APPENDIX VI

Selected Bibliography for Seismicity and Seismic Hazard Research

Abe, K., 1981 Magnitude of large shallow earthquakes from 1904 to 1980. Phys. Earth Planet. Inst., 27, 77-92.

Abe K., 1984. Complement to "Magnitude of large shallow earthquakes 1904 to 1980". Phys. Earth Planet Inst., 34, 17-23

Abe, K. and S. Noguchi, 1983a. Determination of magnitude for large shallow earthquakes 1898-1917. Phys. Earth Planet. Inst., 32, 45-49.

Abe, K. and S Noguchi, 1983b. Revision of magnitudes of large shallow earthquakes 1897-1912. Phys. Earth Planet. Inst , 33, 1-11.

Agarwal, R.C., 1993. Seismic hazard in India. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 139-143

Algermissen, S.T and D.M. Perkins, 1976. A probabilistic estimate of maximum acceleration in rock in the contiguous United States. U S. Geol Surv. Open File Rep., 76-416, 45p.

Algermissen, S.T., D.M. Perkins, P.C. Thenhaus, S.L. Hanson and B.L. Bender, 1982 Probabilistic estimates of maximum acceleration and velocity in rock in the contiguous United States. U.S. Geol. Surv Open File Rep., 82-1033, 99p

Algermissen, S T., D M Perkins, P.C. Thenhaus. S.L. Hanson and B.L. Bender, 1990. Probabilistic earthquake acceleration and velocity maps for the United States and Puerto Rico. U.S. Geol. Surv. Map MF-2120, 2 plates.

Algermissen, S.T., E.V Leyendecker, G.A. Bollinger, N.C. Donovan, J.E Ebel, W.B. Joyner, R.W. Luft and J.P. Singh, 1991. Probabilistic ground motion hazard maps of response spectral ordinates for the United States Proceedings of the Fourth International Conference on Seismic Zonation, II, 687-694.

Algermissen. S.T. and E V. Leyendecker, 1992. A technique for4 uniform hazard spectra estimation in the U S.. Proceedings 10th World Conference on Earthquake Engineering, Madrid, 1, 391-397.

IAllen, C.R., 1975. Geological criteria for evaluating seismicity. Bull. Seismol. Soc. Am., 86, 1041-1057.

Anglin, F.M et al., 1990. The seismicity map of Canada. G.S.C Canadian Geophysical Atlas, Map 15, Scale 1.10 000 000.

Alvarez, Leonardo, 1993. Seismic hazard in Cuba In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 78-81

Anderson, J G., 1979. Estimating the seismicity from geological structure for seismic risk studies. Bull. Seismol Soc. Amer.. 69, 135-158.

Armijo, R., P Tapponnier, J L Mercier and T. Han, 1986. Quaternary extension in Southern Tibet: field observations and tectonic implications. J. Geophys Res., 91, 13803-13872.

Armijo, R., P. Tapponnier and H. Tonglin, 1989 J. Geophys. Res , 94, 2787-2838.

Arya, A.S., 1992. Possible effects of major earthquake in Kangra region of Himachal Pradesh, Special Issue, edited by H.K Gupta, Curr. Sic., 62, 252-256.

Asfaw, Laike Mariam, 1993. Seismic hazard in Ethiopia In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 102-104.

Aspinall, W.P., J B. Shepherd, G. Woo, L.L. Lynch, W Ambeh, K.C. Rowley and A. Wightman, 1993. Seismic hazard near a segmented subduction zone, The Roseau Dam Site, St. Lucia, West Indies. Earthquake Spectra, (in press).

Aspinall, W.P., (1978). The 14 August, 1977 earthquake near Trinidad. Proceedings, First Caribbean earthquake Conference, 44-70.

Bapata, A., R.C Kulkarni and S.K. Guha, 1983. Catalogue of earthquakes India and neighbourhood from historical period up to 1979. Indian Soc. of Earthquake Technology (Publ.) 1-211.

Basham. P.W., D.H. Weichert, F.M. Anglin and M.J. Berry, 1985 New probabilistic strong seismic ground motion maps of Canada. Bull Seismol Soc. Am., 75, 563-595

Basham, Peter and Domenico Giardini, 1993b Technical guidelines for global seismic hazard assessment In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 15-24.

Beca, Carter, Hollings and Ferner Ltd., 1978. Indonesian earthquake study (6 volumes), Wellington, New Zealand (unpublished manuscripts)

Beltran, C. and C. Giraldo, 1989. Aspectos neotectonicos de la región nororiental de Venezucla. VII Cong. Geol. Venezolano, Bqto., 3, 1000-1021.

Bender. B and D M. Perkins, 1987. SEISRISK III: a computer program for seismic hazard estimation U S Geol Surv. Bull , 1772, pp. 48.

Berberian, M. and A. Mohajer-Ashjai, 1977. Seismic risk map of Iran, a proposal Geol Surv. Iran, 40, 121-150.

Berberian, M., 1981. Active faulting and tectonics of Iran, Hindu Kush. Geodynamic Evolution, Geodynamic Series, edited by H K. Gupta and F.M. Delany, vol. 3, 33-69

Bernard, P., and J. Lambert, 1988 Subduction and seismic hazard in the Northern Lesser Antilles: Revision of the historical seismicity. Bull. Seismol. Soc. Amer., 78, 1965-1983.

Berrocal, Jesús and Celia Fernandes, 1993. Seismic hazard in Brazil. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 38-41.

Bertil. D., 1993. Seismic hazard in the Ivory Coast In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 163-164.

Bollinger, G.A., 1973. Seismicity of the southeastern United States. Bull. Seismol. Soc. Amer., 63, 5, 1785-1808.

Boore, D. and N. Ambraseys, 1993 Some notes concerning prediction of ground motion for GSHAP. In GSHAP Technical Planning Volume, edited by Dominico Giardini and Peter Basham, Ann Geofis., 36, n. 3-4, 169-180.

Bozorgnia, Y. and A. Mohajer-Ashjai, 1982. Seismic risk investigation of major cities of Iran. Earth and Space Phys., 2 (1,2). 15-38.

Brooks, J.A., 1965 Earthquake activity and seismic risk in Papua and New Guinea. Aust. Bur. Miner. Resour., Geol and Geophys Rep , 74.

Brune, J.N., P.A. Johnson and C. Slater, 1990 Nucleation, predictability and rupture mechanism in foam rubber models of earthquakes. J. of Himalayan Geol., 1, (2), 155-166.

Brunnschweiler, R.O., 1960. On the geology of Indoburman Ranges. J. Geol. Soc. Aust., 13, 137-194.
Bufaliza, M.A., 1985. Atenuación de las acelerogramas horizontales máximas empleando datos de sismos argentinos. SISRA 14, CERESIS.

Bufaliza, M.A., 1987. Atenuación de la aceleración horizontal máxima con la distancia. Memorias VII Jornadas Argentinas de Ingeniería Estructural. Buenos Aires.

Burton, Paul W., 1993. Seismic hazard in the United Kingdom. In The Practice of Earthquake Hazard Assessment. edited by Robin K. McGuire, 251-257.

Cabré, S.J. and B.A. Vega, 1989. Sismicidad de Bolivia. Observatoris San Calixto Pub., 40, pp. 73.

Cabré, Ramón and Angel Vega, 1993 Seismic hazard in Bolivia. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 34-37.

Camelbeeck, T., 1993. Seismic hazard in Belgium In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 29-33

Campbell, K W , Algermissen, S.T., Kausel, E., and L W. Highland, 1989. Processed Strong-Motion Data for the Central Chile Earthquake of March 3, 1985 - fifteen accelerograph sites owned by CHILECTRA, ENDESA and the Department of Geology and Geophysics, University of Chile. U.S. Geological Survey Open-File Report 89-448, 329p

Carmona, J.S., and Castano, J.C., L973. Seismic risk in South America to the south of 20 degrees. Proceedings of the Fifth World Conference on Earthquake Engineering, Ministry of Public Works, Rome, Italy.

