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TRAFFIC MICROPLASTICS - SOLUTIONS TO MITIGATE THE PROBLEM

Natural Resources Institute Finland (Luke)

Preventive methods are cost-effective and have multiple benefits

The most efficient ways to reduce the amount of tyre and road wear particles in the environment are through preventive methods. Factors that affect tyre and road wear are related to proper use of tyres, driving behaviour, and the characteristics of the tyres as well as road surfaces. In addition to decreasing microplastics from tyre wear, these measures can provide additional benefits such as improved air quality in cities, improved safety in traffic, decreased noise pollution, and decreased fuel consumption and GHG emissions.

TRAFFIC MICROPLASTICS

Traffic microplastics, i.e. tyre and road wear particles, have been identified as a major source of microplastics in the environment in Europe. Traffic microplastics particles originate mainly from tyre rubber, but also from road markings and sometimes from polymer modified bitumen, which is used in the asphalt. The pathways for traffic microplastics to end up in aquatic environments are through stormwater and air.

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Factor	Topic	Good practices	How to implement
Proper use of tyres:	tyre pressure	regular checking, varies also depending on the load	guidance for drivers, tyre pressure monitoring in vehicle
	wheel alignment	regular checking once a year, occasionally more often if needed	guidance for drivers, yearly inspection, better maintenance
Driving behavior:	fast acceleration and heavy braking, high cornering speeds	smoothly driving, tyre wear comparable to fuel consumption	guidance for drivers, fuel consumption/tyre wear meter
Tyre characteristics:	summer tyres, non-studded winter tyres, studded tyres	proper selection of tyres according to weather conditions and driving needs	local guidelines for tyre selection, public awareness raising campaigns
	tyre properties, eco-tyres	product development: chemical composition and pattern of the tyre tread	EU regulation for tyre wear, subsidies for eco-tyres (analogy with subsidies for electric vehicles)

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