F I N A L R E P O R T

D I S A S T E R R E C O V E R Y P R O J E C T

I N F R A S T R U C T U R E C O M P O N E N T S

D E C E M B E R, 1 9 8 6

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FINAL REPORT SUMMARY

This final report is presented by Fred D. Adams III, Project Coordinator, and covers the infrastructure subcomponents of the Disaster Recovery Project.

In response to the GOB's request for assistance to recover from the 1983 El Niño drought and flash flooding, USAID/Bolivia provided various relief programs, one of which was the Disaster Recovery Project.

The Disaster Recovery Project includes infrastructure construction. The construction consists of: rehabilitation of Taruma-Samaipata road, construction of irrigation systems in Oruro, Chuquisaca and Cochabamba and rehabilitation of the potable water systems in Potosi and Sucre. Also included in the project are irrigation and potable water systems constructed by CARE. These systems are not included in this report since they were managed directly by PRD.

In order to coordinate the infrastructure components, a Coordination Unit was formed with a project coordinator, administrative assistant, secretary, accountant and irrigation specialist. The unit's offices are located in the GSO building in San Pedro.

The roads subcomponent is 80% complete and is scheduled to be concluded in March, 1987. Five small bridges, the Taruma bridge, approximately 50 kilometers of road have been reconstructed and all but two landslide areas have been stabilized. Five river defense sectors have been contracted out to private firms and are expected to be finished in early 1987. The irrigation subcomponents have been completed. The Potosi potable water project is 99% complete and will be concluded in late January. The Sucre potable water project was cancelled.

The following problems were encountered during the project implementation:

1. Deteriorating social and economic conditions in Bolivia.

2. Institutional weakness at SNC and DDCs.

3. Slow procurement and delivery of project equipment, spare parts and materials.

4. Continuing heavy rains which caused delays and additional work.

5. Delays in disbursement of the GOB financial contribution to the implementing agencies.

6. Political interference at ELAPAS and in the administration of most government organizations.

7. Over ambitious plans at CORDECO.

8. Frequent changes of project and administrative personnel.

The following are recommendations based on the experience gained in the implementation of the project:

1. The ability, experience, capacity and strength of the implementing agencies should be evaluated in greater depth.

2. Experienced engineers should be consulted to assess the magnitude and degree of difficulty of large construction projects and to offer advice in formulating the implementation plans for those projects.

3. A private procurement agency should be contracted when numerous, large and diversified procurements are needed.

4. AID should, before approving a project, insist that project personnel be contracted or committed for the life of the project by the proposing agency and should reserve the right to approve the personnel.

5. A project to assist the DDCs in providing extension services to farmers should be seriously considered by AID as a follow up to many of the agricultural programs now in effect.

6. AID in approving proposed projects should consider not only their technical merits but their importance to the implementing agencies and their respective communities.

7. If possible, projects approved should be part of a master plan.

FINAL REPORT

I. PREFACE:

This final report is presented by Fred D. Adams III, the Disaster Recovery Project Coordinator and covers the period from February 9, 1984 to December 19, 1986. The report covers the infrastructure components of the Disaster Recovery Project.

II. PROJECT: Disaster Recovery Project/Infrastructure Components

Project No.: 511-0581
Loan: 511-F-069
Grant: 511-0581
Country: Bolivia

III. IMPLEMENTING AGENCIES:

1. Roads subcomponent:
   Servicio Nacional de Caminos (SNC)
2. Irrigation subcomponent:
   a. Corporación Regional de Desarrollo de Cochabamba (CORDECO)
   b. Corporación Regional de Desarrollo de Oruro (CORDEOR)
   c. Corporación Regional de Desarrollo de Chuquisaca (CORDECH).
3. Potable Water subcomponent:
   a. Administración Autónoma para Obras Sanitarias (AAPOS)
   b. Empresa Local de Agua Potable y Alcantarillado de Sucre (ELAPAS).

IV. OBJECTIVES OF INFRASTRUCTURE SUBCOMPONENTS:

* To assist Bolivia in recovering from the combined natural disaster of drought in the Altiplano and flooding in the southeast.

* To rehabilitate the Taruma-Samaipata sector of the Santa Cruz-Cochabamba highway.

* To assure potable water to the citizens of Potosi and Sucre.

* To provide small scale irrigation facilities to communities in Cochabamba, Oruro and Chuquisaca.

V. INTRODUCTION:

El niño weather of 1983 caused heavy rains and flash flooding in the Santa Cruz area and drought in the Altiplano. As a result USAID/Bolivia responded with various relief programs, one of which was the Disaster Recovery Project.

The Disaster Recovery Project consists of infrastructure construction, supply of commodities, agricultural credits, food distribution, rural recapitalization, and data collection. This report deals with the infrastructure components.

