

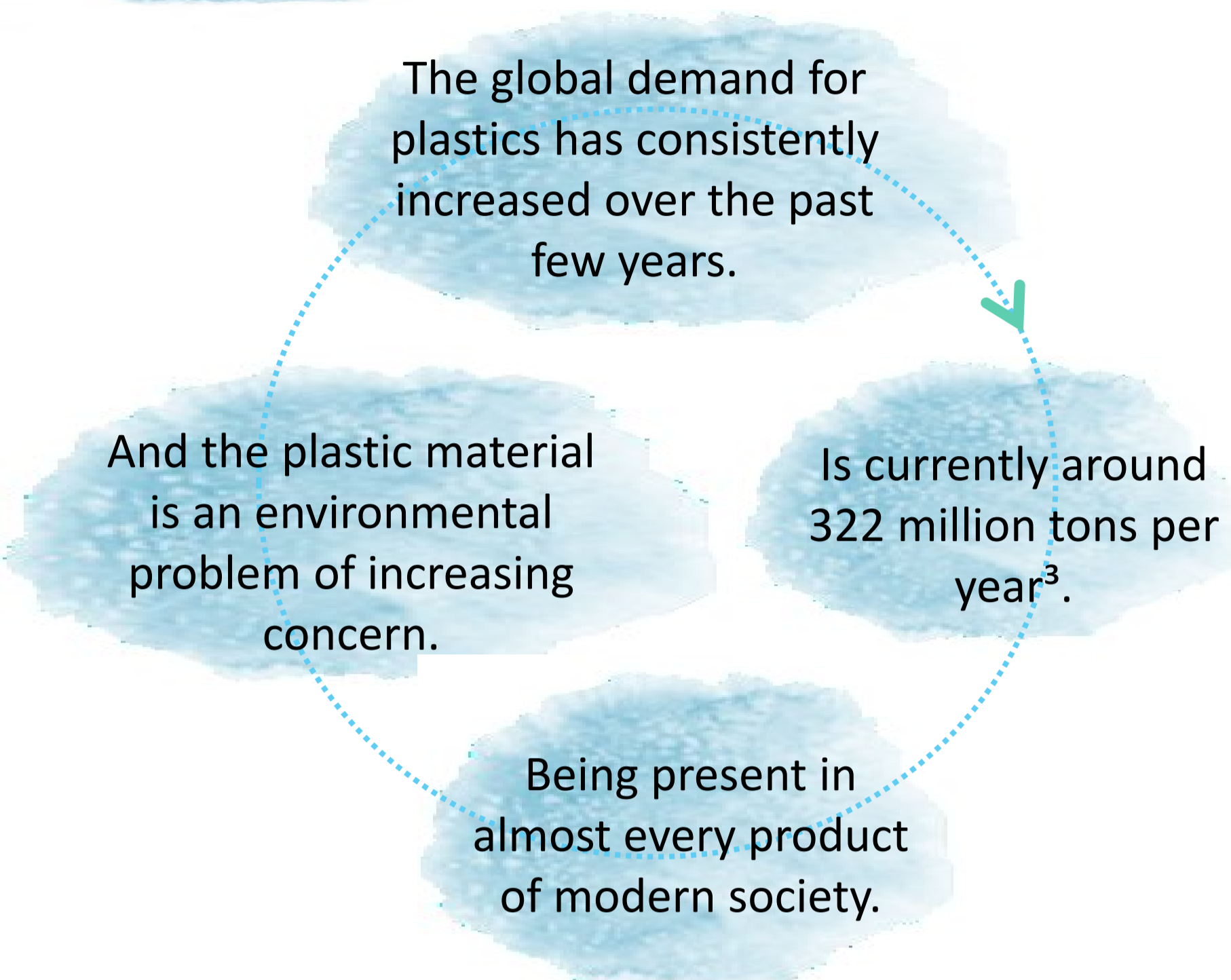
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## INTRODUCTION



## OBJECTIVE

This study aimed to characterize, quali and quantitatively, mesoplastics (5 – 25mm) and microplastics (<5mm) on three different beaches in Santa Catarina Island, SC, Brazil

## RESULTS AND DISCUSSION

The mean concentration of mesoplastic and microplastic varied from 2 to 43.3 particles m<sup>-2</sup> and 0 to 104 particles m<sup>-2</sup>, respectively, and size varied from 0.11 to 10.4cm (Fig 2).

