Disappearing Beaches at Visakhapatnam: A National Disaster – C. Kasipathi, Department of Geology, Andhra University, Visakhapatnam - 530 003, A.P. (Email: kasigeolau@rediff.com)

The Fishing Harbor, Coastal Battery, Gokul Park, Ramakrishna, Pithapuram, Lawson's Bay, Lumbini Park, Tenneti Park and Rishikonda beaches of Visakhapatnam, Andhra Pradesh have been very refreshing and the beach roads are generally crowded with the locals and the tourists from various parts of the country and abroad. The general width of this beach varies between 300 m to 800 m and these beaches are very well known since a long time for their beauty and relaxation. Deposition/segregation and erosion/regression of the beach sand has been a regular phenomena of the oceans due to high and low tides. Many earth scientists for the last 7 decades have been doing research on the geological, geomorphological, mineralogical, topographical, physical, chemical, oceanographic and meteorological aspects of this beach.

The topography of the beaches in Visakhapatnam region is very different from most of the other coastal city beaches of the country. The continental shelf breaks very near to the coast at 50 to 70 m distance and there is a sudden drop of about 200 m. These beaches are very well known for their enriched beach placers like ilmenite, rutile, garnet, zircon, sillimanite, magnetite and monazite. Cyclones are prevalent in this section during September to December every year. The Bay of Bengal and the associated beach has received many cyclones and these cyclones generally change the beach configuration to some extent for a short span and later recovering its original configuration and form.

The Visakhapatnam beach has been disappearing for the last two months and the width has been very much reduced and touches the well constructed classic beach bund and the modern posh beach road. The reasons may be plenty, like advanced

Fig.1. Visakhapatnam beach in 1995 with wider sandy beach. Ramakrishna Beach to Lawson's Bay Beach area, with elegant urban constructions on one side, wide double B.T. road with beautiful pavements and the old light house at 'The Park' hotel.

industrialization, outer harbor and inner harbor activities, dredging and port operations etc. About 45 years back, Shri Mokshagundam Visweswaraiiah, the world-famous civil engineer had arranged submergence of a big old ship at Visakhapatnam beach side and engineered construction of outer harbor at this place to eradicate the sand transportation towards the harbor and to help easy access of big vessels into the harbor. After the construction of the outer harbor, the beach has been reduced in a long span of time.

Beaches of east coast are invaluable repositories of many rare minerals, comprising of garnet, ilmenite, rutile, zircon, monazite, sillimanite and magnetite etc. Mineral processing plant units need to be established for separation of these minerals from the sands which are of great economic value. If the beaches

disappear due to any unexpected natural reasons, this industry can't be furthered. Hence, there is a need to tackle the problem through immediate disaster management practices.

Whatever may be the reason, the Visakhapatnam beach has been disappearing very rapidly in a short time, due to the negligence of the scientific community and the government authorities. Hence, they must be nourished scientifically. Detailed geological, oceanographic, meteorological and civil engineering studies have to be taken up immediately and a long-term solution on the sea erosion. But, for the present, the beach can be saved through (1) installing stone revetment, (2) laying gabions or (3) through construction of geotube walls. Otherwise, one has to forget about the entire beauty of Visakhapatnam beach.