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IMPLEMENTATION COMPLETION REPORT  
(CPL-35110; SCL-3511A; SCPD-3511S)

ON LOANS

IN THE AMOUNT OF US\$285 MILLION IN TOTAL

TO

THE REPUBLIC OF TURKEY

FOR AN EARTHQUAKE REHABILITATION AND RECONSTRUCTION PROJECT

February 28, 2001

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective November 2000)

Currency Unit = Turkish Lira (TL)  
TL1.00 million = US\$ 1.45  
US\$ 1.00 = TL690,000

## FISCAL YEAR

January 1 - December 31

## ABBREVIATIONS AND ACRONYMS

ECA	-	Europe and Central Asia
FY	-	Fiscal Year
GDP	-	Gross Domestic Product
GOT	-	Government of the Republic of Turkey
GPS	-	Geographic Positioning System
HDA	-	Housing Development Administration, the Prime Minister's Office
IRR	-	Internal Rate of Return
kms	-	Kilometers
m <sup>3</sup>	-	Cubic meters
m <sup>2</sup>	-	Square meters
m <sup>2</sup>	-	Square meters
MIS	-	Management Information System
MOA	-	Ministry of Agriculture
MOP	-	Memorandum of the President
MPWS	-	Ministry of Public Works and Resettlement
PIU	-	Project Implementation Agency
POP	-	Population
QAE	-	Quality at Entry
QAG	-	Quality Assurance Group
RPA	-	Regional Procurement Adviser
SBD	-	Standard Bidding Document
TOR	-	Terms of Reference
UNDP	-	United Nations Development Program

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<i>Project ID:</i> P009099	<i>Project Name:</i> EARTHQUAKE REHABILITATION AND RECONSTRUCTION
<i>Team Leader:</i> Henry Boldrick	<i>TL Unit:</i> ECSIN
<i>ICR Type:</i> Core ICR	<i>Report Date:</i> March 1, 2001

## 1. Project Data

*Name:* EARTHQUAKE REHABILITATION AND RECONSTRUCTION

*L/C/TF Number:* CPL-35110;  
SCL-3511A;  
SCPD-3511S

*Country/Department:* TURKEY

*Region:* Europe and Central Asia Region

*Sector/subsector:* UY - Other Urban Development

### KEY DATES

	<i>Original</i>	<i>Revised/Actual</i>
<i>PCD:</i> 03/31/1992	<i>Effective:</i> 09/18/1992	09/18/1992
<i>Appraisal:</i> 04/19/1992	<i>MTR:</i>	
<i>Approval:</i> 07/23/1992	<i>Closing:</i> 06/30/1996	06/30/2000

*Borrower/Implementing Agency:* GOVT. OF TURKEY/HOUSING DEVT. ADM.

*Other Partners:*

STAFF	Current	At Appraisal
<i>Vice President:</i>	Johannes Linn	Wilfried Thalwitz
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## 2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

*Outcome:* S

*Sustainability:* L

*Institutional Development Impact:* M

*Bank Performance:* S

*Borrower Performance:* S

	QAG (if available)	ICR
<i>Quality at Entry:</i>	S	S
<i>Project at Risk at Any Time:</i>	No	

## 3. Assessment of Development Objective and Design, and of Quality at Entry

### 3.1 Original Objective:

On March 13, 1992, at 7:42 p.m., the city of Erzincan (pop. 120,000) and its surroundings were hit by an earthquake measuring 6.8 on the Richter Scale. The motion lasted 20 seconds, and the epicenter

was about 3 kms southeast of the city. Two days later, a 6.1 magnitude aftershock ruptured an 80 km segment near the neighboring town of Pulumur. There were about 500 fatalities from collapsed buildings and some 700 persons were seriously injured. The heaviest damage occurred in approximately 60 buildings of four or more stories that collapsed, mainly along the central avenue of Erzincan in an east-west direction. Hotels, office buildings, hospitals, schools, municipal buildings and a vast number of apartment buildings were affected. There was extensive damage in the surrounding rural areas as well.

Over the next few months, the Bank helped design a project to support the Government of Turkey's (GOT) Rehabilitation and Reconstruction program for the area. According to the Loan Agreement, the objective of the project was to assist the Government in carrying out its 1992-95 emergency reconstruction program for the Erzincan region through (i) rehabilitation and reconstruction of the areas affected by the earthquake, and (ii) development and implementation of seismic risk prevention and mitigation measures. The Memorandum of the President (MOP) stated that the objective of the project is to reconstruct essential housing, infrastructure and other facilities to promptly restore economic activity in the affected area, a significantly more ambitious statement of the project's objective. In any case, the project was intended to (i) reconstruct/rehabilitate essential housing, infrastructure and other facilities, and procure critically needed equipment and commodities to help rebuild the local economy, and (ii) provide technical training and a series of studies to reduce future earthquake vulnerability.

For obvious reasons, the project was not anticipated in the Country Assistance Strategy (CAS) for Turkey, which at the time had been shaped by a series of adjustment operations in the late 1980s, both at the macro level and in key sectors of the economy. It was envisaged that the adjustment dialogue would continue with the overall aim to promote a more outward-looking development strategy, and with sector and project lending focusing on poverty alleviation, social infrastructure and education/health. The selected project objectives cannot be judged central to the country strategy, but rather formed an enclave in the country program, justified by the need to assist Turkey to deal with the aftermath of the earthquake. The project's regional development effort for the poor and remote Erzincan area did provide a link to the overall strategy, but it was limited as the objectives were concerned with reconstruction only. There was no attempt to address whatever regional development issues there had been before the earthquake, or to set forward-looking priorities among the various sectors and development needs.

The project objectives were clear and realistic, responsive to the Borrower's efforts to deal with the aftermath of a serious disaster, and clearly focused on the recovery needs for the region. Their broad scope reflected the urgency felt at the time to support the rapid recovery of the local economy, and in particular the speedy rebuilding of the physical infrastructure and provision of recovery-related inputs. They were well coordinated with the Government's overall recovery strategy which included a three-phased program with an initial Rescue and Relief phase, a Temporary Rehabilitation phase, and finally a Reconstruction and Rehabilitation phase of which the project formed a part.

The project proved very demanding for the implementing agency, the Housing Development Administration (HDA) was under the Prime Minister's office, located in Ankara. It had little experience of this type of activity and of working with the Bank's procurement guidelines. After an initial period, however, HDA had built up the relevant capacity and experience and became very capable of managing the many contracts carried out under the project.

### *3.2 Revised Objective:*

An expansion of the geographical scope of the project objectives was approved by the Board of Executive Directors on two occasions. On December 19, 1995, the Loan Agreement was amended to

include reconstruction of municipal infrastructure and flood and erosion control measures in the city of Senirkent following mud slides in the city, and the closing date was extended to December 31, 1999. On July 28, 1997, a similar amendment was made to include the reconstruction of urban infrastructure and flood control measures in the town of Sutculer following a flood in late 1995, as well as the design of seismic strengthening measures for hospitals in Istanbul and Izmir. The geographically expanded project objectives remained broadly consistent with the original objectives: disaster-related reconstruction and institutional development measures to reduce the impact of any future disasters.

### *3.3 Original Components:*

The original project components were well selected and designed to achieve the project objectives. The June 1999 QAG Rapid Supervision Assessment also concluded that the project design was sound. An initial damage assessment provided an inventory of all reconstruction needs and formed the core of the GOT's overall reconstruction program estimated at US\$650 million. Following agreements on who should do what, the Bank-supported project components were designed to avoid duplication of efforts and to complement the other reconstruction activities of the Government of Turkey, and amounted to US\$285 million, or 44 percent of the total program, and the closing date was set at June 30, 1996. The project components included: (a) a comprehensive urban reconstruction/rehabilitation program for cooperative and government housing, hospitals, schools, public buildings, infrastructure, shops and businesses, building demolition and debris removal, various lots of equipment, approximately 76 percent of total costs; (b) a similar but smaller program for the affected rural areas including barns, irrigation/water supply and animals/equipment, approximately 9 percent of total cost; (c) training and studies including a loss-reduction study, training for the construction industry, a study developing an earthquake Insurance Industry, a study on Urban Vulnerability, and a study on Emergency Preparedness, approximately 1 percent of total costs; and (d) consultant services for design, supervision and project management, institutional strengthening of the concerned agencies, and some supporting equipment, approximately 14 percent of total cost.

Although the project components were developed in coordination with the overall reconstruction program, they came to include activities in many sectors. This made the project cumbersome to implement and difficult to supervise, with a large number of sometimes very small contracts and relatively small amounts of financing for many of the included components. The dominance of the construction activities, at 85 percent of total cost, reflected the priorities at the time to quickly carry out physical reconstruction works, but covered several sectors, involved many different Government agencies and demanded substantial coordination and supervision efforts. The administrative capacity of the implementing agency was initially not sufficient to handle the project work load, and substantial time and support was needed before implementation took off.

### *3.4 Revised Components:*

There were three significant revisions of the project components, two of which involved amendments to the Loan Agreement and introduced new physical components, and one which revised the institutional development component, i.e., the efforts to enhance Turkey's preparedness for future disasters.

- (1) Following the first amendment in the Loan Agreement in late 1995 the closing date was extended to December 31, 1999 and the US\$20 million Senirkent Rehabilitation program was included in the project. It was designed to support recovery efforts after mud slides in the city. It was, although much smaller than the Erzincan program, modeled after the original project concept and included reconstruction of essential infrastructure, measures for flood and erosion control, disaster mitigation, and supporting equipment.

- (2) After the second amendment in 1997, the closing date was further extended to June 30, 2000, US\$42 million of unused funds were canceled, and a similar US\$7 million program for the town of Sutculer was included following floods in the area in 1995. This also included a US\$3.5 million provision for the Design of Seismic Retrofitting of 26 hospitals in Istanbul and 31 in Izmir. In addition to these expansions, one sub-component originally in the project, the rehabilitation of the 60 km Refahiye-Erzincan-Tercan Road, was later dropped. The decision to drop this component followed disagreements between the Bank and the Highways Directorate on the need to complete detailed design before bidding the civil works contract, and on whether an earlier list of bidders from another project could be used as short list.
- (3) Originally, the following components were included in the institutional development component: (a) a Loss reduction study including: (i) revisions of the Disaster Law; (ii) revisions of the Reconstruction Law, Building Code and other laws related to construction; (iii) microzoning plan for Erzincan, and (iv) a program of assessing and improving public buildings in Turkey; (b) training of construction industry; (c) an earthquake insurance industry study; (d) an urban vulnerability study, and (e) an emergency preparedness study. None of these activities had started by 1995, and a revised component was developed and agreed on, including: (i) a study to revise the Reconstruction Law and include aspects on disasters and (ii) preparation of a public information campaign and development of training materials for the construction industry. The originally included MIS system for Ministry of Public Works and Resettlement (MPWS) was also included in the revised component. During discussions of the second amendment, installation of a Geographic Positioning System (GPS) system in the Marmara Region to identify the areas of the highest seismic risk was added to the institutional development component.

The agreement to expand the project to include the Senirkent program came after the original reconstruction components were almost complete. About US\$170 million of the loan funds had been used up by end 1995 and it was obvious that there would be significant unused funds. The Bank had made several inquiries to the Government about canceling the remaining funds. GOT was reluctant to cancel any loan funds and proposed other uses for the funds. The Bank replied that it would be more appropriate to consider a new project on its own merits rather than add new activities to make use of the surplus funds. GOT's unwillingness to cancel the remaining funds was the dominant factor behind the request for amendment and extension, and the Bank finally agreed since the proposed activities in Senirkent (and later in Sutculer) were similar in nature to the original project activities.

### *3.5 Quality at Entry:*

The project was very quickly prepared in response to the Borrower's call for quick action to respond to the disaster. A mission to prepare the operation was sent to Turkey from April 9-24, 1992 (this mission was later upgraded to appraisal) and produced a damage assessment, a list of reconstruction needs, a proposed division of responsibility for the reconstruction activities, and proposed implementation arrangements. The Board of Executive Directors approved the operation on June 23, the loan agreement was signed on July 27, and declared effective on September 18, 1992. As a result of the rapid appraisal and approval of the project, preparation work was not as rigorous as in more typical Bank supported projects. By Board approval, there were no designs or draft tender documents prepared for the civil works, no agreed TORs for the studies and training activities, and no capacity in the implementing agency for managing the preparation of the tender documents and subsequent contracts. Nevertheless, the QAE is rated S given the unique circumstances for the project start. The QAG Rapid Supervision Assessment (July 1999) similarly concluded that the project was ready for implementation at approval as the project was a disaster relief operation.

## 4. Achievement of Objective and Outputs

### 4.1 Outcome/achievement of objective:

The outcome/achievement of project objectives is rated satisfactory. Taking as a project objective the MOP's more expansive goal of rebuilding the Erzincan local economy, analysis of available regional GDP data for Erzincan suggest that the Erzincan economy was rebuilt in the 3-4 years following the disaster. The earthquake caused a 10-14 percent reduction in economic activity in 1992 and 1993. This was followed by a local "boom" in 1994, probably fueled by the reconstruction activities. Then came a period of higher-than-1991 GDP levels from 1995 onwards with continued growth in 1996 and 1997. The "economic loss" suffered can be illustrated by the fact that the economic growth in Erzincan was limited to 9.4 percent between 1991 and 1997, while the corresponding figure was 14.4 percent for eastern Turkey, and 33.5 percent for Turkey as a whole.

It is difficult to say how much of the recovery was due to the reconstruction program. The Erzincan region's GDP was about US\$260 million in 1992. There is therefore little doubt that the Bank's funding of \$180 million for the region, as well as the originally planned overall US\$650 million reconstruction package, spent over 3-4 years were very large interventions. It would appear safe to conclude that the Bank-funded construction activities contributed to rebuilding the local economy. In addition to the direct economic benefits, the construction activities are likely to have triggered and accelerated the private sector-driven recovery and expansion of the local economy in the area. There is no data available describing this process, but there is anecdotal evidence that many of the entrepreneurs and richer parts of the population left Erzincan after the earthquake. Many of those who could leave did so, and settled in other parts of Turkey, mainly in the economically more active western parts. Those who left were in many cases owners and operators of factories and businesses. They often appointed caretakers or managers to look after the businesses. Demographically, therefore, the earthquake caused out-migration of the richer and most enterprising people which in turn was matched by some in-migration from the surrounding areas.

The forward-looking institutional objectives seeking to reduce Turkey's vulnerability to future earthquakes were only partly achieved. Some of the activities were completed, others were partly completed and will be completed on their own or as part of other Bank-supported projects, and some were not undertaken. Please see 4.2 (ii) below for details.

The objectives for the smaller parts of the project that were added in 1995 and 1997 were substantially met. The rehabilitation programs for both Senirrkent and Sutculer have been completed and both their municipal infrastructure and actions to reduce risk for and vulnerability to future floods and mud slides have been completed. Similarly the smaller added components of retrofitting hospitals in Izmir and Istanbul, and the establishment of a GPS system in the Marmara area were completed.

### 4.2 Outputs by components:

The components (original and later added) designed to meet the physical objectives were generally successfully implemented while performance of the components supporting institutional strengthening was mixed. The summary provided here is illustrated in more detail in Annex 1.

- (i) Physical objectives under the Erzincan program: this component is rated Satisfactory as almost all components were implemented as planned. It would have earned a Highly Satisfactory rating had it not suffered from initial delays. Most of the construction activities did not start until

Spring/Summer 1994, i.e. two years after the earthquake occurred, and most were completed during late 1995, almost 4 years after the earthquake. This delay did not stop the project from reaching its objectives, but it certainly delayed it.

