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## Study on Changes in Morphometric Characteristics of Bed Materials (Case study: Vaz Watershed, Mazandaran)

S. H. R. Sadeghi<sup>\*1</sup>, A.V. Khaledi Darvishan<sup>2</sup>, M. Vafakhah<sup>3</sup> and L. Gholami<sup>2</sup>

<sup>1</sup> Associate Prof, College of Natural Resources and Marine Sciences, University of Tarbiat Modares, I. R. Iran

<sup>2</sup> Former M. Sc. Student, College of Natural Resources and Marine Sciences, University of Tarbiat Modares, I. R. Iran

<sup>4</sup> Instructor, College of Natural Resources and Marine Sciences, University of Tarbiat Modares, I. R. Iran  
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### Abstract

Studying changes in morphometric characteristics of bed materials helps understand and manage hydrological processes governing a watershed system. The present study has been conducted in a 30-kilometer reach of Vaz River in Mazandaran Province to investigate changes in morphometric parameters of bed materials in downstream direction. To achieve the study's purpose, seven cross sections were selected along the reach. The bed material were then sampled and associated morphometric parameters viz. mean, standard deviation, skewness, kurtosis, mode,  $d_{10}$ ,  $d_{50}$ ,  $d_{90}$ , gravel, sand, mud, sediment texture, small, medium and large diameters, shape factor, nominal diameter, sphericity, roundness and width ratios were determined and corresponding changes were evaluated in downstream ward. The results of the study verified changes in morphometric characteristics. Besides that, it was understood that different natural reasons and anthropogenic activities have seriously affected the intensity and trend of the changes.

**Keywords:** Bed material, Sediment morphometry, Granulometry, Vaz River, Mazandaran, Iran