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 ?stanbul, Kocaeli, and ?zmir, and the district municipality of Be?ikta?.The work operated by ?stanbul Metropolitan Municipality has been active for 7 years with 12 garbage collection boats. ?zmir 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 Be?ikta? 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. ?stanbul Metropolitan Municipality and Be?ikta? 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 Be?ikta?.
Duration	Ongoing
Theme	Mitigation
Type of Initiative	Practice/ Activity/ Action
Initiated by	

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	Be?ikta? Municipality ?stanbul Metropolitan Municipality ?zmir Metropolitan Municipality Kocaeli Metropolitan Municipality
Involved Stakeholders	Workers of the above municipalities.
Funding/Financial Support	Yes, by the municipalities.
Success Rate	Successful. Particularly Sea Surface Marine Litter Cleaning Operation by Be?ikta? Municipality has been very successful.
Case Study prepared by	Nejat Büyükköksal (Department of Environmental Protection and Control in Be?ikta? Municipality) http://www.besiktas.bel.tr Orhan Sevimo?lu (Director of Marine Services in ?stanbul Metropolitan Municipality) http://www.ibb.gov.tr Meriç Deniz (Department of Environmental Protection and Control in Kocaeli Metropolitan Municipality) http://www.kocaeli.bel.tr

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Submitted by	TUDAV Ayaka Amaha Ozturk, Songül YAVUZ

Available documentation and further information

Be?ikta? Municipality http://www.besiktas.bel.tr/Default.aspx

?stanbul Metropolitan Municipality

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

?zmir 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 ?zmir, Kocaeli and ?stanbul, 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^3 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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