Computer vision and self-sampling in the Belgian beam trawl fisheries

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At ILVO we are trying to be innovative at finding solutions for today's challenges in the Belgian Fisheries. Due to a shortage of fisheries data and the fact that for some fish species like Brill and Turbot, overall data is lacking (data-limited species), we are working on an innovative tool that can solve these problems. A team of scientists at ILVO is therefore developing a hardware and software system (FishScan) that can measure fish with high accuracy and identify them on species level by using just a camera and an Industrial Computer. The system is initially built to be put on top of conveyor belts in fisheries auctions and on commercial fishing vessels to collect information of the catches (ID and length of fish). With the focus on commercial fish species, we are today already able to identify sole (*Solea solea*) and plaice (*Pleuronectes platessa*) with high accuracy and measure them with high precision. Although the implementation of image recognition systems in fisheries is nothing new, we are trying to implement this system in the Belgian beam trawl fisheries with the future focus on identifying mixed catches and discards on the onboard conveyor belts. With the cooperation of the crew on board of these beam trawl vessels, a self-sampling protocol will be set up, where our newly developed system can be used to collect catch data for scientific purposes as well as for the fisheries industry.

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