DOI	The DOI is sending many of its staff to work in the DWIDP. The DOI does not have specific organization for disaster mitigation. In case of disaster, the DOI refers to the DWIDP, which implements disaster mitigation works to protect the irrigation facilities and irrigated fields. The two departments need closer cooperation. In the DSC meetings, more specific and practical proposals are expected.
DOR	The DOR is working closely with the DWIDP for disaster mitigation of roads. The DOR wants know-how of the DWIDP to be transferred. The DOR therefore sends its staff to the DWIDP's training courses and even deputes its staff to work at the DWIDP. The DOR prepared "Guide to Road Slope Protection Works" in 2003 with a JICA expert in cooperation with the DMSP.
DSCWM	The staff are receiving training at the DWIDP. The two organizations should have more coordinated roles in an integrated manner.
DOLIDAR	It is a new department and so does not have sufficient technical capacity in disaster mitigation, although the department prepared Landslide Risk Assessment Manual with the support of the DFID in 2003. The training courses of the DWIDP are useful. The DOLIDAR is benefiting from the achievements of the Project through the materials and expertise. It will consult with the DWIDP for disaster mitigation.
DWIDP	The counterparts highly evaluate the technology transfer from the Japanese experts. On average, they do not expect major problems but still expect some problems after the Project.

2.4. Overall and Super Goals

The overall goal is that capacity of HMG/N and communities to cope with water induced disasters will be strengthened.

In spite of some constraining factors like current security conditions and outstanding local political issues, the achievement of the Project is a significant step toward the goals. The momentum has been generated at both the policy and grassroots levels toward the overall goal and the super goal of disaster mitigation in Nepal.

3. Evaluation by Five Criteria

3.1. Relevance

As natural disasters are among major causes of the poverty, which is the top priority issue of Nepal, the Tenth National Five Year Development Plan (2003 - 2007) prepared by the National Planning Commission (NPC) stipulates disaster mitigation by a section for the first time, that is Chapter 17.2 Water Induced Disaster Management. Based on the plan and the Water Resources Strategy approved by HMG/M in 2002, the Water and Energy Commission Secretariat (WECS) is preparing the National Water Plan in which the DWIDP is recognized as a leading agency for disaster management with special importance. Thus, the Project purpose is fully relevant to the national policy.

As manifested by frequent damages to communities by water induced disasters, the Project addresses the grassroots needs of local communities as well as the macroscopic national needs.

The Project adopts appropriate technologies including non-structural measures at low costs with community participation so as to be replicated by local initiatives at district and village levels. Such an approach is relevant also to the government's devolution policy, although the movement is yet to be expedited.

Historically Japan was long prone to natural disasters. From Edo Era till Showa Era, a lot of disaster

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mitigation efforts were made with insufficient finance and expertise. Such assets of Japan as well as its state-of-art technologies are great advantages to seek for technologies appropriate to the current situation of Nepal.

3.2. Effectiveness

A couple of model projects have not been as effective as originally expected. The upstream of Girubari Model Site has not yet surveyed for Sabo measures due to the security problem. In the model site, the demand for river training work from the local people for affected and vulnerable areas can be addressed effectively. On the other hand, Bagmati Model Projects are behind the schedule due to the delay of the commencement of the study caused by the initial shortage of the counterparts, although the work is going on smoothly now.

In most of the Project components, however, the achievements are highly appreciated by the Joint Coordinating Committee members and the Disaster Survey committee members. A key factor for successful operation of construction works, non-structural measures and disaster mitigation education has been the participation of the local communities.

The achievements have been disseminated through committee meetings, seminars/workshops and distribution of awareness raising materials for disaster mitigation.

A number of disaster surveys and rehabilitation activities were also highly appreciated by local stakeholders and relevant government agencies. The Japanese experts actively visited disaster-hit sites and gave practical advice on the rehabilitation and prevention, which may not be given by other organizations in Nepal.

The momentum for disaster mitigation has been strengthened by the Project as reflected in relevant national plans. It is therefore regarded that the Project has been fairly effective.

3.3. Efficiency

In general, the Japanese experts were properly dispatched. The long-term experts were continuously assigned without substantial vacant periods. A total of 40 short-term experts were assigned according to the annual plan of operations including lecturers of the Water Induced Hazard Courses of the Water Resources Engineering Program of Institute of Engineering at Tribhuvan University.

The equipment and materials for the Project were selected based on local applicability and availability, and provided according to the plan of operations in order to efficiently transfer technologies so that the model projects were implemented efficiently except at the upstream in Girubari Model Site and Bagmati Model Site. In particular, they met the pinpoint needs of disaster rehabilitation works.

The counterpart training was highly evaluated by the participants, and so is the technology transfer from the Japanese experts as most of the answerers to the questionnaire are fully satisfied.

As to the turnover of the staff, the situation has been improving recently as the DWIDP is strengthening its organizational status. It is also noted that a number of staff who left the DWIDP were transferred to government organizations concerned with disaster mitigation such as the JCC or DSC members. The DWIDP has had some deputed staff from other offices such as Department of Roads so that they learn disaster mitigation at the DWIDP and then utilize the experience in DOR on their return. Moreover, some who were transferred out may rejoin the DWIDP as there are currently six members of staff who rejoined the office.

At the beginning of the Project, the budget was not fully utilized due to shortage of staff and delays of activities. In the latter half of the Project period, with reinforced staff, the activities were smoothly done by fully utilizing the budget, except at the upstream in Girubari Model Site and Bagmati Model

Site.

The Japan's Grant Assistance for Grassroots Project of 2001 Japanese fiscal year for countermeasures of slope failures contributed a lot to the Project activities.

3.4. Impact

The Tenth National Five Year Development Plan and the semi-finalized National Water Plan emphasize the importance of water induced disaster mitigation and the roles of the DWIDP. The feature of the disaster mitigation in the national plans is part of the results of the raised awareness of disaster mitigation among His Majesty's Government of Nepal promoted by the Project activities. As a significant impact of the Project, various relevant government agencies are starting to cooperate for disaster mitigation activities.

As an impact of the Project, the Nepal Landslide Society (NELS) was established as a first academic society of natural disaster mitigation in Nepal. It is expected to function as a center for exchange of research and technologies.

Among the model projects, the Kathmandu - Naubise Road Model Project significantly contributes to all the year round traffic flow and plays an essential role to the economic activities in the capital region.

It is also part of the Project impact that an increasing number of requests for rehabilitation works have been made from local communities of disaster-stricken areas. In fact, the requests by far outnumber the capacity for the implementation due to the limited resources compared to the very high demand. For example in Girubari Model Site, local people demand more river improvement works in vulnerable areas, which seem to be essential.

3.5. Sustainability

According to the questionnaire survey, most counterparts are fully satisfied with the technology transfer from the Japanese experts. Although they are consulting with the Japanese experts, they can properly manage many of the activities of the DWIDP. However, some remaining activities need to be followed up together with corresponding technology transfer. It means that the DWIDP is not yet fully sustainable. Some problems are expected by a number of counterparts in their prospects of institutional, financial and technical aspects, while most tasks can already be managed properly within the current framework of the three aspects.

(1) Institutional Aspect

In March 2000, the DWIDP became a permanent government organization by the administrative reorganization. After the official decision in 2002, seven division offices and five sub-division offices were established and the River Training Division of the Department of Irrigation was merged to the DWIDP at the beginning of 2003. Then the number of technical staff of DWIDP was increased. The DWIDP central office consists of two divisions, namely the Research, Training and Monitoring Division, and the Study and Implementation Division transferred from the Department of Irrigation.

In recent years, the counterparts tend to remain at the DWIDP, although some were transferred to other government organizations concerned with disasters such as the member agencies of the Joint Coordinating Committee. As shown in the National Water Plan, the DWIDP is designated to be the leading agency in charge of disaster mitigation plans. Therefore, it is thought that the status of the department is secure and the staff number is expected to be maintained.

The management of the DWIDP intends to fully utilize the 12 local offices for local operations in cooperation with district and village development committees in the coming years.

His Majesty's Government of Nepal gives high priority to disaster mitigation. It is therefore expected that legal arrangement for disaster mitigation will be made in the near future.

(2) Financial Aspect

His Majesty's Government of Nepal continued its budget allocation to the DMSP Project through the DWIDP. The total disbursement to the department jumped in 2002/2003 fiscal year (July 2002 - July 2003) due to the merger of the river training division and the disaster rehabilitation operations. The allocation to the Research, Training and Monitoring Division, the counterpart division of the DMSP, in 2003/2004 is around Rs 160 million. The amount is regarded to be quite high.

As the DWIDP being recognized as an important department of His Majesty's Government of Nepal, it is thought that the budget is maintained.

Following the Water Resources Strategy, the National Water Plan stipulates that with the initiatives of the DWIDP, concerned agencies jointly proceed with short-term (5 years), mid-term (15 years) and long-term (25 years) strategies to address water induced disasters. Annual budgets are presented in the plan. It is expected that the government budget will be allocated to the DWIDP referring to the plan.

(3) Technical Aspect

The disaster mitigation technologies transferred by the Water Induced Disaster Prevention Technical Centre Project (Phase 1) have been maintained in the DWIDP as it can now conduct the training courses for relevant government employees. The trainees are from not only the DWIDP but also other staff of MOWR such as DOI, and also the police, Department of Hydrology and Meteorology of Ministry of Science and Technology, DOR of Ministry of Physical Planning and Works, Department of Soil Conservation and Watershed Management of Ministry of Forest and Soil Conservation, and other institutions.

Through the Project activities, the counterparts have been motivated to disaster mitigation with strong sense of commitment. While actions to be taken are planned and confirmed jointly by the Japanese and Nepalese staffs, those of the counterparts are proposed, operated and managed by themselves.

The transferred technologies are expected to be diffused by training the local office staff of the DWIDP.

As the newly attached local offices, data sources can be expanded. It is expected that the information system will be properly updated with diversified data sources.

4. Conclusion

The model project for sabo at Girubari upstream site is suspended with limited achievements due to the security problem at the site. The model projects for landslides at Bungamati and Chalnakhel sites have been delayed and are unlikely to be completed during the Project period, caused by the original delay of allocation of sufficient Nepalese staff at the beginning of the Project. On the other hand, the other model projects are at their final stage as planned.

Outputs of the disaster rehabilitation, the disaster information sharing and the awareness raising have been mostly produced.

The Project considerably strengthened capabilities and measures against water induced disasters of the DWIDP and other relevant government agencies. It also strengthened the disaster mitigation capabilities of a number of communities through some model projects, disaster rehabilitation activities and awareness raising campaigns.

On the whole, the Project is highly evaluated. The following issues are however not yet fully

addressed.

(1) Establishment of disaster mitigation/rehabilitation systems at local levels through the local offices of the DWIDP

(2) Diffusion of the disaster mitigation education in cooperation with MOES

(3) Close cooperation among government organizations as well as other relevant organizations for disaster mitigation by exchanging and sharing detailed disaster information

It is noted that achievements of the Water Induced Disaster Prevention Technical Centre Project (Phase 1) have been considerably taken over to the DWIDP as its institutional knowledge in documents, in staff who have been working since then or who have rejoined the DWIDP and as equipment and facilities. Among others, the present status of the DWIDP as a permanent organization is a result of the Phase 1. The basic concept of developing and diffusing low cost appropriate technologies has been taken over from the Phase 1. The general and advanced training courses currently operated by the Nepalese initiatives are also successful examples of the achievements.

Based on the achievements of the DPTC and DMSP Projects, the newly established division and sub-division offices need orientation and model site implementation which will help them to have more integrated view on water induced disaster prevention as a whole.

5. Recommendations

(1) Model Sites

"Land Use Guidelines" drafted through experiences in Dahachowk Model Site for Sabo is useful and effective for disaster mitigation. It's adaptability to other disaster prone areas would be testified.

At Bagmati Model Site for Landslides, the construction work by UG will not be completed within the project period. Countermeasures for Landslide in Bagmati are good practice for prevention of other landslides in Kathmandu Valley. In case future budget allocation for this model site in FY 2004 was fulfilled, Japanese expert's technical support would be available at DWIDP's request.

(2) Organization

The Water Induced Disaster Prevention Technical Centre Project (DPTC) culminated, reflected in its new status as a governmental organization in Mar 2000. The establishment of Department (DWIDP) is the admirable outcome which DPTC & DMSP are proud of.

In Feb 2002 the River Training Division of Department of Irrigation joined DWIDP, the budget and the number of staff scaled up drastically. At this time, a part of the dormitory of DPTC was transferred into office space for new staff who moved in DWIDP due to shortage of administrative buildings.

DWIDP should maintain effective and full utilization of both the accumulated disaster mitigation knowledge and the facilities provided by Japanese side after project termination.

(3) Training

The DWIDP conducts general and advanced disaster mitigation training courses, which were originally operated by the DPTC with the support of the Phase 1 project. These courses are carried out without any budgetary support from Japanese side. Sustainability was confirmed. The guidelines produced by DMSP will be significant materials for the training courses.

The training opportunity should be extended to the staff belonging to12 branches of DWIDP in the coming years.

The Water Induced Hazard Courses were opened by the Institute of Engineering, Tribhuvan

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University in 2001 with the support from the DMSP. During two academic years the Nepalese faculties had acquired academic knowledge from Japanese short time experts' lectures.

Godawari Hydraulic & Material Testing Laboratory offered precious experimental environment for students. Learning opportunity for disaster mitigation skill in higher education should be maintained in future.

(4) Disaster Rehabilitation System

"Disaster Rehabilitation Frame and System" proposed in JCC in 2001 was set by the project and concerned organization. Among central government bodies, the framework was constructed on how to react the onset of disasters, mitigate their shocks and rehabilitate them. On the other hand, disaster rehabilitation mechanisms in districts are immature and insufficient. The accumulated information and skills in DPTC and DMSP are efficient tools for future development through the DWIDP's branches in district level. The DWIDP should establish local disaster rehabilitation mechanisms at district and village levels.

(5) Information and Disaster Mitigation Education

GIS based disaster potential maps of all the 75 districts of Nepal are scheduled to be prepared and shared by relevant organizations within the Project period. Utilization of the GIS and the close network for promotion of disaster mitigation should be implemented.

Trial of Disaster Mitigation Education at primary schools in model sites produced textbooks for children. The usefulness of that material is obvious, so the revision of the curriculum and the provision of the necessary training for teachers should be made.

Annex 1.

PROJECT DESIGN MATRIX (PDM)

(revised at mid term Evaluation in December 2001)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Super Goal: Water induced disasters will be mitigated in Nepal.	(1) Minimizing the disaster (2) Condition / Situation / Status of disaster damage	Annual Disaster Review Report	(1) Climate & other natural conditions will not change significantly. (2) Deforestation & other factors that may cause disasters will not progress.
Overall Goal: Capability of HMG/N and communities to cope with water induced disasters will be strengthened.	(1) Priority of disaster prevention countermeasures in the National Development Plan (2) Concrete status of disaster matter in HMG/N and communities (3) No. of disaster mitigation / prevention project implemented by HMG/N	(1) National Development Plan (2) Annual reports of concerned Ministries (3) National annual budget plan	(1) Nepalese national economy will continue to grow. (2) Development projects in disaster prone area will be executed in controlled manner.
Project Purpose: Countermeasures for water induced disasters by HMG/N and communities will be promoted. Target Group (1) JCC member agencies (2) DWIDP (3) Community	(1) Formulation of policy by JCC member agencies to prevent/mitigate water induced disasters (2) Formulation of plan of actions/operations by DWIDP to prevent/mitigate water induced disasters in line with the achievements of DMSP Project	(1) Questionnaire/inquiry to JCC member agencies on utilisation of DMSP project achievements (2) Plan of actions/operations by DWIDP for disaster prevention/ mitigation	(1) Disaster prevention / regulation law shall be legislated and functioned.

Annex 1.

PROJECT DESIGN MATRIX (PDM)

Outputs: 1. Disaster mitigation measures and construction methods suitable for local environment will be identified. Target Group: (1) Community (2) Counterpart of DMSP	(1) Establishment of systems by community people in DMSP Project target areas to prevent/mitigate water induced disasters such as; warning/evacuation system, community activities to prevent/mitigate water induced disasters with the initiatives of Users' Group (UG), and Disaster Mitigation Education (DME) (2) Reliable/systematic information on effective investigation methods and countermeasures in terms of cost, workability and function to prevent/mitigate water induced disasters in DMSP Project target areas	(1,2) Model work report, (1,2) Activity report (1) Warning/evacuation guide (1) Record of UG activities (1) Record of DME (1) Social Survey (2) Photo Monitoring (2) Guideline/manual	(1) HMG/N will provide disaster prevention budget properly. (2) Trainers in DPTC/DWIDP and in communities will continue to work in disaster prevention, rehabilitation, and preparedness.
2. Disaster rehabilitation will be strengthened through technical supports of DWIDP (DMSP) Target Group: (1) Concerned central government offices (2) Concerned agencies = Central and local Government offices, ICIMOD, NGO etc. (3) DSC members	(1) Establishment of Disaster Survey Committee (DSC) comprised of the representatives of concerned central government offices (2) Distribution of case study reports on disaster rehabilitation to concerned agencies (3) Discussion/examination among DSC member agencies on establishment of sector-wide disaster rehabilitation system	(1,2) List of concerned agencies participating in DSC (1) Record of DSC activities (2) Case study reports on disaster rehabilitation (survey reports/ technical recommendations) (2)Record of distribution (3) Record of discussion/examination	

Annex 1.

PROJECT DESIGN MATRIX (PDM)

3. Sharing of disaster information and disaster mitigation technology will be improved. Target groups: (1) Counterpart of DMSP (2) Concerned agencies' staff (3) Institute of Engineering, Tribhuvan University	(1,2) Improvement of information sharing system established by DWIDP and its use by 10% of the staffs (about 250 in number) in concerned government offices (*1) (3) Establishment of disaster prevention/mitigation course at Institute of Engineering of Tribhuvan University followed by its independent management of the course	(1,2) Frequency of access to Web site (2) List of participants in trainings and seminars (2) Information guide (3) Evaluation of IOE/TU lecturers by DMSP Project experts/staff (3) Performance rate of curriculum (*3) (3) Number of enrollment of students in the course	
4. Awareness on disaster mitigation among HMG/N and communities will be raised. Target groups: (1) Concerned agencies (JCC) (2) Communities (All Nepal)	(1) Recommendations to JCC on disaster prevention/mitigation (2) Dissemination of DMSP Project achievements to 5% of VDCs and municipalities (about 200 in number) in the country (*2)	(1) Recommendation paper (2) List of VDCs participating in mobile seminars by DMSP Project (2) List of VDCs provided with IEC	

Annex 1.