VI. PROJECT COORDINATION

In order to manage and coordinate the Disaster Recovery Project, I was contracted as Project Coordinator to assist the Project Manager. The scope of work presented to me was for coordination of the entire project and not just the infrastructure components. Nevertheless, it became obvious in the first month that the project components were run independently by the various mission departments, so it was agreed that I should coordinate only the infrastructure subcomponents.

To assit me in coordinating and administering the project a coordination unit was formed. The following persons presently form the unit:

Maria Ines Zambrana - Administrative Assistant
Felix Fernandez - Irrigation Specialist
Jorge Moscoso - Accountant
Nancy Carrasco - Secretary

Office space has been provided in the AID/GSO building in San Pedro. An operating budget was set up to procure office equipment (typewriters, IBM computer, calculators, etc.) and supplies.

The Coordination Unit has been effective. Good control of project activities has been realized. Budgets, reports and schedules have been maintained and are up to date. Relationships with the implementing agencies have been well established and can be considered good to excellent.

The Coordination Unit has operated independently of the Mission in some respects, but at the same time has worked very closely in making sure that the Mission's policies were fully carried out. All correspondance and documentation has been prepared for Mission clearance and for the Project Manager's signature. The unit has acted as an extension of the Mission's Private and Rural Development Department.

VII. SNC ROAD SUBCOMPONENT/TARUMA-SAMAIPATA:

On March 19, 1983, the Rio Pirai destroyed the Taruma Bridge and along with the unusually heavy rains damaged the Taruma-Samaipata road and its bridges.

This subcomponent consists of construction of the Taruma bridge, five small bridges, river defenses, 62 Km of road rehabilitation and stabilization of landslides. The work has been carried out by Servicio Nacional de Caminos (SNC) and many private contractors.

Initially the work was to be done almost entirely by administration; however, SNC could not do the work because of the social conditions in the country and because of an institutional weakness at SNC. Once SNC itself was convinced that it could not complete the work in a reasonable period,(this took a year of virtually no progress and various meetings held by the US Embassador and AID director with the Minister of Transportation, and SNC personnel), SNC agreed to contract as much of the work as possible.

Contracting has been done in various forms. The main one being major contracts (up US$ 500,000) for construction of bridges, road sectors and river defenses. Other contracts have been awarded to small labor contractors for construction of gabions, culverts, small concrete lined ditches and various other minor works. In addition, to support SNC with the heavy equipment, repairs and maintenance have been contracted out to local repair shops and additional equipment has been rented from local equipment owners and borrowed from the Rural Roads II Chapare project.

The subcomponent is approximately 80% complete at the time of this report. It is making good progress and receiving the full support of SNC at all levels. The work is expected to be completed by March 30, 1986, provided the weather remains relatively dry.

1. ORIGINAL ROADS SUBCOMPONENT GOALS:

Originally the subcomponent was scheduled to be completed in two years. The goal was to reconstruct 62 Km of road, rebuild the Taruma bridge, rebuild five small bridges, construct river defenses and construct extensive landslide stabilization works.

AID was to provide construction equipment, spare parts, vehicles, construction materials, construction financing, technical assistance (road construction, equipment maintenance, landslide stabilization, river defense and project administration experts).

The GOB was to provide construction equipment, construction services, administrative and construction personnel and operating expenses.

2. WORK AND OBJECTIVES REALIZED:

As of the writing of this report most of the original goals and objectives have been realized. A list of work completed follows:

1. Taruma Bridge
2. Five small bridges
3. Road sectors (80% of the 62 Km.) consisting of drainage structures, road beds, gabion retaining walls and reinforced earth walls.

SNC has provided heavy equipment, administrative personnel, operating personnel, field engineers, design services, construction materials and operating expenses.

The works not completed are well underway and are expected to be concluded by March 30, 1987. These works under construction consist of:

1. River defenses

2. Road sectors under construction by SNC administration.

The river defenses are under construction by two private contractors and some sectors are expected to be completed by January, with the latest in March.

The road sectors under construction by SNC are making good progress and only one sector is expected to take until March, the others will be completed in January and February. Progress to date on these sectors is as follows:

SECTOR	PERCENT COMPLETE
Cincho Amarillo	97
Aguas Hediondas	93
El Chorro	59
Monos	64
Taruma Bridge Approaches	81
Kilometro 82 (sector 5)	56

AID has responded and continues to respond as promised. The following has been provided:

1. Construction materials consisting of gabions, PVC pipe, Reno mats, reinforcing steel, prestress strands, filter fabric and corrugated metal culverts.

2. Spare parts for bulldozers, front-end loaders, drills, motor graders, vehicles, dump trucks, and other heavy construction equipment.

3. Vehicles - 4 Ford Broncos and 2 Ford F-150 pickups. (Originally only 2 Ford Broncos and 2 pickups were promised).

4. Construction financing for the river defenses, road sectors and bridges.

5. Technical assistance consisting of Francisco Perez, Highway Supervisor; Jaime Calvo, Heavy Equipment Supervisor; Dr. Eugene Kojan, landslide and river stabilization expert; Charles Redfield, T.Y. Lin prestress bridge expert and advice and counsel from the Coordination Unit administrative, engineering and financial personnel.

