

② Annual Report for the 1st Year

Annual Report for the 1st Year
(October 1991 - September 1992)

Contents

	Page
I. Preface	1
II. General	2
1. Organization	2
1) Organization of DPTC	2
2) Staffing	4
3) Joint Committee Members	5
2. Facilities	7
1) Hydraulic Laboratory	7
2) Office Building	8
3. Input by Nepalese Government	10
1) Nepalese Staff	10
2) Nepalese Budget Allocation (July 1991 - July 1992)	11
3) Equipment provided by Nepalese Government	12
4. Input by Japanese Government	13
1) Japanese Staff	13
2) Japanese Budget Allocation (April 1991 - March 1992)	14
3) Equipment provided by Japanese Government	14
4) Counterpart Training in Japan	15

III. Master Plan and its Achievement	
IV. Training	16
1. General Course	16
2. Advanced Course	19
3. Intensive Course	19
4. Training in Japan	19
1) Counterpart Training	
2) Group Training	
5. Training in Other Countries	20
V. Technology Development	21
1. Development of Engineering Method	21
1) Sabo Engineering	21
2) Landslide Engineering	22
3) River Engineering	23
2. Advice on Ongoing Projects	23
3. Preparation of Technical Standards	24
4. Model Experiment in the Hydraulic Laboratory	25
VI. Information	26
1. Data Base	26
2. Public Relations	26
3. Others	26
1) Field Reports	
2) Exchange of Information	
VII. Chronology	27

Annual Report for the 1st Year
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I. Preface

This Annual Report has been prepared in accordance with the Record of Discussions (R/D) summarizing activities of Water Induced Disaster Prevention Technical Centre (DPTC) during the period from October 1991 to September 1992. Most of the said period was spent for the institutional establishment of DPTC.

In the beginning after signing R/D on 7 October 1991 DPTC had started its activities in the office building of River Training Project, Department of Irrigation at Panipokhari Maharajgunj. The space provided by DOI, HMG/N was not sufficient enough to run the Centre and hence a private house at Khumaltar has been taken in rent from 1 April 1992. Construction of the Hydraulic Laboratory and modification and expansion of existing building (referred to as "Common Building") started in March 1992. In February 1992, the Director of the Centre was assigned and then only the activities of the Centre started increasing. A total of fourteen (14) staff members were assigned. Five (5) Japanese Experts arrived by the end of May to fulfill the required number as stipulated in the R/D. Four vehicles (3 jeeps and 1 micro bus) and the first batch of equipment provided by JICA arrived in July and September 1992 respectively. A air cargo of measuring instrument was received in April 1992. The activities of DPTC was highlighted by the First General Course Training (6 - 24 September) which was conducted successfully with full cooperation of Nepalese staff members and Japanese Experts working in the Centre.

DPTC sincerely thanks Japan International Cooperation Agency (JICA) for their kind cooperation in establishing the Centre at right time.

S. P. Rimal
(Director)
DPTC

II. General

1. Organization

1) Organization of DPTC

DPTC was established in accordance with the R/D (Record of Discussions) signed on 7 October 1991. It is a joint undertaking of Ministry of Water Resources, Ministry of Forest and Environment and Ministry of Works and Transport with the Ministry of Water Resources as the leading agency. Ministry of Home, National Planning Commission, etc. are collaborating with the above Ministries.

Joint Committee consists of representatives from Ministries/Departments concerned, Director of DPTC, Japanese experts of DPTC and the Resident Representative of JICA Nepal Office.

Nepalese staff of DPTC has been deputed from the Ministry of Water Resources, Ministry of Forest and Environment and Ministry of Works and Transport according to R/D.

DPTC has three technical divisions (Training, Technology Development and Information) and one administrative division which are shown in the organization chart.

ORGANISATION CHART

HIS MAJESTY'S GOVERNMENT

MINISTRY OF WATER RESOURCES

Japanese Long Term Experts

1. Chief Advisor
2. Coordinator
3. Sabo Expert
4. Landslide Expert
5. River Engineering Expert

Water Induced Disaster Prevention Technical Centre

Director

(S. P. Rimat)

Participating Organizations

Ministry of Forest & Environment
(Dept. of Soil Conservation)

Ministry of Works & Transport
(Dept. of Roads)

Collaborating Organizations

Ministry of Home,
Water and Energy Commission
Secretariat (WECS)

Administration Division	Technology Dev. Division	Training Division	Information Division
Section Officer (M. Adhikari)	Division Chief (G. R. Joshi)	Division Chief (K. P. Bhattachai)	Division Chief
Accountant (B. Timisina)	Civil Engineer (A. S. Dhakal) (H. S. Gupta)	Civil Engineer (D. P. Acharya)	1
Senior Office Assistant (B. Dhungana)	Soil Conservation Officer	Soil Conservation Officer	Hydrologist (J. K. Bhushal)
	Overseer (Bishu Bdr. K. C.)	Overseer (A. M. Rimat)	Soil Conservation Officer (B. P. Gyawali)
			Overseer (K. B. Shrestha)
Total = 4	Total = 7	Total = 5	Total = 5

Administration
Gen. 3rd class
Non-Gen. 1st class
Spec. Watchman & Sweeper
Total = 10

Technical
Gen. 1st class
Gen. 2nd class
Gen. 3rd class
Non-Gen. 1st class
Total = 5

2) Staffing

As shown in the organization chart, there are eleven (11) technical staff members and three (3) administrative staff members in DPTC as of end of October 1992. Eight (8) staff members are to be assigned to fulfill the total number of staff as stated in R/D.

Five Japanese experts have already been assigned fulfilling the required number stipulated in the R/D.

3) Joint Committee Members (As of end of October 1992)

No.	Name	Position
1.	Mr. Gauri Nath Rimal	Chairman of the Committee, Secretary of Ministry of Water Resources
2.	Dr. Chandra Kant Sharma	Executive Secretary of Water and Energy Commission Secretariat
3.	Mr. Harshaman Shrestha	Chief Planning Coordinator of Ministry of Water Resources
4.	Mr. Siva Raj Pant	Director General of Department of Irrigation
5.	Dr. Sarad Prasad Adhikari	Director General of Department of Hydrology and Meteorology
6.	Mr. Krishna Bahadur Malla	Director General of Department of Soil Conservation and Watershed Management, Ministry of Forest and Environment
7.	Mr. Ram Babu Sharma	Director General of Department of Roads, Ministry of Works and Transport
8.	Mr. Kirti Chand Thakur	Managing Director of Nepal Electricity Authority
9.	(Representative)	Ministry of Finance
10.	(Representative)	National Planning Commission
11.	(Representative)	Ministry of Home
12.	Mr. Yasuyuki Kobori	JICA Nepal Office
13.	Mr. Shyam Prasad Rimal	Director of DPTC

No.	Name	Position
14.	Mr. Hidetomi OI	Chief Advisor
15.	Mr. Hidetaka ESAKI	Coordinator
16.	Mr. Takashi INOUE	River Engineering Expert
17.	Mr. Kiyoshi AMAO	Landslide Expert
18.	Mr. Atsushi OKAMOTO	Sabo Expert

Representative from the Embassy of Japan is invited to attend the Committee as an observer.

2. Facilities

1) Hydraulic Laboratory

The construction of the Hydraulic Laboratory and modification and expansion of existing building (referred to as "common building") was started in Godawari, Lalitpur District in March 1992. The land for the construction was made available by HMG/N and construction is funded by JICA according to R/D (Record of Discussions "Special Measures to be taken by the Government of Japan"). Godawari was selected for the Hydraulic Laboratory because of availability of clean water from Godawari Khola and its good environment and surrounding. The land was a property of the Department of Irrigation and was handed over to DPTC in March 1992.

In the Hydraulic Laboratory there are two channels for hydraulic model test and two sets of equipment for landslide model test. Box type channel has 4m width, 20m length and 1/100 gradient. Steep and changeable slope channel has a narrow channel part (0.3m width, 9m length and slope angle is changeable up to 25°) and a wide channel part (3m width and 5m length).

A set of equipment for the landslide model test is divided into sliding part (1m width, 4m length and slope angle is changeable up to 30°) and deposition part (2.5m width and 2m length).