PROJECT DESIGN MATRIX (PDM)

Activities: 1-1 Plan disaster mitigation activities in the target areas. 1-2 Apply appropriate disaster mitigation technologies and methods in the target areas. 1-3 Promote participatory disaster mitigation activities and educate communities in the target areas. 2-1 Setup organizational framework on disaster rehabilitation at DWIDP and the Disaster Survey Committee. 2-2 Conduct disaster surveys consulting with concerned agencies and/or communities. 2-3 Submit survey reports and/or rehabilitation plan to concerned agencies and/or communities.	Inputs:（5 years） ＜Japanese side＞ (1) Long-term experts(6) 1) Chief advisor 2) Coordinator 3) Community disaster mitigation 4) River Improvement 5) Sediment-related disaster mitigation 6) Disaster rehabilitation (2) Short-term experts(about 10 per year) (3) C/P training in Japan (about 4 per year) (4) Equipment ＜Nepal side＞ (1) C/P and Operational/clerical staff (2) Land and facilities (3) Project operational costs and construction cost necessary for model works	(1) C/P staff will not get transferred frequently. (2) Project implementing organisation will be maintained and strengthened.

2-4 Select target areas and implement model emergency rehabilitation works. 2-5 Promote participatory disaster rehabilitation activities in the target areas. 2-6 Review rehabilitation framework and system. 3-1 Implement training, workshops and/or seminars on project achievements. 3-2 Improve database and information systems at DWIDP 3-3 Develop Disaster Potential Maps by using GIS as a disaster information system. 3-4 Extend technical supports to introduce Disaster Mitigation Management Course in Water Resources Engineering Master Course at IOE/TU. 3-5 Extend technical supports upon request from concerned agencies and communities. 4-1 Make recommendations toward HMG/N on project achievements. 4-2 Disseminate IEC materials to communities resulted from the Activities 1 to Activities 3.		Pre-Condition (1) Counterpart budget for the project is in place (2) Necessary Counterparts are assigned. (3) Outputs of Phase -1 have been continuously maintained in DWIDP. (4) IOE/TU has intention and plan to establish disaster mitigation / prevention course.

N.B. 1 Major concerned government offices are Department of Irrigation (DOI), Department of Roads (DOR), Department of Soil Conservation and Watershed Management (DSCWM) and Ministry of Home Affairs (MOH). The Number of staffs in charge of disaster prevention/mitigation in those offices is about 2,500 in total. Information sharing system includes GIS, database, seminars and trainings.

2 provided that those VDCs and municipalities are accessible

3 Performance rate = percentage of number of topics covered compared with number of topics planned

Plan of Operations <Sl.No.9> (Revised Plan and Progress up to December 31, 2003)

Project: Disaster Mitigation Support Programme Project (from September 1st 1999 to August 31st 2004)
Project Purpose: Countermeasures against water induced disasters by HMG/N and communities will be promoted.
Target Group: Concerned HMG/N officials and community people.

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEPT, Ⅳ OCT NOV DEC; 2000 Ⅰ JAN FEB MAR, Ⅱ APR MAY JUN, Ⅲ JUL AUG SEP, Ⅳ OCT NOV DEC; 2001 Ⅰ JAN FEB MAR, Ⅱ APR MAY JUN, Ⅲ JUL AUG SEP, Ⅳ OCT NOV DEC; 2002 Ⅰ JAN FEB MAR, Ⅱ APR MAY JUN, Ⅲ JUL AUG SEP, Ⅳ OCT NOV DEC; 2003 Ⅰ JAN FEB MAR, Ⅱ APR MAY JUN, Ⅲ JUL AUG SEP, Ⅳ OCT NOV DEC; 2004 Ⅰ JAN FEB MAR, Ⅱ APR MAY JUN JUL			
			Implemented / Completed / Revised Plan			
1	**Identifying of measures and methods**					
	<River Improvement ; Girubari Khola)				**LTE3/4 Engeneer1 Overseer2**	
R 1-1	**Plan disaster mitigation activities in the target areas**					
R 1-1-1	Identify criteria for model site selection	Criteria		DG, CA, PC, LTE, CP		
R 1-1-2	Identify model site	Model Site		DG, CA, PC, LTE, CP		Idea / information from DOI / DSCWN / community.
R 1-1-3	Conduct detail survey	Baseline Data	① ① ② ③ ④ **Social Survey**	LTE(Ishichi), CP	Aero-photo, Topo-map	Contruct out if necessary.
R 1-1-4	Prepare for site plan	Work Plan, Participatory Plan	① ② ③	LTE(Ishichi), CP		Collaborate with DOI / DSCWN.
R 1-1-5	Develop country-watching maps	Country Watching Map	① ① ②	LTE(Ishichi), CP	PRA Consultant	Collaborate with DOI / DHM / community.
R 1-1-6	Monitor and evaluate model work	Report, Guide, Manual		DG, CA, PC, LTE(Ishichi), CP		Evaluation of Activities 1-1 to 1-3 will be executed at the final stage. Connect with Activity 4.
R 1-1-7	Fixed－point observation	Data (Rain, Water Level, Incline, Extensor, etc)		LTE(Ishichi), CP	Monitoring equipments	
R 1-2	**Apply appropriate disaster mitigation technologies and methods in the target areas.**					
R 1-2-1	Identify and design low-cost technology and construction method	Low Cost Technology, Method, Design	① ② ③ ④ ⑤	LTE(Ishichi), CP	STE	Apply local technology / method. ③,⑤ = Hydraulic Model Experiment conducted by STE.
R 1-2-2	Implement model work	Model Work	① ① ② ③ ④	LTE(Ishichi), CP	Construction equipment	Involve community. Contract out if necessary.
R 1-2-3	Evaluate technology	Upgrade Guide/ Manual / Report	① ② ③	LTE(Ishichi), CP		

*DG=Director General, CA=Chief Adviser, PC=Coordinator, LTE=Long Term Expert, STE=Short Term Expert, CP=Counterpart, KTM=Kathmandu Municipality

Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEPT OCT NOV; Ⅳ DEC JAN FEB MAR; 2000 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2001 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2002 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2003 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2004 Ⅰ APR MAY JUN; Ⅱ JUL AUG			
			Implemented / Completed / Revised Plan			
R 1-3	**Promote participatory disaster mitigation activities and educate communities in the target areas.**					
R 1-3-1	Develop materials	IEC & Teaching Material	① ① ② ③ ④ ⑤	LTE(Ishichi), CP	STE	Management manuals will be developed at the later stage.
R 1-3-2	Advocate and educate community	Awareness, Publication, Warning and Evacuation system, Participatory Activities	① ① ② ② ③ ③	LTE(Ishichi), CP	Gabion Wire STE IEC materials	Collaborate with MOE / DOI / community.
R 1-3-3	Evaluate participatory activities	Upgrade Guide/ Manual / Report		LTE(Ishichi), CP	STE	Questionnaire / interview
	<Sabo ; Dahachowk & Girubari Khola (Upper)>				**LTE3/4 Engeneer2 Overseer2**	
S1-1	**Plan disaster mitigation activities in the target areas**					
S 1-1-1	Identify criteria for model site selection	Criteria		DG, CA, PC, LTE, CP	LTE 3/4 Engineer 2 Overseer 2	
S 1-1-2	Identify model site	Model Site		DG, CA, PC, LTE, CP		Idea / information from DSCWN / community.
S 1-1-3	Conduct detail survey (Dahachowk)	Baseline Data	① ① ② ③ ④ ⑤ social survey	LTE(Hiruma), CP	Aero-photo, Topo-map, Survey equipment, STE (social survey),	Contract out if necessary.
	(Girubari)		① ② ③ ④ ⑤ social survey	LTE(Hiruma), CP		
S 1-1-4	Prepare site plan (Dahachowk)	Work Plan, Participatory Plan	① ② ③ ④	LTE(Hiruma), CP		Collaborate with DSCWN / community.
	(Girubari)		① ② ③ ④	LTE(Hiruma), CP		
S 1-1-5	Develop country watching maps (Dahachowk)	Country Watching Map	① ② ③ ④	LTE(Hiruma), CP	Consultant	Collaborate with DSCWN / community.
S 1-1-6	Monitor and evaluate model work	Report, Guide, Manual		DG, CA, PC, LTE(Hiruma), CP		Evaluation of Activities 1-1 to 1-3 will be executed at the final stage. Connect with Activity 4.
S 1-1-7	Fixed-point observation	Data (Rain, Water Level, Incline, Extensor, etc)		LTE(Hiruma), CP	Monitoring equipments	
S1-2	**Apply low-cost disaster mitigation technologies and methods in the target areas.**					

*DG=Director General, CA=Chief Adviser, PC=Coordinator, LTE=Long Term Expert, STE=Short Term Expert, CP=Counterpart, KTM=Kathmandu Municipality

Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 III SEPT OCT NOV; IV DEC JAN FEB MAR; 2000 I APR MAY JUN; II JUL AUG SEP; III OCT NOV DEC; IV JAN FEB MAR; 2001 I APR MAY JUN; II JUL AUG SEP; III OCT NOV DEC; IV JAN FEB MAR; 2002 I APR MAY JUN; II JUL AUG SEP; III OCT NOV DEC; IV JAN FEB MAR; 2003 I APR MAY JUN; II JUL AUG SEP; III OCT NOV DEC; IV JAN FEB MAR; 2004 I APR MAY JUN; II JUL AUG			
			Implemented / Completed / Revised Plan			
S 1-2-1	Identify and design low-cost technology and construction method (Dahachowk)	Low Cost Technology, Method, Design	STE ①; ②; ③; ④	LTE(Hiruma), CP	STE	Apply local technology / method.
	(Girubari)		①; ②; ③; ④; ⑤	LTE(Hiruma), CP		
S 1-2-2	Implement model work (Dahachowk)	Model Work	②; ③	LTE(Hiruma), CP	Construction equipment. Seedling, Farming appliances. Agricultural implement	Involve community. Contract out if necessary.
	(Girubari)		①; ②; ③; ④	LTE(Hiruma), CP		
S 1-2-3	Evaluate technology	Upgrade Guide / Manual / Report		LTE(Hiruma), CP		
S 1-3	**Promote participatory disaster mitigation activities and educate communities in the target areas.**					
S 1-3-1	Develop materials	IEC & Teaching Material		LTE(Hiruma), CP	Consultant STE	Managament manuals will be developed at the later stage.
S 1-3-2	Advocate and educate community	Awareness, Publication, Warning and Evacuation System	①; ②; ③	LTE(Hiruma), CP	STE, Consultant, Street drama	Collaborate with MOE / DSCWN / community.
S 1-3-3	Evaluate participatory activities	Upgrade Guide / Manual / Report		LTE(Hiruma), CP		Questionnaire / interview.
	<Sediment-related ;Kathmandu/Naubise Road>				**LTE1/2 Engen.1/2*2 Overseer 0**	
K 1-1	**Plan disaster mitigation activities in the target areas**				Lecturer(No.1-0)	
K 1-1-1	Identify criteria for model site selection	Criteria		DG, CA, PC, LTE(Omoto), CP		
K 1-1-2	Identify model site	Model Site		DG, CA, PC, LTE(Omoto), CP		Idea /Information from DOR.
K 1-1-3	Conduct detail survey	Baseline Data	S; Topo; F/S; Topo/DPM; Topo/DPM	LTE(Omoto), CP	STE, Survey Equipment, Topo-map, Aerial-photo, Consultant	Contract out if necessary.
K 1-1-4	Prepare for site plan	Work Plan		LTE(Omoto), CP		Collaborate with DOR.

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Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEPT OCTV NOVC DECN; 1999 Ⅳ JAN FEB MAR; 2000 Ⅰ APRY MAYN JUNL JULG; 2000 Ⅱ AUGP SEPT OCTV NOVC DECN; 2000 Ⅲ JANB FEBR MARR APRY; 2000 Ⅳ MAYN JUNL JULG AUGP; 2001 Ⅰ SEPT OCTV NOVC DECN; 2001 Ⅱ JANB FEBR MARR APRY; 2001 Ⅲ MAYN JUNL JULG AUGP; 2001 Ⅳ SEPT OCTV NOVC DECN; 2002 Ⅰ JANB FEBR MARR APRY; 2002 Ⅱ MAYN JUNL JULG AUGP; 2002 Ⅲ SEPT OCTV NOVC DECN; 2002 Ⅳ JANB FEBR MARR APRY; 2003 Ⅰ MAYN JUNL JULG AUGP; 2003 Ⅱ SEPT OCTV NOVC DECN; 2003 Ⅲ JANB FEBR MARR APRY; 2003 Ⅳ MAYN JUNL JULG AUGP; 2004 Ⅰ SEPT OCTV NOVC DECN; 2004 Ⅱ JANB FEBR MARR APRY MAYN JUNL JULG AUGP			
			Implemented; Completed; Revised Plan			
K 1-1-5	Develop hazard map	Disaster Potential Map	DPM; DPM; DPM	LTE(Omoto), CP	STE, Consultants	Collaborate with DOR. Contract out if necessary.
K 1-1-6	Monitor and evaluate model work	Report, Guide, Manual		DG, CA, PC, LTE(Omoto), CP	STE	Evaluation of Activities 1-1 to 1-3 will be executed at the final stage. Connect with Activity 4.
K 1-1-7	Fixed－point observation	Data (Rain, Water Level, Incline, Extensor, etc)		LTE(Omoto), CP	Monitoring equipments	
K 1-2	**Apply appropriate disaster mitigation technologies and methods in the target areas.**					
K 1-2-1	Identify and design appropriate technology and construction method	Appropriate Technology, Method, Design		LTE(Omoto), CP	STE	Apply loca technology / method. Establish the database of existing control works.
K 1-2-2	Implement model work	Model Work		LTE(Omoto), CP		Contract out
K 1-2-3	Evaluate technology	Upgrade Guide / Manual / Report	report	LTE(Omoto), CP	STE	
K 1-3	**Promote participatory disaster mitigation activities and educate communities in the target areas.**					
K 1-3-1	Develop materials	IEC & Teaching Material	IEC; Guid; Guide; IEC; IEC	LTE(Omoto), CP	STE	Management manuals will be developed at the later stage.
K 1-3-2	Advocate and educate community	Awareness, Publication, Warning and Evacuation System	R/S	LTE(Omoto), CP	STE, IEC materials	Cooperate with MOE / Community
K 1-3-3	Evaluate participatory activities	Upgrade Guide / Manual / Report		LTE(Omoto), CP	STE	Questionnaire.
	<Landslide : Bagmati River>				**LTE1/2 Engn.1/2*2 Overseer0**	
B 1-1	**Plan disaster mitigation activities in the target areas**				Lecturer(No.1-0)	
B 1-1-1	Identify criteria for model site selection	Criteria		DG, CA, PC, LTE, CP		
B 1-1-2	Identify model site	Model Site		DG, CA, PC, LTE, CP		Idea / information from concerned agencies and/or community.

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Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEPT OCTV NDEC; Ⅳ JAN FEB MAR; 2000 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2001 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2002 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2003 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2004 Ⅰ APR MAY JUN; Ⅱ JUL AUG			
			Implemented; Completed; Revised Plan			
B 1-1-3	Conduct detail survey	Baseline Data	S; LDM; CWM; LDM	LTE(Omoto), CP	STE, Survey equipment, Topo-map, Aerial-photo, Consultant	Contract out if necessary.
B 1-1-4	Prepare for site plan	Work Plan, Participatory Plan		LTE(Omoto), CP		Collaborate with community.
B 1-1-5	Develop hazard maps	Landslide Distribution Map	LDM; CWM; LDM/CWM	LTE(Omoto), CP	STE, Consultant	Collaborate with community. Contract out if necessary.
B 1-1-6	Monitor and evaluate model work	Report, Guide, Manual		DG, CA, PC, LTE(Omoto), CP	STE	Evaluation of Activities 1-1 to 1-3 will be executed at the final stage. Connect with Activity 4.
B 1-1-7	Fixed-point observation	Data (Rain, Water Level, Incline, Extensor, etc)		LTE(Omoto), CP	Monitoring equipments	
B 1-2	**Apply appropriate disaster mitigation technologies and methods in the target areas.**					
B 1-2-1	Identify and design appropriate technology and construction method	Appropriate Technology, Method, Design		LTE(Omoto), CP	STE	Apply the technology developed by DPTC.
B 1-2-2	Implement model work	Model Work	Bungamati; Bungamati	LTE(Omoto), CP	Construction equipment.	Contract out if necessary. Involve community if possible.
B 1-2-3	Evaluate technology	Upgrade Guide / Manual / Report		LTE(Omoto), CP	STE	
B 1-3	**Promote participatory disaster mitigation activities and educate communities in the target areas.**					
B 1-3-1	Develop materials	IEC & Teaching Material	IEC; IEC/DME	LTE(Omoto), CP	STE	Management manuals will be developed at the later stage.
B 1-3-2	Advocate and educate community	Awareness, Publication, Warning and Evacuation system		LTE(Omoto), CP	STE, IEC materials	Collaborate with MOE / community.
B 1-3-3	Evaluate participatory activities	Upgrade Guide / Manual / Report		LTE(Omoto), CP	STE	Questionnaire.
2	**Promotion of Disaster Rehabilitation**				**LTE2/4 Engen.1+1/3 Overseer1**	
2-1	**Setup organizational framework on disaster rehabilitation at DWIDP and the Disaster survey committee**					

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Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEPT OCT NOV; 1999 Ⅳ DEC JAN FEB MAR; 2000 Ⅰ APR MAY JUN; 2000 Ⅱ JUL AUG SEP; 2000 Ⅲ OCT NOV DEC; 2000 Ⅳ JAN FEB MAR; 2001 Ⅰ APR MAY JUN; 2001 Ⅱ JUL AUG SEP; 2001 Ⅲ OCT NOV DEC; 2001 Ⅳ JAN FEB MAR; 2002 Ⅰ APR MAY JUN; 2002 Ⅱ JUL AUG SEP; 2002 Ⅲ OCT NOV DEC; 2002 Ⅳ JAN FEB MAR; 2003 Ⅰ APR MAY JUN; 2003 Ⅱ JUL AUG SEP; 2003 Ⅲ OCT NOV DEC; 2003 Ⅳ JAN FEB MAR; 2004 Ⅰ APR MAY JUN; 2004 Ⅱ JUL AUG			
			Implemented; Completed; Revised Plan			
2-1-1	Setup a team on disaster survey and rehabilitation	Institutional Framework	①	DG, CA, PC, LTE, CP		
2-1-2	Study and prepare rehabilitation activity plan	Rehabilitation Activity Plan	① ② ③	LTE(Sumi), CP	STE	
2-1-3	Set up the Disaster Survey Committee (DSC)	DSC / Criteria	①	DG, CA, PC, LTE, CP		Concerned agencies of DSC.
2-2	**Conduct disaster surveys consulting with concerned agencies and/or communities**					Disaster surveys will be conducted in collaborate with concerned agencies.
2-2-1	Disaster survey and damage assessment	Data	① ② ③ ④	LTE(Sumi), CP	Survey equipment, Aerial-photo, Topo-map, STE	Contract out if necessary. Use helicopter if necessary.
2-2-2	Prepare survey report and rehabilitation plan	Preliminary Report, Plan, Advice	① ② ③ ④	LTE(Sumi), CP	STE	Survey in (Aug-Sep) & after (Jan-Feb) monsoon. Contract out if necessary.
2-3	**Submit survey reports and/or rehabilitation plan to concerned agencies and/or communities**					
2-3-1	Hold DSC Meeting and Review Survey Report	DSC, Preliminary Report	① ② ③	DG, CA, PC, LTE(Sumi), CP		Concered agencies of DSC.
2-4	**Select target areas and implement model emergency rehabilitation works**					
2-4-1	Select target areas for model emergency rehabilitation works initiated by DWIDP/DMSP and inform to DSC	Model Site Plan	① ② ③ ④	DG, CA, PC, LTE(Sumi), CP		Short and long term project (including evacuation).
2-4-2	Advocate and motivate the community	Community Activity	① ①② ② ③ ③ ④ ④	LTE(Sumi), CP	IEC materials	Involve community.
2-4-3	Implement emergency rehabilitation work and recommendation	Rehabilitation Work, Recommendation	① ① ② ③ ④	LTE(Sumi), CP	Construction equipment.	Collaboration with concerned agencies. Final year activities will be carried out by DWIDP.
2-5	**Promote participatory disaster rehabilitation activities in the target areas**					
2-5-1	Monitoring and assessment emergency rehabilitation work	Report, Data, IEC		LTE(Sumi), CP	Observation / survey equipment.	Involve community. Final year activities will be carried out by DWIDP with DMSP support.
2-5-2	Prepare and review guidelines and manuals	Guide and Manual		LTE(Sumi), CP	STE	Connect with Activity 4.