Carmona, J.S., J.C. Castano and C.A. Medone, 1970. Riesgo sísmico en la República Argentina. Simposio sobre acciones estructurales. Tucuman, Argentina.

Carmona, Juan S and Mario A. Bufaliza, 1993. Seismic hazard in Argentina. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 11-15

Castano, J.C. y H. Bastías, 1981 Evaluación del riesgo sísmico en base a un criterio sismotectónico. Publicación Técnica No. 8 del INPRES, San Juan, Argentina.

Castano, J.C. y J.L. Zamarbide, 1991 Fuentes sismogénicas, sismicidad histórica y peligro sísmico en la región centro-oeste de la Argentina. Revista Geofísica, En prensa, 1991

Castano, J.C y M.A. Araujo, 1993. Seismogenic Source and Regional Tectonics Stresses in the Subandean Zone of Major Seismic Hazard of Argentina. 2nd. International Symposium on Andean Geodynamics Oxford, England, September

Centeno-Grau, M., 1969. Estudios Sismologicos. Biblioteca de la Academia de Ciencias Físicas, Matemáticas y Naturales, Volumen VII, Caracas

CEPREDENAC, 1991. Informe final del trienio, Octubre 1988 - Febrero 1991. Guatemala City, Guatemala, 40p

Chandra, U , 1978 Seismicity, earthquake mechanisms and tectonics along the Himalayan mountain range and vicinity. Phys. Earth Planet. Inter., 6, 109-131.

Chandra, U., 1992. Seismotectonics of Himalaya. Curr. Sci., no 1-2, 40-71.

Chen, W.P and P. Molnar, 1977. Seismic moments of major earthquakes and the average rate of slip in Central Asia. J. Geophys. Res., 82, 2945-2969.

Chen, W.P. and P. Molnar, 1983. Focal depths and fault plane solutions of earthquakes under the Tibetan Plateau. J. Geophys Res., 88, 1180-1196.

Cloud, W K., 1963. Maximum accelerations during earthquakes. Proceedings de la 1ra. Conferencia sobre Sismología e Ingeniería Sísmica, Santiago de Chile.

Coppersmith, K.J., 1982. Probabilistic evaluations of earthquake hazards Calif. Div. of Mines and Geol., Special Paper 62, 125-134.

Coral-Gómez, Carlos, 1993. Seismic hazard in Colombia. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 69-73

Cornell, C.A., 1968. Engineering seismic risk analysis Bull. Seismol. Soc Amer , 58, 1583-1606.

Cornell, C.A., 1986. Where do we go from here to increase the state of knowledge? A workshop on "Probabilistic Seismic Hazard Assessments", U.S. Geol Surv. Open-File Report, 86-185, 19-24.

Cozzolino. J.M., 1978. A method for the Evaluation of Retained Risk Journal of Risk and Insurance, Vol. 45, No. 3.

Crawford. A.R., 1974 The Indus suture line, the Himalaya, Tibet and Gondwanaland. Geol. Mag., 111, 369-383.

Crone, A.J., 1987. Introduction to directions in paleoseismology. U.S. Geol. Surv Open-File Report, 87-673. 1-7.

Curray, J.R., D G. Moore, L.A. Lawver, F.J. Emmel, R.W. Raitt, M Henry and R. Kieckhefer, 1978. Tectonics of Andaman sea and Burma. In Geological and Geophysical Investigations of Continental Margins, edited by J.S. Watkins, L. Montadert and P. Dickerson, Mem. Am. Assoc Pet Geol., 29, 189-198

Dahle, Anders and Hilmar Bungam, 1993. Seismic hazard in Norway. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 200-204

Dames and Moore, 1986. Seismic hazard methodology for the Central and Eastern Unites States. Vol. 6, Tectonic interpretations, Electric Power Research Institute, NP-4726

Davis, Scott D and Cliff Frolich, 1991. Single-link cluster analysis of earthquake aftershocks Decay laws and regional variations. Jour Geophys. Res., 96, 84, 6335-6350.

de Crook, Th , 1993. Seismic hazard in The Netherlands. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 187-191.

Denham, David and Warwick Smith, 1993. Earthquake hazard assessment in the Australian Southwest Pacific Region: A review of the status quo In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 27-39.

Der Kuireghian, A. and A.H.S. Ang, 1975. A fault-rupture model for seismic risk analysis. Civil Engineering Studies, Structural Research Series No. 419. University of Illinois, Urbana

Dixit, Amod Mani, 1993. Seismic hazard in Nepal. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 184-186.

Drimmel, Julius, 1993 Seismic hazard in Austria. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 21-25.

Dziewonski, A.M, T.A. Chou and J.H. Woodhouse, 1982. Determination of earthquake source parameters from waveform data for studies of global and regional seismicity. J. Geophys. Res., 86, 2825-2852.

El-Kaysi, Kays K., 1993. Seismic hazard in Jordan. In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 174-179

Episodes, June 1992. World had 61 significant earthquakes in 1991, vol. 15, no 2, 156.

Espinosa, A., Sarria A. and L. García, 1985. Riesgo Sísmico en Colombia. Mem. VI Congreso Latinoamericano de Geología, Bogotá, 2, 206-243.

Esteva, R.L. and E Rosenblueth, 1964. Expectios de temblores distancias moderadas y grandes. Soc. Mex. Ing. Seis., 2, 1-18

Esteva, L., 1976. Stochastic Processes of Seismic Risk. In Lomnitz, C. and E Rosenblueth (editors), Seismic Risk and Engineering Decisions, Elsevier Scientific Publishing, Amsterdam.

Esteva, L., 1970. Regionalización sismica de México para fines de Ingeniería. UNAM, No. 246, Mexico City.

Evans, P. and W. Crompton, 1946 Geological factors in gravity interpretation by evidence from India and Burma Q.J. Geol Soc. London, 102, 211-249.

Everingham, I.B., 1986 A note on earthquake risk zoning in Fiji. Fiji Min. Res. Dep. Note BP 33/14 (unpublished)

Feng Hao, 1991. Characteristics of seismicity in China. Seismological Publishing House, An introduction to Lithospheric Dynamics of China, pp. 193-200

Fernández, L.M., 1985. El Procesamiento de acelerogramas de un terremoto Limeño en el dominio de la frecuencia. SISRA 14, CERESIS

Fernandez, L.M. and A. du Plessis, 1993. Seismic hazard in South Africa. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 218-222

Feuillard, M,, 1982. La sismicité historique de la Guadeloupe et la Martinique. Ph. D. Thesis, Observatoire Volcanologique de la Guadeloupe.

Fiedler, G., 1961. Areas afectados por terremotos en Venezuela Memoria del III Congreso Geológico de Venezuela, vol. IV, Boletin de Geológico, publicación especial 3, Ministerio de Minas y Hidrocarburos, Caracas.

Fitch, T.J., 1970. Earthquake mechanisms in the Himalayan, Burmese, and Andaman regions and continental tectonics in central Asia. J. Geophys Res., 175, 2699-2709.

Fitch, T.J., 1972. Plate convergence, transcurrent faults and internal deformation adjacent to southeast Asia and the western Pacific. J. Geophys. Res., 77, 4432-4460.

Fresard, M. y G.R. Saragoni, 1985 Análisis de los acelerogramas de los sismos de 1981 en la Zona Central de Chile. Sección Ingeniería Estructural, Departamento de Ingeniería Civil, Universidad de Chile, Publicación SES I 3/85 (198) Dic. 1985, 401p.

Gansser, A., 1981. The Geodynamic history of the Himalaya, Zagros, Hindu Kush, Himalaya Geodynamic Evolution Geodynamic Series, edited by H.K. Gupta and F.M. Delany, Am. Geoph. Un. and Geol. Soc. of Am., vol. 3, 111-121.

Garcia, L.E , A. Sarcia, A. Espinosa, C.E. Bernal and M. Puccini, 1984. Estudio general del riego sismico de Colombia. Asociacíon Colombiana de Ingeniería Sísmica, Bogotá.