Under the housing component, 252 Government apartments were reconstructed compared to the 250 originally planned. However, the 1,131 units of cooperative housing actually repaired or reconstructed fell short of the 3,640 units planned. This was due to inaccuracies in the original damage assessment which formed the basis for the Bank's appraisal. The actual number of eligible damaged units turned out to be a much smaller number. Under the community facilities component, three hospitals were reconstructed with 475 beds planned as compared to the 350 beds for patients and 150 units of nurses' lodgings that were actually built. The hospitals are fully operational and well maintained, although there is a shortage of specialized doctors (as is the case in all of Eastern Turkey). Another 500 units of housing for medical staff were completed as planned, as was the delivery of equipment to the hospitals. The planned rehabilitation of a health post was dropped. Equipment for the area schools were delivered as planned, as was the reconstruction of 300 units of teachers' housing. Under the shops and business component, 387 shops and 275 offices were reconstructed in six shopping centers, another 512 shops and 143 apartments were repaired in 39 structurally rehabilitated buildings. About 95 percent of the units are used, and most of them are rented out by the original beneficiaries.

Under the public buildings component, municipal offices, the Adult Education Center, the Horticulture Research Center, the National Education Center, four municipal workshops, the Rural Affairs Building and a bus terminal were reconstructed, mainly as planned although the rebuilding of a sports stadium wall was dropped. Civil works and equipment under the infrastructure components were carried out and delivered much as planned and included inputs and investments for many sectors of the municipal economy. The main difference from the original plans was that the approximately 100 kms. of road repairs originally planned never took place. The building removal and debris component took place as planned. The rural component was implemented very quickly even if the originally planned number of barns to be constructed (4,100) was larger than what was achieved (2,885). Again, this was due to inaccuracies in the original damage assessment used for appraisal. The barns were built very quickly after loan effectiveness, by the beneficiaries themselves with lump sum payments made for construction materials. The repair of the sugar factory chimney and the delivery of equipment to the Civil Defense Directorate took place as planned.

- (ii) Institutional development component. As mentioned in 3.4 above, this component was scaled-back and revised in 1996. It is rated Unsatisfactory since many of the originally intended activities never took place, and as only part of the work actually done has led to the intended actions or follow-up. The study to revise the Reconstruction Law and include aspects on disasters in it was initiated in October 1997, and completed in draft in September 1999. There have been some modifications in the MWPS bylaws governing construction but no legal changes have been presented to parliament. The preparation of the public information campaign and development of training materials for the construction industry started in June 1998 and were completed in June 2000, but the campaign and training activities could not be initiated in time to take advantage of Bank agreement to fund them under the Erzincan loan and it was decided to fold it into similar activities under another Bank-financed project. The Installation of the GPS system in the Marmara Region was completed by November 1999 (most parts of the system were in place when the August 1999 earthquake hit the region, and provided valuable inputs to assess the situation). In addition, a component to automate and replace the MWPS management information system

was included in the original project and was largely implemented as planned. Some of the specially designed software was rejected by MWPS, but off-the-shelf software was procured and is working well with the installed hardware.

- (iii) Components in the first amendment of the Loan Agreement, January 1996 - Senirkent Reconstruction Program. This project component is rated Highly Satisfactory as all parts of it were implemented on a timely basis and according to plans. The infrastructure works and equipment were completed as planned in October 1999, and the preventive flood and erosion control components were completed as planned in June 1999 and included 3.7 million trees planted, 24 thousand meters of fencing, and 2,603 hectares planted.
- (iv) Components in the second amendment of the Loan Agreement, August, 1997 - Sutculer Reconstruction Program and the Assessment and Design of Hospitals in Istanbul and Izmir. These components are rated Highly Satisfactory. All parts of the reconstruction program were completed by June 2000 (except for the water treatment plant component which was dropped because it could not be technically justified), including the preventive flood & erosion control activities to protect a 860-hectare erosion control zone. The design work for the Istanbul and Izmir hospitals was completed by September 2000.

#### *4.3 Net Present Value/Economic rate of return:*

There was no NPV or IRR calculated for the project during preparation/appraisal. During the ICR preparation, a limited ex-post cost-benefit analysis was carried out for the housing and shops/business components, and the per-unit costs for the hospitals component were assessed. Contracts and other materials available for the other components were analyzed to see if least-cost solutions were sought. Details of the calculations are found in Annex 3.

A: The project's housing component amounted to US\$44.2 million or 22 percent of total project cost. For these funds, a total of 2,183 apartments of on average 90m<sup>2</sup> were reconstructed or repaired at a cost of \$20,200 each. The market value of each apartment is assessed at \$200 per month. Comparing the assessed market rental value with the costs for the three reconstruction/repair contracts yields a rate of return of 11 percent.

B: The project's shops and businesses component amounted to US\$22.5 million or 11 percent of total project cost. A total of 387 shops were reconstructed in six shopping centers, 512 shops rehabilitated in 39 different buildings, 275 offices reconstructed in six shopping centers, and 143 apartments reconstructed in 39 different buildings, implying a renovation cost of US\$16,500 for each unit. The rental market value is assessed at \$130 per month for each shop, \$50 per month for each office, and \$200 per month for each apartment. Average rental value for each unit in this component is \$155 per month. Comparing the assessed market rental value with the costs for the three reconstruction/repair contracts yields a rate of return of 7 percent.

C: The project's hospitals component amounted to a total cost of US\$35 million or 17 percent of total project cost. Three hospitals with a total of 350 beds were reconstructed, furnished and equipped. This included 150 associated nurses lodgings. This corresponds to 85m<sup>2</sup> per bed, \$59,000 per bed in rehabilitation/reconstruction costs, \$41,000 in cost per bed for furniture and equipment, or a total cost per bed of \$100,000. Per square meter, the costs are \$683 for the reconstruction, and \$476 for furniture and equipment, in total \$1,059 per square meter. The costs for this component are very low and the standards

appropriate. The 85m<sup>2</sup> per bed compares to a norm of 100m<sup>2</sup> in many industrialized countries. The \$1,059 total cost per square meter compares to a figure of \$1,700 for a recently completed Bank-supported medical facility in Estonia (excluding beds). The total cost per bed, at \$100,000, compares to an industry average of \$250,000-350,000 for first rate hospitals in many industrialized countries, with \$120,000 being the benchmark for less modern facilities in poorer countries.

A review of available data for components D, E, and F suggest that the activities pursued by the project represented the least cost solutions for the outputs and associated benefits:

D: Equipment, total cost US\$22 million = 11 percent of total project cost

E: Other civil works, infrastructure, total cost US\$65 million = 33 percent of total cost

F: Consultants services, total cost US\$12 million = 6 percent of total project cost

#### *4.4 Financial rate of return:*

There was no financial rate of return estimated for the project.

#### *4.5 Institutional development impact:*

Overall, the project did not make significant contributions to the ultimate institutional development objective: to improve Turkey's preparedness for future natural disasters. A more thorough implementation of the activities designed to limit the damage of future earthquakes would have been desirable. The smaller preventive components for the Senirkent and Sutculer programs, the Marmara GPS system, and the planned retrofitting of the hospitals in Istanbul and Izmir do compensate for some of the earlier neglect in the project. In summary, the institutional development aspects were neglected as the original construction activities were carried out, but pursued through a scaled-down program later, and through the amendments of the project.

HDA/PIU grew into a skilled organization and became a good training ground for project management including procurement and contract management.

## **5. Major Factors Affecting Implementation and Outcome**

### *5.1 Factors outside the control of government or implementing agency:*

There were several problems during the first three years of the project with the selection and work of the consultants who assisted HDA with design and construction supervision for the four main construction components. These difficulties significantly contributed to the initial implementation delays. By mid 1993 all four consultants were contractually late in the preparation of bidding documents, and frequently submitted the wrong or incomplete versions of the documents to HDA. Most of these problems were eventually solved, but HDA in 1996 terminated the contract for one of the consultants and converted the security bond (bank letter of guarantee) to cash. This led to a lawsuit against HDA which is still underway and to which HDA has issued a counter claim.

In addition, three construction companies have brought forward six other lawsuits against HDA, mainly related to the applicability of the correct price index in payment certificates and the claims for time extensions. HDA has won four of the six cases, lost and appealed one, and is awaiting the outcome of one. It is not expected that the lawsuits will have any impact on the project outcome.

### *5.2 Factors generally subject to government control:*

There was poor Government commitment to the institutional components attempting to strengthen Turkey's preparedness for future earthquakes. The project was clearly viewed as a reconstruction program, and there was little interest in the broad studies and training program included in the original project design. None of the planned activities had started by the end of 1995. The modified program agreed on in 1996 has been implemented, but interest in the findings of the studies and in the information campaign and training materials prepared has been limited. However, GOT interest in the Marmara GPS system and in the envisaged renovation of hospitals in Istanbul and Izmir has been more positive.

The selection of HDA as implementing agency was a compromise after the first proposals to use MPWS failed. The Bank's identification mission in April 1992 recommended that the directorate in MPWS responsible for disaster management be made the implementing agency, as this directorate was to play a central role in the overall reconstruction program. Within weeks, however, it became clear that MWPS did not agree to the envisaged modalities of the Bank supported activities (see section 7.4 below) and as a result the government suggested that the Bank supported part of the reconstruction program be implemented by the smaller and more flexible HDA. Although HDA became a very competent implementing agency, it is still regrettable that the Bank and MWPS did not manage to establish a better basis for cooperation. The ministry is the key agency dealing with many aspects of disaster management (including construction standards), and the project components dealing with Turkey's preparedness for future earthquakes would have had a greater chance of success had they been part of the ministry's own work.

The project came to cover many sectors of the region's economy, and many government agencies had to be involved in the work. This meant that HDA initially had to spend significant time and effort to establish a series of protocols with the agencies it had to work with. In the end, the Government's intra-agency collaboration worked quite well as far as the construction activities and procurement of goods were concerned. The Ministry of Agriculture quickly administered the construction of barns and procurement of animals, the Ministry of Education procured and distributed the school materials, etc. But it also meant that HDA became overloaded with a lot of detailed questions about Bank procurement and procedures from a vast number of agencies each struggling to implement their part of the project. One Bank report in 1994 noted that HDA was swamped with these kind of questions and that all resources went into the day-to-day handling of them. The staff had little time or energy to focus on the overall implementation of the project, and this is possibly yet another explanation to why the institutional strengthening components were neglected for so long.

### *5.3 Factors generally subject to implementing agency control:*

HDA became a very efficient implementing agency. The successful completion of the reconstruction efforts in Erzincan, and later in Senirkent and Sutculer, is a result of HDA's competent project management and handling of contracts and procurement. This is particularly true for the time from 1995 onwards.

The early years of project implementation were difficult for HDA. Without the necessary staff, it attempted to get a large number of complex construction and infrastructure operations in motion, employing Bank rules and procurement guidelines, while also negotiating protocols with the larger ministries dealing with specific components of the operation. It took a long time for HDA to get the right key staff, i.e. with knowledge of procurement and contract management, and also to secure the services of

consultants to help as needed with the preparation of bidding documents and supervision of the construction activities.

#### *5.4 Costs and financing:*

Both the funding needed to complete the original project components and the speed by which disbursements would take place were overestimated during project preparation. By 1996, the original physical components of the project had been completed at a cost of about US\$180 million, compared to a loan amount of US\$285 million, implying that the original costs were overestimated by about 58 percent. Most of the over budgeting (about 80 percent of the US\$105 million of excess funds) originated from four subcomponents; (i) Infrastructure - US\$26 million of the US\$55 million budgeted was spent, (ii) Housing - US\$47 million of US\$69 million was spent, (iii) Rural reconstruction - only US\$7 million out of US\$25 million was spent, and (iv) PMU/project design and supervision - US\$20 million out of US\$38 million was used. The speed with which the funds would be disbursed was also overestimated. For the \$285 million made available, the MPWS envisaged that 49 percent of the funds would be spent during FY93, with the remainder at a declining rate during the next three FYs at 33 percent, 10 percent and 7 percent respectively. In fact, the disbursement-profile of the spending of the \$180 million actually spent before the project restructuring was much more back-loaded, with only 9 percent and 7 percent spent in 1992 and 1993, respectively, and 49 percent, 30 percent and 5 percent during the following three years.

There are several reasons why the funding needs and speed of their use were overestimated. First, the rapid preparation did not allow for realistic plans and cost estimates. Second, the pressure to get the recovery program started fast led to a situation where generous amounts of funding were made available to make sure that shortage of funds would not hamper the recovery efforts. Third, the enthusiasm and urgency to implement the recovery efforts were mistaken for actual implementation and absorption capacity. While such situations should be avoided in the future, the need to respond to urgent requests after natural disasters makes it difficult to get cost estimates as accurate as are available in the normal Bank investment operation.

The most obvious implication of the over-budgeting was that a large amount of funds was underutilized. This became clear in 1995 whereupon the Bank advised GOT to cancel the extra funds. However, GOT did not agree to this, and instead raised various ideas about how the funds could be used. A situation emerged where the idle funds were seen as available credit to be drawn on for any disaster related activities. This resulted in the two amendments: to add the Senirkent, Sutculer and Hospital Retrofitting components. The costs for the added components (and the revised institution strengthening) were more realistically assessed, and parts of the loan were eventually canceled on three occasions. The first cancellation amounted to US\$42 million and was dated May 7, 1997, the second of US\$19.5 million took place on August 9, 1998, and the final one of US\$17 on April 5 1999, in all bringing the total amount of the loan down from US\$285 to \$206.5 million.

## **6. Sustainability**

### *6.1 Rationale for sustainability rating:*

The sustainability for the project as a whole is rated Likely, and includes three parts; (i) the project's physical components rated highly likely, (ii) the reduced institutional component rated likely, and (iii) the abandoned parts of the institutional component that were never carried out. The physical components (construction/rehabilitation of buildings and infrastructure, equipment) sustainability is highly likely. The infrastructure/investments provided to the three municipalities are integral parts of the cities'

provision of services to its inhabitants, and are being used and maintained. Virtually all housing/apartments supported by the project are lived in with market-based rents used for the cooperative houses and subsidized rents for the Government owned buildings where the civil servants are typically charged US\$75 per month (as compared to a market rent of US\$200 per month). About 95 percent of the shops and offices provided are used, with the majority being rented out by the original beneficiaries. The three hospitals in Erzincan are fully functional and well maintained, the main problem being to attract suitable medical specialists (an issue common to all of Eastern Turkey). The seismic-resistant design developed for hospitals in Istanbul and Izmir is likely to be used in the future. The sustainability of the project's reduced institutional parts is rated likely since the GPS system for the Marmara region as well as the management information system for MPWS are operational. Similarly, the training and information materials developed for the public and the construction industry are likely to be used, and the proposed revisions of the reconstruction law are likely to be considered. Some of the abandoned parts of the institutional component are being continued under the MEER project, i.e. revision of key legislation and the development of a disaster insurance industry.

#### *6.2 Transition arrangement to regular operations:*

The transition for the physical parts of the project is complete. The respective agencies and municipalities manage, operate and maintain the equipment, buildings and investments made. Similarly, the Marmara GPS system is handled by TUBITAK, a scientific and technical research council, and the MPWS' MIS system is fully handled by the ministry. The training and information campaign materials have been handed over to MPWS, as has the report listing desirable revision to the Construction law. It is recommended that the Bank, possibly as part of the MEER project, support the future use of these materials and recommendations for law amendments. Similarly, the Bank should support the continued revision of laws and regulations, relevant studies and the development of an insurance industry for disasters. Finally, discussions are underway with the Government about support for reducing seismic risk in Istanbul, an effort which could include retrofitting of some hospitals in Istanbul and Izmir.

## **7. Bank and Borrower Performance**

### **Bank**

#### *7.1 Lending:*

The Bank quickly responded to the disaster. The earthquake took place on March 13. On March 15, a meeting was held which concluded that the Bank should offer assistance to prepare an operation with limited objectives and with a realistic time schedule to (i) do a comprehensive damage assessment, (ii) help fill the financial and technical requirements to restore the productivity of the area, and (iii) take actions to mitigate against damage in case of any future earthquakes. Letters outlining the Bank's possible support were sent to the President and the Prime Minister on March 16. The offer was gratefully accepted, and the Bank launched an identification/pre-appraisal mission in April (9 - 24) which was later upgraded to appraisal. This seven-person mission produced a comprehensive assessment of the damage, and identified the scope and content of the project. Disagreements about the implementation arrangements, however, made it necessary to launch a post-appraisal mission (May 31 - June 9). During this mission it was agreed that the Bank-supported activities would be implemented by the HDA, while MWPS would be in charge of the part supported by an ECU150 million credit from the Council of Europe. After Board approval, the Bank sent a third mission which worked with HDA to strengthen its implementation capacity, comprising one HQ staff and one Procurement Expert from the Bank's Ankara Office.

