The RADIUS project has already improved awareness on earthquake risk and increased expert's knowledge of earthquake engineering. It is planned to simplify the existing Ethiopian seismic code for use by civil engineers, architects and other potential users. The goals of making this code mandatory are to:

- Seek more efficient control of design and construction;
- Prepare guidelines for design and construction of new houses and the strengthening of existing dwellings;
- Prioritize buildings for intervention and rescue;
- Improve the seismic performance of lifeline infrastructure and services; and
- Adapt emergency response to earthquakes.

Recognizing the importance of the continuation of the project for Addis Ababa and Ethiopia and the need for implementation of the action plan, BRGM decided to request the cooperation of the French minister, to provide funds for training of local specialists in earthquake engineering.

Izmir

In the case of Izmir, the municipality had developed contacts before the RADIUS project started with a group of national scientists from Bogazici University and from Istanbul Technical University. Their objective was to prepare an earthquake master plan for Izmir, collect appropriate data, and for Izmir University to conduct an initial seismic hazard analysis using basic RADIUS methodology. Once the contract was signed the national group began hazard and vulnerability assessment studies in more detail. At the same time, the Chambers of Civil Engineers and Architects of Izmir had another contract to define the vulnerability of the main infrastructure and 215,000 buildings. These data were to be processed by the end of October 1999.

The municipality of Izmir conducted the RADIUS studies through its local steering committee, which coordinated the work done by Bogazici University, Istanbul Technical University, the Chambers of Civil Engineers and Architects, and state and municipal institutions.

Two approaches were used for the project implementation:

- Incorporation of the RADIUS initiative into the city's global seismic disaster reduction policy; and
- Analysis of the long-term city urban and environmental planning and the integration of seismic risk reduction.

Emphasis was placed on cooperation by all institutions involved to closely link preventive and environmental planning (Local Agenda 21). New links between the national institutions (governor's office and civil defence directorate) and the municipal government were created. In addition, it was possible to incorporate several international cooperation programmes in the global perspective of seismic risk reduction in Izmir. These included German cooperation for relief organization and equipment, preparedness, and training for crisis management and UK cooperation for hospital and school vulnerability assessment and retrofitting. After the Izmir disaster, the new mayor emphasized that:

- Soil questions and seismic microzoning will be a priority for land-use planning;
- Illegal buildings will not be permitted and construction will be regulated;
- Public awareness campaigns will be carried out; and
- A risk management department will be established.

A communication plan is being developed to raise public awareness through coverage by the media and to integrate the media into policy.

Skopje

Based on decisions of the International Consultative Board and the governments of the Republic of Macedonia and the City of Skopje, the Institute for Earthquake Engineering and Engineering Seismology at the St. Cyril and Methodius University (IZIIS) was created in 1965. Its mission is to provide data and design and planning elements for long-term reconstruction and development of the city and to incorporate new techniques in the field of planning and design. In the

municipality the department for urbanism is in charge of preparedness, emergency management, and contingency planning. Good communication between these services has insured close collaboration between the project and political officials.

It was decided to concentrate the activities of the RADIUS project on:

- Urban development plan for lifeline components, health care systems, and schools;
- Emergency activities of transportation, search and rescue;
- Collective measures to improve the functioning of the aforementioned systems;
- Individual counter measures for vulnerable important facilities;
- Improvement of regulation and insurance systems: building code, monitoring of construction and insurance; and
- Dissemination of the scenario and action plan.

The RADIUS study was an opportunity to enforce the building code, to strengthen the mechanism for technical supervision of design and construction, through the physical plan and the master plan for the city of Skopje. Links between the government and municipal departments involved in the planning were considerably strengthened during the project.

In order to improve the present situation, it was decided:

- To increase national coordination between sectors;
- To include the results of the Radius project in the preparation of the master plan and of the physical plan; and
- To institutionalize efforts by improving the laws and by creating a committee for the development of a multidisciplinary and multi-risk management plan.

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