6. Construction equipment - one D-7 Bulldozer (originally two were to be supplied but one was delayed in New Orleans and the order was subsequently cancelled).

7. In addition, AID is providing financial support with the salary of Victor Blanco, SNC Project Director.

SNC has provided heavy equipment, administrative personnel, operating personnel, field engineers, design services, construction materials and operating expenses.

3. PROBLEMS ENCOUNTERED

There were four major problems encountered during the past 3 years:

1. Social and economic conditions in Bolivia. Many times the project was paralized by strikes in Santa Cruz, in La Paz and countrywide. There were long delays in disbursements made by the GOB because of a shortage of funds in the treasury.

2. Institutional weakness at SNC; a condition aggravated by the preceeding problem. Because of low salaries most of the competent engineers, equipment operators, surveyors and administrative personnel have gone to private industry. SNC has been unable to provide the necessary personnel to administer the project, provide survey control, maintain and operate equipment or to supply the heavy equipment originally promised for the project.

3. Delays in delivery of construction materials, spare parts, project vehicles and heavy equipment. Some of these items took as much as 18 months to arrive at the project site. This problem was due to the inefficiency of the AID procurement process and an overload on Mission procurement personnel.

4. Heavy rains created additional work and delayed work in progress.

4. CONCLUSIONS

The project work and the support needed to carry it out was well identified in the design of the project; however, the implementation was not adequately analized. The project is a major earthmoving work in very difficult terrain and requires a strong institution to carry it out. SNC has had problems in design, construction and administration. The Taruma

bridge girder failures were a result of lack of experience in the design of this type of structure and its construction. For a time, SNC did not have a project coordinator and was unable to administer, make disbursements or provide the necessary backstop support. SNC has a shortage of mechanics and operators and lacks equipment in good working conditions.

Most of the problems were identified early on by AID technicians and changes were made in the implementation procedures, but only after numerous meetings were held by the Ambassador and AID Director with SNC executives and the Minister of Transport. The changes came slowly; actually a year, before they were fully implemented.

Since the changes were accepted, the project has made significant progress. Those changes consist of:

1. Major contracs for road sectors, river defenses and bridges.
2. Renting heavy equipment.
3. Repairing and maintaining SNC heavy equipment with local repair shops.
4. Contracting small labor works to private individuals and small construction companies.
5. Buying spare parts as needed on the local market.
6. Assigning a SNC project coordinator.
7. Contracting a competent SNC project director.
8. SNC placing a higher priority on the project.

5. RECOMMENDATIONS

For the road subcomponent at this point, it is recommended that progress be monitored closely with the CPM now in use; that the project financial plan be reformulated to transfer unused funds to the first and

second quarter budget, 1987; that AID disbursements be made without delays and in accordance with project needs; and that SNC be pressured to make their disbursements to Santa Cruz as needed and requested by project personnel. In April an audit of the project should be carried out by AID Controller's office.

For future projects of this type, it is recommended that engineers experienced with management of major or difficult projects in developing countries be consulted to evaluate the magnitude and difficulty of the work and the ability, experience, capacity and strength of the implementing agency, and to make recommendations for implementing and supporting the proposed project.

Unfortunately, emergency projects are born from necessity and not planned. Planning is hurried and at times superficial and mostly concerned with the financial aspects. Because of time constraints in preparing the project paper, there is a lack of attention to who or how the details will be carried out. Failure or poor results can almost always be attributed to a lack attention to details.

VIII. POTABLE WATER SUBCOMPONENTS

The prolonged drought of 1983 severely affected the city of Potosi and to a lesser extent the city of Sucre. The city of Potosi is supplied water by snow and spring fed lakes. The lakes, small canals and dams date as far back as the Spanish conquest. The city of Sucre is supplied water by a thirty kilometer, open concrete and stone masonry canal which is fed by the Rio Ravelo.

A. POTOSI WATER SYSTEM

Potosi has long range plan to construct a water supply line to a river source 60 km away. This source should prevent emergencies such as the one caused by the drought of 1983. When the emergency occurred AAPOS presented an interim plan that proposed the cleaning of existing storage

lagoons, repair of dams, rehabilitation of access roads, construction of new canals and reconstruction of existing access roads. This plan was approved by AID and incorportaed as a subcomponent of the Disaster Recovery Project.

The work is 99% complete and only a small canal remains to be lined with concrete. The canal is expected to be finished in January, 1987. AAPOS has done all the work with their own forces and with AID donated equipment.

1.POTOSI SUBCOMPONENT GOALS

The subcomponent goals were:

1. Cleaning and repair of storage lagoons which had not been cleaned or repaired since 1936. The lakes were leaking and their capacity had been reduced by sedimentation.

