



Discovering the  
**PLASTIC WASTE**  
oceans

- The ever increasing demand for water has dramatic consequences in terms of waste. Producing, treating, cleaning water all create waste. At the same time, companies, humans and animals are competing to access clean water. They are also a huge source of waste.
- Yet, once collected and recycled, waste can be transformed into resources -including energy - that can serve to produce and to clean... water.
- Water & Waste management is undoubtedly one of the major issue for our civilization. However, this waste management is water consuming and can also be done via a more efficient use of water.

Still waters run deep warns the English idiom: what appears calm and placid on the surface may well hide currents of complexity below. Water surrounds us in our daily lives, and we think we understand it well, but hydrologists are still learning about its movement, distribution and quality, and its fragility.

- For humans, it's a core asset to their survival and their daily activities.
- For companies, it's an essential commodity for their operations but the resource is becoming increasingly scarce, partly because of expanding corporate activity.

The industrial sectors are particularly large consumers (and potential polluters) of water.

Utilities are the most obvious companies reliant on water - getting it to households and taking the waste away, but it is also used for cleaning and extracting other resources in mining, provides a mode of transport for the shipping industry, and is used in waste management in the chemical sector.






These uses lead to very different water management issues.

## Chemicals: Diving deeper

The lazy view of chemicals manufacturers is that they are a disaster for the environment, but the truth is not so black-and-white. Indeed, the industry counts some of the most ESG-aware companies among its ranks.

Take plastics, the chemicals producers' biggest business. Plastics have a multitude of vital uses including packaging that keeps food fresh. Banning plastics would lead to mountains more of food waste. But plastics, especially single-use ones, are polluting the oceans.

### Illustration 1. Plastic fantastic - benefits of plastics

Criteria	Energy	Chemicals	Production	Malleability	Weight
					
Plastic	It takes 82% more energy to produce plastic alternatives	Metals may oxidise or rust while plastics are prone to less decay ensuring them longer integrity	Faster production cycle times means lower unit cost	Highly flexible compared to rigid alternatives	On average, alternatives such as glass to plastics are 3.5x heavier

Source : Berry Global, Ocean Conservancy, August 2018.

Sources : Fidelity International, February 1<sup>st</sup>. 2019.. #ESG ; #Water ; #Waste

### Important Information

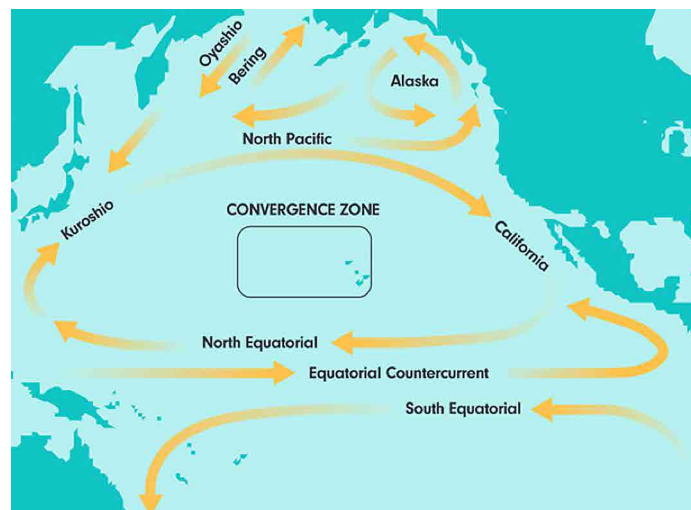
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These single-use plastics are not recycled and can take 500-1000 years to degrade. PET (polyethylene terephthalate) bottles comprise 15 % of total marine waste - the third most common item found in ocean debris. Ocean waste also has a nasty habit of congregating in zones which are populated by sea life because the same currents act on both groups.

### Illustration 2. The Pacific Garbage Patch - ocean waste converges with sea life



Source : NOAA Marine Debris Program, August 2018

The solution is more recycling but this is not as easy as it is for paper or glass. Plastic items can be complex, containing multiple layers of polymers that are extremely difficult to separate before being ready for the recycling process. In many countries the infrastructure required to recycle simply isn't widely available, so only 14 % of the world's plastic packaging is recycled.

Water & Waste management is an urgent issue that is applicable to all industries. This creates opportunities for investors willing to integrate ESG prism into their stock analysis. It also means having a strong commitment to support companies in their endeavours to better manage natural resources and to implement their sustainable policies.