Gaull, B.A., M O. Michael-Leiba and J M.W. Rynn, 1990. Probabilistic earthquake risk maps of Australia. Aust. J. Earth Sci., 37, 169-187.

Geological Survey of India, 1992 Uttarkashi earthquake - October 20, 1991. J.G.S.I., 39, (1), 83-88.

Giardini. D. and P.W. Basham, 1993a. The Global Seismic Hazard Assessment Program (GSHAP). In GSHAP Technical Planning Volume, Ann. Geofis , 36 (n.3-4), 3-13.

Grases, J. 1971. La sismicidad histórica del Caribe. Informe que presente el Ing José Grases G. a la Juntal Directiva del Comité Conjunto del Concreto Armado, Caracas (FUNVISIS, Caracas).

Grases, J , 1990. Peligro sismico con fines de Ingenieria. Segundas Jornadas de Ingenieria Sismica, Caracas, 1 and 2 Junio, 1990.

Grunthal, G. and G. Leydecker, 1993. Seismic hazard in Germany. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 121-128.

Gu Gongxiu, 1983 Earthquake Catalogue of China. Seismological Press.

Gupta, Harsh K , 1993. Seismic hazard assessment in the Alpide belt from Iran to Burma. In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 61-82

Guidoboni, E. and M. Stucchi, 1993. The contribution of historical records of earthquakes to the evaluation of seismic hazard. In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis.. 36, n. 3-4, 201-215

Gulatee, B.L., 1956. Gravity data in India. Surv. India Tech. Pap., 10, 195.

Gulkan, Polat and M. Semih Yucemen, 1993. Seismic hazard in Turkey. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 247-250.

Gupta, H.K., K. Rajendran and H.N. Singh, 1986. Seismicity of the North-East India Region. Part I: the data base. J. Geol. Soc. India, 28, 5, 345-365.

Gupta, H.K. and H.N. Singh, 1986. Seismicity of the North-East India Region, Part II. earthquake swarms precursory to moderate magnitude to great earthquakes. J. Geol. Soc India, 28, 5, 367-406.

Gupta, H.K. and S.C. Bhatia, 1986 Seismicity in the vicinity of the India-Burma border: evidence for a sinking lithosphere. J. Geodynamics, 5, 375-381.

Gutenberg, B. and C.F. Richter, 1954. Seismicity of the Earth and Related Phenomena. Princeton University Press, Princeton, N J..

Guttorp, Peter, 1987. On least-squares estimation of b values. Bull. Seis. Soc. Am., Vol. 77 No. 6, 2115-2124

Hamilton, W., 1977. Subduction in the Indonesian region, in Island arcs, deep sea trenches and back-arc basins. Maurice Ewing Ser., edited by M. Talwani and W.C. Pitman, A.G.U Washington, D.C., vol. 1, 15-31.

Hamilton, W., 1979. Tectonics of the Indonesian region. U.S. Geol. Surv Prof. Pap., 1078, 345.

Hanks, T.C. and H. Kanamori, 1979 A moment magnitude scale. J. Geophys. Res., 84, 2348-2350

Hasegawa, H.S., P.W. Basham and M J Berry, 1981. Attenuation relations for strong seismic ground motion in Canada. Bull. Seismol Soc. Am., 71, 1943-1962.

Hattori, S., 1979 Seismic risk maps in the world (maximum acceleration and maximum particle velocity II). Balkan, Middle East, Southeast Asia, Central America, South America and others. Bull. Int. Inst Seismol Earthquake Eng., 17, 33-96.

H'faiedh, D. Mohamed and D. Mohamed Allouche, 1993. Seismic hazard in Tunisia. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 243-246.

Hutchinson, D.L., A.L. Andrews, G.W. Butcher and D. Kolston, 1986. Draft replacement of NZS 4203:1984. Seismic provisions. Bull. N.Z. Nat. Soc. Earthquake Eng., 19, 158-166.

Ibrahim, Ezz Eldin, 1993. Seismic hazard in Egypt. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 96-101.

Iñiguez, Pérez, H.M.R. Acosta Segura and L.A. Vizcaino. 1975 Relación de sismos occuridos en La Isla de Santo Domingo (1551-1975) Publ by the Universidad de Santo Domingo.

INPRES, 1985 Estudio sísmico de emplazamiento de la Central Nuclear Atucha II. San Juan, septiembre.

INPRES. 1990. Microzonificación sísmica del Gran Mendoza. Informe Técnico General, Vol. I al VII. Argentina

INPRES-Cirsoc, 1983. Normas Argentinas para construcciones sismo-resistentes. INPRES 103, San Juan, Argentina.

Jacob, A W.B., 1993 Seismic hazard in Ireland. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 150-152.

Jacob, K H. and J. Mori, 1982. Strong motion in Alaska-type subduction zones. Proc. 8th World Conf. Earthquake Eng , 2, 311-317.

Jacob, K.H. and R.C. Quittmeyer, 1979. The Makran region of Pakistan and Iran: trench-arc system with active plate subduction Geodynamics of Pakistan-Progress Report, Publ. Geol. Survey Pakistan.

Johnston, A. and S. Halchuck, 1993. The seismicity data base for the Global Seismic Hazard Assessment Program. In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36 n. 3-4, 133-151.

Jones, Trevor D , 1993 Seismic hazard in Fiji In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 105-110

Joyner, W.B and D M. Boore, 1981. Peak horizontal acceleration and velocity from strong motion records including records from the 1979 Imperial Valley, California earthquake Bull Seismol. Soc. Amer., 71, 2011-1038.

Jury, R.D., J.P. Hollings and I.A.N. Fraser, 1982 The development of seismic zones and the evaluation of lateral loadings for earthquake resistant design of buildings in Papua New Guinea Bull. N Z. Soc. Earthquake Eng., 15, 3, 123-139

Kanai, K and I. Suzuki, 1968. Expectancy of the maximum velocity amplitude of earthquake motions at bedrock. Bull. Earthquake Res. Inst., 46, 663-666

Kanamori, K., 1977. The energy release in great earthquakes. J. Geophys Res., 82, 2981-2987.

Kanamori, H., 1978. Quantification of great earthquakes. Tectonophysics, 49, 207-212.

Katayama, Tsuneo., 1993. Seismic hazard in Japan. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 169-173.

Kausel, Edgar, 1993. Seismic hazard in Chile. In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 57-61

Kijko, Andrzej, 1993. Seismic hazard in Poland. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 210-212.

Kanamori, H., 1978. Qualification of earthquakes. Nature, 271, 411-414.

Khattri, K N , 1992 Seismic hazard in Indian region Special issue, edited by H.K. Gupta Curr Sci , no. 1-2, 109-116

Kong, Lee Keng., 1993. Seismic hazard in Malaysia. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire. 180-183

Le Dain, A.Y., P. Tapponnier and P Molnar, 1984 Active faulting and tectonics of Burma and surrounding regions. J. Geophys. Res., 89, (B1), 453-472.

Lomnitz, C., 1964. Earthquake risk in Chile. Bull. Seismol. Soc. Am., 54, 1271-1281.

Lomnitz, C., 1969. An earthquake risk map of Chile. Proc. 4th World Conf. Earthq. Eng. Santiago, 1, A-1, 161-171

Lomnitz, C., 1970. Major earthquakes and tsunamis in Chile during the period 1535-1955 Geol. Rundschau, 59, 939-960.

Lomnitz, C., 1974 Global tectonics and earthquake risk. Developments in Geophysics 5, Elsevier Scientific Publ Co., p. 320

Liu, Huixiang, 1987 On the seismic zoning map China. Proceedings of International Seminar on Seismic Zonation, pp. 35-42

Makropoulos, K.C., 1993. Seismic hazard in Greece In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 129-134.

Mantyniemi, Paivi, 1993. Seismic hazard in Finland. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 111-114.

Marza, V. and A. Pantea, 1993. Seismic hazard in Romania. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 213-217

Mayer-Rosa, Dieter, 1993. Towards uniform earthquake hazard assessment in Europe. In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 93-102.