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Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEPT OCTV NOVC; 1999 Ⅳ DECN JAEB FAPR; 2000 Ⅰ MAPRY AJUN JUNL; 2000 Ⅱ JULG AUGP SEPT; 2000 Ⅲ OCTV NOVC DECN; 2000 Ⅳ JAEB FAPR MAPRY; 2001 Ⅰ AJUN JUNL JULG; 2001 Ⅱ AUGP SEPT OCTV; 2001 Ⅲ NOVC DECN JAEB; 2001 Ⅳ FAPR MAPRY AJUN; 2002 Ⅰ JULG AUGP SEPT; 2002 Ⅱ OCTV NOVC DECN; 2002 Ⅲ JAEB FAPR MAPRY; 2002 Ⅳ AJUN JULG AUGP; 2003 Ⅰ SEPT OCTV NOVC; 2003 Ⅱ DECN JAEB FAPR; 2003 Ⅲ MAPRY AJUN JULG; 2003 Ⅳ AUGP SEPT OCTV; 2004 Ⅰ NOVC DECN JAEB; 2004 Ⅱ FAPR MAPR AJUN JUNL JULG AUG			
			Implemented; Completed; Revised Plan			
2-6	**Review rehabilitation framework and system**					
2-6-1	Review the emergency rehabilitation work, DSC framework and system	DSC, Report	① ① ② ③ ④	DG, CA, PC, LTE(Sumi), CP	STE	Collaborate with concerned agencies of DSC.
2-6-2	Preparation of annual rehabilitation report	Report Annually	① ② ③ ④	LTE(Sumi), CP		Contract out if necessary.
2-6-3	Revise manuals, design/survey guidelines (final)	Manual, Guide		LTE(Sumi), CP	STE	Connect with Activity 4.
3	**Disaster mitigation network**					Set up a team for each activity
3-1	**Implement seminars, training and/or workshops on project achievements**				LTE 1/4 Engineer 1	This activity will relate to Activity 1,2 and 4.
3-1-1	Study and prepare the training, seminar plan	Training / Seminar Plan		DG, CA, PC, LTE(Hiruma), CP		
3-1-2	Design training course and develop materials (General / Advanced training course)	Course Curriculum, Manual		LTE(Hiruma), CP	STE	Project output will be partially incorporated into General / Advanced Training Course.
	(DME Teachers Training)			LTE(Hiruma, Ishichi, Omoto), CP		
3-1-3	Implement training course (General / Advanced training course)	Trainer		LTE(Hiruma), CP	Teaching materials.	Project output will be partially incorporated into General / Advanced Training Course.
	(DME Teachers Training)			LTE(Hiruma, Ishichi, Omoto), CP		
3-1-4	Conduct seminars/workshops	Seminar / Workshop	DME DME DME DME DME national international	LTE(Hiruma), CP	STE, IEC materials	Seminar / workshop will also be held at model site if necessary.
3-1-5	Review and Evaluation	Training, Seminar, Workshop		LTE(Hiruma), CP		
3-2	**Improve database and information systems at DWIDP**				**LTE1/4 Engeneer1/2 Typist1 P-Staff1**	This activity will relate to Activity 1,2 and 4.
3-2-1	Study on the improvement of database and information system at DWIDP	Improvement Plan	① ② ③ ④	DG,CA,LTE, LTE(Sumi), CP		
3-2-2	Improve database and information system at DWIDP (Data base)	Database、Data Processing Method		LTE(Sumi), CP	Computer system	Contract out if necessary.
	(Information system)	Information System		LTE(Sumi), CP		

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PLAN OF OPERATIONS (PO)

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			1999 Ⅲ SEPT OCT NOV; Ⅳ DEC JAN FEB MAR; 2000 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2001 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2002 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2003 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR; 2004 Ⅰ APR MAY JUN; Ⅱ JUL AUG			
			Implemented / Completed / Revised Plan			
3-2-3	Classify and improve information data (Classify data)	Database、Data Processing Method		LTE(Sumi), CP	Computer system	Data from DWIDP and concerned agencies.
	(Improve information data)	Sharing Information / Data		LTE(Sumi), CP		
3-2-4	Establish Web site of DMSP/DWIDP	Web Site		LTE(Sumi), CP	Computer system	Contract out if necessary.
3-2-5	Disseminate information on disaster & disaster mitigation	Data, Information System		LTE(Sumi), CP		Disseminate to concerned agencies and community people.
3-2-6	Monitoring and evaluation	Report, Database, Information System		LTE(Sumi), CP	STE	
3-3	**Develop Disaster Potential Maps by using GIS as a disaster information system**				**LTE1/4 Engeneer1/2 Typist1 P-Staff1**	These activities will relate to Activity 1.
3-3-1	Study work plan of GIS at DWIDP	Workplan		DG, CA, LTE(Sumi), CP	STE	
3-3-2	Setup and improve GIS at DWIDP	GIS System		LTE(Sumi), CP	STE, Computer system.	
3-3-3	Survey, collect and process GIS data (District wise disaster information)	GIS Data		LTE(Sumi), CP	Survey equipment, Aerial-photo, Consultant	
	(KTM-Naubise Road)	GIS Data		LTE(Sumi), CP		
	(Giriwari River)			LTE(Sumi), CP		
3-3-4	Develop Disaster Potential Maps using GIS (District wise disaster information)	Disaster Potential Map		LTE(Sumi), CP	STE (GIS), Consultant	
	(KTM-Naubise Road)			LTE(Sumi), CP		
3-3-5	Disseminate disaster potential maps (District wise disaster information)	Dissemination		LTE(Sumi), CP		Disseminate to concerned agencies and community people.
	(KTM-Naubise Road)	Disaster Potential Map		LTE(Sumi), CP		
3-3-6	Monitoring and evaluation	Report, GIS, Disaster Potential Map		LTE(Sumi), CP	STE	
3-4	**Extend technical supports to introduce Disaster Mitigation Management Course in Water Resources Engineering Master Course at IOE/TU**				**LTE1/4 Senior Divisional Engineer**	Collaborate with the initiative of IOE/TU

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Annex 2.

PLAN OF OPERATIONS (PO)

No.	Activity	Target	Schedule (Japanese Fiscal Year)	Responsible Person in Project Team	Input	Remarks
			1999 Ⅲ SEP OCT NOV DEC; Ⅳ JAN FEB MAR 2000 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR 2001 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR 2002 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR 2003 Ⅰ APR MAY JUN; Ⅱ JUL AUG SEP; Ⅲ OCT NOV DEC; Ⅳ JAN FEB MAR 2004 Ⅰ APR MAY JUN; Ⅱ JUL AUG			
			Implemented / Completed / Revised Plan			
3-4-1	Study on the set-up of the Disaster Mitigation Management Course in TU	Institutional Framework, Course Plan		DG, CA, LTE(Hiruma), CP		Intention and plan of IOE/TU to be comfirmed.
3-4-2	Develop course design, curriculum and teaching materials with TU	Curriculum, Teaching Materials		LTE(Hiruma), CP	STE, IOE/TU	
3-4-3	Establish the Disaster Mitigation Management Course	Course		LTE(Hiruma), CP	IOE/TU, Curriculum, Teaching materials	
3-4-4	Support lecture and experiment study	Course Attendant		LTE(Hiruma), CP	STE, IOE/TU, Teaching materials,	Course shall be sustained by IOE/TU itself.
3-5	**Extend technical supports upon request from concerned agencies and communities**					
3-5-1	Set up technical support system at DWIDP	Institutional Framework on Technical Support, Criteria		DG,CA,PC,LTE,CP		
3-5-2	Extend technical support	Technical Advice		LTE(Sumi, Hiruma, Ishichi, Omoto), CP		Technical supports will be made within DWIDP cabability and its other activities.
4	**Awareness on disaster mitigation**					
4-1	**Make recommendations toward HMG/N on project achievements**					Recommend to concerned agencies.
4-1-1	Make and disseminate progress report	Annual / Bi-annual Report		DG,CA,LTE(Sumi, Hiruma, Ishichi, Omoto), CP		
4-1-2	Recommend countermeasures in JCC	Recommendation		DG, CA		JCC meeting will be held once a year and upon necessity.
4-2	**Disseminate IEC materials to communities resulted from the Activities 1 to 3**					Create awareness of disaster mitigation through disseminated outputs
4-2-1	Prepare and disseminate IEC materials and/or guides	Dissemination / Awareness		LTE(Sumi, Hiruma, Ishichi, Omoto), CP	Case study, IEC materials, Guide, Publication	Material and guides will be prepared and disseminated in Activities 1-3.
4-2-2	Monitor and feedback the impact of materials, guides	Dissemination / Awareness		DG,CA,LTE(Sumi, Hiruma, Ishichi, Omoto), CP		
4-2-3	Upgrade and summarize materials and/or guides	Dissemination / Awareness		LTE(Sumi, Hiruma, Ishichi, Omoto), CP		

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Annex 3. **DISPATCHED SHORT-TERM EXPERTS** SHORT TERM EXPERT

JFY1999

NO.	NAME	EXPERT ON	DURATION	RESPONSIBLE LTE	RESPONSIBLE CP
1	Mr.Akira MATSUMOTO	Project Cycle Management (PCM)	21/11-4/12/1999	Mr.K.Sasaki	Mr.D.Bhattarai
2	Mr.Yoshikazu SHIMIZU	GIS Technology	11/12-25/12/1999	Mr.S.Yamaguchi	Mr.P.M.Shrestha
3	Mr.Yasushi MABUCHI	Database	15/12-29/12/1999	Mr.S.Yamaguchi	Mr.P.M.Shrestha
4	Mr.Hidetomi OI	Rehabilitation Planning	16/2-26/2/2000	Mr.S.Yamaguchi	Mr.M.B.Pradhan
5	Mr.Itsuo HIRATA	Disaster Rehabilitation Implementation	16/2-27/2/2000	Mr.S.Yamaguchi	Mr.M.B.Pradhan
6	Dr.Shuji KITAZAWA	Land Slide Survey	1/3-9/3/2000	Mr.S.Morikawa	Mr.K.B.Bhandari
7	Prof. Takuo UTAGAWA	Social Survey Methodology	8/3-2/4/2000	Mr.K.Iriguchi	Mr.B.Ghimire

JFY2000

1	Ms.Yuki SHUTO	Community Disaster Mitigation Program	20/5-28/5/2000	Mr.K.Kansha	Mr.R.H.Pantha
2	Mr.Takashi ARAI	IEC Materials	5/6-24/6/2000	Mr.K.Iriguchi	Mr.B.Ghimire Mr.P.M.Shrestha Mr.K.Bhandari
3	Mr.Toshiro MOMOZAWA	Disaster Mitigation Education	26/7-4/8/2000	Mr.S.Morikawa	Mr.D.Bhattarai
4	Mr.Satoshi HARA	Disaster Survey	22/8-3/9/2000	Mr.S.Yamaguchi	Mr.M.B.Pradhan Mr.B.Ghimire
5	Dr.(A.Prof.) Masahiro KAIBORI	Countermeasures against Sediment Discharge	9/9-22/9/2000	Mr.K.Kansha	Mr.R.H.Pantha Mr.S.K.Dwibedi
6	Mr.Masaki HIRUMA	Low Cost Disaster Mitigation Works	9/9-29/9/2000	Mr.K.Iriguchi	Mr.A.Karki
7	Mr.Tadanori ISHIZUKA	Participatory Disaster Mitigation Program	14/11-26/11/2000	Mr.K.Kansha	Mr.A.Karki
8	Mr.Shigechika MIYAZIMA	Disaster Rehabilitation Planning	19/11-3/12/2000	Mr.S.Yamaguchi	Mr.M.B.Pradhan Mr.B.Ghimire
9	Mr.Yasuo ISHII	Participatory Disaster Mitigation Program	26/11-9/12/2000	Mr.S.Morikawa	Mr.P.M.Shrestha
10	Mr.Tatsuya MIWATA	GIS Technology	11/3-24/3/2001	Mr.S.Yamaguchi	Mr.P.M.Shrestha
11	Dr.(A.Prof.) Masaharu FUJITA	Disaster Mitigation/Prevention Course Curriculum Development	26/3-9/4/2001	Mr.K.Iriguchi	Mr.D.Bhattarai

Annex 3.

SHORT TERM EXPERT

JFY2001

1	Mr.Yoshio TOJU	Slope Disaster Mitigation	17/7-29/7/2001	Mr.S.Morikawa	Mr.K.N.Dahal Mr.G.R.Adikari
2	Mr.Yutaka KOBAYASHI	Disaster Rehabilitation Planning	2/10-23/10/2001	Mr.T.Fukada	Mr.P.M.Shrestha Mr.K.B.Shrestha
3	Dr.(A.Prof.) Masaharu FUJITA	Disaster Mitigation/Prevention Course Curriculum Development	17/11-25/11/2001	Mr.K.Iriguchi	Mr.D.Bhattarai
4	Mr.Mobutomo OSANAI	Vegetation Engineering	10/2-21/2/2002	Mr.K.Kansha	Mr.S.P.Sharma
5	Mr.Kzuhumi KAWAMITSU	Land Slide Countermeasures	5/2-27/2/2002	Mr.S.Morikawa	Mr.G.R.Adhikari Mr.K.N.Dahal
6	Mr.Takashi YANAGAWA	Land Use Regulation	24/2-7/3/2002	Mr.K.Kansha	Mr.S.R.Goutam
7	Mr.Kazutomo INAGAKI	GIS Technology	10/3-23/3/2002	Mr.T.Fukada	Mr.P.M.Shrestha
8	Dr.(Prof.) Hajime NAKAGAWA	Lecture for Water Induced Hazard Core Course	16/3-6/4/2002	Mr.K.Iriguchi	Dr.N.M.Shakya

JFY2002

1	Ms.Yasuko ODA	Disaster Mitigation Education	15/7-12/9/2002	Mr.K. Ishichi	Mr.S.P.Sharma
2	Dr.(A.Prof.) Michiya IRASAWA	Lecture for Water Induced Hazard Elective Course	24/8/-14/9/2002	Mr.M.Hiruma	Dr.N.M.Shakya
3	Dr.Akira ODA	Hydraulic Model Experiment	25/8-27/9/2002	Mr.K.Ishichi	Mr.B.P.Gautam
4	Mr.Kiyoshi AMAO	Disaster Rehabilitation Planning	18/1-2/2/2003	Mr.T.Fukada	Mr.S.M.Sthapit
5	Mr.Kuniaki KANSHA	Land Use Regulation	23/2-8/3/2003	Mr.M.Hiruma	Mr.S.P.Sharma
6	Dr.(A.Prof.) Yoshihumi SATOFUKA	Lecture for Water Induced Hazard Core Course	16/3-30/3/2003	Mr.M.Hiruma	Dr.N.M.Shakya

JFY2003

1	Ms.Yasuko ODA	Disaster Mitigation Education	7/5-4/6/2003	Mr.K.Ishichi	Mr.S.Pradhan
2	Mr.Takayuki MAYUMI	Soil Experiment	21/7-10/8/2003	Mr.N.Omoto	Mr.J.L.Shrestha
3	Dr.(A.Prof.) Tetsuya KUBOTA	Lecture for Water Induced Hazard Elective Course	13/9-27/9/2003	Mr.M.Hiruma	Dr.N.M.Shakya
4	Dr.Akira ODA	Hydraulic Model Experiment	3/11-5/12/2003	Mr.K.Ishichi	Mr.B.P.Gautam
5	Prof. Takuo UTAGAWA	Social Survey Methodology	8/11-30/11/2003	Mr.K.Ishichi & Mr.M.Hiruma	Mr.R.Shakya Ms.S.Singh
6	Dr.(Prof.) Satoshi TSUCHIYA	Stone Fall Prevention on theSlope	1/12-20/12/2003	Mr.N.Omoto	Mr.J.L.Shrestha
7	Dr.(E.Prof.) Keiji OTE	Land Use Regulation	10/12-26/12/2003	Mr.M.Hiruma	Mr.S.P.Sharma
8	Mr.Kenichi TANAKA	GIS Technology	18/1-31/1/2004	Mr.Y.Sumi	Mr.P.M.Shrestha

Annex 4.

