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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

JULY 1, 1992

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CURRENCY EQUIVALENTS

Currency Unit -- Turkish Lira (TL):

-----End of Month Exchange Rate-----

	<u>Jan 1992</u>	<u>Feb 1992</u>	<u>Mar 1992</u>	<u>Apr 1992</u>	<u>May 1992</u>	<u>June 1992</u>
US\$1.00 =	5,451.08	5,849.28	6,241.49	6,523.93	6,779.21	6,882.00

MEASURES

Metric System: m² = square meter

ABBREVIATIONS

DPD	-	Directorate of Planning and Development
EMU	-	Erzincan Management Unit (Housing Development Administration)
GDDA	-	General Directorate of Disaster Affairs
GDP	-	Gross Domestic Product
GNP	-	Gross National Product
GDRS	-	General Directorate Rural Services (Ministry of Agriculture)
GOT	-	Government of Turkey
HDA	-	Housing Development Administration
IB	-	Ilker Bank
ITU	-	Istanbul Technical University
METU	-	Middle East Technical University
KGM	-	General Directorate of Highways
MOA	-	Ministry of Agriculture and Rural Affairs
MOE	-	Ministry of Education
MENR	-	Ministry of Energy and Natural Resources
MOH	-	Ministry of Health
MOS	-	Minister of State
MOT	-	Ministry of Transport
MPWS	-	Ministry of Public Works and Settlement
PCR	-	Project Completion Report
PCU	-	Project Coordination Unit (Housing Development Administration)
PSBR	-	Public Sector Borrowing Requirement
PTT	-	Post Office, Telephones & Telegraph
SDF	-	Social Development Fund
SOE	-	State Owned Enterprises
SPO	-	State Planning Organization
TCDD	-	Turkish State Railways
TEK	-	Turkish Electricity Authority
TOR	-	Terms of Reference
UNDP	-	United Nations Development Program
UNDRO	-	United Nations Disaster Relief Organization

TURKEY - FISCAL YEAR

January 1--December 31

TURKEY

EARTHQUAKE REHABILITATION AND RECONSTRUCTION PROJECT

Loan and Project Summary

Borrower: The Republic of Turkey

Beneficiary: Housing Development Administration

Amount: US\$285 million equivalent

Terms: Payable over 17 years including 5 years of grace at the Bank's variable interest rate.

Economic Rate of Return: Not applicable

Staff Appraisal Report: Not applicable. Technical Annexes are attached.

Maps: Nos. IBRD 23895, 23896, 23900 and 23901

This report and the Technical Annexes are based on the findings of an appraisal mission comprised of Mohsin Ali Khan (Mission Leader), Alcira Kreimer (ENVPR), Paul Blanchet (ECLIN), Edward Echeverria, Ronald Parker, Vitelmo Bertero (Consultants), Brad Herbert, Ahmet Gokce (RMT).

MEMORANDUM AND RECOMMENDATION OF THE PRESIDENT
OF THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE EXECUTIVE DIRECTORS ON A PROPOSED LOAN
TO THE GOVERNMENT OF TURKEY
FOR AN EARTHQUAKE REHABILITATION AND RECONSTRUCTION PROJECT

1. The following memorandum and recommendation on a proposed loan to the Republic of Turkey for US\$285 million equivalent is submitted for approval in support of the Government's earthquake reconstruction efforts. The proposed loan will have a term of 17 years, including five years of grace, at the standard variable interest rate. Proceeds from the loan will be provided to the Housing Development Administration (HDA) under a Minister of State in the Prime Minister's office.

2. **Background.** (Background on the Economy and the status of Bank Group operations in Turkey are provided in Annex I and Schedule D respectively). The earthquake experienced by Turkey on March 13, 1992 caused extensive damage to Erzincan city and its surrounding area in northeast Turkey (details in Annex II). The tremor had a magnitude of 6.8 on the Richter scale. Its epicenter was located about 3km southeast of the city (Maps IBRD 23895, 23896, 23900, and 23901 are attached). On March 15, a 6.1 magnitude aftershock occurred in nearby Pulumur in the adjoining Province of Tunceli. The most serious damage affected a 400m-wide band on both sides of Erzincan's main street. The central business district was destroyed. Municipal buildings, markets, schools and housing were severely damaged. At least 500 people died, 700 were injured, and more than 6,500 houses were destroyed.

