several users' committees in ongoing scheme areas to discuss the problems of construction work.
12. Second seminar for the Users' Committee, discussing operation and maintenance, fund raising and organizing labour for main-

APPENDIX 7/2

- tenance, accounting etc. Organized after the completion of the scheme.
13. Village Maintenance Workers formal training, a one month training course.
 14. Completion ceremonies of the scheme. Formal handing over certificates.

LIST OF MOTOR CYCLE FORM TRANSPORT SECTION.

S/N	VEHICLE NO.	VEHICLE TYPE
1.	16-0-46	XL Honda
2.	16-0-47	XL Honda
3.	16-0-48	XL Honda
4.	16-0-49	XL Honda
5.	16-0-50	XL Honda
6.	16-0-51	XL Honda
7.	16-0-52	Hero Honda
8.	16-0-53	Hero Honda
9.	16-0-87	XL Honda
10.	16-0-88	XL Honda
11.	16-0-89	XL Honda
12.	16-0-90	XL Honda
13.	16-0-91	XL Honda
14.	16-0-92	XL Honda
15.	16-0-93	XL Honda
16.	16-0-94	XL Honda
17.	16-0-118	Hero Honda
18.	16-0-119	Hero Honda
19.	16-0-120	Hero Honda
20.	16-0-121	Hero Honda
21.	16-0-122	Hero Honda
22.	16-0-123	Hero Honda
23.	16-0-124	Hero Honda
24.	16-0-125	Hero Honda
25.	16-0-126	Hero Honda
26.	Ba.A.B. 2682	Hero Honda
27.	Ba.A.B. 3803	Hero Honda
28.	Ba.A.Ma. 5407	Hero Honda

LIST OF VEHICLE FROM TRANSPORTATION SECTION

S/N	VEHICLE NO.	VEHICLE TYPE
1.	16-0-39	Single Cabin
2.	16-0-40	Single Cabin
3.	16-0-41	Station Wagon
4.	16-0-42	Double Cabin
5.	16-0-43	Double Cabin
6.	16-0-44	Tata Truck
7.	16-0-45	Tata Truck
8.	16-0-84	Station Wagon
9.	16-0-85	Station Wagon
10.	Lu.A.Ta. 1244	Ford Tractor
11.	Lu.A.Ta. 1245	Ford Tractor
12.	Lu.A.Ta. 1253	Ford Tractor
13.	Lu.A.Ta. 1272	Belarus Tractor
14.	Lu.A.Ta. 1274	Belarus Tractor
15.	Lu.A.Ta. 1275	Belarus Tractor
16.	Lu.A.Cha. 243	Mahindra Jeep
17.	Ba.A.Ya. 1331	Toyota GL. Car
18.	Ba.A.Ya. 104	Toyota Land Cruiser

PERSONNEL INFORMATION OF THE PIU

A. PIU/HMG STAFF

Project Manager	1.1.92-1.11.92	Mr. D.B. Shrestha
Project Manager	1.12.92-31.12.	Mr. A.K. Banjitkar
Engineer		Mr. D. Gubedi
Overseer		Mr. N. Shrestha
Overseer		Mr. D. Pandit
Health Officer		Mr. H. Acharya
Accountant		
Administ. Asst.		Mr. B. Shrestha
Peon and Guards		Total 3

B. CONSULTANT'S STAFF

Long Term Field Staff

Project Coordinator	1.1.-15.5.92	Mr. T. Arola
Project Coordinator	15.5.-31.12.92	Mr. J. Notley
Rural Water Supply and Sanitation Adviser/ Procurement Officer		Mr. J. Piekkari
Health Advisor	1.1. - 1.8.92	Dr. V. Shrestha
Health Advisor	1.11.-31.12.92	Mr. K. Upadhaya
Training Coordinator		Ms. M. Notley
Water Supply and Sanitation Engineer		Mr. R. Bhusal
Administrative Officer		Mr. K. Adhikary
Liaison Officer		Mr. S. Wagley
Health Training Officer		Ms. K. Pandey
Health Training Officer		Ms. U. Shrestha
Community Training Off.		Mr. B.B. Thapa
Community Training Off.		Mr. J. Prasain
Community Training Off.		Mr. Ram Bdr. K.C.
Data analyst		Mr. S. Vaidya