COUNTERPART TRAINING

1. JAPAN (JICA CP TRAINING SCHEME)

	NAME	DESIGNATION (AS OF TRAINING TIME)	TOPIC/SUBJECT	DURATION
1	Mr.Krishna Prasad BHANDARI	Engineer	Land Slide Engineering	20/1-25/2/2000
2	Mr.Dinesh Kumar MALLA	Soil Conservation Officer	Sediment Transportation in Rivers	20/1-25/2/2000
3	Mr.Mahesh Bahadur PRADHAN	Engineer	Sabo Engineering Technology	16/3-26/4/2000
4	Mr.Bhuwan GHIMIRE	Engineer	Disaster Survey and Rehabilitation	2/10-1/11/2000
5	Mr.Ram Hari PANTHA	Soil Conservation Officer	Community Disaster Mitigation	2/10-1/11/2000
6	Mr.Prakash Man SHRESTHA	Engineer	GIS	2/10-7/11/2000
7	Mr.Bishwa Nath SAPKOTA	Secretary	Disaster Mitigation Administration (senior)	21/1-28/1/2001
8	Mr.Arjun Kumar KARKI	Engineer	Countermeasures against Flood Disasters	7/6-11/7/2001
9	Mr.Damodar BHATTARAI	Senior Divisional Engineer	Disaster Survey and Rehabilitation	23/7-15/8/2001
10	Mr.Sagar Raj GOUTAM	Engineer	Countermeasures against Soil Erosion	5/11-6/12/2001
11	Mr.Badri Govinda RAJKARNIKAR	Senior Divisional Engineer	Disaster Information	6/10-24/10/2002
12	Mr.Amoda Nanda MISHRA	Director General	Land Slide Countermeasures (senior)	14/10-26/10/2002
13	Dr.(A.Prof.) Narendra Man SHAKYA	Associate Professor (TU)	Water Induced Disaster Mitigation Engineering	14/10-14/11/2002
14	Mr.Khila Nath DAHAL	Engineering Hydro Geologist	Slope Failure Countermeasures	20/1-21/2/2003
15	Mr.Prakash Man SHRESTHA	Engineer	Water Sector Development Planning	13/3-29/3/2003
16	Mr.Dhurb Raj PAUDYAL	Overseer	Hydraulic Model Experiment	13/10-22/11/2003
17	Mr.Ujjwal Prasad DHAKAL	Overseer	Disaster Rehabilitation	2/11-3/12/2003
18	Mr.Krishna Bahadur SHIGN	Overseer	Countermeasures against Sediment-Related Disasters	2/11-3/12/2003
19	Mr.Shree Hari REGMI	Overseer	Afforestation Technique in Barren and Degraded Land	2/11-3/12/2003

2. THIRD COUNTRY (INDONESIA)

1	Mr.Sundar Prasad SHARMA	Assistant Soil Conservation Officer	Sabo Engineering and Water Induced Disaster Countermeasures	17/9-24/10/2001

3. OTHERS

1	Mr.Kedar Prakash RIZAL	Acting Director General	Public Works and Management (Japan, Group, Senior)	11/10-22/10/1999
2	Mr.Amoda Nanda MISHRA	Director General	Public Works and Management (Japan, Group, Senior)	15/10-26/10/2001
3	Mr.Amoda Nanda MISHRA	Director General	Asia Pacific Consultation Workshop on Water and Poverty (Bangladesh)	22/9-26/9/2002
4	Mr.Damodar BHATTARAI	Senior Divisional Engineer	Regional Consultation Workshop on Poverty and Floods (Philippines)	14/10-18/10/2002
5	Mr.Damodar BHATTARAI	Senior Divisional Engineer	3rd World Water Forum (Japan)	13/3-18/3/2003
6	Mr.Narayan Prasad GAUTAM	Acting Director General	3rd World Water Forum (Japan)	18/3-23/3/2003

:RETIRED/TRANFERRED

Annex 5.

MAJOR EQUIPMENT PROVIDED BY JICA

NO.	JFY	ITEM	QTY.	UNIT VALUE (CIF)	TOTAL VALUE (CIF)
1	1999	Nissan Patrol Station Wagon: TVTSRAFY61NRQCL	2	2,723	5,446
2		Isuzu Dump Truck: FSS33F-01	3	4,547	13,641
3		Komatsu Bull Dozer: D21A-7	2	3,583	7,166
4		Komatsu Excavator: PC45R-8	3	3,249	9,747
5		Komatsu Wheel Loader	1	5,092	5,092
6	2000	Nissan Patrol Station Wagon: TWSSREFY61URAY110Z	1	2,830	2,830
7		Data Logger for Inclenometer with PC Communication Software EL-201	1	2,445	2,445
8		PC Communication Software	1	1,632	1,632
9	2001	Nissan Pick-up: CVRURCFDD22NWNA	1	1,801	1,801

Unit: 1,000NRs

N.B. Including only major equipment with the CIF value of 1,600,000 yen and above.

Annex 6.

LIST OF COUNTERPARTS

NO.	NAME	POST/DESIGNATION	DIVISION/SECTION/SECTION	SERVICE PERIOD (FROM)	REMARKS
1	Mr. Shital Babu REGMEE	Director General	-	14/8/2003	
2	Mr. Narayan Prasad GAUTAM	Deputy Director General	Research, Monitoring & Training Division	9/10/2002	Rejoined
3	Mr. Jeevan Lal SHRESTHA	Senior Divisional Hydro Geologist	Sediment Related Disaster Mitigation (Landslide)	4/12/2002	
4	Mr. Khila Nath DAHAL	Engineering Hydro Geologist		18/4/2001	
5	Mr. Bhuwan GHIMIRE	Irrigation Engineer		4/11/1999	
6	Mr. Kendra Bahadur SHRESTHA	Overseer (Highway)		25/6/1992	
7	Mr. Bharat Raj KHAREL	Overseer		30/10/2001	
8	Dr. Ramesh Man TULADAR	Senior Divisional Hydro Gyologist	Community Disaster Mitigation Planning (SABO)	27/11/2002	
9	Mr. Govinda PAUDEL	Irrigation Engineer		23/10/2002	
10	Mr. Sundar Prasad SHARMA	Assistant Soil Conservation Officer		8/2/2001	
11	Ms. Sangeeta SINGH	Sociologist		18/11/2002	
12	Mr. Chandra Shekhar GAUTAM	Overseer (Highway)		6/5/1993	
13	Mr. Shree Hari REGMI	Overseer		17/2/2000	
14	Mr. Kishor Kumar KARKI	Soil Conservation Assistant		23/1/2003	Deputed
15	Mr. Badri Govinda RAJKARNIKAR	Senior Divisional Engineer (Irrigation)	River Improvement, Hydraulic Laboratory and Planning	18/12/2000	Rejoined
16	Mr. Sanjaya PRADHAN	Agriculture Engineer		2/12/2002	on Leave
17	Mr. Bishnu Prasad GAUTAM	Irrigation Engineer		19/10/2001	
18	Mr. Ram Babu REGMI	Irrigation Engineer		7/11/2002	
19	Mr. Dhurb Raj PAUDYAL	Overseer		30/11/1999	
20	Mr. Thal Bahadur TAMANG	Overseer		15/11/2001	
21	Mr. Samanta Man STHAPIT	Senior Divisional Engineer (Agriculture)	Disaster Rehabilitation	18/11/2002	
22	Mr. Prakash Man SHRESTHA	Irrigation Engineer		8/1/1998	
23	Mr. Niwas Chandra SHRESTHA	Agriculture Engineer		25/11/2002	
24	Mr. Ujjwal Prasad DHAKAL	Overseer		12/10/2001	Rejoined
25	Mr. Amrit Mani RIMAL	Overseer		27/9/2001	
26	Mr. Raja Ram SHRESTHA	Assistant Hydrologist		21/8/2000	Rejoined

Annex 6.

COUNTERPART LIST

NO.	NAME	POST/DESIGNATION	DIVISION/SECTION/SECTION	SERVICE PERIOD (FROM)	REMARKS
27	Mr. Lal Chand PRADHAN	Senior Divisional Engineer (Agriculture)	Information (GIS, Database), Training, Studies and Publication	29/11/2002	
28	Mr. Shree Kamal DWIBEDI	Engineering Hydro Geologist		23/10/2002	Rejoined
29	Mr. Prasun MISHRA	Agriculture Engineer		8/11/2002	
30	Mr. Rajan SHAKYA	Sociologist		6/1/2003	
31	Mr. Rajan Man SHRESTHA	Mechanical Engineer	Mechanical Management	19/3/2003	on Leave
32	Mr. Amar Kumar PRADHAN	Section Officer	Administration	30/3/1993	
33	Mr. Keshav Babu ARYAL	Senior Accountant		9/5/2002	
34	Mr. Yuba Raj KHAREL	Store Keeper		14/11/1997	
35	Mr. Ram Hari PANERU	Head Office Assistant		22/11/2001	Rejoined
36	Mr. Hari Man JOSHI	Head Office Assistant		18/11/2002	
37	Mr. Bachchu Ram GHIMIRE	Head Office Assistant		25/11/2002	
38	Mr. Rishi Ram POKHREL	Accountant		6/1/2004	
39	Mr. Sham Krishna KHATRI	Assistant Accountant		20/5/2003	
40	Ms. Sachita JOSHI	Computer Operator		25/8/2000	
41	Mr. Mahesh Prasad YADAV	Office Assistant		24/2/2003	

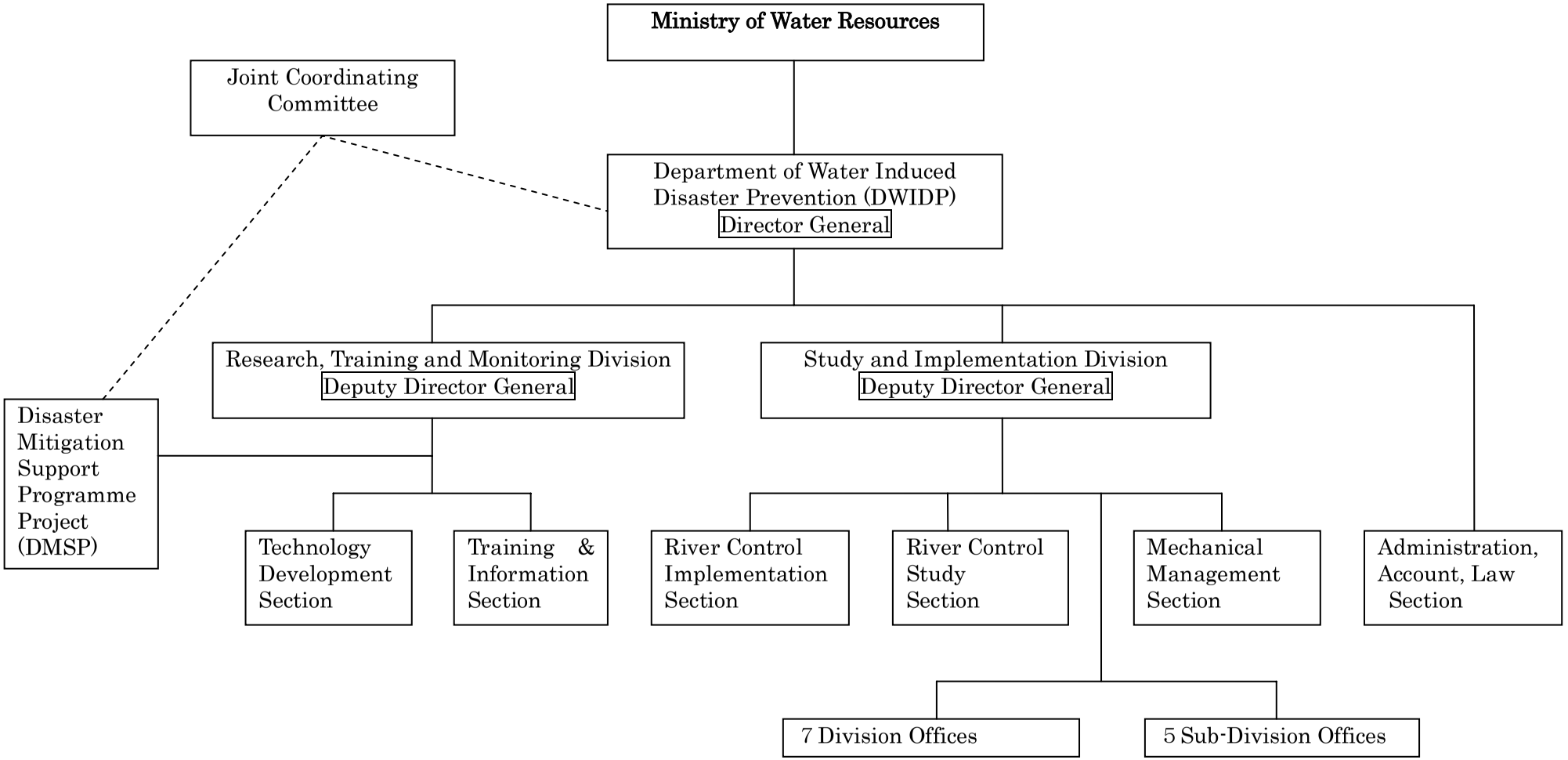
Annex 7.

DWIDP BUDGET

NFY	INITIAL BUDGET NRs	RATE/PREVIOUS YEAR %	FINAL BUDGET NRs	RATE/PREVIOUS YEAR %
1999/2000	76,820,000.00	-	75,937,026.00	-
2000/2001	74,170,000.00	97%	51,253,885.00	67%
2001/2002	78,876,000.00	106%	73,957,814.00	144%
2002/2003	97,821,430.00	124%	670,894,143.00	907%
2003/2004	615,506,000.00	629%	-	-
TOTAL	943,193,430.00	-	872,042,868.00	-

Annex 8.

ORGANIZATIONAL STRUCTURE OF DWIDP



Annex 9. Results of Questionnaire Survey to Counterparts

1. Framework of Survey

(1) Target of the survey:

28 technical counterparts of the Disaster Mitigation Support Programme Project (excluding two on leave)

(2) Answerers: 15 members (54%)

(3) Average age: 43.9 years

(4) Educational background: 8 masters, 3 bachelors, 1 doctor and 1 diploma.

(5) Field of activities: (1) Community disaster mitigation planning (Sabo) training = 3
(2) Sediment-related disaster mitigation = 5
(3) GIS and database = 1
(4) Disaster rehabilitation = 3
(5) River improvement = 2
(6) Others = 1

2. How do you evaluate the technology transfer from the Japanese experts?

(1)Fully satisfactory =13 (2)Fair = 2
(3)Acceptable = 0 (4)Little unsatisfactory = 0 (5)Unsatisfactory = 0

If you have dissatisfaction or requests, please mention them with the reasons.

No comments.

3. How do you evaluate the training courses in Japan?

The following questions are only for those who attended the courses in Japan.

3.1. Period

(1)Too long = 0 (2)Appropriate = 5 (3)Too short = 1

3.2. Contents

(1)Fully satisfactory = 4 (2)Fair = 2
(3)Acceptable = 0 (4)Little unsatisfactory = 0 (5)Unsatisfactory = 0

Please mention what you appreciate or problems and requests.

- Method of landslide mitigation works and monitoring of the counter measure works. - Japanese working style. - The training program was optimum in terms of site visits, duration and content of the course. In my opinion, it would be appropriated, if the orientation classes prior to site visits are much elaborated and cover major technical aspects & practical matters. It is worth, even at expense of lesser number of site visits. - Short period of refreshment (revision) will be highly appreciated. - Contents of the training course and training process followed by field visits are appreciable. - It is better to arrange an interaction meeting with the trainees before his departure to Japan regarding the content of the course.

3.3. Are you transferring the knowledge and technology you learned in Japan to your fellow counterparts?

(1) Yes, sufficiently = 3 (2)Yes, to a certain extent = 3
(3)No, not sufficiently = 0 (4)No = 0

Please mention how you transfer them or why you do not.

- During working period. and the knowledge is also transferred by presentation, circulation of materials gathered during the training period.
- Starting from the presentation in DWDP after the training, I have been trying to share knowledge with fellows via discussions during project design, planning and implementation. Also articles, reports & discussions during staff meeting are also serving the same activity.
- While working together in the field.
- The things I have learned in Japan is being transferred to fellow counterparts while working together.
- Through the presentation and while working in the team.
- While designing the project in Nepal, I used to discuss with my fellow counterparts about using knowledge & technology I learned in Japan.

4. Please list up major actions of the Project that you have taken or you are taking.

(Skipped.)

5. What do you think most important among targets aimed at by the Project.

(Skipped.)

6. What prospects do you have of the Project component you belong to?

6.1. Technical aspects such as expertise knowledge and equipment operation and maintenance

(1)No problems are expected. = 3 (2)No major problems are expected. = 5
(3)Some problems are expected. = 6 (4)Serious problems are expected. = 0

If you encircle (3) or (4), what will be the problems?

- Insufficient expertise concerning to the new technologies relating to the mitigation and study of landslides. Besides, there would be the problems of budget for counter measure works.
- In the landslide mitigation field, very few Nepalese counterparts (civil engineers) have prior experience & education background and only few can/will devote time for learning & applying in the field. Same applies to equipment operation and maintenance. Continuity of external support & trainings of counterparts is a must to enhance this section in the future.
- Expand sabo activities in the 12 Divisional Offices of DWIDP.
- Increase activities of DWIDP in WID matters all over the country.
- Knowledge is insufficient as yet and hence needs Japanese support to achieve the goal.
- There is no sufficient expertise knowledge for the planning of appropriate sabo facilities. Therefore, the help of the experts is further required.
- Knowledge and skills we learnt need to upgrade for sustainable Management and need to transfer them to other concern agencies and Division/Sub-division offices of DWIDP.

6.2. Operation and management aspects

(1)No problems are expected. = 3 (2)No major problems are expected. = 7
(3)Some problems are expected. = 5 (4)Serious problems are expected. = 0

If you encircle (3) or (4), what will be the problems?

- Monitoring as well as skilled manpower.
- Technical manpower must be maintained or prepared to handle all the equipment, such as boring machines inclinometer etc. Logistic support is needed to continue research activities.
- Would not be any problem if there are budgets (JICA and/or HMG) and a program.
- Lack of trained manpower for proper operation and management of the sabo facilities.
- Still necessary some technology that need to transfer for HMGN officials (in general).

6.3. Financial aspects

(1)No problems are expected. = 3 (2)No major problems are expected. = 6
(3)Some problems are expected. = 6 (4)Serious problems are expected. =0

If you encircle (3) or (4), what will be the problems?

- Lack of enough budget.
- At least for same years to come, JICA is kindly requested to support the activities currently employed, so that the department can sustain its activities in the future.
- Probably HMG budget will not be enough for desired Awareness Training, WID information dissemination and monitoring works. Thus some problems will be raised for sure.
- The HMG/N budget may not be sufficient to fulfill the target of the project.
- Allotted budget is limited.

6.4. Measures for sustainable development of the Project

In order for the Project to develop in future, what measures do you think are important to take? Please let us know your idea.

