



# THEME 4 MARINE DEBRIS COLLECTIONS

JANUARY 2022 - JUNE 2022

Half-yearly report on the BCSS Ocean Observatory marine debris collections conducted in collaboration with African Parks.



# LOCATIONS BENGUERRA ISLAND

LOCATIONS

QUICK FACTS

TOTAL WEIGHT

PLASTICS

## Benguerra Island

Benguerra Island is the second largest island of the Bazaruto Archipelago with an area of 55km<sup>2</sup>. The island contains large white beaches, coastal sand dunes, savannah grassland, marshes, evergreen dune forests, wetland eco-systems, freshwater lakes, mangrove forests and seagrass meadows. The BCSS Research Station is located on the northern coast of the island, next to mudflats and beach habitats.

## Frequency of marine debris collections

In collaboration with African Parks, BCSS has visited five designated sites on Benguerra Island on a monthly basis for the past 6 months, with the aim to collect marine debris at every site once a week. The group spent a total of 72 hours collecting waste from the habitats, resulting in a total of 1.020 kgs of marine debris that has been analysed and weighed. All data have been retrieved at the BCSS Waste Facility.



- SITE A: BEACH HABITAT
- SITE B: BEACH HABITAT
- SITE C: MUDFLATS HABITAT
- SITE D: MANGROVES HABITAT
- SITE E: SEAGRASS HABITAT