Another equipment for landslide test is for the study on tension cracks of landslide.

The construction of the Hydraulic Laboratory will be completed in November 1992 and the equipment will be installed by the end of January 1993. The common building is made available in October 1992.

Access road: Construction of an access road to the Hydraulic Laboratory compound which has about 555m length and 3.5m width is underway with the budget of HMG/N for 1991/92 - 1992/93.

Water supply: The water supply line pipe has been installed from the source situated about 600m away from the Hydraulic Laboratory compound with the budget of HMG/N for 1991/92.

Electricity: The transformer of capacity of 50KVA has been installed inside the compound of the Hydraulic Laboratory from the 11kv transmission line situated 400m away from the compound with the budget of HMG/N for 1991/92.

Telephone: A telephone has been installed in the Hydraulic Laboratory compound with the budget of HMG/N for 1991/92.

2) Office Building

After signing the R/D on 7 October 1991, top floor of the office building at Panipokhari belonging to River Training Project, Department of Irrigation was made available to DPTC for its execution. At the end of March 1992, DPTC realised that the space provided by DOI would not be sufficient for the execution of the Centre and hence the private building at Khumaltar, Lalitpur Ward No. 5 has been hired with 18 rooms, (total 242m²) 3 toilets, one veranda, parking area and one small garden.

The Administration Division, Training Division, Technology Development Division and Information Division are working in this building. Both Nepalese staff and Japanese experts are working together.

Office building at present is a private house taken in lease with a contract on yearly basis. Request for the financial assistance to construct a new office building together with other facilities has been submitted to the Japanese Government from HMG/Nepal.

3. Input by Nepalese Government

1) Nepalese Staff

No.	Name	Position	Class	Date of Assignment
1	Mr. S. P. Rimal	Director of DPTC	Gaz. 1st.	11 Feb. 1992
2	Mr. N. P. Bhattarai	Chief of Training Division	Gaz. 2nd.	25 June 1992
3	Mr. G. H. Joshi	Chief of Tech. Dev. Division	"	6 Aug. 1992
4	Mr. M. Adhikari	Chief of Administration Division	Gaz. 3rd.	13 April 1992
5	Mr. A. S. Dhakal	Tech. Dev. Division	"	31 March 1991
6	Mr. J. K. Bhusal	Information Division	"	14 May 1992
7	Mr. B. P. Gyawali	"	"	19 Aug. 1992
8	Mr. H. S. Gupta	Tech. Dev. Division	"	3 June 1992
9	Mr. D. P. Acharya	Training Division	"	8 June 1992
10	Mr. B. Timilsina	Administration Division	Non. Gaz. 1st.	"
11	Mrs. B. Dhungana	"	"	30 April 1992
12	Mr. K. B. Shrestha	Information Division	"	27 June 1992
13	Mr. Bisnu Bdr. K. C.	Tech. Dev. Division	"	16 June 1992
14	Mr. A. M. Rimal	Training Division	"	27 June 1992

In addition:

Two peons

Three watchmen

One sweeper

2) Nepalese Budget Allocation

First Year (July 1991 to July 1992)

No.	Item	Approved Budget (Rs.)	Consumption (Rs.)
1.	Salaries	2,51,000.00	76,458.52
2.	Allowances	10,000.00	1,182.20
3.	T. & D. Allowances	10,000.00	1,786.00
4-1	Services Tax	34,000.00	13,285.59
4-2	Services Other	10,000.00	8,425.00
5.	Hire Charge	20,000.00	1,400.00
6.	Repair & Maintenance	60,000.00	3,837.00
7-1	Office Materials	20,000.00	9,908.00
7-2	Magazines	5,000.00	1,463.00
7.3.1	Fuel for Vehicles	70,000.00	19,607.00
7.3.2	Fuel other Purpose	4,000.00	50.00
8-3	Medecine	10,000.00	-
9.	Contingencies	10,000.00	4,790.90
10-1	Furniture	20,000.00	19,945.00
10-2	Vehicles	10,000.00	4,975.00
10-3	Machine Tools	50,000.00	49,785.00
12-2	Other Construction	9,06,000.00	9,05,686.54
	TOTAL	15,00,000.00	11,22,584.75

3) Equipment provided by HMG/N (July 1991 - July 1992)

No.	Description	Specification	Maker	Quantity	Date of Payment	Date of arrival	Amount(Rs.)
1.	Nepalese Typewriter	-	Godarej	2	22-5-1992	22-5-1992	35,760.00
2.	Cheque Writer	Kores mark II	Indian	1	22-5-1992	22-5-1992	2,000.00
3.	Brief case	-	Echolac	1	13-5-1992	13-5-1992	1,500.00
4.	Steel Almira	54" x 72"	Eagle Co.	2	18-5-1992	18-5-1992	7,845.00
5.	Office Bag	Crocodile, Taiwan	Taiwan	3	28-6-1992	28-6-1992	1,650.00
6.	Office Table	42" x 24" x 30"	Local	2	4-7-1992	4-7-1992	5,300.00
7.	Armed Chair	-	"	2	"	"	1,950.00
8.	Ordinary Chair	-	"	10	"	"	4,850.00
9.	Calculator	FX 3600P	-	10	11-7-1992	11-7-1992	10,250.00
10.	Calculator	Cashio with adaptor	-	1	3-7-1992	3-7-1992	1,775.00
11.	Cycle	Chinese	China	1	3-7-1992	"	3,200.00
12.	Cycle	Indian, Hero	Hero Cycle Co	1	10-7-1992	10-7-1992	1,775.00
	Total :						77,655.00

4. Input by Japanese Government

1) Japanese Staff

Long term expert:

No	Name	Title	Period of Assignment
1.	Mr. Hidetomi OI	Chief Advisor	10 May 1992 - 9 May 1994
2.	Mr. Hidetaka ESAKI	Coordinator	02 Feb.1992 - 1 Feb.1994
3.	Mr. Atsushi OKAMOTO	Sabo Expert	19 Mar.1991 - 18 Mar.1993
4.	Mr. Kiyoshi AMAO	Landslide Expert	2 Apr.1992 - 1 Apr.1994
5.	Mr. Takashi INOUE	River Engineering Expert	28 May 1992 - 27 May 1994

Short term expert: (FY. 1992/93)

No.	Field
1.	Sabo Planning (1)
2.	Sabo Planning (2)
3.	Watershed Management
4.	Landslide and Slope Failure
5.	River Engineering
6.	Hydraulic Model Test
7.	Landslide Model Test
8.	Computer Data Base (1)
9.	Computer Data Base (2)
10.	Boring Engineering
11.	Hydrological Equipment

Among the above only Sabo Planning (1) was sent to Nepal during the period for the first year of DPTC.(Mr. Yasuo TOMOMATSU, 17 - 27 September 1992)

2) Japanese Budget Allocation (Apr.1991 - Mar. 1992)

No.	Approved Budget (Yen)	Remarks
1.	160,000	General Expenditure
2.	600,000	Supplement to General Expenditure
3.	44,828,000	For Construction of Hydraulic Laboratory
4.	8,898,872	Modification and Expansion of Existing Building (Common Building)
5.	119,488,500	Equipment
Total	Yen 173,975,372 (Rs. 57,991,791)	Note: 1 Rs = 3 Yen

3) Equipment provided by Japanese Government

Purchased in Nepal	Purchased in Japan
1. Equipment for hydraulic model test	1. Equipment for hydraulic model test
2. Equipment for field survey	2. Equipment for field survey
3. Equipment for construction works	3. Equipment for construction works
4. Equipment for data base	4. Equipment for data base
5. Audio-visual equipment	5. Audio-visual equipment
6. Vehicles	6. Others
7. Others	
Cost: Yen 28,900,000 (Rs. 9,633,000)	Cost: Yen 90,588,500 (Rs.30,200,000)
Total Cost = Yen 119,488,500 (Rs.39,833,000) Note: 1 Rs = 3 Yen	