Ma Zongjin, Chen Zhangli, Zhu Yueqing, Wang Liping and Xue Feng, 1984. The basic characteristics of the continental earthquakes. A collection of Papers of International Symposium on continental Seismicity and Earthquake Prediction, pp. 299-311.

Ma Zongjin, Fu Zhengxiang, Zhang Yingzhen, Wang Chengmin, Zhang Cuomin and Liu Defu, 1989. Earthquake Prediction: nine major earthquakes in China. Seismological Press and Springer-Verlag.

Matuschka, T , K.R. Berryman, A.J O'Leary, G.H. McVerry, W.M. Mullholland and R.I. Skinner, 1985 New Zealand seismic hazard analysis. Bull. N.Z. Nat. Soc Earthquake Eng., 18, 313-322.

Matuschka, Trevor, 1993. Seismic hazard in New Zealand. In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 192-197.

Mayer-Rosa, D., 1993. Seismic hazard in Switzerland. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 227-230.

McCue, K.F., 1984. Discussion paper "The development of seismic zones and the evaluation of lateral loadings for earthquake resistant design of buildings in Papua New Guinea, edited by R.D. Jury, J.P Hollings and Ian Fraser" Bull. N Z Soc. Earthquake Eng., 17, 4, 292-296.

McEwin, A., R. Underwood and D. Denham, 1976. Earthquake risk in Australia. BMR J Aust. Geol. Geophys., 1- 15-21.

McGuire, R.K , 1976 FORTRAN computer program for seismic risk analysis. U.S. Geol. Surv. Open File Rep., 76-67, 90p.

McGuire, R.K., 1979. Adequacy of simple probability models for calculating felt-shaking hazard, using the Chinese earthquake catalogue. Bull Seismol Soc. Amer , 69, 877-892.

McGuire, R.K. and T.P. Barnhard, 1981. Effects of temporal variations in seismicity on seismic hazard. Bull Seismol Soc. Amer., 71.

McGuire, R.K., 1993 Computations of seismic hazard. In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n. 3-4, 181-200.

McGuire, Robin K., 1993. Seismic hazard in the United States of America In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 258-265.

Mezcua, J and A.J. Martin, 1993 Seismic hazard in Spain. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 223-226.

Michael-Leiba, Marion, Trevor Jones and Kevin McCue, 1993 Seismic hazard in Australia. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 16-20.

Mihailov, Vladmir, 1993. Seismic hazard in Former Yugoslavia In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 277-280.

Minaya, E., 1985. Atenuación de la intensidad en la región de Cochabamba. SISRA 14, CERESIS.

Minister, J. and T Jordan, 1978. Present-day plate motions. J. Geophys Res., 83, 5331-5354.

Molnar, P., 1979. Earthquake recurrence intervals and plate tectonics. Bull. Seismol Soc. Amer., 69, 115-133.

Molnar, P. and Q Deng, 1984 Faulting associated with large earthquakes and average rate of deformation in Central and Eastern Asia. J. Geophys. Res.,89, 6203-6227.

Molnar, P. and H. Lyon-Caen, 1989. Fault plane solutions of earthquakes and active tectonics of the Tibetan Plateau and its margins. Geophys. J. Int., 99, 123-153.

Molnar, P and P. Tapponnier, 1975. Cenozoic tectonics of Asia: effects of a continental collision. Science, 189, 419-426

Molnar, P. and P. Tapponnier, 1978. Active tectonics of Tibet J. Geophys Res.,83, 5361-5374.

Montero, Walter P., 1993. Seismic hazard in Costa Rica. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 74-77.

Mouroux, P., P Godefroy and H Ferrieux, 1993. Seismic hazard in France. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 115-121.

Muniruzzaman, M , 1993 Seismic hazard in Bangladesh. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 26-28.

Muir-Wood, R., 1993. From global seismotectonics to global seismic hazard. In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis , 36, n. 3-4, 153-168

Mukhopadhyay. M. and S. Dasgupta, 1988. Deep structure and tectonics of the Burmese arc. constraints from earthquake and gravity data Tectonophysics, 149, 299-322

Nelson, M.R., R. McCaffrey and P. Molnar, 1987. Source parameters for 11 earthquakes in the Tian Shan, Central Asia, determined by P and SH waveform inversion. J. Geophys. Res., 92, 12629-12648.

Ni, J. and M. Barazangi, 1986. Seismotectonics of the Zagros continental collision zone and a comparison with the Himalayas. J. Geophys. Res , 91, (B8), 8205-8218.

Nowroozi, A.A. and G. Ahmadi, 1986. Analysis of earthquake risk in Iran based on seismotectonic provinces. Tectonophysics, 122, 89-114.

Nuttli, Otto W., 1974. Magnitude recurrence relations for the central Mississippi Valley earthquakes Bull Seismol. Soc. Amer., 64, 4, 1189-1207.

Okal, E.A., 1989 A theoretical discussion of time domain magnitudes the Prague formula for M_s and the mantle magnitude M_m. J. Geophys. Res., 94, B4, 4194-4204

Oldham, T., 1883 A catalogue of Indian earthquakes from the earliest time to the end of A.D. 1869. Mem. Geol. Surv. India., 19, pt. 3, 1-53

Onuoha, K. Mosto, 1993. Seismic hazard in Nigeria. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 198-199

Pacheco, J F. and L.R. Sykes, 1992. Seismic moment catalogue of large shallow earthquakes, 1900 to 1991 Bull Seismol Soc. Amer., 82, 1306-1349.

Pantosti, D. and R. Yeats, 1993. Paleoseismology of great earthquakes of the late Holocene In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n. 3-4, 237-257.

Papakyriacoou, George J., 1993 Seismic hazard in Cyprus. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 82-86.

Pardo. M , Comte, D , y A. Eisenberg, 1989. Sismicidad histórica y evaluación del peligro sísmico en la zona central de Chile 5as. Jornadas Chilefias de Sismología e Ingeniería Antisísmica, ACHISINA, Santiago, 1, 311-319

Peltzer, G. and P. Tapponier, 1988 Formation and evolution of strike-slip faults, rifts, and basins during the India-Asia collision: an experiment approach J Geophys. Res.,93, 15085-15117.

Pennock. E.S., R.J. Lillie. A.S.H Zamana and M. Yousuf, 1989. Structural interpretation of seismic reflection data from eastern salt range and potwar plateau, Pakistan. The American Association of Petroleum Geologists Bulletin, 73, (7), 841-857.

Perucca, J.C y otros, 1979. Carta Geotectónica de Cuyo. Instituto de Investigaciones Geológicas Fac. Cien. Ex Fis. y Nat, Universidad Nacional de San Juan Bol N4

Poobrasert. Suparb, 1993. Seismic hazard in Thailand In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 239-242.

Posso, G., 1985 Estudio preliinar del riesgo sísmico en el Ecuador. Tesis de grado inédito, Escuela Politécnica Nacional. Quito

Quittmeyer, R.C., A. Farah and K.H. Jacob, 1979. The seismicity of Pakistan and its relation to surface faults. Geodynamics of Pakistan, Geological Survey of Pakistan, Quetta

Quittmeyer, R.C and K.H. Jacob, 1979 Historical and modern seismicity of Pakistan, Afghanistan, Northwestern India, and Southeastern Iran. Bull. Seismol Soc. Amer., 69, (3), 773-823.

Ramírez, J E. and G Estrada Uribe, 1977. Mapa de riesgo sísmico. Inst. Geofísico, Univ. Javeriana, Bogotá.

Richter. C.F , 1958 Elementary Seismology Freeman Press, San Francisco, CA.

Riddell, R. and R. Villablanca, 1986. Riesgo sísmico en Chile. 4as Jornadas Chilenas de Sismología e Ingeniería Antisísmica, ACHISINA, Viña del Mar, 2, p F-130-151

Ripper. L.D. and H. Letz, 1993. Seismic hazard in Papua New Guinea In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 205-209.

Risk Engineering Inc., Woodward-Clyde Consultants, Geomatrix Consultants, Cygna Corporation. Seismic hazard methodology for the Central and Eastern United States Vol. 1, Methodology, Electric Power Research Institute, NP-4726, revised February 1987.