Support Services' Personnel

Procurement Assistant	Mr. R. K. Lohani
Accountant	Ms. L. M. Rana
Jn. Procurement Asst.	Mr. S. G. Thapa
Secretaries	5 persons
Storekeepers	2 persons
Other support services' staff; drivers, guards, etc.	35 persons

Health Education and Sanitation Programmes' Assistant Staff

Health Training Assistant	2 persons
Laboratory staff	2 persons
Village Hygiene Promoters	3 persons

District Water Supply Development Planning Personnel

Senior DDP Engineer 1.1.-1.11.92	Mr. P. Sista (temporary)
DDP Engineer	Mr. R. Bhora (temporary)
Draughtsmen	3 persons (temporary)
Overseers	7 persons (temporary)
Enumerators	45 persons (temporary)

Home Office Personnel

Home Office Coordinator 1.1.-31.4.92	Ms. A. Keinanen
Home Office Coordinator 1.5.-31.12.92	Mr. E. Ovaskainen
Home Office Secretary	Ms. Sirkku Koivisto

Short Term Consultants

DDP Advisor 1.3.-1.4.92	Mr. O. Purhonen
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FILE:\SYHP\DATA\JEREMY\BUD'92F

SUMMARY PRESENTATION OF DRAFT FINNIDA BUDGET FOR 1992

	SUB TOTAL	321**	322*	323**	331*	332*	333*	212*	213*	214*	215*	211*	231**
1 CONST OF W/S +TOILET	5005132	4146000	120000	30000	567306	141826	0	0	0	0	0	0	0
4 GENERAL/OTHER CONSTR COST	518000	250000	20000	5000	96000	10000	137000	0	0	0	0	0	0
5 WORKSHOP AND STORES	92000	5000	45000	0	40000	0	2000	0	0	0	0	0	0
6 LABORATORY	40000	22000	7000	0	11000	0	0	0	0	0	0	0	0
7 DISTRICT DEV PLAN	340000	234000	84000	0	19000	0	3000	0	0	0	0	0	0
8 DISTR/INSTI/SCHEME SUPP	157000	0	20000	0	55000	0	10000	0	72000	0	0	0	0
9 H E S P	315000	139000	72000	0	17000	0	3000	42000	0	42000	0	0	0
10 HUMAN RESOURCES DEV	413500	21000	7500	3000	254000	0	12000	92800	0	23200	0	0	0
11 OFFICE HELSINKI	25000	0	0	0	19000	0	4000	0	0	0	0	2000	0
12 OFFICE NEPAL	340000	117000	54000	2000	149000	10000	8000	0	0	0	0	0	0
13 VEHICLES	450000	282000	60000	0	37000	44000	27000	0	0	0	0	0	0
14 CONTINGENCIES	769563	384782	76956	76956	76956	76956	76956	0	0	0	0	0	0
15 CONSULTANT FEE	2580000	0	0	0	0	0	0	0	2580000	0	0	0	0
16 CONS/STAFF COSTS	197000	0	0	0	0	0	0	0	0	0	0	25000	172000
	11242195	5600782	566456	116956	1341262	282783	282956	134800	2652000	65200	0	27000	172000

