



HMIS News

A NEWSLETTER FROM THE PLANNING BRANCH

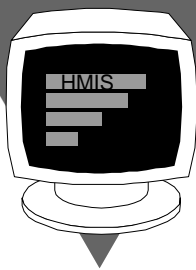
MEU

Annual Progress Report for FY 2052 /53

The Monitoring and Evaluation unit of DoR has recently prepared a Annual Progress Report summarizing the physical achievements and the problems encountered during the last fiscal year(FY).

According to the report among 76 projects implemented in road transport sector under DoR 85.82 % progress achieved against the initial budget allocation. But considering the curtailment of the budget the progress achieved against the sanctioned budget was 97.88%. More than two-third of the of the projects had achieved more than 75% progress whereas 4 projects achieved less than 50 % progress. 7 projects were completed in the last FY. The total length of 524.61 km of roads (63.27 km Black-topped, 174.58

The Highway Management Information System (HMIS) is located in the Planning Branch of the DOR. The HMIS Manager is Dr. Nabin Kazi Pradhan. You can reach us by phone or by fax at number 221.771 or you can visit us in our office on the first floor of Babar Mahal. Mail can be send to: DOR-HMIS POBox 2623 Kathmandu.



km of gravelled and 287.06 km of Earthen road) was planned to be constructed in the last FY. Similarly, 27 suspension bridge and 13 motorable bridges were also in the annual programme.

... (cont'd in page 2)

COMPUTERS

Computerisation in DoR

With the development of modern computer technology, computers have become an essential part of our life. This is also the case in the Department of Roads: the number as well as the use of computers is growing (fig.1). Survey conducted by RSSDU shows that there are about 35 computers in working condition in the central office, 4 of them have a pentium processor, 14 of them have 486 processors and the rest have 386 or 286 processors. In spite of the rapid growth of the numbers of the computers in the central office the effective use of the computer could not be done. Lots of problem have been felt due to lack of proper plan and standardization in use of hardware and software.

The main use of the computers in the department is for word processing. Especially in the last 2 years this function has been rapidly increasing and computers have almost completely replaced mechanical typewriters. Various word processing software are being used: MS Word version 6 is most commonly used word processing package in the Department. However, Word perfect version 6 is being used in 2 units and the version 5.1 in one unit. The use of different word processing software and different versions of the same software has been causing problems when the files need to be exchanged. Similar situation is prevailing in the case of use of spreadsheets for various calculation purposes. MS Excel version 4 and 5 are generally used. But DOS version of Lotus 123 has been used in some units while the others has already shifted to Lotus window version 5. As many different software packages are installed for widely used application exchanging files between these different applications is not always easy, often exporting and importing do not work well and a lot of time has to be spent to restore the desired formatting.

Over the last three years a lot of progress has been achieved in the (Cont'd in p. 2)

Computerisation..... (cont'd from page 1)

development of computerised database systems in various branches and the units of DoR(table 1). Computerised data

Inside this issue:

- 1
- 2
- 3
- 4
- 5

RMP: Plant Management Component

RMP: Cyclic Maintenance Component Update

Activities in Planning branch

AHP: Equipment Maintenance Centre

HMIS Supplements

base system allows to store, manage efficiently a large volume of data. If properly planned it could also facilitate easy exchange of data, generation of report and information. But as we see from table various programming software has been used for developing the database by the different units. All these different packages complicate data exchange, and in addition to that some of the database systems like Traffic Accident Database and DEE Monitoring Database even lack importing and exporting facilities. Moreover many database do not implement the DoR road referencing system. Even the recently developed customized Bridge Inventory database lacks compatibility with other branches of DoR.

Table 1

Database Systems	Year	Branch/Unit	Software used
Road Equipment Register	1992	Mechanical Branch	dBASE
HMIS	1994	Planning Branch	dBASE/ACAD
Personnel Information System	1995	RSSDU	dBASE
DEE Monitoring data base	1995	MEU	Visual Basic
Traffic Accident data base	1995	TESU	Visual Basic
Nepal Road Statistics	1996	Design Branch	Lotus/ACAD
Bridge Inventory Data Base	1996	Bridge Unit	Access 7.0

Use of various engineering softwares for the propose of planning and designing are presently in use. Structural design package SUPERSTRESS has been installed in Design Branch and is used for the checking of the Bridge structural design done by consultants. CALIX/ADB installed in Geo-environmental Unit is being used for EIA activities. Similarly HDM 3 used for the priority investment Plan will be handover to Planning Branch in near future which could be used for technico-economical analysis of road projects.