**Mudflats**  
SITE C



**Beach**  
SITE A + B



**Mangroves**  
SITE D



**Seagrass**  
SITE E

# QUICK FACTS

## JANUARY-JUNE

### TOTAL WEIGHT

1.020 kgs

### Nº OF COLLECTIONS

25

### HOURS SPENT

72 hours

### FREQUENCY

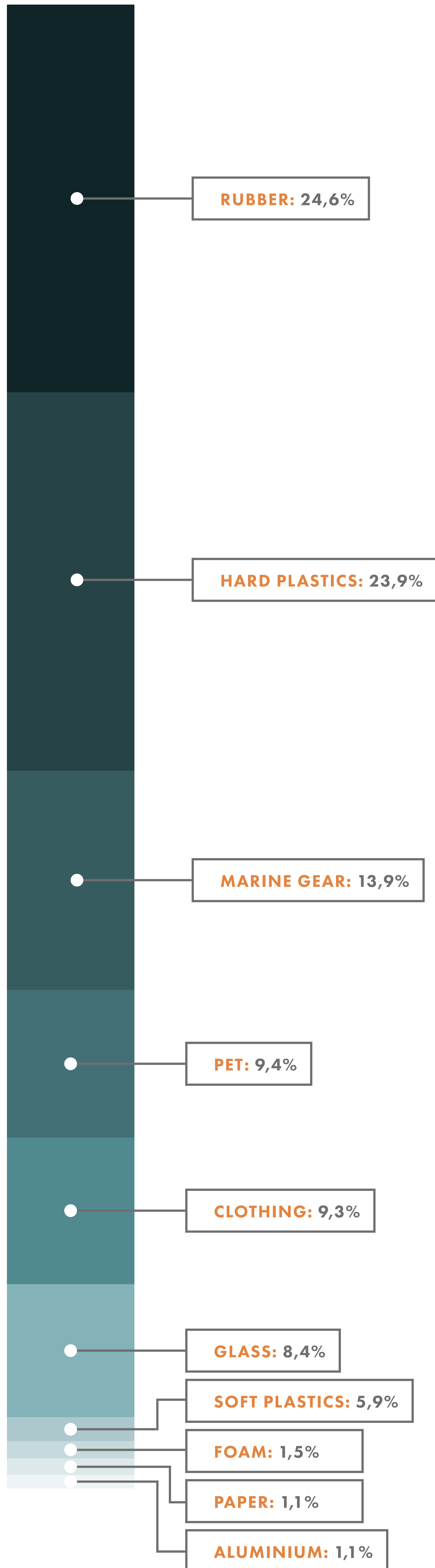
1 x week

LOCATIONS

QUICK FACTS

TOTAL WEIGHT

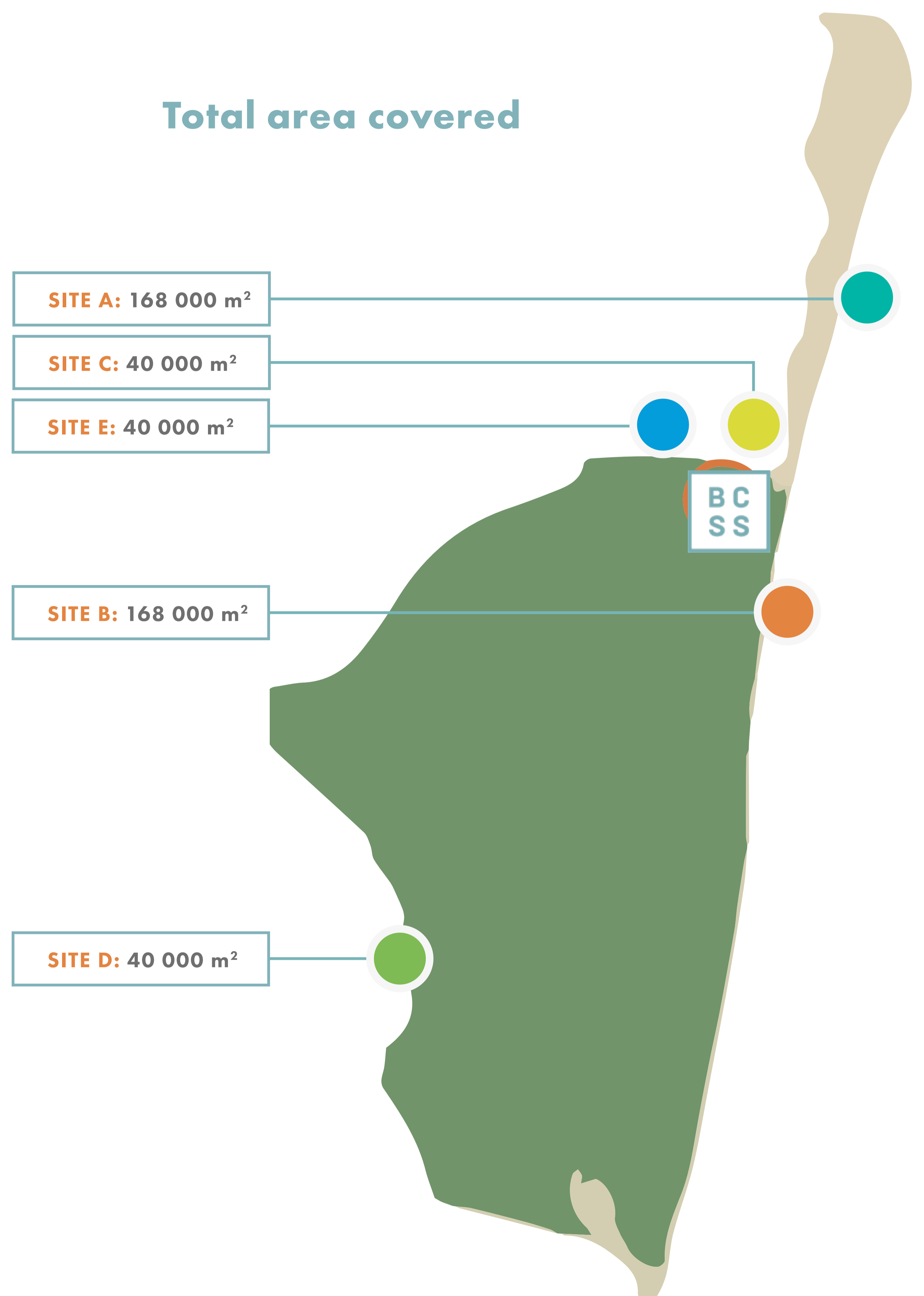
PLASTICS



### Methodology

The five sites which are being surveyed continuously cover different habitats: mudflats, beach, mangroves and seagrass. By foot, the group conducts surveys once per week. The start and end of each survey is determined using GPS coordinates. Surveyers walk in zig-zag motion across the site, collecting all visually recognisable debris into 60L empty sacks. After each survey is completed, the debris is transported to the BCSS Waste Management Facility, where the marine debris is sorted into the following categories: PET bottles, soft plastics, hard plastics, foam/polystyrene, rubber, clothing, fishing gear, aluminium cans, other metals and glass. The total weight of each survey is recorded. Comments and photographs are taken of any unusual observation.

