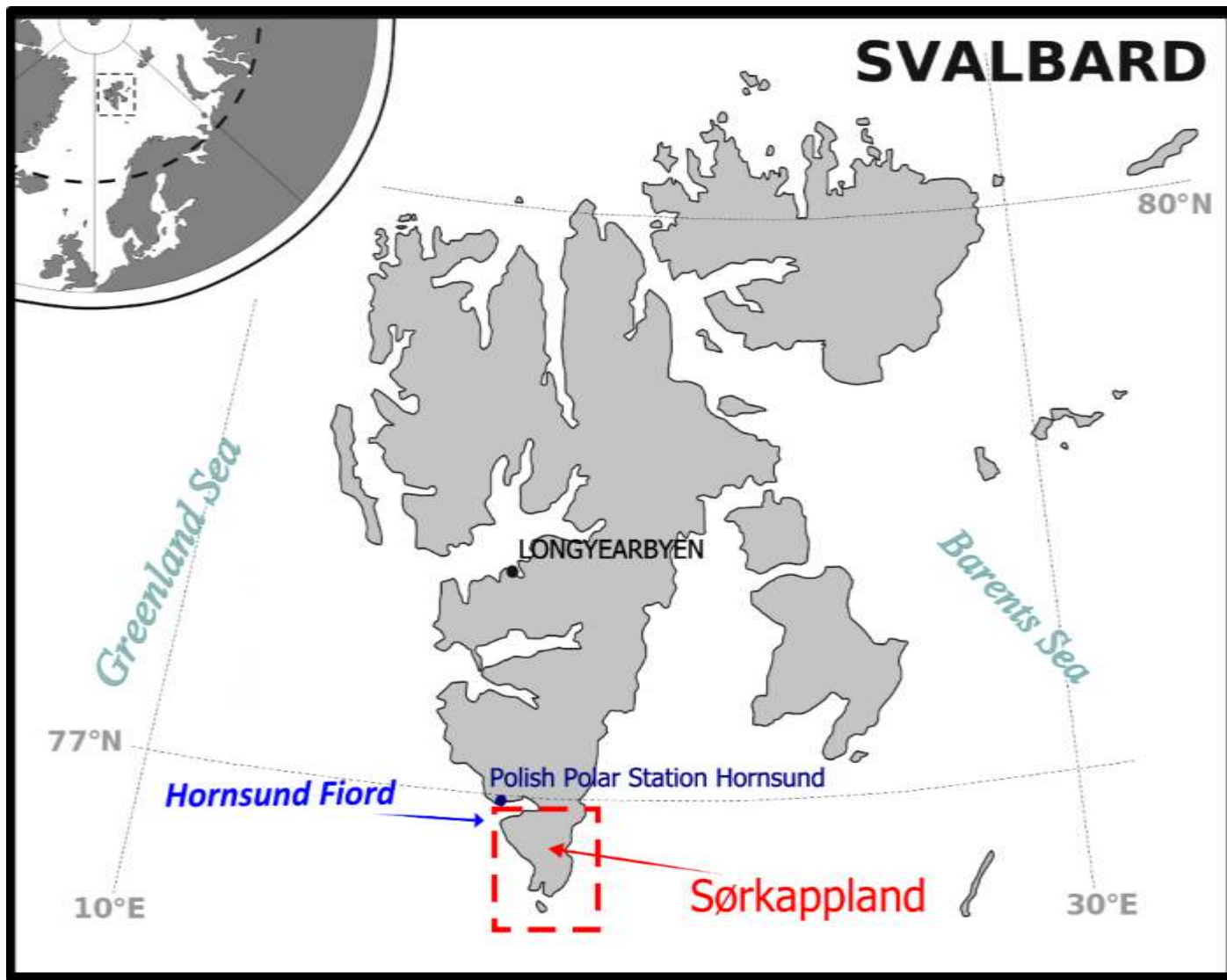


Marine litter pollution in Southern Spitsbergen – lessons learnt from 6 tonnes of litter picked up from 30 km of the coast

