Fishermen help to get to the bottom of fish diseases in a citizen science project

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Wild flatfish may develop various lesions or deformities. Searching for a cause of these abnormalities often is comparable with finding a needle in a haystack. Therefore, it is challenging to pinpoint an exact cause of a certain disease. Various environmental factors might play a role in the susceptibility of an individual animal to develop a certain lesion or deformity. Moreover, characteristics of the fish, such as gender, condition or the activity of the immune system might act as predisposing factors.

One important piece of information is the prevalence of a certain disease and its variability in space and time. With regard to this, various scientific institutes over the world organize regular monitoring studies to measure the prevalence of certain diseases. One of the Belgian institutes is the Research Institute for Agriculture, Fisheries and Food (ILVO) which has already been conducting surveys on the occurrence of different diseases in the Belgian part of the North Sea for a long time. This information is used for, amongst others, designing the 'Marine Strategic Framework Directive (MSFD)'. From 2015 onwards, the data collection was intensified with a two-monthly monitoring campaign on board of the RV Simon Stevin at eight fixed sampling locations in the Belgian part of the North Sea. This data collection mainly focused on the research regarding skin ulcerations of flatfish.

To increase the dataset, we recently launched a citizen science project whereby the sea-going communities (professional or recreational fishermen, marine scientists…) are involved in the data-gathering process. They can deliver useful information on various diseases and areas that are not (intensively) covered in the scientific surveys. The citizen science project is supported by a website (www.platvisziekten.be) which contains some general information on various diseases and the goal of the scientific surveys. Furthermore, the sea-going community has the opportunity to notify scientists through the website if they encounter any flatfish with an abnormality by filling in a simple form and send it, along with a picture of the deformity. Using observations of these lesions or deformities will considerably strengthen the data collection and substantiate the scientific surveys for trends in prevalence and sudden changes of various diseases. This data may be used to study the cause of various diseases but also to monitor the health of the marine ecosystem in which the fish reside.

The website was constructed at Flanders Marine Institute (VLIZ).