Robertson, P. and K. Burke, 1989. Evolution of the southern Caribbean plate boundary, vicinity of Trinidad and Tobago. Bull. Am Assoc. Petrol. Geol., 73,490-509.

Robson, G.R., 1964. An earthquake catalogue for the eastern Caribbean 1530-1960. Bull. Seismol. Soc. Amer., 54, 785-832.

Russo, R.M., E.A. Okal and K.C. Rowley, 1992. Historical seismicity of the southeastern Caribbean and tectonic implications. PAGEOPH 139 1 87-119.

Russo, M.R., 1990. Seismicity, gravity anomalies and the tectonics of the Southeastern Caribbean. Ph D. Dissertation, Northwestern University, Evanston, Illinois.

Saenz, A. and A. Holmberg, 1990. Análisis de los acelerogramas del terremoto del 3 de marzo de 1985. Thesis Civil Eng., Dept. of Civil Engineering, U. of Chile.

Sarria, A., 1990. Sismos y riesgo sísmico en Colombia. Proyecto SISRA, Tomo 11, Publicaciones CERESIS.

Sarria, A., Bernal, C., y D. Echeverry, 1980. Estudio preliminar del riesgo sísmico en Colombia con base en curvas de isoaceleración. Segundo Seminario Colobiano de Geotecnia; Bogotá, Colombia, 1980.

Schenk, Vladimir, 1993. Seismic hazard in the Czech Republic and Slovakia In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 87-91.

Schwartz, D.P., 1988. Geologic characterization of seismic sources moving into the 1990s American Society of Civil Engineers, Geotechnical Special Publication, 20, 1-42.

Scholtz, C.H.,1990. The mechanics of earthquake faulting. Cambridge University Press.

Seeber, L. and J.G. Ambruster, 1981. Great detachment of earthquakes along the Himalayan arc and long term forecasting. American Geoph. Un , Maurice Ewing Series, 4, 259-277.

Shapira, A. and E. Arieh, 1993. Seismic hazard in Israel. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 153-157.

Shareq, Abdullah, 1981. Geological observations and geophysical investigations carried out in Afghanistan over the period of 1972-1979, Sagros, Hindu Kush. Himalaya Geodynamic Evolution, Geodynamics Series, Vol. 3, edited by H.K. Gupta and F.M. Delany, American Geophysical Union, Geol. Soc. of America

Shareq, Abdullah, 1993. Seismic hazard in the Islamic state of Afghanistan. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 1-6.

Shebalin, N.V., 1993. Seismic hazard in the Former USSR. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 266-273.

Shedlock, Kaye M., 1993. Status of seismic hazard assessment around the globe: North and South America. In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 103-129

Shepherd, J.B. and W.P. Aspinall, 1983. Seismicity and earthquake hazard in Trinidad and Tobago, West Indies Earthquake Eng. and Struct. Dynam. 11 2 229-250.

Shepherd, J.B , D.M. Beckles, W.P. Aspinall and S Clarke, 1986. Recent seismicity of the Trinidad/Tobago Gulf of Paria region. Proceedings, sixth Caribbean Geological Conference.

Shepherd, J.B., K.C. Rowley and L.L Lynch, 1988. The March 10, 1988 earthquake near Trinidad and its aftershocks Seismic Research Unit, U.W I., Report to the Ministry of National Security, Government of Trinidad and Tobago.

Shepherd, J.B., 1989. Eruptions, eruption precursors and related phenomena in the Lesser Antilles Proceedings of Volcanology, 1, 35-57.

Shepherd, J.B. and L.L. Lynch, 1993. An earthquake catalogue for the Caribbean: Part I, The historical period 1530-1900. Revista Geofisica (In Press).

Shepherd, J.B , J.G Tanner and L. Prockter, 1994. Revised estimates of the levels of ground acceleration and velocity with 90% probability of non exceedance in any 50-year period in the Trinidad and Tobago region. Proceedings, Caribbean conference on earthquakes, volcanos, windstorms and floods, Port-of-Spain, Trinidad. October, 1993,

Shepherd, John B., 1993. Seismic hazard in the eastern Caribbean. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 51-56

Singh, D.D. and H.K Gupta, 1980. Source dynamics of two great earthquakes of the Indian sub-continent the Bihar Nepal earthquake of January 15, 1934 and the Quetta earthquake of Maya 30, 1935. Bull. Seismol Soc. Amer., 70, 1757-773

SISRA, 1985. Catalogo de terremotos para America del Sur. CERESIS, Lima, Peru.

Slejko, D , 1993. Seismic hazard in Italy In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 158-162.

Smith, W.D., 1976 Statistical estimates of the likelihood of earthquake shaking throughout New Zealand. Bull. N.Z. Soc Earthquake Eng., 9, 4, 213-221

Smith, W.D., 1978a. Spatial distributions of felt intensities for New Zealand earthquakes. N.Z.J. Geol. Geophys., 21, 3, 293-311.

Smith, W.D., 1978b. Earthquake risk in New Zealand: statistical estimates. N.Z.J. Geol. Geophys , 21, 3, 313-327

Smith, W.D. and K.R. Berrymand, 1986 Earthquake hazard in New Zealand: inferences from seismology and geology. R. Soc. N.Z. Bull., 24, 223-243

Speed, R.C., 1985. Cenozoic collision of the Lesser Antilles Arc and continental South America and the origin of the El Pilar fault Tectonics, 4, 41-69.

Stein, S., C. DeMets, R.G. Gordon, J. Brodholt, D Argus, J F Engeln, P. Lundgen, C. Stein, D. Wiens and C.F. Woods, 1988. A test of alternative Caribbean plate relative motion models. J. Geophys. Res., 70, 5065-5074.

Schaad C and R. Saragoni, 1989. Fórmulas de atenuación considerando el terremoto de Chile de 1985. 5as. Jornadas Chilenas de Sismología e Ingeniería Antisismica, Santiago, 1, 379-388.

Singh, S K., Bazan E , y L Esteva, 1980 Expected earthquake magnitude from a fault Bull Seis. Soc Am., 70, N 3, 903-914.

Stelkkpp, J.C., 1972. Analysis of completeness of the earthquake sample in the Puget Sound area and its effect on statistical estimates of earthquake hazard. Proc. Int. Conf. Microzonation, 2, 897-910.

Stoyanov, Tosho, 1993. Seismic hazard in Bulgaria. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire. 42-46

Sulstarova, Eduard, 1993. Seismic hazard in Albania. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 7-10

Sykes, L.R., 1971. Aftershock zones of great earthquakes seismicity gaps and earthquake predication for Alaska and the Aleutians. J. Geophys. Res., 76, 8021-8041.

Tanner, J.G. and J.B. Shepherd, 1993 A revised seismicity catalogue for Latin America and the Caribbean. Presented at the U.N. Conference on the Application of Space Techniques, México, September, 1993.

Tapponnier, P. and P. Molnar, 1977. Active faulting and Cenozoic tectonics of China. J. Geophys. Res., 82, 2905-2930.

Tapponnier, P. and P. Molnar, 1979. Active faulting and Cenozoic tectonics of the Tien Shan, Mongolia, and Baikal region. J. Geophys. Res , 84, 3425-3459.

Tarr, A.C. (compiler), 1974 World map of seismicity. U.S. Geol. Surv., 1 sheet.

Tavakoli, Behrooz, 1993. Seismic hazard in the Islamic Republic of Iran. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 144-149

Tinti, Stefano and Francesco Mulargia, 1987. Confidence interval of b values for grouped magnitudes. Bull. Seis. Soc. Am., 77, No 6, 2125-2134.

Trenhaus, P.C., 1986. Seismic source zones in probabilistic estimation of the earthquake ground motion hazard a classification with key issues. A workshop on "Probabilistic Seismic Hazard Assessments". U.S. Geol. Surv. Open-File Report, 86-185, 53-71

Trieu, Cao Dinh, 1993. Seismic hazard in Vietnam In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire. 274-276.