### CLASSIFICATION OF PLASTIC MATERIAL

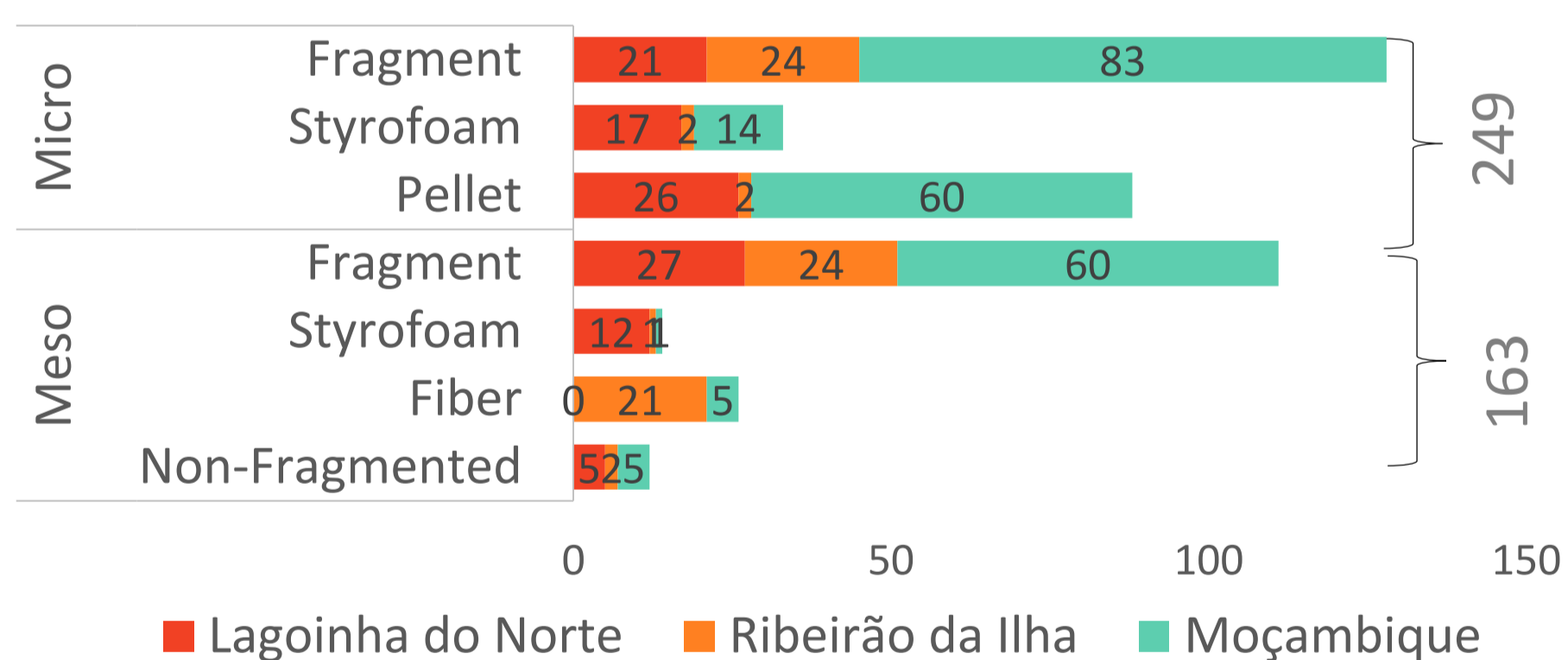


Figure 1. Characterization of marine debris divided by types of materials. The divisions differ due to no other non-fragmented microplastic beyond pellets were founded.

