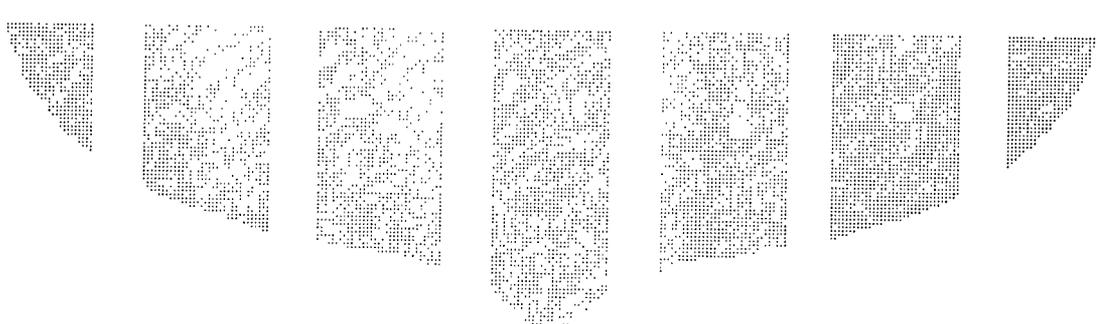


MISSION TO PAKISTAN AND AFGHANISTAN

**PROJECT ASSISTANCE COMPLETION
REPORT**

**Road Resources Management
(391-0480)**



*Submitted by Private Enterprise and Energy Division
November 1994*

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LIST OF ACRONYMS

ACE	-	Associated Consulting Engineers
AED	-	Academy for Educational Development
AIT	-	Asian Institute for Technology
CCSC	-	Construction Control Services Corporation
C&WD	-	Communication and Works Department
FY	-	GOP Fiscal Year (July 01 to June 30)
GOP	-	Government of Pakistan
GO	-	Government of Sindh
JICA	-	Japan International Cooperation Agency
MLGRD	-	Ministry of Local Government and Rural Development
MTRI	-	Municipal Training and Research Institute
NHB/A	-	National Highway Board/Authority
NTRC	-	National Transport Research Center
RDA	-	Rural Development Academy
RMU	-	Road Maintenance Unit
RoMMS	-	Road Maintenance Management System
RoMP	-	Road Maintenance Programming
RoSI	-	Road System Improvements
LGRDD	-	Local Government and Rural Development Department, Government of Sindh

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PROJECT ASSISTANCE COMPLETION REPORT

ROAD RESOURCES MANAGEMENT PROJECT (391-0480) November, 1994

I. BASIC PROJECT DATA

Project Title	:	Road Resources Management
Project Number	:	391-0480
Project Officer	:	Hasan Masood
Date of Authorization	:	February 12, 1987
Date of Agreement	:	June 18, 1987
Original PACD	:	December 31, 1992
Revised PACD	:	December 31, 1994
Pressler PACD	:	June 30, 1994
Amount Authorized	:	\$ 43.00 million
Amount Obligated	:	\$ 14.05 million
Pressler Deobligation	:	\$ 2.27 million
Amount Expended	:	\$ 11.38 million (as of 11/23/94)
Implementing Agencies	:	Ministry of Local Government & Rural Development, Government of Pakistan Local Government & Rural Development, Department, Government of Sindh
Technical Assistance Contractors	:	Construction Control Services Corporation Associated Consulting Engineers

II. PROJECT GOAL AND PURPOSE

The goal of the RRM project was to raise the productivity level of the nation's investment in the road sector, thereby improving transport services, especially in rural areas, which in turn will promote a more rapid and equitable growth in national income and the standard of living in Pakistan.

The project's purpose was to establish a maintainable rural road system in the Sindh province of Pakistan on a pilot basis, and to further identify the policy, management and financial reforms needed to achieve a sustainable road system nation wide.

III. BACKGROUND

The RRM project was originally approved on February 18, 1987 as a five-year, \$43 million project designed to solve the problem of a deteriorating road system that was difficult to maintain at an acceptable cost. The project activities focussed on the rural districts in the province of Sindh to demonstrate, on a pilot basis, how road networks can be better planned, funded and maintained. Implementation was designed on an incentive-based strategy whereby the Sindh district councils were motivated to maintain their existing paved road network through their own resources in return for project assistance in the form of new road construction or rehabilitation. The project was planned to be implemented in two phases - a two-year Phase I for planning and Phase II for implementation.