Trifonov, V. and M.N Machette, 1993. The World Map of Major Active Faults Project In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n. 3-4, 225-236.

Ulomov, Valentin I., Vladimir Strakhov and Domenico Giardini, 1993 Seismic hazard assessment in Northern Eurasia. In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 83-92

Vanek J , J. Zátopek, V. Kárnik, N.Y Kondorskaya, Yu. V. Riznichenko, E.F. Savarenskii, S.L Solov'ev and N.V. Shebalin, 1963. Standardization of magnitude scales Izv. Akad. Nauk. SSSR, Ser. Geofiz., 2 153-158

Various, 1997. Volume devoted to attenuation and ground motion relations. Seismol. Res. Let., 68, 1, 255p.

Vega, B.A., 1980. Riesgo sismico en Bolivia. Revista Geofisica, 13, 121-129.

Vega, A., 1985. Sismicidad y peligro sísmico en el centro de Bolivia Simposio sobre el Peligro y Riesgo Sísmico y Volcánico en América del Sur., Proy. SISRA, 14, 317-323

Veneziano, D., C.A. Cornell and T. O'Hara, 1984. Historical method of seismic hazard analysis. Elec. Power Res. Inst., Report NP-3428, Palo Alto, Calif..

Villablanca, R. and R. Riddell, 1985 Evaluación del riesgo sísmico en Chile. Department of Structural Engineering, Catholic University of Chile, DIE 85-4, August, 153p.

Wafula, Mifundu and N. Zana, 1993. Seismic hazard in Zaire. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 281-284.

Wallace, R.E., 1981 Active faults, paleoseismology, and earthquake hazard in the Western United States. In Earthquake Prediction - an international review, edited by D.W. Simpson and P.G. Richards, Washington, D.C., American Geophysical Union, Maurice Ewing Series 4, 209-216.

Weichert, D.H., 1980. Estimation of the earthquake recurrence parameters for unequal observation periods for different magnitudes. Bull Seismol. Soc. Amer , 70, 1337-1346.

Weichert, Dieter, Peter Basham and John Adams, 1993. Seismic hazard in Canada In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 46-50

Wiggins-Grandison, M.D., 1993. Seismic hazard in Jamaica In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 165-169

Woodward-Clyde Consultants, 1982. Development and initial application of software for seismic exposure evaluation. Report for NOAA, Volume II.

Wallace, R.E., 1984. Patterns and timing of late Quaternary faulting in the Great Basin Province and relation to some regional tectonic features. J Geophys. Res., 89, 5763-5769

Wallace, R.E., 1987. Grouping and migration of surface faulting and variation in slip rate on faults in the Great Basin Province. Bull. Seismol. Soc. Amer., 77, 868-876.

Wesnousky, S.G., 1986. Earthquakes, quaternary faults, and seismic hazard in California. J. Geophys. Res., 91, 12587-12631.

Xiaxin, Tao, 1993. Seismic hazard in China. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire. 62-68

Youngs, R.R. and K.J. Coppersmith, 1985. Implications of fault slip rates and earthquake recurrence models to probabilistic seismic hazard estimates. Bull. Seismol. Soc. Amer., 75, 939-964.

Yeh, Yeong Tein and Chin-Hsiung Loh, 1993. Seismic hazard in Taiwan. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 231-238.

Yepes, H.A , L.F. Bonilla and M.C. Ruiz, 1993 Seismic hazard in Ecuador In The Practice of Earthquake Hazard Assessment, edited by Robin K McGuire, 92-95.

Youngs, R.R. and K.J. Coppersmith, 1989 Attenuation relationships for evaluation of seismic hazards from large subduction zone earthquakes. Proceedings of Conference XLVIII, Earthquake Hazards in the Puget Sound, Portland Area, U.S. Geological Survey Open File Report 89-465, 42-49.

Zambrano, J.J., 1978 Interpretación geológica preliminar del subsuelo de la zona Norte, Sector Occidental, Pcia. de Mendoza. Publicación N P-203, Serie Técnica, C.R.A.S.

Zhang, Peizhen, 1993 Seismic hazard assessment in Continental Asia. In GSHAP Technical Planning Volume edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n 3-4, 41-59.

Zhang, W., D. Jiao, P. Zhang, P. Molnar, B.C. Burchfiel, Q. Deng, Y. Wang and F Song, 1987 Displacement along the Haiyuan fault associated with the great 1920 Haiyuan, China, earthquake. Bull. Seismol. Soc. Amer., 77, 117-131.

Zhang, P , B.D. Slemmons and F. Mao, 1991. Geometric pattern, rupture termination, and fault segmentation of the Dixie Valley - Pleasant Valley active normal fault system, Nevada, U.S.A.. J. Struct. Geol., 13, 165-176.

Zoback, M.L., 1992. First and second order patterns of tectonic stress' The World Stress Map Project. J. Geophys. Res., 97, 11703-11728.

Zoback, M L., 1993 Utilizing in-situ stress data for seismic hazard assessment: The World Stress Map Project's contribution to GSHAP. In GSHAP Technical Planning Volume, edited by Domenico Giardini and Peter Basham, Ann. Geofis., 36, n. 3-4, 217-224.

Zsíros, Tibor, 1993. Seismic hazard in Hungary. In The Practice of Earthquake Hazard Assessment, edited by Robin K. McGuire, 135-138.

APPENDIX VII

List of Addresses

The names and addresses given here are based on the attendance at the various workshops held throughout the life of the prject. The addresses, telephone numbers, etc. have been updated where the information is available, but any one wishing to contact any individual should be aware that the information may be out of date.

Ing. Salvador de Jesus Alvarez
Centro de Investigaciones Técnicas
Depto. de Investigaciones Sismolólicos

Apartado Postal 109
San Salvador
EL SALVADOR, C.A
Tel: 503 22-98-00
503 22-96-98
Fax 503 21-19-33

Ing Mario Alberto Araujo
INPRES

Roger Balet 47, Norte
5400 San Juan
ARGENTINA
Tel: 54-64-231578
54-64-222710
Fax: 54-64-234463

Virginia Garcia Acosta
Centro de Investigaciones y Estudios
Superiores en Antropoligia Social

Hidalgo y Matamoros
Tlalpan 14000
Apartado Postal 22-048
México D.F.
MEXICO
Tel: (525) 573-90-66
Fax: (525) 573-69-83

Mr. Peter Basham
Geological Survey of Canada

1 Observatory Cres.
Ottawa, ON
K1A 0Y3
CANADA
Tel: (613) 995-0904
Fax: (613) 992-8836
E-mail: basham@seismo.emr.ca

Mr. Eduardo Camacho
Estación Sismológico
Instituto de Geociencias
Universidad de Panamá

Panamá
REPUBLICA DE PANAMA

Ing Juan Carlos Castano
Director, INPRES

Roger Balet 47 Norte
5400 San Juan
ARGENTINA
Tel: 54-64-239016
54-64-234463
Fax: 54-64-234463
E-mail: jcastano@inpre.gov.ar

Pra. N. Cardoze
Directora
Insitituto de Geociencias
Universidad de Panamá

Panamá
REPUBLICA DE PANAMA

Dr. Michel Feuillard
Observatoire Volcanologique de la Soufrière

Le Houëlmont
97113 Gourbeyre
GUADELOUPE W 1
Tel. (590) 81-37-15
(590) 80-01-39 (m)
Fax: (590) 81-35-91

Ing. Alberto Giesecke
Director, CERESIS

Apartado 14-0363
Lima
PERU
Tel. (511) 495-1391
(511) 433-6750(o)
Fax: (511) 433-6750
E-mail: giescere@inictel.gob.pe

Ing. José Grases
Director Técnico
CORAL 83

1A Av. Los Palos Grandes
Edif. Coral, No. 83
Caracas 1062
VENEZUELA
Tel: (582) 284-7198
Telex: 25594 ALITUVE
Fax. (582) 284-7198

Ing. Luis Odonel Gomez
Instituto Nacional de Recursos Hidraulicos
Red Sismica Nacional

Centro de los Heroes
Santo Domingo
REPUBLICA DOMINICANA
Tel· (809) 532-6765
Fax: (809) 535-1171
Fax:: (809) 535-3643
E-mail. lgomez@codetel.net.do

Dr. Edgar Kausel
Depto. De Geofisica
Universidad de Chile

B. Encalada 2085
Santiago
CHILE
Tel: 56-2 696-6563
Fax. 56-2 696-8686
E-mail: ekausel@dgf.uchile.cl

Mr. lloyd Lynch
Seismic Research Unit
University of the West Indies

St. Augustine
TRINIDAD
Tel: (809) 662-4659
Fax: (809) 663-9293
E-mail.