Budget 1992, matrix, January 1992, Appendix 10

EXPENDITURE FOR 1990 & 1991, BUDGET SUMMARY FOR 1992, TENTATIVE BUDGET SUMMARY FOR 1993

FILE NAME C:\SYMPHONY\DATA\jeremy\bud92\F

	EXPENDITURE*	EXPENDITURE	BUDGET	TENTATIVE	PROJECT SUB
	1990	1991	1992	1993	TOTAL
1 SCHEME AND TOILET CONSTRUCTION	243,687.71	3,115,849.32	5,005,132	7,953,285	16,317,954
4 CAPITAL INVEST/SCHEME OVERHEADS	0.00	490,811.56	518,000	600,000	1,608,812
5 WORKSHOP AND STORES	42,410.07	71,188.92	92,000	40,000	245,599
6 LABORATORY	14,085.72	38,455.26	40,000	40,000	132,541
7 INSTITUTIONAL SUPPORT	0.00	312,415.72	340,000	400,000	1,052,416
8 DISTRICT DEVELOPMENT PLANS	13,920.72	61,728.51	157,000	160,000	392,649
9 HEALTH PROGRAMME	30,653.66	45,239.01	315,000	500,000	890,893
10 HUMAN RESOURCE DEVELOPMENT	30,811.41	84,187.04	413,500	500,000	1,028,498
11 OFFICE HELSINKI	29,050.86	26,985.53	25,000	35,000	116,036
12 OFFICE NEPAL	283,413.11	278,159.11	340,000	340,000	1,241,572
13 VEHICLES/TRANSPORTATION	831,612.18	452,439.62	450,000	200,000	1,934,052
Sub total 1.	1,519,645.44	4,977,459.60	7,695,632	10,768,285	24,961,022
14 CONTINGENCIES	63,423.40	0.00	769,563	1,076,829	1,909,815
Sub total 2.	1,583,068.84	4,977,459.60	8,465,195	11,845,114	26,870,838
15 TECHNICAL ASSISTANCE	1,921,598.28	2,117,701.25	2,580,000	2,475,000	9,094,300
16 OTHER CONSULTANT/STAFF COSTS	448,233.97	169,628.56	197,000	220,000	1,034,863
TOTAL	3,952,901.09	7,264,789.41	11,242,195	14,540,114	37,000,000
QTR1	1,272,357.54	2,296,925.04	2,250,000		
QTR2	934,071.09	1,825,649.59	2,810,000		
QTR3	915,140.28	1,794,240.34	2,810,000		
QTR4	831,332.18	1,347,974.44	3,720,000		
TOTAL	3,952,901.09	7,264,789.41	11,242,195		

* Adjusted codes to 1991-1993 format

SYN\FIN\INFO\1992\QTR4\WAT92.WR1
 SUMMARY MATRIX FOR THE YEAR 1992
 PROJECT
 CODE

	TOTAL ::	321*-*	322*-*	323*-*	331*-*	332*-*	333*-*	212*-*	213*-*	214*-*	215*-*	221*-*	231*-*
	FIN ::												
01 WATER SUPPLIES\ TOILETS	5,642,634.80 ::	5,046,801.15	67,214.31	0.00	528,519.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04 GENERAL\OTHER	289,288.70 ::	20,661.73	4,847.53	0.00	52,751.27	0.00	211,328.17	0.00	0.00	0.00	0.00	0.00	0.00
05 WORKSHOPS\STORES	51,420.33 ::	2,834.05	7,038.78	0.00	34,813.25	0.00	0.00	0.00	6,734.25	0.00	0.00	0.00	0.00
06 LABORATORY	16,300.06 ::	5,037.66	2,046.00	0.00	6,071.68	0.00	0.00	0.00	1,144.72	0.00	0.00	0.00	0.00
07 DISTRICT SUPPORT	697,520.80 ::	626,494.32	40,339.45	0.00	26,972.94	0.00	1,714.09	0.00	0.00	0.00	0.00	0.00	0.00
08 BISTR DEV PLANS	632,693.12 ::	39,744.56	67,899.21	0.00	522,830.04	4.29	172.98	60.35	1,981.69	0.00	0.00	0.00	0.00
09 HEALTH\SANITATION	118,579.29 ::	54,387.70	12,452.23	0.00	18,936.20	0.00	0.00	27,979.18	4,837.78	0.00	0.00	0.00	0.00
10 HUMAN RES DEV	431,152.60 ::	23,774.51	11,188.83	0.00	308,071.64	0.00	0.00	87,802.13	315.49	0.00	0.00	0.00	0.00
11 OFFICES NEPAL	11,607.72 ::	0.00	30.00	0.00	11,489.72	0.00	0.00	0.00	78.00	0.00	0.00	0.00	0.00
12 OFFICES NEPAL	531,532.62 ::	140,253.65	118,162.82	0.00	184,831.12	0.00	0.00	0.00	88,285.83	0.00	0.00	0.00	0.00
13 VEHICLES	694,499.35 ::	501,878.32	74,527.16	0.00	112,881.54	0.00	0.00	0.00	6,002.33	0.00	0.00	0.00	0.00
14 CONTINGENCES	0.00 ::	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 CONSULTANTS FEE	2,304,040.95 ::	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,304,040.93	0.00	0.00	0.00	0.00
16 OTHE CONS & STAFF COSTS	278,215.80 ::	4,599.49	1,063.90	0.00	457.84	0.00	0.00	0.00	271,494.57	0.00	0.00	0.00	0.00
TOTAL	11,698,488.28	6,466,567.14	406,870.22	0.00	1,816,041.66	4.29	212,315.24	115,832.88	2,887,314.79	0.00	0.00	0.00	0.00