2. Repair of dams which were leaking and in some cases near collapse.

3. Construction of new lined canals to prevent loss of water through filtration.

4. Rehabilitation of existing access roads used for maintenance of the lakes, dams, canals and other works.

5. Construction of new access roads.

AID was to provide equipment and spare parts to undertake the above work. The equipment consisted of a bulldozer, six dump trucks, a front-end loader and a backhoe.

The GOB and AAPOS were to provide operating expenses, all constuction materials, manpower, some equipment, fuel and lubricants.

2. WORK AND OBJECTIVES REALIZED

With the exception of the small canal lining, all of the work originally planned has been realized. In fact, additional cleaning of lagoons has been done. The canal lining should be completed in January.

AID provided the equipment promised and additional funds to rent equipment, to buy non-local materials (cement, steel, lumber etc.) and to buy fuel.

AAPOS has provided all other materials necessary, manual labor and supervision. The GOB provided funds to buy fuel and lubricants.

3. PROBLEMS ENCOUNTERED

There were two significant problems encountered:

1. Delay in delivery of heavy equipment.

2. Delay in disbursement of GOB contribution to AAPOS.

Both of these problems were eventually overcome. Late delivery of equipment (18 months after the project was initiated) caused the longest delay in completing project activities. AID tried to reduce the impact of the late delivery by providing funds to rent a bulldozer and dump trucks. The second problem was trying to get funds from the GOB for fuel and lubricants. This was solved by AID pressuring the GOB through its contacts and by providing additional funds for fuel and construction materials not originally budgeted.

4. CONCLUSIONS

The cleaning of lagoons and rebuilding of dams was work which was necessary a long time before the drought. The drought served to highlight this very dramatically. AAPOS has accomplished the work pretty much as planned. The delay in completing the project can be attributed to the late delivery of heavy equipment.

Once more this subcomponent showed that the AID procurement process needs to be streamlined. It is true that a lack of competent personnel in the procurement division and a large and diversified one time only procurement need aggravated the already slow system.

5. RECOMMENDATIONS

It is recommended that a follow up visit be made to Potosi in January to confirm construction of the remaining canal. The final audit should be done in late January.

On future projects where diversified and large volume procurements are needed a private procurement agency should be contracted to insure a quicker response. This should eliminate a lot of paper work for the Mission and the need to have a large and specialized procurement staff.

B. SUCRE WATER SYSTEM

Sucre is supplied water by an open aquaduct which collects water from the Rio Ravelo. The aquaduct travels through an unstable mountainous area and is frequently cut off by landslides. Also the river flow is not adequate to meet the peak demand. In order to meet the future needs of the city and to assure an emergency supply, ELAPAS proposed construction of a pumping station on the Rio Cachimayu. This river far exceeds the present and future requirements of Sucre and is only one kilometer from the sedimentation tank fed by the Rio Ravelo.

During the 1983 drought, Sucre was the second most severely affected Altiplano city. AID in response, approved the proposed Sucre emergency plan as part of the Disaster Recovery Project. Unfortunately, the project was canceled and never completed due to disagreements in Sucre between the Mayor's office, ELAPAS and the Ministry of Urbanism and Housing. The disagreements appear to be political and power motivated.

1. SUCRE SUBCOMPONENT GOALS

The plan was to build a pumping station on the Rio Cachimayu, a booster station below the sedimentation tank, three kilometers of distribution pipe and power supply line for the pump electric motors.

2. WORK OBJECTIVES REALIZED

Preliminary designs were completed, a request for technical proposals was made and proposals received. The proposals were evaluated, a firm selected and just before the contract was awarded the project was cancelled by the Ministry of Planning.

3. PROBLEMS ENCOUNTERED

The main problem encountered was the internal struggle for control of the decision making process between the Major's office, the Ministry of Urbanism and Housing and ELAPAS. ELAPAS wanted the emergency water system. The Ministry wanted to control the design and construction of the systems. The Mayor's office wanted to enclose the Rio Ravelo aquaduct, a long term and costly project that is marginal for the city's present needs and inadequate for its future water requirements.

The Ministry sided with the Mayor's office and they decided that they wanted the long term project or nothing else.

4. CONCLUSIONS

The final decision reached by the struggling parties was a poor one. The city of Sucre is now totally dependent on an inadquate supply of water which can be completely cut off by a landslide at any time. AID made every possible effort to convince them that the emergency system would provide the city a steady supply of water during emergencies (droughts or landslide interruptions) and for peak demand periods.

5. RECOMMENDATIONS

Should the GOB request assistance in building the emergency pumping system, two items should be studied: first the degree of salinity of the water from the Rio Cachimayu and second, the cost of electric power for

operating the pumping system. These two items were the most significant points brought out in the struggle between the authorities involved. Sucre needs an alternate system, especially since the Rio Ravelo system is inadequate and rehabilitation is a long term and costly project.