The project was for obvious reasons not envisaged in the Bank's Country Strategy for Turkey, but supported the Government's reconstruction efforts and was well coordinated with GOT's overall

post-earthquake reconstruction program. The work carried out by the Bank staff was of high quality and provided a comprehensive assessment of the reconstruction needs. Appraisal of the Government's commitment was correct for the reconstruction activities, but not realistic for the institutional components for which the commitment was overestimated. The assessment of HDA's ability to implement the project underestimated the problems this agency came to face in implementing a complex project in a remote part of Turkey. Similarly, the plans for establishing a local PIU in Erzincan proved very hard to carry out. The project design was straightforward and appropriate even if it spanned several sectors of the local economy and came to involve many agencies. The funding amount provided proved overly generous and the disbursement profile too optimistic.

#### *7.2 Supervision:*

Overall, the Bank's supervision efforts were satisfactory, and can be divided into three phases. During the initial two years of the project, the Bank's supervision efforts focused on assisting HDA with the hiring of consultants for the design and supervision of reconstruction work and for the preparation of bidding documents. The Bank also put significant efforts into familiarizing HDA staff with Bank procurement and disbursement procedures. During this phase, the emphasis was on dealing with the delayed construction efforts while the institutional objective of the project was largely neglected. In the project's second phase, 1995-96, the originally planned reconstruction components were largely completed, and attention was again turned towards the second project objective, and towards reallocating the un-used part of the loan proceeds. Finally, during the third phase in 1997 and 1998, the scaled down institutional component and the Senirkent and Sutculer reconstruction programs were implemented, and the Bank's supervision focused on these activities.

Throughout implementation, a large part of the supervision and day-to-day task management were carried out by Ankara office staff, supported by periodic missions from HQ. This arrangement proved very helpful to address issues related to procurement and contract management, and was much appreciated by the borrower. One shortcoming in the supervision (as noted in QAG's RSA report) was that reporting focused on the output level rather than on outcomes, i.e. on the construction activities rather than on the re-established economic activity in the affected areas. Implementation progress was adequately reported and implementation problems identified and addressed. The performance ratings given during supervision (S throughout) were realistic. More attention should have been paid to the lagging behind of the project's institutional strengthening components during 1993-1995. The advice given to the implementing agency was of high quality and appreciated. All loan covenants were enforced and complied with. The skills mix and continuity of Bank staff during supervision was good.

#### *7.3 Overall Bank performance:*

Overall Bank performance was satisfactory. During preparation the Bank acted quickly, but also underestimated the problems with having an implementing agency not used to Bank projects dealing with a project covering many sectors and many government agencies. During supervision, the Bank provided good support to the reconstruction efforts but initially neglected the institutional development objective (preparedness for future earthquakes). Once the institutional component started, supervision of it was very good as was the supervision of the other added project components.

#### **Borrower**

##### *7.4 Preparation:*

The borrower's performance during preparation was satisfactory. The government provided

adequate inputs for the preparatory work, and the Bank supported activities were shaped into a consistent part of the overall reconstruction efforts. The only complication concerned the selection of the implementing agency. It was initially assumed that MPWS would be implementing the project as its directorate for disaster management played a key role in handling the overall reconstruction program. However, disagreements between the ministry's practices and the Bank's guidelines proved hard to overcome. The ministry wished to use its own procedures for the design work (to be done by the ministry) and construction (using MPWS procurement rules), which the Bank did not judge satisfactory. The Bank further argued that MPWS's organizational structure did not permit accountability and responsibility to be clearly assigned. Some modifications in MPWS' procedures were agreed on, but it was judged to be in the best interest of implementation if the Bank supported part of the reconstruction program was implemented by HDA rather than MPWS.

#### *7.5 Government implementation performance:*

Government performance during implementation is rated satisfactory. The construction and infrastructure components were implemented with full Government support. The cross-sectoral and comprehensive nature of the project made it difficult at times to achieve focused Government implementation. Each respective agency was supposed to carry out the implementation and procurement of its own component (school materials by Ministry of Education, etc.) with HDA providing overall guidance as needed. In fact, HDA ended up handling most of the detailed implementation.

There was little Government interest in the project components aiming to strengthen Turkey's preparedness for future earthquakes. The broad and ambitious program designed for the original project was not pursued during the first three years of the project. Implementation only started after the program had been severely scaled back and after Bank staff invested large amounts of time in developing TORs and advancing the program.

#### *7.6 Implementing Agency:*

HDA's performance is rated satisfactory. This assessment is based on (i) consistently highly satisfactory performance since 1995-96, (ii) initial delays in project implementation as well as in solving staffing issues during 1992-1994, (iii) disregard for the project's institutional strengthening components until their restructuring in 1996.

HDA grew into a very effective implementing agency after the first few years of work. The management of HDA was generally efficient, including the financial management. Following a period of inadequate staffing during the first years of implementation, the agency developed the right staffing and skills mix. There were no remarks related to the execution of a US\$60,000 Trust Fund from UNDP. The restructuring of the project to include Senirkent, Sutculer and the design for renovation of hospitals in Izmir and Istanbul, and the implementation of these new activities was handled very well.

During the first few years of implementation (1992-94) HDA found it hard to carry out the assigned tasks. One year after effectiveness, the Bank advised the PIU to do the following urgently: (i) complete the staffing of the PIU, and strengthen the procurement function of the PIU with a TA contract, (ii) complete the staffing of the Erzincan PIU, (iii) push the consultants to get the bidding documents ready for the four major construction components, (iv) to finalize the Turkish translation of the SBDs, and (iv) complete the audit of the 1992 accounts which was overdue. The absence of experienced staff in the areas of procurement and contract management proved particularly harmful. At this time a lot of effort went into establishing the official protocols governing the PIU's relations with the other parts of the Government

responsible for their respective parts of the project. As the volume of activities increased, the PIU found itself flooded with many smaller questions and issues, often of a very technical nature, from other agencies, contractors, consultants, etc. It was also difficult for a long time to get staff for the PIU in Erzincan due to unrest in the area.

HDA showed little interest in the implementation of the studies and training components to enhance Turkey's preparedness for future earthquakes. Once these components were restructured, HDA effectively implemented the studies agreed upon.

A review of the project's procurement by the ECA RPA's office in mid-2000 did not reveal any major issues but stated the following: (i) Legal proceedings are under way with 4-5 contractors on price adjustment; arbitration process as per contract was not followed; (ii) Bank agreed to restricted advertisement (not through Development Business) but information was forwarded to Embassies only; (iii) Construction of barns was implemented under the project, but was not provided for in the procurement schedule of Loan Agreement, (iv) no information on aggregate value for different method to establish compliance with legal agreement, (v) consultant selection for Project Management Automation (value>\$200,000) included only four local institutions, (vi) procurement of stabilization equipment was not clear; repeated sole sourcing was awarded, (vii) role of TUBITAK, a research institute, as beneficiary and provider of services for the Marmara GPS system was not clear, (viii) extension of contract with one company was approved without clearance of the RPA, (ix) no post reviews conducted.

#### *7.7 Overall Borrower performance:*

The Borrower's overall performance is rated satisfactory based on the assessments above.

### **8. Lessons Learned**

- Give preventive and institutional development measures a more prominent role: The project's objective to strengthen Turkey's preparedness for future earthquakes was not fulfilled as almost all attention in the Erzincan project was focused on the reconstruction efforts to repair damage done. In August 1999, seven years after the Erzincan earthquake, the Marmara Region was struck by a serious earthquake with extensive damage and many casualties. Obviously, forceful implementation of the project's comprehensive training and studies program that was designed to mitigate against damage in case of future earthquakes would have served Turkey well, and a vigorously pursued loss-minimizing program during the 1990s would have yielded substantial benefits. In the case of any future operations seeking to meet institutional or preparedness objectives, the following measures could be considered: (1) Make sure that the preventive/forward looking project components have their own implementing agencies and interested audiences, i.e., avoid putting these components as add-on's to a larger and implementation intensive reconstruction program. (2) Consider putting progress on the preventive/forward looking activities as conditions for disbursement on the reconstruction components. (3) Develop self-standing operations with preventive/forward looking objectives, i.e., not linked to any reconstruction activities. (4) Prepare the preventive/forward looking components in more detail (at least agreed-on TORs) before Board approval.
- Maintain reasonable Quality at Entry even for urgent projects: The Bank made a significant amount of funding available within six months after the earthquake. However, funding in place proved not to be the key constraint. Instead, poor implementation capacity as well as limited absorptive capacity locally meant that it took two years for the reconstruction activities to start,

and three years to finish. More attention to preparation, development of bidding documents and the creation of a better equipped PIU would have contributed to speedier implementation. The urgency and pressure to move fast after disaster strikes make it tempting to focus on making money available fast, and to push the more difficult problems aside. Would an extra six months of preparation of the original project have led to the completion of reconstruction after two years instead of three?

- Local involvement is key to success. The rural component rebuilding barns was a big success and quickly implemented as it closely involved the beneficiaries. It would have been interesting to know if closer community involvement in the identification and construction activities would have resulted in speedier implementation of other activities.
- Seek to limit the number of sectors included: The reconstruction activities covered almost every sector of the local economy, leading to a large number of contracts worth often small amounts of funding available for each activity. It would have been beneficial if the division of responsibilities between the Bank and other actors had left the project with 2-3 sectors to focus on. The initial delays could have been reduced if focus had been on, say, housing and hospitals only.
- Avoid extensions: Rather than extending the project and adding on two major components, it might have been better to allow the project to close after the original construction activities were completed. The extensions and added components (which were well designed and implemented) were really the result of excess funds being available. These were also activities of very small size and scope which would not have justified Bank intervention. The result was that a relatively small amount of loan proceeds (about US\$20 million) was used during the last four years, while the budget costs for this to happen from the Bank's side included supervision for four years and the drafting of two extensions. All in all, it would have been better to close the project in 1996 and identify new operations in response to future disasters on the basis of the merits of those cases.

## **9. Partner Comments**

*(a) Borrower/implementing agency:*

See attachment.

*(b) Cofinanciers:*

No comments were received from the two organizations involved in the Erzincan Reconstruction Program, i.e., the UNDP and the Council of Europe.

*(c) Other partners (NGOs/private sector):*

N/A

## **10. Additional Information**

N/A

## Annex 1. Key Performance Indicators/Log Frame Matrix

### Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR	Actual/Recent Estimates
Restoration of production capacity and employment in Erzincan local economy Restoration of production capacity and employment in the Senirkent and Sutculer local economies Strengthening the country's capacity to deal with future disasters		Regional GDP data at higher-than pre-disaster levels from 1996 onwards No data available. The urban economy appears restored in both cities  No data available

### Output Indicators:

Indicator/Matrix	Projected in last PSR	Actual/Recent Estimates
<p>A: Original Project Components</p> <p>1: Housing</p> <p>(a) Housing reconstruction of 250 Government apartments (80m2 each) and 940 cooperative apartments (100m2 each)</p> <p>(b) Housing rehabilitation/repair of 2700 cooperative apartments (100m2 each)</p> <p>2: Community facilities</p> <p>(a) Hospital reconstruction/rehabilitation Hospital 1: 275 beds Hospital 2: 100 beds Hospital 3: 100 beds Staff apartments: 500 x 75m2 Equipment: for 475 beds Rehabilitation Health Post</p> <p>(b) Schools reconstruction/rehabilitation Equipment: 1410 classrooms Teachers' housing: 300 units</p> <p>3: Shops and Businesses</p> <p>Reconstruction: 1300 units x 60m2 Rehabilitation: 2400 units x 80m2</p> <p>4: Public buildings</p> <p>Municipal offices reconstruction: 100 x 100m2 Municipal offices rehabilitation: 400 x 100m2 Bus terminal: 5000 pass/day Municipal workshops: 4 Sports arena rehabilitation</p>		<p>A: Original Project Components</p> <p>1: Housing</p> <p>(a) 252 Government apartments reconstructed, 354 cooperative apartments reconstructed</p> <p>(b) 777 cooperative apartments repaired</p> <p>2: Community facilities</p> <p>(a) Hospital reconstruction/rehabilitation Hospital 1: 150 beds and 60 beds in nurse lodgings (10595m2) Hospital 2: 100 beds and 60 beds nurse lodgings (10134m2) Hospital 3: 100 beds and 30 beds nurse lodgings and a heating facility building (9752m2) 500 staff apartments x 75m2 Equipment: delivered, except two contracts still pending Rehabilitation of Health Post canceled</p> <p>(b) Schools reconstruction/rehabilitation Equipment: Delivered without delays 300 teachers' apartments</p> <p>3: Shops and Businesses</p> <p>39 buildings in 10 groups 3 shopping centers</p> <p>4: Public buildings</p> <p>Municipal offices, 6,000m2</p> <p>Adult Education Center 2,900m2, Horticulture Research Center 3,675m2, National Education Center 3,792m2 Municipal Workshops 3,100m2 Rural Affairs Building 3,255m2 Bustermal 1253m2</p>

5. Infrastructure

(a) Municipal works

Water supply: repair 650 leaks, 1200m of damaged pipes in 60 locations, reconstruction

1300 inspection chambers and house connections, equipment for maintenance  
Ditch digging

Urban streets: resurface 20 kms

Solid waste landfill

Storm drainage

Sewage treatment plant

Traffic light system rehabilitation

Electrical distribution line repair: 5 km overhead and 1.5 kms underground

Electrical distribution transformers: 33

Rehabilitation transformation stations: 4

Improve network

Buildings: 4

(b) Equipment

(c) State and provincial roads;

100 kms of road repair

Equipment

6. Building demolition

Demolition: 360,000m<sup>2</sup> or about 100 large buildings, 400 small buildings and 3,700 dwellings

Debris removal: 625,000 m<sup>3</sup>

7. Rural development

Cattle barns: 2500 x 120m<sup>2</sup>

Storage barns: 1600 x 100m<sup>2</sup>

Animals: 10,900

MOA Heavy Equipment

Irrigation repair

Water supply repair

8. Sugar factory, civil defense

Repair sugar factory chimney

Materials, equipment for the civil defense department

5. Infrastructure

(a) Municipal works

Wastewater treatment plant

Solid waste Landfill

Sewerage, drainage, water supply and urban roads

Water meters and leak detection. 265 kms inspected, 300m<sup>3</sup>/hr of leaks detected and repaired

Traffic lights at 6 junctions

Electric network

(b) Equipment

10 dump trucks, 3 compression trucks, 1 forklift, 2 loaders, 2 excavators, 1 compactor, 1 bulldozer, 1 grader, 1 roller, 10 pick-ups, 1 sewerage truck, 1 crane-mounted truck, 1 landfill compactor.