Phase-I commenced in January, 1988 with the signing of the technical assistance (TA) contract with Construction Control Services Corporation (CCSC). The activities planned under this phase included conducting a detailed inventory of the district councils' road network, undertaking road condition surveys and traffic counts; collecting relevant economic and financial data on districts' revenues and budget preparation practices; estimating training needs; and determining the district councils' needs for road maintenance equipment. Based on this information, programs were developed for improvement of deteriorated roads through project-funded rehabilitation works and for maintenance of the roadways by the district councils. In addition, financial analyses were prepared; training plans were developed; and procurement plans were prepared for acquisition of road maintenance equipment. Furthermore, GOP/GOS policies in the road sector were reviewed, improved and/or developed and methodologies were evolved for implementation of Phase II.

The project laid special emphasis on the area of policy reform, as demonstrated by the conditions precedent (CPs) for construction which required the adoption of a "maintenance first" policy for rural roads at the federal and provincial levels before any funds would be released for construction. A Rural Road Policy statement was issued by the Government of Sindh in June, 1989, thereby partially satisfying the CP for disbursement of construction funds. However, the federal rural road policy, which was also part of the CP, was waived in October, 1989, based on a detailed analysis of the GOP road sector policy by CCSC, which concluded that federal policy has little impact on rural roads, as they come under the purview of the provincial governments.

Prior to the issuance of the rural road policy statement, all Sindh district councils resolved to participate in the project and to implement the policy by utilizing all their resources in the road sector first for maintenance and then for expansion of the network. The policy required all district councils to establish a Road Maintenance Unit (RMU) within their organization and to allocate adequate resources in the annual budgets for road maintenance. The road maintenance program was initiated in July, 1989 in all the participating districts. A gradual approach was adopted whereby the districts were given an increasing road maintenance target each year. The districts were to meet this target to become eligible for receiving funds for next year's construction program. The maintenance targets were increased from 10% in the first year to 100% by the end of the project in 1994.

With the start of Phase II in January, 1990, several changes were made in the implementation approach. These included:

- Implementation of road construction and rehabilitation by the district councils instead of the technical wing of the Local Government and Rural Development Department of the Government of Sindh (LGRDD), as envisaged in the project design. The GOS requested this change due to a shortage of LGRDD staff, which was overextended due to several on-going programs. This change had a positive impact on the sustainability of the project in that the technical capabilities of the district engineering staff were substantially enhanced as they gained exposure to improved construction practices under the guidance of the TA contractor.
- A change in the criterion for annual allocation of project funds to the district councils. The project design recommended that project funds be allocated for construction/rehabilitation of roadways based on the potential size of road network that a district would be able to maintain with its existing financial resources. This approach was based on the assumption that the districts had meager resources available for maintenance and that existing network did not require extensive rehabilitation. However, a detailed study of the district councils' resources conducted by CCSC showed that more district funds were available for maintenance than anticipated. In addition, a new road condition survey showed substantial deterioration in the existing roads, thereby driving up cost estimates for the rehabilitation work to be paid for with project funds. Due to these two factors, it was determined that using the original project design criterion would result in construction targets far beyond the funds available under the project. Hence, the annual allocations for construction had to be linked with the availability of project funds and were limited to the maximum figure set out in the construction line item.
- In September, 1990, the three-year implementation period was extended by two years at the request of the GOP.

The Pressler Amendment mandated a reduction of the LOP funding for the project from \$43.0 million to the previously obligated amount of \$14.1 million in May of 1991, and forced major program adjustments. These included early termination of the TA contract, a substantial reduction in the road construction and training programs, and cancellation of the program to provide road maintenance equipment to the district councils. After negotiations with the GOP regarding the reduced project scope, it was agreed that at least 218 km roads would be rehabilitated to bring a major portion of the existing district paved road network to a level where it could be economically maintained by the district councils. The districts were to continue maintaining their paved road networks in accordance with the gradually increasing targets.

