

Litter-Filled Trawls Highlight the Ugly Truth

04 November 2020



It is a shocking statistic that of 235 demersal trawls off the South African coast, 17% contained plastic items of litter including fishing-related items. This is a good enough reason to read the latest [WWF Plastic Facts & Futures](#) report released today.

Most of us are guilty of not paying enough attention to the litter problem. However the reports and images of massive accumulations of floating plastic and other marine litter out at sea is not fake news. Close to home is floating plastic debris off the west coast of South Africa which eventually ends up in the South Atlantic Gyre. Another case in point is the Great Pacific Garbage Patch.

Then there are the plastic-choked beaches, rivers and estuaries that despite regular clean-ups, have to be cleaned up again and again.

And the fact that a recent study found that there were 927 entanglement cases of Cape fur seals in the V&A Waterfront precinct in Cape Town during the period 2000 to 2018.

Of these 85% were caused by plastic box-strapping, fishing line and raffia cord, all related to fishing activities.

State of pollution

The 136-page [WWF Plastic Facts & Futures](#) report really does make you stop and think. One of the 10 key messages it tries to get across is that plastic pollution in the marine environment is a transboundary issue.

Most plastic in the ocean is from land-based sources, transported across national borders via waterways and atmospheric and ocean currents.

Accurately quantify the plastic leakage from both land – and sea-based sources is a challenge. This is largely due to the lack of comprehensive global, regional and national monitoring data.

Land-based sources of microplastics include micro fibers from textile washing, and microbeads in cosmetics and personal-care products (face washes and toothpastes).

Other less-reported or less-quantified land-based sources of microplastics leakage include tyre abrasion, city dust and road-marking abrasion.

With increased use of cars in the major cities, the prediction is that tyre-wear is a major source of microplastic leakage into the environment.

Plastic leakages from sea-based sources include abandoned, lost or otherwise discarded fishing nets. This is also known as ghost gear and is the largest sea-based source of plastic pollution.

Plastic production and biofouling

Plastics such as low- and high-density polyethylene (LDPE and HDPE) and polypropylene (PP), make up about 60% of total plastics production in South Africa.

It floats in water, although denser plastics, such as PET and PVC, sink, either suspended in the water column or settling on the seafloor. However, a PET bottle filled with air and closed with a bottle cap will also float.

This is a common sight in rivers.

Micro-organism growth on plastic surfaces, known as biofouling, may also cause floating plastics to sink over time.

Such was the example of a 3-month-old LDPE bag found with pelagic goose barnacles present on its surface.

Beach clean-ups

Although shorelines have the highest concentration of visible plastic in the ocean, shoreline plastics account for only about 5% of the total mass of plastic in the ocean.

Lorren De Kock is Project Manager: Circular Plastics Economy with WWF South Africa, and co-author of the new report. She raises awareness of the recent phenomenon of nurdles washing up on Cape beaches.

Lentil-sized plastic pellets or nurdles are a source of primary micro- or mesoblastic that are leaked into the environment if mismanaged.

This usually happens during processing and transport, as was the case in Durban when the ship transporting the cargo lost its load.

The problem is marine animals and seabirds mistake the nurdles for food because they look like tiny eggs.

Land-based sources

Did you know too that the number of litter items washing up on Cape Town's beaches increased by 300% from 1994 to 2012? Over the same period, the City of Cape Town's human population grew by 50%. Given that most litter comes from local, land-based sources, it means Capetonians are now producing more litter per person than 20 years ago.

Excessive non-recyclable and problem (single-use) packaging consumption is driving most of this trend.

Beach litter studies show that macro- and mesoblastic litter on South Africa's beaches is mainly concentrated around the four main centres. These are Cape Town, Port Elizabeth, East London and Durban.

There is also a surprising amount of plastic found along the coastline where there are small towns and villages. Some beaches (namely, Woody Cape near Alexandria and Olifantsbos near Cape Point) with peak litter loads also have a large proportion of legacy litter and do not reflect current litter inputs. The data revealed that most of the plastic litter was from local, land-based sources.

“While beach clean-ups are well-intentioned, they do not tackle the source of the problem.

“A situation like this should be similar to an oil spill where there are penalties and polluting companies are held to account,” says De Kock.

Impact on recycling industry

De Kock says: “With the price of virgin plastic at an all-time low, due to the falling oil price, and massive investment into virgin polymer production, virgin plastic is the cheapest material to procure.

“This is impacting on the recycling industry which has resulted in a lack of demand for recycled plastic materials.

“The reality is that plastic pollution is a complex societal issue requiring interventions at each stage of the lifecycle. These include the critical need for a reduction in production and consumption, substitution with alternative materials and delivery models such as reuse and refill, more investment and support for recycling and appropriate disposal at end of life.”

The Way Forward

De Kock believes it is becoming increasingly clear that it is not just consumers and individuals that need to pay attention to plastic problem.

The point is made that no single organisation can solve the plastic pollution challenge by itself.

What is needed is an inclusive, collaborative process with multiple stakeholders across the plastics value chain.

A strong focus must be on prevention rather than mitigating impacts once they have already occurred.

“Addressing the plastic pollution crisis must not be done at the expense of other increasing environmental problems.

“If done right, it will result in net positive environmental outcomes for our planet across a range of environmental and social stressors,” she concludes.

