Electrifying a Benthos Release Panel to retain sole

Soetaert Maarten[1,2], Bart Verschueren[2], Hans Polet[2], Annemie Decostere[3], and Koen Chiers[1]

[1] Department of Pathology, Bacteriology & Poultry Diseases, Faculty of Veterinary Medicine, Ghent University, Salisburylaan 133, B–9820 Merelbeke, Belgium
E-mail: Maarten.Soetaert@UGent.be

[2] Institute for Agricultural and Fisheries Research (ILVO), Animal Sciences – Fisheries, Ankerstraat 1, B–8400 Oostende, Belgium

[3] Department of Morphology, Faculty of Veterinary Medicine, Ghent University, Salisburylaan 133, B–9820 Merelbeke, Belgium

Although water and electricity are known as sworn enemies, the use of electrical pulses has already shown some spectacular results when it comes to aqueous ecology. In freshwater, so called 'electrofishing' has been a valuable sampling technique for decades and electrical fields were applied as a screen to limit fish migration. More recently, elaborate research has been done with marine organisms, showing different reactions of flatfish, roundfish and invertebrates to electrical pulses. This opens various applications for electrical pulses as a tool for more selective fishing and/or reduced ecological impact.

A first way to achieve more selective catches is by aiming for a specific reaction of the animal in front of the net. This has already led to the commercial application in electrotrawls, in which shrimp is startled or flatfish is brought into a cramp, resulting in a fishery with reduced bottom contact, discards and fuel consumption. However, the possibility to steer the behaviour of marine organisms may also be used to separate and release unwanted by-catch without loss of commercial target species once these animals entered the net by implementing pulsing tools in existing sorting boxes, grids, release panels. This presentation will focus on the results of recent field experiments with an electrified Benthos Release Panel (eBRP), aiming for a huge benthos and trash catch reduction without losing commercial sole will be discussed.