Fewer animals needed in fisheries research thanks to video and crowdsourcing

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SCOPE OF THE METHOD

The Method relates to	Animal health
The Method is situated in	Education and training
Type of method	Other: video and crowdsourcing
This method makes use of	Animal derived cells / tissues / organs

DESCRIPTION

Method keywords

fish

reflex

video

training

Scientific area keywords

fisheries
survival
reflex

Method description

Reflex tests on fish which are used to determine the stress state and survival rate after discards must be correctly conducted and interpreted, and therefore require training. Thanks to ILVO research on the use of video and crowdsourcing (product improvement based on the knowledge and skills of users), fewer laboratory animals will be needed in the near future.

Lab equipment

Method status

Published in peer reviewed journal

PROS, CONS & FUTURE POTENTIAL

Advantages

Reliability and repeatability are essential in the observations we make on the vitality of live caught fish. A series of video clips allows us to train students, veterinarians and fisheries researchers, but we can also compare a series of interpretations of the same clips by different people - crowdsourcing. Interpretation of the same clips can also be repeated by the same people (duplication). In this way we were able to demonstrate that our measurement method is reliable and that even people without prior knowledge can make good observations with this training.

Challenges

There are two major bottlenecks here:
- Observations must be unbiased and repeatable. For example, an observer should not be influenced by foreknowledge (e.g. "That sole has been floundering on dry land for 5 minutes so its reflexes won't be up to speed anymore").
- New observers require training, either with newly caught fish, or with fish kept in the laboratory for that purpose.

REFERENCES, ASSOCIATED DOCUMENTS AND OTHER INFORMATION

Associated documents

Links

Website text ILVO
Video
Publication

PARTNERS AND COLLABORATIONS

Organisation
Name of the organisation Instituut voor Landbouw-, Visserij- en Voedingsonderzoek (ILVO)

Department Animal Research
Country Belgium
Geographical Area Flemish Region
Name of the organisation NOAA
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