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Indian Marine Sector's Carbon Emissions Are Lower Than The Global Average: CMFRI

More than 90% of the fuel used in the industry was consumed during the harvest phase (active fishing) in the country.

The carbon emissions from the Indian marine fisheries sector is much lower than the global level, an ICAR-Central Marine Fisheries Research Institute (CMFRI) research study said. Presenting the data at a review meeting of the fisheries component of the network research project under the National Innovations in Climate Resilient Agriculture (NICRA) of the Indian Council of Agricultural Research (ICAR), CMFRI found that the harvest phase (active fishing) in the country utilised more than 90 per cent of the fuel used in the sector.

In a research in assessing the carbon footprint in India's marine fisheries, the ICAR-CMFRI has estimated that the sector emits 1.32 tonnes of CO2 (carbon dioxide) to produce one tonne of fish, which is lower than the global average of more than two tonnes for the same quantity."This is the assessment of the greenhouse gas (GHG) emissions from total activities in the sector, from pre-harvesting to marketing, by converting it into CO2 equivalent," CMFRI said in a statement.

ICAR-CMFRI Director A Gopalakrishnan said the study was conducted from select fishing centres of all the maritime states of the country, dividing the fishing-related activities into three phases pre-harvesting, harvesting and post-harvesting."The country's carbon emissions from the marine mechanised fisheries sector is 16.3 per cent lower than the global level," Gopalakrishnan said.

Grinson George, Principal Scientist of CMFRI, said the increased intensity of cyclones, sea level rise, and warming of the Indian Ocean have led to changes in marine ecosystems among many others, causing depletion of some fishes and the emergence of some other varieties.The project is aimed at studying the impact of climate change on agriculture including crops, livestock, horticulture and fisheries and to develop and promote climate resilient technologies thereby addressing vulnerable areas of the country, the release said. In its efforts to assess climate change risks in the coastal region, CMFRI identified cyclone proneness, flood proneness, shoreline changes, heat wave and sea level rise as the major hazards that could put coastal lives in peril.

The ICAR institute said work on a Coastal Climate Risk Atlas that marks areas of risks including hazards and vulnerabilities in all coastal districts in India is in progress.In the wake of the disruption in the fish value chain owing to the climate crisis, the CMFRI proposed to develop climate-smart value chain critical points, policy advisory for seafood marketing and a consumer education tool kit for emerging species.

S K Chaudhari, Deputy Director General (Natural Resources Management) of ICAR, who presided over the meeting, said the rise in temperature and heat have a cascading effect on food-producing sectors, including fisheries."Excessive pressure on groundwater is leading to the presence of more salts on the ground surface," he said, adding that assessing ecological losses should also be considered while studying the impact of climate change on the food sector.

B Venkateswarlu, Chairman of the NICRA Expert Committee, urged scientists to focus on technological innovations and contributions to policy interventions during the time of climate change. Innovative technologies would help fishers to sustain their livelihood during cyclones, heavy rainfalls and other extreme weather conditions, he said.Principal Investigators of the NICRA project from ICAR-Central Institute of Brackishwater Aquaculture (CIBA), Chennai, ICAR-Central Inland Fisheries Research Institute (CIFRI), Barrackpore; ICAR-Directorate of Coldwater Fisheries Research (DCFR), Bhimtal; ICAR-National Bureau of Fish Genetic Resources (NBFGR), Lucknow; Tamil Nadu Dr J Jayalalithaa Fisheries University; and Bihar Animal Sciences University presented the status of their research works at the meeting.K K Vass, member of the NICRA Expert Committee; V K Singh, Director of Central Research Institute for Dryland Agriculture (CRIDA) and M Prabhakar, Principal Investigator of the NICRA, also spoke on the occasion.