Each spike in the seismic activity curve follows an event, up to a maximum of three events per day, which may be due to a stronger earthquake that is reflected either in the counts of volcanic sources or in the REJ/DOO count ratio. A trend toward increasing or decreasing activity is not immediately evident for any of the sources. It is a cumulative process, with the major volcanic activity occurring at a much higher tide (Figure 2b) [Ataullakhanov et al., 2006]. Note that the observed increase occurs at the end of year, with an increase of activity per day, with a significant increase in activity between 1100 and 1300 (in the curve, as can be seen at the beginning of the 24th September 4 and in the last graph).

While event count statistics describe the occurrence of earthquakes and volcanic activity, the activity and occurrence of additional information on the amplitudes of continuous signals is obtained, such as the background seismic noise. The level of background noise can be used to identify an increase in the number of seismic events, as well as to reveal seismological activity that is not related to volcanic activity solely. These events are considered to be of tectonic origin, and they may be associated with local tectonic activity.

The authors also modeled possible sources of the interplanetary shock using data from Voyager 1 and 2. They found that the shock was generated by a series of flares and coronal mass ejections on the Sun. The shock was detected by Voyager 1 and 2 in 2006. (Figure 2c) [Yurchyshyn et al., 2006].

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Author Information

Amie Hofmann-Rothe, Malte Bovek Seifert, Rudolf Knier, Erik Faber Knaus Klages, and Christian Reichert, National Institute for Coastal Research, Hanover, Germany. Email: a.hofmann-rothe@sinp.ub.edu.

Cayen Patel, Center for Volcanology and Geological Hazard Mitigation, Bandung Indonesia.

The Sumatra-Andaman earthquake and tsunami of 26 December 2004, one of the deadliest natural events in human history caused more than 230,000 fatalities along the margins of the Indian Ocean. The rupture was initiated on the plate boundary between the Indo-Australian and propagating 1300 kilometers to the Antarctic Islands.

Access to extensive portions of the rupture zone north of Sumatra is restricted by the Indian or Chinese embassies. In addition, because of political considerations, India does not provide open access to data from its extensive network of mainland broadband seismic stations. These factors provide a context for Memoir 63 of the Geological Society of India, which documents primary observations of the earthquake and tsunami effects in Indian territories.

A brief introductory chapter defines the Department of Science and Technology (DST) as the Indian government department coordinating investigations of the earthquake, and the DST interdepartmental working group chaired by Harsh K. Gupta of the Department of Oceanography, New Delhi, as the preparers of this report. Chaps. are not given specific page numbers but appear to have been generated independently leading to some nonuniformity in the document. The findings of Chap. 1 are presented as an overview of the seismic activity on seismograms using variations of the base level noise vector spectrum, J. Volcanol. Geotherm. Res., 159, 1–20.

Subsidence and southward displacement of southeast Louisiana through normal faults. Tectonic processes such as faulting, uplift, and the influence of the U.S. onshore have played a substantial role in lowering the land surface in the Gulf of Mexico. This subsidence in the Mississippi River Delta, B. N. Dukhovna et al. (2006) studied GPS data collected between 1995 and 2003 in Georgia and the Carolinas. This subsidence, and the tested parameterizations for vertical deformations, has led to the conclusion that subsidence is occurring at the same rate as the vertical motion of the delta.

It has to be emphasized that the data presented in this paper and analyzed in this study are not the result of a systematic and thorough investigation of the southeast Louisiana coast. The authors note that future motion of this land should be considered during construction and development of the Mississippi River Delta, and other communities of south Louisiana and New Orleans. The Mississippi River Delta is directly affected by the subsidence and significant loadings that are caused by rising sea levels during the recent period. The Mississippi River delta loading the Earth’s crust with sediment and moving southward with respect to North America, and by rising sea levels during the recent period, are both subsiding vertically at a rate of approximately 2 mm per year.

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