### Total area covered



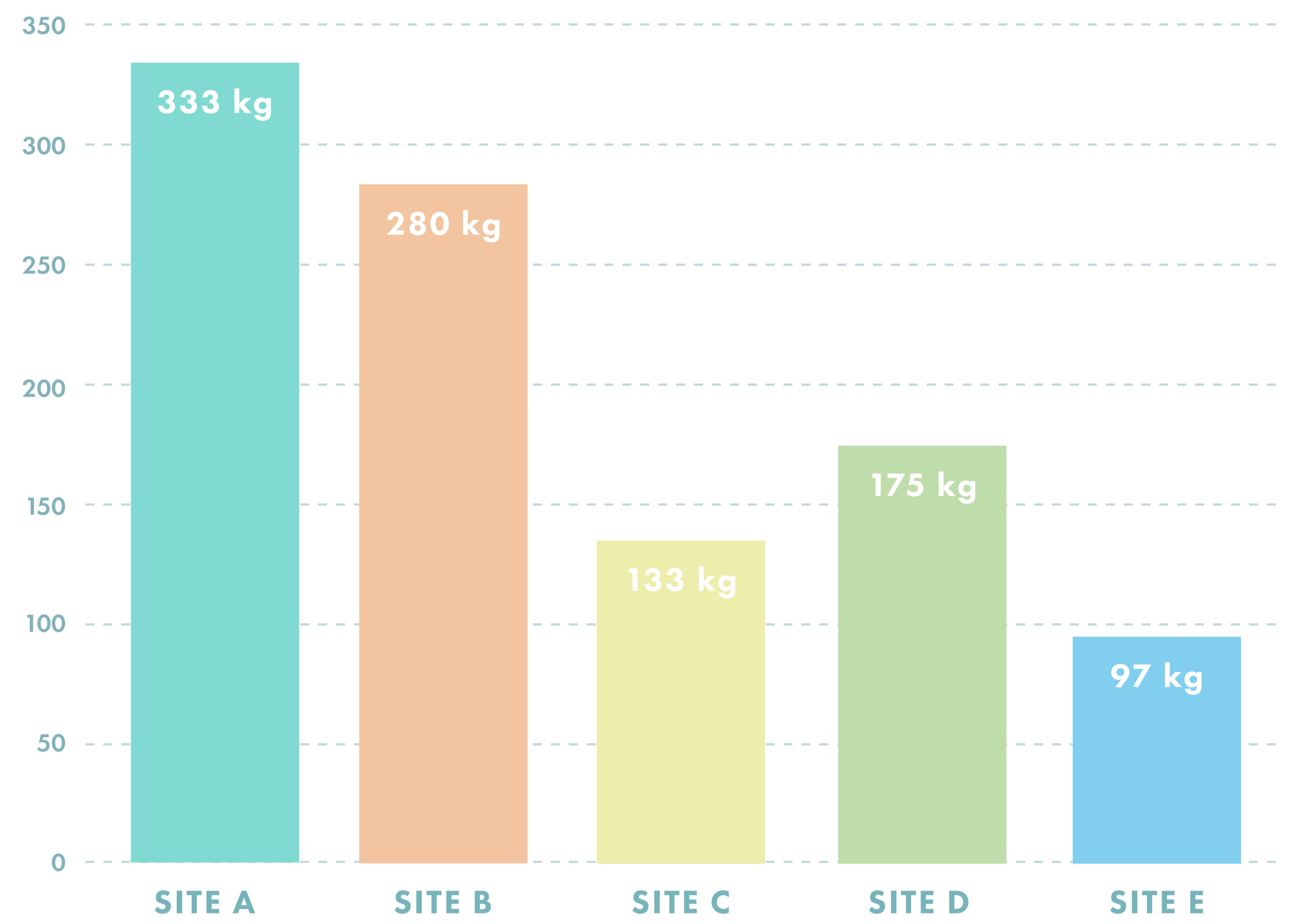
# TOTAL WEIGHT PER SITE

LOCATIONS

## Total weight of collections

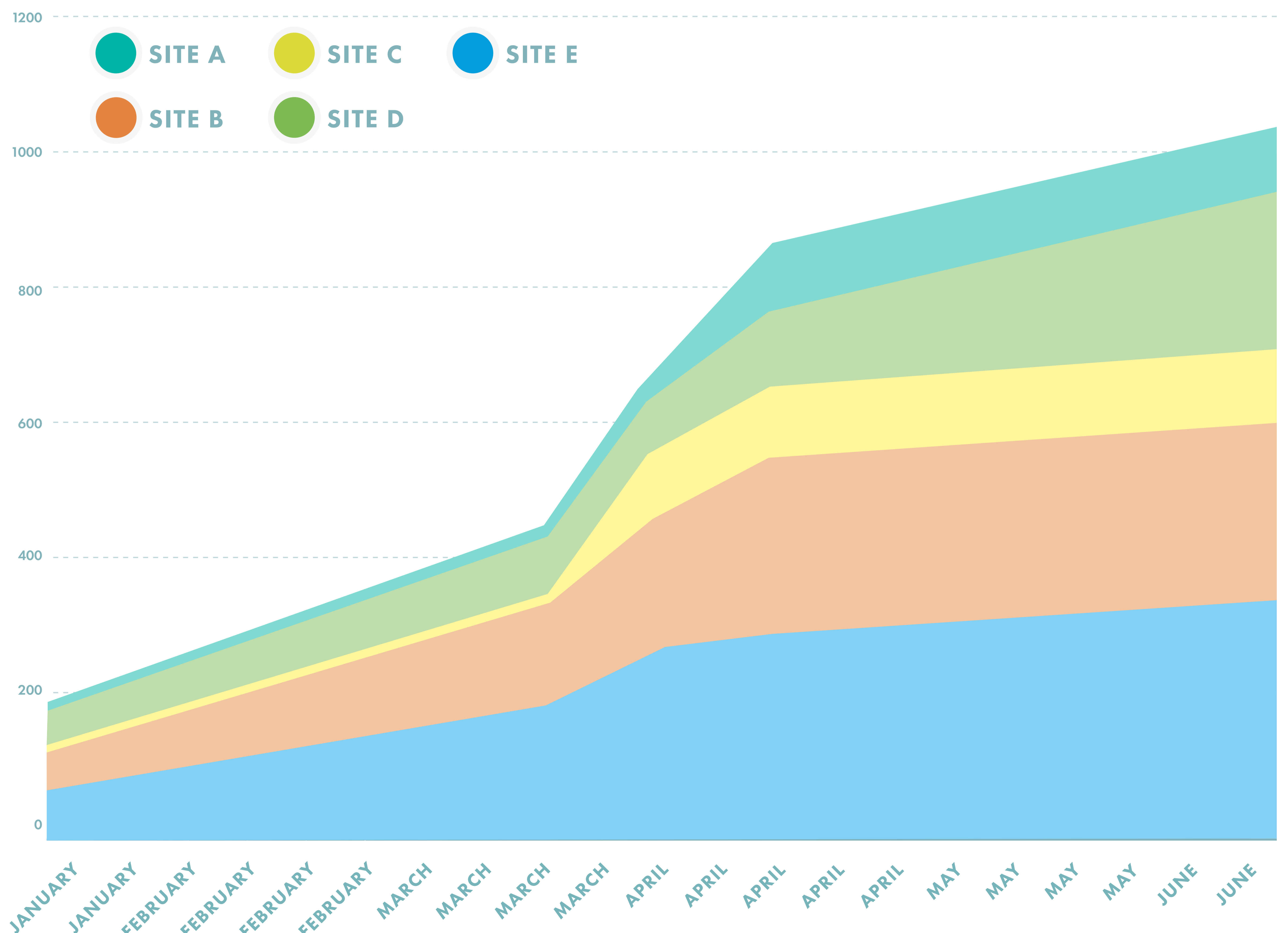
In the period from the start of January until the end of June, a total of 1018 kg has been collected.

The northern beach location (site A) has yielded the highest amounts of marine debris in the last six months, with 333 kg. At the second beach location, on the northeast side of Benguerra Island, a total of 280 kg was collected. The third-highest amount of marine debris was collected at the mangrove forest (site D), with a total of 175 kg. The mudflats on the north side of Benguerra Island (site C) accumulated a total of 133 kg, whereas at the seagrass meadows (site E) 97 kg was collected in the last six months.



