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Open Source monitoring platform for small commercial fisheries.

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Inshore small commercial fisheries management needs to evolve to address current challenges. In that sense, different approaches are developing, including: qualified monitoring solutions, for high precision data collection; and fishing efforts assessments, to achieve the biological, economic and social balance for inshore fisheries. The present contribution presents a small fisheries management system, with broad monitoring possibilities. The system consists of a low cost Open Source monitoring platform. The platform receives GPS data (time, position, speed and course) and sends it by GSM system to a private server in near real time, allowing a control of the inshore fishing effort. Data sampling is configurable, and the system is also able to receive any type of data from the fishing vessel. Data quality and signal coverage is higher comparing to other relatively new fishing activity management and monitoring platforms, such as the Automatic Identification System (AIS), which fails to provide such utilities and precision.

It is well known that small fisheries are highly fuel dependent; thus, fuel cost is one of the main concerns of the ship owners. The system includes fuel consumption management plugging, which may detect skipper's behavioural changes on operational patterns during the steaming activity. Therefore, both the fuel consumption and pollutant emissions are reduced. The system represents a "win-win" business model, where scientific community could assess the inshore fishing effort and ship owners would decrease fuel expenses. Thus, the sustainability of the inshore small fisheries will be also improved considerably.

Keywords: Open Source platform, inshore vessel monitoring, GPS data, fishing effort, fuel consumption, "win-win", sustainability.

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