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ABSTRACT: The coastal of Pakistan extends 1, 050 kms along the Arabian Sea. Karachi, Ormarah, Pasni and Gwader are some of the important coastal areas. The coast of Pakistan can be divided into coasts of Sindh and Balochistan because they exhibit large variability in climatic and hydrological resources and physical limitations.

Sindh coast is endowed in hydrological terms as Indus River falls to the Arabian Sea and contributes into large Indus River delta with micro-climate of deltaic region and wide variability of estuaries and mangroves.

INTRODUCTION: Pakistan coastal region is located in the South-eastern part of the country between the Indian borders along Sir Creek on the east to Hub River along the Baluchistan coast on the west (Figure 1) 1. Approximately 300, 000 km<sup>2</sup> of the Indus watershed, of which 50% is located outside Pakistan (India, China & Afghanistan) contribute flows to the Indus River. The Indus Delta (approx. 1600 km<sup>2</sup>) is the most prominent ecological feature of the Sindh coast covering 85% of the coastal belt in Sindh 3, 4.

The Indus Delta covers 0. 6 million ha with a coastline of 250 km, bordering the city of Karachi in the northwest. The Indus Delta is comprised of 17 major creeks, numerous minor creeks, extensive areas of mudflats, and 0. 129 million ha of mangrove forests 1, 3. The dense forests are mostly located in the pockets created by the creeks. The source of fresh water is from the Indus River flows through the delta before reaching the Arabian Sea.

The Indus Delta shelf is 150 kms wide and receives scanty rainfall during the monsoon season 6. The average wind speed during these months varies from 12 km to 35 km per hour 6. The Indus delta is the most prominent

ecological feature of the Sindh coast. Its coastal morphology is characterized by a network of tidal creeks formed as a result of changes in river beds and a large number of small islands with scattered mangrove vegetation 2, 6. The Indus Delta has the largest arid climate mangroves in the world. They are the 13th largest mangrove forests on the basis of coverage in the world 3. The Karachi coast constitutes a coastal belt of about 100 km length situated between the Indus Delta on the South-east and Hub River on the west. Most of the coast, with the exception of scattered patches of mangroves, is devoid of any other kind of vegetation 5.

The Lyari and Malir Rivers flowing through the Karachi City are non-perennial in nature and drain in the Arabian Sea. They carry substantial quantities of untreated urban sewage and industrial effluents. Karachi City is the commercial and industrial hub of Pakistan along with being a national port 1, 2.