4) Counterpart Training in Japan

F.Y.	Name	Position	Duration	Subject of Training
1992/93	Mr.H.M.Shrestha	Chief Planning Coordinator, Ministry of Water Resources	15 Feb. to 28 Feb. 1992	Project Management, Sabo Planning, River Engineering, Road Maintenance
	Mr.R.K.Mahato	Superintendent Engineer, Department of Irrigation, Ministry of Water Resources	ditto	ditto
	Mr.K.B.Malla	Director General, Department of Soil Conservation and Watershed Management, Ministry of Forest and Environment	ditto	ditto
	Mr.V.P.Shrestha	Deputy Director General, Department of Roads, Ministry of Works and Transport	ditto	ditto

Master Plan (3-1)

Activities	FIRST YEAR			SECOND YEAR			THIRD YEAR			FOURTH YEAR			Remarks
	1991	1992	1993	1992	1993	1994	1993	1994	1995	1996	1995	1996	
	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	
(Training)													
1. General Course				Sep				Sep				Sep	✓ Achievement
2. Advanced Course													
3. Intensive Course													
(Technology Development)													
1. SABO													
a) Nakhu Khola	Survey				Survey			Master Plan					✓ Achievement
b) Trisuli	Survey				Survey / Design								✓ Achievement
c) Siwalik	Data Collection				Selection of Model Area			Survey					✓ Achievement
2. LANDSLIDE													
a) 48km from Kathmandu along Trisuli Road	Survey				Survey			Master Plan					✓ Achievement
b) 19km from Kathmandu along Trisuli Road	Survey				Detailed Survey			Preparation of Guidelines					✓ Achievement
c) Upstream of Butwal along Tinau River	Survey				Survey			Survey	Master Plan				✓ Achievement

III. Master Plan (3-2)

Activities	Year		SECOND YEAR			THIRD YEAR			FOURTH YEAR			FIFTH YEAR			Remarks
	1991	1992	1992	1993	1993	1993	1994	1994	1994	1995	1995	1995	1996		
	Month	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul		
3. RIVER ENGINEERING															
a)Bagmati River			Survey			Survey				Master Plan				Achivement	
b)Improvement of construction method/materials			Survey			Survey				Survey			Conclusion	Achivement	
c)Study on river works in Terai			Survey			Survey				Survey				Achivement	
4. PREPARATION OF TECHNICAL STANDARDS															
a)Preparation of technical standards			Collection			Collection / Review				Review / Revision			Review / Rivision	Achivement	
(Information)															
1. DATA BASE															
a)Data Base			Data Collection			Development of softwar				Establishment				Achivement	
2. PUBLIC RELATIONS															
a)Public relations			Brochure			Brochure, Calendar Disaster Annual Report								Achivement	

Master Plan (3-3) D P T C D P T C

Activities	Year		FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR		Remarks
	Month	Year	1991	1992	1992	1993	1993	1994	1994	1995	1996		
(Others)													
1. SEMINARS													
a) Organization of seminars						ESCAP Seminar. Joint seminar. Roving Seminar							ESCAP Seminar Joint Seminar Roving Seminar Achievement
2. PARTICIPATION IN INTERNATIONAL CONFERENCE/SYMPOSIUM													
a) Participation in international conference/symposium							IAHR						IAHR International Association for Hydraulic Research Achievement
3. EXCHANGE OF TECHNOLOGY/MANAGEMENT													
a) Exchange of Technology / Management						Indonesia STC							Achievement

D P T C D P T C D P T C

IV. Training

1. General Course

- a) Objective: To train technical personnel in the field of disaster prevention works by introducing concept and effect of water induced disaster prevention and rehabilitation works, giving fundamental ideas and a wide understanding about the necessity of these works.
- b) Qualification of the trainees: Technicians (overseers etc., non-gaz. class I) working for and recommended by participating Ministries and Departments.
- c) Period : 6 to 24 Sep. 1992
- d) Name of trainees :

No.	Name	Department
1.	Mr. Suresh Maskey	DHM
2.	Mr. R. N. Pandit	NEA
3.	Mr. K. P. Adhikari	Min. of Housing and Physical Planning
4.	Mr. B. Dhakal	DSCWM
5.	Mr. A. Pakhrin	DSCWM
6.	Mr. K. Shrestha	DOR
7.	Mr. K. B. Shrestha	DOR
8.	Mr. R. P. Kharel	DOR
9.	Mr. P. M. Tuladhar	DOI
10.	Mr. A. M. Rimal	DOI
11.	Mr. Ramesh K. C.	DOI
12.	Mr. B. Bdr. K. C.	DOI

e) Curriculum of the training :

Sep. 6 Sunday	Orientation, opening ceremony, special lecture
7 Monday	Types and causes of water induced disasters, special lecture
8 Tuesday	Policies and activities of HMG/N for disaster prevention/preparedness
9 Wednesday	Field trip to areas of recent disasters
10 Thursday	(Holiday)
11 Friday	Hydrology
12 Saturday	(Holiday)
13 Sunday	Hydrology
14 Monday	Sabo Engineering
15 Tuesday	Sabo Engineering
16 Wednesday	Landslide Engineering
17 Thursday	Landslide Engineering
18 Friday	River Engineering
19 Saturday	(Holiday)
20 Sunday	River Engineering
21 Monday	Field trip to areas of recent disasters
22 Tuesday	Construction materials
23 Wednesday	Discussion on a specific subject, "questionnaire" for the course evaluation
24 Thursday	Examination, evaluation of the course, closing ceremony

f) Lecturers:

From	Lecturers	Classes
DPTC Nepalese staff	7 persons	20 classes
" Japanese Experts	4 persons	21 classes
Outside (Ministries, Departments, International Organization, Japanese Short Term Expert)	12 persons	13 classes
Total	23 persons	54 classes

2. Advanced Course

The Advanced Course starts from 2nd year.

3. Intensive Course

The Intensive Course starts from 2nd year.

4. Training in Japan

1) Counterpart Training (Observation and Study Tour)

Fiscal Year	Name	Position	Duration	Subject to the training
1991/92	Mr.H.M.Shrestha	Chief Planning Coordinator MOWR	15 Feb. 1992 to 28 Feb. 1992	Project Management, Sabo Planning, River Engineering, Road Maintenance
	Mr.R. K. Mahato	Superintendent Engineer Dept. of Irrigation	(ditto)	(ditto)
	Mr. K. B. Malla	Director General, Dept. of Soil Conservation and Watershed Management	(ditto)	(ditto)
	Mr.V.P.Shrestha	Deputy Director General, Dept. of Roads	(ditto)	(ditto)

2) Group Training Course on River and Dam Engineering

Fiscal Year	Name	Position	Duration	Subject to the training
1992/93	Mr.J.K.Bhushal	Hydrologist DPTC	01 Sep. 1992 to 30 Nov. 1992	Sabo Planni- ng, River Engineering, Landslide

5. Training in Other Countries

It starts from second year.

V. Technology Development

1. Development of Engineering Method

Objective of this activity is to develop engineering methods appropriate to the local conditions through combination of modern technology and indigenous technology. Theme shall be carefully established in the 2nd year.

This activity shall be pursued through research and investigation, survey, design, model construction and so on at various model sites. Model construction is a part of engineering method development and it is also expected to be usefull for on-the-job training and actual prevention measures.

Model sites have been selected and their outlines together with the reasons for selection are given as follows:

1) Sabo Engineering

a) Nakhu Khola:

This river is a tributary of Bagmati River and it divides into Lele Khola and Nallu Khola in the upstream of Tikabhairav, Lalitpur District. This watershed is covered by the Bagmati Watershed Management Project, Department of Soil Conservation and Watershed Management, supported by EEC. A big disaster caused by floods and debris flows took place in September 1981 in Nallu and Lele Khola. This river is one of the possible sources for water supply scheme to Lalitpur and Kathmandu to be implemented in near future.

b) Trisuli:

This area belongs to the Demonstration Centre of the Department of Soil Conservation and Watershed Management established in 1989. As this area has been deforested and devastated the Department has been carrying out plantation and construction of checkdams. Technology Development and Promotion Section of the Department asked DPTC for the cooperation in introducing Japanese technology "PNC blocks" for retaining walls as well as for checkdams in this area.

c) Siwalik Range:

Siwalik Range has very fragile geological condition and produces a huge amount of sediment to rivers thus causing severe disasters of flooding in vast areas in Terai and even in India.