- Technology transfer & Training for CPs.
- Model site selection and preventive works in the model site.
- Necessary to impart modern technological knowledge by means of training, providing chance of higher education in concerning subjects.
- Necessary to promote awareness activities by which local communities would involve in operation and management aspects.
- Until now, less attention is being paid to preventive measures against sediment related disasters in Nepal. Nepalese government, especially the department must prepare technical expertise to deal with landslides, so that all DWIDP divisions would go for such projects, and not just to flood prevention/rehabilitation activities. Awareness programs must be conducted, supported with information such as potential disaster mapping, GIS hazard maps etc. Technical wing i.e. (landslide section) must be strengthened with manpower & most importantly budget allocation.
- Sufficient men, money & time if arranged, the project may be developed in future.
- For the sustainable development of the project, we should give the trainings and awareness programms to the beneficences of that area. We should give the idea of operating and maintenance of the structures to the beneficiaries. The beneficiaries must feel then the ownership of the project.
- Focus on Planning and Training Manpower in a scheduled manner.
  Minimize construction budget and maximize awareness programs.
  Develop sabo master plan for Kathmandu Valley.
  Enhance WID database and information sharing network.
- Technology transfer to DMSP of Division/Sub-division staff is to be more effective by training, seminar/workshop, study tour etc.
  Sustainable technology using locally available materials should be practiced more.
  Awareness program to the community people is to be emphasized.
- Develop system to transfer technology.
  Develop network with Division/Sub-division offices of DWIDP.
  Develop co-ordination and co-operation system among stakeholders.
- At present, DWIDP has 12 division/sub-division offices which look after 75 districts of the country in the field of water induced disaster mitigation. So, extension of DMSP is necessary for the development of the project nationwide.

- The area of the disaster mitigation program needs to increase throughout the nation in phase wise.
- Allocation of sufficient budget.
  Empowerment of human resources of DWIDP
  Training for Nepalese CPs.
- Following issues should be taken care.
  Appropriate and cost effective technology development at regional basis, development of guidelines and technical manuals.
  Establishment of water-induced disaster information data bank and dissemination of the information.
- For the sustainable development of this project, there should be financial support as well as technical support.
- Nepal is highly vulnerable to recurrent floods and landslides, so it is important to conduct more awareness programmes for the people and to make training programmes more effective and efficient.

Thank you very much for your participation.

Annex 10

LIST OF PRODUCTS THROUGH DMSP
FROM 1 SEPTEMBER 1999 TO 31 JANUARY 2004

NO. ON PDM		SABO MODEL SITE (DAHACHOWK & GIRUBARI)	RIVER MODEL SITE (GIRUBARI)	LANDSLIDE MODEL SITE (KATHMANDU-NAUBISE ROAD)
OUTPUT 1	ACTIVITY 1-1	1. Model Site Selection Report 2. Conceptual Master Plan 3. Social Survey Report 4. Survey Work at Girubari Khola 5. Survey Work at Dahachowk 6. Field Report on Girubari Khola SABO Model Site 7. Household Survey in Dahachowk 8. Environmental Study at Girubari Khola	1.Model Site Selection Report 2.Conceptual Master Plan 3.Contents and Methods of Collectiong Data of the Model site 4.Field Report on Survey Works of Girubari Khola 5.Report on Social Survey 6.Progress Report of DMSP 7.Sampling and Analysis of River Bed Materials 8.For Training and Participatory Rural Appraisal (PRA) at Girubari Khola River Model Site 9.Preparation of Plane figure for Country Watching Map of Bhagra Area 10.Disaster Hazard Map in Bagra 11.Monitoring Report on countermeasures of Girubari River	1. Work plan Kathmandu-naubise road model site 2. Work plan Landslide model site along the Bagmati river 3. A Guidebook for Field Reconnaissance on Landslide 4. The Method of Mud and Debris Flow investigation 5. A Guidebook of Disaster Potential Mapping Technology in DMSP 6. A Guide of Disaster Potential Mapping Technology in DMSP 1st Revision 7. Report "Disaster Potential Map of Kathmandu-Naubise Road Sector" 8. Manual of Aerial Photo Interpretation Training 9. The report of Precipitation in Kathmandu-Naubise Road Model site 10. Landslide Management Methodology 11. Activity Report of Kathmandu-Naubise Road Model site 12. Activity Report of Bagmati River Model site 13. Conceptual Master plan of Chalnakhel model site 14. Report of Conceptual Master plan of Bungmati site

OUTPUT 1	ACTIVITY 1-1			15. Monitoring observation report 16. Record of Structure design 17. Disaster Distribution Map (for distribution) 18.Topographcal map, Kathmandu-Naubise model site, Bungmati, Chalnakhel 19.Boring survey at Bagmati model site (Chalnakhel site) 20.Moving peg survey at Chalnakhel site (Jan 2003, Jun 2003, Nov 2003) 21.Geophysical and Geological study at Chalnakhel site (Aug 2003) 22.Data collection of the field exploration for Kathmandu-Naubise road model site (Mar 2002) 23.Data collection of the field exploration for Kathmandu-Naubise road model site (Sep 2002) 24.Report on Data collection of the field exploration for Bagmati river model site (Jan 2004)

Annex 10

OUTPUT -1	ACTIVITY 1-2	1. Report on Participatory Plantation management 2. Field Report on Dahachowk Model Site (Dr. Kaibori) 3. Check Boring Report in Dahachowk (2001, 2003) 4. Report on Gabion Check Dam Construction 5. SABO Planning Guideline 6. Bio-Engineering Guideline 7. Landuse Guideline	1.Field Report on Girubari Khola 2.Report on Survey and Study of River Training Works,Girubari Khola 3.Digest Map of Girubari River Training 4.GIRUBARI KHOLA RIVER TRAINIG WORKS 5.Report on Hydraulic Model Experiment of Girubari River 6.Hydoraulic Model Experiment Video	1. The report of Rehabilitation Plan on Landslide site at Chainage 13+000 along Kathmandu-Naubise sector 2. Final Report on Emergency Disaster Rehabilitation of Tribhuvan Highway (13km) 3. Activity Report on Soil Test 4. Report of Landslide Model and its Manual 5. The points of Disaster on slope
	ACTIVITY 1-3	1. Memorandum of Agreement (Girubari) 2. Memorandum of Agreement (Dahachowk) 3. Evacuation Drill and Street Drama 4. Record of UG Activities	1.Memorandum of Agreement (between User's Group and DMSP) Project Term, 2001, 2002, 2003 2.Report on Awareness Training Seminar For Disaster Mitigation 3.Preparation Manual on Disaster Hazard Map	1. Report on Disaster Mitigation Education activity in Kathmandu-Naubise model site and Bagmati model site 2. Report of Landslide model and its manual

Annex 10

NO. ON PDM		REHABILITATION MODEL SITE
OUTPUT 2	ACTIVITY 2-1	1.Disaster Survey Committee
	ACTIVITY 2-2	1. Disaster Survey 2. Disaster Rehabilitation Planning 3. Kurintar Site Visit Report 4. Report onf Field Visit to Devi Nagar 5. Krishnabhil Landslide 6. Preliminary disaster survey report 2001, 2002, 2003 7. Necessity of disaster rehabilitation in NEPAL 8. DISASTER REHABILITATION ACTIVITY PLAN (Disaster Rehabilitation Activity Report 2002) 9. Final Report on Preliminary Survey of Sundari Khola to Prepare Master Plan
	ACTIVITY 2-3	1. Reporting to 1st Meeting Disaster Survey Committee 2. Report of 2nd Disaster Survey Committee Meeting 3. Report of 3rd Disaster Survey Committee Meeting 4. Report of 4th Disaster Survey Committee Meeting
	ACTIVITY 2-4	1. Plan of Rehabilitation Dhapakhel 2. Final Report on the Disaster Rehabilitation Activity in Dhapakhel 3. Emergency Rehabilitation Works at the Khado River (Disaster Rehabilitation Activity Report 2002) 4. A Final Report on the Disaster Rehabilitation Activity in Bhimdhunga (Disaster Rehabilitation Activity Report 2002) 5. Final Report on the Bhigi River (Disaster Rehabilitation Activity Report 2002) 6. Final Report on the Gamaha River (Disaster Rehabilitation Activity Report 2002) 7. Disaster Rehabilitation Works at the Sundari Mahuli River
OUTPUT 2	ACTIVITY 2-5	1. Memorandum of Agreement (between Dhapakel Gully Erosion Control and Rehabilitation Committee and DMSP) 2. Emergency Rehabilitation Works at the Khado River (Disaster Rehabilitation Activity Report 2002) 3. A Final Report on the Disaster Rehabilitation Activity in Bhimdhunga (Disaster Rehabilitation Activity Report 2002)
	ACTIVITY 2-6	1. Proposed Disaster Rehabilitation System and Frame of the DWIDP 2. Recommendation of Establishment Disaster Rehabilitation System 3. Guideline for Disaster Rehabilitation 4. Disaster Survey Manual

Annex 10

NO. ON PDM		GENERAL/COMMON
OUTPUT 3	ACTIVITY 3-1	1. Water Induced Disaster Prevention Guide for Beginners 2. Report on Community Disaster Mitigation Programme (May 2000) 3. Report of Seminar on Community Disaster Mitigation (Nov 2000) 4. Seminar on Disaster Rehabilitation in Nepal and Workshop on Disaster Rehabilitation. 5. Gathering and Analysis of the DME Teaching Materials Available in Nepal 6. Report on Workshop for Disaster Mitigation Education (Aug 2000) 7. Seminar on Disaster Rehabilitation and Management (Jan 2003) 8. The basic principles of landslide (Training textbook) 9. Training Manual on Water Induced Disaster Prevention 10.Gathering and Analysis of the DME Teaching Materials available in Nepal 11.Report on Workshop for Disster Mitigation Education (Aug.2000) 12.Report of 2nd Workshop on Disster Mitigation Education (March.2001) 13.Report on 3rd Workshop on Disster Mitigation Education (March.2002) 14.Report on 4th Workshop on Disster Mitigation Education (Sep.2002) 15.Report on 5th Workshop on Disster Mitigation Education (May.2003) 16.DME Textbook Ver.1,2,English 17.Report on Disaster Mitigation Education (DME) 18. Report on Plantation Management and Training in SABO Model Site (2002) 19. Nursery Naike Training Report in Girubari and Dahachowk SABO Model Site
	ACTIVITY 3-2	1. Disaster Synopsis NEPAL 1999, 2000, 2001, 2002, 2003 2. Master Plan of Disaster Information Activities for DWIDP/DMSP (Nov. 2001) 3. A Study on the Distribution Characteristics of Water Induced Disaster Occurred in Nepal in 1999 and 2000 4. Development of Information System at DWIDP 5. Development of Information System in Nepal 6. User's Manual for Intranet System of DWIDP/DMSP(2003) 7. Library Management System Operational Manual(2004) 8. Library Management System(2004) 9. Intranet System of DWIDP/DMSP(2004)

Annex 10

OUTPUT 3	ACTIVITY 3-3	1. Water Induced Disaster Scenario of Nepal Based on Disaster Information System of the DWIDP 2. Disaster Information System (DIS) 3. Disaster Information System (DIS) 2nd Phase1 4. Disaster Information System (DIS) 2nd Phase2 5. GIS Data User Manual 6. Disaster Information System for Kathmandu-Naubise Highway (Mar 2003) 7. GIS Based Hazard Map of GIRIWARI KHOLA Catchment and Flood Plain in Nawalparasi District (Jun. 2001) 8. Disaster Information System (DIS) 3rd 9. Disaster Information System for Kathmandu-Naubise Highway (Mar 2004) 10. Report "Disaster Potential Map of Kathmandu-Naubise Road Sector"
	ACTIVITY 3-4	1. Memorandum of Understandings between IOE/TU and DMSP 2. Lesson Plan 3. Course Mannual for Water Induced Hazard 1 (Sediment Hydraulics) 4. Course Mannual for Water Induced Hazard 2 (Integrated Measures for Sediment Management)
	ACTIVITY 3-5	1. Technical Suggestion in Charali-Ilam Road 62km Landslide Site. 2. Technical Support about Disaster Management Programme Held by DSCWM 3. Disaster Rehabilitation Seminar (Disaster Rehabilitation Activity Report 2002) 4. Suggestion about road maintenance 5. Reconnaissance Report on Slope Hazards in E-W and Tribhuvan Highway 6. Disaster site visit report, Mugling-Narayanghat highway
OUTPUT 4	ACTIVITY 4-1	1. "DWIDP Bulletin" (1999/2000, 2000/2001, 2001/2002, 2002/2003) 2. "Disaster Review" (1998and1999, 2000,2001,2002)
	ACTIVITY 4-2	Poster /Calendar/Brochure DMSP Project Presentation Video"WAYS TO MINIMIZE WATER INDUCED DISASTER"

Annex 11.

SEMINARS AND WORKSHOPS

NO.	TITLE	SUBJECT/PURPOSE	DATE	VENUE	MAIN PRESENTER / LECTURER	PARTICIPANT	RESPONSIBLE CP	RESPONSIBLE LTE	REMARKS
1	JPCM Workshop	*To review and finalize PDM, PO *To study project monitoring	23 Nov-2 Dec, 1999	DPTC	1) STE on JPCM: Mr. A. MATSUMOTO (22 Nov-3 Dec, 1999)	LTE & Counterpart		Mr. K. SASAKI	Revised PDM, PO were approved by JCC
2	Workshop on Database and GIS system	*To study and discuss the purpose and to prepare plan on Database & GIS for improvement of operation system in DPTC	13-27 Dec, 1999	DPTC	2) STE on GIS: Mr. Y. SHIMIZU (12-24 Dec, 1999) 3) STE on Database: Mr. Y. MABUCHI (16-28 Dec, 1999)	LTE & Counterpart	Mr. P.M. SHRESTHA	Mr. S. YAMAGUCHI	Field survey was conducted at KTM/Naobise road.
3	Seminar on Disaster Rehabilitation in Nepal	*To study the situation in the aftermath of disaster *To introduce the Disaster Rehabilitation System and its effect in Japan *To introduce the organization and system of Disaster Management in Nepal	23 Feb, 2000	DPTC	4) STE on Rehabilitation Planning: Mr. H. OI (17-25 Feb, 2000) 5) STE on Disaster Rehabilitation Implementation: Mr. I. HIRATA (17-26 Feb, 2000) *Dr. M.B.P. CHHTRI (MOHA)	Representative of: MOWR, MOH, NPC, DHM, DOR, DOI, DOSCWM, EOJ, JICA LTE & Counterpart Trainee of advanced course.	Mr. M.B. PRADHAN	Mr. S. YAMAGUCHI	
4	Workshop on Disaster Rehabilitation	*To introduce the Disaster Rehabilitation System in Japan. *To study and discuss criteria and implementation system of disaster rehabilitation	24 Feb, 2000	DPTC	4) STE on Rehabilitation Planning: Mr. H. OI (17-25 Feb, 2000) 5) STE on Disaster Rehabilitation Implementation: Mr. I. HIRATA (17-26 Feb, 2000)	LTE & Counterpart	Mr. M.B. PRADHAN	Mr. S. YAMAGUCHI	Field survey was conducted at Trisuli 19Km, Nalkhola, KTM/Naobise road
5	Lecture / Workshop on Landslide Survey	*To study the theory and methodology of landslide survey.	7-9 Mar, 2000	DWIDP	6) STE on Landslide Survey: Dr. S. KITAZAWA (2-10 Mar, 2000)	LTE & Counterpart	Mr. K.B. BHANDARI	Mr. S. MORIKAWA	Field survey was conducted at KTM/Naobise road
6	Lecture / Workshop on Social Survey Methodology & Practice of Social Survey	*To study the theory and the methodology of social survey. *To prepare the questionnaire. *To study the data analysis. *To conduct the social Suvey	13-17 & 27-31 Mar, 2000	DWIDP Girubari Model Site	7) STE on Social Survey Methodology: Prof. T.UTAGAWA (8 Mar-1 Apr, 2000)	LTE & Counterpart	Mr. B.GHIMIRE	Mr. K.KANSHA Mr. K.IRIGUCHI	Social survey was conducted in Giruwari Khola model site from 20 to 25 March, 2000.

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7	Workshop on Community Disaster Mitigation	*To introduce the Community Disaster Mitigation Administration and Participatory Programme in Japan. *To study possible Community Disaster Mitigation Programmes in Nepal.	24 & 25 May, 2000	DWIDP	8) STE on Community Disaster Mitigation: Ms. Y. SHUTO (21-27 May, 2000)	LTE & Counterpart	Mr. R.H. PANTHA	Mr. K. KANSHA	
8	Seminar on Community Disaster Mitigation Programme	*To introduce Community Disaster Mitigation Administration and Participatory Programme in Japan. *To share concepts of DMSP Model Sites Activities.	26 May, 2000	DWIDP	8) STE on Community Disaster Mitigation: Ms. Y. SHUTO (21-27 May, 2000)	MOWR, MOH, MOE, DHM, DOR, DOI, DSCWM, MOLD, LTE & Counterpart	Mr. R.H. PANTHA	Mr. K. KANSHA	Field visit of model-site; Shanti Basti, Dahachowk
9	Lecture / Workshop on Development of IEC Materials	*To study tudy the theory and methodology of IEC. *To develop draft of IEC materials.	7, 8, 15, 16 & 19-21 June, 2000	DWIDP	9) STE on IEC materials: Mr. T. ARAI (6-23 June, 2000)	LTE & Counterpart	Mr.P.M. SHRESTHA Mr. K. BHANDARI Mr. B. GHIMIRE	Mr. K. IRIGUCHI	Field visit of model-site; KTM/Naobise road, Dahachowk, Giruwari Khola
10	Disaster Mitigation Education (DME) Workshop (1st)	*To introduce Disaster Mitigation Education in Japan. *To learn earn and exchange ideas about necessity and possible DME in Nepal.	31 July-2 Aug, 2000	DWIDP	10) STE on Disaster Mitigation Education: Mr. T. MOMOZAWA (27July-3 Aug, 2000) *Chief Adviser GPCP/JICA: Ms. Y. ODA	Selected teachers form model sites, LTE, Counterpart	Mr.D. BHATTARAI	Mr. S. MORIKAWA	
11	Lecture / Workshop on Disaster Survey	*To introduce Disaster Survey System and Method in Japan. *To study significance and importance point of Disaster Survey. *To fixix the activity frame of Disaster Rehabilitation and agenda of guidelines/manuals.	25, 28, 30 & 31 Aug, 2000	DWIDP	11) STE on Disaster Survey: Mr. S. HARA (23 Aug-2 Sep, 2000)	LTE, Counterpart	Mr. M.B. PRADHAN Mr. B. GHIMIRE	Mr. S. YAMAGUCHI	Field survey was conducted at Trisuli 19Km, Arniko Highway.
12	Workshop on Participatory Disaster Mitigation Activities in DMSP	*To study and discuss possible scheme/ measures to carry out participatory disaster mitigation activities in DMSP model site.	7 Sep, 2000	DWIDP	Mr. D. Bhattarai & Mr. K. Sasaki (DMSP/DWIDP&JICA)	LTE, Counterpart	Mr. D. BHATTARAI Mr. B. GHIMIRE	Mr. K. SASAKI	
13	Lecture / Workshop on Soil Erosion and Sediment Discharge	*To study the mechanism and appropriate or Soil Erosion and Sediment Discharge countermeasures which local community could participate.	11 & 15-19 Sep, 2000	DWIDP	12) STE on Countermeasures for Sediment Discharge. Dr. M. KAIBORI (10-21 Sep, 2000)	LTE & Counterpart	Mr. R.H. PANTHA Mr. S.K. DWIBEDI	Mr. K. KANSHA	Field survey was conducted at Dahachowk on Sep. 13,14
14	Lecture / Workshop on Low-cost Disaster Mitigation Works Technology	*To study reliable and appropriate low cost disaster Mitigation Construction Technology.	11, 18-22 & 25-27 Sep, 2000	DWIDP	13) STE on Low-cost Disaster Mitigation Works Technology Mr. M. HIRUMA (10-28 Sep, 2000)	LTE & Counterpart	Mr. A. KARKI	Mr. K. IRIGUCHI	Field survey was conducted at Giruwari on Sep. 13-16.