(c) State and provincial roads;

canceled

8 dump trucks, 2 truck tractors, 1 tree transplanting machine, 10 camp trailers, 2 sprinkler trucks, 10 forklifts, 2 generators, 1 crawler tractor, 10 hydraulic breakers, 1 asphalt plant, 2 road marking machines, 2 bridge maintenance platforms, 5 mobile cranes, 1 wireless communication system

6. Building demolition

No data available/completed as planned

7. Rural development

2885 barns built

Irrigation: 27 village groups

Water supply 22 village groups

Rural Roads 7 groups

Animals 10348

Equipment: 2 vibrating rollers, 1 bulldozer, 1 grader, 2 wheel loaders

8. Sugar factory, civil defense

Sugar factory chimney repaired

Equipment: 5 rescue vehicles, 2 decontamination trucks

6 contracts for 12 lots of equipment

9. Project management automation

Replace MWPS management information system

10. Training and studies

(a) Loss reduction study:

- (i) revisions of Disaster Law; (ii) revisions of Reconstruction law, Building Code and other laws related to construction; (iii) microzoning plan for Erzincan; (iv) program of assessing and improving public buildings in Turkey
- (b) Training of construction industry
- (c) Earthquake Insurance Industry study
- (d) Urban vulnerability study
- (e) Emergency preparedness study

11. Project management

B. Components added at first project modification

1. Senirkent Rehabilitation Program

1.1 Infrastructure works and equipment

- (a) water supply and distribution network, wastewater network, storm water drainage network, and roads
- (b) Electrical distribution network

(c) Telecoms network

1.2. Flood & erosion Control

C: Components added at second project modification

9. Project management automation

Completed, but some software not accepted and contract with supplier terminated. Off the shelf software is used so the system works. Only some specific software is not in place – first 4 lots of 12. (adm, invest mon/eval, regulations, documents). The 486 PCs have been replaced.

10. Training and studies

- (i) A study to revise the Reconstruction law and include aspects on disasters was completed in draft September 1999;
- (ii) a Public Information Campaign and Development of Training Materials for the Construction Industry. Materials prepared and campaign was planned, but no campaign or training activities to date;
- (iii) Installation of a GPS system in the Marmara Region completed by November 1999

11. Project management

B. Components added at first project modification

1. Senirkent Rehabilitation Program

1.1. Infrastructure works and equipment

(a) Completed as planned 10/99

(b) Completed as planned 12/99; 6 transformer stations, 489 poles, related network and street lighting

(c) Canceled

1.2 Flood and Erosion Control

Completed as planned 6/99, 3.7 million trees planted, 24 thousand meters of fencing, 2,603 hectares planted.

C: Components added at second project modification



## Annex 2. Project Costs and Financing

Project Cost by Component (in US\$ million equivalent)

<b>Project Cost By Component</b>	<b>Appraisal Estimate US\$ million</b>	<b>Actual/Latest Estimate US\$ million</b>	<b>Percentage of Appraisal</b>
Erzincan Rehabilitation and Construction	242.50	160.50	66
Training, studies, management automation, project supervision and design	42.50	16.50	39
Senirkent Rehabilitation and Construction	0.00	16.20	
Sutculer Rehabilitation and Construction	0.00	4.50	
Istanbul and Izmir Hospital Retrofitting, Marmara GPS	0.00	4.00	
<b>Total Baseline Cost</b>	<b>285.00</b>	<b>201.70</b>	
<b>Total Project Costs</b>	<b>285.00</b>	<b>201.70</b>	
<b>Total Financing Required</b>	<b>285.00</b>	<b>201.70</b>	

Project Costs by Procurement Arrangements (Appraisal Estimate) (US\$ million equivalent)

<b>Expenditure Category</b>	<b>Procurement Method</b>			<b>N.B.F.</b>	<b>Total Cost</b>
	<b>IGB</b>	<b>NCB</b>	<b>Other</b>		
<b>1. Works</b>	0.00 (0.00)	142.90 (142.90)	34.20 (34.20)	0.00 (0.00)	177.10 (177.10)
<b>2. Goods</b>	20.70 (20.70)	40.90 (40.90)	3.60 (3.60)	0.00 (0.00)	65.20 (65.20)
<b>3. Services</b>	2.50 (2.50)	40.20 (40.20)	0.00 (0.00)	0.00 (0.00)	42.70 (42.70)
<b>4. Miscellaneous</b>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<b>5. Miscellaneous</b>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<b>6. Miscellaneous</b>	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<b>Total</b>	<b>23.20 (23.20)</b>	<b>224.00 (224.00)</b>	<b>37.80 (37.80)</b>	<b>0.00 (0.00)</b>	<b>285.00 (285.00)</b>

**Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US\$ million equivalent)**

Expenditure Category	Procurement Method <sup>1</sup>			N.B.F.	Total Cost
	ICB	NCB	Other <sup>2</sup>		
1. Works	0.00 (0.00)	101.29 (0.00)	23.77 (0.00)	0.00 (0.00)	125.06 (0.00)
2. Goods	14.73 (0.00)	29.10 (0.00)	2.56 (0.00)	0.00 (0.00)	46.39 (0.00)
3. Services	1.77 (0.00)	28.48 (0.00)	0.00 (0.00)	0.00 (0.00)	30.25 (0.00)
4. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
5. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
<b>Total</b>	16.50 (0.00)	158.87 (0.00)	26.33 (0.00)	0.00 (0.00)	201.70 (0.00)

<sup>1/</sup> Figures in parenthesis are the amounts to be financed by the Bank Loan. All costs include contingencies.

<sup>2/</sup> Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

**Project Financing by Component (in US\$ million equivalent)**

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	Bank	Govt.	CoF.	Bank	Govt.	CoF.	Bank	Govt.	CoF.
Reconstruction, equipment and infrastructure	242.50	189.70		189.15	0.00		78.0	0.0	
Project management, training and studies	42.50	12.00		12.34	0.00		29.0	0.0	

## **Annex 3: Economic Costs and Benefits**

### **1. Rebuilding the Erzincan Economy**

Analysis of available regional GDP data for Erzincan suggest that the Erzincan economy was rebuilt in the 3-4 years following the disaster, although it is difficult to say how much of this is due to the reconstruction program. The earthquake caused a 10-14 percent reduction in economic activity in 1992 and 1993. This was followed by a local "boom" in 1994 probably caused by the reconstruction activities. The Erzincan region GDP was about US\$260 million in 1992, implying that the Bank's funding of \$180 million for the region, as well as the originally planned overall US\$650 million reconstruction package spent over 3-4 years were very large interventions. This was followed by a return to higher-than-1991 GDP levels from 1995 onwards with continued growth in 1996 and 1997. The "economic loss" suffered can be illustrated by the fact that the economic growth in Erzincan was limited to 9.4 percent between 1991 and 1997, while the corresponding figure was 14.4 percent for eastern Turkey, and 33.5 percent for Turkey as a whole.

A more detailed review shows that in 1992, the year of the earthquake, the Erzincan Region's economy shrunk by 2.3 percent. This contraction should be compared with a positive growth rate of 4.5 percent for eastern Turkey this year, and of 6 percent for Turkey as a whole. Assuming that the Erzincan economy would have performed as the rest of eastern Turkey had there been no earthquake, one can assume that the earthquake caused a contraction of the economy in 1992 of 6-8 percent. In 1993, the Erzincan economy continued to contract by 0.5 percent, while eastern Turkey and Turkey as a whole grew by 3.7 percent and 8 percent respectively, leading to an assumption that the earthquake caused a further contraction of 4-6 percent this year. The accumulated effect of the disaster could then be estimated at 10-14 percent of the region's GDP. In 1994, the Erzincan economy grew by 7.9 percent, possibly reflecting the reconstruction efforts, while the rest of eastern Turkey contracted 0.5 percent. The slowing down of the reconstruction work led to regional GDP falling by 3.4 percent in 1995, but the activity level settled at just above the 1991 (pre-disaster) level. 1996 saw a GDP expansion of 0.9 percent which increased to a respectable 7 percent in 1997, the last year for which data is available.

There are no statistics illuminating the dynamic process whereby the Erzincan economy was reconstructed. However, anecdotal evidence indicates that many of the entrepreneurs and richer parts of the population left Erzincan after the earthquake. Many of those who could leave did, and settled in other parts of Turkey, mainly in the economically more active western parts. Many of those who left were owners and operators of factories and businesses, and in many cases they appointed caretakers or managers to take over. Demographically, therefore, the earthquake caused out-migration of the richer and most enterprising people which was matched by some in-migration from the surrounding areas.

### **2. Project Components**

The project components are summarized as follows:

- A: Housing, total cost US\$44.2 = 22 percent of total project cost, estimated IRR = 11 percent
- B: Shops and businesses, total cost US\$22.5 million = 11 percent of total project cost, estimated IRR = 7 percent
- C: Hospitals, total cost US\$35 million = 17 percent of total project cost, low costs per units, appropriate standards

- D: Equipment, total cost US\$22 million = 11 percent of total project cost
- E: Other civil works, infrastructure, total cost US\$65 million = 33 percent of total cost
- F: Consultants services, total cost US\$12 million = 6 percent of total project cost

*A: Erzincan Housing Component*

- Benefits: 252 reconstructed government apartments, 500 apartments for hospital staff, 300 apartments for teachers, 354 reconstructed cooperative apartments, 777 repaired cooperative apartments; in total 2,183 apartments of on average 90m<sup>2</sup>.
- Value: The market value of each apartment is assessed at \$200 per month.
- Costs: Three contracts of a total of \$44.16 million, or \$20,200 per apartment. This amounts to 22 percent of total project cost (at \$200 million).
- Rate of Return: Comparing the assessed market rental value with the costs for the three reconstruction/repair contracts yields a rate of return of 11 percent. Key assumptions: Costs \$10 million the first year and \$34.16 the second year. Benefits starting the third year and lasting for 25 years.

*B: Shops and Businesses Component*

- Benefits: 387 shops reconstructed in six shopping centers, 512 shops rehabilitated in 39 different buildings, 275 offices reconstructed in six shopping centers, 143 apartments in 39 different buildings.
- Value: The rental market value is assessed at \$130 per month for each shop, \$50 per month for each office, and \$200 per month for each apartment. Average rental value for each unit in this component is \$155 per month.
- Costs: Three contracts of in total \$22.5 million, or \$16.5 thousand for each unit. This amounts to 11 percent of total project cost.
- Rate of Return: Comparing the assessed market rental value with the costs for the three reconstruction/repair contracts yields a rate of return of 7 percent. Key assumptions: Costs \$5 million the first year and \$17.5 the second year. Benefits starting the third year and lasting for 25 years.

*C: Hospitals Component*

- Benefits: Three hospitals with a total of 350 beds were reconstructed, furnished and equipped. This included 150 associated nurse lodgings.
- Costs: Total cost for the rehabilitation/reconstruction was \$20.5 million, and the furniture and equipment costs amounted to \$14.4 million. This is equivalent to 17 percent of total project cost. This corresponds to 85m<sup>2</sup> per bed, \$59 thousand per bed in rehabilitation/reconstruction costs, \$41 thousand in cost per bed for furniture and

equipment, or a total cost per bed of \$100 thousand. Per square meter, the costs are \$683 for the reconstruction, and \$476 for furniture and equipment, in total \$1,059 per square meter.

The costs for this component are very low and the standards appropriate. The 85m<sup>2</sup> per bed compares to a norm of 100m<sup>2</sup> in many industrialized countries. The \$1,059 total cost per square meter compares to a figure of \$1,700 for a recently completed Bank supported medical facility in Estonia (excluding beds). The total cost per bed, at \$100 thousand, compares to an industry average of \$250-350 thousand for first rate hospitals in many industrialized countries, with \$120 thousand being the benchmark for less modern facilities in poorer countries.

*D: Equipment (excluding hospital equipment and furniture)*

About US\$22 million, or 11 percent of total project cost, was used for equipment

*E: Civil Works, Buildings, Infrastructure (other than housing, hospitals, shops and businesses)*

US\$65 million, 33 percent of total cost

*F: Consultants Services*

US\$12 million, 6 percent of total cost

#### Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle Month/Year	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
	Count	Specialty	Implementation Progress	Development Objective
<b>Identification/Preparation</b> 04/92	6	1 Economist, 1 Reconstruction Specialist, 1 Housing Specialist, 1 Water & Sanitation Specialist, 1 Seismic Expert, 1 Post-Disaster Specialist		
<b>Appraisal/Negotiation</b> 06/92	4	1 Economist, 1 Financial Specialist, 1 Procurement Specialist, 1 Engineer		
<b>Supervision</b> 08/92 09/92 11/92 09/93 06/94 12/94 02/95 10/95 07/97 10/98 06/99 06/00	2 1 2 3 2 2 2 2 2 2 1 2	1 Engineer, 1 Procurement Disaster Prevention 1 Engineer, 1 Procurement 1 FMS, 1 Engineer, 1 Procurement 1 FMS, 1 Engineer 1 FMS, 1 Engineer 1 FMS, 1 Engineer Engineer 1 FMS, 1 Engineer 1 FMS, 1 Engineer 1 Engineer 1 FMS, 1 Engineer	   S S S S S S S S S S	   S S S S S S S S S S
<b>ICR</b>				

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US\$ (,000)
Identification/Preparation	34.2	95.3
Appraisal/Negotiation	35.4	105.6
Supervision	233.0	420.0
ICR		
Total	302.6	620.9

Note: The figures for "Supervision" include those for "ICR"

**Annex 5. Ratings for Achievement of Objectives/Outputs of Components**

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	<i>Rating</i>				
<input checked="" type="checkbox"/> <i>Macro policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Sector Policies</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input checked="" type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Physical</i>	<input checked="" type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Financial</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Institutional Development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Environmental</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<i>Social</i>					
<input checked="" type="checkbox"/> <i>Poverty Reduction</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Gender</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA
<input checked="" type="checkbox"/> <i>Private sector development</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input checked="" type="checkbox"/> <i>Public sector management</i>	<input type="radio"/> H	<input type="radio"/> SU	<input checked="" type="radio"/> M	<input type="radio"/> N	<input type="radio"/> NA
<input type="checkbox"/> <i>Other (Please specify)</i>	<input type="radio"/> H	<input type="radio"/> SU	<input type="radio"/> M	<input type="radio"/> N	<input checked="" type="radio"/> NA

## Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

### 6.1 Bank performance

#### Rating

- Lending
- Supervision
- Overall

- HS  S  U  HU
- HS  S  U  HU
- HS  S  U  HU

### 6.2 Borrower performance

#### Rating

- Preparation
- Government implementation performance
- Implementation agency performance
- Overall

- HS  S  U  HU

## **Annex 7. List of Supporting Documents**

Turkey - Erzincan Region Earthquake Rehabilitation Project, Preliminary Findings of the World Bank Mission on Damage and Needs Assessment, The World Bank, April 1992.

Report and Recommendation of the President of the International Bank for Reconstruction and Development to the Executive Directors on a Proposed Loan in an Amount Equivalent to US\$285 million to the Republic of Turkey for an earthquake Rehabilitation and Reconstruction Project, June 1, 1992, Report No. P-5810-TU.

Proposed Amendments to the Loan Agreement to Support the Senirkent Emergency Reconstruction Program, Turkey, Earthquake Rehabilitation and Reconstruction Project (Loan 3511-TU), the World Bank, November 20, 1995.

Proposed Amendments to the Loan Agreement to Support the Sutculer Emergency Reconstruction Program and the Design of Seismic Retrofitting of Hospitals in Istanbul and Izmir, Turkey, Earthquake Rehabilitation and Reconstruction Project (Loan 3511-TU), the World Bank, June 5, 1997.

Progress Report (No. 1-31), Disaster Rehabilitation and Reconstruction Project (Loan No: 3511A-TU Republic of Turkey, Prime Ministry, Project Implementation Unit, from 1992 to 2000.

Quality of Supervision Assessment, Turkey Earthquake Reconstruction ID-9099, Quality Assurance Group, The World Bank, July 20, 1999.



**REPUBLIC OF TURKEY**  
**PRIME MINISTRY**  
(PROJECT IMPLEMENTATION UNIT)

**IMPLEMENTATION COMPLETION  
REPORT  
(ICR)**

**FOR**

**ERZINCAN EARTHQUAKE**  
**REHABILITATION AND**  
**RECONSTRUCTION (ERRP) PROJECT**

**(LOAN NO: 3511 A-TU)**



# **ERZINCAN EARTHQUAKE REHABILITATION AND RECONSTRUCTION PROJECT**

## **INTRODUCTION**

This Report is prepared for purposes of the Implementation Completion Report (ICR) in accordance with the World Bank procedures.