In spite of these situations, very few studies on Siwalik have so far been carried out.

2) Landslide Engineering

Following sites have been selected based on field trips to landslide sites along Kathmandu - Trisuli Road, Prithvi Highway, Arniko Highway and in Rupandehi District of Western Region.

a) 48 km from Kathmandu along Trisuli Road:

This site seems to be in the major and peculiar type of landslide zone. The whole hill is moving. Many parts of the road surface were sunk. Breast walls dislocate, trees bend along the slides and cracks are seen on the road surfaces. Despite the seriousness of the situation, no plan of countermeasures has so far been proposed.

b) 19km from Kathmandu along Trisuli Road:

This site at Okhar Pauwa is one of the major problems facing in the Kathmandu-Trisuli Road. Landslide is active at this site and the road surface is covered by debris from time to time during monsoon season. This site is located on the way from Kathmandu to a tourist spot of Kakani and the traffic on this section is increasing year by year.

c) Upstream of Butwal along Tinau River:

There are many landslides along the Tinau River. One of the biggest occurred on 10 September 1978 on the top of the Tinau alluvial fan. A road bridge was washed away and the Tinau River was blocked by slid materials.

3) River Engineering

a) Bagmati River :

Location : About 5km from upstream of the confluence with Bishnumati to the Manohara bridge, Ring road.

Reasons for selection:

- Possibility of failure of bridge piers due to lowering of river bed. Implementatin of groundsills of gabions is a temporary work. Measures to stabilize the river course is urgently required.
- Existing revetments and river banks are unstable due to degradation of river bed. There will be a big damage if big flood occurs.
- The increase in houses constructed near the river and in the flood-plain area is rapid. In order to avoid encroachment of residential area to river side, it is necessary to prepare a flood prevention master plan and to separate private land from government land (river area).
- Parks being scarce for people in urban area, use of the part of the river area for parks will be advisable.
- The site is near to DPTC, therefore it will be convenient for on the job training and technology development activities.

2. Advice on Ongoing Projects

DPTC made suggestions to Department of Roads for the protection of seven bridges with groundsills in the Kathmandu Valley. The suggestions were summarized in the "Inspection Report and Suggestions on Protection Works of Seven Bridges in the Kathmandu Valley".

3. Preparation of Technical Standards

As the first step of preparation of Technical Standards, existing technical standards in Nepal were collected as follows;

1) Sabo and Soil Erosion

- a) Notes on Soil Erosion and Specification of Basic Structural and Vegetative Control Measures
(Watershed Management and Conservation Education Project, Department of Soil Conservation and Watershed Management, June 1983)
- b) Field Measurement on Erosion and Sedimentation in Nepal
(Integrated Watershed Management Torrent control and Land Use Development Project, Department of Soil and Water Conservation, September 1978)
- c) Guide Lines on Design of Waterways in Watershed Management
(S. Baidoo - UNV Civil Engineer, Watershed Management Project, Department of Soil Conservation and Watershed Management, February 1988)
- d) Manual Calculation of Check Dams
(Bernhard Hiller, Department of Soil and Water Conservation/Swiss Association for Technical Assistance, September 1979)

2) Landslide

- a) Landslide Prevention and Control
(Watershed Management and Conservation Education Project, Department of Soil Conservation and Watershed Management, 1985)
- b) Mountain Risk Engineering Hand Book
(Part - 1, Part - 2 and Complementary Version)
(B. Deoja, M. Dhital, B. Thapa, A. Wagner, ICIMOD, May 1991)

- c) Vegetation Structures for Stabilizing Highway Slopes
(J. H. Howell, J. E. Clark, C. J. Lawrance, I. Sunwar,
Department of Roads/ODA (UK), Mar. 1991)

3) River Training and Flood Rehabilitation

- a) Design Manual for River Training Works in Nepal
(Water and Energy Commission Secretariate,
June 1988)
- b) Guide Lines for River Training in Nepal
(Department of Roads (Notes from a workshop conducted
by the Department of Roads, January 1991)
- c) Head works, River Training Works and Sedimentation
Manual (Mac Donald Agricultural Services Ltd. and East
Consult (p) Ltd, Planning and Design Strengthening
Project, Department of Irrigation, February 1990)

4) Others

- a) Environmental Protection Measures for Hill Irrigation
Schemes in Nepal (Manual)
(Irrigation Sector Support Project, Department of
Irrigation)
- b) Manual for Survey, Design and Construction of Small
Hill Irrigation Systems in Nepal
(Hill Agriculture Development Project, Sinkalama
Irrigation Programme, Department of Irrigation,
February 1992)

4. Model Experiment in the Hydraulic Laboratory

Model experiment in the Hydraulic Laboratory will start from
the 2nd year after completion of the facility early 1993.

VI. Information

1. Data Base

In preparation for the establishment of the Data Base, relevant materials and data were collected as follows:

- 1) Relevant materials such as reference books, reports, documents, maps (topographical, geological and land use map etc.), aerial photos, video tapes and slides were collected.
- 2) Disaster records in 1992 were collected from concerned Ministries/Departments as well as from field trips to the disaster areas.

2. Public Relations

The DPTC brochure was prepared and distributed to government agencies, international organizations, NGOs, and agencies of foreign countries dealing with disasters.

3. Others

1) Field Reports

Reports on each field trip have been prepared.

2) Exchange of Information

Contact channels have been established with a number of agencies in foreign countries and in Nepal for exchange of information.

VII. Chronology

Term	Events	Remarks
Apr.8 to Apr.20 1977	The Preliminary Survey Mission	This mission was sent to confirm the request for a long-term expert from HMG/N through UNDRO. Mr. H. Tamamitsu (MOC) Mr. T. Matsushita (MOC)
Sept. 1977 to Aug. 1978	Long term JICA Expert	Based on the recommendation made by the Preliminary Survey Mission, Mr. Hashimoto was sent to Nepal. He was assigned to the Soil Conservation Department and prepared a report on "Soil and Water Conservation Project in Nepal". Mr. A. Hashimoto (JICA)
Sept.3 to Sept. 14 1989	The Advisory Mission	The mission made a proposal to establish Water Induced Disaster Prevention Technical Centre. Mr. S. Tabata (MOC) Mr. H. Shimamura (MOC) Mr. Y. Hara (MOC)
Feb. 12 1990	-	Official request for DPTC project was made to Japanese Government.

Term	Events	Remarks
Sept. 14 to Sept. 28 1990	The Preliminary Survey Mission	<p>This mission discussed with Nepalese authorities concerned about the request made in February 1990 and confirmed the necessity of establishment of DPTC in Nepal.</p> <p>Mr. S. Tabata (MOC) Mr. K. Kawasaki (MOC) Dr. T. Higaki (MOC) Mr. A. Okamoto (MOC) Mr. M. Sugimoto (JICA)</p>
Feb. 3 to Feb. 17 1991	The First Survey Mission	<p>The team was sent as a follow-up of the Preliminary Survey Mission. (Sept. 14 to Sept. 28, 1990)</p> <p>Dr. T. Higaki (MOC) Mr. A. Okamoto (MOC)</p>
June 7 to July 19 1991	The Second Survey Mission	<p>The location of a hydraulic laboratory was decided at Godawari.</p> <p>Mr. H. Oi (JICA) Mr. H. Abe (Sabo Centre) Mr. S. Kimura (JICA) Mr. H. Esaki (JICA)</p>

Term	Events	Remarks
August 12 to August 25 1991	The Third Survey Mission	The team drafted the Record of Discussions and the Minutes of Understanding to be agreed upon between the Implementation Survey Mission and HMG/N in October. Mr. H. Oi (JICA) Mr. F. Watanabe (MOC) Mr. H. Esaki (JICA)
Sept. 29 to Oct. 11 1991 Sign on Oct.7	The Implementation Survey Mission	The team discussed in detail with Nepalese authorities concerned and R/D was signed on 7 October 1991. Mr. T. Matsushita (MOC) Mr. H. Oi (JICA) Mr. N. Fujita (MOC) Mr. Y. Nakano (MOC) Dr. T. Higaki (MOC) Mr. M. Sugimoto (JICA)
Apr. 1992	Opening of DPTC Office	Khumaltar, Lalitpur District
Sep. 1992	Completion of common building	
6-24 Sep. 1992	First General Course Training	

