

Extracting Solid Waste from Elephant Dung Inside Protected Area's Odisha, India

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Opinion Article

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DESCRIPTION

Aesthetic value of nature is one of the supreme attractions for peoples around the globe which increasing the nature tourism. Nature is although a communicative process which fills the gap between peoples and nature but in some way due to unmanaged waste management and irresponsible behavior of tourists cause threat to wild animals. Majorly, plastic litters are largely produced by tourism activities inside the protected area due to inexpensive, durable and easily available. According to chemical structure of plastics are forming stable double bond and as the result of cross-linking, bond strength is so strong that only UV rays can break this bond which makes it unbreakable by digestion process and resistance to natural degradation. Consumption of plastic wastes are deadly for wild animals due to its indigestibility and blockage in their digestive system. Frequent deaths of marine animals and terrestrial animals is a matter of consideration. Odisha is an Indian state located on the eastern coast of India. Around 37.34% of total area covered by wildlife sanctuary comprising of 191.06 sq. km. areas ^[1] are highly diverse as well as sensitive of anthropogenic activity perceptible.

During a field survey to both the protected areas in April 2019 I have seen plastic wastes and other human borne solid wastes in several elephant dung piles. By the extraction method and direct sight method plastic contained piles were identified collected for further examine. Plastics and other solid wastes were extracted by hands and forceps and collected in bag for identification. Wastes were later on cleaned with normal tap water and identified by name printed over them and by direct observation (Figure 1).

Figure 1. Elephant dung piles (1-4), Plastic extraction from elephant dungs (5-9), Open plastic dispose (16-17), sacred cloth (18).



From the survey around these sites we have recorded 31 elephant dung piles containing human borne solid wastes. Out of 31, 17 dungs piles were recorded from Devkund (21° 42' 21.694"N, 86° 26' 47.169"E), 4 dung piles each in Baniabasa (21° 45' 14.558"N, 86° 28' 58.962"E) and Sitakund (21° 55' 36.894"N, 86° 26' 34.721"E) and these three places are the buffer zone of simlipal biosphere reserve whereas 6 dung piles collected. These places are situated very lose to human habitations and human activities are frequent and Anthropogenic pressure is high. From Gadachandi (21° 13' 39.565"N, 86° 15' 20.411"E) which is a forest compartment of Hadgarh wildlife sanctuary. These four places are tourist sites for picnic and religious purpose. Temples are situated in Devkund, Sitakund and Gadachandi and all four places are used for feast and picnic purposes (Figure 2) ^[2,3].

Figure 2. Plastic extraction from elephant dungs (10-15) , Open plastic dispose (16-17) , sacred cloth (18).



From dungs piles of Gadachandi, we extracted plastic carry bags, chocolate wrappers, Plastic glasses and plastic plates. Same materials found in other sites with some more items like ice-cream wrappers, tobacco wrappers, biscuit wrappers baby sanitary napkin, parts of dresses, sacred clothes , plastic bottle cap, water pouch and a glass piece. Length of baby sanitary napkin was around 60cm was the biggest item extracted. A small piece of glass indicated towards the broken alcohol bottles found in dustbins and open areas.

We have noticed unawareness and irresponsibility of tourists is a major cause of these incidents. People should aware of the consequences of their plastic and other wastes and should use dustbins. Use of single use plastic should totally prohibited inside Protected areas. Consumption of tobacco and alcohol should strictly prohibit. Open wastes dispose should prohibit and punishable to avoid these cases. Sacred trees should be boundaries to avoid and dustbins should cover. Underground dispose for biodegradable wastes should be carry out with certain intervals, as well as burning of non-degradable items is important. Limited entrance per day is another way to avoid major disturbances. These are some ways to manage these situations without harming people's sentiments to create a eco-friendly tourist places inside protected areas ^[4].

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