In this way we can see that use of computer is used more and more for planning and designing purposes. However, most of the computers are still used in less productive secretarial jobs. Hence it is, generally, felt that well coordinated and properly planned approach for the effective use of computer should be launched. Some of the activities which could inevitably improve the situation are:

Master Plan

A "Computer Application Master Plan" for phase wise implementation of the computerization process of DoR should be developed with the help of professionals (may be with the assistance of local consulting firm or National Computer Centre). It should promote proper distribution of computers based on the activities, keep balance between acquisition /development of various computer systems and human resource development programme.

Institutional Development

Organization structure of DoR has to be updated to accommodate computerization process. Separate specialized unit looking after procurement/development/maintenance of computer systems and management information systems in DoR should be introduced and properly manned with expert personnel and equipped with necessary equipments.

But introducing new unit in DoR, usually, takes considerable time and needs proper planning. Hence to tackle with the problems, establishment of a "Computer and Management Information System Committee" with the objective of assisting the DoR management to formulate and implement the policy related to the computerization process in DoR and to ensure smooth flow of information throughout the DoR has been in the formal process. Planning of the Computer unit and development of "Computer development Master Plan" will also be some of the most important activities of the Committee.

Standardisation

For the easy exchange of data and computer files standardisation in software, referencing system, codes, procedures and formats used by various branch/unit/project for information management is essential. Due consideration should also be given to make our standard codes and formats compatible to other organizations, especially, for the data related to road sector.

Distribution of computers

Managers could take the best advantage of Management information systems only when computer is available on the desk of manager or have an easy access. It will also help to develop the Management Information System itself as the managers would be able to get information easily by clicking the mouse button. Consequently, it will promote the development of management information systems. Hence the present practice of handling the computer by the data operator and data entry operator should be discouraged.

Besides, Regional and Divisional Road Offices should also be equipped with the computers so that they could also be benefitted by various management information systems and engineering software developed in DoR. So it would also help the engineers to remain updated with the computer system.

Network Systems

Linking up of the computers within DoR could result in easy exchange of information.

A Local Area Network(LAN) is created by linking computers with a cable so that data can flow from one computer to the other. Each user has always the possibility to use his computer as before as a stand-alone work station, but if he chooses to work in Network he can do that.

Exchange of data files will be much easier and faster, for example HMIS will put a copy of the database on the server in a format that can be read by any spreadsheet or database programme, this way every workstation user can log into the network anytime and make this data also available in network. Of course sensitive data can be protected using passwords so that only authorised persons can access this data. In this way newsletters, reports, lists, forms etc. can be made available to all users.

LAN could also help to solve problem of uniformity of software packages. For each type(word processing, spreadsheet, database, etc.) one software package is selected and put on the LAN server, then all workstations can use these software packages. The LAN manager will ensure that regularly new updates of the software are made available. Of course multi-user licenses will have to be purchased but they are considerably cheaper than the same number stand-alone programme.

When LAN is functioning files can be exchanged, but this is not the only possible use of network, an increasingly powerful and popular use is electronic mail or E-mail. This software will create a mailbox for every network user on the servers hard disk. Using E-mail every user can send a written message to another user.

A wide Area Network is created by linking several distant LANs or by linking distant users to a main LAN. Usually these links use telephone lines. With WAN the database can be consulted remotely: for example the Butwal workshop can easily find out if a spare part - unavailable in Butwal is available in Kathmandu or Itahari. Besides, the present communication problem between the field offices and the headquarters could be solved in very efficient and cost effective way using e-mail service between the offices using WAN. MEU can get the monthly and trimester progress report within the next day of the given period(provided that responsible authority send them. Similarly planning branch could get urgent query data/information very quickly. RSSDU can collect the Bio-data using the e-mail facility. This system is DoR is in the process of implementing LAN in DoR central office.

Road Maintenance Project

Plant Management Component

Background

The Plant Management Component is a part of the ODA funded Road Maintenance Project within the main Road Maintenance and Rehabilitation Project. It operates from within the Mechanical Section of the Department of Roads at Babar Mahal. The component was established in April 1994 under guidelines determined by the MRCU.

The main objective of the RMRP is to ensure effective maintenance of the main road network in Nepal by rehabilitating sections of main roads to bring them up to a maintainable condition; and by developing a capability within Nepal to undertake effective maintenance of the main road network

The declining ability of the equipment sector to provide adequate support for road maintenance activities (in particular), is one which has been recognised for some time. Under initiatives from the MRCU and the DoR Mechanical Directorate certain specific policies have been identified and introduced to overcome these problems.

