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On the planform geometry of estuaries and its relationship with discharge and tidal regime

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Five macrotidal monsoonal estuaries are characterized for their funnel width variation as a function of distance from the mouth. All the five estuaries show similar behaviour, which is accurately described by an exponential decay function. The co-efficients 'a' and reciprocal of co-efficient 'b' of the equation $y = ae^{(-bx)}$ help in classifying estuaries based on funnel morphology. This approach supplements existing classifications, which are descriptive, and scores over them as it takes into account both, characters of river discharge and tidal regime. The classification method when applied to selected estuaries from across the globe representing diverse discharge and tidal regimes discriminates them effectively.