

CLIMATE CHANGE AND ENVIRONMENTAL EFFECT ON PRODUCTION OF PALLA (*TENUALOSA ILISHA*) FROM INDUS RIVER

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The hilsa, *Tenualosa ilisha* (Hamilton 1822), belonging to the family Clupeidae, is locally known as 'ilish' and 'palla' in Pakistan. Hilsa has a wide range of distribution and occurs in marine, estuarine and riverine environments. It is found in the Arabian Gulf, Red Sea, Arabian Sea, Bay of Bengal, Vietnam Sea and China Sea. The riverine habitat covers the Satil Arab, and the Tigris and Euphrates of Iran and Iraq, the Indus of Pakistan, the rivers of Eastern and Western India, the Irrawaddy of Myanmar, and the Padma, Meghna, Jamuna and other coastal rivers of Bangladesh. Hilsa is largely an anadromous species, capable of withstanding a wide range of salinity and capable of migrating great distances upstream. Nature of the climate change threat. Fisheries and aquaculture are threatened by changes in temperature and, in freshwater ecosystems, precipitation. The climate change effecting directly through changing water temperatures and associated phonologies, the lengths and frequency of hypoxia events, through on-going ocean acidification trends or through shifts in hydrodynamics and in sea level. In general temperature has great influence on change physiology as well as the composition and dynamic coupling of food webs in fish ecosystem. Hence, ongoing climate change is predicted to affect individual organisms during all life stages, thereby affecting populations of Palla species population.

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