③ Work Plan for the 2nd Year

Work Plan for the 2nd Year
(October 1992 - September 1993)
Contents

	Page
I. Preface	1
II. General	2
1. Organization	2
2. Facilities	2
1) Hydraulic Laboratory	
2) Office Building	
3. Input by Nepalese Government	3
1) Nepalese Budget Allocation (July 1992 - July 1993)	
4. Input by Japanese Government	4
1) Japanese Budget Allocation (April 1992 - March 1993)	
2) Equipment to be provided by Japan in FY. 1992/93	
3) Short Term Expert	
4) Counterpart Training in Japan	
III. Master Plan	
IV. Training	7
1. General Course	7
2. Advanced Course	7
3. Intensive course	8
4. Training in Japan	8
1) Counterpart Training	
2) Group Training	
5. Training in Other Countries	9

V. Technology Development	11
1. Development of Engineering Method	11
1) Sabo Engineering	
2) Landslide Engineering	
3) River Engineering	
2. Advice on Ongoing Projects	14
1) Landslide Engineering	
2) River Engineering	
3. Preparation of Technical Standards	15
4. Model Experiment in the Hydraulic Laboratory	15
1) Sabo Engineering	
2) Landslide Engineering	
3) River Engineering	
VI. Information	17
1. Data Base	17
2. Public Relations	17
VII. Others	17
1. Organization of Seminars	17
2. Participation in International Conferences, Symposiums etc.	18
3. Cooperation with Sabo Technical Centre in Indonesia	18

Work Plan for the 2nd Year
(October 1992 - September 1993)

I. Preface

This Work Plan for the second year (October 1992 - September 1993) has been prepared in accordance with Record of Discussions (R/D) summarizing activities to be executed by Water Induced Disaster Prevention Technical Centre (DPTC) in the coming year. This Work Plan is prepared with the consultation of Japanese Experts working in the Centre.

A number of important activities are proposed under three components of Training, Technology Development and Data Base, some starting in the second year to last for a few years. Meanwhile in order to carry out these activities successfully efforts will be made to recruit engineers to fulfil the vacancies.

DPTC requests the Department of Hydrology and Meteorology, the Department of Roads and the Department of Soil Conservation and Watershed Management to kindly assign the requested staffs to fulfil the vacancies of the Centre and expects good cooperation from the said departments to increase the activities of the Centre.

DPTC is very much thankful to the Department of Irrigation for assigning all the requested staff necessary to run the centre.

DPTC sincerely thanks Japan International Cooperation Agency (JICA) for their kind cooperation in establishing the Centre and taking keen interest in its development.

(S. P. Rimal)
Director
DPTC

II. General

1. Organization

As of the beginning of the 2nd year, fourteen (14) Nepalese staff have been assigned to DPTC as against twenty two (22) as stipulated in R/D. DPTC requests Joint Committee Members (heads of concerned organizations) to send proper numbers of technical staff members to DPTC to fill these vacancies as early as possible.

Vacancy to be filled:

- 1) Ministry of Water Resources
Department of Hydrology and Meteorology
 - Division Chief 1
 - Technician (Non-gazetted level I) 1
- 2) Ministry of Forest and Environment
Department of Soil Conservation
and Watershed Management
 - Forest Officer with experience of Watershed Management 2
 - Technician (Non-gazetted level I) 1
- 3) Ministry of Works and Transport
Department of Roads
 - Civil Overseers (Non-gazetted level I) 2

Five Japanese experts have been sent filling the required numbers according to the R/D.

2. Facilities

1) Hydraulic Laboratory

Construction of the Hydraulic Laboratory will be completed in November 1992 and the channels and other equipment for experiment will be installed by the end of January 1993. Japanese short term experts will be sent for the installation and test-run of the facilities.

2) Office Building

The office building of DPTC is located at Khumaltar, Lalitpur Ward No. 5. It has been rented by DPTC with JICA's budget. The office is relatively small for the smooth implementation of the Project so that HMG/N requested the Government of Japan to construct three buildings including Main Building, Technology Development Building and Trainees' Dormitory. The land for three buildings has to be provided by HMG/N and the Ministry of Water Resources requested the Ministry of Local Development to provide the part of its land in Pulchok.

3. Input by Nepalese Government

1) Nepalese Budget Allocation

2nd Year (July 1992 to July 1993)

No.	Item	Approved Budget
1.	Salaries	7,10,000.00
2.	Allowances	10,000.00
3.	T. & D. Allowances	30,000.00
4-1	Services Tax	40,000.00
4-2	Services Other	18,000.00
4-3	Other services	10,000.00
5.	Hire Charge	20,000.00
6.	Repair & Maintenance	40,000.00
7-1	Office Materials	30,000.00
7-2	Magazines	5,000.00
7-1-2	Printing	20,000.00
7-3-1	Fuel for Vehicles	50,000.00
7-3-2	Fuel other Purpose	5,000.00
8-3	Medicine	15,000.00
9.	Contingencies	10,000.00
11.	Land Purchase	2,00,000.00
12-2	Other Construction	5,00,000.00
	TOTAL	17,13,000.00

4. Input by Japanese Government

1) Japanese Budget Allocation (April 1992 - March 1993)

No.	Approved Budget(Yen)	Remarks
1.	11,586,000	General Expenditure
2.	540,000	Supplement to General Expenditure
3.	1,700,000	For Research and Survey
4.	300,000	For Publicity
5.	450,000	For Seminars
6.	122,000	For Training Course
7.	100,000	For Preparation of Audio-visual Materials
8.	3,000,000	For Preparation of Text Books
9.	75,000,000	For Equipment
Total	Yen 92,798,000 (Rs. 30,933,000)	

Note: 1 Re. = 3 Yen

2) List of Equipment to be provided by Japan in FY. 1992/93

- a) Equipment for hydraulic model test
- b) Equipment for field survey
- c) Equipment for construction works
- d) Equipment for data base
- e) Equipment for soil testing
- f) Audio - visual equipment
- g) Others

3) Short Term Expert (FY. 1992/93)

No.	Field
1.	Sabo Planning (1)
2.	Sabo Planning (2)
3.	Watershed Management
4.	Landslide and Slope Failure
5.	River Engineering
6.	Hydraulic Model Test
7.	Landslide Model Test
8.	Computer Data Base (1)
9.	Computer Data Base (2)
10.	Boring Engineering
11.	Hydrological Equipment

Among the above short term experts Mr. Yasuo TOMOMATSU was sent as Sabo Planning Expert (1) from 17 to 27 September 1992.

4) Counterpart Training in Japan

F.Y.	Period	Name	Position	Subject
1992/93	10 - 24 Oct.	Mr. S.P.Rimal	Director of DPTC	Discussion on DPTC and field observation
	1992	Mr. P.M.Joshi	Under Secretary of MOWR	ditto
1993/94	2 weeks	2 persons	-	Discussion on DPTC and field observation
	8 months	1 person	-	Hydraulic experiment
	8 months	1 person	-	Boring technique