Victor A. Hvérfono Moreno
Red Sísmica de Puerto Rico

UPR-RUM
Mayaguez
PUERTO RICO 00681
Tel: (809) 833-8433
Fax: (809) 765-1684
E-mail: v_hverfono@rumac.upr.clu.edu

Ing. Carlos Gutteriez Martinéz
Centro Nacional de Prevención Desastres
(CENAPRED)

Delfin Madrigal 665
Col Dto Domingo
México 04360
MEXICO
Tel: (525) 658-5127 (ext. 251)
Fax: (525) 554-8041

Prof. Lalu Mansinha
Dept Earth Sciences
University of Western Ontario

London, ON
N6G 4P8
CANADA
Tel (519) 433-0854(h)

(519) 661-3145(o)
Fax (519) 661-3292
E-mail lalu@uwovax.uwo ca

Ms. Claire McQueen
Environmental Sciences Division
Inst. Environ & Biol. Sciences
Lancaster University

Lancaster LA1 4YQ
UNITED KINGDOM

Ing. Walter Montero P.
Director
Escuela Centroamericana de Geologia
Universidad de Costa Rica

Apartado 35-2060
San José
Costa Rica
Tel. (506) 225-7941
Fax: (506) 234-2347
E-mail: wmontero@cariari.ucr.ac.cr

Dr. Mario Ordaz S.
Instituto de Ingenieria
UNAM

Ciudad Universiteria
Coyoacán 14510
México D.F.
MEXICO
Tel (525) 622-3464
Fax (525) 606-1608
E-mail: mos@merlin.iigen.unam.mx

Ing. Guillermo Napoleón Morán Orellana
Sección de Geofisica
Escuela de Fisica
Fac. De Ciencias Naturales y Matemática
Universidad de El Salvador

Apartado Postal 25-87
San Salvador
EL SALVADOR
Tel. (0503) 257466
(0503) 719222 ext 212
Fax. (0503) 254208

Dr. Moises Ortega G.
Depto. de Fisica
Universidad de Panamá

Apartado Postal 10802
Panamá
REPUBLICA DE PANAMA

Mr. Uchi Osuji
Seismic Research Unit
University of the West Indies

St. Augustine
TRINIDAD
Tel: (809) 662-4659
Fax. (809) 663-9293

Ing. Giovanni Peraldo H.
Escuela Centroamericana de Geologia
Universidad de Costa Rica

Apartado 35-2060
San Pedro (San José)
COSTA RICA
Tel: (506) 225-7941
Fax: (506) 234-2347

Ing Alberto Sarria
Decano, Faculdad de Ingenieria
Universidad de los Andes

Apartado 4976
Bogotá
COLOMBIA
Tel: (571) 281-6385

Dr. Gerardo Súarez
Director
Coordinación de la Investigación Cientifica
UNAM

Apartado 70-172
México, D.F.
MEXICO
E-mail. gerardo@ollin.igeofcu unam.mx

Dr. John B. Shepherd
Environmental Sciences Division
Inst. Environ & Biol. Sciences
Lancaster University

Lancaster LA1 4YQ
UNITED KINGDOM
E-mail: j.b.shepherd@lancaster.ac.uk

Dr. J.G. Tanner
IPGH

R R. # 1
Union, ON
NOL 2L0
CANADA
Tel: (519) 631-3190
Fax. (519) 633-4990
E-Mail: lmansinh@julian uwo.ca

Ing. Jaime Toral
Instituto de Geociencias
Universidad de Panamá

Panamá
REPUBLICA DE PANAMA
Fax (507) 63-76-71

Ing. Hugo Yepes A
Instituto de Geofisica
Escuela Politecnico Nacional

Casilla Postal 21-499
Quito
ECUADOR
Tel: (5932) 56-78-97
Fax: (5932) 56-78-97

Ing. Mario Villagrán
INSIVUMEH

7 Av. 14-57
Zona 13
Guatemala
GUATEMALA
Tel: (5022) 32-47-41
Fax: (5022) 31-50-05

M. Jean Pierre Viode
Observatoire Volcanologique de la
Montagne Pelée

97250 Saint Pierre
MARTINIQUE W. 1
Tel: (596) 78-41-41
Fax: (596) 55-80-80

Dr. Chester Zelaya-Goodman
Secretario General
Insto Panamericana de Geografia y Historia

Apartado 18879
11870 México, D F.
MEXICO
Tel: (525) 515-1910
Fax: (525) 271-6172
E-mail: ipgh@laneta.apc org

Dr. Ramón Zúñiga D.
Director, Graduate School
Instituto de Geofisica
UNAM

Cd. Universitaria
Coyoacán
México 04510, D.F
MEXICO
Tel: (525) 622-4130, 622-4138
Fax: (525) 616-2547
E-mail. ramon@ollin.igeofcu.unam.mx

APPENDIX VIII

The Format of the Epicentre Records in the Project Catalogue

Each record gives an epicentral estimate. Most fields in the record are optional - spaces in the field indicate that no value has been given.

Byte 1. (*) or ( ) - record type indicator - format=A1
1. (*) inidcates the primary estimate of an event
2. ( ) indicates an alternative or secondary estimate of an event

Bytes 2-7. Agency code - format=A6 - left justified
Further details of the agency codes used in this catalogue may be found in Appendix IX.

Byte 8. Data source - data taken from the publication indicated.
1. (B) - BCIS
2. (I) - ISS/ISC
3. (N) - NEIS
4. (T) - Telex
5. ( ) - Direct

Byte 9. UTC date - optional - Format A1
(-) implies B.C. date
( ) implies A.D. date

Bytes 10. Time of origin - the MANAGE programme reads this as A15 and then divides.
1. Bytes 10-13 - Year - format=I4
2. Bytes 14-15 - Month - format=I2
3. Bytes 16-17 - Day - format=I2
4. Bytes 18-19 - Hours - format=I2
5. Bytes 20-21 - Minutes - format=I2
6. Bytes 22-24 - Seconds - format=F3.1

Bytes 25-30 - optional - format=F5.3, A1 - latitude in degrees - this field is terminated with a N or S.

Bytes 31-37 - optional - format F6.3, A1 - longitude in degrees - this field is terminated with a W or E.

Bytes 38-40 - optional - format=I3 or (***) - depth in kilometres - (***)= depth out of range.

Bytes 41-50 - optional - first magnitude

1. Bytes 41-43 - magnitude value - format=F3 2.
2. Byte 44 - magnitude scale - format=A1
    1. ( ) - unspecified
    2 (B or B) - body wave magnitude
    3. (C) - coda length magnitude
    4. (D) - duration magnitude
    5. (L) - local (Richter) magnitude
    6. (N) - magnitude from Lg phases (Nuttli)
    7. (S or s) - magnitude from surface waves
    8. (W or w) - moment magnitude
3. Bytes 45-50 - agency code for magnitude - left justified - format=A6.

Bytes 51-60 - optional - second magnitude - sub fields as for first magnitude.

Bytes 61-62 - optional - maximum intenstiy from 0 and 12 inclusive - format I2.

