

tides amounts to 35,087,450 cubic yards ; and the annual tangible deposit over a certain area (allowance being made for shrinking to half its bulk) is estimated at 11,695,817 cubic yards. The cross set of the Irish Channel currents limits the extension outwards of the shoals.

The proportion of sediment thus found in the Mersey (33 cubic inches in a cubic yard = $\frac{1}{1414}$, and 4 cubic inches the quantity really deposited = $\frac{1}{11664}$), may perhaps exceed the average for British estuaries, but is much below some estimates, or rather conjectures, collected by Mr. Lyell, from Rennell, Sir G. Staunton, and others. Mr. Everest found in the water of the Ganges, during rains, $\frac{1}{856}$ th of its volume of mud ; and the total annual discharge of sediment into the Bay of Bengal 6,368,077,440 cubic feet (= 235,854,720 cubic yards). (Biblioth. Universelle, 1834). In the Severn Mr. Ham found on an average 40·3 grains of sediment in an imperial gallon of water, weighing about 10 lbs., or 70,000 grains—proportion of weight as 1737 to 1 : of bulk as 6948 to 1 nearly. (British Association Reports, 1837.)

If researches of this nature had been prosecuted in various quarters of the globe, and on rivers flowing over different classes of rocks, the results would have been of great value in geological reasoning.

If the country drained by the Ganges is 300,000 square miles, its average waste, from Mr. Everest's data, would appear to be 78·6 cubic yards per square mile of 3,097,600 square yards, = $\frac{1}{4000}$ of a yard in depth, which is about $\frac{1}{111}$ th of an inch per annum from the whole surface of drainage ! In 8000 years this would be equal to the mass of the English tertiaries, assumed to be on average 300 feet thick, and to have a surface of 6000 square miles. The Brahmaputra is supposed to discharge as much sediment as the Ganges.

On the narrow bed of the quiet Adriatic we behold the accumulation of conchiferous mud, hardly different from the subapennine tertiaries which have formerly been