



**DISASTER REDUCTION
IN
TURKEY**

"COUNTRY REPORT"

General Framework for Disaster Reduction in Turkey

Turkey frequently faces various types of disasters coming from its geological, topographical and climatic characteristics. But until 1944, there was no legislation on disasters. Before that year, Turkish Red Crescent had given help to those affected by disasters after the occurrence. The earthquakes that took place between the years 1939 and 1944, proved that the general approach to disasters was highly insufficient due to non-existence of legislation. The Turkish Assembly approved Law no 4263 "Law on Precautions to be taken before and after Earthquakes" in 1944, after Japan (1924), USA (1933) and Italy (1940). Generally, Law no. 4263 brought obligations on delimitation of risky areas, publication and implementation of special rules in the form of regulations, geological studies in the development areas of the municipalities, preparation of programs on emergency aid and rescue activities by each province and districts. Ministry of Public Works in collaboration with universities published the Earthquake Map of Turkey and approved the Building Regulation in Earthquake Regions which at present is called the Regulation About Buildings in Disaster Regions. In 1953, Earthquake Bureau has been added to organization chart of the Ministry of Public Works. In 1955 this bureau was renamed as Earthquake-Flood-Fire Section and its terms of reference was redefined. In 1953, Law no 6200 that is to prevent damages and make use of subterranean and surface waters in various ways, was approved and the general Directorate of State Hydraulics Works had been established. In addition to laws directly aimed at prevention and mitigation of possible damages and organization of aid after disasters, Development Law no 6785 was approved in 1956, that was amended and approved as Development Law no 3194 which has been serving as a supplementary law in preventing disasters. Furthermore in 1958, the Civil Defence Law no 7126 was approved. By this law first aid and rescue activities during disasters have been formally organized and an establishment is given the responsibility for carrying out these activities. In 1959, Law on Precautions for Disasters Affecting Everyday Life no 7269 was approved and today Turkey has been making use of this law with some minor modifications made in time. This law defines phases like *pre disaster*, *during*

disaster, post disaster and defines tasks to be carried out during each phase, and sets up a Disasters Fund that is comprised of transfers from budget, 3% of profits of public economic establishments, and back payments of indebted citizens who are affected by disasters. In 1968, by Law no 1051, amendments made to the original law no 7269 in order to make responses to disasters more effective. In 1972, by Law no 1571 on Transfer of Revenues Collected from Price Increases of State Monopoly Commodities to a Fund in Central Bank of Turkish Republic. In 1977, Law no. 2090 on Aids to Farmers Affected by Disasters. To create new Funds and increase existing ones Law no 2479 (1981) and Law no 3177 (1985) were approved. In 1990s, disasters that caused huge damages occurred in Turkey and it was understood that Law no 7269 was ineffective to cover all damages faced. So in 1992, Law no. 3838 that is "Law on Reconstruction Accomplishments of Public Services for Earthquake Disaster in Erzincan and Damages in Sirnak and Cukurca" , was approved. As understood from the name of the law, it was only for provinces (Erzincan and Sirnak) and a district (Cukurca). To generalize the law for the whole country Law no 4123 that is "Law on Provision of Public Services Damages Caused by Natural Disasters.

Main activities on risk reduction in the case disasters in Turkey has begun in 1940s and in 1950s; when a general law on disasters was approved. From that date on, some special laws were approved for special cases and the existing ones had been revised in order to cover special events that occurred in Turkey. From the beginning of legislative activities for risk reduction and decrease of damages, as well as aids during and after disasters, disasters have diversified as urbanization increased in pace. Floods in urban areas have begun to be seen frequently, following the rains. So new development and risk reduction measures for specific disasters in urban areas is being studied since a few years by various commissions in Turkey.

Ten Year of Disaster Reduction in Turkey

Risk Reduction facilities in Turkey is carried out both at central and local levels. At central government level, Ministry of Public Works and Settlement (General Directorate of Disaster Affairs and General Directorate of Technical research and Implementation) is responsible for setting rules by publishing regulations and so forth and monitor activities as well as carrying out scientific researches and coordination, organizing courses at national level for risk reduction. At local level, both governorates and municipalities are responsible for implementation of general rules set by laws and regulations and control of pre-disaster implementations.

