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Climate change impact on inland fisheries: Vulnerability assessment, adaptation and potential mitigation measures

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India is the second largest producer of fish contributing 5.43 percent to the global fish production and is also the second major producer of fish through aquaculture. But in recent years, climate variability manifested by increased temperature, erratic and unseasonal rains, occurrence of droughts, and a regional increase in severe storm incidence in coastal states have adversely impacted the fisheries, aquatic biodiversity and livelihood. The impacts are also evident for freshwater fisheries and fishers of the River Ganga and the water bodies in its plains and deltaic areas. Therefore, any adverse effects of climate change will have great implication on regional food security especially in the eastern Indo-Gangetic states. It is thus imperative to understand the vulnerability, adaptation and mitigation strategies of the sector in dealing with the impacts. The studies on inland fisheries of ICAR –CIFRI, India showed considerable geographic shift of several warm water fish species into the colder stretch of the River Ganges. The reproductive and spawning behaviour of the Indian major carps has been impacted and a consequent decline in fish spawn availability has been noticed in Ganges basin. Additionally, effect of drought revealed that rainfall deficits of 29% and 27% during breeding months (March- September) affected 92% fish spawn hatcheries in two selected districts of West Bengal.

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