All at sea cleaning up the pacific garbage

Article: C. Evans-Pughe, "All at sea cleaning up the pacific garbage," in Engineering & Technology, vol. 12, no. 1, pp. 52-55, February 2017, doi: 10.1049/et.2017.0105.

The Great Pacific Garbage is marine debris collection in North Pacific Ocean. It is also known as the Pacific trash vortex ranging between California and Hawaii encompasses about 140,000 tonnes of floating plastic suspended into the seas. Therefore, Boyan Slat came across with the idea of The Ocean Cleanup (TOC) and obtained crowdfunding in order to resolve this issue. The utmost mission of this engineering project is to eliminate half of the plastic by implementing the floating barriers with 100km array anchored to the seabed. The gyres which rotate around the area in clockwise are used to pull plastic trash into the ocean patches. The trash would pick up onto boats for recycling. Nevertheless, the project involved many experts that drawn lots of ideology and seems as distraction during the planning phase. The first prototypes launched on June 2016 which set 100m barrier with tracking motion sensors and loads placed on it. The prototype is crucial to detect its performance especially in worst-case scenario. The researchers also anticipated its functionality with minimum maintenance. After two months, they noticed the air chamber of prototype being out of shape with barrier connect to permanent mooring system by shackles is faulty. The engineering team ought to redesign the system to achieve long-lasting durability. Concurrently, Dr Erik van Sebile and Peter Sherman stated the doubt by implied the coastal collection of microplastics might be more efficient compared to gyre-dependent system. In conclusion, TOC project aid to create awareness on the importance of beach cleanliness.