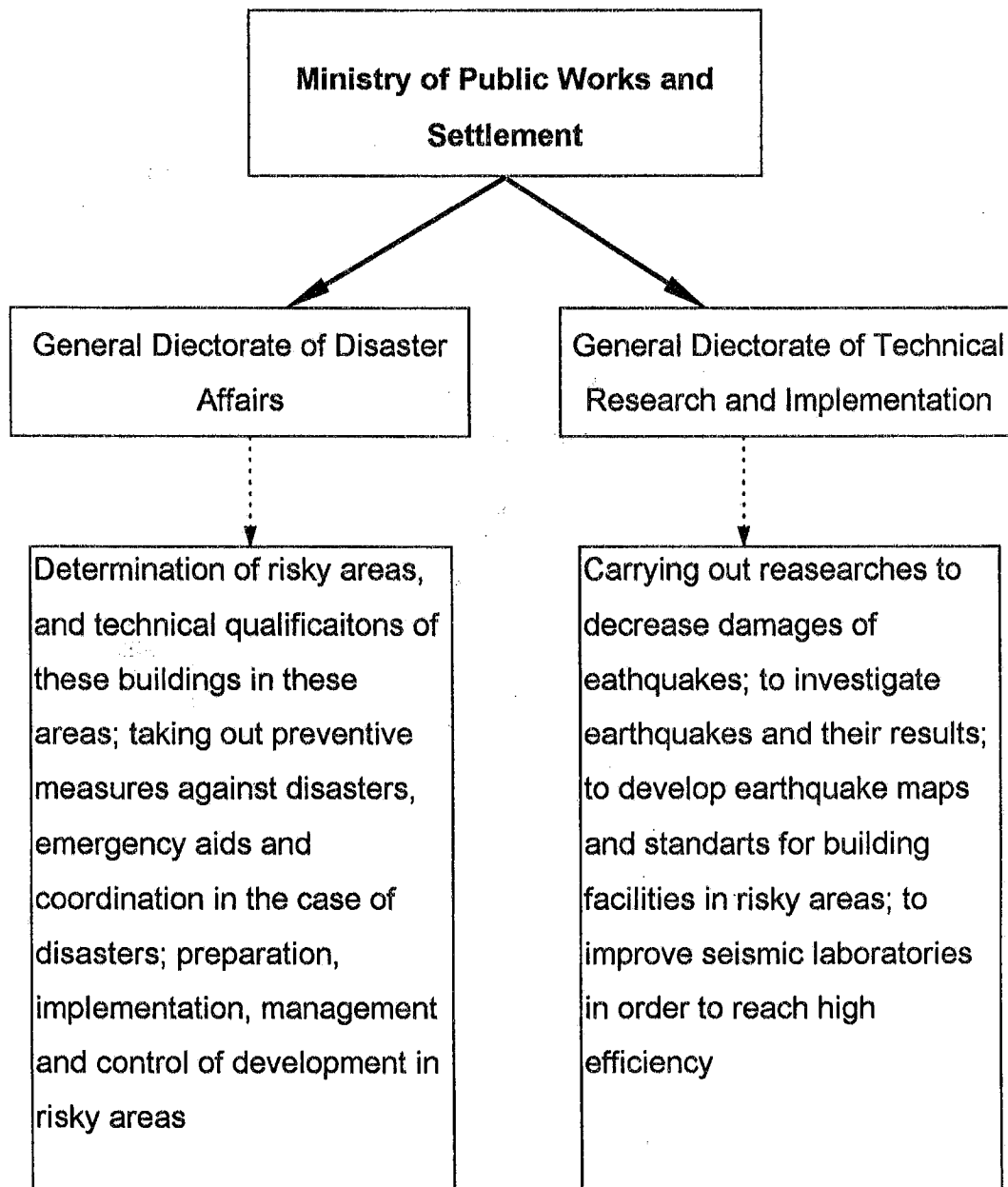
Publicly announced risky areas are restricted in development and other facilities, furthermore development in these areas is accomplished according to rules set by regulations. Development plans serve as tools for visual representation of dangerous areas and setting rules of development. All development plans base on Development Law no 3194 and its related regulations. On the other hand all military troops and civil defense establishments have been preparing for possible disasters at local level.