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forScience Foundation

Sørkapp Marine Litter Cleanup



forScience



SVALBARDS
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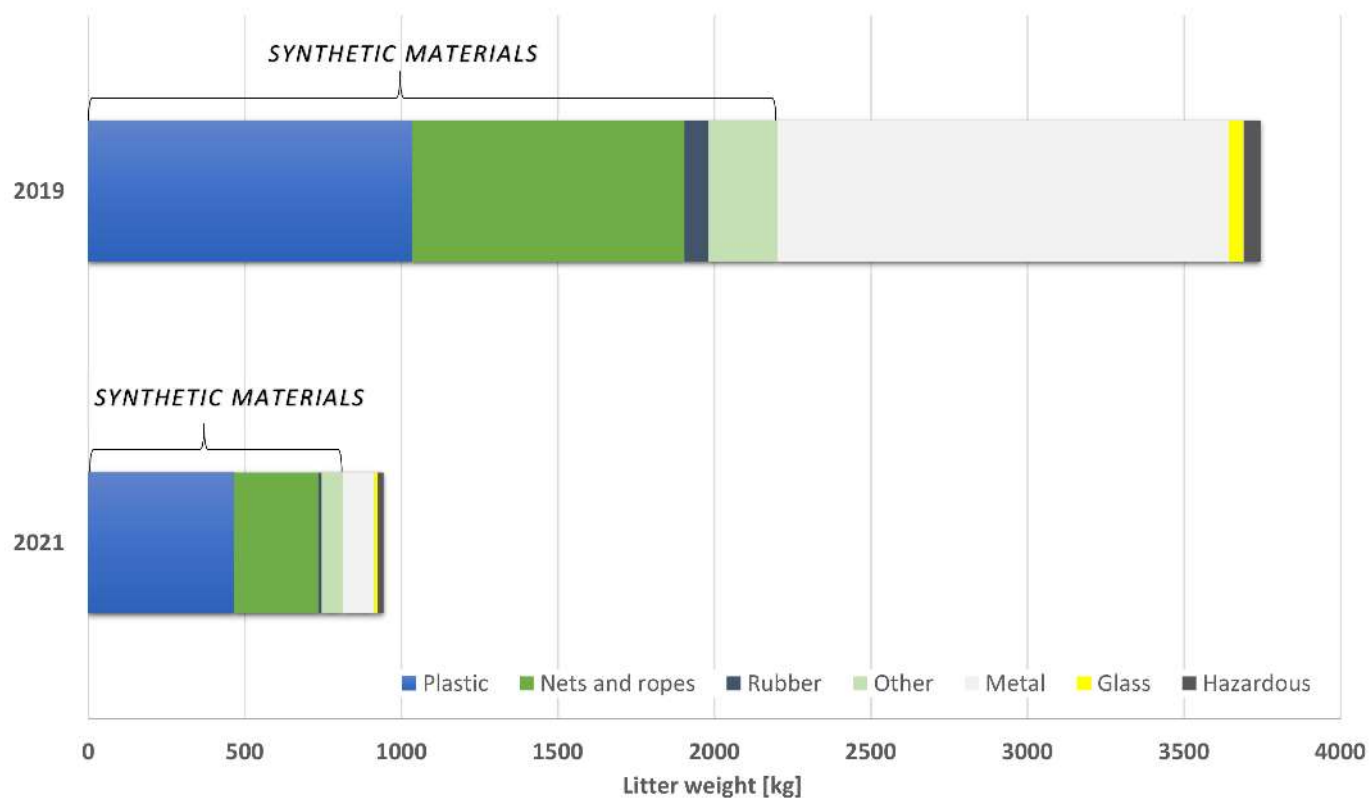


| | Category |
|---------------------|----------------|
| SYNTHETIC MATERIALS | PLASTIC |
| | NETS AND ROPES |
| | RUBBER |
| | OTHER |
| | METAL |
| | GLASS |
| | HAZARDOUS |