IX. IRRIGATION SUBCOMPONENTS

The DDCs' in Chuquisaca and Oruro as well as Cochabamba, proposed small to medium-scale irrigation subprojects to increase irrigated land in Altiplano regions affected by the drought. The subprojects were selected on the basis that they could be implemented quickly.

During the course of the past two years, the subprojects have changed. Some new subprojects added, others deleted for various reasons. Nevertheless, all those subprojects approved have been completed and these subcomponents are finished.

A. CORDECO

1. SUBCOMPONENT GOALS

The following is the original list of subprojects proposed:

1. Omereque
2. Capinota
3. Aiquile

AID was to provide one pickup, one dump truck, a backhoe, technical assistance (hydraulic engineer and an irrigation specialist), spare parts for equipment, construction materials and training courses.

CORDECO was to provide construction materials, community promotion and all technical backstopping (surveys, design, construction supervision and agricultural extension services). The communities were to provide manual labor.

2. WORK AND OBJECTIVES REALIZED

Omereque and Capinota were completed as planned. Aiquile was changed to Laimiña when errors were discovered in the survey and the project found unfeasable. Laimiña was also completed.

AID provided the equipment promised and an additional dump truck which was originally promised to CORDECH. Other items were delivered as promised. CORDECO and the communities completed their responsibilites as planned.

The farmer's irrigation training course was carried out by Servicios Tècnicos del Caribe. Ninety farmers attended the course which was held in 3 separate weekly sessions. The course was well received and CORDECO's interest was prodded into instituting further courses.

3. PROBLEMS ENCOUNTERED

The main problems revolved around the social and economic climate present in 1984 and 1985 in Bolivia. The problems were:

1. Lack of counterpart funds.
2. Frequent changes in administration at CORDECO.
3. Strikes.
4. Slow delivery of equipment and materials.

The project manager, Ing. Fidel Amurrio, has been a major force in moving the subcomponent despite the above problems. Many times he personally encouraged people to work during strikes and fought with each change in Presidents to maintain the project with the highest priority at CORDECO.

4. CONCLUSIONS

The three subprojects completed by CORDECO are the best designed and best executed of all the DDC irrigation subprojects. The main reason appears to be the competence of Ing. Fidel Amurrio. Ing. Amurrio was very resourceful in the use of personnel, equipment and funds and shows that the key in implementing a project is the drive and competence of the project manager.

Training courses at the farmer level are well received and greatly needed. There should be greater emphasize placed in the training of farmers and an offering of extension services.

5. RECOMMENDATIONS

When accepting projects from implementing agencies, AID should review, perhaps even interview the proposed project team, and insist on a permanent project staff for the life of the project. Frequent project management changes in all implementing agencies have caused greater problems than lack of funds, weather or strikes. Is is recommended that technical assistance be given to the DDCs to provide agricultural extension services and training courses for farmers.

B. CORDEOR

1. SUBCOMPONENT GOALS

CORDEOR proposed a very ambitious plan to construct three medium size irrigation subprojects, thirty micro-irrigation subprojects and one large irrigation subproject.

AID was to provide two technicians (a hydraulic engineer and an irrigation specialist), two pickup trucks, two dump trucks, small construction equipment, funds for farmers' training courses and construction materials.

CORDEOR was to provide community promotion and all technical backstopping. The communities were to provide manual labor.

2. WORK AND OBJECTIVES REALIZED

The following subprojects were completed:

1. Turco (First stage only)
2. Sajama
3. Caracollo (First stage only)
4. Eleven Micro irrigation subprojects.

AID provided all financial, technical and equipment assistance promised. In fact AID provided additional funds to contract promoters and six construction technicians which were originally CORDEOR's responsibility.

CORDEOR did not design the large irrigation or the other micro irrigation subprojects planned, because they lacked the technicians to do the work. CORDEOR struggled in providing the resources which were promised. The communities did not provide the manual labor promised.

3. PROBLEMS ENCOUNTERED

The problems encountered were due to poor planning, an over ambitious program, lack of interest, frequent changes in project personnel and administration, lack of promotion in the field and of course the social and economic conditions in Bolivia.

The two technicians hired by AID were not very effective. The fault seems to be mostly with CORDEOR in that they did not provide them with support (office space, secretarial services, transport, etc.). Also the irrigation specialist was young and lacked experience. Before he was hired CORDEOR was advised that few applicants were interested in moving to Oruro to work and that the best candidate was young and with litle experience. CORDEOR accepted the technicians even with the noted shortcomings.

The CORDEOR technicians were marginally competent. They were slow in completing designs and their designs were poor. They would not accept help or advise from the AID contracted technicians. There were also frequent changes in technicians.

The communities did not provide manual labor as planned. The reasons were lack of promotion and coordination by CORDEOR. Also in the case of Turco, the project had more direct benefit for CORDEOR than for the community. CORDEOR had a competing potable water project at Turco which used up the limited human resources of the community and damaged the irrigation subproject's chances of being completed on schedule.

