VareseNews

Legambiente: “Plastic is threatening the water of Lake Maggiore”

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Plastic is threatening the waters of our lakes. This is what has been revealed by the results of samples taken in the month of July, by the crew of the “**Goletta dei laghi**” (Schooner on the lakes, the travelling campaign by environmental organisation **Legambiente**, organised in collaboration with COOU, the mandatory consortium of used oils, and Novamont, which, for 11 years, has denounced the main problems threatening Italian lakes.

The “Schooner on the lakes” campaign on river waters.
For the first time in Italy, in Sebino, Lario, Verbano and Benaco, besides monitoring the presence of pollution from bacteria of faecal origin, a **sampling** was also done **of micro-plastics**. The samples taken by the schooner crew in the main lakes in northern Italy underwent laboratory tests, which revealed the presence of plastic micro-particles in all of them.

The lakes in which the highest levels of particles were found were **Lake Iseo and Lake Maggiore**, with average density values of 40,396 and 39,368 particles per square kilometre of sampled area, followed by Lake Garda, with 25,259 particles per square kilometre. The section of lake with the highest densely of micro-litter was the portion of the Verbano area, from Arona to Angera, an area where currents come together before flowing towards the exit. The results of the study carried out in Lario are still not in, but invalidating factors made it impossible to use the samples collected in the summer of 2016 in the laboratory.

SAMPLING ON LAKE MAGGIORE

The sampling on Lake Maggiore focused on the southern part of the lake. The average density of micro-particles present is equal to more than 39,000 per square kilometre. The highest density of particles per square kilometre was found in the mouth of the River Vevera, near Arona and Dormelletto, with their high population density, which, as identified by the schooner monitoring, have purification problems.

“It’s with great satisfaction that we are presenting the results of this work, which, for the first time, has added to the microbiological tests, a study aimed at detecting the presence of this waste, which is very dangerous for the equilibrium of the lake ecosystems,” Barbara Meggetto, the Chairperson of Legambiente Lombardia, explained. “Unfortunately the waterways continue to be constantly in the dock: the River Oglio, which forms Lake Iseo, the Adda in Lario, the rivers Bardello, Acquanegra and Boesio in Verbano, the Bolletta in Ceresio, and finally the Maguzzano in Benaco. Almost always, what weighs heavily is the lack of sewer infrastructure in the municipalities inland, and the inadequacy of the purification plants, because of the excessive anthropic load.”

The whole project was made possible thanks to the scientific collaboration of ENEA (the national agency for new technologies, energy and sustainable economic development) and of the “Ca’ Foscari” University, in Venice, with which Legambiente produced a protocol specifically for lakes, by adapting the model used so far, only in the seas, using a particular instrument that has an ultrafine grid that captures micro-particles. This important innovation made it possible to make a careful analysis of the micro-litter present in the water, and carry out the first study on the state of pollution of the Italian lakes, with respect to these types of substances.

At the same time as the numerical counts, data was also collected on the shape of the particles, which provides indications on the possible nature of the micro-plastics found, which, in most cases, are of secondary origin, as they come from the disintegration of larger waste, like packaging, ropes and synthetic textile fibres. The micro-plastics of primary origin include pellets and spherical micro-particles, which are the raw material used by all of the companies that produce plastic objects.

“The presence of micro-plastics in the lakes is the demonstration that, above all, there is no culture of waste management. All too often, objects are thrown into drains that should be disposed of in the rubbish. Change will happen, above all, by making individuals more aware that their everyday behaviour has global effects. Moreover, in many cases in the harbours on the shores of the lakes, there is a shortage of services that collect and dispose of the waste of pleasure boaters. The data of the Legambiente study should encourage local administrations also to take action to raise the awareness of residents and tourists to encourage them to adopt good practices,” Barbara Meggetto concluded.

di Translated by Arianna Bassetti (Reviewed by Prof. Rolf Cook)