D P T C D P T C D P T C **III. Master Plan (3-1)**

Activities	Year		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR		Remarks
	1991	1992	1992	1993	1993	1994	1994	1995	1995	1996	
	Month	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	Oct Jan Apr Jul	
(Training)											
1. General Course		Sep		Sep		Jan	Jan	Sep	Jan	Sep	Achivement
2. Advanced Course			Apr-Jun		Mar-May	Mar-May	Mar-May	Mar-May	Mar-May	Mar-May	
3. Intensive Course			Jan	Jan	Jan	Jan	Jan	Jan	Jan	Jan	
(Technology Development)											
1. SABO											
a) Nakhu Khola	Survey		Survey		Master Plan	Master Plan	Master Plan	Master Plan	Master Plan	Master Plan	Achivement
b) Trisuli	Survey		Survey/Design		Survey/Design	Survey/Design	Survey/Design	Survey/Design	Survey/Design	Survey/Design	Achivement
c) Siwalik	Data Collection		Selection of Model Area		Survey	Survey	Detailed Survey	Preparation of Guidelines	Preparation of Guidelines	Preparation of Guidelines	Achivement
2. LANDSLIDE											
a) 48km from Kathmandu along Trisuli Road	Survey		Survey		Master Plan	Master Plan	Master Plan	Master Plan	Master Plan	Master Plan	Achivement
b) 19km from Kathmandu along Trisuli Road	Survey		Detailed Survey		Preparation of Guidelines	Preparation of Guidelines	Preparation of Guidelines	Preparation of Guidelines	Preparation of Guidelines	Preparation of Guidelines	Achivement
c) Upstream of Bural along Tinau River	Survey		Survey		Survey	Survey	Master Plan	Master Plan	Master Plan	Master Plan	Achivement

D P T C (3-2) D P T C

Activities	FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		Remarks
	1991 Oct	1992 Jan	1992 Apr	1992 Jul	1992 Oct	1993 Jan	1993 Apr	1993 Jul	
3. RIVER ENGINEERING									
a) Bagmati River	Survey	Survey	Survey	Survey	Master Plan	Survey	Survey	Conclusion	Achievement
b) Improvement of construction method/materials	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Achievement
c) Study on river works in Terai	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Survey	Achievement
4. PREPARATION OF TECHNICAL STANDARDS									
a) Preparation of technical standards	Collection	Collection	Collection / Review	Review / Revision	Review / Revision	Review / Revision	Review / Revision	Review / Revision	Achievement
(Information)									
1. DATA BASE									
a) Data Base	Data Collection	Development of software	Establishment	Establishment	Establishment	Establishment	Establishment	Establishment	Achievement
2. PUBLIC RELATIONS									
a) Public relations	Brochure	Brochure, Calendar	Disaster Annual Report	Disaster Annual Report	Disaster Annual Report	Disaster Annual Report	Disaster Annual Report	Disaster Annual Report	Achievement

III. Master Plan (3-3) D P T C D P T C

Activities	Year		FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR		FIFTH YEAR		Remarks	
	Month	Year	1991	1992	1992	1993	1993	1993	1994	1994	1995	1995		
			Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	Jul
(Others)														
1. SEMINARS														
a)Organization of seminars														
2. PARTICIPATION IN INTERNATIONAL CONFERENCE/SYMPOSIUM														
a)Participation in international conference/symposium														
3. EXCHANGE OF TECHNOLOGY/MANAGEMENT														
a)Exchange of Technology / Management														

IV. Training

1. General Course

Objective:

To introduce concept, objective and effect of water induced disaster prevention and rehabilitation works to give a wide understanding about the necessity of these works, to give fundamental ideas for these works etc.

Qualification of the Trainees:

Technicians (overseers etc. non-gaz. class I) working for and recommended by participating Ministries and Departments.

Period : September 1993, for three weeks

Number of trainees: Twelve (12)

2. Advanced Course

Objective:

To train backbone professionals in the field of disaster prevention and rehabilitation works and familiarize them with the proper technology for the implementation of these works.

Qualification of Trainees:

Professionals (Gazetted Class II and III) working for participating Ministries and Departments.

Period : About three months from April to June 1993

Number of Trainees : five (5)

3. Intensive Course

Objective

To train future staff members of DPTC and core professionals of the government of Nepal.

Qualification of the trainees

Professionals (Gazetted Class III) working for participating Ministries and Departments junior than staff members (professionals) of DPTC.

Period : From January to September 1993 (nine months)

Number of Trainees : Five (5)

4. Training in Japan

1) Counterpart Training (Observation and study Tour)

F.Y.	Period	Name	Position	Subject
1992/93	10 - 24 Oct.	Mr. S.P.Rimal	Director of DPTC	Discussion on DPTC and field observation
	1992	Mr. P.M.Joshi	Under Secretary of MOWR	ditto

For the FY. 1993/94, following training programmes will be carried out.

a) Duration : Two weeks

Number of participants: two (2)

Subject: Discussion on DPTC and field observation

b) Duration : Eight months

Number of participants : One (1)

Subject : Hydraulic experiment

c) Duration: Eight months

Number of participants: One (1)

Subject : Boring technique

2) Group Training

Participation to JICA group training courses shall be explored.

5. Training in Other Countries

- 1) Country:Indonesia"Third country training programme on the fifth international training course on erosion and sediment control engineering (Sabo engineering 1992)

Fiscal Year	Name	Position	Duration	Subject to the training
1992/93	Mr. H. S. Gupta	Asst.Engineer DPTC	04.Nov. 1992 to 02 Dec. 1992	Erosion and Sediment Control

2) Country: Thailand "14th Disaster Management Training" at ADPC of AIT.

Fiscal Year	Name	Position	Duration	Subject to the training
1992/93	Mr.A. S. Dhakal	Asst.Engineer DPTC	11.Oct. 1992 to 20.Nov. 1992	Disaster Management

In addition to the above training courses, participation to courses in other countries shall also be explored.

V. Technology Development

1. Development of Engineering Method

Under this component, various activities such as survey, design, model construction etc. are carried out at selected sites and model experiment at the laboratory in Godawari. Development of engineering method shall be pursued through implementation of these activities.

Theme for the development of engineering method have been defined as follows:

- PNC blocks for soil conservation (Refer to 1). 8)
- Concrete blocks as materials for revetment, gabions etc.
- Gabion works for groundsills
- Spur dyke
- Bio engineering for embankment

Following activities will be carried out in the 2nd year.

1) Sabo Engineering

a) Nakhu Khola;

Investigation on 1981's flood will be conducted this year which will include the followings;

Damage conditions

Hydro-meteorological data (rainfall etc.)

Streams where debris flow occurred

Sediment volume (yield and transport)

Flood discharge

Remaining volume of sediment on stream bed

Change of land utilization before and after the flood

Others

After the investigation master plan of erosion control will be prepared in cooperation and coordination with the Bagmati Watershed Management Project, Department of Soil Conservation and Watershed Management (DSCWM). On the basis of the master plan, construction works will be considered in later years.

b) Trisuli;

In the Demonstration Centre of DSCWM, Pipaltar, Trisuli, Nuwakot District, application of Japanese technology, PNC blocks which has plates and tie-rod for retaining wall blocks will be examined for check dam and retaining wall for gully control.

PNC blocks have been used in many places in Japan. They are light (37kg per one set) and easy to transport so it is expected that they shall also be useful and effective in Nepal.

This year site for PNC blocks will be chosen and design will be done. PNC blocks will be procured in Japan in FY. 1992/93, and they will reach Kathmandu in autumn 1993.

c) Siwalik Range:

Siwalik Range has very fragile geological condition and produces a huge amount of sediment to rivers downstream, thus causing severe disasters of floods, debris flows etc.

In spite of these conditions, very few studies on Siwalik have so far been carried out. DPTC will study on sediment yield and transport of Siwalik rivers and damage conditions with a view to finding out effective methods to control sediment.

2) Landslide Engineering

a) 48 km from Kathmandu along Trisuli Road:

Landslide is active in this area. Survey, installation of landslide investigation equipment and observation of the data will be carried out.

b) Upstream of Butwal along Tinau River:

Landslide of 1978 caused heavy damage in the area and there are some potential landslides along right bank of Tinau River. Reconnaissance survey of the area will be carried out for 2nd year.

- c) Comparison and examination of appropriate method for landcollapse countermeasures:

This study will cover whole the country.

- d) Study of landslide distribution and risk analysis:

Areas and mode of survey shall be decided later in consultation with other agencies concerned.

3) River Engineering

- a) Model construction works in Bagmati River (continuation of survey/design and initiation of actual works):

- Implementation of survey works for existing rivers and investigation of change of river bed in future. Setting of concrete posts in both bands at the interval 200m to mark the river width.
- Collection and analysis of hydrological data in the basin.
- Preparation of master plan for flood control.
- Preparation of master plan for river banks through discussions with local bodies (committee includes local authorities etc.)