After being postponed several times, the mid-term project evaluation was conducted in May, 1993. This was the only evaluation conducted during the life of the project. The evaluation report recognized that despite changing local socio-political conditions and severe program reductions as a result of the Pressler Amendment, the project targets had been

substantially met. The evaluation supported the project's efforts to improve the condition of the district council roads and to enhance the districts' capabilities to maintain the road networks. To improve the districts' performance in road maintenance and to ensure the sustainability of the project efforts, the evaluators recommended training of the district council staff and provision of road maintenance equipment to the district councils using GOP or other donor resources.

Beginning in early 1994, uncertainty about the future of the project began to impair implementation of certain planned activities. Eventually, USAID/W's imposition of the requirement that \$56.2 be rescinded from the USAID Pakistan program led to the early termination of the project in June, 1994 - six months before the scheduled PACD.

IV. PROJECT COMPONENTS

The project consisted of two main components: (1) the Rural Roads Program, which involved a comprehensive approach to improve planning and investment in rural roads within the districts in Sindh; and (2) the Highway Policy and Finance Program, under which project efforts focussed on investigating ways of overcoming policy and financial constraints to effective management of road resources.

A. Rural Roads Program

The Rural Roads Program was the major component of the Project. It consisted of the following three sub-components:

i) Road Maintenance Programming (RoMP): This element involved the provision of technical assistance and training for district and provincial personnel to increase: a) awareness of the role of maintenance in maximizing road service capacity; b) understanding of basic maintenance principles; and c) knowledge and use of techniques for planning, programming, financing and monitoring rural roads maintenance and road network expansion activities.

ii) Road Maintenance Management Systems (RoMMS): This element included a package of assistance comprised of intensive technical assistance, on-job-training, and road maintenance equipment for the district councils in Sindh to enable them to create within their organizations a Maintenance Management System and a Road Maintenance Unit (RMU) capable of maintaining the paved road network.

iii) Road System Improvement (RoSI): This element involved rehabilitating and upgrading the rural road system in participating districts to conform to technical standards that would permit district personnel to use efficient maintenance practices on the paved road network and on priority sections of the remaining all-weather system. Expansion of the katcha access network in some districts to serve villages without roads was also a part of this activity.

B. Highway Policy and Finance Program

The Highway Policy and Finance program consisted of policy analysis and training for national and provincial personnel to help the GOP develop an appropriate provincial and federal road strategy. The analyses were to identify the set of policies and related financial and institutional reforms needed to implement a development strategy for the road system consistent with Pakistan's needs and resources.

V. INPUTS

A. Inputs Provided by USAID

The level of USAID funding varied significantly over the life of the project, as indicated in the following table.

TABLE 1 - SUMMARY OF USAID FUNDING

(in 000 US\$)

Line Item	Amount Obligated			Amount Expended (as of 9/30/94)
	Original	Post-Pressler	Post-Rescission	
Tech Asst	8,250	5,263	5,506	5,462
Training	3,070	500	437	419
Commodities	5,580	767	760	760
Construction	22,280	6,265	4,052	3,978
Other Costs	2,210	830	981	966
Evaluation	150	50	44	44
Sub-total	41,540	14,035	11,780	11,629
Contingency	1,460	65	0	0
Total	43,000	14,100	11,780	11,629

It was initially planned that the technical assistance under the project would be provided under a long-term contract between USAID and a U.S. firm, CCSC, in a joint venture with a local A/E firm - ACE. Five long-term and several short-term expatriates were to be supported by a locally-hired staff, with engineering assistance from the ACE staff. After the Pressler-mandated reductions in funding, the long-term TA contract was terminated and ACE was contracted to

provide the TA services for the road construction component. Technical assistance for road maintenance was acquired through a one-year PSC contract with an expatriate road maintenance specialist.

Only a very small portion of the planned overseas and in-country training was possible due to Pressler-related funding cuts. All overseas (US and Third Country) training was acquired through an institutional contractor - AED. The in-country training program, which was to have been implemented at GOP institutions such as MTRI/Karachi and RDA/Tandojam by the long-term TA contractor, had to be totally abandoned due to the funding cuts. Later, some workshops, seminars and conferences were arranged by the project staff.

