Homogenous earthquake catalog of South Asia - a generic M_W scale framework

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The catalog is prepared with sixteen columns as described below:

1. The first three columns represent the date: YEAR MONTH DAY
2. Origin Time (in UTC) is given in the next three columns: HH MM SS
3. The epicentral coordinate is given in next two columns: LAT LON
4. Focal depth and associated error (standard deviation) are listed under columns: DEPTH D_ERR
5. The next three columns present the native magnitude type, its value and associated error: NM_TYPE NMAG NM_ERR
6. The next two columns list the equivalent moment magnitude, and its associated error: MW MW_ERR
7. The next column is provided for the native data source: SOURCE
8. The last column is provided to indicate the likely type of shock: SHOCK

In case of non-availability of particular field value, the value of '-1' is inserted in the catalogue.

The codes assigned to the different sources are as given below:

Code	Reference
ASC2009a	Amateur Seismic Centre, 2009. *http://www.asc-india.org*, Pune, India (last accessed April 2009).
AM2000a	Ambraseys, N., 2000. Reappraisal of north-Indian earthquakes at the turn of the 20th century, *Current Sci.*, **79,** 101–114.
AB2003a	Ambraseys, N. & Bilham, R., 2003. Earthquakes in Afghanistan, *Seism. Res. Lett.,* **74**, 107–123.
AD2004a	Ambraseys, N. & Douglas, J.J., 2004. Magnitude calibration of north Indian earthquakes, *Geophys. J. Int.*, **159**, 165–206.
AJ2003a	Ambraseys, N. & Jackson, D., 2003. A note on early earthquakes in northern India and southern Tibet, *Current Sci*., **84**, 570–582.
B1992a	Byrne, D.E., L.R. Sykes, and D.M. Davis (1992) Great thrust earthquakes and aseismic slip along the plate boundary of Makran subduction zone, *J. Geophys. Res*., **97**, 449-478.
B1995a	Bilham, R., 1995. Location and magnitude of the 1833 Nepal earthquake and its relation to the rupture zones of contiguous great Himalayan earthquakes, *Current Sci.*, **69**, 155–187.
B1999a	Bilham, R., 1999. Slip parameters for the Rann of Kachchh, India, 16 June 1819 earthquake quantified from contemporary accounts. In Stewart, I.S., Vita-Finzi, C. (Eds.), *Coastal Tectonics*, Geological Society London, 146, 295–318.
BE2001a	Bilham, R., England, P., 2001. Plateau 'pop up' in the great 1897 Assam earthquake. *Nature*, **410**, 806–809.
B2005a	Bilham, R., Engdahl, E.R., Feldl, N. & Satyabala, S.P., 2005. Partial and complete rupture of the Indo-Andaman plate boundary 1847-2004, *Seism. Res. Lett.*, **76**, 299–311.
BA2005a	Bilham, R., and N. Ambraseys (2005). Apparent Himalayan slip deficit from the summation of seismic moments for Himalayan earthquakes, 1500–2000, *Curr. Sci.* **88**, 1658 -1663

Code	Reference
CG1995a	Chung, W.-Y., Gao H., 1995. Source parameters of the Anjar earthquake of July 21, 1956, India, and its seismotectonic implications for the Kutch rift basin. *Tectonophysics*, **242**, 281–292.
EHB	International Seismological Centre (2009). *EHB Bulletin*, http://www.isc.ac.uk, Internatl. Seis. Cent., Thatcham, United Kingdom.
GSI	Geological Survey of India
GCMT	Global Centroid Moment Tensor database
NGDC	National Geophysical Data Center, http://www.ngdc.noaa.gov
IMD	India Metrological Department, http://www.imd.ernet.in
ISC	International Seismological Center, http://www.isc.ac.uk
JS2004a	Jaiswal, K. & Sinha, R., 2004. *Web portal on earthquake disaster awareness in India,* www.earthquakeinfo.org.
J1993a	Johnston, A.C., 1993.*Report TR-102261*, Chap. 3, Electric Power Research Institute.
LEE1976a	Lee, W.H.K., Wu, F.T. & Jackson, C., 1976. A catalog of historical earthquakes in China, *Bull. Seism. Soc. Am.*, **66**, 2003–2016.
M2004a	Mandal, P., Rastogi, B.K., Satyanarayana, H.V.S., & Kousalya, M., 2004. Results from Local Earthquake Velocity Tomography: Implications toward the Source Process Involved in Generating the 2001 Bhuj Earthquake in the Lower Crust beneath Kachchh (India), *Bull. Seism. Soc. Am.*, **94**, 633–649.
MD1984a	Molnar, P., and Q. Deng (1984) Faulting associated with large earthquakes and the average rate of deformation in central and eastern Asia, *J. Geophys. Res.* **89**, 6203-6227.
PS1992a	Pacheco, J.F. & Sykes, L.R., 1992. Seismic moment catalog of large shallow earthquakes, 1900 to 1989. *Bull. Seism. Soc. Am.*, **82**, 1306–1349.
RR2000a	Rao, B.R., 2000, Historical seismicity and deformation rates in the Indian Peninsular Shield, Jour. Seism., **4**, 247–258.
SG1980a	Singh, D.D. & Gupta H.K., 1980. Source dynamics of two great earthquakes of the Indian Subcontinent: the Bihar-Nepal earthquake of January 15, 1934 and the Quetta earthquake of May 30, 1935, *Bull. Seism. Soc. Am*., **70**, 757–773
T2008a	Thingbaijam, K.K.S., Nath, S.K., Yadav, A., Raj, A., Walling, M.Y., & Mohanty, W.K., 2008. Recent seismicity in northeast India and its adjoining region, *Jour. Seism.*, **12**, 107–123.
UL2006a	Ulomov V.I., Danilova, T.I., Medvedeva, N.S. & Polyakova, T.P., 2006. Seismo-geodynamics of lineament structures in the mountainous regions bordering the Scythian-Turan Plate, *Izvestiya Phys. Solid Earth*, **42**, 551–566
USGS	http://earthquake.usgs.gov/earthquakes/eqarchives/epic/
W2005a	Wallace, K., Bilham, R., Blum, F., Gaur, V.K. & Gahalaut, V., 2005. Surface deformation in the region of the 1905 Kangra Mw = 7.8 Earthquake in the period 1846–2001, *Geophys. Res. Lett.*, **32**, L15307, doi: 10.1029/2005GL022906

Caveat on the pre-instrumental records:

Historical earthquake reportings has several shortcomings: (1) Possibility of inhomogeneity cannot be ruled out in case of the historical earthquakes owing to non-calibrations owing to lack of common reportings across the different studies. (2)The data is deemed to be highly incomplete as well having high uncertainties. (3)Appropriate treatment on the associated uncertainties and incompleteness is required.