## **THE PROJECT**

The earthquake experienced by Turkey on March 13, 1992 caused extensive damage to Erzincan city and its surrounding area in northeast Turkey. The most serious damage affected a 400m-wide band on both sides of Erzincan's main street. The Municipal Buildings, markets, schools and housing were severely damaged.

In response to the Erzincan Earthquake, the Republic of Turkey has received a loan from the International Bank for Reconstruction and Development (IBRD) in various currencies towards the cost of the Earthquake Rehabilitation and Reconstruction Project in Erzincan, (known hereinafter as "ERRP"). The scope of the project was amended to finance Senirkent project, Sütçüler project and Hospital Retrofitting Project from the same loan.

The responsibility for the implementation of the ERRP was allocated to a Minister of State and Project was implemented by the Housing Development Administration (HDA) through its Project Coordination Unit (PCU).

Erzincan Earthquake Rehabilitation and Reconstruction Project has been in effect since July 27, 1992, the date of signing the Loan Agreement No. 3511-TU and approved by the Council of Ministers on August 6, 1992 with Decree no. 92/3352. The scope of the ERRP is defined in detail in the Report of the World Bank no. P-5810-TU dated July 1, 1992.

Housing Development Administration (HDA) was authorized to implement the project based upon the protocols signed between the Treasury and HDA dated November 11, 1992, March 11, 1996 and August 25, 1997.

The Loan Agreement was revised to include Senirkent Project on January 19, 1996 and hence the title of the Project was changed as "DISASTER REHABILITATION AND RECONSTRUCTION PROJECT", and the date of termination of the Loan was extended from June 30, 1996 to December 31, 1999.

Second amendment to the Loan was signed on August 22, 1997 to permit financing of reconstruction and rehabilitation of flood-damaged infrastructure at Sütçüler and the design of seismic retrofitting of hospitals in Ýstanbul and Ýzmir and also to cancel US\$ 42 million of unused funds from the loan. The date of termination of the Loan was extended to June 30, 2000.

The Loan Agreement has become effective since September 18, 1992 as per condition of the Article V of the Agreement.

This report comprises a brief description of each project component.

## **PROJECT MANAGEMENT**

The institutional framework for the execution of the ERRP is set out in the World Bank Report No. P-5810-TU. The responsibility for the overall coordination of the Project has been

allocated to the Minister of State. The Housing Development Administration (HDA) has been entrusted with the authority and responsibility for the implementation of the Project. The HDA, in turn, had carried out its activities under the Project through the Project Coordination Unit (PCU) and the Erzincan Management Unit (EMU). Formal terms of reference have been implemented between HDA and PCU and EMU for this purpose. PCU and EMU were established in 1992 in Ankara and in Erzincan respectively. However, EMU was closed down on January 31, 1996 upon completion of the main site activities in Erzincan. The Project was also subject to the overall policy guidance of a Steering Committee comprised of various Ministries and Agencies.

All Ministries/Agencies in the Project were required to procure their respective works, goods and services under the coordination of the HDA/PCU. Therefore the implementation of the Project involved the HDA/PCU, amongst others, in the following range of activities:

- Co-ordination of all project related activities of the various Ministries/Agencies for which works, equipment and goods formed part of the Project,
- Procurement of works, goods and services on behalf of various Ministries/Agencies,
- Maintenance of and disbursement of Finances in respect of the Project Works,
- Recruitment of Advisory Services,
- Responsibility for the day-to-day implementation of the Project,
- Administration of Contracts with Contractors and Consultants, etc. including review and approval of all documents prepared for the various contracts.

However, it had turned out that HDA/PCU had to procure major part of the goods and works on behalf of the Ministries/Agencies to speed up the implementation of the whole program.

The "PCU" formed under Earthquake Rehabilitation and Reconstruction Project has been reorganized and become (PIU) Project Implementation Unit since October 1<sup>st</sup>, 1998, to Implement "TEFER" Project as well.

## **PROJECT DESCRIPTION**

ERRP Project was financed for demolition, reconstruction, rehabilitation and repair activities in the urban and rural areas including:

- cooperative and government housing, hospitals, office and shop buildings and key infrastructure,
- procurement of critical commodities including livestock, and
- training and studies to reduce earthquake vulnerability.

A detailed description of the Project is given below.

### **I. ERZÝNCAN PROJECT**

#### **I-1 Housing**

##### **(i) Works**

The Housing Component consisted of the reconstruction of Government Apartments (252 units), housing for medical staff (500 units) and teachers (300 units), and reconstruction,

rehabilitation and repair of Co-operatives houses (approximately 777 units rehabilitation and repair, 354 units reconstruction).

Three of the Housing Contractors : ÝÇTAP, SUTEK and ERE had lawsuits against HDA regarding application of base index and time extension claims.

The court cases with SUTEK were resulted in favour of the HDA. The other court cases with ÝÇTAP and ERE for the time extension is still underway.

(ii) Consultancy Services

The Consulting Services for the implementation of this component was provided by SEYAP/TÝMAT Consortium.

Despite of PIU's continued efforts to maintain the contract with the Consultants, their uncompromisable attitude with the contractors, PIU and even among themselves brought the progress of this component to a halt. Therefore the Contract with the consultant was terminated on 23.08.1996 and consequently their securities were turned into cash to indemnify the PIU's losses. A court case is still underway regarding the termination of the consultants' contract.

**I -2 Community Facilities - Hospitals**

(i) **Works**

The Community Facilities Component of the ERRP consisted of reconstruction of the State Hospital Complex, reconstruction of the Military Hospital, reconstruction of the Social Security Hospital, rehabilitation of a Health Post and procurement of hospital equipment and furniture. The details of the works are as follows:

- (i) State Hospital : General Hospital (150 beds) with Nurse Lodgings (60 beds) and rehabilitation of existing buildings at this complex.
- (ii) Social Security Hospital: General Hospital (100 beds) with Nurse Lodgings (60 beds)
- (iii) Military Hospital : General Hospital (100 beds) with Nurse Lodgings (30 beds) and a Heating Facility Building.

The construction of the hospital buildings were completed on the dates indicated in Annex A incorporated in this report. The hospitals have been in service since May 1996.

(ii) **Consulting Services**

Consulting Services for the implementation of this component was provided by VAMED/Prokon Consortium.

(iii) **Goods**

The suppliers of both medical equipment and furniture for the aforementioned hospitals also completed their contractual obligations.

**I -3 Schools**

School equipment and furniture damaged during the earthquake were replaced in Erzincan and Tunceli.

All of the Suppliers completed their contractual obligations.

**I -4 Shops/Businesses**

**(i) Works;**

The Shops/Businesses Component consisted of the reconstruction, rehabilitation and repair of shops/businesses damaged by the earthquake at various locations in Erzincan. This component of the project was fully completed and the buildings were handed over to the owners.

**(ii) Consulting Services;**

The Consulting Services for the implementation of this component was provided by YALÇIN TEKNİK / LOUIS BERGER Joint Venture.

**I -5 Municipal Infrastructure Works and Public Buildings**

**(i) Works;**

This component of the ERRP involved mainly the Municipal Infrastructure Works in Erzincan, Municipal Offices, Public Buildings and procurement of equipment for the Municipality of Erzincan.

Stadium wall, Adult Education Center and Agricultural Research Center Buildings, Bus Terminal and Municipal Building under Public Buildings Package 1 (WPB-1) and Rural Affairs Administration Building, National Education Building and Municipal Workshops under Public Buildings Package 2 (WPB.2) were completed and handed over to the users.

The Treatment Works and the Sanitary Landfill works-Infrastructure Works Package No : 1 were completed, and handed over to the Municipality.

Infrastructure Works Package No : 2 (WIF-2) including rehabilitation and reconstruction of water distribution network, wastewater and stormwater drainage network and roads were also completed and handed over to the Municipality.

**Traffic Lights**

The works under the Contract for the rehabilitation and reconstruction of Traffic Lights in Erzincan with ULTRA were completed, taking over certificates were issued and handed over to the Municipality. ULTRA raised some claims regarding the "escalation" of the prices which were not acceptable to the Consultants and appealed to the court. The court's decision was in favor of the HDA/PCU.

**(ii) Consulting Services**

The Consulting Services for the implementation of this component was provided by COWI/TEMAT Joint Venture.

## **I -6 State and Provincial Roads**

### **(i) Component Description**

This component of the ERRP originally consisted of the repair/rehabilitation and reconstruction of about 100 km highways between Refahiye-Erzincan-Tercan Road and the procurement of equipment.

Although the road construction part of this component was cancelled, following the negotiations between the Treasury and the Bank for revitalization of the project, it was decided to continue to finance this component under the ERRP in 1997 (Please see prg.2.13.1).

Procurement of the equipment for KGM was fully completed and handed over.

## **1 -7 Buildings Demolition**

This component of the project was fully completed.

## **1 -8 Rural Development**

The Rural Development Component of the ERRP consisted of:

Replacement of Animals Operational Costs & Debris Removal  
Procurement of equipment,  
Construction of barns & supervision,  
Rural water supply works,  
Rural irrigation works, and  
Rural road works.

All of the works and procurement of goods regarding this component were fully completed.

## **1 -9 Sugar Factory/Civil Defense**

Two separate elements are included under this project component :

- repairs and reconstruction of the minor damages and the chimney of the Sugar Factory, and
- procurement of equipment for the General Directorate of Civil Defense.

Repair and reconstruction works for the Sugar Factory were fully completed.

Five (5) rescue vehicles and the decontamination systems were procured and delivered to General Directorate of Civil Defense.

## **1 -10 Electrical Works**

This component of the ERRP comprises the repair, rehabilitation and reconstruction of electrical works in Erzincan.

This project was implemented by the Turkish Electricity Authority (TEDAŞ) under the coordination of PIU. The works are completed.

## 1 -11 Project Management Automation

### (i) Component Description

Under this component of the ERRP, by reviewing the existing information system of the MPWS, the necessary computers, software, training and technical assistance were supposed to be obtained.

The consulting services to implement the Project Management Automation were provided by Middle East Technical University (METU).

All software and hardware were delivered, and final acceptance certificates were issued for all lots except Lots 1, 2, 3 and 4 involving some specific software for MPWS. In spite of several attempts, the Supplier could not succeed to finalize the specific software under Lots 1 through 4.

The specific software developed by the Supplier was eventually tested and commissioned by the MPWS and Consultants in June 2000. Both found that the specific software was not acceptable. Therefore, by considering also that the loan was no longer to be extended, the Contract with Siemens/Nixdorf was terminated for the Supplier's Default by the PM/PIU and the supplier's performance security was forfeited.

## 1 -12 Training and Studies

A seismic risk prevention and mitigation program consisting of technical training and studies was carried out together with the General Directorate of Disaster Affairs (GDDA) of the Ministry of Public Works and Settlement (MPWS) under this component of the ERRP.

The major achievements in this component of ERRP are as follows :

- a) A training course was conducted by the GDDA on small scale in 1993.
- b) The by-laws regarding construction of buildings to include earthquake resistance were amended by the MPWS.
- c) The Earthquake map was prepared and distributed by the GDDA.
- d) The Weak Motion and Strong Motion seismic equipment was procured and handed over to the GDDA.
- e) **Consulting services to determine the scope of the amendments to the existing Law of Construction to include the measures for disasters:**

The research to amend the construction Law No: 3194 and its by-laws for the inclusion of a new construction control system and measures of resistance against disasters were carried out together with the Ministry of Public Works and Settlement (MPWS).

The Consultants' Services of this component were provided by the Middle East Technical University (METU).

METU submitted the Final Report on September 20, 1999. Since the approval of MPWS was provided on time, PIU prosecuted its comments to the Consultants for the completion of Final Report Stage and approved the report on January 20, 2000.

- f) **A campaign for raising public consciousness on precautions against natural disasters to minimize the damages and for training of the construction workers and foremen on construction techniques :**

The studies regarding the preparation of campaign materials were carried out together with the Ministry of Public Works and Settlement (MPWS) under this component.

The Consultants' Services of this component were provided by EMA and the campaign materials within the scope of two sub-components of this study were completed and submitted to MPWS. Since the approval of the MPWS was provided on time, the PIU approved the documentation and the report. Subsequently the Consultants reproduced the campaign materials and submitted to the MPWS to conduct the campaign.

## **II. THE PROJECTS INCLUDED LATER IN THE ERRP**

Following project components were decided to be incorporated in the ERRP with the consent of the Bank due to the fund remained from the Erzincan Project completed.

### **II -1 State and Provincial Roads**

As stated before, ERRP was originally consisted of this component as Refahiye-Erzincan-Tercan Road. Since the KGM was not able to finalize the tender procedure it was decided to cancel this part of the ERRP. Later on, it was decided to continue to finance this component under the ERRP following the negotiations with the Bank.

A protocol was prepared by the HDA and signed with the KGM on 23.07.1997 following the Bank's no objection dated June 30, 1997. KGM was informed that the proper designs had to be prepared within 1997 before tendering the construction works to bring the Project to success.

The KGM insisted on using the bidding documents prepared for some other World Bank financed project without any acceptable design, technical specifications and BOQs despite of PIU's comments and objection. Therefore, PIU submitted the documents to the Bank together with their comments for their "no-objection". Since no sufficient time was left for the completion of this component it was decided to drop out this component.

### **II -2 Network of Continuously Recording GPS Stations**

This component of the ERRP consisted of establishing a continuously recording GPS network in the Marmara Region. This component was implemented by the Scientific and Technical Research Council of Turkey (TÜBÝTAK) under the coordination of the PIU.

A protocol was signed between the HDA and the TÜBÝTAK on 23.06.1997 following the Bank's no objection received on June 19, 1997.

The following equipment was procured under this Component.

- i) Lot 1- GPS Observation Networks,
- ii) Lot 2- Unix Based Computers and Facilities
- iii) Lot 5- Equipment and Tools For Various Seismological Studies
- iv) Lot 6- Seismological Sensors
- v) Lot 7- Broadband Sensors
- vi) Lot 8- Seismological Recorders and Facilities
- vii) Lot 9- Software for GIS
- viii) Lot10- Telecommunication Infrastructure

All the items included in the Protocol signed with TUBITAK were fully completed.

The details for each Components of Erzincan Project are given in Annex A enclosed herewith.

## **II -3 SENÝRKENT PROJECT**

The works under Senirkent Project were grouped into a number of components as follows :

- (i) Repair, Rehabilitation and Reconstruction of Municipal Infrastructure (water supply and distribution network, wastewater and storm water drainage networks and roads)
- (ii) Repair and Rehabilitation of Electric Distribution Networks
- (iii) Repair and Rehabilitation of Telecommunication Network
- (iv) Flood and Erosion Control Project
- (v) Afforestation Project

Agreements in the form of Protocols were signed between the HDA and the following authorities for the project components as indicated;

- (i) for the Municipal Infrastructure with Senirkent Municipality,
- (ii) for the Repair and Rehabilitation of the Senirkent Electricity Distribution Network with the General Directorate of the Turkish Electricity Distribution Corporation,
- (iii) for the Repair and Rehabilitation of the Telecommunication Network of Senirkent with the General Directorate of Turkish Telecommunication company,
- (iv) for the Isparta-Senirkent Flood and Erosion Control with General Directorate of the State Hydraulic Works,
- (v) for the Afforestation of the Catchment Areas of Dođru and Suyolu Creeks with the General Directorate of Afforestation,

All the works mentioned above were fully completed.

The details for each Components of Senirkent Project are given in Annex B enclosed herewith.

## **II - 4 SÝTÇÜLER PROJECT**

The components of Sütçüler Project may be summarized as follows :

- (i) Repair, Rehabilitation and Reconstruction of Municipal Infrastructure (water supply and distribution network, wastewater and stormwater drainage networks, simple wastewater treatment system and roads),
- (ii) Repair and Rehabilitation of Electric Distribution Network,
- (iii) Repair and Rehabilitation of Telecommunication Network,
- (iv) Flood and Erosion Control Project,
- (v) Afforestation Project, and
- (vi) Equipment for the operation and maintenance of the infrastructure systems.