A large program to procure road construction and maintenance equipment in support of the efforts of the 14 participating district councils had to be cancelled due to the drastic funding cuts. The only significant procurements which survived these cuts were the acquisition of vehicles for the district council engineering staff and the provision of computers for the GOP/GOS.

The construction program, which consumed a major portion of the project funds, was also significantly curtailed due to the reduction in project funding.

B. Inputs Provided by the GOP

Although the GOP contributed to the project in terms of staff time and other resources, the major quantifiable GOP contribution was the amount spent by the Sindh district councils annually on maintaining their road networks. The following information is based on the district councils' budgets, published annually.

TABLE 2 - SUMMARY OF GOP FUNDING
(in million Rs)

Year	Sindh District Councils' Expenditures on Road Maintenance
FY 89-90	9,649
FY 90-91	4,985
FY 91-92	10,375
FY 92-93	6,792
FY 93-94	18,800*
Total:	50,601

* Budgeted Amount

VI. PROJECT ACCOMPLISHMENTS

A. Road Rehabilitation/Construction

The RRM Project was aimed at establishing a maintainable rural road system in Sindh by improving the existing network through rehabilitation and upgrading of existing roads. Since a large portion of funding under the original project and subsequently under the reduced project was planned for this activity, the Road System Improvement (RoSI) program assumed critical importance. The construction targets were reduced considerably due to Pressler funding cuts, as shown by the following comparison.

TABLE 3 - CONSTRUCTION TARGETS
(in Km)

TYPE	ORIGINAL	PRESSLER
REHABILITATION of existing paved roads to bring them to a maintainable condition	226	218*
UPGRADING of katcha roads to paved level	104	0
EXPERIMENTAL roads construction	16	0
KATCHA access roads	960	0
TOTAL	1,306	218*

* The reduced target of 203 Km Rehabilitation & 15 Km Katcha roads was later revised to 218 Km Rehabilitation as additional funds were available due to exchange rate gains.

Due to termination of the project six months ahead of the PACD as mandated under rescission, only a total of 172 Km of roads (about 80% of the post-Pressler targets) could be rehabilitated. Appendix I shows the actual kilometers of roads rehabilitated each year compared to the annual targets.

A program of experimental road construction was being developed by the TA contractor in collaboration with NTRC to evolve ways of constructing low-cost and low-maintenance roads using locally available materials. However, the program could not be implemented due to termination of the TA contractor.

Despite substantial reductions in road construction activities, the focal point of the program remained: i) rehabilitating the deteriorated roads to maximize the maintainable paved road network in Sindh districts; and (ii) strengthening the institutional capabilities of the district councils to enable them to construct better, and economically, viable roads. Major achievements in this area involved:

-
- a substantially improved paved road network that could be economically maintained by the Sindh districts;
 - instituting a procedure of thorough planning and simplified economic feasibility analysis in the selection of roads for rehabilitation or construction to ensure prudent use of district resources;
 - establishing improved standards for carrying out engineering design and preparation of bid documents; and
 - significantly improved construction quality through enforcement of quality control regimes and better supervision and administration of construction contracts.

Another accomplishment of the project has been an increase in the availability of experienced local contractors, who have been trained over the years through participation in project-funded construction contracts. These contractors have been exposed to improved quality control standards and construction practices, and should play a very positive role in the development of improved road networks in the districts in the future.

B. Maintenance of District Roads

To achieve the project objective of making the district councils capable of sustaining their paved road networks, which constitute their major investment, the Road Maintenance Programming (RoMP) and Road Maintenance Management Systems (RoMMS) activities were initiated. Critical efforts in this area involved:

- a series of seminars and workshops to create awareness among the district council and provincial officials;
- carrying out a detailed inventory of the district paved road network and conducting condition surveys to determine the road maintenance needs of each district;
- preparation of a Maintenance Manual providing information on planning, organizing and conducting road maintenance, along with detailed performance standards for each maintenance activity and associated costs;
- organizing a highly successful training program on maintenance management at AIT, Thailand. (The usefulness of the training program can be judged from the fact that it is now regularly offered by the Continuing Education Center at AIT);
- development of contracts for maintenance, a relatively new approach for the district councils, to enable them to contract out maintenance activities as opposed to the traditional way of carrying out maintenance through force account.

