

# Plastics pollution from placement of blasted rock masses in the sea

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**Introduction:** The overall objective of the project is to prevent plastics originating from placement of rock masses from tunnelling and other blasting activities entering the sea. During tunnel construction plastics are used in detonating cords and explosives, as well as fibrous reinforcement (including macrofibers and microfibers) of shotcrete linings in tunnels.

In recent years there has been an increasing awareness of plastics entering the sea from such sources. There is a need for further information about this and which type prevention and measures that can be taken to stop the plastics from entering the sea or stop the spreading of plastics that already have entered the sea.

**Methods:** The project will:

- Establish an overview of sources of plastics from tunnelling and other blasting activities.
- Give estimates of the amount of plastics that can enter the sea from tunnelling and other blasting activities in the Nordic countries and how they influence the environment.
- Present possible replacement of plastics used in tunnelling and other blasting activities with other products.
- Give examples of ways to stop plastics from spreading from tunnelling and blasting rock that has been placed in the sea.

**Results:** The project shall identify strategies and measures to stop plastics from spreading from tunnelling and blasting rock to the sea. This should lead to minimum a 75 % reduction of spreading of plastics to the sea from tunnelling and blasting compared to today's situation.

The outcome will be a report/handbook with recommendations how to prevent plastics in the sea originating from placement of rock masses from tunnelling and other blasting activities. The main target audiences are road authorities, environmental authorities, contractors and consultants that work with tunnelling and other blasting activities.

**Discussion:** Plastics in the ocean has been identified as a major contamination problem. So far there is little information about plastics from tunnelling and other blasting activities entering the sea. This project which is sponsored by the Nordic Council of Ministers will contribute to further knowledge in this field. The project will start in January 2019 and the first data will be available for presentation at the SedNet conference in Dubrovnik.