The long term objective identified by the MRCU is the encouragement of greater private sector plant ownership, with the eventual privatisation of the Plant Hire Units (PHU's) formed as part of the Strengthened Equipment Divisions (SED's).

In order to achieve this long term goal several specific short term objectives have been clearly identified. These objectives are;

- to reduce the DoR plant holdings to a core fleet of reliable equipment;
- to introduce management systems and sound workshop practices with complementary training schemes and staff incentives into DoR workshops;
- to establish a legally constituted revolving fund within the DoR to accrue and administer plant hire charges;
- to introduce the Plant Hire Unit concept into the DoR whereby all users of DoR plant, including the DoR direct labour operations, are charged at commercial rates and the Unit is self-supporting;
- to make increased use of hiring from the private sector;
- to arrange the eventual transfer of the Plant Hire Units from the DoR to the private sector.

The project was initially concentrated on Butwal HED. However in view of the broader scope of the overall objective the original terms have been expanded to incorporate key improvements regarded as essential and achievable within the designated project period and available funding.

To achieve these expanded objectives specific improvements were identified which will both improve the working environment and upgrade present facilities to a level comparable with those of the private sector, i.e. to present a more attractive and efficient package to achieve the main long term objective - privatisation of the PHU's. These short term objectives are;

- develop manual and computerised equipment management systems and implement initially on a pilot basis at Butwal HED
- upgrade Assets/Plant Register system
- develop spare parts management system
- establish commercially viable Plant Hire Rates
- rehabilitate and upgrade HED workshop facilities at Butwal and Nepalgunj
- reorganise spare parts stores at Butwal, Itahari and Nepalgunj HED's
- establish physical separation of PHU yard at Butwal HED
- rehabilitate and reorganise main spare parts store at Kathmandu HED
- completely rehabilitate Pokhara Mechanical Office
- conduct site training of mechanics at Butwal HED and provide spare parts in support of mechanic training and PHU equipment at Butwal
- improve the working environment/rehabilitate accommodation and general facilities

Present Progress

All of the main and expanded objectives are presently on schedule despite some very real and unforeseeable problems.

Benefits are already apparent in improved staff moral, work output, improved equipment availability and plant costings. Information presently being gathered will serve to identify more appropriate equipment for Nepal and avoid those type of units which have proved inefficient or unreliable and costly to operate in the past.

Acceptance of the principal long term objective has resulted in a well coordinated effort from the Mechanical Directorate which has often been understaffed and working under the considerable pressures and problems of day-to-day management.

Future Development

1. Kathmandu, Hetauda and Godawari HED's have all been included in forward planning however any additional input is dependent upon funding availability
 2. Identification of an appropriate emergency fleet will result from the needs expressed by the Maintenance Division
 3. Current Plant Hire Rates have been retained for the next year following comprehensive calculations which revealed rates directly comparable with international figures.
 4. The Revolving Fund is reviewed annually. Theoretically this will progress to a 100% fund well before privatisation is considered.
 5. Decisions regarding Plant selection, procurement and disposal will all be affected by the data resulting from the Equipment Management Systems, i.e. plant suitability, specifications and economic life spans
- Management Systems implementation at other HED's again depends on additional funding

Cyclic Maintenance Component -Update

The status of the Cyclic Maintenance Component of the RMP is listed below:-

- Package 1** - The contract to reseal the 24 km Anbukhareni to Gorkha Feeder road (F 35) under the supervision of local consultants has been substantially completed..
- Package 2** - The contract to reseal the 23 km Dhangahi - Ataria - Godawari section of Highway H 14 is well advanced. The pre-treatment is substantially completed and a single surface dressing is underway.
- Package 3** - The contract was signed in early December and the contractor is currently mobilising to reseal 26 km on the Mahendra Rajmarg from Butwal towards Bardaghat.
- Package 4** - The local consultants have completed their design services' contract, for part of the Highway H 9. Sagarmartha Rajmarg, Kadmaha Chowk to Gaighat, and Feeder road F 4, from Rupani to Rajbiraj. Following the earlier prequalification of contractors, the invitation to bid should be published shortly.
- Package 5** - The local consultants have substantially completed their design services' contract, for 16 km, part of Highway H 7, Mechi Rajmarg, from Charali towards Ilam. Invitations to bid should be published shortly.
- Packages 6, 7, 8 and 9** - Financial negotiations(draft contract) completed with local consultants in February for Packages 6, 7 and 8. Package 9 recommendations are still with the MOWT.

