EEFIT

Earthquake Engineering Field Investigation Team

Administrative Office

The Institution of Structural Engineers,
47-58 Bastwick Street, London, EC1V 3PS, United Kingdom
Tel: +44 (0)20 7235 4535
Fax: +44 (0)20 7235 4294
Email: eefit@istructe.org
Website: www.eefit.org.uk

EEFIT is a UK based group of earthquake engineers, architects and scientists who seek to collaborate with colleagues in earthquake prone countries to improve the seismic resistance of traditional and engineered structures. It was formed in 1982 as a joint venture between universities and industry and it has the support of the Institution of Structural Engineers and of the Institution of Civil Engineers through its associated society SECED (the British national section of the International Association for Earthquake Engineering). EEFIT is financed solely by membership subscriptions from its individual and corporate members.

EEFIT exists to facilitate the formation of investigation teams which are able to undertake, at short notice, field studies following damaging earthquakes. The main objectives are to collect data and make observations leading to improvements in design methods and techniques for strengthening and retrofit, and where appropriate to initiate longer term studies. EEFIT also provides an opportunity for field training for engineers who are involved with earthquake-resistant design in practice and research.

EEFIT has undertaken missions in Australia, Chile, Colombia, Greece, Iran, Italy, India, Japan, Mexico, the Philippines, San Salvador, Sicily, Taiwan, Turkey, Romania and the United States of America.

Mission reports are published and supplemented by blogs, preliminary reports and technical lectures.

The reports are illustrated with numerous images and figures relating to the earthquakes and consider:

- the mission methodology
- the earthquake affected region
- seismological aspects
- the types of damage, including its distribution and extent on both engineered and non-engineered structures
- the social and economic effects of the earthquakes.

Objectives

The main objectives of EEFIT field investigations are:

(a) To carry out a detailed technical evaluation of the performance of structures, foundations, civil engineering works and industrial plant within the affected area.
(b) To collect and assess appropriate geological, topographical and seismological data, including strong motion records where available.
(c) To record the effectiveness of earthquake protection measures (including repair and retrofit), and to make comparisons of actual performance of structures and other construction with the expectations of designers.
(d) To study disaster management procedures and the socio-economic effects of the earthquake, including human casualties.
(e) To disseminate initial findings within a few weeks of return, via:
    - De-briefing seminars and meetings organised in conjunction with supporting organisations
    - Articles in appropriate journals
    - EEFIT's web site
(f) To publish within twelve months a report covering the team's findings and interpretation of data, and referring to the work of other investigators.
(g) To promote opportunities for follow-up research projects and consultancies, especially those which involve collaboration between UK and local research teams, or those which are of particular relevance to the UK engineering profession.

Methods

The detailed strategy for the investigations undertaken after any particular earthquake are established upon arrival in the field. Wherever possible the collaboration of local engineers in determining the type and extent of the surveys to be carried out is sought. The investigations will normally include consideration of:

(a) The earthquake affected zone including population, economy, topography and geology.
(b) Seismology, including historical seismicity, epicentre location, data on magnitude and source mechanisms and strong motion records.
(c) The structural behaviour of both engineered and non-engineered structures.
(d) Significant geotechnical aspects of the earthquake including the relationship between the spatial distribution of damage and geological/geotechnical damage and studies of the performance of foundations and earth structures.
(e) The performance of industrial plant including mechanical and electrical equipment.
(f) The performance of large facilities and civil engineering construction such as dams, bridges, port facilities and tunnels.
(g) Earthquake-resistant design procedures.
(h) Lifelines, including services and transportation.
(i) Disaster planning and management including recovery programmes.