

Marine litter, a constant concern for Mare Nostrum NGO since 1999

Marine litter is one of Mare Nostrum NGO`s biggest concern since 1999, when our team organized the first beach clean-up activity, in order to make people aware of the gravity of the situation. Back then, there was little information about the matter and people of Constanta didn`t know how to prevent or stop marine pollution and/or marine litter. We were the first Romanian NGO that brought the subject in the public agenda and kept on fighting against the matter, through sustained awareness campaigns for tourists regarding the selective collection of waste on Romanian beaches.

Throughout the years, Mare Nostrum NGO implemented projects such as COASTWATCH (1997-2017), LITORAL CURAT (2005-2012), EcoROM Vadu (2012-2013), ECOWATCH, BEACH MONITORING and several other privately financed projects in order to bring awareness on the matter and to have a real scientific approach on the situation.



Even more, every single public event that we organized in the last 10 years is focused on educating the population in order to prevent the occurrence of marine litter in the coastal area. In order to increase the public awareness on the matter, we focused on informal activities as well:



- an exhibition consisting of interactive panels
- various activities, competitions and events designed to teach students how to be responsibly towards the environment
- an European MARLISCO contest
- Marineopoly game
- underwater clean-up campaigns

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Our sustained efforts in this direction helped us build an impressive database that clearly reflects the situation and the spread of marine litter on the Romanian seashore. To achieve this, in the last 10 years, every year, we've organized two sessions of beach monitoring activities. To be more specific, one of the beach monitoring sessions is held at the beginning of the tourist season (in April - May) and the second one at the end of the tourist season (September - October), each session covering 1.5% of the Romanian beach portions.



In order to have accurate numbers regarding the waste quantities and the marine litter spread, we apply the European methodology included in “The Guidance on Monitoring of Marine Litter in European Seas”, a guidance document within the Common Implementation Strategy for Marine Strategy Framework Directive, covering Romania’s obligation to monitor Descriptor 10 - Marine Litter for beaches, implemented in 2014: 8 sectors are surveyed, that is almost 41 547 m² of the total surface of the beach on the Romanian seaside.

Each and single waste item identified on these beach portions is introduced in the monitoring chart or file under a unique identification number. Afterwards, all of the waste identified on the beach portions is collected and eliminated accordingly with the help of our volunteers.

During these years of monitoring we've noticed several crucial aspects:

- Waste/ Marine litter density oscillates between 0,5 and 1 items per m²
- The numbers regarding the waste identified is higher after the tourist season than before the tourist season
- One of the most common types of waste identified are cigarettes butts
- Artificial polymeric materials are on the first place regarding marine litter spread in all of our beach monitoring sessions

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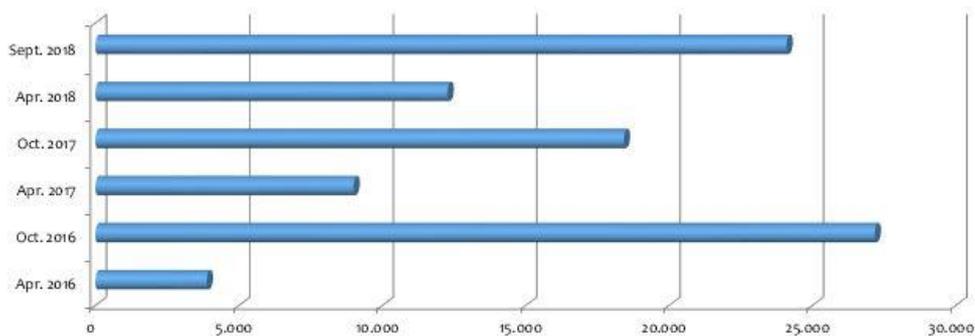
Monitoring of litter on the coastline quantify and characterize litter pollution and provide comparable datasets to support national and regional assessments of marine litter. Consequently it provides the basis for the development of management, control and enforcement measures and allows the effectiveness of mitigation strategies to be measured. It should also help us to understand the level of threat posed by marine litter to ecosystems.