The Sindh rural road policy required all district councils to give priority to road maintenance by establishing a Road Maintenance Unit (RMU) in their engineering offices and to allocate adequate resources in their annual budgets for road maintenance. Since the district councils had historically not maintained their roadways, a gradual approach was adopted whereby the districts were given an increasing road maintenance target each year. The target increased from 10% in the first year to 100% by the end of the project in 1994. Appendix II shows the overall performance of the district councils. Although the initial progress was encouraging due to small targets and general enthusiasm at the start of the project in FY 1989-90, performance suffered in FY 1990-91 due to increased maintenance costs, reduced attention to maintenance due to evacuation of the TA contractor during the Gulf war, and lack of performance of one district. After the Pressler Amendment was imposed, the districts' performance improved considerably due to renewed commitment on the part of USAID and to a more focussed effort on road maintenance activities, led by an expatriate specialist. However, the momentum generated and the progress made received a setback with the dissolution of the district councils in October, 1992, and a subsequent freeze on their funds. This caused serious disruption in implementation of the FY 1992-93 program. After USAID raised concerns about the future of the project and the sustainability of its objectives, the freeze on funds was eventually lifted, only to be imposed again soon after the change of government during this period. This situation continued until the project was terminated in June, 1994. It is a credit of the district councils that during this period they continued to maintain their roads through force account, although at a reduced level, as indicated in Appendix II.

Despite unfavorable conditions making it difficult for the district councils to achieve their maintenance targets, the road maintenance program was successful in:

- establishing a Rural Road Policy in Sindh which gives priority to maintenance over expansion of the road network;
- generating awareness and understanding among the district, provincial and federal agencies about the importance of road maintenance as demonstrated through the project;
- creating RMUs in all the participating district councils and developing the capabilities of the district engineering staff through training in road maintenance techniques;
- providing innovative contracting mechanisms within the frame work of the GOP regulations which would enable the district councils to contract out road maintenance works.

C. Management of District Councils' Financial Resources

To fill the resource gap in road maintenance, a financial management program was initiated to conduct a detailed review of the status of district councils' resources and analyze the possibilities of revenue enhancement. The following two reports were prepared by CCSC:

- Preliminary Financial Assessment
- Revenue Enhancement Analysis

These reports include a detailed analysis of the district councils' budgets and revenue sources, identify the deficiencies in the current tax collection system - particularly the Export Tax which accounts for 70% of the district revenues, and recommend measures to increase revenues.

The following summarizes the major efforts in the area of financial management:

- In the absence of any previous work on district councils' financial resources, these studies represent a pioneering effort. The reports are very well documented and provide a solid ground on which future work in district revenues could be carried out.
- The recommendations proposed in the reports have been discussed in detail with the GOS and presented in seminars. These recommendations included: improvement of budgetary procedures; streamlining revenue collection procedures; and identification of sources of additional revenues. These recommendations are also supported by the mid-term evaluation.
- Creation of the Sindh Local Government Finance Executive Committee by the GOS to examine the recommendations and propose systems for implementation. This committee, which consists of GOS and district council representatives, will also monitor district councils' financial practices and provide the guidance and oversight necessary to sustain the project efforts.

D. Highway Policy Improvements

Since the RRM project focused primarily on the district-level rural road network, the role of the project vis a vis the national and provincial highway system was of a supportive nature. The World Bank and the Asian Development Bank continue to play a major role in the development of the national and provincial highways systems. The project supplemented the efforts of these major donors by including short-term training programs for senior federal and provincial officials in the NHA, and the provincial C&WD and MLGRD in the areas of highway planning and policy development. In addition, two important studies were conducted under the RRM project. These studies were:

- Review of GOP policies in the Road Sector: This study was conducted to analyze the GOP's policies in the road sector, particularly with regard to rural roads, and how these relate to provincial road sector policies;
- Organization and Management of the National Highway Board (NHB): This study focused on the organizational structure, operations, autonomy and delegation of authority of the existing agency and developed recommendations for a more appropriate and permanent organization with responsibilities for construction, maintenance and operation of the entire national highway system. This important

study eventually led to the proposed reorganization and creation of the National Highway Authority (NHA).