SUMMARY FOLLOW UP EXPENDITURE TODATE

FILE NAME C:\SYM\STATUS\ACFU'12.WR1
 PREPARED IN THE END OF DECEMBER 1992

	EXP 1990	ACTUAL EXP 1991	ACTUAL EXPENDITURE 9 TH QTR	ACTUAL EXPENDITURE 10 TH QTR	ACTUAL EXPENDITURE 11 TH QTR	ACTUAL EXPENDITURE 12 TH QTR	EXP 1992	TOTAL TOTALE UP TO 1992
3 SCHEME AND TOILET CONSTRUCTION	243,667.71	3,115,849.32	353,349.44	1,697,997.00	479,529.03	3,111,759.41	5,642,634.88	9,002,171.91
4 CAPITAL INVEST/SCHEME OVERHEADS	0.00	490,811.56	64,049.39	26,798.23	34,100.23	136,340.85	289,289.70	760,103.26
5 WORKSHOP AND STORES	42,410.07	71,100.92	15,161.72	12,190.27	11,926.47	11,541.87	51,420.33	165,819.12
6 LABORATORY	14,085.72	38,455.26	1,117.54	1,480.29	7,035.85	6,866.58	18,300.88	68,841.04
7 INSTITUTIONAL SUPPORT	0.00	312,415.72	225,869.41	75,123.27	18,088.45	378,439.87	697,520.80	1,009,936.52
8 DISTRICT DEVELOPMENT PLANS	13,920.72	61,728.51	77,551.06	148,668.55	148,021.85	258,451.86	632,693.12	708,342.35
9 HEALTH PROGRAMME	30,653.66	45,239.01	24,078.91	36,663.00	33,526.76	23,450.62	118,578.29	194,471.96
10 HUMAN RESOURCE DEVELOPMENT	30,811.41	84,187.04	12,998.82	48,375.74	114,676.11	255,181.93	431,152.60	546,151.05
11 OFFICE HELSINKI	29,850.86	26,985.53	3,103.70	2,550.09	2,317.79	3,638.14	11,687.72	67,844.11
12 OFFICE NEPAL	283,413.11	278,159.11	77,208.83	123,736.77	56,919.44	253,668.38	51,532.62	1,533,134.84
13 VEHICLES/TRANSPORTATION	831,612.18	452,439.62	403,931.77	52,547.97	79,719.68	158,299.83	894,499.35	1,972,557.15
Sub total 1.	1,519,645.44	4,977,459.60	1,259,219.79	2,256,731.18	1,025,921.46	4,375,357.04	9,117,229.47	15,514,334.51
14 CONTINGENCIES	63,423.40	0.00	0.00	0.00	0.00	0.00	0.00	63,423.40
Sub total 2.	1,583,068.84	4,977,459.60	1,259,219.79	2,256,731.18	1,025,921.46	4,375,357.04	9,117,229.47	15,677,757.91
15 TECHNICAL ASSISTANCE	1,821,598.28	2,117,701.25	595,951.47	655,927.74	600,650.68	451,511.84	2,304,040.93	6,343,340.46
16 OTHER CONSULTANT/STAFF COSTS	448,231.97	169,628.56	58,420.78	71,053.71	58,071.69	90,669.62	278,215.83	656,078.33
TOTAL	3,952,901.89	7,264,789.41	1,913,592.04	2,883,712.63	1,664,643.83	5,117,537.70	11,689,486.20	22,517,176.74