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15	Lecture / Workshop on Community Disaster Mitigation	*To study Community Based Disaster Mitigation Activities in Nepal.	20 & 23 Nov, 2000		14) STE on Participatory Disaster Mitigation Programme: Mr. T. ISHIZUKA (15-25 Nov, 2000)	LTE & Counterpart	Mr. A. KARKI	Mr. K. IRIGUCHI	
16	Seminar on Community Disaster Mitigation	*To improve Community Disaster Mitigation Activities in Nepal. *To present a plan of DMSP Model Site Activities and get feedback from participants.	21 & 22 Nov, 2000	DWIDP	14) STE on Participatory Disaster Mitigation Programme: Mr. T. ISHIZUKA (15-25 Nov, 2000)	Representatives of: model site community, NPC, MOWR, MOLD, MOH, DHM, DOR, DOI, DSCWM, WECS, IOE/TU, DDO, LDO, DISCO, DIO, DRO, DFO, UNDP LTE & Counterpart	Mr. A. KARKI	Mr. K. IRIGUCHI	
17	Lecture / Workshop on Disaster Rehabilitation Planning	*To introduction of the role of Disaster Rehabilitation in Japan. *To study the contents of Disaster Rehabilitation Programme.	23, 24, 29 & 30 Nov, 2000	DWIDP	15) STE on Disaster Rehabilitation Planning : Mr. S. MIYAJIMA (20 Nov-2 Dec, 2000)	LTE & Counterpart	Mr. M.B. PRADHAN Mr. B. GHIMIRE	Mr. S. YAMAGUCHI	Field survey was conducted at Bungmati and Dhapakhel on Nov.27, at Okharpauwa on Nov.28.
18	Lecture / Workshop on Landslide	*To study the guideline of comprehensive landslide investigation. *To finalize field-survey form/manual about landslide along Bagmati river.	28 & 30 Nov 1, 4, 6 & 7 Dec, 2000	DWIDP	16) STE on Landslide: Mr. Y. ISHII (27 Nov-8 Dec, 2000)	LTE & Counterpart	Mr. P.M. SHRESTHA	Mr. S. MORIKAWA	Field survey was conducted at KTM/Naobise road on Nov.29, at Bagmati on Nov.29/Dec.4, 5.
19	Lecture / Workshop on GIS	*To introduce the DB/GIS utilization for Disaster Mitigation Management. *To discus and study the master plan and management system of Disaster information and GIS.	13-16 & 19-22 Mar, 2001	DWIDP	17) STE on GIS: Mr.T. MIWATA (12-23 Mar, 2001)	LTE & Counterpart	Mr. P.M. SHRETHA	Mr. S. YAMAGUCHI	
20	Disaster Mitigation Education (DME) Workshop (2nd)	*To discus and study feasible and suitable ideas and plan of DME in Model school.	21 & 22 Mar, 2001	DWIDP	Mr. R.B.Tamrakar (DME Consultant) Prof. J.Awa (Director, CDC, MOES)	LTE & Counterpart, Selected teachers model sites	Mr. D. BHATTARAI	Mr. K. IRIGUCHI Mr. K. KANSHA	

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21	Feasibility study and Seminar/ Workshop on Disaster Mitigation/ Prevention	*To introducethe Disaster Mitigation/Prevention Course in Japan and Indonesia. *To discus and study with faculty of IOE/TU on feasible and suitable Mitigation / Prevention Course in IOE/TU. *To introduce feasible and suitable Mitigation/Prevention Course in IOE/TU.	28-30 Mar & 3-5 Apr, 2001	DWIDP IOE/TU	18) STE on Disaster Mitigation/Prevention Course curriculum development: Dr. (Ass. Prof.) M. FUJITA (27 Mar-8 Apr, 2001)	LTE & Counterpart	Mr. D. BHATTARAI	Mr. K. IRIGUCHI	
22	Disaster Survey Committee (DSC) Meeting (1st)	*To discus disaster rehabilitation activities of DMSP and collaboration among the agencies.	30 Mar, 2001	DWIDP	Representatives of: DMSP/DWIDP&JICA	Representatives of: MOHA, DOI, DOR and DWIDP LTE, Counterpart	Mr. B. GHIMIRE	Mr. S. YAMAGUCHI	
23	Lecture/field survey on debris flow and its countermeasures	*To provide theoretical and practical knowledge on debris flow and its counter measures	19, 20 & 23-27 July, 2001	DWIDP	19) STE on slope disaster mitigation Mr. Y. TOJU (17-29 Jul 2001)	LTE & Counterpart	Mr. K.P. BHANDARI	Mr. S. MORIKAWA	Field survey was conducted in Thankot VDC, Kathmandu, along Gakhcha river.
24	Lecture/field survey on disaster rehabilitation	*To provide theoretical and practical knowledge on disaster rehabilitation	4, 5 & 8-11 Oct, 2001	DWIDP	20) STE on disaster rehabilitation planning Mr. Y. KOBAYASHI (2-13 Oct 2001)	LTE, Counterpart & DSC members	Mr. P. M. SHRESTHA	Mr. T. FUKADA	Field survey was conducted at Dhapakel, Bhim Dhunga & Syuchatar
25	Lecture/field survey on vegetation engineering	*To provide theoretical and practical knowledge on vegetation engineering	18 Feb, 2002	DWIDP	21) STE on vegetation engineering Mr. N. OSANAI (10-21 Feb 2002)	LTE & Counterpart	Mr. S. SHARMA	Mr. K. KANSHA	Field survey was conducted at Dahachowk Model Site
26	Lecture/field survey on landslide countermeasures	*To provide theoretical and practical knowledge on landslide countermeasures	25 Feb, 2002	DWIDP	22) STE on landslide countermeasures Mr. K. KAWAMITSU (5-27 Feb 2002)	LTE & Counterpart	Mr. K. N. DAHAL	Mr. S. MORIKAWA	Field survey was conducted at Kathmandu-Naubise Road Model Site
27	Disaster Survey Committee (DSC) Meeting (2nd)	*To discus disaster rehabilitation activities of DMSP and collaboration among the agencies.	26 Feb, 2002	DWIDP	Representative of: DMSP/DWIDP&JICA	Representative of: DOI, DOR, MOLD, DSCWM, MOHA, DWIDP LTE, Counterpart	Mr. P. M. SHRESTHA	Mr. T. FUKADA	
28	Lecture/field survey on regulation of land use	*To provide theoretical and practical knowledge on regulation of land use	5 Mar, 2002	DWIDP	23) STE on regulation of land use Mr. T. YANAGAWA (24 Feb-7 Mar 2002)	LTE & Counterpart	Mr. S. R. GOUTAM	Mr. K. KANSHA	Field survey was conducted at Dahachowk Model Site
29	Disaster Mitigation Education (DME) Workshop (3rd)	*To discuss the draft supplementary textbook for Disaster Mitigation Education (DME) and teaching schedule in each model school	13 & 14 Mar, 2002	DWIDP	Mr. K.N.PAUDYAL (DME Consultant, TU) Ms. Y. ODA (JICA Expert)	LTE & Counterpart, Selected teachers from model sites.	Mr. D. BHATTARAI	Mr. K. IRIGUCHI Mr. K. KANSHA	
30	Lecture on GIS technology	*To provide theoretical and practical knowledge on GIS technology	21 Mar, 2002	DWIDP	24) STE on GIS technology Mr. K. INAGAKI (10-23 Mar 2002)	LTE & Counterpart	Mr. P. M. SHRESTHA	Mr. T. FUKADA	

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31	Disaster Mitigation Education (DME) Workshop (4th)	*To explain the contents of the supplementary textbook and audio visual of DME and get feed back from the attendants. *To train teachers how to use the textbook. *To discuss and make the teaching schedule in each model school.	3-5 Sep, 2002	DWIDP	25) STE on DME Ms. Y.ODA (15 Jul-12 Sep 2002)	LTE & Counterpart, Teachers from DMSP Community Disaster Mitigation model-sites.	Mr. S. P. SHARMA	Mr. K.ISHICHI	
32	Disaster Survey Committee (DSC) Meeting (3rd)	*To discus disaster rehabilitation activities of DMSP and collaboration among the agencies.	3 Jan, 2003	DWIDP	Representative of: DMSP/DWIDP&JICA	Representative of: DOI, DOR, MOLD, DSCWM, MOHA, DWIDP LTE, Counterpart	Mr. S.M.STHAPIT	Mr. T. FUKADA	
33	Seminar on Disaster Rehabilitation and Management	*To discuss key issues on disaster rehabilitation and management.	29 Jan, 2003	DWIDP	26) STE on Disaster Rehabilitation Mr. K.AMAO (18 Jan-2 Feb 2003) Mr. T.R.ONTA (Nepal Red Cross) Mr. K.P.POUDEL (MOHA) Mr. S.R.BAJARCHARYA & Ms. M.SHRESTHA (ICIMOD)	LTE & Counterpart	Mr. S.M.STHAPIT	Mr. T.FUKADA	
34	Lecture/Workshop on Land Use Regulation	To discuss appropriate land use in disaster prone areas in Nepal.	28 Feb, 2003	DWIDP	27) STE on Land Use Regulation Mr. K.KANSHA 23 Feb-8 Mar 2003)	LTE & Counterpart	Mr. S.P.SHARMA	Mr. M.HIRUMA	Field survey was conducted at Dahachowk Model Site
35	Joint Reporting on CP trainings and 3WWF in Japan in JFY 2002.	*To share the knowledge and the skills acquired during the training with DWIDP staff.	30 Apr, 2003	DWIDP	Mr. N.P.GAUTAM Mr. D.BHATTARAI Mr. B.G.RAJKARNIKAR Mr. P.M.SHRESTHA Mr. K.N.DAHAL Mr. S.GHIMIRE	LTE & Counterpart	Mr. L.C.PRADHAN	Mr. N.OMOTO	-
36	Disaster Mitigation Education (DME) Workshop (5th)	*To review activities and problems of DME at each model school. *To discuss the effectiveness and improvement of DME activities.	26-28 May, 2003	DWIDP	28) STE on DME Ms. Y.ODA (7 May-4 Jun 2003) Prof. J.AWA (Director, CDC, MOES)	LTE & Counterpart, Teachers from DMSP Community Disaster Mitigation model-sites.	Mr. B.P.GAUTAM	Mr. K.ISHICHI	
37	Lecture/Training/Practice on Soil Test	*To provide theoretical and practical knowledge on Soil Test for Slope Stability	24 July-6 Aug., 2003	DWIDP (Godawari Lab.)	29) STE on Soil Test Mr. T.MAYUMI (21 July-10 Aug. 2003)	LTE & Counterpart, DWIDP Staff from Divisional & Sub-divisional Offices, TU students	Mr. J.L.SHRESTHA	Mr. N.OMOTO	Sampling & Different Soil Tests

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38	Lecture / Workshop on Social Survey Methodology & Practice of Social Survey	*To study the theory and the methodology of social survey. *To prepare the questionnaire. *To study the data analysis.	10-14, 17-27 Nov, 2003	DWIDP Dahachowk Model Site	30) STE on Social Survey Methodology: Prof. T.UTAGAWA (8-30 Nov, 2003)	LTE & Counterpart	Mr. S.SINGH	Mr. M.HIRUMA	Social survey was conducted at Dahachowk Model Site from 21 to 23 November, 2003.
39	Lecture on Hydraulic Model Experiment	*To understand study methods based on the results of the Hydraulic Model Experiment. *To learn/study Sediment Hydraulics.	11 Nov, 2003	DWIDP	31) STE on Hydraulic Model Experiment Dr. A.ODA (3 Nov-5 Dec, 2003)	LTE & Counterpart	Mr. B.P.GAUTAM	Mr. K.ISHICHI	Practical training was conducted at Godawari Laboratory from 5 to 27 November, 2003.
40	Seminar on Rockfall Countermeasure & Special Lecture	*To study the theory and methodology of rockfall countermeasures. *To study characteristics and analysis of rockfall.	15 Dec, 2003	DWIDP	32) STE on Rockfall Countermeasures: Prof. S.TSUCHIYA (1-20 Dec, 2003)	LTE & Counterpart	Mr. B.GHIMIRE	Mr. N.OMOTO	Field survey was conducted at Kathmandu-Naubise Road Model Site on 4 & 16 December, and along Prithwi Highway & Muglin-Narayanghat Road from 10 to 12 December.
41	Lecture on Hillside Works	*To provide knowledge on afforestation technique	15 Dec, 2003	DWIDP	33) STE on Afforestation Technique in Barren and Degraded Land Dr. K.OTE (10-26 Dec, 2003)	LTE & Counterpart	Mr. S.P.SHARMA	Mr. M.HIRUMA	Field survey was conducted along Tribhuvan and Prithivi Highway
42	Joint Reporting on CP trainings in Japan in JFY 2003.	*To share the knowledge and the skills acquired during the training with DWIDP staff.	22 Dec, 2003	DWIDP	Mr. J.L.SHRESTHA Mr. D.R.PAUDYAL Mr. K.B.SHIGN Mr. S.H.REGMI Mr. U.P.DHAKAL	LTE & Counterpart	Mr. L.C.PRADHAN	Mr. K.ISHICHI	-

N.B. including only those related to DMSP.

Annex 12.

Evaluation Grid of Disaster Mitigation Support Programme Project

Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Overall Goal** Capability of HMG/N and communities to cope with water induced disasters will be strengthened.	(1) Priority of disaster prevention countermeasures in the National Development Plan	Based on the Tenth National Development Plan (2003 - 2007) prepared by the National Planning Commission (NPC), the National Water Plan was prepared by the Water and Energy Commission Secretariat (WECS) in June 2003 for development of the water sector. Among the sub-sectors is the water induced disaster management. The sub-sector plan stipulates that with the initiatives of the DWIDP, concerned agencies jointly proceed with short-term (5 years), mid-term (15 years) and long-term (25 years) strategies to address water induced disasters. Annual budgets are presented in the plan. It is expected that the government budget will be allocated according to the plan and that disaster mitigation projects will be implemented by the budget.
		(2) Concrete status of disaster matter in HMG/N and communities.	
		(3) No. of disaster mitigation / prevention project implemented by HMG/N	

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Project Purpose** Countermeasures for water induced disasters by HMG/N and communities will be promoted. Target Groups (1) JCC member agencies (2) DWIDP (3) Communities	(1) Formulation of policy by JCC member agencies to prevent / mitigate water induced disasters.	NPC: The disaster mitigation is one of the nation's priority areas for it supports poverty alleviation. The work done by the Project is highly appreciated. MOHA: The MOHA is the secretariat of the National Disaster Relief Committee, an overall center for disaster relief. The MOHA has been working closely with DWIDP and appreciate its technical and material support for disaster rehabilitation. Coordination should be strengthened, and GIS maps can be effectively utilized. DOI: The DOI is sending many of its staff to work in the DWIDP. The DOI does not have specific organization for disaster mitigation. In case of disaster, the DOI refers to the DWIDP, which implements disaster mitigation works to protect the irrigation facilities and irrigated fields. The two departments need closer cooperation. In the DSC meetings, more specific and practical proposals are expected. DOR: The DOR is working closely with the DWIDP for disaster mitigation of roads. The DOR wants know-how of the DWIDP to be transferred. The DOR therefore sends its staff to the DWIDP's training courses and even deputes its staff to work at the DWIDP. The DOR prepared "Guide to Road Slope Protection Works" in 2003 with a JICA expert in cooperation with the DMSP. DSCWM: The staffs are receiving training at the DWIDP. The two organizations should have more coordinated roles in an integrated manner. DOLIDAR: It is a new department and so does not have sufficient technical capacity in disaster mitigation, although the department prepared Landslide Risk Assessment Manual with the support of the DFID in 2003. The training courses of the DWIDP are useful. The DOLIDAR is benefiting from the achievements of the Project through the materials and expertise. It will consult with the DWIDP for disaster mitigation. DWIDP: The counterparts highly evaluate the technology transfer from the Japanese experts. On average, they do not expect major problems but still expect some problems after the Project.
		(2) Formulation of plan of actions / operations by DWIDP to prevent / mitigate water induced disasters in line with the achievements of DMSP Project	Disaster Protection Activity Plan for the Joint Coordinating Committee in 2003.

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Outputs** 1 Disaster mitigation measures and construction methods suitable for local environment will be identified Target Group: (1) Community (2) Counterpart of DMSP	Dahachowk Model Site for Sabo	
		(1) Establishment of systems by community people in DMSP Project target areas to prevent/mitigate water induced disasters such as; warning/evacuation system, community activities to prevent/mitigate water induced disasters with the initiatives of Users' Group (UG), and Disaster Mitigation Education (DME)	A users' group was organized and an annual activity plan was agreed each year. The following activities were implemented according to the plan together with technology transfer to the counterparts and awareness raising of the community members. 1. Organizing the users' group 2. Development of low cost technologies and methods for disaster mitigation such as gabion check dams and bio-engineering 3. Construction of nurseries, fostering nursery operators and the operation 4. Planting and bamboo fencing to stabilize the land 5. Awareness raising activities (seminars and evacuation drills) 6. Disaster mitigation education at 3 schools The warning and evacuation system is scheduled to be established well before the rainy season in2004.
		(2) Reliable/systematic information on effective investigation methods and countermeasures in terms of cost, workability and function to prevent/mitigate water induced disasters in DMSP Project target areas	Technology transfer to the counterparts enabled them to conduct a series of actions, such as design of facilities, cost estimation, implementation, operation of seminars, etc. Based on the model projects, a manual "Land Use Guidelines" has been prepared, and currently two manual, "Sabo Planning Guidelines" and "Bio-engineering Guidelines" are being prepared.