4. CONCLUSIONS

In general, this subcomponent was poorly thought out, disorganized and sorely needed a driving force within the CORDEOR administration.

When projects are originally proposed they are considered of high priority by the administration in power. In Bolivia, frequent changes in the DDC's administration are made for political reasons. This makes it difficult in many cases to implement or complete projects proposed by prior administrations. The projects approved for financing should therefore be truly important or significant to the DDC and perhaps be part of a long range master plan.

5. RECOMMENDATIONS

It is recommended that the implementing agencies be more thoroughly investigated to see if they have the human and equipment resources promised for a project; that project be evaluated not only on their technical merits but also on their importance to the DDC's and their respective communities or beneficiaries; if possible, that projects be a part of a long range master plan so that changes in management will have minimal effect on the priority of the approved project.

C. CORDECH

1. SUBCOMPONENT GOALS

CORDECH proposed the following five projects:

1. Rancho Naranjo
2. Coilolo
3. Mojotorillo
4. Orcas
5. Sopachuy

AID was to provide construction materials, small construction equipment and a dump truck.

CORDECH, considered a strong organization financially and technically, was to provide personnel, equiment, vehicles, promotion and construction materials. The communities involved were to provide manual labor.

2. WORK AND OBJECTIVES REALIZED

The only subproject completed was Mojotorillo. The other subprojects were cancelled because of a lack of interest on CORDECH's part. The only reason that Mojotorillo was completed was because of the strong interest shown by the community. A small water mill was added to the project when the community solicited AID's financial assistance. The mill is benefiting the community by saving a two day trip to a nearby mill and providing some income for grinding grain for other nearby communities.

AID provided the funds and materials to construct the Mojotorillo irrigation project and the water mill. The dump truck that was to be given to CORDECH to complete the other projects was instead transferred to CORDECO. CORDECH did litle to promote or initiate their projects and as a result they were cancelled.

3. PROBLEMS ENCOUNTERED

The main problem was a lack of interest on the part of CORDECH's administration. They did very litle to promote or support the subprojects. After repeated warnings the subprojects were cancelled with the exception of Mojotorillo.

Towards the middle of 1986 a change in administration at CORDECH changed the attitudes and priorities of the entire organization. There seemend to be more interest in AID financed projects, but by that time it was to late to renew the cancelled subprojects.

changed the attitudes and priorities of the entire organization. There seemed to be more interest in AID financed projects, but by that time it was to late to renew the cancelled subprojects.

4. CONCLUSIONS

A change in administration in 1984 shifted priorities and the organization lost interest in the projects originally proposed to AID. Even repeated warnings that CORDECH was going to lose funding for the subprojects, failed to raise any interest in the administration of 1984.

5. RECOMMENDATION

It is recommended that projects proposed for financing by AID be evaluated or considered for their importance to the implementing agencies' overall master plan and to the interest of the benefitting community.