Agreements in the form of Protocols were signed between the HDA and the following authorities:

- (i) Sütçüler Municipality,

- (ii) General Directorate of Afforestation (AGM),
- (iii) Turkish Electricity Distribution Corporation (TEDAŞ),
- (iv) General Directorate of the State Hydraulic Works (DSİ),

All the works mentioned above were completed.

The details for each Components of Sütçüler Project are given in Annex C enclosed herewith.

## **II -5 HOSPITALS RETROFITTING PROJECT**

26 hospitals in İstanbul and 31 hospitals in İzmir were surveyed to determine whether the hospitals had been designed and constructed to sufficient seismic resistance standards. Seismic retrofitting designs were prepared for the hospitals that need strengthening.

The Services under this Project were fully completed.

The details for this Project Component are also given in Annex C enclosed herewith.

### **FINANCIAL OBJECTIVES**

#### **Accounting and auditing**

PIU has developed its own accounting and budgeting system, on the basis of acceptable accounting principles in accordance with the International Accounting Standards and in line with the provisions of the Loan Agreement NO. 3511 A-TU.

All functions of the Accounting Department have been fully computerized. The billing system, general ledger, receivables, collections, fixed assets, inventories etc.. have been computerized through a fully integrated system.

Financial statements consisting of balance sheet, income and expenditure account, cash flow statements etc.. are prepared annually. Annual audits of the financial statements and the special account are systematically carried out by the Auditor of the Treasury of the Republic of Turkey.



# **ANNEX A**



## Category 1 : Civil Works

## ERZİNCAN PROJECT

1/4

Description	Contractor	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Comm. Date	Date of Taking Over/ Final Acceptance	Contract Amount	Curr.	Cost US\$
- PUBLIC BUILDINGS											
- I. Cont. Package (WPB1)	İNTEŞ	21.06.93	09.06.93	26.07.93	10.08.93	31.08.93	16.08.93	27.11.95/02.01.97	50,507,902,356	TL	3,211,874.07
- II. Cont. Package (WPB2)	GÜNAL A.Ş.	07.02.94	08.02.94	24.03.94	01.04.94	19.04.94	07.04.94	11.07.95/23.09.96	67,942,598,728	TL	2,793,458.96
Sub - Total									118,450,501,084	TL	6,005,333.03
- HOSPITALS											
- WHF1 (SSK)	İNTEŞ A.Ş.	25.11.93	19.11.93	14.01.94	22.02.94	07.03.94	04.03.94	14.11.95/14.11.96	117,293,777,015	TL	6,073,266.84
- WHF2 (Military Hosp.)	GÜNAL A.Ş.	25.11.93	19.11.93	14.01.94	21.02.94	01.03.94	28.02.94	10.11.95/10.11.96	115,226,538,464	TL	6,897,465.33
- WHF3 (State)	TEPE AĞAÇ META İnş. San. A.Ş.	25.11.93	19.11.93	14.01.94	15.02.94	28.03.94	28.02.94	10.11.95/10.11.96	132,173,639,000	TL	7,527,717.57
Sub - Total									364,693,954,479	TL	20,498,449.74
- HOUSING											
- I. Cont. Package (WH1)	İÇTAŞ	23.12.93	29.12.93	11.02.94	22.03.94	04.04.94	25.03.94	09.09.95/24.10.97	364,531,099,441	TL	13,852,192.74
- II. Cont. Package (WH2)	ERE	23.12.93	29.12.93	11.02.94	22.03.94	30.03.94	25.03.94	09.09.95/14.08.97	312,541,356,077	TL	12,470,460.99
- III. Cont. Package (WH3)	SUTEK	25.02.94	28.02.94	14.04.94	18.05.94	01.06.94	31.05.94	14.07.95/10.09.96	471,862,121,000	TL	17,830,522.56
Sub - Total									1,148,934,576,518	TL	44,153,176.29
- SHOPS/BUSINESSES											
- I. Cont. Package (WSB1)		22.06.93	21.06.93	05.08.93	cancelled in Dec. 1993						
- II. Cont. Package (WSB2)	İNTEŞ A.Ş.	08.02.94	04.02.94	22.03.94	01.04.94	15.04.94	08.04.94	10.11.95/11.12.96	148,021,155,500	TL	5,859,080.26
- III. Cont. Package (WSB3)	YENİGÜN A.Ş.	04.03.94	04.03.94	19.04.94	04.05.94	18.05.94	25.05.94	27.06.95/27.06.96	255,103,407,400	TL	9,346,238.71
- IV. Cont. Package (WSB4)	İÇTAŞ	25.03.94	01.04.94	16.05.94	08.06.94	23.06.94	13.06.94	22.09.95/02.12.96	247,765,489,658	TL	7,317,308.89
Sub - Total									650,890,052,558	TL	22,522,627.86
- MUN. INFRASTRUCTURE											
- I. Cont. Package (WIF1) (Tr. Plant & San. Land.)	ALARKO/VINSAN J	26.01.94	21.01.94	08.03.94	25.03.94	29.04.94	18.04.94	09.11.95/12.02.97	164,720,080,533	TL	7,298,045.46
- II. Cont. Package (WIF2) (Networks)	İÇTAŞ	26.01.94	21.01.94	09.03.94	14.04.94	22.04.94	18.04.94	15.10.96/15.10.97	276,226,143,409	TL	5,731,924.65
- Traffic Signals	ULTRA	15.09.94	07.10.94	31.10.94	28.11.94	28.12.94	06.12.94	06.12.96/08.12.97	2,679,919,200		71,118.66
Sub - Total									650,890,052,558	TL	13,101,088.77

## Category 1 : Civil Works

## ERZİNCAN PROJECT

2/4

Description	Contractor	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Comm. Date	Date of Final Acceptance	Contract Amount	Curr.	Cost US\$
- KGM (WKGM-1)		25.11.93	18.01.94	07.03.94	08.06.94	cancelled.	To be re-tendered				
- BARNs & STORAGE BARNs	By the beneficiaries				19.09.92		24.10.92	18.06.94	147,125,000,000	TL	13,091,826.67
Sub - Total									147,125,000,000	TL	13,091,826.67
<b>- RURAL DEVELOPMENT</b>											
<b>* Irrigation Projects</b>											
-Bayırbağ-Karakaya-Pişkıdağ	B. Dinçer	20.04.93	07.06.95	07.07.95	04.08.95	14.07.95	18.07.95	19.10.95	488,128,200	TL	
-Keklikkayası-Kurutilek-Demirk.	S. Demirdögen	20.04.93	29.07.93	11.08.93	02.09.93	07.09.93	23.09.93	27.06.94	427,325,182	TL	
-Dereyurt-Yalnızbağ	F. Alp	20.04.93	29.07.93	11.08.93	02.09.93	10.09.93	13.09.93	27.06.94	408,141,822	TL	
-Ekmekli-Heybeli	N. Batur	20.04.93	29.07.93	11.08.93	02.09.93	09.09.93	10.09.93	01.07.94	738,172,260	TL	
-Cevizli-Aydoğdu	N. K. Korkmaz	20.04.93	29.07.93	11.08.93	02.09.93	20.09.93	20.09.93	31.10.94	411,537,280	TL	
.Çaybaşı	N. Sazlı	20.04.93	29.07.93	11.08.93	02.09.93	07.09.93	08.09.93	07.10.94	296,962,903	TL	
.Çaybaşı Mak. Kazısı	Dön. Ser. İş.M	20.04.93	29.07.93	11.08.93	02.09.93	10.09.93	08.09.93	06.07.94	40,399,188	TL	
-Yayla başı Mercan Deresi	S. Sarak	20.04.93	29.07.93	11.08.93	02.09.93	13.09.93	14.09.93	18.07.94	485,898,150	TL	
-Geyikli	M. Yalçın	20.04.93	29.07.93	11.08.93	02.09.93	09.09.93	10.09.93	31.10.94	332,673,740	TL	
-Yeniköy	Y. Kurtaran	20.04.93	29.07.93	11.08.93	02.09.93	10.09.93	13.09.93	27.06.94	609,643,465	TL	
-Eşme pınarı	B. Dinçer	20.04.93	29.07.93	11.08.93	02.09.93	10.09.93	13.09.93	27.06.94	406,551,378	TL	
-Binkoç-Türkmenoğlu-Kilimli	E. Altun	20.04.93	29.07.93	11.08.93	02.09.93	13.09.93	14.09.93	31.10.94	490,317,878	TL	
-Beşgöze	S. Kılıçkırın	20.04.93	29.07.93	11.08.93	02.09.93	07.09.93	10.09.93	07.10.94	422,064,177	TL	
-Çörekli	Z. Sezgin	20.04.93	29.07.93	11.08.93	02.09.93	Jun-93	terminated		(291.919.820)	TL	
-Türkmenoğlu-Binkoç-Kilimli-Pool	Erbil Altun	20.04.93	16.05.94	17.06.94	24.08.94	15.07.94	20.07.94	16.01.95	512,300,470	TL	
-Pınarönü	B. Yılmaz	20.04.93	15.10.93	23.11..93	24.08.94	04.10.93	01.05.94	14.07.94	262,909,364	TL	
-Erdene-Derebağ		20.04.93	29.07.93	No bid							
-Günebakan-Buğdaylı-Başpınarı	F. Alp	20.04.93	15.10.93	23.11.93	24.08.94	04.01.94	01.05.94	28.07.94	232,210,419	TL	
-Oğulcuk-Tatlısı	A. Canpolat	20.04.93	15.10.93	23.11.93	24.08.94	13.01.94	01.05.94	07.10.94	440,038,727	TL	
.Davarlı	S. Kılıçkırın	20.04.93	15.10.93	23.11.93	24.08.94	04.10.93	01.05.94	31.10.94	283,933,842	TL	
.Davarlı Mak. Kazısı	Dön. Ser. İş.M	20.04.93	15.10.93	25.11.93	24.08.94	21.02.94	25.02.94	11.10.94	23,420,250	TL	
-Maksutluşağı	H. Tanyeli	20.04.93	15.10.93	23.11.93	24.08.94	10.01.94	25.02.94	16.01.95	146,342,991	TL	
.Koruyolu	M. Yalçın	20.04.93	15.10.93	23.11.93	24.08.94	10.01.94	25.02.94	16.01.95	474,084,726	TL	
.Koruyolu Mak. Kazısı	Dön. Ser. İş.M	20.04.93	15.10.93	25.11.93	24.08.94	21.02.94	25.02.94	11.10.94	46,840,500	TL	
-Çit	Ö. Gezici	20.04.93	07.06.95	07.07.95	04.08.95	21.07.95	08.08.95	15.07.96	1,269,742,140	TL	
-Sarıkoç	Merve Ltd.	20.04.93	07.06.95	07.07.95	04.08.95	31.08.95	01.09.95	11.07.96	1,058,208,480	TL	
-Koçkaya	E. Altun	20.04.93	15.10.93	24.11.93	24.08.94	06.01.94	01.05.94	16.01.95	441,171,592	TL	
.Hastarla	B. Dinçer	20.04.93	15.10.93	24.11.93	24.08.94	05.01.94	01.05.94	31.10.94	462,494,070	TL	
.Hastarla Mak. Kazısı	Dön. Ser. İş.M	20.04.93	15.10.93	25.11.93	24.08.94	21.11.93	25.02.94	25.10.94	19,509,068	TL	
-Ortaköy	N. K. Korkmaz	20.04.93	15.10.93	24.11.93	24.08.94	04.11.93	25.02.94	16.01.95	317,790,653	TL	
.Gelinpınarı	N. Batur	20.04.93	15.10.93	24.11.93	24.08.94	03.01.94	25.02.94	31.10.94	409,943,803	TL	
.Gelinpınarı Mak. Kazısı	Dön. Ser. İş.M	20.04.93	15.10.93	25.11.93	24.08.94	21.02.94	24.02.94	25.10.94	23,216,445	TL	

## Category 1 : Civil Works

## ERZİNCAN PROJECT

3/4

Description	Contractor	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Comm. Date	Date of Final Acceptance	Contract Amount	Curr.	Cost US\$
-Işıkpınar-Oğlaktepe	S. Demirdöğen	20.04.93	15.10.93	24.11.93	24.08.94	04.01.94	24.02.94	07.07.94	163,070,659	TL	
-Çadıkkaya	D. Serbay	20.04.93	15.10.93	24.11.93	24.08.94	10.01.94	24.02.94	07.10.94	106,576,279	TL	
-Kayacık	K. Akkaya	20.04.93	15.10.93	24.11.93	24.08.94	19.01.94	24.02.94	31.10.94	578,929,449	TL	
<b>* Water Supply</b>											
-Akyazı Grb.	S. Akdağ	12.11.93	17.11.93	20.12.93	02.09.93	18.02.94	16.05.94	10.09.94	245,480,000	TL	
-Hancıçiftliği	D. Serbay	12.11.93	17.11.93	20.12.93	02.09.93	17.03.94	11.05.94	16.09.94	35,200,000	TL	
-Yalınca Grb.	D. Serbay	12.11.93	17.11.93	20.12.93	02.09.93	17.03.94	02.05.94	16.09.94	71,148,000	TL	
-Oğlaktepe	N. K. Korkmaz	12.11.93	17.11.93	20.12.93	02.09.93	18.03.94	13.05.94	16.09.94	43,000,000	TL	
-Keklikkayası	Z. Sezgin	12.11.93	17.11.93	20.12.93	02.09.93	01.03.94	06.05.94	25.09.94	150,165,000	TL	
-Mecidiye	S. Erdogan	12.11.93	17.11.93	20.12.93	02.09.93	23.02.94	10.05.94	14.09.94	156,000,000	TL	
-Söğütözü	C. Yavuz	12.11.93	17.11.93	21.12.93	02.09.93	18.02.94	13.05.94	10.09.94	204,425,000	TL	
-Tandırılı	L. Akdemir	12.11.93	10.06.94	14.07.94	24.08.94	16.08.94	16.08.94	23.09.94	89,910,000	TL	
-Ekinci	L. Akdemir	12.11.93	17.11.93	21.12.93	02.09.93	18.02.94	05.05.94	23.09.94	203,000,000	TL	
-Pınaröntü	H. Tanyeli	12.11.93	17.11.93	21.12.93	02.09.93	10.03.94	11.05.94	15.09.94	140,360,000	TL	
-Erdene	H. Hisman	12.11.93	17.11.93	21.12.93	02.09.93	18.02.94	03.05.94	03.10.94	156,298,000	TL	
-Boğazlı	Şahinler Ltd.	12.11.93	17.11.93	22.12.93	02.09.93	23.12.93	03.05.94	25.09.94	236,425,000	TL	
-Yaylakent	C. Yavuz	12.11.93	17.11.93	22.12.93	02.09.93	18.02.94	03.05.94	15.09.94	210,270,000	TL	
-Çaltı	S. Yılmaz	12.11.93	17.11.93	22.12.93	02.09.93	01.03.94	03.05.94	03.09.94	275,220,000	TL	
-Atma	D. Egemen	12.11.93	10.06.94	14.07.94	24.08.94	04.08.94	08.08.94	08.11.94	445,500,000	TL	
-Kutluova Grb.	Z. Sezgin	12.11.93	17.11.93	22.12.93	02.09.93	01.03.94	25.05.94	23.09.94	325,375,000	TL	
-Sörek	A. Erdogan	12.11.93	17.11.93	22.12.93	02.09.93	18.12.93	02.05.94	12.09.94	102,960,000	TL	
-Ocak	Özkır Ltd.	12.11.93	17.11.93	23.12.93	02.09.93	15.02.94	05.05.94	20.06.95	545,232,000	TL	
-Yk. Yıldızören	E. Altun	12.11.93	17.11.93	23.12.93	02.09.93	22.03.94	16.05.94	25.11.94	307,720,000	TL	
-Beşkaya	O. Dumanlar	12.11.93	17.11.93	23.12.93	02.09.93	22.03.94	05.05.94	22.09.94	274,120,000	TL	
-Yamanlar	C. Akdemir	12.11.93	17.11.93	23.12.93	02.09.93	08.02.94	05.05.94	14.09.94	160,890,000	TL	
-Derebük	Y. Yavuz	12.11.93	17.11.93	23.12.93	02.09.93	18.02.94	05.05.94	15.09.94	155,400,000	TL	
<b>Road Works</b>											
-Kureşli-Sarıkkaya 1. Köprü İnş.	O. Han	20.04.93	21.06.95	21.07.95	04.08.95	08.08.95	08.08.95	07.06.96	576,423,000	TL	
-Kureşli-Sarıkkaya 2. Köprü İnş.	O. Han	20.04.93	30.07.93	18.08.93	02.09.93	Dec. 93	21.09.93	05.12.94	246,250,000	TL	
-Göyne-Baltaşı-Esenyurt	N. K. Korkmaz	20.04.93	30.07.93	18.08.93	02.09.93	Dec. 93	24.09.93	15.09.94	432,450,000	TL	
-Ekecik-Çamlımülk-Kamberağa	E. Altun	20.04.93	30.07.93	18.08.93	02.09.93	Dec. 93	15.09.93	22.11.94	299,700,000	TL	
-Otlukbeli-Boğazlı-Cennetp.-Karah	S. Demirören	20.04.93	18.04.94	18.05.94	24.08.94	09.06.94	10.06.94	13.10.94	469,496,700	TL	
-Oğulveren-Başbudak	S. Mallı	20.04.93	18.04.94	18.05.94	24.08.94	09.06.94	10.06.94	13.10.94	789,941,000	TL	
-Dikmen-Uğur- Sarıpınar	M. Atas	20.04.93	18.04.94	18.05.94	24.08.94	20.06.94	30.06.94	25.11.94	571,500,000	TL	
<b>Sub - Total</b>									<b>20,750,408,250</b>	<b>TL</b>	<b>909,093,81</b>