VII. MAJOR CONSTRAINTS

The politically sensitive nature of the project and its focus on activities in Sindh province, an area subject to ethnic strife and lawlessness, led to some major constraints in project implementation. These included:

- **Adverse Security Conditions:** Although no untoward incident happened, the security situation in Sindh remained unstable during the major part of the project life. Continuous travel restrictions, elaborate and time consuming arrangements to ensure security during travel in the interior of Sindh, and limitations on access to parts of some districts made travel to project sites relatively difficult. These travel constraints applied equally to our GOP/GOS counterparts.
- **Dissolution of District Councils:** The start of the project in early 1988 coincided with the start, in early-November, 1988, of the five-year term of the newly-elected district council members. In October, 1992, when project implementation was at its peak, the district councils were dissolved by the Government of Sindh in anticipation of the forthcoming new elections. To date, these elections have not been held, for political reasons. Since the councils were dissolved, the affairs of the councils have been conducted by GOS-appointed administrators who have reduced authority to utilize district council funds. This has had an adverse effect on the project, particularly on the road maintenance program, as outside contractors could not be hired to perform the necessary maintenance work.

VIII. LESSONS LEARNED

The concern for maintenance of infrastructure in general and the road sector in particular is growing and the concept of sustainable development is rapidly gaining support. The RRM project, therefore, serves as a pioneering effort in this direction. Based on our experience in implementation of the RRM project, the following lessons learned may be useful in connection with any future projects in this area:

- The Project Paper recognized that previously documented USAID and other donors' experience in the rural road programs showed that **"a really long-term commitment (up to 20 years) with realistically achievable short-term and medium-term goals to encourage progress" is required.** The RRM project had very ambitious targets, with an initial implementation time frame of three years, which was later on extended by two years. However, severe Pressler funding cuts and premature termination of the project reduced the planned short and medium-term gains.

It is realized that such **institution building projects are extremely sensitive to changes in commitments on part of the donor agencies**. The release of project funds was linked with the district councils spending their own resources in meeting the road maintenance targets. The delicate balance between donors' commitments and implementing agencies' obligations is susceptible to shifting in the wrong direction with even a slight hint of uncertainty on part of the donors. In the case of RRM project, the commitment was unilaterally revoked, resulting in loss of interest on part of the implementing agencies.

- **There is a need for close coordination and open lines of communications between various donors involved in the development of the road sector in Pakistan.** The World Bank has been playing a major role in the improvement and expansion of the national highway system. Similarly, the Asian Development Bank is actively involved in the development of provincial highways and rural roads. Recently, JICA has come in a big way in national and provincial highways as well as the rural roads. However, all donors share the common concern of sustainability of the improved and expanded road system. Although each donor is tackling this issue in its own area, there is a need for coordination between the donors to highlight the problem at a national level. A collaborative effort involving all major donors would have a much greater impact by creating awareness and commitment among GOP decision makers and in developing a realistic implementation plan fully backed by the GOP.
- **Ownership of and commitment to the project on the part of the GOP/GOS is a critical aspect of the successful implementation and sustainability of any such institutional development project.** One of the problems encountered during implementation of the RRM project was the GOP/GOS's perception that the RRM was a district council-level project which required minimal involvement on their part. The GOS, in particular, despite issuing the Sindh Rural Road Policy statement, did not get actively involved in project implementation and was hesitant to exercise any influence over the district councils for political reasons.
- Closely tied to the previous lesson is fact that **the GOP/GOS agencies, which have traditionally been involved in rural road development, have an important role to play in projects of this nature.** The design of the project failed to consider the appropriate role of the federal and provincial road agencies. This led to minimal involvement on the part of the National Highway Authority (NHA) and Sindh Communication and Works Department (C&WD), thereby isolating and confining the project activities to the district level. The C&WD is the primary provincial agency responsible for the development of highways and rural roads in the province. The engineers at the district level follow the C&WD road construction standards and look to them for guidance in road development. The lack of C&WD endorsement of the improvements in road design and construction instituted under the project will jeopardize the sustainability of these achievements.