In the previous decade, Turkey's organization and preparedness for disasters have been tested by earthquakes occurred at local places. In 1992 Erzincan Earthquake (covering provinces Tunceli and Gumushane as well), in 1995 Dinar Earthquake and 1998 Adana Earthquake are main disasters that have been announced as national disasters by Turkish Governments. Besides these, floods and landslides both in urban and rural areas, snowfalls in mountainous areas frequently occur every year. And it is seen that in urbanized areas, lots of high story buildings in low income areas of cities (Erzincan and Adana) have been demolished. In rural areas piled buildings were also demolished by earthquakes (Dinar). The result of these earthquakes reveal that, in low income areas of urbanized areas of Turkey buildings specially those emerged as a result of transformations from squatter housing to apartments are especially prone to earthquake damage due to lack of efficient control.

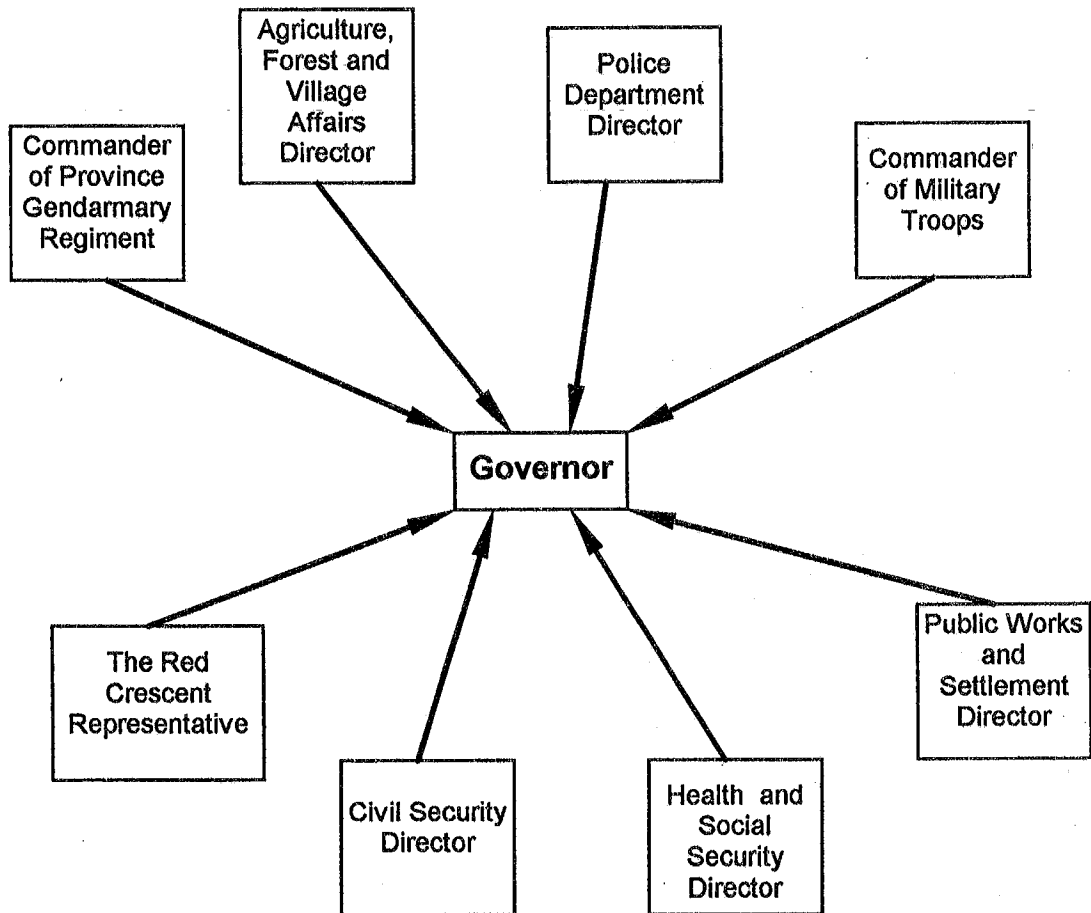
On the other hand, in urban areas flood risk reduction is generally considered to be within the responsibility area and carried out by municipalities. Risk reduction for this type of disaster usually involves rehabilitation of river banks, forestation of open areas and so on. Also dams built for water supply of cities have been circumscribed by protection belts where development is restricted. Land slides are frequently seen in urban areas especially in squatter housing areas which are built illegally. Development in most of these areas are legalized by laws approved at various dates. These populist legalization activities have resulted in public offenses toward central and local governments when disasters occurred in these areas, characterized by topographical and geological deficiencies.