3. Turkey has been so seismically active that between 1903 and 1990 there were 48 major destructive earthquakes. Since 1900 over 90% of the land area has experienced at least one earthquake of a magnitude in excess of 6.0 on the Richter scale; the average annual number of deaths caused by earthquakes has been 800; the average annual number of injuries has been 1,400; and collapsed or heavily damaged buildings average 4,700 annually. In 1939, a 7.9 magnitude earthquake in Erzincan caused 32,000 casualties. In 1983 a 5.5 magnitude tremor caused no casualties but the damage to buildings was heavy. Some of the buildings that collapsed in the recent event had been damaged in 1983.

4. **Recovery Strategy.** In response to the recent Erzincan earthquake, the Government of Turkey (GOT) with assistance from the Bank has identified an Earthquake Rehabilitation and Reconstruction Program with an estimated total cost of US\$650 million. To expedite execution, the implementation responsibility for the construction components has been allocated as follows, under the overall coordination of a Minister of State: (i) HDA: US\$285 million funded by the World Bank, comprising primarily cooperative and government housing units, hospitals and infrastructure; and (ii) Ministry of Public Works and Settlement (MPWS): US\$190 million funded by a GOT loan from the Social Development Fund - Council of Europe, primarily for single-family housing units and schools. The remainder of the program amounting to an estimated US\$175 million represents temporary housing and other smaller components whose cost will be borne by the GOT and the local community. The Bank component of the program is referred to hereafter as the project.

5. To cope with the disaster, the Government formulated a three-stage strategy. The Government began rescue and relief operations immediately after the earthquake under the Central Coordinating Committee for Disasters, Civil Defense and the Red Crescent at the central Government level, and the Province Rescue and Aid Committee at the local Government level (Organizational Charts I and II). The very cold temperatures compounded the impact of the earthquake, and tents and emergency supplies had to be distributed to the disaster victims. Temporary renovation began soon after relief started. Heavy equipment from several ministries began to clear rubble from fallen buildings and main roads throughout the city center so that the victims could begin to provide themselves with shelter and makeshift business space. Rehabilitation and reconstruction is the last stage and will be executed as outlined in para. 4 above. Most of the works will be carried out by the private sector.

6. Bank Approach and Project Preparation. In response to the GOT's request for reconstruction assistance after the earthquake, the Bank immediately began preparing a possible reconstruction loan. After a detailed review of all existing projects, it was agreed with the GOT that it was not possible to reallocate uncommitted funds from existing loans to provide immediate financial assistance to the area, either because the Bank had no projects in the affected sectors (e.g., housing), or because all funds under existing loans had already been committed. The Bank's damage assessment/appraisal mission commenced on April 7, 1992 to assess the situation and gather information for a possible reconstruction loan and to identify and appraise the proposed project together with staff from the relevant GOT ministries. A timetable of key project processing events is given in Schedule C. Negotiations for the loan were conducted in Washington from June 22-26, 1992.

7. Project Objectives and Rationale for Bank Involvement. The project is part of the GOT's reconstruction program, and will include sectors in which the Bank has previous experience and therefore a comparative advantage in implementation. Care has been taken to ensure: (i) that reconstruction plans are compatible with the GOT's policy in each sector; and (ii) to ensure that the proposed project takes into account the lessons which the Bank has learned in similar reconstruction efforts in other countries. The objective of the proposed multisectoral project is to reconstruct essential housing, infrastructure and other facilities to promptly restore economic activity in the affected area. Bank involvement will help to prevent the recurrence of similar earthquake damage in the future by providing technical training for the construction industry, identifying existing public buildings which can be structurally reinforced through retrofitting, and upgrading the institutional and financial arrangements which deal with disasters in Turkey. Land use mapping based on microzoning will enable vulnerable municipalities to provide themselves with a safer environment through the identification of unstable soil and highly unstable geological areas.

8. Project Description. The proposed Bank project will finance demolition, reconstruction, rehabilitation and repair activities in the urban and rural areas including: (a) cooperative and government housing, hospitals, office and shop buildings and key infrastructure; (b) procurement of critical

commodities including livestock; and (c) training and studies to reduce earthquake vulnerability. A detailed description of the Bank-funded project components is presented in Annex IV.

9. Estimated Costs, Disbursements and Procurement. A summary of project costs and financing is presented in Schedule A, and more detailed cost tables are given in Annex III. Retroactive financing amounting to US\$6 million has been included for the removal of debris and the preparation of new designs already underway for reconstruction and rehabilitation of buildings. Amounts and methods of procurement and the disbursement schedule are shown in Schedule B.

