

Sea turtles exposure to marine debris in French waters

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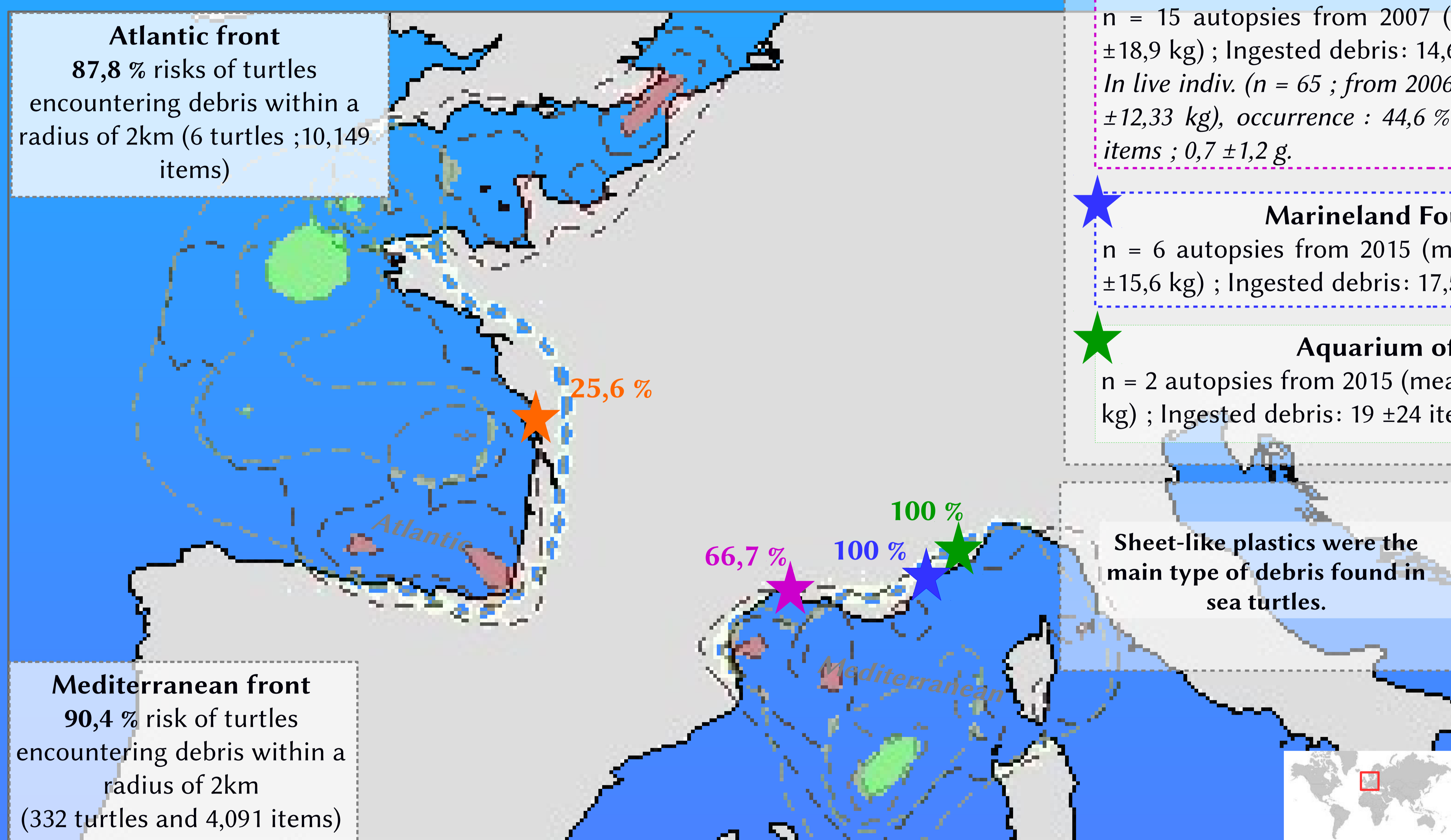
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The considerable level of litter in marine environments impacts marine wildlife, especially sea turtles. The loggerhead turtle *Caretta caretta* was proposed as an indicator of marine debris level and impact for the descriptor 10 of the MSFD (“Ingestion indicator 10.2.1”), which aims to restore the Good Environmental Status of the European marine waters. This study aims to assess the risk of loggerhead exposure to marine debris, as well as ingestion rates and amount in the metropolitan French and Monaco waters.

Materials and Methods:

1. Debris ingestion: Occurrence (% of turtles having ingested debris), number and mass of debris (>1mm) found in turtles having ingested debris, measured in dead individuals from autopsies, and in live individuals from excreted faeces (Mediterranean front).

2. Exposure risks to debris: Exposure risk areas and density of debris surrounding turtles evaluated by joining turtle and marine debris locations from aerial surveys in Summer 2012 (Flight altitude: 183 m; detection: object>20-30 cm).



Distribution of turtles (red) and debris (green) location probabilities (Kernel 95 % (non filled dashed line), 50 % (dashed line lightly filled), 10 % (dashed line darkly filled), in Summer 2012

MAIN RESULTS AND PERSPECTIVES:

- High propensity of loggerheads to ingest debris, possibly related to high exposure risks,
- Debris is a major threat that needs to be urgently addressed,
- To establish suitable conservation programs, use of the MSFD standard protocol is a necessity in order to compare regional results,
- Studies on a larger spatial scale and with a wider network of experts is essential.



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