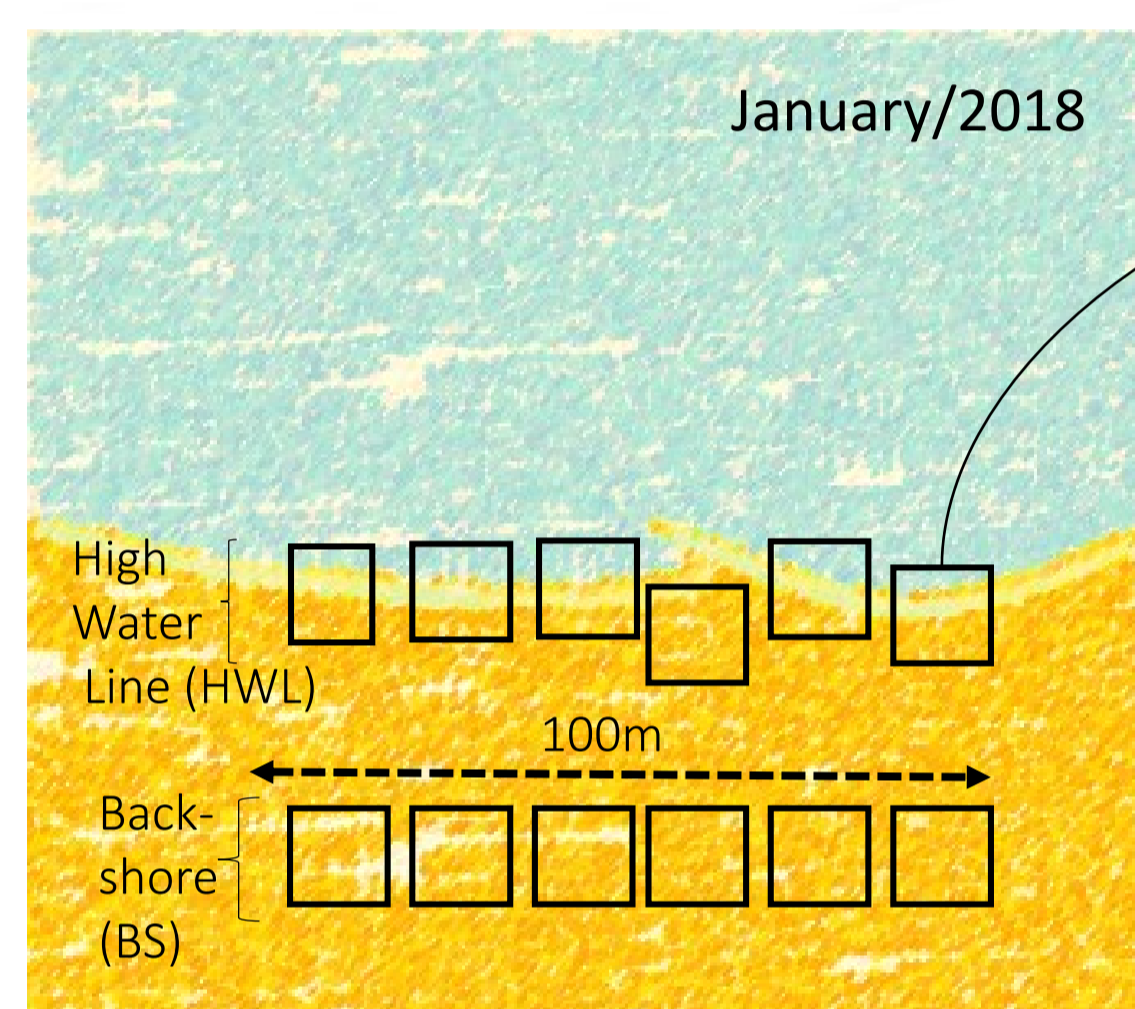
Plurality of sources.

- Fishing and mariculture activities, evidenced mainly in Ribeirão da Ilha beach, an important Brazilian center for bivalve production<sup>4</sup>.
- Beach users activities (locals and tourists), since Tourism plays an important role in Santa Catarina Island's economy.
- Oceans' currents and surface winds also contribute to an expressive number of pellets and fragments, brought to the island, since the island has no sources of pellets.

## STUDY AREA



## METHODS



fragments; styrofoam; fibers; pellets and non-fragments.