Over 100 000 waste items eliminated from the Romanian beach portions by Mare Nostrum NGO

During our 2014 - 2018 beach monitoring sessions, Mare Nostrum NGO identified and eliminated over 100 000 waste from the monitored beach portions. The dirtiest year was 2018 (April and October) with 36 379 items identified and eliminated, being followed at a considerable distance by 2016 (27 432 items).

**Monitoring of marine litter in Romania
2016-2018**



The dirtiest sector is Constanta, with 21 323 items, followed by Năvodari (17 284) and Saturn (14 397). At the opposite pole, we have the sampling units from Corbu (3 566) and Costinești (4 038), but the last sector lost most of its surface due to the sand erosion.

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One of the dirtiest beach sectors was identified as Constanta (the county capital city) - with a total of 22 612 elements identified in these 4 years. Annually, during the tourist season, over 1 000 000 tourists benefit from Constanta's beach portions, the number being closely related to the waste elements identified here. On the second place is Navodari, the second touristic beach attraction in the area and on third place is Saturn, another representative beach portion from the Romanian seashore.

The evolution of the marine litter at the Romanian seashore is another interesting fact, as you can see below:

APRIL 2014 - 3 852

APRIL 2015 - 2 019 elements

APRIL 2016 - 3 885 elements

OCTOBER 2016 - 27 175 elements

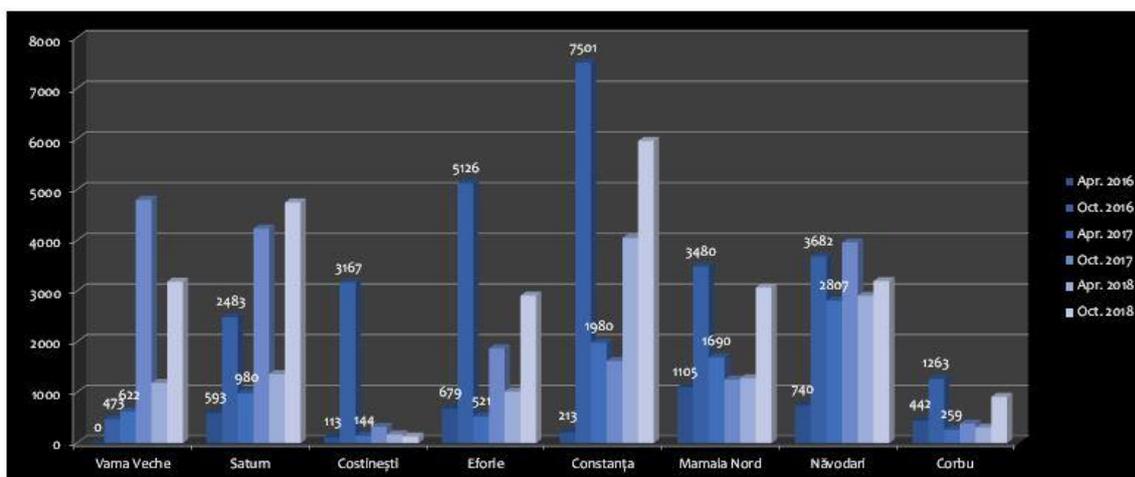
APRIL 2017 - 9 003

OCTOBER 2017 - 18 429 elements

APRIL 2018 - 12 278 elements

SEPTEMBER 2018 - 24 101 elements

Marine litter distribution on sectors



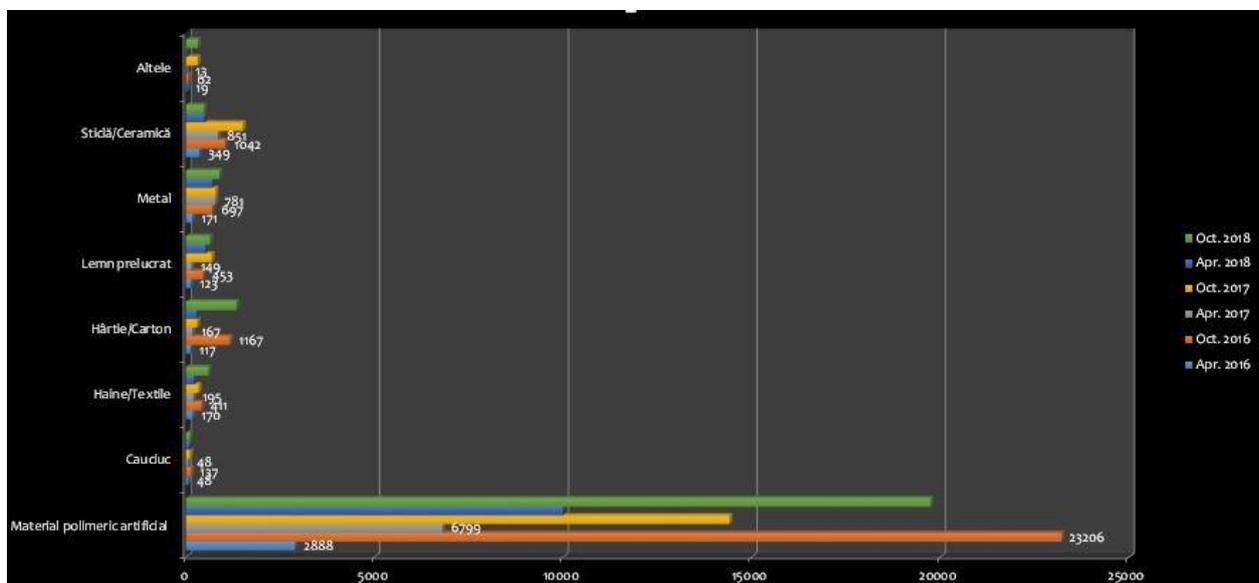
So far, we believe that the sudden increase of waste elements during the October 2016 session and October 2017 session is strictly related to the economic development of the seashore area and the lack of sustainable management of the local authorities, together with the lack of interest and education regarding the Romanian tourists.

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What types of marine litter are common for the Romanian Seashore?