- Though the **involvement of local communities in the maintenance of rural roads** was not considered during the design of the project, it became apparent during implementation that this aspect should be further explored. This was particularly important as the local governments (district councils) were not financially capable of maintaining the rural road networks. During the survey of the district roads it was observed that most of them were short (one to two kilometer) links from the provincial highways to various population centers. Furthermore, these roads are scattered all over the district, making it very difficult for the limited district engineering staff, with its meager resources, to monitor. Hence, there is a potential that the communities benefitting from the road could be organized to maintain these roads. This would be similar to the approach successfully used by UNICEF and other donors in sustaining the facilities provided under rural water supply projects.

IX. SUSTAINABILITY

The project design relied on achieving sustainability through:

- **Policy Reform** - Issuance of a Sindh Rural Road Policy statement by the Government of Sindh (GOS) that all resources available with the districts would be used first for the maintenance of existing roads before any funds would be spent on the expansion of the network. This policy statement was the condition precedent (CP) for the disbursement of funds for construction. The policy required the fourteen participating rural district councils to: 1) create a new line item for road maintenance in their annual budgets and provide adequate funds; and 2) establish a Road Maintenance Unit under the district engineer to manage the annual road maintenance programs. Prior to its issuance, all the district councils reviewed the policy and gave their commitment to follow it.
- **Institutional Development** - A comprehensive training program was developed to train the GOP/GOS/district staff, elected representatives of the district councils, and contractors to adequately plan, implement and manage the road maintenance programs and generate adequate revenues to fund this activity.
- **Technology Transfer** - Expatriate and local expertise was made available to the districts through a TA contractor to assist in implementing improved methods of road system management, construction and maintenance and to introduce newer technologies suited to the local conditions.

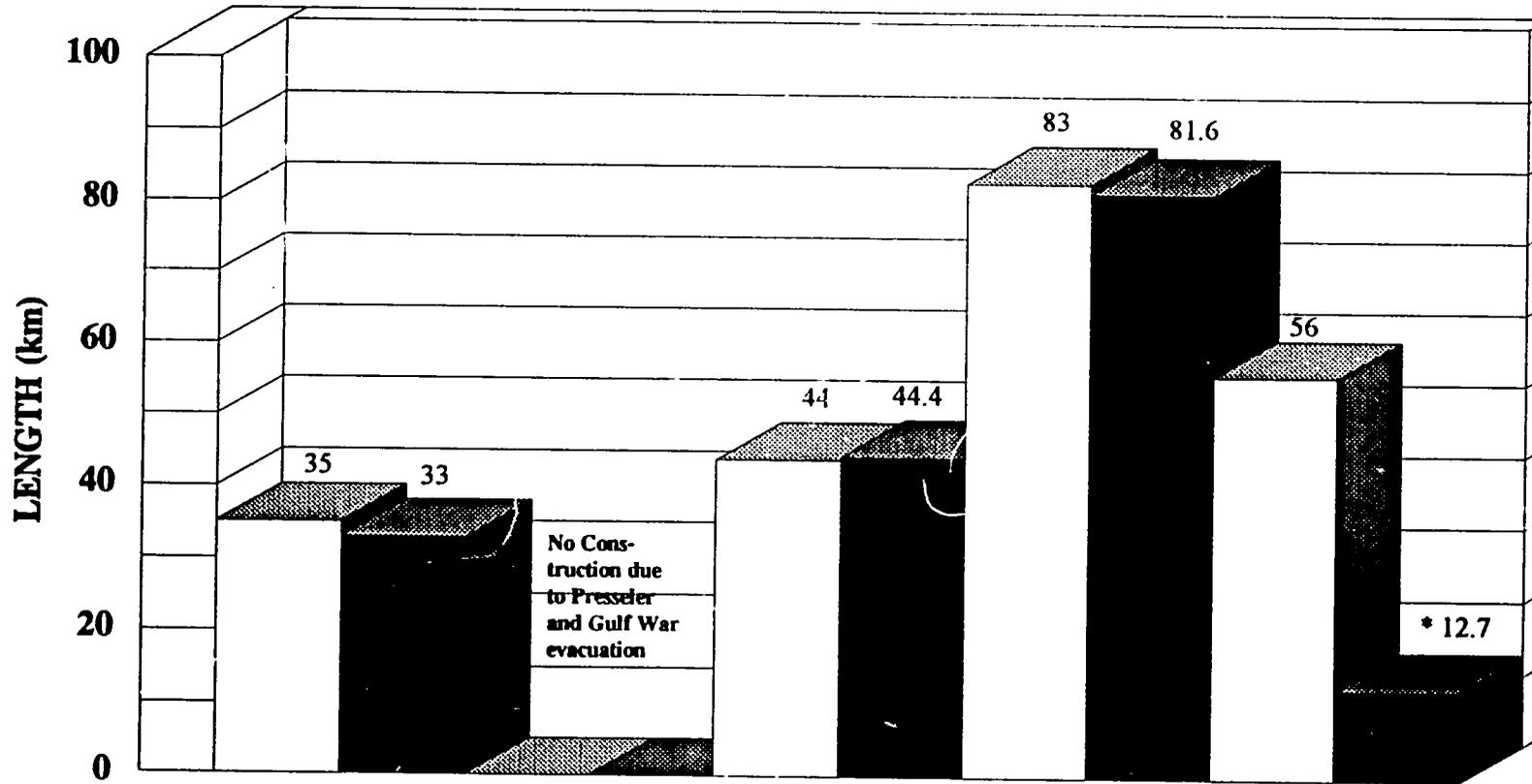
The severe Pressler cuts in LOP funding forced the reduction or discontinuation of a number of project activities - particularly training and technical assistance, thereby requiring a review of the above mentioned approach and the need to initiate additional efforts towards achieving sustainability. It was recognized that the sustainability of the RRM project hinged on making the Sindh district councils aware of the importance of road maintenance to protect their investment in the road sector. The new approach placed emphasis on the institutional roles and