Bytes 63-64 - optional - intensity scale - format=A2
1 ( ) - unspecified
2. (CS) - Mercalli, Cancani and Seberg
3. (J) - Japanese Meteorology Agency
4. (M) - Mercalli
5. (MM) - Modified Mercalli
6. (RF) - Rossi & Ferel
7 (SK) - Medvedev, Sponheur & Karnik

Bytes 65-67 - given when latitude and longitude present - Flinn-Engdahl geographic region number - format=I3.
Flinn, E.A. E.R. Engdahl, 1965. A proposed basis for geographic and seismic regionalization. Rev. Geophysics, 3, 123.

Bytes 68-70 - optional - number of stations associated with determination - format=I3

Byte 71 - type of event - format=A1
1. ( ) - earthquake
2. (C) - coal bump
3. (E) - non-nuclear explosion
4. (I) - implosion - collapse
5. (M) - meteoric source
6. (N) - nuclear explosion
7. (R) - rockburst
8. (X) - explosion of unspecified source

Bytes 72-74 - optional - used in place of 68-70 when it is not clear whether the number refers to number of stations reporting or number of stations used in solution - format=I3.

Byte 75 - optional - cultural factor - format=A1

1. (F) - felt earthquake
2. (C) - deaths
3. (X) - damage

APPENDIX IX

Agency Codes for Epicentral and Magnitude Determinations

ABE Abé (1981 & 1984) - magnitudes of great earthquakes 1900-1984.
ACS Acres International Ltd., 1961
AFL Alvarado et al, 1988 (Appendix III)
ALQ Alberquerque, New Mexico, USA.
ALV Alvarado, 1993 (Appendix III)
AMB Ambrayseys, 1994.
ARE Arequipa, Peru
BAA Buenos Aires, Argentina
BCIS Bureau Central International de Sismologie, Strasbourg, France
BCX Ensenada, Baja California
BDA Bath and Duda, 1979 (Appendix II)
BGS British Geological Survey
BHP Balboa Heights, Panamá
BKS Byerly, California, USA
BLA Blacksburg, Delaware, USA
BMO Blue Mountain, USA
BOG Bogotá, Colombia
BRK Berkeley, California, USA
CAR Caracas, Venezuela
CARR Carr and Stoiber, 1978 (see Appendix III for exact reference)
CGS US Coast and Geodetic Survey, USA
COM Comitan, México
CON Concepdión, Chile
CRM Caravelle, Martinique
C-V Camacho and Viquez, 1992 (Appendix III)
FDF Fort de France, Martinique
FELD Feldman, 1988a,b (Appendix III)
FEM Feldman, 1988 (Appendix III)
FIE Gunther Fiedler, Caracas, Venezuela
FIG Figueroa, 1979 (Appendix II)
FUNV FUNVISIS, Venezuela
GCG Guatemala City, Guatemala
GLD Golden, Colorado, USA
G-M Güendel and McNally, 1986 (Appendix III)
GUC Geofisica, Universidad de Chile
GUE Güendel, 1986 (Apprndix III)
GUTE Gutenberg and Richter (1954)
IAG Instituto Astronomico y Geofisico, Univ de Sao Paulo, Brazil
IBO Boschini, 1989 (Appendix III)
ISC International Seismological Centre, UK
ISS International Seismological Summary, UK

JBS J.B. Shepherd (usually for macroseismic estimates)
JHO Johannsen, 1988 (Appendix III)
JIM Jiménez, (in prep. at time of writing)
J-M Jordan and Martinez, 1980 (Appendix III)
JSA Jesuit Seismological Association, St. Louis, USA
KCL Kire,idjian et al, 1977 (Appendix III)
KRX Sapper, 1925 (Appendix III)
LAO Large Aperture Seismic Array, Montana, USA
LARI Larios, 1979 (see Appendix III for exact reference)
LDE Morales, 1983 (Appendix III)
LDI Morales, 1985 (Appendix III)
LDO Lamont-Doherty Observatory, New York, USA
LEED Leeds and Moore, 1974 (Appendix III)
LEJ Leeds, 1974 (Appendix III)
LIM Lima, Perú
LPA La Plata, Argentina
LPB La Paz, Bolivia
LPZ San Calixto, Bolivia
M-A Montero and Alvarado, 1988 (Appendix III)
M-G Montero and González, 1990 (Appendix III)
M-M McNally and Minster, 1981 (Appendix III)
MAB Meyer-Abich, 1952 (Appendix III)
MAC Macroseismic magnitude estimate
MACRO Macrosesimic epicentre
MAX González, 1987 (Appendix III)
MCH Chavez and Castro, 1987 (Appendix II)
MER Merida, Yucutan, México
MGG Marie-Galante, Guadeloupe
MON W. Montero, ECG/UCR (see publication list in Appendix III)
MONT W. Montero (various publications in Appendix III)
MOS Moscow, Russia
MPR Mayaguez, Puerto Rico
MYA Miyamura, 1980 (Appendix III)
MYS Miyamura, 1976 (Appendix (III)
NEIC National Earthquake Information Center, Golden, Colorado, USA
NEIS National Earthquake Information Service, Golden, Colorado, USA
NSK Nishenko, 1989 (Appendix III)
OAE Observatorio Astronomico de Quito, Ecuador
OAX Oaxaca, México
P-S Paniagua and Soto, 1986 (Appendix III)
PAL Palisades, New York, USA
PAS Pasadena, California
PDE Preliminary Determination of Epicenter from NEIS/CGS
PEL Peldehue/Santiago
PRO Peraldo and Montero (in prep. at time of writing)

PSA Instituto Nacional de Prevención Sísmica (INPRES), San Juan, Argentina
RESMAC Red Sísmica Mexicana de Apertura Continental, México
R-I Father Jesus E Ramirez, Bogotá, Colombia
ROJ Rojas, 1993 (Appendix III)
ROR Russo, Okal and Rowley, 1992
SAA Shepherd and Aspinall, 1982
SAE Sykes and Ewing, 1965
SAN Santiago, Chile
SAT Shepherd and Tanner, this volume
SBAC Shepherd et al, 1987
SCB Observatorio San Calixto, La Paz, Bolivia
SDD Santo Domingo, Dominican Republic
SJG San Juan, Puerto Rico
SJP San Juan, Puerto Rico
SJR San José, Costa Rica
SIS Instituto Costarricense de Elctricidad, Costa Rica
SISRA CERESIS countries of South America
SPEC Special NEIS solution
SSS San Salvador, El Salvador
SUAREZ Gerardo Súarez, UNAM (historical)
SUA Gerardo Súarez, UNAM (historical)
SUC Sucre, Bolivia
SUH Sutch, 1981 (Appendix III)
SYKES Sykes (L R.) earthquake catalogue
TAC Tacubaya, México
TOJ Toral, 1992 (Appendix III)
TRN Trinidad
UNM UNAM, México D.F
UPA Universidad de Panamá, Panamá
UPP Uppsala, Sweden
USCGS United States Coast and Geodetic Survey
USGS United States Geological Survey
UVC Universidad de Valle, Cali, Colombia
V-T Víquez and Toral, 1987 (Appendix III)
VAO Valinhos, Brasil
VEG Vergara, 1990 (Appendix III)
VIQU Viquez and Camacho, 1993; Viquez and Toral, 1987 (see Appendix III)
W-C Montero and Climent, 1990 (Appendix III)
W-H White and Harlow, 1985 (Appendix III)
WCA Woodward, Clyde Associates
WHE White, 1988 (Appendix III)
WHT White, 1985 (Appendix III)
WMP Montero, 1986 (Appendix III)
WMR Montero, 1989
ZUN Ramón Zúniga, UNAM, México, this project

1* Singh and Súarez, 1985 (Appendix II)
2* ISC
3* PDE
4* NOAA
5* Singh and Lermo, 1985 (Appendix II)
6* Singh, Astiz and Havskov, 1981 (Appendix II)
7* Singh, Rodriguez and Espindola, 1984 (Appendix II)
8* Anderson, Singh, Espindola and Yamamoto, 1989 (Appendix II)
9* Molnar and Sykes, 1969 (Appendix II)
10* Same as MCH
11* Same as 7*
12* Nishenko and Singh, 1987 (Appendix II)
13* McNally and Minster, 1981 (Appendix II)