### PREFERRED SIZE OF COLLECTED ITEMS

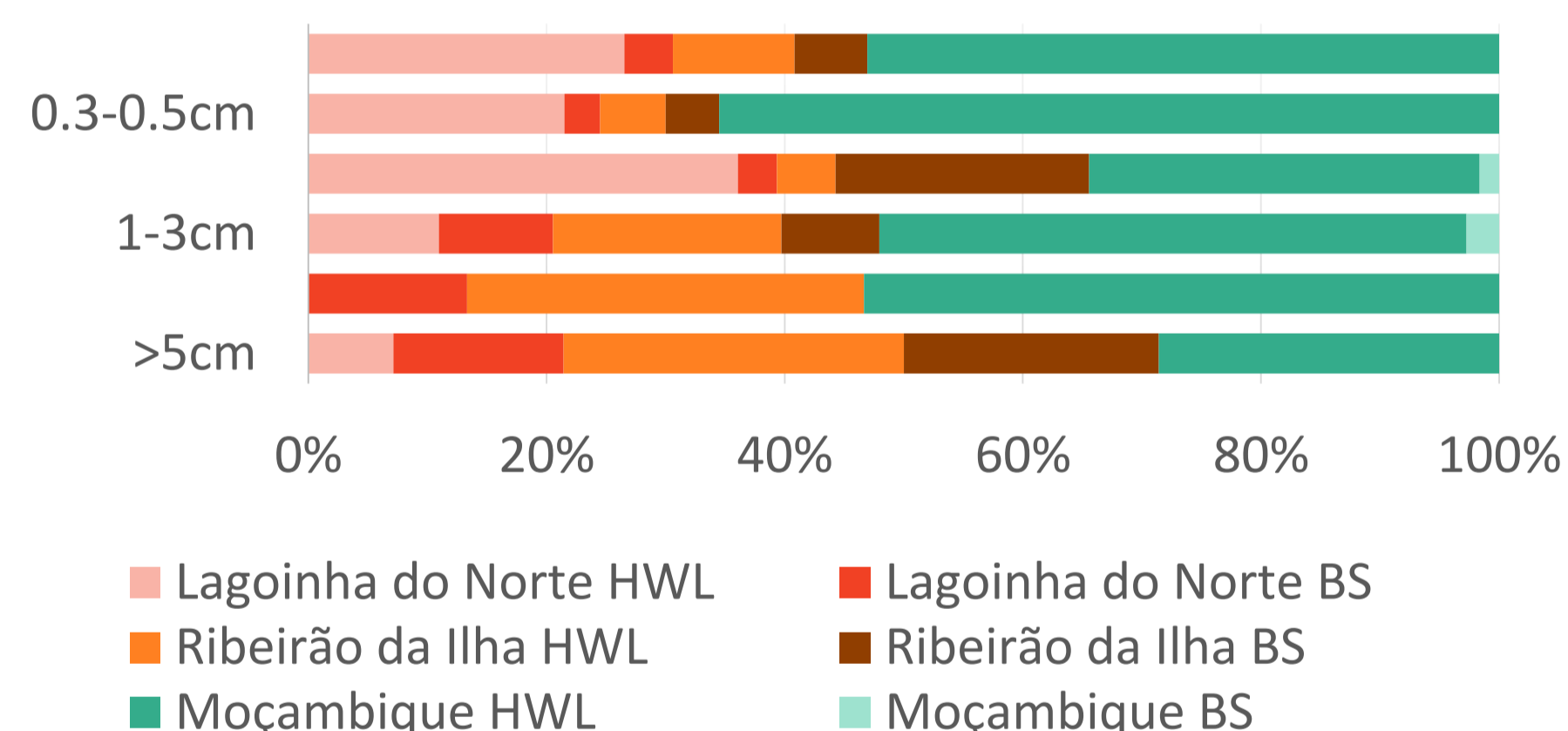


Figure 2. Size of items collected in the High Water Line (HWL) and Backshore (BS)



Figure 3. Material collected in Moçambique beach, Ribeirão da Ilha beach and Lagoinha do Norte beach, containing plastic tags (seal tag), seals, cloth peg, bottle caps, fibers, straw, toothpick packing material and sachets.

## CHALLENGES

The plurality of marine litter shows that different sources need different approaches to reduce them. These include changes in policy, local actions, improvement in waste-management systems and eliminating particularly items products. In the case of Santa Catarina Island still has a lot to do since the municipality of Florianópolis still requires that beach vendors offer to their clients only disposable utensils and straws, individually wrapped and sealed, and Florianópolis Waste Management Plan still is not responsible for fishing related litter.

### REFERENCES:

- <sup>3</sup> Plastics Europe. Plastics—the facts. An analysis of European plastic production, demand and waste data, 2016.
- <sup>4</sup> SILVA, Ana Claudia Nascimento. O papel da maricultura na configuração urbana do Ribeirão da Ilha. 2012.

Acknowledgments:

