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**ABSTRACTS**



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## **Energy optimization in fishing through m-KRISHI® Fisheries Service in Raigad district, Maharashtra**

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A pilot study was undertaken to enhance the adaptive capacity of the fishers by increasing livelihood options, in climatically vulnerable Raigad district of Maharashtra. This was done in partnership with Tata Consultancy Services Ltd. (TCS) through implementation of mobile based agro advisory system, m-KRISHI®, in 13 fishing villages having 15 fisheries cooperative societies. Basically, two important advisories received through INCOIS were disseminated with dual objectives of providing early warning regarding wind speed and direction for safety at sea and Potential Fishing Zone (PFZ) information for optimization of fishing efforts. Implementation of this service has resulted in fuel saving and consequent reduction in carbon emissions and revenue savings. Four clusters (Cluster 1: Alibag, Saswane, Bodani and Mandwa; Cluster 2: Ekdara, Murud and Rajapuri; Cluster 3: Mora, Ulwa and Vasheni; Cluster 4: Salav, Korlai and Nandgaon) in the Raigad district of the Maharashtra state were selected for the pilot study. Clusters were extensively covered by RRA and critical gap analysis revealed that most of the fishers were not aware of the advisories on Potential Fishing Zone and wind speed and direction. About 750 mechanized and motorized fishing vessels were in operation in the district. After initial implementation, savings to the tune of 3 lakh litres of fuel per year at 5% level of adoption, was

observed in the study area. At 15% adoption level fuel saving were projected to the tune of 9 lakh liters per year. Savings in expenditure on diesel consumed (@ Rs. 52/litre) were Rs. 156 and Rs. 468 lakh/year at 5 and 15% adoption, respectively. Similarly, savings in carbon emission (@ 2.68 kg/lit of diesel burnt) were 804 and 2412 tonnes/year at 5 and 15% adoption levels, respectively. The service has already been expanded during second phase of implementation to 56 societies having 2681 mechanized and motorized fishing crafts.

**Keywords:** Energy savings, TCS Mobile Agro Advisory System, m-KRISHI®, Potential Fishing Zone, safety at sea.