Group 6

Monitoring Fishing Gear Waste: A Study of Beaches in South Africa and Norway

Second International Conference of the African Marine Waste Network in Port Elizabeth

1

Group members

- Samuel Pillay, SST/GreenCape (group lead)
- Sipesihle Booi, Nelson Mandela University
- Di Wu, NTNU
- Sidra Tul Muntaha, NTNU
- Patricia Wenigwieser, Johannes Kepler Universität Linz/NTNU
- Gregor Amani, NTNU/TOMRA Collection

2

The purpose of our work

- To investigate if fishing gear waste is being lost to the marine environment by sampling on South African and Norwegian beaches
- Connect young researchers from South Africa and Norway

3

Abandoned, Lost, or otherwise Discarded Fishing Gear

Abandoned, lost, or otherwise discarded fishing gear refers to fishing gear such as nets, lines, ropes, traps, etcetera that end up in the marine environment

Fishing gear can end up in the marine environment due to harsh weather conditions leading to:

Gear being lost at sea,

Snagging with the seafloor forcing fishers to discard their gear,

Negligent fishing practices leading to gear being dumped or discarded intentionally,

Entanglement with other marine life resulting in gear being discarded or lost and also gear entanglement with other vessels

4

Impacts of ALDFG

Entanglements

Source: Bergmann et al., 2017.

Ingestion

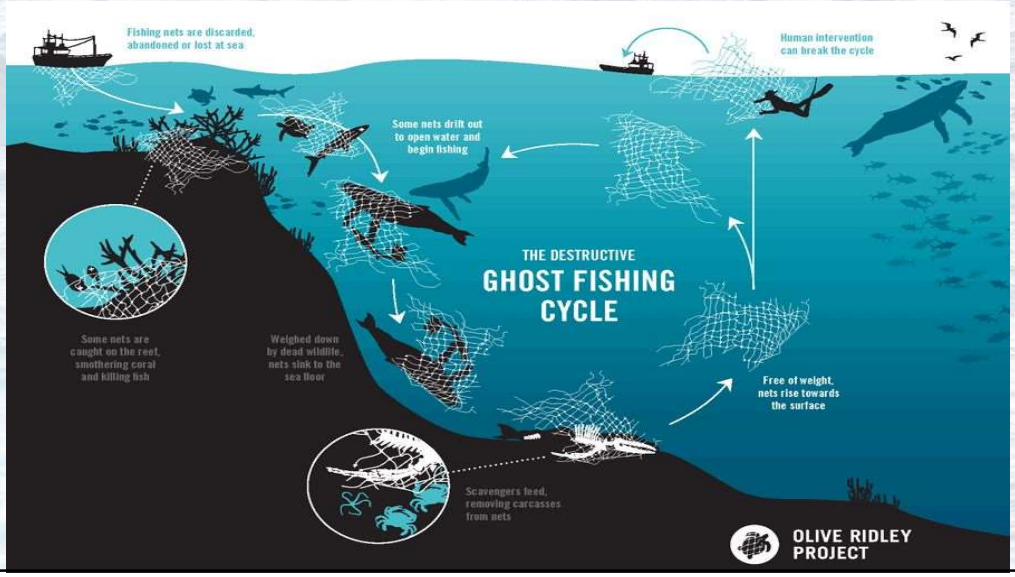
Source: Grade et al., 2019.

Rafting of microorganisms and pollutants

Source: Williams, 2021.