Applied to our last beach monitoring sessions, we noticed that most of the waste elements identified are:

- Artificial Polymer materials (over 21 kg eliminated in September 2018) - 80%
- Glass - (11 kg eliminated in September 2018) - 6%
- Metal - 4%
- Processed Wood elements (18 kg eliminated in September 2018) - 3%
- Paper - 3%
- Textile - 2%
- Other - 1% (consisting of syringes, diapers, pads)



The most common litter registered was the cigarette butt, reaching a total of 44 992 items. Constanța is the sector that ranks first at this category, with 17 256 cigarette butts, followed by Saturn (6.281) and Vama Veche (5.900). Most of the recordings took place in October 2016, with 16 122 records. Each cigarette contains more than 900 chemicals, including nicotine, cyanide, ammonia, cadmium, acetone and arsenic. Cigarette butts contain the toxic residue of these. Studies have shown that even one cigarette butt put in a litter of water with fish killed about half of the exposed fish.

Besides cigarette butts, among the common items were plastic packs, straws and sticks for mixing, lids, but also bags, plastic bottles, food containers, ear stick, foam/sponge, etc. Then, were recorded some uncommon elements, but that carries various pathogens: syringes, fresheners for toilets, plums, diapers, medication blisters, condoms and their packing, shaving devices.

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Litter such as paper glasses, food packing, lamps, tax vouchers, paper napkins, faience, bricks, different processed wood, cans, etc. were recorded during monitoring. The removed items were weighted and we reach a total of 1 146 kg of marine litter and the Mamaia Nord occupies first place at this category.

The conclusion?

Mare Nostrum NGO will continue to provide essential data on the marine debris registered at the Romanian seashore, this being one of the main activities in our strategic planning. We are glad that the results from our beach monitoring sessions got the local and national media attention, which support us constantly in enhancing our messages to the public and



authorities. Even more, they have their own marine litter awareness campaigns going viral in offline and online channels.

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