## Category 1 : Civil Works

## ERZINCAN PROJECT

4/4

Description	Contractor	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Comm. Date	Date of Final Acceptance	Contract Amount	Curr.	Cost US\$
- BUILDING DEMOL. & DEB. REM. - DSI & MOA	Ret. Payment				30.10.92 28.12.92			1992	7,631,983,000	TL	
* Erzincan Governor	various small contra	20.09.93									
- LOCAL PROCEDURE											
- Erz. Merk. 1.,3.,4.,5.,6.,8. Grup	Köy Hiz. İl Md.	20.09.93	02.12.93	11.01.94		11.01.94	02.04.94	15.07.94	2,170,000,000		
- Erz. Merk. 2. Grup	S. Demirdöven	20.09.93	02.12.93	10.12.93		24.12.93	24.12.93	28.12.93	600,000,000		
- Kemah Lisesi 7. Grup	İlke Tur	20.09.93	02.12.93	10.12.93		20.12.93	20.12.93	24.01.94	592,000,000		
- Erz. Merk. 10. Grup	S. Erdoğan	20.09.93	02.12.93	10.12.93		28.12.93	28.12.93	07.02.94	650,000,000		
- Erz. Merk. 11. Grup	Aydiner İnş.	20.09.93	02.12.93	10.12.93		25.12.93	25.12.93	03.01.94	560,000,000		
- Erz. Merk. 6. Grup	Eta İnş.	20.09.93	02.12.93	10.12.93		20.12.93	20.12.93	25.12.93	600,000,000		
- Erz. Merk. Köy. I. Grup	B. Bulut	16.05.94	29.09.94	30.09.94		07.10.94	12.10.94	01.11.94	440,000,000		
- Erz. Merk. Köy. II. Grup	S. Demirdöven	16.05.94	29.09.94	30.09.94		06.10.94	13.10.94	31.10.94	645,000,000		
- Erz. Merk. Köy. III. Grup	S. Erdoğan	16.05.94	29.09.94	30.09.94		06.10.94	13.10.94	27.10.94	480,000,000		
<b>Sub - Total</b>									<b>14,368,983,000</b>		<b>1,144,160.99</b>
- SUGAR FACTORY	Rec. Payment				15.02.94			23.02.94	11,385,783,892	TL	633,775.89
<b>Sub - Total</b>									<b>11,385,783,892</b>	TL	<b>633,775.89</b>
- TEK	SİMKO A.Ş.	25.03.94	22.06.94	22.08.94	15.11.94	13.12.94	27.12.94	05.04.96	49,340,176,375	TL	1,451,849.61
<b>Sub - Total</b>									<b>49,340,176,375</b>	TL	<b>1,451,849.61</b>

## Category 2: Goods

## ERZINCAN PROJECT

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Description	Supplier	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Date of Completion	Contract Amount	Curr.	Cost US\$
- PROCUREMENT OF ANIMALS	Local shopping from various suppliers					12.10.93	31.01.93	17.132.353.370.-	TL	2,122,016.76
	Sub - Total									2,122,016.76
- ERZINCAN MUNICIPALITY (G-3)										
* 10 Dump Truck + 3 Comp. Truck	BMC San. ve Tic. A.Ş.	03.05.93	10.05.93	12.07.93	01.09.93	23.09.93	18.11.93	12.436.473.000.-	TL	
* 1 Fork Lift	ITOCHU Corporation	03.05.93	10.05.93	12.07.93	01.09.93	15.10.93	29.08.94	5,229,000	JY	
* 2 Loaders	FIAT-HITACHI Const. Eqp.	03.05.93	10.05.93	12.07.93	01.09.93	15.10.93	16.05.94	13,254,584	TL	
* 2 Excavator, 1 Compactor 1 Bulldozer, 1 Grader & 1 Roller	ÇUKUROVA İTHALAT ve İHRACAT T.A.Ş.	03.05.93	10.05.93	12.07.93	01.09.93	12.10.93	20.07.95	276,700,000	IL	
* 10 Pick-Up	TOYOTASA Ot. San. Tic. A.Ş. & MITSUI & Co. Ltd.	03.05.93	10.05.93	12.07.93	01.09.93	02.11.93	23.06.94	51,691,960	TL	
* Sewerage Truck	GÜNERİ	03.05.93	10.05.93	12.07.93	01.09.93	05.10.93	25.11.93	694,000	USD	
Equipment for Sanitary Landfill								169,200,000	TL	
* Crane Mounted Truck	YOL-BAK	28.07.94	08.09.94	25.10.94	21.12.94	03.01.95	06.02.95	129,420	USD	
* Landfill Compactor	DYNAPAC	28.07.94	08.09.94	25.10.94	21.12.94	06.03.95	10.10.95	56,450,000	TL	
	Sub - Total							50,000,000	TL	2,298,942.14
- KGM										
KGM I. Package(G-4)										
* Tree-Transplanting Machine	TEMSA İnş. Tic. Gid. San. ve Tur. A.Ş.	27.04.93	17.05.93	19.07.93	01.09.93	14.10.93	15.02.94	146,750	USD	
* 2 Truck Tractors	Renault Vehicules Indus.	27.04.93	17.05.93	19.07.93	01.09.93	06.10.93	05.03.94	1,350,110	FRF	
* 8 Dump Trucks	Mercedes-Benz Türk A.Ş.	27.04.93	17.05.93	19.07.93	01.09.93	06.10.93	15.02.94	600,000	TL	
	Sub - Total							600,000	USD	948,649.97

## Category 2 : Goods

## ERZINCAN PROJECT

2/6

Description	Supplier	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by	Contract Signature Date	Date of Completion	Contract Amount	Curr.	Cost US\$
KGM II. Package (G-5) *Semi Trailer,10 Camp Trailer	İBRAHİM ÖRS	13.12.93	20.12.93	10.02.94	05.05.94	26.05.94	22.07.94	209.700 15.000.000	USD TL	
*2Sprinkler Truck,10Roller,3Bridge Maintenance Truck	KATMERCİLER	13.12.93	20.12.93	10.02.94	05.05.94	26.05.94	13.08.94	709.100 80.000.000	USD TL	
*2Wheel Loader,4Forklift,(Gr.B), 2Generator(Gr.A)	ÇUKUROVA	13.12.93	20.12.93	10.02.94	05.05.94	07.06.94	21.07.94	267.000 360.527 TL 106.000.000	USD DM TL	
*1Crawler Excavator	MITSUBISHI	13.12.93	20.12.93	10.02.94	05.05.94	10.06.94	02.05.95	22.850.039 2.300	JY USD	
*10Hydraulic Breaker	İNDECO	13.12.93	20.12.93	10.02.94	05.05.94	14.06.94	29.11.94	134.391 40.000.000	USD TL	
*1Asphalt Plant-Gr.A	ERG İNŞ.	13.12.93	20.12.93	10.02.94	05.05.94	03.06.94	23.10.94	188.200	USD	
*2Road Marking Machine	GUBELA	13.12.93	20.12.93	10.02.94	05.05.94	30.06.94	03.08.95	307.675	USD	
*2Bridge Maintenance Platform	BARIN	13.12.93	20.12.93	10.02.94	05.05.94	07.06.94	14.01.95	1.062.390.000 192.000.000	ITL TL	
*4Mobil Crane(Gr.A&B)	SOCIETE PPM	13.12.93	20.12.93	10.02.94	05.05.94	04.08.94	01.02.95	2.903.691,4 30.708.000	FF TL	
*1Mobil Crane(Gr.C)	MANESSMANN DEMAG	13.12.93	20.12.93	10.02.94	05.05.94	06.07.94	17.11.94	1.454.756 10.000.000	DM TL	
*4Forklift(Gr.A)	TEMSA TERMOMEKANİK	13.12.93	20.12.93	10.02.94	05.05.94	02.06.94	18.07.94	82.200	USD	
*Wireless Comm. Systems	SP RADIO A/S	13.12.93	20.12.93	10.02.94	05.05.94	30.05.94	23.05.97	978.350	USD	
<b>Sub - Total</b>										<b>5.353.000.59</b>

## Category 2 : Goods

## ERZİNCAN PROJECT

3/6

Description	Supplier	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Date of Completion	Contract Amount	Curr.	Cost US\$
KGM III (Package G-7) * 2 Generators * 1 Asphalt Plant	IŞBİR ERG	18.05.95 18.05.95	06.06.95 06.06.95	25.07.95 25.07.95	24.08.95 24.08.95	18.10.95 02.10.95	16.11.95 21.12.95	35,400 TL 179,000 TL	USD USD	
<b>Sub-Total</b>										<b>214,100.00</b>
RURAL AFFAIRS Gen. Dir. Eqp. (G-2) * 2 Vibrating Roller	ÇUKUROVA İTHALAT ve İHRACAT T.A.Ş. Bitelli.	02.04.93	18.05.93	05.07.93	01.09.93	10.12.93	27.10.94	102,000	USD	
* 1 Dozer & 2 Graders	FIAT-HITACHI Const. Eqp.	02.04.93	18.05.93	05.07.93	01.09.93	24.12.93	13.02.95	232,450,000 194,000	IL USD	
* 2 Wheel Loaders	ERG İnş. ve Tic. San. A.Ş.	02.04.93	18.05.93	05.07.93	01.09.93	06.12.93	08.04.94	1,597,500,000	TL	
* Office Eqmnt. (Computer for MOA)	Ankom Ltd.	05.01.93			27.01.93		11.02.93	72,850,000	TL	
* Survey Equipment for MOA		16.11.94	16.12.94	18.01.95	15.05.95	cancelled				
<b>Sub - Total</b>										<b>495,138.23</b>
CIVIL DEFENCE EQUIPMENT (G-1) * 3 Rescuer Vehicles	UMTAŞ A.Ş./ZIEGLER	25.01.93	18.01.93	05.03.93	10.05.93	16.06.93	27.04.94	975,700	DM	575,261.73
<b>Sub - Total</b>										<b>575,261.73</b>
CIVIL DEFENCE (G-8) * 2 Decontmn. Vehicles Lot 1 & 2 * 2 Rescue Vehicles Lot 3	KARCHER ZIEGLER	18.03.96 18.03.96	24.05.96 24.05.96	23.07.96 23.07.96	12.09.96 12.09.96	12.11.96 14.11.96	22.12.1997 03.10.1997	2,356,254.29 787,800	DM DM	456,255.05 1,254,370.09
<b>Sub - Total</b>										<b>1,710,625.14</b>
OFFICE EQUIPMENT FOR GDDA	Computer Sys. Bilsen A.Ş. Facsimile Karer A.Ş. Tel. - Orta Anadolu A.Ş.	02.04.93		16.04.93			07.05.93 07.05.93 11.05.93	67,174,462 7,690,000 4,440,000	TL TL TL	
<b>Sub - Total</b>										<b>27,228.40</b>

## Category 2 : Goods

## ERZİNCAN PROJECT

4/6

Description	Supplier	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Date of Completion	Contract Amount	Curr.	Cost US\$
* EQUIPMENT FOR GDC GDC, I. Package (GPM-1) * Lot 1,2,3 and 4 (Pers. file, Accounts/ Invst. Monitoring & Evt. System /Prog.Follow-Up Software/Doc.Follow Up	SIEMENS NIXDORF	26.08.94	09.09.94	10.11.94	02.02.95	08.03.95	Terminated	245,000	USD	
* Lot 12 (Hardware		26.08.94	09.09.94	10.11.94	02.02.95	08.03.95	16.08.96	1,906,054	USD	
* Lot 5 (All purpose Design& Draft.)	KENT BİLGİSAYAR	26.08.94	09.09.94	10.11.94	02.02.95	28.03.95	16.11.95	218,020	CFF	
* Lot 6 (Architect Design & Drafting )		26.08.94	09.09.94	10.11.94	No res. bid.			22,490,000	TL	
* Lot 7 (Strct. Analysis Design & Drafting)	ŞANLI BABALIOĞLU and GALAKSI Müh.San. ve Tic. A.Ş.	26.08.94	09.09.94	10.11.94	02.02.95	10.03.95	16.11.95	684,450,000	TL	
* Lot 8 (Survey Modelling & Mapping)	AK Mühendislik	26.08.94	09.09.94	10.11.94	02.02.95	08.03.95	16.11.95	46,200	USD	
* Lot 9 (Cost Est. & Reports Organization)	MİKROPROSESÖR Bilg. Prog. Müh. Müş. Ltd. İN-PRO İnş. ve Bilgisayar Yazılım Org. Ltd.	26.08.94	09.09.94	10.11.94	02.02.95	17.03.95	16.11.95	0	TL	
* Lot 10 (Raster-Vector Conv. Syst.)		26.08.94	09.09.94	10.11.94	No bid					
* Lot 11 (Heating, vent. & gas design)	TELEM Telekom El San. ve Tic.Ltd.	26.08.94	09.09.94	10.11.94	02.02.95	07.03.95	16.11.95	14,375	USD	
GDC -II. Package (GPM-2) * Architect Design 2 Drafting * Raster-Vector Conv. Syst.	Local shopping	04.05.95	05.05.95	01.06.95	Cancelled					
		04.05.95	05.05.95	01.06.95	18.07.95	12.09.95	21.12.95	390,000,000	TL	
<b>Sub - Total</b>										<b>2,314,217.67</b>
* HOSPITAL EQUIPMENT Medical Equipment (GHF-1) * X-ray,CT, Ultrasound - Lot 1 * Sterilization - Lot 2	SIEMENS (SIMKO A.Ş.) BKB A.Ş.	26.06.94 26.04.94	11.07.94 11.07.94	19.12.94 19.12.94	30.03.95 30.03.95	15.06.95 15.05.95	08.08.96 terminated	3,805,555 511,175	DM USD	