5

Ghost Fishing Cycle

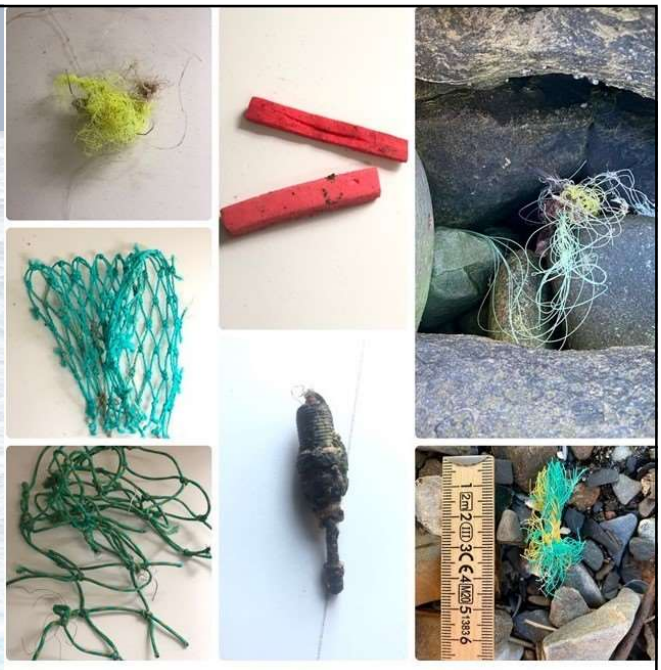


Ghost Fishing Cycle (Source: Olive Ridley Project)

6

Methods

- Time frame: november & december 2021
- On a weekly basis
- Document sampling site and fishing gear and remove fishing gear waste
- Document type, size, mass, abundancy, appearance and entanglement in a ghost gear data sheet provided by SST



SST AFRICAN WASTE ACADEMY NORWAY IN SOUTH AFRICA NTNU Knowledge for a better world Norwegian Retailers Environment Fund

7

8

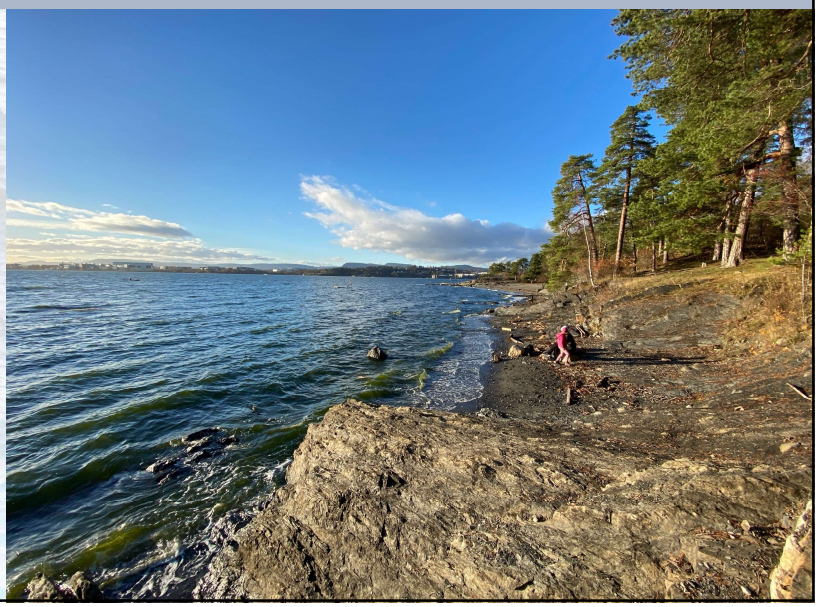
Collection sites in South Africa

- Port Elizabeth, South Africa
- Three sections of Schoenmakerskop beaches (Cannon, Sacramento, Peri winkle lane)
- Rocky shore
- 100 – 200 m stretch

