

# Use of and potential biodegradable alternatives for dolly rope, a.k.a “spekking”, in Belgian fisheries

**Bekaert Karen, Devriese Lisa, Vandendriessche Sofie,  
Vanderperren Els**

Institute for Agricultural and Fisheries Research, Ankerstraat 1, 8400 Ostend, Belgium

☎ +32(0)59/569855 ✉ [karen.bekaert@ilvo.vlaanderen.be](mailto:karen.bekaert@ilvo.vlaanderen.be)

**ILVO**  
Institute for Agricultural  
and Fisheries Research



**Flanders**  
is agriculture and fisheries

## What is dolly rope?

- Blue, orange or black polyethylene threads are used for protection of fishing nets from wear and tear
- In former times, bicycle tubes were used
- Dolly rope is lost at sea, ends up in the marine environment and fragments into microplastics



1976



2015

## Objectives

- Evaluation of the use of dolly rope in Belgian fisheries
- Searching for bio-degradable alternatives of dolly rope



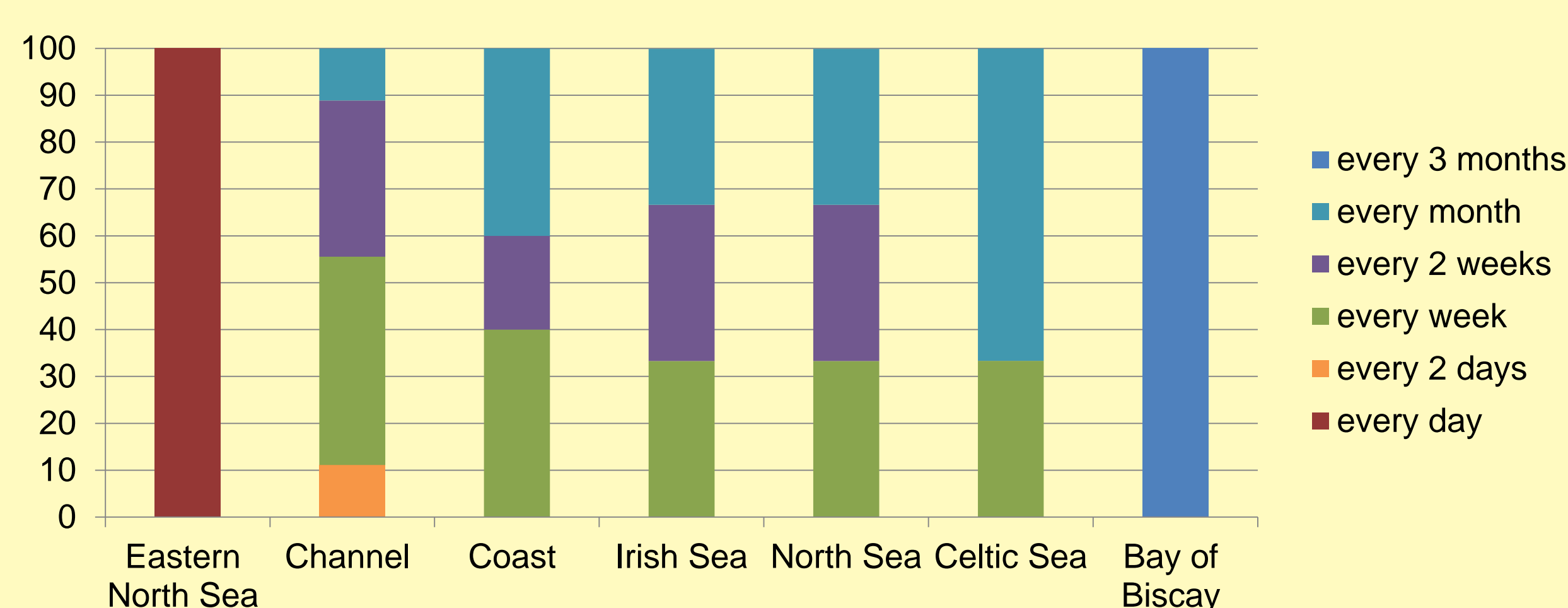
## Ra ra ra, which one is PLA?

## Biodegradable alternatives

Alternatives should be biodegradable in the marine environment, have good mechanical properties and be price-competitive

Polymer	Polylactic acid (PLA)	Polyhydroxy-alcanoates (PHA)	Polybutylene succinate (PBS)	Starch plastics	Cellulose plastics	Polycaprolactone (PCL)
Mechanical properties	++	+	+	+	+	+
Biodegradation at sea	-	++	+	++	+	-
Price	++	-	+	++	+	-

## Use of dolly rope in Belgian fisheries



Depending on the fishing ground, dolly rope is more or less often replaced by the fishermen

## Conclusion

- Annually, between 90 and 130 tons of dolly rope is used by Flemish fishermen
- Biodegradable alternatives exist and blends/composites can be developed to obtain the desired properties
- There is no “off-the-shelf “ solution for dolly rope and a custom-made design will be necessary



## Acknowledgement

This project receives funding from the European Fisheries Fund: Axis 4, the province of West-Flanders and the Flemish government.