ACTIVITIES IN PLANNING BRANCH

1. Preparation is going on in the Planning branch to conduct annual Pavement Condition Survey and Traffic Survey with the assistance of private consulting firms.
2. Input for the formulation of the Ninth Five year Plan is being given to NPC.
- 3.

AHP

Equipment Maintenance Centre

Introduction

The EMC consisting of an equipment maintenance and repair workshop includes a mobile service and maintenance unit, stores for spare parts, tools tyre, lubricant etc. and offices. It has been established under the AHMP during Phase I and has been operational since April 1994. The construction of the workshop for EMC was fully financed by SDC. Until the privatisation of EMC, SDC is providing a deficit guarantee in order to cover any exceeded expense.

The EMC yard, which is located at Panchkhal (Km 44+700, AH) occupying about 4800 m² of leased ground, consists of a main workshop shed, equipment shed, store rooms, generator house, oil tank, water supply, office and fully equipped workshop, mobile units and tools. The environmental pollution from oil and lubricants has been reduced to minimum by installing an oil separation tank.

During AHMP Phase I, EMC was managed by a Chief Mechanic under the guidance of the Project Manager on behalf of the Steering Committee. The Chief Mechanic was responsible for the operation of the workshop including management, accounting and the provision of on job trainings to the staff. In AHP Phase II, the former Deputy Workshop Manager has been promoted as the Workshop Manager and the Chief Mechanic has been working as a Technical Advisor to EMC.

Objectives

One of the major objectives of the project was to promote the local construction industry. The project planned to provide assistance in both the procurement and maintenance of road construction equipment to enhance the capability of local contractors in management of equipment. The project guarantees, credits and advance payments in local or foreign currency, buy back option and procurement services to the contractors. The establishment of the EMC has guaranteed a good functioning of the Project's and Contractor's equipment and the investment of both the Project and the Contractors minimised as the Contractors could receive quality and timely repair from EMC by direct payment.

The establishment of EMC in the vicinity not only fulfills the repair and maintenance of the road construction equipment in rehabilitation work but also facilitates optimum use of the Contractor's equipment by reducing the down time of equipment.

In view of establishing a proper workshop for road construction equipment in private sector, the EMC shall be privatised by the end of AHP Phase II< December 1998.

Activities

Since the establishment of EMC this centre has been continuously assisting the Project by providing quality and timely services in maintaining all Project equipment and the equipment of the Contractors that are involved in rehabilitation works. The repair, maintenance and the refurbishment of the equipment of the Crushing and Screening Plant was one of major activities of EMC apart from other road construction equipment like Motor Grader, Roller, Loader, Trucks and vehicles etc. The EMC played a vital role in completing the rehabilitation works in stipulated time period.

Apart from the road construction equipment and vehicles this centre was also engaged in special jobs related to bridge erection, cleaning, painting, repair of joints in and outside the Project. The centre also provided repair and maintenance services the other project equipment, LJRP equipment and local villagers' equipment and agricultural tools.

Annual Progress Report (cont'd from page 1)

By the end of the last FY 76.55 km of black topped roads, 204.88 km of gravelled roads and 231 km of earthen roads totaling to 513.34 km roads, 26 suspension bridges and 13 motorable bridges was completed. Besides, programmes like study, research and survey works, organisational development, strengthening of road laboratory, construction plant and equipment, and spare parts procurement and minimisation of national transport cost have been undertaken. Some of the main reasons hindering the progress of various projects were:

1. Annual programme approved only after the first trimester
2. Confusion in budget disbursement shown as source of Asian Development Bank
3. Land compensation and land acquisition problems unsolved
4. Insufficient supply of construction material like explosive
5. Disputes of the road alignment
6. Replenishment not done in time
7. Unsystematic transfer and posting of personnel
8. Most of the supervision consultants and the contractors did not work at the given time

Insufficiency in budget and machinery equipment, partially because of compulsion to provide machinery equipment to be provided for outside departmental work.

HMIS Unit is in the process of updating the mailing list of HMIS Newsletter. If you are interested to continue to get the news letter regularly, please fill the form and send back to the following address:

**HMIS Manager
P.O.Box 2623
Department of Roads
BabarMahal, Kathmandu
Fax: (977)-1-221 771**

Name:

Organization :

Mailing Address:

Number of copies:

Comments :