9

Collection sites in Norway

- Oslo, Norway
- Three sections at Bygdøy
- Rocky shore
- 50 – 300 m stretches



10

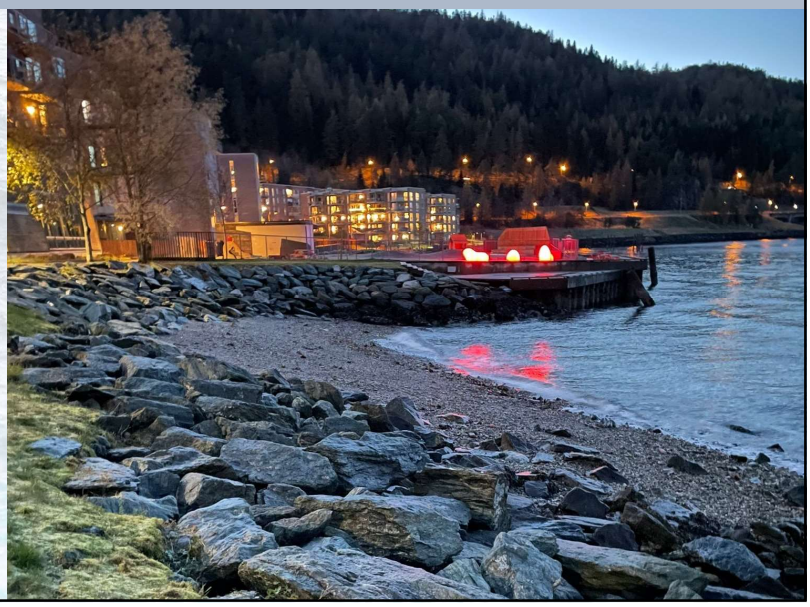
Collection sites in Norway

- Ålesund, Norway
- One beach at Hatlane
- Rocky shore
- 2,000 m stretch

11

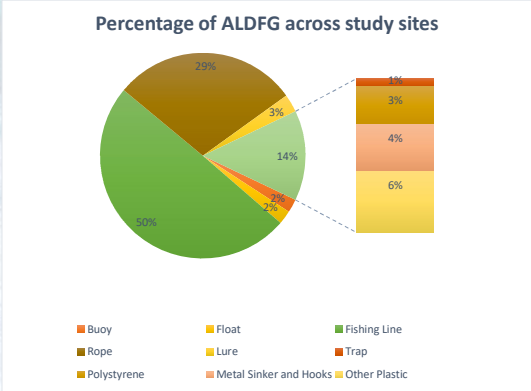
Collection sites in Norway

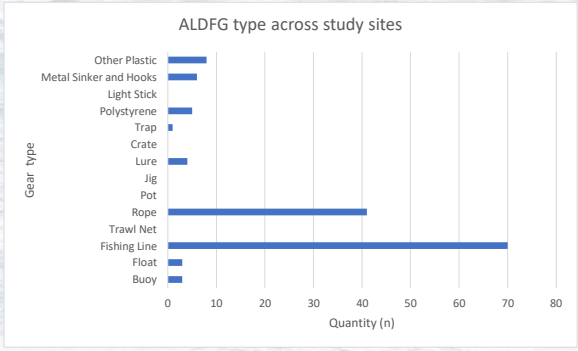
- Trondheim, Norway
- Three sections at Ila
- Rocky shore
- 200 m stretches



12

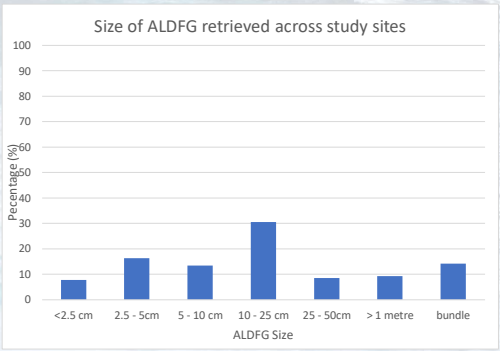
Findings

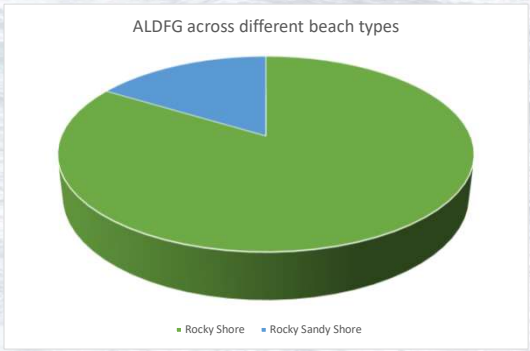




13

Findings





14

Limitations

- Weather conditions in Norway were unpredictable during the sampling period which affected sampling frequency
- Lack of resources (i.e. funding) to monitor sites consistently to produce a comprehensive database
- Workshops were postponed due to lack of funding

15

Conclusion

- Based on the study it is evident that fishing gear waste is lost to the environment both in South Africa and Norway
- With access to funding and increased capacity the project has the ability to determine the true extent of ALDFG in Norway and South Africa
- The project team would also like to increase awareness across stakeholder groups by facilitating ALDFG education and training workshops on environmental conservation and plastic pollution

16

Thank you for your attention!

17