Mines, quarries, demolition of buildings, bulk materials handling systems are all places where dust particles, also known as “the silent killer”, may have harmful consequences for human health. For years, it seemed that nothing could be done. Actually, a solution does exist, as explains Matteo Passoni, Ph.D., CEO of Ecology S.r.l. “It is the Fog Cannon.” he says, “Thanks to our patented technology, we have created a new standard for outdoor dust suppression. Here is how it works. Dust particles usually remain suspended in the air for a long period of time before settling, and that is precisely where the problem lies. The technology we have developed provides a powerful fan that conveys air through a cone with special nozzles. The nozzles produce small droplets of water (i.e. atomised water), which cause the particles agglomerate into lumps and settle. It is critical that the water droplets have the same size as the dust particles, namely between 10 and 90 microns. Very large drops such as those generated by sprinklers or snow cannons, often go through the bank of dust without agglomerating it. Researchers have identified 15 bars as the optimal water pressure to achieve the best dust suppression.” Many enterprises have already chosen Ecology. “We have received orders from many foreign mining companies,” says Matteo Passoni “such as Rio Tinto, BHP Billiton, Enel and Endesa. However, the European internal market lags behind, claiming to move towards environmentally-friendly production, while it persists in buying useless Chinese machines in order to silence the local environmental government agencies, who do not have the ability to prosecute environmental pollution. We at Ecology are not going to stop. We plan to meet the needs of the eco-technology sector by reducing airborne particles in cities such as Milan, Brescia, and Turin, where our systems have already shown an efficiency rate of 97.8%. We are now working on what is expected to become the technology of the future: the mechanical generation of water micelles before nebulisation. This would increase efficiency of airborne particle reduction to 99 %.” Internationalisation is one of the most important parts of Ecology’s business. “In particular, we operate in South America, Australia and South Africa. Meanwhile, we hope that in Europe Governments will decide to prioritise civilian health and take the airborne particle problem seriously. Unfortunately, it appears that they never have the funds to do it and are leaving the problem for future generations to fix.”

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by Elena Ricci