## Category 2 : Goods

## ERZİNCAN PROJECT

5/6

Description	Supplier	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Date of Completion	Contract Amount	Curr.	Cost US\$
* OTs, Monitoring, Lab Eq. & Glassware, Mortuary and Patho Lab; Gen Med Eq Lot 3,4,5,6	SIMED Int. B.V.	24.06.94	11.07.94	19.12.94	30.03.95	07.06.95	09.08.96	11,626,900.94	NLG	
* Surgical Inst & Diag. Stes & Ward Eq. - Lot 7	IMPREGILO S.p.A.	24.06.94	11.07.94	19.12.94	30.03.95	29.05.95	04.12.96	4,080,860,822	IL	
<b>Sub - Total</b>										<b>12,882,207.80</b>
<b>HOSPITAL FURNITURE (GHF-2)</b>										
* Lot 1 (Beds and Accessories)	CATIC - (TMT A.Ş.)	17.01.95	30.01.95	03.04.95	12.06.95	13.09.95	terminated	300,000.44	USD	
* Lot 2 (Electric Equipment)	EMN Ltd. Şti.	17.01.95	30.01.95	03.04.95	12.06.95	05.09.95	12.07.96	161,831	USD	
* Lot 3&6 (Cafe Equipment and Personnel Computer & Printer)	İHTAŞ - İhlas Elekt. San. Tic. A.Ş.	17.01.95	30.01.95	03.04.95	12.06.95	28.07.95	23.09.96	90,600.40	USD	
* Lot 4 (Tables, Desks, etc)	Aydinel Altıntaş	17.01.95	30.01.95	03.04.95	12.06.95	07.09.95	12.07.96	957,443	USD	
* Lot 5 (Sinks and Workstables)	Cahit Özfidan	17.01.95	30.01.95	03.04.95	12.06.95	17.08.95	12.07.96	1,800,000,000 554,500	TL USD	
<b>Sub - Total</b>										<b>1,774,929.41</b>
<b>SCHOOL EQUIPMENT (GSE-1)</b>										
* Furniture(desks, chairs, etc.)-Lot1& Metal Works Equip. Lot 7	ŞAN HALI Tic. ve San. A.Ş.	25.08.94	01.09.94	03.11.94	27.12.94	20.01.95	04.09.95	1,501,801,000 950,000,000	USD TL	
* Furniture(cabinets, tables, etc.)-Lot2	AYDINEL ALTINTAŞ	25.08.94	01.09.94	03.11.94	27.12.94	01.02.95	09.04.96	1,306,201 4,700,000,000	USD TL	
* Office Equipment-Lot3		25.08.94	01.09.94	03.11.94	No bid					
* Electronic Equipment-Lot4	PERSPEKTİF İletişim Dan. Hizmet ve Tic. Ltd. Şti.	25.08.94	01.09.94	03.11.94	27.12.94	07.02.95	21.06.95	566,722 290,000,000	USD TL	
* Dormitory Equipment-Lot5	BİLPA Bilkent Eğitim Araç Gereç ve Hizmet Paz. San. ve Tic. A.Ş.	25.08.94	01.09.94	03.11.94	27.12.94	02.02.95	17.04.95	299,132,12 550,000,000	USD TL	
* Tailoring/Carpeting Equip. -Lot6		25.08.94	01.09.94	03.11.94	No res. bid					

## Category 2 : Goods

## ERZİNCAN PROJECT

6/6

Description	Supplier	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Date of Completion	Contract Amount	Curr.	Cost US\$
*Carpentry Works Equip. -Lot8	AKKERMANS Industrial Eng.	25.08.94	01.09.94	03.11.94	27.12.94	08.02.95	02.08.95	213,809	NDL	
SCHOOL EQUIPMENT (GSE-2) * Tailoring / Carpeting Equip.-Lot 6 & Office Equipment - Lot 3	PETTEKS A.Ş.	15.02.96	08.03.96	09.05.96	30.06.96	09.09.96	25.02.97	547,796	USD	
<b>Sub - Total</b>										<b>4,493,821.80</b>
- SEISMIC EQUIPMENT (TTS-1) * Strong Motion Rec. Network Lot 1 * Weak Motion Obs. Network Lot 2	GEOSYS KINEMETRIKS	20.11.95 20.11.95	09.02.96 09.02.96	09.04.96 09.04.96	14.06.96 14.06.96	01.10.96 31.07.96	01.07.97 02.12.96	92,400 80,658.75	SFR USD	
<b>Sub - Total</b>										<b>147,660.72</b>
<b>TÜBİTAK - GPS PROJECT</b>										
*GPS Receivers for continous GPS Network, Installation Receivers and accessories for mobile measurements and solar panels Lot 1	NUR Construction&Industrial Co.Inc.	17.04.98	07.05.98	01.07.98	09.09.98	22.10.98	7/9/99	284.000	USD	279,942.86
*Unix based computers and facilities Lot2	GANTEK Computer Consultancy Services Trade Inc.	17.04.98	07.05.98	01.07.98	09.09.98	23.10.98	3/17/99	232.709	USD	230,333.00
*Equipment and Tools for various Seismological Studies Lot 5	NUR Construction and Industrial Co.Inc.	17.04.98	07.05.98	01.07.98	09.09.98	22.10.98	6/2/99	117.000	USD	109,670.72
*Seismological Sensors Lot 6	MARK Products	17.04.98	07.05.98	01.07.98	09.09.98	23.10.98	6/2/99	94.202	USD	85,998.50
Broadband Sensor Lot 7	GÜRALP System Ltd.	17.04.98	07.05.98	01.07.98	09.09.98	23.10.98	07.10.1999	126.601	GBP	198,032.87
*Seismological recorders and facilities Lot 8	REFRACTION Technology Inc.	17.04.98	07.05.98	01.07.98	09.09.98	23.10.98	7/9/99	374.493	USD	368,847.80
*Software for GIS Lot 9	ISLEM GIS	17.04.98	07.05.98	01.07.98	09.09.98	29.10.98	12/3/98	16.487	USD	16,487.00
Telecommunication Infrastructure Lot 10	MEGATEK İletişim Sistemleri Ltd.	17.04.98	07.05.98	01.07.98	09.09.98	08.10.98	2/8/99	124.480	USD	123,464.00
<b>TÜBİTAK II PACKAGE</b>										
*Personal Computers with environmental Units Lot 3	BOGAZICI Bilgisayar TIC. SAN A.S. (NS)		16.09.98	08.10.98	23.10.98	30.11.98	2/8/99	90.812	USD	90,716.80
*Field vehicles Lot 4	NISSAN Otomotive A.Ş. (NS)		16.09.98	08.10.98	23.10.98	24.11.98	20.12.1998	83.211	DM	48,308.29
Some consumables, small equipment and tools	MEGATEK İletişim Sistemleri Ltd.		27.10.99	15.11.99		23.11.99	20.12.1999	59.333	USD	59,333.00
<b>Sub total</b>									\$	<b>1,611,134.84</b>

## Category 3 : Consultants' Services

## ERZİNCAN PROJECT

1/2

Description	Consultant	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Compl. Date	Contract Amount	Curr.	Cost
HOSPITALS										
* Main Consultancy Services	Vamed/Prokon Consortium	11/30/92	20.11.1992	15.01.1993	03.02.1993	18.02.1993	November 98	1,885,200	DM	
	Supplementary Cont.				02.03.1995	08.03.1995		9.500.000.000	TL	
	Supplementary Cont.II				27.02.1996	20.05.1996		4.840.000.000	TL	1,968,984.42
								281.990,40	DM	
								916.378.976	TL	
* Soil Investigation	TOKER Koll.Şti.				05.05.1993	06.05.1993	15.06.1993	351.190.000	TL	21,150.86
*Copy and Modification Rights of Original Hospital Designer	Y.Mimarlık Bürosu (yalçın İleri)				11.03.1993	18.03.1993	18.03.1994	519.837.789	TL	19,059.21
<b>Sub-Total</b>										<b>2,009,194.49</b>
HOUSING										
*Main Consultancy Services	Seyaş/Timat Consortium	30.11.1992	25.11.1993	15.01.1993	15.02.1993	16.02.1993	terminated	18.584.651.250	TL	
	Supplementary Cont.				02.03.1995	14.03.1995	30.06.1995	800.750	USD	
								17.274.689.212	TL	
								172,000	USD	2,259,112,47
*Soil Investigation	JMS		19.03.1993	29.03.1993	05.05.1993	18.05.1993	01.07.1993	595,800,000	TL	
								250,000,000	TL	67,736,66
*Sampling and Tests	ITU				24.05.1993		16.09.1993	51,100,000	TL	
								60,000,000	TL	9,123.80
*Subdivision Plan Preparation and its application	SAY İnş.Müh.San.ve Tic.Ltd.Şti.	02.04.1993	11.05.1993	26.05.1993	26.05.1993	11.06.1993	15.07.1993	465,985,944	TL	18,740,57
<b>Sub-Total</b>										<b>2,354,713.50</b>
SHOPS & BUSINESSES										
*Main Consultancy Services	Yalçın Teknik/Louis Berger	30.11.1992	11.27.1993	18.01.1993	28.01.1993	16.02.1993	22.12.1997	18.401.905.908	TL	
	Supplementary Cont.							1.231.623	USD	
	Spektra Jeotek							7.924.000.000	TL	2,019,057,83
*Soil Investigation								309.750.000	TL	26,322.58
*Sampling and Tests										
<b>Sub-Total</b>										<b>2,045,380.41</b>



CATG.	ERZINCAN PROJECT	AMOUNTS
	PARTICULARS	DISBURSED (U.S.\$)
1	<b>CIVIL</b>	<b>123,610,931.77</b>
	<b>Public Buildings</b>	<b>6,005,333.03</b>
	Contract - I	3,211,874.07
	Contract - II	2,793,458.96
	<b>Hospitals</b>	<b>20,498,449.74</b>
	SSK Hospitals	6,073,266.84
	Military Hospita	6,897,465.33
	State Hospital	7,527,717.57
	<b>Apartments/Housing</b>	<b>44,153,176.29</b>
	Contract - I	13,852,192.74
	Contract - II	12,470,460.99
	Contract - III	17,830,522.56
	<b>Shops &amp; Businesses</b>	<b>22,522,627.86</b>
	Contract - II	5,859,080.26
	Contract - III	9,346,238.71
	Contract - IV	7,317,308.89
	<b>Municipality Infrastructure</b>	<b>14,619,196.94</b>
	Treatment Pland & Sanitary Landfil	7,298,045.46
	Municipality Infrastructure	5,731,924.65
	Traffic Lights	71,118.66
	Electricity	1,451,849.61
	TCDD Railway Crossing	7,198.49
	KGM Supervision	3,143.06
	PTT Underground System	10,302.42
	Municipality Water Systerr	42,207.57
	Stormwater Discharge	3,407.02
	<b>Rural Development</b>	<b>15,812,147.91</b>
	Cattle & Storage Barns	13,091,826.67
	Rural Roads & Irrigatior	909,093.81
	Demolition & Debris Remova	1,144,160.99
	Sugar Factory Repair	633,775.89
	Nursing Home Maintenance	18,290.55
	Others (Tubitak GPS)	15,000.00
2	<b>GOODS</b>	<b>36,953,935.20</b>
	Procurement of Animals	2,122,016.76
	Equipment for the Municipality	2,298,942.14
	Equipment for KGM	6,515,750.56
	Equipment for Rural Affairs	495,138.23
	Equipment for Civil Defence	2,285,886.87
	Equipment for Hospitals	12,882,207.80
	Furnitures for Hospitals	1,774,929.41
	School Equipments	4,493,821.80
	GDC Automation	2,314,217.67
	Equipment for Disaster Affairs&Tubitak GPS	1,771,023.96
3	<b>CONSULTING</b>	<b>16,471,434.79</b>
	Public Buildings and Municipal Infrastructure	3,256,859.18
	Hospitals	2,009,194.49
	Housing	2,354,713.50
	Shops & Businesses	2,045,380.41
	Cattle & Storage Barns	1,535,909.77
	Project Management - Min. of Settlement	125,148.35
	Training & Studies	307,583.22
	Ministry of Agriculture	156,179.36
	PCU & EMU	2,683,204.76
	U.N.D.P.	381,600.68
	Maps for Disaster Affairs&Tubitak supplie	254,181.62
	Leak Detection & Equipments	451,081.25
Campaign For Public Awareness	910,398.20	
	<b>TOTAL DISBURSEMENTS (1+2+3)</b>	<b>177,036,301.76</b>



## **ANNEX B**



## SENİRKENT PROJECT

Project Components	Allocation of the Loan (US \$)	Contract Amount	Cur.	Actual Disbursement (DM)	Actual Disbursement Equivalent (\$)
<b>Civil Works Infrastructure</b>					
a) Municipality (ARSAN)	8,500,000	1,129,396,531,500	TL	9,810,369.03	5,373,407.21
b) Electrical Distribution	500,000	83,803,324,063	TL	760,152.49	426,478.25
c) Telecommunication	500,000	-		-	-
<b>Sub-Total</b>	<b>9,500,000</b>	<b>1,213,199,855,563</b>	<b>TL</b>	<b>10,570,521.52</b>	<b>5,799,885.46</b>
<b>Hazard Miligation Program</b>					
d) Flood&Erosion Control (DSI)	12,000,000	916,985,202,000	TL	14,509,826.82	8,397,247.70
e) Forestation	1,400,000	1,400,000	\$	2,451,415.38	1,395,120.36
<b>Sub-Total</b>	<b>13,400,000</b>			<b>16,961,242.20</b>	<b>9,792,368.06</b>
GOODS	600,000	-		26,748.80	17,896.55
<b>CONSULTANCY PROJECT</b>					
<b>ADMINISTRATION</b>					
f) Hazard Mitigation Consultancy	500,000	-		-	-
g) Infrastructrure Consultancy	1,620,000	331,250	\$	503,484.06	291,324.65
h) Project Administration	1,280,000	-		498,952.66	258,077.77
<b>Sub-Total</b>	<b>3,400,000</b>			<b>1,002,436.72</b>	<b>549,402.42</b>
CONTINGENCIES	3,100,000			-	-
<b>GRAND TOTAL</b>	<b>30,000,000</b>			<b>28,560,949.24</b>	<b>16,159,552.49</b>



## **ANNEX C**



## Category 9 : Consultants' Services

## SÜTÇÜLER PROJECT

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Description	Consultant	Clearance of Bid. Doc. by WB	Call for Bid	Bid Opening	Clearance of Eval. Rep. by WB	Contract Signature Date	Compl. Date	Contract Amount	Curr.	Cost US\$
- MUNICIPAL INFRASTRUCTURE and flood Control Works	Delcan/Su Yapı J.V. supplementary Cont.1	12/3/97	N/A	N/A	N/A	12/8/97	30.09.2000	282,260	USD	362,689.51
-Flood And Sediment control works	Supplementary cont.2	12/3/97	N/A	N/A	N/A	5/4/98	30.09.2000	85,000	USD	
Hospital Retrofitting Project	Laing/Williams	12/18/97	19.12.1997	19.02.1998	5/7/98	7/14/98	9/30/00	1,445,991	GBP	2,323,319.13
								<b>Sub-Total</b>		<b>2,686,008.64</b>
<b>Category 7 : Civil Works</b>										
- MUNICIPAL INFRASTRUCTURE and flood Control Works	M.RIZA AKKAYA	5/20/98	25.05.1998	09.07.1998	7/30/98	8/17/98	28.06.2000	475.892.371.630	TL	1,330,691.50
- Electrical Distribution Network	Ersöz Enerji A.Ş.	6/18/98	05.08.1998	21.09.1998	06.01.1999	1/27/99	12/15/99	38,836,309,937	TL	113,493,78
								<b>Sub-Total</b>		<b>1,444,185.28</b>
<b>Category 8 : Goods</b>										
-Backhoe Excavator-Loader	MASTAŞ A.Ş.	1/5/99	1/12/99	2/8/99	N/A	3/4/99	4/9/99	16,575,000,000	TL	44,637.49
-Dump-Truck	YOL-BAK A.Ş.	1/5/99	1/15/99	3/22/99	N/A	4/9/99	4/26/99	70,000	USD	70,000.00