

Resource: 19. Gathering data to measure the extent of beach litter on a beach -  
Biology/Science Fieldwork  
Appendix: 19.1 - Background information

### Definition of Marine Litter:

Marine litter is defined by the United Nations Environment Program as: “any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment. Marine litter consists of items that have been made or used by people and deliberately discarded into the sea or rivers or on beaches; brought indirectly to the sea with rivers, sewage, storm water or winds; accidentally lost, including material lost at sea in bad weather (fishing gear, cargo); or deliberately left by people on beaches and shores.” (UNEP 2005: 3)

### Use of Quadrats in this educational activity:

Quadrats are often used in Science/Biology for the estimation of population of living organisms particularly non-sessile organisms such as vegetation. In this educational activity, the same principle is being used to estimate the litter on a beach and thereby giving a rating for that beach with regards to litter.

### Possible types of litter above sand:

- Plastic and polystyrene pieces
- Food related items such as wrappers, packets (plastic)
- Cigarette butts and remains
- Drinking related items such as cups, caps, lids (plastic)
- Plastic bags
- Paper and cardboard items
- Bottles and containers (plastic)
- Single-use cutlery and straws
- String and ropes (plastic)
- Glass and ceramic fragments
- Foil wrappers and pieces of metal
- Industrial packaging
- String and ropes (plastic)
- Processed wood

Possible types of litter below sand:

- Micro-plastics
- Cigarette butts



Microplastics

The ACFOR scale can be used to collect data on the abundance of each litter item:

- Abundant
- Common
- Frequent
- Occasional
- Rare
- None

Bio-degradable and Non-biodegradable waste:

Biodegradable material includes food waste like vegetable and fruit peels, dead plants and animals, egg shells, garden waste, paper materials, etc. Non-biodegradable things include plastics, polystyrene, various metals and specifically aluminium cans, toxic chemicals, paints, tyres, etc.

Use of different waste bags for appropriate waste disposal

Any litter which is too soiled needs to go in the black bag (general stream).

Type of Waste Bag	Components
Black	General waste
Grey/Green	Any recyclable plastic/paper/cardboard
White – Organic	Food remains
Reusable container	Any glass