QUICK FACTS

## Cumulative marine debris collected (kg) per site



TOTAL WEIGHT

PLASTICS

# PLASTICS PER TYPE

LOCATIONS

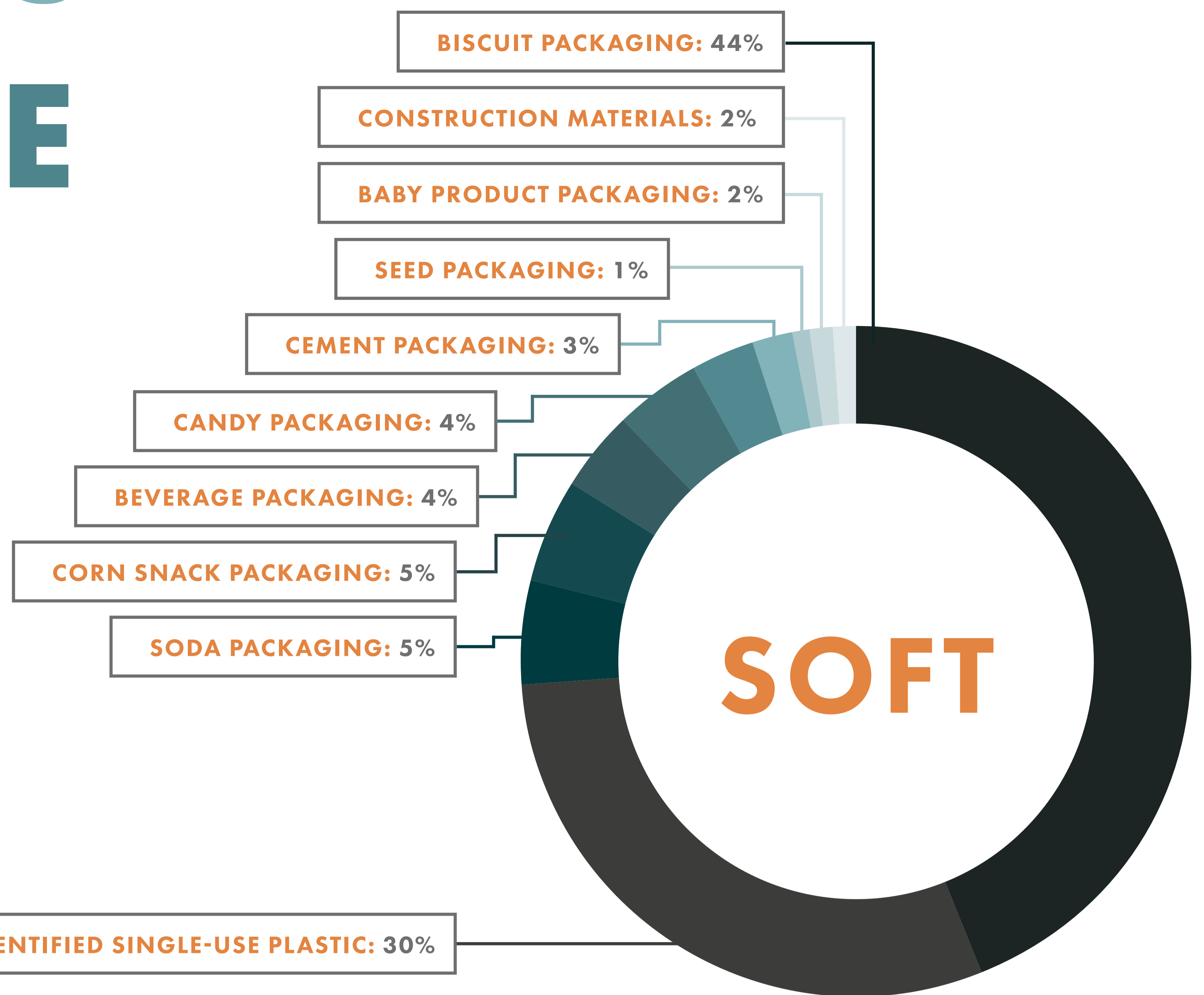
QUICK FACTS

TOTAL WEIGHT

PLASTICS

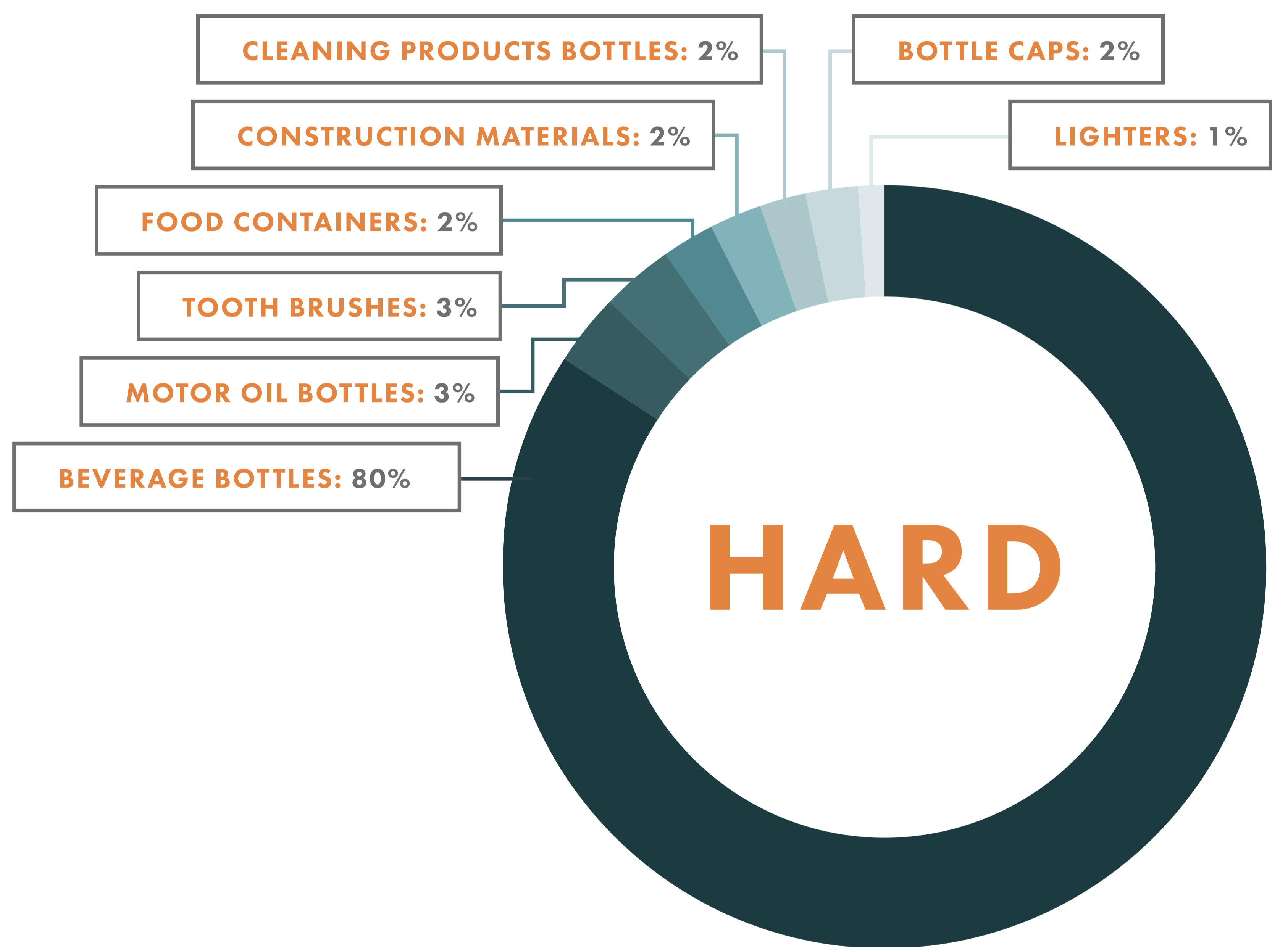
## Soft plastics

Owning up 44% of the total found soft plastics, biscuit packaging is the top type of soft plastics found on Benguerra Island's coast. 30% of the total is unidentified because the label was unreadable after the marine debris has spent a long time in the habitat. Other soft plastics include soda, corn snack, beverage and candy packaging.



## Hard plastics

Hard plastics marine debris found on the shores of Benguerra Island mainly contain single-use beverage bottles (80%). Other hard plastics found include toothbrushes, motor oil bottles, food containers and construction materials.



## PET bottles

Analysing the hard plastics labelled as 'beverage bottles' above, this type of plastics found contains single-use soda bottles (73%), water bottles (19%), food bottles (3%) and alcohol bottles (1%).