Expenditure matrix 1990, 1991, 1992, todate, Appendix 13

RURAL WATER SUPPLY AND SANITATION PROJECT, LUMBINI ZONE, NEPAL
EXPENDITURE IN 1990, 1991 AND 1992. BUDGET FOR 1993. TENTATIVE BUDGET FOR 1994

Appendix III

FILE NAME C:\SYN\J\F\TOTAL BUDGET REQUIREMENTS 80-94.WRI(TSR1094)2
PREPARED: 28/01/93

	EXP 1990	EXP 1991	EXP 1992	BUDGET 1993	TOTAL TENTATIVE BUDGET 1994	TOTAL EXPECTED PROJECT EXPENDITURE	
EXCHANGE RATE USED	7.50	9.00	9.33	9.30	9.30		
A FINNIDA/HNG/FERTILISER FUND							
1 OVERHEAD COSTS	91,288	108,898	169,490	291,506	150,402	900,495	
2 CONSTRUCTION COSTS	338,364	496,331	322,291	1,111,757	652,731	3,219,135	
3 Total HNG/Fertilizer contribution	428,252	603,229	731,492	1,393,273	803,334	4,019,630	
B FINNIDA DIRECT CONTRIBUTION							
1 SCHEME AND TOILET CONSTRUCTION	243,888	3,115,349	5,542,935	2,008,717	1,248,597	12,139,339	
4 CAPITAL INVEST/SCHEME OVERHEADS	0	430,912	239,239	135,664	234,239	1,109,334	
5 WORKSHOP AND STORES	42,410	71,109	51,420	37,133	40,846	242,339	
6 LABORATORY	14,886	38,455	16,290	37,133	40,846	146,828	
7 INSTITUTIONAL SUPPORT	0	312,416	697,521	232,088	255,288	1,497,384	
8 DISTRICT DEVELOPMENT PLANS	13,921	61,729	632,693	371,327	50,000	1,129,678	
9 HEALTH PROGRAMME	30,654	45,239	119,579	556,991	612,690	1,364,154	
10 HUMAN RESOURCE DEVELOPMENT	30,811	84,187	431,153	229,940	243,834	1,010,125	
11 OFFICE HELSINKI	29,051	26,988	11,698	27,850	38,835	128,128	
12 OFFICE NEPAL	293,413	278,159	531,533	371,327	408,460	1,872,893	
13 VEHICLES/TRANSPORTATION	831,812	452,440	698,499	259,929	285,922	2,528,463	
Sub total 2.	1,519,645	4,977,468	9,119,229	4,389,091	3,229,459	23,259,383	
14 CONTINGENCIES	63,423	0	0	438,909	322,046	924,378	
Sub total 3.	1,583,068	4,977,468	9,119,229	4,828,000	3,542,504	24,059,262	
15 TECHNICAL ASSISTANCE	1,921,598	2,117,701	2,304,041	2,520,000	2,671,200	11,534,548	
16 OTHER CONSULTANT/STAFF COSTS	448,234	169,629	278,216	252,000	287,120	1,415,199	
C FINNIDA ADMINISTRATIVE COSTS						500,000	
2 Total direct FINNIDA contribution	3,952,901	7,264,788	11,781,485	7,600,000	6,488,824	37,508,008	
D ADDITIONAL FUNDS REQUIRED							
1 CONSTRUCTION MATERIALS(fertilizer)	0	0	0	0	2,737,409	2,737,409	
TOTAL REQUIRED FINNIDA CONTRIBUTION DIRECT AND INDIRECT FOR PHASE I (1990-1994) & PHASE II IN 1994	4,381,253	7,868,019	12,492,978	8,993,273	10,021,566	44,257,089	
SUMMARY OF COMPONENT PROJECT COSTS							
1 CONSTRUCTION MATERIAL (A1, B1, D1)	580,052	3,612,181	6,264,636	3,200,484	4,438,647	18,096,008	41%
2 HEALTH EDUCATION/H. RES DEV (B6, B9, B10)	75,551	167,881	566,032	615,064	896,570	2,521,098	6%
3 DISTRICT W.S & SAN DEV PLAN (B8)	13,921	61,729	632,693	371,327	50,000	1,129,678	3%
4 INSTITUTIONAL SUPPORT (B4, B7)	0	803,227	986,818	417,743	459,518	2,667,298	6%
5 PROJECT OVERHEADS (A1, B5, B11, B12, B13, B16, C1)	1,726,708	1,105,300	1,738,766	1,229,745	1,183,597	7,486,104	17%
6 TECHNICAL ASSISTANCE (D15)	1,921,598	2,117,701	2,304,041	2,520,000	2,671,200	11,534,548	26%
7 CONTINGENCIES (D14)	63,423	0	0	438,909	322,046	924,378	2%
TOTAL	4,381,253	7,868,019	12,492,978	8,993,273	10,021,566	44,257,089	100%
CONTRIBUTIONS							
1 FINNIDA NON TA (C2-D16)	2,831,303	5,147,088	9,307,445	6,000,000	3,888,624	25,965,488	59%
2 FINNIDA TA (D16)	1,921,598	2,117,701	2,304,041	2,520,000	2,671,200	11,534,548	26%
3 FIN/HNG FERT FUND STANDARD (A3)	428,252	603,229	731,492	1,393,273	803,334	4,019,630	9%
4 FIN/HNG FERT FUND ADDITIONAL (D1)	0	0	0	0	2,737,409	2,737,409	6%
TOTAL	4,381,253	7,868,019	12,492,978	8,993,273	10,021,566	44,257,089	100%