**Two summer seasons (2019 and 2021)
5915 kg of collected marine litter
30 km of cleaned up coastline**

synthetic materials almost 84%

Data from 15 km

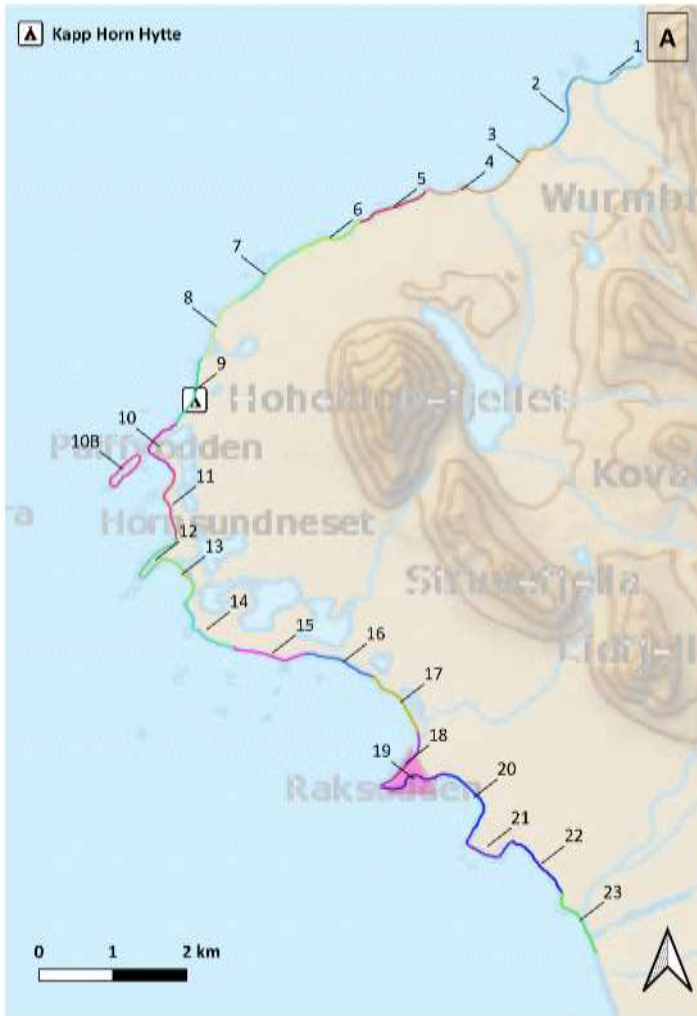


The average litter accumulation rate 21.2 kg/km/a

For individual working sections the accumulation rate ranged from a little over 4 kg/km/a to over 40 kg/km/a

Jóźwiak, B., Nawrot, A. (2019). *Report on the execution of Sørkapp Marine Litter Cleanup project in 2019*. Fundacja forScience. ISBN 978-83-956002-1-0

#1: How to measure the coast?



| Working section | Length [m] | | | Working section | Length [m] | | |
|-----------------|------------|------|------------|-----------------|------------|------|------------|
| | A | B | difference | | A | B | difference |
| #1 | 1000 | 1014 | 14 | #12 | 1000 | 2069 | 1069 |
| #2 | 1000 | 1391 | 391 | #13 | 1000 | 1261 | 261 |
| #3 | 1000 | 1043 | 43 | #14 | 1000 | 1406 | 406 |
| #4 | 1000 | 1428 | 428 | #15 | 1000 | 1419 | 419 |
| #5 | 1000 | 1645 | 645 | #16 | 1000 | 1246 | 246 |
| #6 | 1000 | 1035 | 35 | #17 | 1000 | 1224 | 224 |
| #7 | 1000 | 1068 | 68 | #18 | 1000 | 1808 | 808 |
| #8 | 1000 | 1062 | 62 | #19 | 1000 | 1585 | 585 |
| #9 | 1000 | 1028 | 28 | #20 | 1000 | 1035 | 35 |
| #10 | 1000 | 1369 | 369 | #21 | 1000 | 1881 | 881 |
| #10B | 1735 | 2026 | 291 | #22 | 1000 | 970 | -30 |
| #11 | 1000 | 1177 | 177 | #23 | 1000 | 1346 | 346 |

Differences in the length of working sections #1 to #23

The target area of the project divided into working sections:

A: mapped out based on the map of Spitsbergen available on Svalbardkartet ©Norwegian Polar Institute; **B:** mapped out based on digital Svalbard shoreline data available on Kartdata Svalbard 1:100 000 (S100 Kartdata) / Map Data Land I ©Norwegian Polar Institute (2014)

#2: Can we rely on labels?



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#3: How many items or how many kilograms?



#4: Is Arctic special?



#5: Are macroplastics too big for science?



#6: Do we cooperate enough?



Potentially useful observations on the practicalities of marine litter methodology, monitoring and assessment in the High Arctic - lesson learnt:

- #1 – We need more comparable data;
- #2 – Labels are not common enough to rely on;
- #3 – Kilograms are more informative than item numbers;
- #4 – The Arctic needs site-specific methods and protocols;
- #5 – Macroplastics are an important source of secondary microplastics;
- #6 – We must cooperate, not compete.



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