

Marine pollution and environmental awareness: An efficient way to approach high school students towards marine sciences

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All the seas are filling up with micro/macro plastic, with degradation rates up to 1000 years. Often they accumulate in specific areas (the famous “Pacific plastic island”) and Mediterranean sea is not an exception (Suaria&Aliani, 2014).

On one hand, damages suffered by animals after contact with macro/micro plastic objects has led to an increase of studies especially on the effects of these pollutants in the food chain (Galgani et al. 2014). On the other hand we still lack knowledge concerning marine litter fluxes in our seas (coming from harbors, river mouths, illegal landfills and sewers) and accumulation on European beaches (Andrady, 2011).

ISMAR Institute has undertaken, since 2013, the SEACleaner project, with the goal to gather as much data as possible on the presence, type and amount of marine litter in the coastal area around the “Pelagos Sanctuary “ (Notarbartolo di Sciara et al., 2008) a special area that encompasses over 87.500 km² of the north-western Mediterranean Sea, between south-eastern France, Monaco, north-western Italy and northern Sardinia, surrounding Corsica and the Tuscan Archipelago.

SEACleaner project involves 4 marine protected areas/marine parks of Liguria and Tuscany, 4 research institutes (such as ISMAR, DLTM, ENEA-UTMAR and DLTM) and one University (University of Pisa). The project has been conducted by involving high schools of the neighbouring areas of La Spezia and Parma through work-related internships (regulated by Legislative Decree n.77 of 15.04.2005 and Law n. 107 of 13.07.2015). Students recollect a large amount of data (citizenscience). This approach has proven to be valid also from an educational point of view (Merlino et al. 2015), since it brings students close to social and environmental issues, while improving knowledge of scientific methodology. Students (at now 450 in three years) participate also to data analysis and give their contribution in different tasks, depending on their school curricula (graphical design, computer science, biotechnology etc.).

The project has had an European Union grant for shoot a documentary (translated in French and subtitled in English), screened at the “tenth anniversary of the researcher night” (September 2015) and selected for several environment film festival, as the Torino Environmental Festival, the LEGAMBIENTE-COLOROFILLA Festival and the International LIFE AFTER OIL Festival [MARINE RUBBISH. A challenge to share. 2015. English subtitled version is now available on ISMAR Youtube channel and on LIFE AFTER OIL International Film festival website].

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