

## Sea Surface Marine Litter Cleaning Operation (Turkey)

The purpose of this operation is to reduce floating (sea surface) marine litter. Sea Surface Marine Litter Cleaning Operation is carried out in Turkey by three metropolitan municipalities, namely İstanbul, Kocaeli, and İzmir, and the district municipality of Beşiktaş. The work operated by İstanbul Metropolitan Municipality has been active for 7 years with 12 garbage collection boats. İzmir Metropolitan Municipality has been operating for 12 years with one garbage collection boat. Kocaeli Metropolitan Municipality has been operating this activity for 5 years with 3 garbage collection boats and Beşiktaş District Municipality for 13 years with one garbage collection boat.

Garbage collection boats gather all sorts of marine litter (plastic bags, balloons, buoys, rope, medical waste, glass and plastic bottles, cigarette lighters, beverage cans, polystyrene, fishing line and nets) almost every day in coordination with their shore team. İstanbul Metropolitan Municipality and Beşiktaş Municipality send collected marine litter to waste repositories to be sent to recycling plants later. It has been observed that the amount of marine litter on the sea surface has been reduced as a result of these operations.

### Facts

Place / Location	Turkey
Commencement Date	Sea Surface Marine Litter Cleaning Operation was launched in 1999 by the Municipality of Beşiktaş.
Duration	Ongoing
Theme	Mitigation
Type of Initiative	Practice/ Activity/ Action
Initiated by	

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	<p>Beşiktaş Municipality</p> <p>İstanbul Metropolitan Municipality</p> <p>İzmir Metropolitan Municipality</p> <p>Kocaeli Metropolitan Municipality</p>
Involved Stakeholders	Workers of the above municipalities.
Funding/Financial Support	Yes, by the municipalities.
Success Rate	<p>Successful.</p> <p>Particularly Sea Surface Marine Litter Cleaning Operation by Beşiktaş Municipality has been very successful.</p>
Case Study prepared by	<p>Nejat Büyükkörsal (Department of Environmental Protection and Control in Beşiktaş Municipality)</p> <p><a href="http://www.besiktas.bel.tr">http://www.besiktas.bel.tr</a></p> <p>Orhan Sevimoğlu (Director of Marine Services in İstanbul Metropolitan Municipality)</p> <p><a href="http://www.ibb.gov.tr">http://www.ibb.gov.tr</a></p> <p>Meriç Deniz (Department of Environmental Protection and Control in Kocaeli Metropolitan Municipality)</p> <p><a href="http://www.kocaeli.bel.tr">http://www.kocaeli.bel.tr</a></p>

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### **Available documentation and further information**

Beşiktaş Municipality <http://www.besiktas.bel.tr/Default.aspx>

İstanbul Metropolitan Municipality

<http://www.ibb.gov.tr/tr-TR/Kurumsal/Birimler/DenizHizmetleriMd/Pages/AnaSayfa.aspx>

İzmir Metropolitan Municipality

<http://www.izmir.bel.tr/StandartPages.asp?menuID=1938&MenuName=>

Kocaeli Metropolitan Municipality

<http://www.kocaeli.bel.tr/Content.aspx?ContentID=9833&CategoryID=1100>

### **What is at Stake?**

Tonnes of solid waste reach the Turkish seas in direct or indirect ways. In industrialized and more populated cities like İzmir, Kocaeli and İstanbul, the intensity of solid waste increases to reach the level of high environmental risks. All kinds of solid waste are collected by sea-surface cleaning operation. The liquid waste that is caused by maritime accidents and other reasons is treated with barriers located on sweepers and oil skimmers.

### **What is the Scale of the Problem?**

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The marine litter problem is at serious levels in the areas where these operations are conducted. Thousands of tonnes of solid waste such as packages, plastic bags, lids, plastic bottles, wood and leaves reach the seas via streams or wind. Some of this solid waste accumulates in gulfs, and some of it reaches other seas via currents. This waste can be fatal to organisms inhabiting the seas and negatively affects human health. This waste is an eyesore and can harm tourism. Solid waste can also get caught in ship propellers and fishing gear causing damage.

### **Project/ Activity Results:**

Solid waste was collected from sea surface in the near-shore water. The results of the operation are:

- Operation of İstanbul Metropolitan Municipality: They removed a total of 29.300 m<sup>3</sup> solid waste between 2005-2012.
- Operation of İzmir Metropolitan Municipality: They removed 5122 tonnes of solid waste between 2006-2012.
- Operation of Kocaeli Metropolitan Municipality: 329 tonnes of solid waste was removed between 2007-2012.
- Operation of Beşiktaş Municipality: 1177 tonnes solid waste was removed between 2008-2012.

### **Success and Fail Factors and Lessons Learned:**

The most obvious success is that the operation contributes to the removal of thousands of tonnes of solid waste in such a short time. It is due to the technical capacity of boats they use as well as to dedicated workers for this particular task.

Negative factors of the operations are: the sweepers cannot collect solid matter smaller than 0.5 cm, and when the weather is harsh and when the marinas are crowded with boats the operation cannot be efficiently run.

### **Additional Information on Finances:**

Each municipality funds its operation.

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### **Assessment of Project/ Activity Sustainability:**

The sea-surface cleaning operation is funded by the municipalities that are implementing this practice and this ensures the longevity of the project. The practice, which removes thousands of tonnes of litter from the marine environment every year, also provides employment for the operators of the boat. The above factors ensure the economic, social and environmental sustainability of the project.

### **How Transferable is the Project/ Activity to other European Countries/Seas?**

This operation can be conducted in European countries by municipalities that are located on the coast.



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