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Tori line simulator tool to train observers

Delegation of France Overseas Territories

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Abstract

Tori line is a mitigation method in place to reduce bird incidental bycatches in the longline fishery. This document presents a simulation tool to visualize the influence of the different parameters affecting the length of the aerial extension of the lines. This tool is used for observer training in the French toothfish fishery.

[1] Restricted documents may contain confidential information. Please do not distribute restricted documents in any form without the explicit permission of the SIOFA Secretariat and the data owner(s)/provider(s).
[2] Documents available only to members invited to closed sessions.

Recommendations
That SIOFA Scientific Committee • **Considers** having this tool available for other members on the SIOFA website so that it can be used in other observer programs

Tori line simulator tool to train observers

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Birds are attracted by bait used in longline fishery. When the line is set, the individuals of bird species capable of diving several meters depths are often caught by hooks and get drowned, causing a severe threat to the populations.

One of the efficient mitigation methods in place to reduce bird accidental bycatch consists in using tori lines towed behind the vessel (Figure 1). This scaring device must cover the dangerous area which starts when the hook touches the water until it is too deep and out of reach for the diving capabilities of the bird species following the vessel.

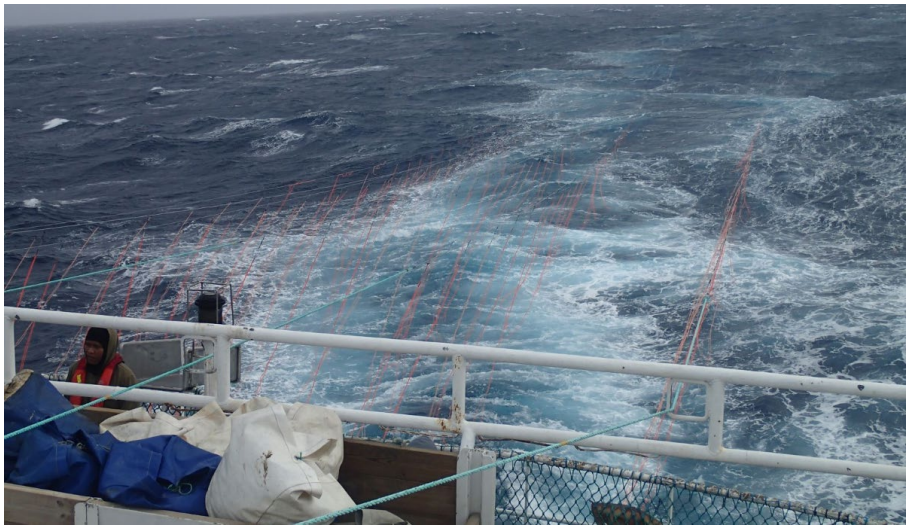

Figure 1: Picture of tori lines deployed

The area that must be covered varies according to:

- The sink rate of the line (how fast it sinks)
- The vessel speed
- The height above water at which the tori lines are attached
- The height above water at which the fishing line is set
- The maximum depth at which the birds can dive

In order to explain the influence of these parameters on the length of the tori lines, French technical coordinators developed a simple Excel plot that is used to train scientific observers deployed on the vessels (Figure 2).

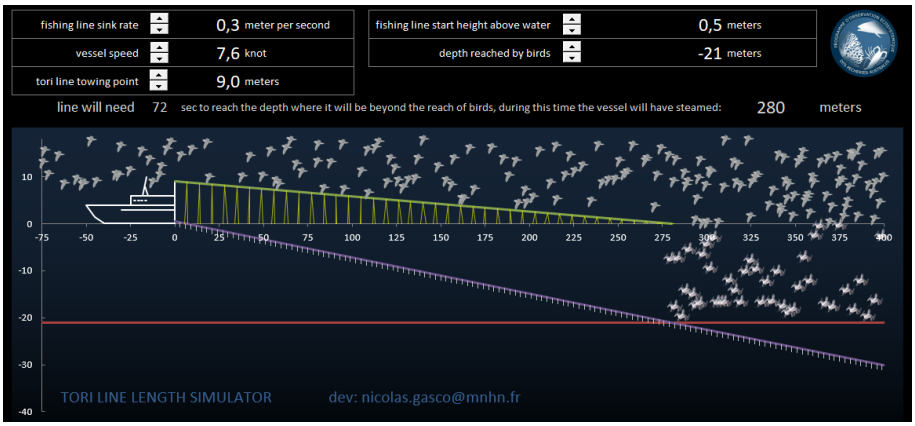

Figure 2: Screen capture of the tori line simulator

We would like to share this tool with other SIOFA members and we recommend that this file (https://doi.org/10.6084/m9.figshare.28194992.v1) is made available on the SIOFA website in the resource section for technical coordinators in order to be used for training.