F. Adams/mi

DISASTER RECOVERY PROJECT No. 511-0581/F-069/T- 70 FINANCIAL PLAN SUMMARY

Until PIL No. 160 Date October 14,1986

COMPONENTS	GRANT	LOAN	TOTAL	GOB	COMMUNITY	TOTAL
I. INFRAESTRUCTURA/INFRASTRUCTURE	2,014,652.00	13,928,777.95	15,943,429.95	6,603,341.86	944,603.00	23,491,374.81
A. CAMINOS/ROADS	1,146,024.55	12,414,000.00	13,560,024.55	5,107,481.00	0.00	18,667,505.55
B. AGUA POTABLE/POTABLE WATER	497,975.45	25,000.00	522,975.45	155,630.00	0.00	678,605.45
C. RIEGOS-CCDS/IRRIGATION-DDCS	370,652.00	1,149,777.95	1,520,429.95	1,340,230.86	944,603.00	3,805,263.81
a. CORDEOR - Oruro	63,159.00	518,248.95	581,407.95	434,802.00	261,058.00	1,277,267.95
b. CORDECH - Sucre	24,200.00	57,392.00	81,592.00	80,360.86	15,483.00	177,435.86
c. CORDECO - Cochabamba	283,293.00	574,137.00	857,430.00	825,068.00	668,062.00	2,350,560.00
D. PROYECTOS DE EMERGENCIA/EMERGENCY PROJECT	0.00	340,000.00	340,000.00	0.00	0.00	340,000.00
a. CORDECO - Cochabamba	0.00	180,000.00	180,000.00	0.00	0.00	180,000.00
b. CORDEPAZ - La Paz	0.00	160,000.00	160,000.00	0.00	0.00	160,000.00
II. IMPORTACION DE BIENES/COMMODITY IMPORTS	2,624,000.00	16,605,000.00	19,229,000.00	39,168,000.00	19,000.00	58,416,000.00
A. FERTILIZANTES/FERTILIZERS	1,594,000.00	0.00	1,594,000.00	0.00	19,000.00	1,613,000.00
B. MEDICINAS/MEDICINES	712,000.00	0.00	712,000.00	168,000.00	0.00	880,000.00
C. INSUMOS AGRICOLAS/AGRICULTURAL IMPUTS	318,000.00	5,545,000.00	5,863,000.00	4,500,000.00	0.00	10,363,000.00
D. AGRO INDUSTRIA/AGROINDUSTRY	0.00	11,060,000.00	11,060,000.00	34,500,000.00	0.00	45,560,000.00
III. CREDITO AGRICOLA/AGRO CREDIT	0.00	12,900,000.00	12,900,000.00	10,000,000.00	0.00	22,900,000.00
IV. APOYO PARA PROGRAMAS DE DISTRIBUCION DE ALIMENTOS/SUPPORT FOR FOOD DISTRIBUTION	751,957.00	0.00	751,957.00	110,000.00	0.00	861,957.00
V. PROGRAMAS DE RECAPITALIZACION RURAL/RURAL RECAPITALIZATION PROGRAM	188,230.00	0.00	188,230.00	108,000.00	0.00	296,230.00
VI. SISTEMA DE RECOLECCION DE DATOS PARA VIGILANCIA DE DESASTRES/DISASTER SURVILLANCE DATA COLLECTION SYSTEM	477,500.00	0.00	477,500.00	144,000.00	0.00	621,500.00
VII. UNIDAD DE COORDINACION/ COORDINATION UNIT	815,200.00	0.00	815,200.00	207,000.00	0.00	1,022,200.00
VIII. SISTEMAS DE AGUA POTABLE CARE/CARE POTABLE WATER SYSTEMS	1,750,000.00	0.00	1,750,000.00	0.00	0.00	1,750,000.00
IX. CONTINGENCIAS/CONTINGENCIES	378,461.00	66,222.05	444,683.05	322,000.00	0.00	766,683.05
TOTALES/TOTALS	9,000,000.00	43,500,000.00	52,500,000.00	56,662,341.86	963,603.00	110,125,944.86

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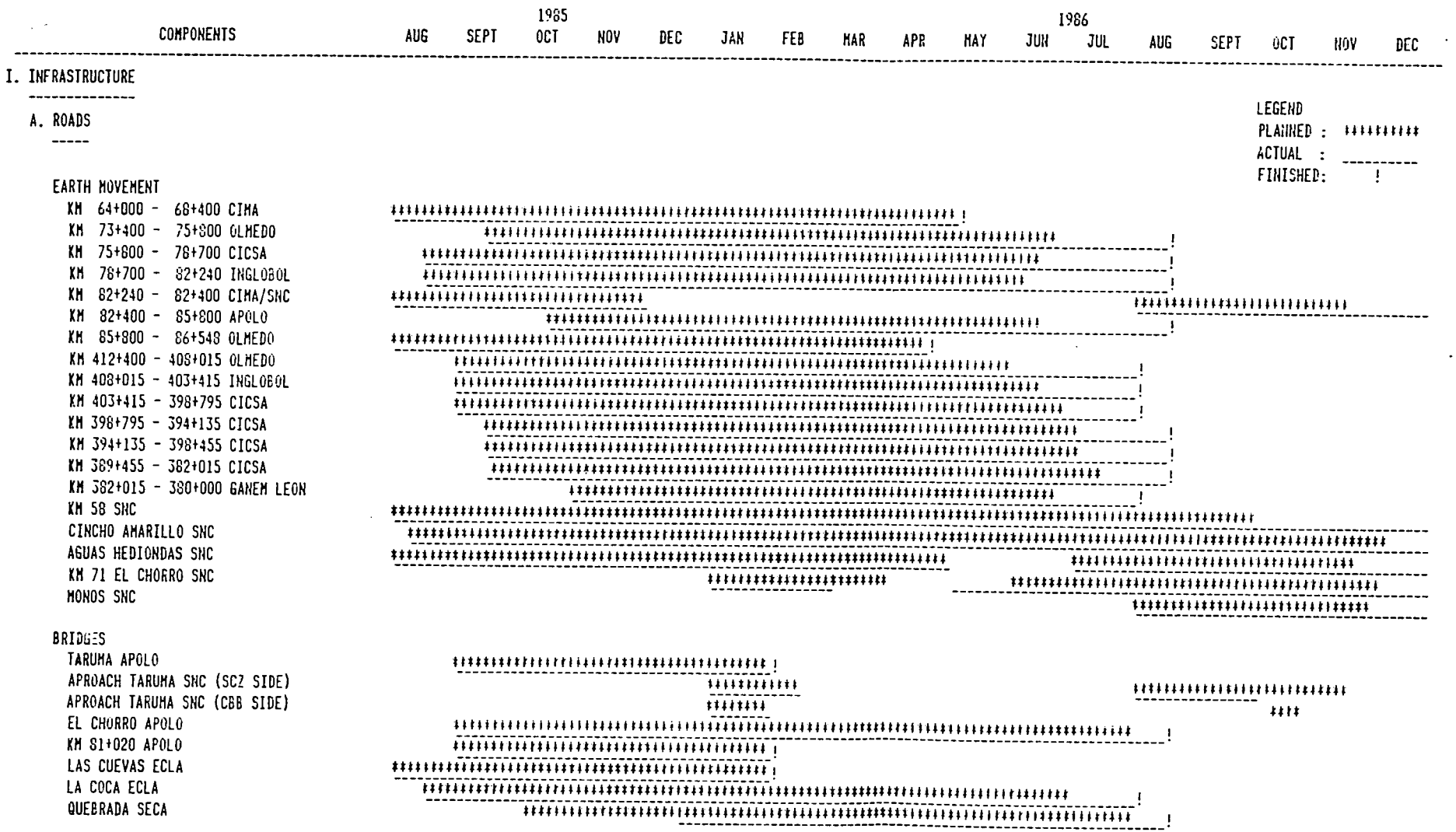
DISASTER RECOVERY PROJECT SCHEDULE



