

# Mesoplastics on Joaquina beach, Santa Catarina Island, Brazil: sources, characterization and temporal trend

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The temporal variability of mesoplastics (5 to 25mm) at Joaquina beach, from July/2018 to January/2020, was analyzed aiming to evaluate which factors, natural and/or anthropic, are the main responsible for its occurrence.



Figure 1 - Map of the study area, Joaquina beach located in the southeastern sector of the island of SC.

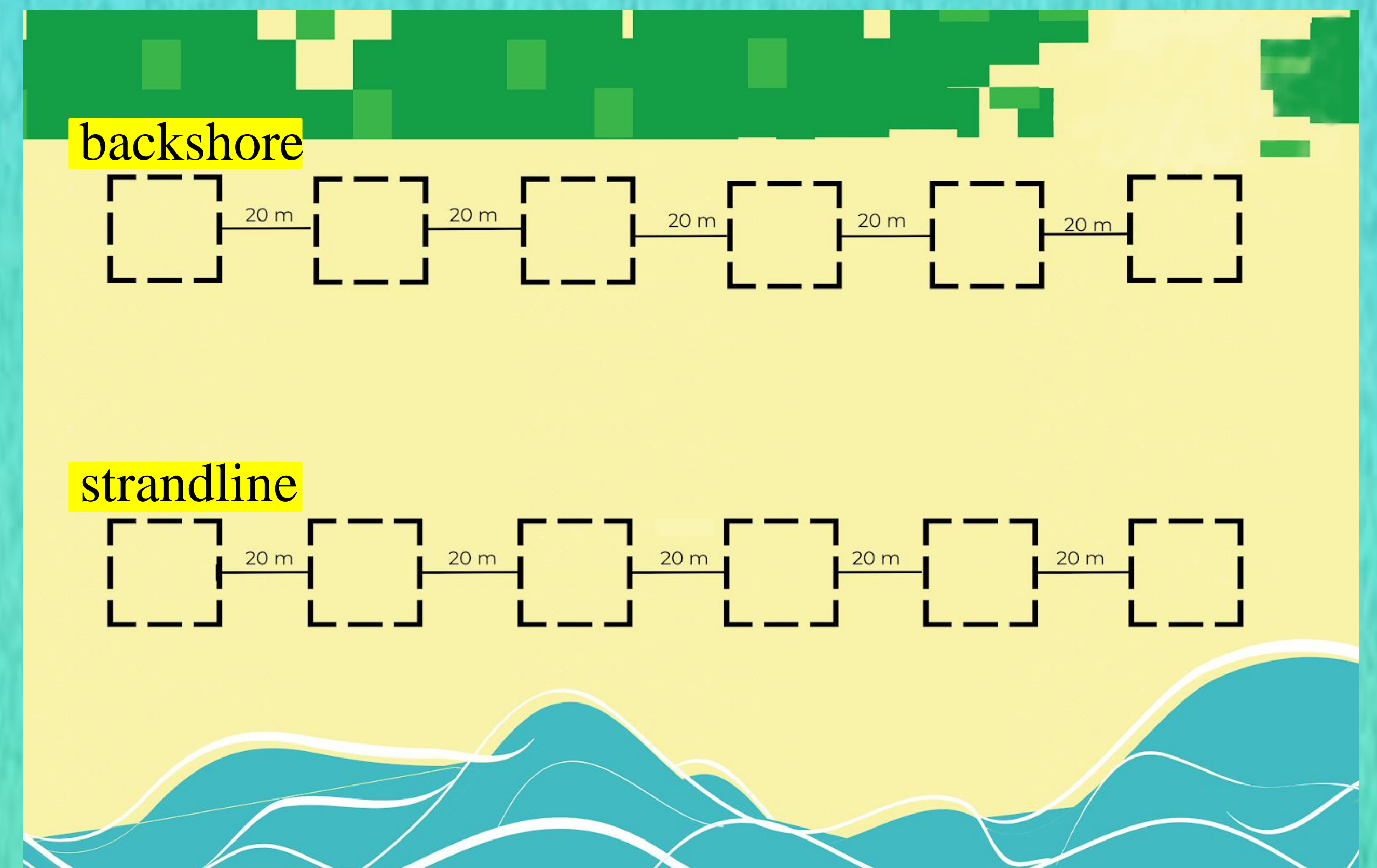


Figure 2: Mesoplastics sampling

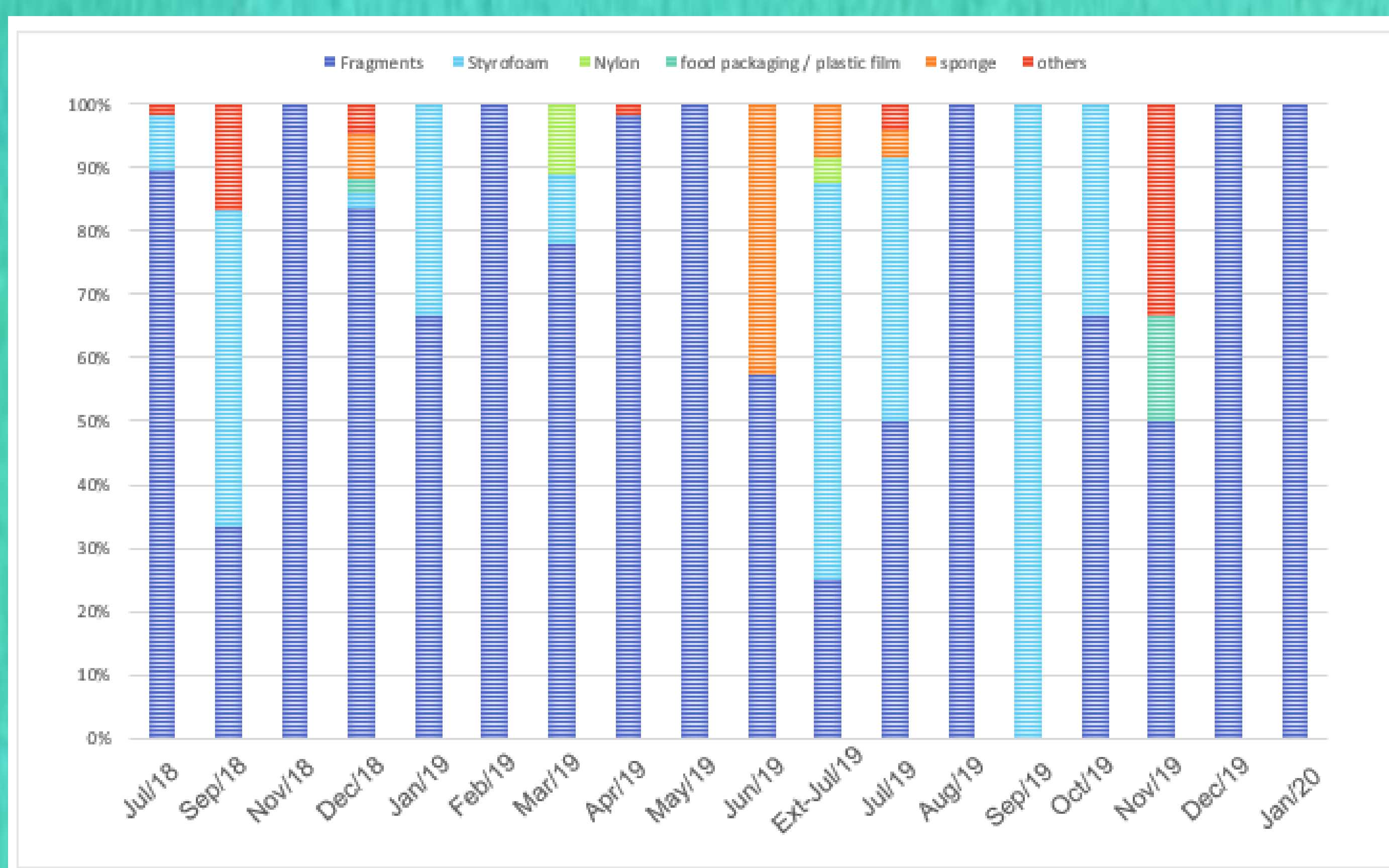


Figure 3 - Percentage of the main types of mesoplastic materials identified for each month



Figure 4: Mesoplastic fragments



Figure 5: Density items m<sup>-2</sup> in 2 transects (strandline x backshore)

- Fragments were the predominant type of plastic in all samples.
- There was a greater occurrence of items in the backshore, where dunes play a key role in the accumulation and retention of debris.
- Occurrence of mesoplastic showed no relation with seasonal use of the beach suggesting that their presence may be related to meteorological and oceanographic conditions.