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Outputs** 1 Disaster mitigation measures and construction methods suitable for local environment will be identified Target Group: (2) Community (2) Counterpart of DMSP	Girubari Model Site (Upstream) for Sabo	
		(1) Establishment of systems by community people in DMSP Project target areas to prevent/mitigate water induced disasters such as; warning/evacuation system, community activities to prevent/mitigate water induced disasters with the initiatives of Users' Group (UG), and Disaster Mitigation Education (DME)	A users' group was organized and an annual activity plan was agreed each year. The following activities were implemented together with technology transfer to the counterparts and awareness raising of the community members. 1. Organizing the users' group 2. Development of low cost technologies and methods for disaster mitigation such as retaining walls to stabilize three slope failure sites 3. Construction of nurseries (1 main nursery and 5 sub-nurseries, fostering nursery operators and the operation 4. Planting 5. Awareness raising activities (seminars) The upstream areas have not been surveyed and so the volume of the sediment discharge can not be estimated. Therefore, the work for the upper reach can not be completed. Regulations to control actions causing sediment related disasters have not been institutionalized.
		(2) Reliable/systematic information on effective investigation methods and countermeasures in terms of cost, workability and function to prevent/mitigate water induced disasters in DMSP Project target areas	Technology transfer to the counterparts enabled them to conduct a series of actions, such as design of facilities, cost estimation, implementation, operation of seminars, etc. Based on the model projects, a manual "Land Use Guidelines" has been prepared, and currently two manual, "Sabo Planning Guidelines" and "Bio-engineering Guidelines" are being prepared.

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Outputs** 1 Disaster mitigation measures and construction methods suitable for local environment will be identified Target Group: (3) Community (2) Counterpart of DMSP	Girubari Model Site (Downstream) for River Improvement	
		(1) Establishment of systems by community people in DMSP Project target areas to prevent/mitigate water induced disasters such as; warning/evacuation system, community activities to prevent/mitigate water induced disasters with the initiatives of Users' Group (UG), and Disaster Mitigation Education (DME)	After the basic agreement on the project activities with the users' group representing the catchment area, the community members actively participated in disaster mitigation activities initiated by the Project. As knowledge and experiences accumulated through the participation, the group members became increasingly committed to disaster mitigation activities. The community members participated in the river improvement works by the DWIDP and then the users' group became able to implement by themselves the works with external support of only the materials and machines. The users' group held seminars for community members with video shows and distribution of pamphlets. As a result, the awareness of disaster mitigation was thought to have been raised considerably. The users' group is establishing an information dissemination function and an action taking functions. The community members are becoming more conscious to address disasters. Thus, they have found the base of a disaster prevention group. The disaster mitigation education was conducted at a primary school near the model site. According to a set of surveys, the education was effective to raise awareness of not only the pupils but also their family members and community members. At Bhagra, a center of the area, a warning and evacuation map is prepared and publicized by pamphlets and boards. A warning and evacuation system is scheduled to be organized by the community members within the Project period. The system will need to be monitored in the coming years.
		(2) Reliable/systematic information on effective investigation methods and countermeasures in terms of cost, workability and function to prevent/mitigate water induced disasters in DMSP Project target areas	Study reports and manuals were prepared based on the model project and hydraulic experiments at the Godawari Laboratory.

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Outputs** 1 Disaster mitigation measures and construction methods suitable for local environment will be identified Target Group: (4) Community (2) Counterpart of DMSP	Kathmandu - Naibise Road Model Site for Landslides	
		(1) Establishment of systems by community people in DMSP Project target areas to prevent/mitigate water induced disasters such as; warning/evacuation system, community activities to prevent/mitigate water induced disasters with the initiatives of Users' Group (UG), and Disaster Mitigation Education (DME)	For this model project, the staff of the local office of the Department of Roads were defined as the target group of technology transfer instead of a users' group of communities because the road is a national artery and the countermeasures were in urgent need. Through field explanation and lectures, the staff learned the importance of the maintenance and landslide measures of roads.
		(2) Reliable/systematic information on effective investigation methods and countermeasures in terms of cost, workability and function to prevent/mitigate water induced disasters in DMSP Project target areas	Disaster Potential Maps and Disaster Distribution Maps have been prepared based on the two model sites. Appropriate methods have been documented as a report. However, landslide countermeasures have not been implemented in Bagmati Model Site, therefore the aspects will not be covered by the report. "Field Survey and Implementation Guidelines" was prepared.

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Outputs** 1 Disaster mitigation measures and construction methods suitable for local environment will be identified Target Group: (5) Community (2) Counterpart of DMSP	Bagmati Model Site for Landslides	
		(1) Establishment of systems by community people in DMSP Project target areas to prevent/mitigate water induced disasters such as; warning/evacuation system, community activities to prevent/mitigate water induced disasters with the initiatives of Users' Group (UG), and Disaster Mitigation Education (DME)	At Bungamati Site, a users' group was organized by the villagers. According to the recommendation of the village development committee (VDC), the construction was implemented by the group. However, due to the delay of the commencement of the model project, the construction will not be completed within the Project period. At Chalnakhel Site, landslide surveys are currently on-going. Whether the design of the works will be finalized by the end of the Project period is questionable. As the disaster mitigation education for Bagmati Model Site, textbooks prepared by the Project were distributed to the fifth grade pupil and video shows were held at each of the three schools. At one of the schools, not only the pupils but their family members and neighborhood communities participated in the video show.
		(2) Reliable/systematic information on effective investigation methods and countermeasures in terms of cost, workability and function to prevent/mitigate water induced disasters in DMSP Project target areas	Disaster Potential Maps and Disaster Distribution Maps have been prepared based on the two model sites. Appropriate methods have been documented as a report. However, landslide countermeasures have not been implemented in Bagmati Model Site, therefore the aspects will not be covered by the report. "Field Survey and Implementation Guidelines" was prepared.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Achievement	2 Disaster rehabilitation will be strengthened through technical supports of DWIDP (DMSP) Target Group: (1) Concerned central government offices (2) Concerned agencies = Central and local government offices, ICIMOD, NGOs, etc (3) DSC members	(1) Establishment of Disaster Survey Committee (DSC) comprised of the representatives of concerned central government offices	The Disaster Survey Committee comprises (1) Department of Irrigation (DOI) of Ministry of Water Resources, (2) Department of Roads (DOR) of Ministry of Physical Planning and Works, (3) Department of Local Infrastructure Development and Agricultural Roads (DOLIDAR) of Ministry of Local Development, (4) Planning and Special Service Division of Ministry of Home Affairs, (5) Department of Electricity Development (DOED) of Ministry of Water Resources, (6) Department of Soil Conservation and Watershed Management (DSCWM) of Ministry of Forest and Soil Conservation, and (7) Department of Water Induced Disaster Prevention (DWIDP) of Ministry of Water Resources as the secretariat. The Nepal Electricity Authority (NEA) is an observer of the committee so that eight of the ten departments in charge of social infrastructure are involved. The following meetings were held. The First Disaster Survey Committee Meeting on 30 April 2001 The Second Disaster Survey Committee Meeting on 26 February 2002 The Third Disaster Survey Committee Meeting on 3 January 2003 The Fourth Disaster Survey Committee Meeting on 6 February 2004 It is noted that no institutional set up has been established at local levels.
		(2) Distribution of case study reports on disaster rehabilitation to concerned agencies	The disaster survey reports were distributed annually to the eight DSC members including the NEA as well as some VDC offices, division offices of the DWIDP and some communities.
		(3) Discussion/examination among DSC member agencies on establishment of sector-wide disaster rehabilitation system	The following reports include the records of the discussions. The First Disaster Survey Committee Report The Second Disaster Survey Committee Report The Third Disaster Survey Committee Report The Fourth Disaster Survey Committee Report

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
	3 Sharing of disaster information and disaster mitigation technology will be improved. Target Groups: (1) Counterpart of DMSP (2) Concerned agencies' staff (3) Institute of Engineering, Tribhuvan University	(1) Improvement of information sharing system established by DWIDP and its use by 10% of the staffs (about 250 in number) in concerned government offices	The computers and their accessories in the DWIDP have been well arranged. The website of DWIDP/DMSP was opened to disseminate information of the activities and to raise awareness of disaster prevention. Information on disasters has been collected from newspapers and Ministry of Home Affairs. Information on technologies has been taken over from the Phase 1 DPTC Project. A local area network was established in the Research, Training and Monitoring Division of DWIDP in order to search and share the data available in the department. Now over 70% of the technical staff exchange data by means of the network. An internal workshop was held for the staff to learn how to utilize the system. Disaster potential maps of all the 75 districts of Nepal as well as a disaster prevention map of the Kathmandu - Naubise Road have been prepared based on the GIS. The website of the DWIDP/DMSP was accessed over 500 times. The district disaster potential maps and the Kathmandu - Naubise Road disaster prevention map are being distributed to relevant organizations such as DHM, MOH and DOLIDAR. The DMSP's periodicals are distributed to relevant organizations. The central government agencies in charge of disaster mitigation are yet to share detailed information. Short-term experts were dispatched to hold seminars of disaster information with a total of 60 participants. An internal training course on the website and the GIS was held with 15 participants. Prepared materials are Intranet System Users manual of DWIDP/DMSP, GIS Users manual of DWIDP/DMSP, and Computerized Library Documents Search System Users Manual. DWIDP Disaster Review and DWIDP Bulletin are annually publicized.
		(2) Establishment of disaster prevention/mitigation course at Institute of Engineering of Tribhuvan University followed by its independent management of the course	In 2000, water induced hazard courses were set up in the water resources engineering master program of Institute of Engineering of Tribhuvan University. The class of 20 students started in August 2001 and the first group graduated in June 2003. One of them was admitted to the doctor course of the Disaster Prevention Research Center of Kyoto University. Intensive classes by five Japanese lecturers and preparation of textbooks, instructions for experiments, and counterpart training of Nepalese lecturers in charge were followed by smooth operation of the course. The Institute of Engineering set up the Centre for Disaster Studies (CDS) for research and training.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
	4 Awareness on disaster mitigation among HMG/N and communities will be raised. Target Groups: (1) Concerned agencies (JCC) (2) Communities (All Nepal)	(1) Recommendations to JCC on disaster prevention/mitigation	At the annual Joint Coordinating Committee Meetings, the DMSP members submitted proposals on activities to be done by the DWIDP and related organizations. The disaster mitigation was recommended to the Ministry of Education and Sports and other relevant organizations for its strong impact and effects confirmed through the activities at the model sites. Discussions have recently started between the DWIDP and the Ministry of Education and Sports for nation wide expansion of the disaster mitigation education.
		(2) Dissemination of DMSP Project achievements to 5% of VDCs and municipalities (about 200 in number) in the country	Disaster rehabilitation seminars were held at: Matihani VDC, Mahottali District (30 participants), Barmajhiya VDC, Saptari District (52 participants), Parroaha VDC, Rupandehi District (28 participants), and Dhapakhel VDC, Kathmandu District (32 participants). The above villages were damaged by disasters and seeking for rehabilitation. Roving seminars were held at 11 areas covering approximately 80 VDCs. Other outputs include distribution of disaster mitigation information to 60 - 80 village development committees, and holding seminars, distributing publications and inviting to participatory rehabilitation projects targeted at the village development committees selected for disaster rehabilitation. (17 locations in 2002).

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Pre-conditions**	(1) Counterpart budget for the project is in place.	The budget jumped in 2002/2003 fiscal year (July 2002 - July 2003) due to the merger of the river training division of the Department of Irrigation and disaster rehabilitation operations. Counterpart budget of the Project is around Rs 160 million. The budget is still tight for extensive activities of the Nepalese staff.
		(2) Necessary Counterparts are assigned.	A sufficient number of counterparts were assigned in recent years.
		(3) Outputs of Phase -1 have been continuously maintained in DWIDP.	The disaster mitigation technologies transferred by the Water Induced Disaster Prevention Technical Centre Project (Phase 1) have been maintained in the DWIDP so that it is conducting studies, research, construction, and training courses for relevant government employees. The trainees are from not only the DWIDP but also other staff of Ministry of Water Resources such as Department of Irrigation, and also the police, Department of Hydrology and Meteorology of Ministry of Science and Technology, Department of Roads of Ministry of Physical Planning and Works, Department of Soil Conservation and Watershed Management of Ministry of Forest and Soil Conservation. Besides the regular use by the DWIDP, the seminar hall is used by 12 organizations for a total of 72 days. The laboratory at Godawari has been used regularly by the DWIDP staff. In addition, two organizations used the laboratory for a total of 106 days. The laboratory facilities and equipment provided by the Phase 1 are maintained and utilized.
		(4) IOE/TU has intention and plan to establish disaster mitigation/prevention course.	A “Memorandum of Understanding” was signed by the Institute of Engineering at Tribhuvan University (IOE/TU) and the DMSP on 10 October 2001 for establishing Water Induced Hazard Courses in the Water Resources Engineering Master Program at IOE/TU.
	Inputs (Japanese side)	(1) Long-term experts(6) 1) Chief advisor 2) Coordinator 3) Community disaster mitigation 4) River Improvement 5) Sediment-related disaster mitigation 6) Disaster rehabilitation	The six assignments of long-term experts have been fulfilled by a total of 14 experts. As current long-term experts for the river improvement and the sediment related disaster mitigation are scheduled to leave in March 2004, the two assignments need their successors.

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Criteria	Evaluation Items	Confirmation Items	Results
Achievement	**Inputs (Japanese side)**	(2) Short-term experts (about 10 per year)	A total of 40 short-term experts were dispatched including those for the Water Induced Hazard Courses at Tribhuvan University.
		(3) C/P training in Japan (about 4 per year)	A total of 21 counterparts received training, consisting of 18 members trained in Japan under the counterpart training scheme, one member in Indonesia under the third country training scheme, and four senior members, two of whom were also trained under the first scheme, participated in courses and workshops. It is noted that nine members out of the 18 members trained in Japan left the DWIDP. Among the above four senior members, only one member remains in the DWIDP. However, most of them moved to organizations dealing with disaster mitigation such as the JCC member agencies, where they are expected to utilize and diffuse their experiences.
		(4) Equipment	Major provided equipment is 4 vehicles, 3 trucks, 6 construction machines 2 personal computer accessories/software. The total value of the equipment provided the JICA headquarters is approximately 63,925,000 Nepalese Rupees. They are properly utilized and maintained. Besides the provision of equipment, the total expenses for the local cost is approximately 48,947,000 Nepalese Rupees including the planned budget for 2003/2004 fiscal year (1 April 2003 - 31 March 2004).
	Inputs (Nepalese side)	(1) C/P and Operational/clerical staff	The Director General of the DWIDP and the staff of the Research, Training and Monitoring Division are defined as the counterparts and operational/clerical staff of the DMSP. Currently, a total of 40 members are assigned, excluding temporary staff. The division has five technical sub-divisions for (1) sediment related disaster mitigation (landslides), (2) community disaster mitigation planning (sabo), (3) river improvement, hydraulic laboratory and planning, (4) disaster rehabilitation, and (5) information (GIS, database), training, studies and publication.
		(2) land and facilities	The office is accommodated by the building constructed by Japan's grant assistance scheme in a government compound. The laboratory is located at Godawari compound and the garage for the construction machines is located at Baneshwar compound.
		(3) Project operational costs and construction cost necessary for model works	The DWIDP's disbursement was approximately 76 million Nepalese Rupees in 1999/2000 fiscal year (July 1999 - July 2000), 51 million Rs in 2000/2001, 74 million Rs in 2001/2002 and jumped to 671 million Rs in 2002/2003 due to the merger of the river training division and disaster rehabilitation operations. The budget for 2003/2004 is 616 million Rs. The budget for the DMSP was approximately 160 million Rs in 2003/2004, that is regarded to be quite large by the Nepalese standard within the insufficient overall framework due to the limited revenue and a lot of financial demand, although the budget is still tight for fully-fledged operation.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	Dahachowk Model Site for Sabo	
		1-1 Plan disaster mitigation activities in the target areas.	Selection of the model site Longitudinal and vertical survey reports Conceptual master plan Monitoring reports
		1-2 Apply appropriate disaster mitigation technologies and methods in the target areas.	Implementation of model works Holding annual seminars Construction of nurseries Fostering nursery operators
		1-3 Promote participatory disaster mitigation activities and educate communities in the target areas.	Establishment of a users' group Meeting to explain disaster mitigation and to receive requests from community members Meeting to explain disaster mitigation activities Expansion of a schoolyard by utilizing waste materials generated from the construction Employing operators of the nursery and their training Holding two seminars involving communities for planting and maintenance Conducting disaster mitigation education at primary schools and evaluation of the effects Distribution of calendars with drawings for disaster mitigation Social surveys (twice) It is noted that the warning and evacuation system is being established at downstream settlements.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	Girubari Model Site (Upstream) for Sabo	
		1-1 Plan disaster mitigation activities in the target areas.	Selection of the model site Longitudinal and vertical survey reports It is noted that the conceptual master plan and the monitoring reports were not prepared because the The local security risk made the survey by the Japanese experts impossible.
		1-2 Apply appropriate disaster mitigation technologies and methods in the target areas.	Holding annual seminars Construction of nurseries Fostering nursery operators It is noted that model works were limited to areas near roads which vehicles can pass.
		1-3 Promote participatory disaster mitigation activities and educate communities in the target areas.	Establishment of a users' group Meeting to explain disaster mitigation and to receive requests from community members Meeting to explain disaster mitigation activities Employing operators of the nursery and their training Holding three seminars involving communities for planting and maintenance Conducting disaster mitigation education at primary schools and evaluation of the effects Distribution of calendars with drawings for disaster mitigation Social survey (once) It is noted that institutional arrangement such as regulations to control actions is yet to be enforced for sediment related disasters.

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Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	Girubari Model Site (Downstream) for River Improvement	
		1-1 Plan disaster mitigation activities in the target areas.	Selection of the model site Field surveys (topography, river bed, social survey) Conceptual Master Plan Agreement on activities with the users' group Preparation of a Country Watching Map by the Participatory Rural Appraisal (PRA) Method Preparation and publication of a Disaster Hazard Map Planning and design of the Girubari River Training Works Photo monitoring of countermeasures for river training Measurement of the rainfall and the river water level
		1-2 Apply appropriate disaster mitigation technologies and methods in the target areas.	Implementation of the model works Conducting hydraulic model experiments
		1-3 Promote participatory disaster mitigation activities and educate communities in the target areas.	Preparation of posters, pamphlets and sign boards for awareness raising, Manual on production of gabion works and maintenance for villagers Preparation of a manual for preparation of warning and evacuation maps Implementation of participatory construction Holding community awareness raising seminars Conducting disaster mitigation education at primary schools and evaluation of the effects

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Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	Kathmandu - Naubise Road Model Site for Landslides	
		1-1 Plan disaster mitigation activities in the target areas.	Report “Disaster Potential Map of Kathmandu - Naubise sector” Topographical map of a part of the model site Disaster potential map using GIS Design of disaster mitigation works Fixed-point monitoring report Facility monitoring report Rainfall data Common to all the landslide model sites: “A Guidebook of Disaster Potential Map Technology in DMSP” “The Points of Disaster on Slope” “A Guidebook of the Field Reconnaissance on Landslide” “Landslide Management Methodology” “The Method of Mud and Debris Flow Investigation” “Manual of Aerial Photo Interpretation” “Report of Landslide Model and its Manual”
		1-2 Apply appropriate disaster mitigation technologies and methods in the target areas.	Implementation of model works Kathmandu - Naubise Activity Report Common to all the landslide model sites: Developing the facility maintenance form Soil test training Simplified penetration test training Aerial photo interpretation training Training for rock fall prevention on the slope
		1-3 Promote participatory disaster mitigation activities and educate communities in the target areas.	Preparation of posters, calendars, pamphlets and sign boards Conducting disaster mitigation education at primary schools and evaluation of the effects Technical proposal to the Department of Roads of the Ministry of Public Works and Transportation Preparation and exhibition of a landslide model Preparation and exhibition of photo panels No community participation in the construction

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	Bagmati Model Site (Bungamati Site) for Landslides	
		1-1 Plan disaster mitigation activities in the target areas.	Bagmati Activity Report Topographical map Disaster field exploration report Disaster distribution map Disaster distribution map by aerial photo interpretation Photo monitoring report Rainfall data Common to all the landslide model sites: See Kathmandu - Naubise Road Model Site for Landslides.
		1-2 Apply appropriate disaster mitigation technologies and methods in the target areas.	Implementation of model works Bagmati Activity Report It is noted that currently construction against landslides are on-going. Due to the delay, the construction can not be completed by August 2004. Common to all the landslide model sites: See Kathmandu - Naubise Road Model Site for Landslides.
		1-3 Promote participatory disaster mitigation activities and educate communities in the target areas.	Preparation of posters, calendars, pamphlets and sign boards Conducting disaster mitigation education at primary schools and evaluation of the effects Preparation and exhibition of a landslide model Preparation and exhibition of photo panels Implementation of participatory construction (not to be completed by August 2004)

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Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	Bagmati Model Site (Chalnakhel Site) for Landslides	
		1-1 Plan disaster mitigation activities in the target areas.	Bagmati Activity Report Topographical map Geophysical and geological investigation Boring survey Disaster field exploration report Moving peg survey, inclinometer, ground water level survey Disaster distribution map Disaster distribution map by aerial photo interpretation Photo monitoring report Rainfall data Common to all the landslide model sites: See Kathmandu - Naubise Road Model Site for Landslides.
		1-2 Apply appropriate disaster mitigation technologies and methods in the target areas.	It is noted that currently surveys of landslides are on-going. Due to the delay, the design of disaster mitigation works may not be completed by August 2004. Common to all the landslide model sites: See Kathmandu - Naubise Road Model Site for Landslides.
		1-3 Promote participatory disaster mitigation activities and educate communities in the target areas.	Preparation of posters, calendars, pamphlets and sign boards Conducting disaster mitigation education at primary schools and evaluation of the effects Preparation and exhibition of a landslide model Preparation and exhibition of photo panels Participatory construction will not be started by August 2004.

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Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	2-1 Setup organizational framework on disaster rehabilitation at DWIDP and the Disaster Survey Committee.	The Disaster Survey Committee was established at a national level or a central government level, and the committee meetings have been held annually. The corresponding committees at local levels of the district development committees and the village development committees are yet to be established for disaster rehabilitation with their initiatives.
		2-2 Conduct disaster surveys consulting with concerned agencies and/or communities.	The DWIDP conduct surveys for disaster rehabilitation annually in cooperation with local agencies and communities. No survey is conducted by local government units for their disaster rehabilitation measures.
		2-3 Submit survey reports and/or rehabilitation plan to concerned agencies and/or communities.	The Disaster Survey Committee distributes the disaster survey reports and the disaster rehabilitation plans to relevant national organizations and local government units.
		2-4 Select target areas and implement model emergency rehabilitation works.	The DWIDP selects disaster rehabilitation model sites from candidate sites requested by relevant organizations and local communities, and implement the selected rehabilitation works. The DWIDP is also monitoring the effects of the rehabilitation. So far, no local government units are taking similar actions.
		2-5 Promote participatory disaster rehabilitation activities in the target areas.	Participatory disaster rehabilitation works have been conducted at four rehabilitation model sites, namely Bhimdhunga, Dhapakhel, Mahuli River and Khado River. Disaster rehabilitation seminars were held at four sites, namely Matihani VDC, Mahottali District, Barmajhiya VDC, Saptari District, Parroaha VDC, Rupandehi District, and Dhapakhel VDC, Kathmandu District.
		2-6 Review rehabilitation framework and system	At the Disaster Survey Committee meetings, discussions and improvements were made of the framework of disaster rehabilitation at a national level, operational procedures and criteria for selection of rehabilitation sites. There is no such framework at local levels.

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Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	3-1 Implement training, workshops and/or seminars on project achievements.	Preparation and revision of disaster mitigation education materials and translation Holding five workshops for disaster mitigation education The general training courses and the advanced training courses are held. No institutional arrangement has been established to diffuse disaster mitigation education nation wide. The model projects are not yet completed so the materials are yet to include the results of the model projects.
		3-2 Improve database and information systems at DWIDP	An intranet of the DMSP has been established together with a database of disaster information. All the available data are currently being input in the server computer. A website of the DWIDP/DMSP has been opened to disseminate information of disasters. The DWIDP and other organizations concerned with disaster mitigation do not yet fully share detailed disaster information.
		3-3 Develop Disaster Potential Maps by using GIS as a disaster information system.	District wise disaster potential base maps have been prepared for all the 75 districts of Nepal. A report of disaster potential map of Kathmandu - Naubise Road has been prepared.
		3-4 Extend technical supports to introduce Disaster Mitigation Management Course in Water Resources Engineering Master Course at IOE/TU	The Project supported the commencement of the disaster mitigation management course, the preparation of the course curriculum, and the preparation of the textbooks. The short-term experts gave lectures and examinations.

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Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	**Activities against schedule**	3-5 Extend technical supports upon request form concerned agencies and communities.	Disaster rehabilitation seminars were held in local districts. Besides the disaster rehabilitation model sites selected by the Disaster Survey Committee, the disaster rehabilitation team of the DWIDP visited various areas hit by disasters of the rainy season and advised local people on disaster prevention and mitigation. The disaster survey reports were handed to the disaster stricken communities. Disaster surveys were conducted at the local request of Gairi Tole, Dhapasi, Kirtipur, Matatirtha, Marsyangdi Power Plant. Participation in the seminar “Sustainable Slope Risk Management for Roads” held by the Permanent International Association for Road Congress (PIARC) in March 2003 Participation in the seminar “Impact of Landslides in Nepal” held by the Nepal Landslide Society (NELS) in September 2003 Technical advice on the debris flow site at Chitwan at the request of the Director General of the Department of Roads of Ministry of Physical Planning and Works in February 2002 Disaster survey of the section between Mugling and Narayanghat.
		4-1 Make recommendations toward HMG/N on project achievements.	The Disaster Review and the DWIDP Bulletin are annually published as public relations of the activities. The publications and the minutes of meetings of the Joint Coordinating Committee are distributed to relevant organizations. Actions toward the nation wide diffusion of the disaster mitigation education have recently been started in cooperation with the Ministry of Education and Sports. It will not be completed in the Project period.
		4-2 Disseminate IEC materials to communities resulted from the Activities 1 to Activities 3	Information, education and communication materials for disaster mitigation were prepared and disseminated as well as guidelines and manuals (See Annex 10.)

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Process of activities	Monitoring	Adjustment of PDM	The original PDM was revised by the mid-term evaluation in December 2001.
	Cooperation between Japanese experts and counterparts	Relationship	Staff meetings were regularly held to exchange and share views.
		Joint efforts to address major issues	Joint efforts were made to address day-to-day issues. The Japanese experts and the Nepalese counterparts are mutually cooperative.
		Ownership of counterparts	Through the Project activities, the counterparts have been motivated to disaster mitigation to have strong sense of commitment. While actions to be taken are planned and confirmed jointly, those of the counterparts are proposed, operated and managed by themselves.
	Feedback from the local participants at the model areas	Utilization of the feed back	Feedback from the project activities such as proposals from the users' groups are incorporated in the annual plan of operations.
	Ownership of the Nepalese Side	Participation of the management staff of DWIDP	The management staff of the DWIDP actively participate in the Project activities.
		Participation of the local governments of the model areas	With the cooperation and support of the village development committees, the Project activities have been diffused and areas of participatory disaster mitigation activities have been spread. In Dahachowk Model Area for Sabo, the users' group is managing the activities with the confidence of the village development committee, therefore, neither the village nor the district development committee is leading the activities.
		Participation of the communities at the model areas	In general, local communities expect a lot from the Project and they actively participated. Construction requires certain skills so that the participants tend to be limited. On the other hand, disaster mitigation activities such as planting and participating in seminars do not require skills and involved many participants.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Important assumptions	Prospects of external conditions	**Activity Level** (1) C/P staff will not get transferred frequently	As the number of counterparts needed to be increased for normal operation of the Project, the reorganization of the DWIDP assigned an appropriate number of counterparts.
		(2) Project implementing organization will be maintained and strengthened.	The organization of the DWIDP was expanded with the Study and Implementation Division transformed from the River Training Division of the Department of Irrigation.
		Outputs Level (1) HMG/N will provide disaster prevention budget properly.	His Majesty's Government of Nepal continued its budget allocation to the DMSP Project through the DWIDP. The total disbursement to the department jumped in 2002/2003 fiscal year (July 2002 - July 2003) mainly due to the merger of the river training division and disaster rehabilitation operations.
		(2) Trainers in DPTC/DWIDP and in communities will continue to work in disaster prevention, rehabilitation, and preparedness.	Many of the counterparts of the Water Induced Disaster Prevention Technical Centre Project (Phase 1) left the DWIDP. However, the training courses are operated mainly by the DWIDP staff having trainees from various government organizations not limited to the DWIDP staff.
		Project Purpose Level (1) Disaster prevention / regulation law shall be legislated and functioned	His Majesty's Government of Nepal places emphasis on the disaster mitigation as both the tenth national five year development plan and the national water plan have a chapter on disasters. It is therefore expected that legal arrangement for disaster mitigation will be made in the near future.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Relevance	Consistency between Project goals and Nepal's national development policy	1.Consistency with the national development policy	The Tenth National Five Year Development Plan (2003 - 2007) prepared by the National Planning Commission (NPC) stipulates disaster mitigation by a section for the first time, that is Chapter 17.2 Water Induced Disaster Management. Based on the plan, the Water and Energy Commission Secretariat (WECS) is preparing the National Water Plan in which the DWIDP was recognized as a chief disaster management agency with special importance. Therefore, the Project purpose is fully relevant to the national policy.
		2.Does this project meet the policies of relevant sectors and local governments?	
	Consistency with Japan's ODA policy	1.Consistency with the ODA policy for Nepal	Natural disasters are among major causes of the poverty, which is the top priority issue of Nepal. The Project is to protect the human security against the disasters.
		2.Japan's technological advantages	Historically Japan was long prone to natural disasters. From Edo Era till Showa Era, a lot of disaster mitigation efforts were made with insufficient finance and expertise. Such assets of Japan as well as its state of art technologies are great advantages to seek for technologies appropriate to the current situation of Nepal.
	Relevance in terms of equity	Selection procedures of target areas, etc.	The model sites have been selected objectively by a number of criteria such as necessity, usefulness, urgency and proximity from the Project Office, considering that they become models to be widely replicated.
	Consistency between Project purpose and Nepal's needs		As manifested by frequent damages of communities by water induced disasters, the Project addresses the grassroots needs of local communities as well as the national needs.

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Criteria	Evaluation Items	Confirmation Items	Results
Effectiveness	Achievement of outputs	Indicators of results	The results of the Project will be disseminated by a nation wide seminar held in March 2004 in order for the relevant agencies to fully understand. The results will also be distributed to other organizations to be utilized for fostering technical staff, doing disaster rehabilitation activities and taking actions to prevent water induced disasters. However, the upstream of Girubari Model Site has not yet surveyed for Sabo measures due to the safety problem. On the other hand, Bagmati Model Projects are behind the schedule due to the delay of the commencement of the study caused by the initial shortage of the counterparts. The DWIDP has further intensions such as establishment of disaster rehabilitation systems at local levels, nation wide diffusion of disaster mitigation education, sharing of disaster information and establishment of a disaster information network. However, they are not likely to be completed by August 2004.
	Achievement of Project purpose	Indicators of results	
	Specific factors constraining Project outputs to achieve Project purpose		The local security problem is a constraining factor of the Project achievement. In addition, absence of elected district and village development committees constrains part of the local operations of the Project in some places. The current situation of the parliament may be a negative factor for legislative aspects of the disaster mitigation.
	Specific factors promoting Project outputs to achieve Project purpose		The increased budget is allocated to the DWIDP in spite of the very tight national budget. As shown in the National Water Plan, the DWIDP is designated as the chief agency in charge of the mid-term and long-term disaster mitigation plans. Therefore, it is thought that the status of the department is secure and the staff tend to remain in the department.
	Cooperation with local government staff	To what extent do local government staff cooperate with Project?	In spite of the government policy, the devolution is constrained by the absence of elected local government chairpersons. In local districts, users' groups are participating in the Project activities, while some of the temporarily appointed local government units are functioning for disaster mitigation although not in full scale. After the merger, the DWIDP has 12 local offices (seven division offices and five subdivision offices) and the management intends to fully utilize the offices for local operations in cooperation with district and village development committees in the coming years.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Efficiency	Quantity, quality and timing of the inputs (Nepalese and Japanese)	Was the timing to dispatch the long & short-term experts appropriate?	In general, the Japanese experts were properly dispatched. The long-term experts were continuously assigned without substantial vacant periods. A total of 40 short-term experts were assigned according to the annual plan of operation including lecturers of the Water Induced Hazard Courses of the Water Resources Engineering Program of Institute of Engineering at Tribhuvan University.
	Utilization of the inputs	Were the selection of counterpart training, the timing of training and the contents of training appropriate? How do they utilize the knowledge and technology learned in the training?	The trainees were selected by considering their technical eligibility and work schedule. The contents of the training were selected to focus on relevant issues. The knowledge and technologies obtained in the training are useful for the activities with their own initiatives. (See Annex 9.)
		Were the selection of the equipment and materials and the timing to supply them appropriate? How are they utilized?	Necessary items of equipment and construction materials were provided according to the plan of operation in order to efficiently transfer technologies so that the model projects were implemented properly at the upstream in Girubari Model Site and Bagmati Model Site. The equipment and materials were very efficiently utilized especially for the disaster rehabilitation works. Selection of the equipment and materials was made based on local applicability and availability resulting in high efficiency.
		Was the operation budget used efficiently?	At the beginning of the Project, the budget was not fully utilized due to delays of activities. In the latter half of the Project period, the activities were smoothly done by fully utilizing the budget, except at the upstream in Girubari Model Site and Bagmati Model Site.
	Factors promoting or constraining Project activities to produce Project outputs	For example, the Project support system	The members of the Joint Coordinating Committee, the Disaster Survey Committee and the GIS Committee are mutually supporting each other.
	Linkage, cooperation or competition with other projects		The DWIDP received the Japan's Grant Assistance for Grassroots Project of 2001 Japanese fiscal year for countermeasures of slope failures.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Impact	Prospects of achievement of Project goals in future		The Tenth National Five Year Development Plan (2003 - 2007) prepared by the National Planning Commission (NPC) stipulates disaster mitigation by a section for the first time, that is Chapter 17.2 Water Induced Disaster Management. Based on the plan, the Water and Energy Commission Secretariat (WECS) is preparing the National Water Plan. This plan shall state the needs for water induce disaster mitigation, which is initiated by the DWIDP, and contents and budgets for the mid-term and long-term measures. These national plans are part of the results of the raised awareness of disaster mitigation among His Majesty's Government of Nepal promoted by the Project activities. As a significant impact of the Project, the various relevant government agencies are starting to cooperate for disaster mitigation activities.
	Impact in the model areas	Institutional, socio-economic, cultural, environmental, etc	The users' group members have earned extra income by participating in construction works and planting.
	Impact outside the model areas	Institutional, socio-economic, cultural, environmental, etc	As an impact of the Project the Nepal Landslide Society (NELS) was established as a first academic society of natural disaster mitigation in Nepal. It is expected to function as a center for exchange of research and technologies. The model projects contribute to traffic flow for all the year round. Especially, Kathmandu - Naubise Road Model Project contributes a lot to the economic activities in the capital region.
	Impact on reputation of Japan's cooperation		Contribution of Japan to disaster mitigation is increasingly recognized not only in the government sector but also in local communities through construction works, participatory approaches and disaster mitigation education.

Annex 12.

Criteria	Evaluation Items	Confirmation Items	Results
Sustainability	Institutional sustainability	Will DWIDP continue to assign the counterpart personnel?	By the administrative reorganization, the DWIDP became a permanent government organization. Then 12 local offices were established and the river training division of the Department of Irrigation was merged into the DWIDP. The number of technical staff of DWIDP was increased and is expected to be maintained.
		Will the counterparts continue to work for the activities?	In recent years, the counterparts tend to remain at the DWIDP. Some were transferred to the member agencies of the Joint Coordinating Committee.
		Operation and management capability of DWIDP	The Tenth National Five Year Development Plan (2003 - 2007) prepared by the National Planning Commission (NPC) and the National Water Plan being prepared by the Water and Energy Commission Secretariat (WECS) stipulate the functions of the DWIDP for disaster mitigation, therefore, the department's institutional sustainability is high with its important roles.
		Continued support by the government	His Majesty's Government recognizes the importance of water induced disaster mitigation and therefore shall continue to be responsible for the DWIDP.
		Participation of local communities	The participatory approach was enhanced through the model projects. The target communities of the Project are better aware of disaster mitigation and the user's groups have been founded for continued operation of disaster mitigation activities.
		Participation of local governments	The local government units, namely the district development committees and the village development committees, are to address local needs such as disaster mitigation, the local institutional set up has not been established for disaster mitigation, although some of the committees have functioned to a certain extent.
	Financial sustainability	Trend and prospects of budgets from the government and other sources	As the DWIDP being recognized an important department of His Majesty's Government of Nepal, the budget shall be maintained.
	Technical sustainability	Sustainability of transferred technologies	The transferred technologies are expected to be diffused by the training courses, especially to the local offices of the DWIDP. While, the DWIDP's information system will function as a disaster information center. The disaster mitigation education is expected to be sustained in cooperation with the Ministry of Education as well as the local offices of the DWIDP.
		Maintaining and upgrading the equipment	The provided equipment is expected to be properly maintained as the sufficient budget is maintained.
		Maintaining and upgrading the database	As the newly attached local offices, data sources can be expanded. It is expected that the information system will be properly updated with diversified data sources.