Ref: sym/c23/la/bud/04
02.10.91

PROJECT NAME :RURAL WATER SUPPLY AND SANITATION PROJECT
HMG/W BUDGET BREAKDOWN FOR FISCAL YEAR 048/49 (1991/92)

RUPEES IN THOUSANDS

FUND NO.	PARTICULAR	PALPA		GULMI		ARGHAKHANCHE		RUPANDEHI		KAPILBASTU		NAWALPARASI		P.T.U			PROJECT TOTAL		
		TOTAL	HMG	TOTAL	HMG	TOTAL	HMG	TOTAL	HMG	TOTAL	HMG	TOTAL	HMG	FINNIDA	TOTAL	HMG	FINNIDA		
1	Salary	86	86	103	103	56	56	120	120	154	154	137	137	294	294		950	950	
2	Allowance	0	0	0	0	0	0	0	0	0	0	0	0	5	5		5	5	
3	TA/DA	33	33	72	72	29	29	36	36	48	48	52	52	30	30		300	300	
4.1	Service fees	0	0	0	0	10	10	0	0	0	0	10	10	45	45		65	65	
4.2	Service Other	5	5	0	0	5	5	0	0	0	0	0	0	65	65		75	75	
5	Rent	36	36	6	6	18	18	0	0	0	0	13	13	52	52		125	125	
6	Repair/maintenance	15	15	0	0	5	5	0	0	0	0	0	0	10	10		30	30	
7.1	Office Equipment	8	8	5	5	5	5	5	5	5	5	4	4	93	93		125	125	
7.2	News Paper	0	0	0	0	0	0	0	0	0	0	0	0	6	6		6	6	
7.3.1	Vehicle Fuel	20	20	10	10	10	10	0	0	0	0	0	0	85	85		125	125	
7.3.2	Fuel Others	0	0	0	0	0	0	0	0	0	0	0	0	5	5		5	5	
7.5.1	Office Other Goods	8	8	2	2	2	2	5	5	5	5	5	5	86	86		125	125	
9	Other Fund	0	0	0	0	0	0	0	0	0	0	0	0	25	25		25	25	
10.1	Furniture	0	0	10	10	10	10	0	0	10	10	10	10	60	60		100	100	
10.2	Vehicle	0	0	0	0	0	0	0	0	0	0	0	0	20	20		20	20	
10.3	Machine tools	0	0	0	0	0	0	0	0	0	0	0	0	225	225		225	225	
11.1	Land Procurement	0	0	102	102	0	0	0	0	0	0	0	0	198	198		300	300	
12.1	House Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
12.2	Other Construction	174	174	402	402	107	107	722.5	722.5	660	660	341.5	341.5	23981	3181	20000	26394	6394	20600
	Grand total	385	385	724	724	263	263	888.5	888.5	882	882	572.5	572.5	25285	5725	20000	29090	9000	20000