working relationship among the GOP, GOS and the district councils to ensure the viability of project initiatives. The renewed sustainability efforts included:

- continuing the close working relationship with all levels of the district councils' staff in planning and executing their maintenance programs and instituting the maintenance management system so as to **expand the group supporting the "maintenance first policy"**;
- **initiating coordination with the elected councilors** (members of the district councils) so as to make them realize that the relatively small investment in a program of regular road maintenance would ultimately provide a substantial payoff through the reduced need to spend a fortune on major road rehabilitation works. The money saved could be used for much-needed and politically popular development activities such as expansion of the road network to provide access to areas not presently served by roads. The role of elected councilors could be further expanded to include monitoring the performance of the district engineering staff to ensure that this routine maintenance is performed.
- assisting the GOS in **implementation of the Rural Road Policy** and exercising more control in ensuring district councils' prudent use of their resources and the grants they receive from provincial and federal governments. This involved helping the GOS amend the Local Government Ordinance to ensure that the districts' budgets include an adequate provision for maintenance of their infrastructure in addition to providing a reasonable percentage of their revenues for development activities.
- encouraging the local contractors to carry out road maintenance works and **developing road maintenance contract packages which are attractive and viable for the contractors**. This included letting out all road maintenance works in a taluka (sub-division of the district) as one contract package. Also, efforts were made to develop IQC-type contracts so that, under the umbrella of one contract, work orders for road maintenance works could be awarded throughout the year on as-needed basis.
- **instituting the use of improved construction standards and practices**, as demonstrated under the road rehabilitation program, which would result in reduced recurrent maintenance costs.

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ROAD REHABILITATION PROGRAM PLANNED Vs ACTUAL (1988-1994)



FY 1989-90

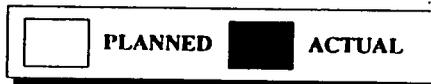
FY 1990-91

FY 1991-92

FY 1992-93

FY 1993-94

FISCAL YEAR



* Project Terminated

DISTRICT ROAD MAINTENANCE PROGRAM TARGET Vs ACTUAL (FY 1989-90 to FY 1993-94)