Following activities will be carried out in later years.

- Detailed design of model construction.
- Institutional arrangement (establishment of river authority)
- Model construction Works

b) Improvement of construction methods/materials:

- Concrete blocks : Investigation in possibility of using less cement concrete as gabion fillings, revettment connected by steel bar etc.
- Gabion works : Investigation in the effectiveness of using geotextile to increase durability of gabion groundsill.
- Spur dyke works : Comparison of spur dyke of different type and material in order to find appropriate ones in Nepal.
- Bio engineering : Investigation in application of forest (trees) to strengthen embankment.

c) Study on river works appropriate to Terai rivers with emphasis on river bed excavation and possible use of gravels for construction material.

2. Advice on Ongoing Projects

DPTC will give technical advices on on-going projects that are carried out by HMG/N upon their requests.

1) Landslide Engineering

19 km from Kathmandu along Trisuli Road. (This area is covered by the Road Improvement Project by the Department of Roads funded by ADB):

Activities include installation of landslide investigation equipment at the site and observation of the data. Any useful information will be given to DOR on the basis of the result of the above observation.

2) River Engineering

a) Flood forecasting and warning systems:

Review and advice on existing flood forecasting and warning systems which have been established with the assistance of India.

b) Review of existing river training master plan for Tinau River and advice for the preparation of more comprehensive plan.

3. Preparation of Technical Standards

Last year existing technical standards in Nepal were collected. This year review of collected materials and finding out of any part which needs modification will be carried out.

From 3rd year result of model construction, hydraulic experiment etc. will be collected and incorporated in the revision of technical standards.

4. Model Experiment in the Hydraulic Laboratory

As mentioned before, installation of equipment in the Hydraulic Laboratory will be completed by the end of Feb. 1993 and test-run of each facility will be carried out. After that model experiment will be done. Planned experiments in each field are as follows:

1) Sabo Engineering

Study on the mechanism of debris flow (bed material, bed gradient, velocity, features of sedimentation, etc.) and effect of Sabo facilities

2) Landslide Engineering

- a) Study on the relationship between ground water, slope angle and landslide
- b) Study on cracks and landslide movement

3) River Engineering

- a) Calibration of different types of current meters by river channel experiment
- b) Experiment on effects of vane works, skelton works etc.
- c) Experiment on bank erosion and change of river bed for a part of Bagmati River

VI. Information

1. Data Base

- a) Collection and compilation of data related to disasters
- b) Development of software for data base
- c) Establishment of library system

2. Public Relations

- a) Second edition of DPTC brochure
- b) Publication of disaster annual report
- c) DPTC calendar for 1993/94
- d) Logo mark
- e) Map of rivers in Nepal

VII. Others

1. Organization of Seminars

- a) Comprehensive flood loss prevention and management seminar in November 1992, in cooperation with ESCAP
 - b) Water induced disaster reduction seminar jointly with ICIMOD in March 1993
 - c) Roving seminar to each region
 - d) IDNDR seminar in cooperation with Ministry of Home on 2nd week October 1993
- (IDNDR - International Decade for Natural Disaster Reduction)

2. Participation in International Conferances, Symposiums etc.

a) IAHR (International Association for Hudraulic Research, 25th Congress "Achievement of a less hazardous world through hydraulic research", 30 Aug. to 3 Sep. 1993, Tokyo, Japan)

b) Others

3. Cooperation with Sabo Technical Centre in Indonesia

a) Exchange of technical papers (text books etc.)

b) Visit to STC to exchange information on technical matters, to discuss for better management of the Centre, etc.

④ DPTC C/P 経歴表

His Majesty's Government of Nepal
Water Induced Disaster Prevention Technical Centre

Bio-data of the Nepalese staffs:

* : 11/6人員整理により退職。 *

S.No.	Name	Designation	Date of Birth	Academic Qualification	Training Subject	Language	Marital Status	Date of Joining DPTC	From Where Deputed
1.	Mr. S. P. Rimal	Project Director	21-9-1943	Msc. Civil Engineering USSR - 1968	Tunnel Design - Japan Hydro power structure in - Germany.	Nepali, English, Russian and Hindi	Married	10 Feb. 1992	Ministry of Water Resources
2.	Mr. N. P. Bhattacharai	Division Chief	15-8-1950	Master in Technology Punjab-1982	Agricultural Land Water Resources Development Japan - 1988 Irrigation and Drainage Australia - 1976	Nepali, English and Hindi	Married	25 June 1992	Dept. of Irrigation
3.	Mr. G. R. Joshi	Division Chief	27-6-1945	Msc. Civil Engineering USSR - 1971 Diploma in Environmental Engineering Israel - 1982 AIT - 1985	Flood Loss Prevention and Management Japan - 1982 Water Resources Management Israel - 1982	Nepali, English, Newari, Hindi and Russian	Married	8 July 1992	"
4.	Mr. J. K. Bhushal	Hydrologist	2-11-1951	M. E. Hydrology India - 1989	Remote Sensing Application to Hydrology USA - 1985	Nepali, English and Hindi	Married	14 May 1992	Dept. of Hydrology and Meteorology
5.	Mr. D. P. Acharya	Civil Engineer	3-11-1959	B. E. Civil Engineer India - 1986	Training and Workshop Regional and District Irrigation Engineers	Nepali, English, Hindi and German	Married	9 June 1992	Dept. of Irrigation
6.	Mr. H. S. Gupta *	Civil Engineer	25-12-36	Diploma in Civil Engineering India - 1957	Course of Instruction in Highway Engineering in England	Nepali, Newari, English, Punjabi, Hindi and Urdu	Married	3 June 1992	Dept. of Roads
7.	Mr. A. S. Dhakal	Civil Engineer		B. E. Civil Engineering India - 1986	River Engineering Japan - 1991	Nepali, English and Hindi	Unmarried	31 March 1991	Dept. of Irrigation
8.	Mr. B. P. Gawali	Agri. Engineer	1-2-1962	B. Sc. Agri. Engineering and Technology India - 1987	Remote Sensing Application to rural development - 1988	Nepali, English and Hindi	Married	19 August 1992	Dept. of Soil Conservation & Watershed Management
9.	Mr. M. P. Adhikari	Section Officer	9-9-1935	B. A. - 1980 B. L. - 1977 TU - Nepal	Diploma in Management Technic India - 1980	Nepali, English and Hindi	Married	23 Feb. 1992	Ministry of Water Resources
10.	Mr. K. B. Shrestha	Overseer	21-3-1957	Certificate in Civil Engineering	-	Nepali, English and Hindi	Married	15 June 1992	Dept. of Roads
11.	Mr. Bisnu Bahadur K. C.	Overseer	-8-1961	Certificate in Civil Engineering 1988	-	Nepali, English and Hindi	Married	16 July 1992	Dept. of Irrigation
12.	Mr. A. M. Rimal	Overseer	-2-1968	Certificate in Civil Engineering 1987	About Hill Irrigation Projects - (one week)	Nepali and English	Married	27 July 1992	"
13.	Mr. B. Timilsina	Accountant		B. Com. TU - Nepal	Accounts Training HMG/N	Nepali, English and Hindi	Married	23 Feb. 1992	Ministry of Water Resources
14.	Mrs. B. Dhungana	Senior Assistant	-9-1956	I. A. TU - Nepal	Typing in English and Nepali	Nepali and English	Married	30 April 1992	"

⑤ センター建設用地に関する書類



His Majesty's Government of Nepal
Ministry of Water Resources
Water Induced Disaster Prevention Technical Centre

Phone No. { 5-26523
5-23528

Khumaltar, Lalitpur

Our Ref:- 198

Date ..9..Dec..1992..

Your Ref:-

To,
Japan International Cooperation Agency
Tripureswar Kathmandu,
NEPAL


Ref: Land for construction of Buildings.

Sirs;

We refer to No. 4 of the attached document of the minutes of meeting signed between the Japanese Mutual Consultation Team and Ministry of Water Resources, HMG/N on 3rd December 1992. We are pleased to inform you that the land in front of Ministry of Local Development (From the wall of Pulchok Main Road- East West 50 m and from the wall of Hotel Narayani- North south 63m) has been made available to our Centre by the decision of His Majesty's Government. Hence we request you to forward necessary request to the Government of Japan for the construction of the buildings under Grant Aid Assistance.

