



Beach litter on the remote and uninhabited Danger Island on the Great Chagos Bank

Chagos awash in beach debris

Chagos is virtually contaminant free, in terms of petroleum hydrocarbons, toxic metals and organochlorine compounds, such as polychlorinated biphenyls (PCBs— persistent organic pollutants which bioaccumulate in animals) and insecticides. That was the conclusion from scientists who sampled sediments and animal tissues during the international research effort in Chagos in 1996¹. After finding negligible traces of 'booster biocide' residues from ship antifouling paints in 2006, they reached the same conclusion².

When it comes to rubbish and litter on the shore however, Chagos has more than its fair share, substantial amounts of which have accumulated over the years. Rapid environmental assessments, undertaken on 21 islands in 1996 and 2006, revealed rubbish at every site. Scores were given for the amount of solid waste and other environmental impacts/pollution (as well as for the abundance of ecosystems and major species groups.) A simple logarithmic 0–6 scale was used, as follows:

0=zero, 1=1–9, 2=10–99, 3=100–999, 4=1,000–9,999, 5=10,000–99,999, 6=100,000+

In the case of beach litter, values represent the number of items of litter observed within an area of 500m along the beach x 250m up the beach towards the centre of the island (ie 125,000m²). Both years, the average (median) score for solid waste was 4 (1,000–9,999 items). On Middle Brother, a score of 5 (10,000–99,999 items) was recorded in 2006. Items included fishing nets, metal and plastic containers, knives, flip-flops, drinks bottles, polystyrene, and hessian bags. Besides an unattractive appearance, litter can be highly damaging to turtles, seabirds and other marine life when it is mistakenly eaten or the animal becomes trapped in it. Small fragments of plastic also adsorb contaminants such as PCBs, increasing their toxicity to anything that mistakenly consumes them. Beach litter levels are also higher than those recorded in most other parts of the world where similar surveys have been carried out.

The occurrence of beach litter at every site indicates that not even remote oceanic islands are devoid of the effects of human activities. The litter almost certainly originates from elsewhere since, with the exception of Diego Garcia, the Chagos Archipelago is not inhabited.

¹ Everaarts JM, Nieuwenhuzie J, Maas YEM, Booj K, Fisher CV. 1998. Assessment of the environmental health of the Chagos Archipelago (Indian Ocean). Linn. Soc. Occas. Pap. 2, 305–326.

² Guitart, C. Sheppard, A. Frickers, T., Price, A.R.G. Readman, J.W. 2007. Negligible risks to corals from antifouling booster biocides and triazine herbicides in coastal waters of the Chagos Archipelago. Mar. Pollut. Bull. 54, 226-232.

³ Price, A.R.G. 1999. Broad-scale coastal environmental assessment of the Chagos Archipelago. Linn. Soc. Occas. Pap. 2, 285-296.

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