Translated from Nepali

FILE NAME (A) C:\SYM\QTR9\HMGTRI.WR1
DATE 13.12.1992

RURAL WATER SUPPLY AND SANITATION PROJECT
HMG/N EXPENDITURE FROM THE BEGINNING TO KARTIK 2049
Expenditure in Rupees (Nepales)

Nepalese Fiscal Year		46/47	47/48	48/49	49/50	PROJECT
Budget		1989/90	1990/91	1991/92	1992/93	TOTAL
Heading	Details	YEAR	YEAR	YEAR	1 ST	TODATE
		TOTAL	TOTAL	TOTAL	TRIMESTOR	
1	Salary	0.00	165,955.75	235,528.20	57,576.00	459,059.95
2	Allowance	0.00	0.00	2,400.00	800.00	3,200.00
3	TA/DA	4,521.20	123,671.30	29,879.75	10,811.05	168,883.30
4.1	Service Fees	0.00	23,301.12	5,673.86	0.00	28,974.98
4.2	Service Other	10,000.00	49,958.50	61,614.50	500.00	122,073.00
5	Rent	0.00	28,550.00	33,600.00	5,600.00	67,750.00
6	Repair/maintenance	0.00	24,449.00	9,270.00	0.00	33,719.00
7.1	Office Equipment	19,999.50	74,911.50	90,201.00	1,100.00	186,212.00
7.1.2	Printing	0.00	0.00	0.00	4,000.00	4,000.00
7.2	News Paper	1,330.00	8,946.72	1,848.00	0.00	12,124.72
7.3.1	Vehicle Fuel	88.30	21,072.55	72,397.47	719.20	94,277.52
7.3.2	Fuel Others	107.00	1,997.00	4,284.00	0.00	6,388.00
7.5.1	Office Other Goods	19,992.77	74,994.00	85,325.00	0.00	180,311.77
9	Cntingencies	597.00	3,280.00	5,205.00	587.00	9,669.00
10.1	Furniture	99,516.50	99,985.00	60,000.00	0.00	259,501.50
10.2	Vehicle	6,000.00	4,980.00	19,970.00	0.00	30,950.00
10.3	Machine tools	49,786.00	49,888.00	270,800.00	0.00	370,474.00
11.1	Land Procurement	0.00	200,000.00	0.00	0.00	200,000.00
12.1	House Const+Rehab	0.00	0.00	0.00	0.00	0.00
12.2	Other Construction	0.00	5,045,458.58	3,980,327.45	2,400.00	9,028,186.03
Grand Total		211,938.27	6,001,399.02	4,968,324.23	84,093.25	11,265,754.77
		211,938.27	6,001,399.02	4,968,324.23	84,093.25	11,265,754.77

HMG/N expenditure to 16 November 1992, Appendix 16