Current Activities in Disaster Reduction

Current accomplishments are carried out at both central and local level. At central level, below chart shows the organization of disaster organization:



At local level, preparation for disasters is carried out. Below chart shows the local organization of each province in Turkey to possible disasters:



Responsibilities of Province Emergency Rescue and Aid Comity is defined as below:

1	Preparation of Province Emergency Aid Plans
2	Preparation of District Emergency Aid Plans
3	Setting up Service Groups defined in the plans, organizing practices for these groups in order to be ready to any possible disaster
4	Calling Service Service Groups
5	Setting Principles for Aids and Assurance
6	Setting Principles and Coordination of Service Groups
7	To Obtain Necessary Materials for Service Groups
8	To Implement Priority Procedures of First Aid 1. Communication Assurance 2. Rescue of Those Under The Debris and Injured 3. First Aid 4. Transportation of Injured and Sick People to Nearby Hospitals 5. Putting Up Fire 6. Assurance of Security and Public Order 7. Assurance of Food, Clothes, Light and Heat 8. Assurance of Temporary Habitation 9. Burial of Death People 10. Ruin Clearance 11. Repair of Infrastructure 12. Precautions of Quarantine

Province Emergency Rescue and Aid Comity implement its tasks by various service groups, those are set up for each different services, these services are as follows:

- *Communication and Transportation Services,*
 - *Preliminary Hazard Assessment, Temporary Shelter, Distribution of Food and other Requisites,*
 - *First Aid and Health Services,*
 - *Relief and Debris Removal Services,*
 - *Security Services,*
 - *Electricity, Water and Sanitation Services,*
 - *Procurement Services*
 - *Agriculture, Animal Husbandary and Rural Services,*
- and the Red Crescent Society.*

Principles for preparation of plans defined in items 1 and 2 in above table is as follows:

Data Necessary For Plan Preparation
Data about Information about risky area and its inhabitants
Data about Features of Urban Areas and Their Oppotunities
Data about Districts of Public Buildings, Hospitals, Schools, Military Barracks, Prisons, Stations, terminals and etc.
Data about Water, Sewage, Electricity, Coal Gas and other Infrastructure and Their Repair Possibilities
Data about Fire Station(s) Possibilities
Data about Communication Possibilities and Network Schema
Data about Health and Social Security Buildings Distribution
Data about Possibilities of Assurance of Stocks for Aids
Data about Possibilities of The Red Crescent
Data about Oil Storage and Transfer Establishments
Data about Various repair Establishments
Data about Staff, Materials and Vehicles of Public and Private Establishments for rescue, Debris Removal and etc.
Data about List of Vehicles and Materials those Would be Given by Public Agencies

Future Prospects in Disaster Reduction

In 1997, A research committee was established in The Turkish Assembly on precautions to minimize damages caused by natural disasters. A comprehensive strategy was proposed by The Committee. Proposals are summarized below:

- *Unification of Disaster Laws,*
- *Revision of Existing Development Law to encompass further measures of disaster prevention,*
- *Revision of Municipality and Greater Municipality Laws,*
- *Revision of Provincial Administration Laws,*
- *Law on Control, Insurance of Buildings, technical responsibility of constructors,*
- *Revision of Chamber(s) Laws in order to control developments,*
- *New Certified Engineers for Building Control and Responsibilities,*
- *Revision of Civil Engineering System,*
- *Public Hearings about Possible Damages of Disasters,*
- *Revision of Education Programs of Architecture, City Planning and Geological Engineering Programs,*
- *Control of Building Materials,*
- *Revision of Civil Defense Law,*
- *Revision of Fire Departments ,*
- *Establishment of Effective Communication Infrastructure*
- *Revision of Disasters Fund,*
- *Education of Public Administrators,*
- *Establishment of Disaster Planning Sections in Municipalities having population over 1 million,*
- *Increase of Available Funds of Local Governments,*
- *Revision of Existing Infrastructure in Risky Areas.*