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REPORT DATE: December 20, 1986

DISASTER RECOVERY PROJECT SCHEDULE

COMPONENTS	AUG	SEPT	1985 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	1986 JUN	JUL	AUG	SEPT	OCT	NOV	DEC
RIVER DEFENSES																	
SECTOR "A" (INGLOBOL)													###	###	###	###	
SECTOR "B" (INGLOBOL)													###	###	###	###	###
SECTOR "C" (INGLOBOL)													###	###	###	###	###
SECTOR "D" (OLMEDO)													###	###	###	###	###
SECTOR "E" (OLMEDO)													###	###	###	###	###
MISCELLANEOUS WORKS						###	###	###	###	###	###	###	###	###	###	###	###

B. IRRIGATION

CORDEOR

1. TURCO

FIRST STAGE	###	###	###	###	###	###	###	###	###			###	###	###	###	###	!
SECOND STAGE	CANCELLED																
THIRD STAGE	CANCELLED																

2. SAJAMA

JUNTUMA	FINISHED (MAY 84)
NANCACALA	FINISHED (MARCH 85)
VISCACHANI	FINISHED (MARCH 85)
UMA PHUSA	FINISHED (JUNE 85)

3. CARACOLLO

SUBPROJECT I	FINISHED (JUNE 84)																
SUBPROJECT II	CANCELLED																
SUBPROJECT III (CADEA)			###	###	###	###	###	!									
SUBPROJECT IV	CANCELLED																

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DISASTER RECOVERY PROJECT SCHEDULE

COMPONENTS	AUG	SEPT	1985 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	1986 JUL	AUG	SEPT	OCT	NOV	DEC
4. VERY SMALL SCALE IRRIGATION																	
OTUYO	FINISHED (MARCH 85)																
CALLO ALCA-PUQUI	FINISHED (MARCH 85)																
PANANOZA	#####	#####	#####	#####	#####												
CHUQUICHURU	#####	#####	#####	#####	#####												
HILLCAPUJIO	#####	#####	#####	#####	#####												
CENTRO HUARA HUARA	#####	#####	#####	#####													
BELLAVISTA	#####	#####	#####	#####							#####	#####	!				
KARAJAHUIRA	#####	#####	#####	#####							#####	#####	#####	#####	#####	#####	!
CHIRIQUINA				#####	!												
MOGACHI BOLIVAR			#####	#####	#####	!											
PAMPA MOGACHI			#####	#####	#####	!											
CHACHACOMANI			#####	#####	#####	!											
CORDECH																	
1. MOJOTORILLO	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	!
CORDECO																	
1. OMEREQUE	#####	#####	#####	#####	#####												
2. CAPINOTA	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	!		
3. LAIMINA		#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	!

(Project cancelled unfinished due to lack of interest)

PROJ. No 511 0581/F-069/T-20

REPORT DATE: December 20, 1986

DISASTER RECOVERY PROJECT SCHEDULE

COMPONENTS	AUG	SEPT	1985 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	1986 JUL	AUG	SEPT	OCT	NOV	DEC
C. POTABLE WATER																	
AAPOS																	
1. ACCESS ROADS NEW CONSTRUCTION					############	!											
2. ACCESS ROADS IMPROVEMENTS			###############			######################## !											
3. CANAL CONSTRUCTION								########################				##############################					
4. CLEANING OF LAGOONS								########################				##############################					
5. CONCLUSION & REPAIR OF DAMS						########			###############			##############################	!				
6. SAN JUAN PROJECT	CANCELLED																

DEC. 86/Barchart/(Disk 104)