10. Implementation. The project will be implemented over a period of about three and one half years, although the major part of the work will be completed in the first two years. A Minister of State is responsible for the overall coordination of the program, and he will chair a Steering Committee (Organization Chart III) created to bring together the various GOT agencies involved in the implementation of program components in the Erzincan area. All Ministries/Agencies in the project will procure their respective goods and equipment under the direction of the HDA. These Ministries/Agencies are familiar and experienced with the Bank procedures. All (except the Mayor's office in Erzincan) have worked in the past and are currently working with ongoing Bank projects. The municipal infrastructure repair component to be implemented through the Mayor's office is relatively small and will be prepared and executed with Iller Bank and HDA assistance.

11. The Bank will review land use and zoning plans for project components, and will ensure that clear titles exist before beginning works to be financed from the proposed loan. Cost recovery measures are outlined in Disaster Law No. 7269 (a translation of the relevant articles is shown in Annex V). All building construction work in the Erzincan area will be in accordance with building standards satisfactory to the Bank. Designs will be approved by a panel of experts acceptable to the Bank, from Middle East Technical University (METU) and Istanbul Technical University (ITU). These universities will also assure that supervision of the works including quality control of workmanship and materials is satisfactory. The design and supervision for all building construction works in the Erzincan area, regardless of the source of financing or implementing agency, will adhere to seismic-resistant standards. For the purpose of O.D. 4.01 on environmental considerations, the project is classed as category "C." Further details on the environmental impact of the project are found in Annex II.

12. The Bank has learned some valuable lessons in its 30 years supporting emergency recovery efforts. The government's commitment is critical to project success. Cooperation and communication between the Borrower and the Bank are also critical, as are an appropriate institutional framework, streamlined and consolidated procurement and disbursement procedures, uncomplicated project designs, and simplified land acquisition procedures. All the above lessons have been incorporated in the proposed project. The rapid preparation of this project is a strong indicator of the cooperative and flexible arrangements already established between the GOT and the Bank to address the earthquake disaster.

13. Agreements Reached. During negotiations, agreement was reached on: a) the criteria for the evaluation of project components; b) the identification of the physical works to be designed and constructed according to the seismic-resistant building standards; c) the mechanism which the Bank will use for reviewing building designs prior to tender; d) the procedures to be used for reviewing bidding documents by the Bank prior to issuance of tenders; e) the audit of project accounts to be done by auditors acceptable to the Bank; and f) the timetable for the studies. At negotiations, agreement was reached that: (i) confirmation of the appointment of the managers for the Project Coordinating Unit (PCU) and the Erzincan Management Unit (EMU) under HDA by GOT; and (ii) receipt by the Bank of the Government-approved protocols (between the Turkish universities and MPWS) for the design and technical supervision of the MPWS building construction works, will be conditions of loan effectiveness.

14. Benefits. The project will assist in the rehabilitation/reconstruction of damaged or destroyed physical assets and institutional strengthening. The immediate benefits of this project are the reconstruction of shelter and other physical assets affecting a combined urban and rural population of about 200,000. Additionally, by reconstructing businesses and farm structures and replacing critical inputs and infrastructure, the proposed project will aid farmers and businessmen with the restoration of production, employment and income. Under the project the operating agencies will gain experience in planning, managing and implementing reconstruction activities. This experience will strengthen the country's ability to cope with future earthquake emergencies when they occur. The training and studies provided for under the project will have medium and long-term positive impacts. Recommendations will emerge from the studies that will propose strengthened mitigation measures, will enhance the country's emergency preparedness capability, suggest improvements to legislation which will enable the GOT to handle pre-disaster and post-disaster emergencies, and recommend ways to strengthen the financial sustainability of disaster-related schemes (insurance, effective financing mechanisms, cost-recovery measures, incentives to construct according to building codes/standards and enforcement guidelines). By identifying public buildings in large urban centers, which could be economically retrofitted to better withstand seismic forces, the project will demonstrate on a pilot basis how to minimize damage from future earthquakes throughout the rest of the country.

15. Risks. The proposed project will involve a large number of reconstruction activities which will have to be carried out simultaneously. Furthermore, because of the pressure to start the project quickly and implement it rapidly, the level of preparation of some of the proposed activities may be insufficient. The risk of delay in project execution that these factors imply has been reduced in the project design by: (i) relying primarily on existing institutions of proven capacity; (ii) making a Minister of State fully responsible for the direction and coordination of the project;

and (iii) securing full funding for the project from the start of project execution. Sufficient flexibility has been provided both on the part of the GOT and the Bank to help resolve implementation problems rapidly as they arise.

16. Recommendation. I am satisfied that the proposed loan will comply with the Articles of Agreement of the Bank and recommend that the Executive Directors approve the loan.

Lewis T. Preston
President

Washington, D.C.
July 1, 1992

Attachments