Thanking you very much for your earlier action.

Sincerely your's

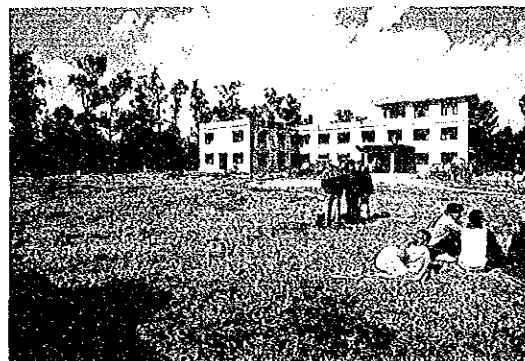


S. P. Rimal
Project director

(a)



(b)



(c)



(d)



130 page text for White-Triaxial - Viscoelasticity and Technical Control
scale 1.500



⑥ DPTC C/P 給与表

- － 2 在ネパール日本国大使館ローカル
スタッフの給与例（参考）
- － 3 日系民間企業ローカルスタッフの
給与例（参考）
- － 4 国連関連プロジェクトの給与補填
資料（参考）

6 - 1 ネパール・スタッフ (カウンターパート) の給与表

所長	S. P. Rimal	Rs	4,800
研修課長	N. P. Bhattari	Rs	4,400
技術開発課長	G. R. Joshi	Rs	4,100
総務課長	M. Adhikari	Rs	3,500
情報課員	A. S. Bhsul	Rs	3,700
	B. P. Gyawari	Rs	3,200
	K. B. Shrestha	Rs	2,300
技術開発課員	A. S. Dhakul	Rs	3,300
	B. B. KC	Rs	2,100
研修課員	D. P. Acharya	Rs	3,200
	A. M. Rimal	Rs	2,100
総務課員	B. Dhurgana	Rs	1,900
会計係	B. Timilsina	Rs	2,600

6 - 2 在ネパール日本国大使館ローカルスタッフの給与例

政務担当	21年	Rs 15,000
”	20年	12,000
”	6カ月	9,000
経協担当	5年	6,500
Admi・担当	10年	8,500
Pegor	22年	4,000
Visa・担当	22年	8,500
Admi	10年	6,000

6-3 日系民間企業ローカルスタッフの給与例

コンサルタント	CLERK	2800~5700	
	ACCOUNT	3600	
	OFFICE BOY	900	
建設会社A	ADM. OFFICER	4800~8800	
	ACCOUNT	4300	
	ASSISTANT	2700	
B	CHEEF ADM	6000	
	ADM STAFF	4000	
	ASSISTANT	2000	
	受付	2000	
C	シニア	2300	
	メッセンジャー	1800	
D	S CLERK	4000	
	BOY	1000	
商社	A	NATIONAL, STAFF	7000
		SECRETARY	4500 (ACCOUNT)
		OFFICE MAINTENANCE	3000・3500
	B	MANAGER	5700
		TYPIST	2900
		CLERK	2300
		PEON	1100
	C	SECRETARY	3000
		CLERK	2000~5000
		BOY	800~1500
	D	S MANAGER	7700~8700
		MANAGER	6000、7000
		ASST MANAGER	5400
		TELEX・TYPIST	2400
		TELEX	4200
		SECRETARY	2400
		メッセンジャー	1400
	E	MANAGER	7000
		SECRETARY	2000
		ACCOUNT	2000
		OFFICE BOY	1200
標準	秘書:	2000~3000	
	会計:	3000~5000	
	事務員:	2000~6000	
	マネージャー:	5000~9000	

**RECOMMENDED SCALE OF REMUNERATION FOR NATIONAL
PROJECT STAFF NOT
HOLDING UN LETTER OF APPOINTMENT
(Effective 1 October 1992)**

The remuneration ranges recommended below are based on the existing U.N. salary scale (in NRs.), all rates are taxable for which provision has been made in each case.

General Services Staff	Current UN Daily Rate	Current UN Min. & Max. Monthly Rate
Typist/Secretary GS-4	372.18	7,395 - 11,245
Admin. & Finance Asst. GS-5	446.55	8,872.5 - 13,492.5
Sr. Administrative & Finance Assistants GS-7	642.68	12,770 - 19,415.83

PROFESSIONAL STAFF	Current UN Daily Rate	UN PAY SCALE
Bachelor's degree holder with minimum 3 years experience or non-degree expert w/technical skills; duties equivalent to NO-A	924.90	19,033.33 - 24,991.67
Master's degree holder or equivalent with minimum 5 years experience; duties equivalent to NO-B	1109.39	22,827.50 - 29,986.67
Post-graduate degree holder or equivalent with minimum 10 years experience; duties equivalent to NO-C	1331.34	27,395 - 35,984.17
Ph.D. or equivalent with minimum 8 years experience as a consultant; duties equivalent to NO-D	1597.51	32,870.83 - 43,183.33

Interpreter	200 - 225 per hour
General Translator	85 - 100 per page
Technical Translator	125 - 150 per page
Typist/word processor	25 - 35 per page

DAILY SUBSISTENCE ALLOWANCES (DSA)

A. DSA Payments to National Project Staff Not Holding U.N. Letters of Appointment

Short-term project staff not holding U.N. Letters of Appointment (e.g. national consultants, holders of Special Service Agreements) will be given a choice between the following two types of DSA payment prior to their departure on each field trip :

either

payment in cash of 350 NRs. per day for professional staff, and 150 NRs. per day for General Service staff;

or

payment of actual costs for board and lodging in the field on the basis of certified bills.

All short-term contracts with national consultants and other local staff should specify that these alternative types of DSA payments will apply in case of in-country travel outside the agreed duty station.

B. Project-related Travel by Government Counterpart Staff

Government is normally responsible for payment of per diem travel allowances to all Government officials associated with U.N. technical assistance activities. However, subject to Government approval, the Agency Representatives may exceptionally, when special circumstances so warrant, contribute towards ensuring that financial considerations do not serve as a disincentive to field trips for Government counterparts by making

either

payment in cash of a DSA supplement of (a) 200 NRs. for First Class Officers, (b) 150 NRs. for Section Officers and Under Secretaries, and (c) 100 NRs. for Non-gazetted Officers,

or

payment of actual costs for board and lodging in the field on the basis of certified bills.

PAYMENTS TO GOVERNMENT OFFICIALS ASSOCIATED
WITH U.N. TECHNICAL ASSISTANCE ACTIVITIES

It is U.N. policy not to provide financial support for Government civil servants associated with technical assistance projects, since they are considered as national counterpart inputs to the projects. However, there are the following exceptions to this general rule :

A. Hiring of Government Officials on Full-time Contracts

It is only possible to recruit Government civil servants on full-time, short-term contracts or Special Service Agreements (SSA) with payments of remuneration within the ranges recommended, provided that their employment does not coincide or conflict with their duties as Government officials, and provided that they take leave of absence from their regular jobs while receiving U.N. compensation. Assurances to that effect from the appropriate Government institution must be obtained prior to the contract arrangement.

B. Hiring of Government Officials for Special Part-time Assignments, Report Writing or Special Presentations

Contracts/SSA's with lump sum payments (honoraria) may be given, if circumstances so warrant, to individual Government civil servants, if they are required - based on their special expertise in a given field - to invest time and effort (outside office hours) in the preparation of reports, documents or special presentations at project-sponsored seminars and meetings. Such payments should be (a) agreed in advance, (b) related directly to special efforts (research and speech/report-writing, "authors contracts") over and above their regular duties as civil servants, and (c) proportionate with the amount of time and effort required.

C. Attendance at U.N.-Sponsored Meetings

No honorarium or other payment ("attendance money") may be made solely to ensure the presence of a particular official at U.N.-sponsored seminars or other project events, all of which are intended for skill-upgrading/training purposes. Participation in such events are a benefit to, and not to be considered a service by, the concerned civil servants.

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