

The Norwegian Maritime Authority  
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Your ref.

Our ref.

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## Assignment - reduction of pollution from ships in the world heritage fjords

Norway has many fjords with heavy cruise ship traffic, particularly during the summer months. In areas with heavy ship traffic, the ships generate significant amounts of emissions to air and discharge to sea, which could be harmful to health and the environment. Measures for more climate- and environment-friendly shipping activities are an important priority area for the government.

In 2005, the West Norwegian Fjords, i.e. the five fjords the Nærøyfjord, Aurlandsfjord, Geirangerfjord, Sognsvannsfjord and Tafjord, were inscribed on UNESCO's World Heritage List. Norway has thus taken on a particular responsibility for conserving these areas. In 2016, the Ministry of Climate and Environment assigned the Norwegian Maritime Authority (NMA), in close cooperation with relevant actors, the task of mapping emissions and discharges in Norwegian fjords with heavy cruise traffic. The assignment was limited to the Geirangerfjord, Nærøyfjord and Aurlandsfjord.

The NMA was recently presented with the results from the mapping in the report *Discharge and emissions from ships in fjord areas with heavy cruise traffic*. The results show, inter alia, that the level of nitrogen oxides ( $\text{NO}_x$ ) in the air is periodically an issue, depending on meteorological conditions and the number of ships. They also found instances of high levels of particulate matter (especially small particles) in the areas. In periods, the port calls also lead to visual pollution in the form of visible smoke clouds consisting of particulate matter,  $\text{NO}_x$ , sulphur oxides ( $\text{SO}_x$ ) and water vapour.

The report points to two measures where there is a need for further assessment. Speed restrictions in the fjords could reduce the emissions to air and thus the visible smoke, and is

a possible measure recommended to be further assessed in cooperation with the Norwegian Coastal Administration. The report also suggests further assessing whether to set requirements for the smoke emitted from the ships. It has been pointed out by several others, in other connections as well, that the visible smoke emitted is unfortunate for the experience and marketing of the world heritage fjords. The Ministry of Climate and Environment therefore believes that it is especially important to assess these measures further, and for that reason, we request that the NMA, by 1 January 2018:

- in cooperation with the Norwegian Coastal Administration, assess the possibility of introducing a maximum speed for ships in defined zones in the world heritage fjords;
- further assess whether it is possible to lay down a requirement for the smoke from ships in the world heritage fjords having a density that reduces transparency by not more than 50% during cold start or 10% when underway.

The report also proposes several other possible measures to reduce the emissions and discharges. In line with these recommendations, we ask that the NMA work towards implementing the following measures applicable to all commercial traffic in the world heritage fjords, both local and international traffic, by the end of 2018:

- lay down requirements for the emission of NO<sub>x</sub> from ships not exceeding the values set out in MARPOL Annex VI, regulation 13.4 (Tier II) by 2018 and regulation 13.5 (Tier III) by 2020. The date of entry into force of these requirements shall be determined upon further assessment;
- lay down requirements for the fuel used having a sulphur content not exceeding 0.10%, or for using an air pollution control device (scrubber) resulting in an equivalent or lower level of emission of sulphur oxides. When using scrubbers, the visible water vapour shall be removed from the exhaust gas;
- further assess a prohibition against discharge of wash water from the scrubbers;
- further assess a prohibition against discharge of grey water;
- further assess a prohibition against discharge of sewage, treated and untreated.

The Synnulvsfjord and the innermost part of the Tafjord are also part of the West Norwegian Fjords, but were not included in this mapping. The assignment nevertheless covers the entire world heritage site.

Necessary considerations of economic and administrative consequences of the measures must also be carried out, and the NMA must keep in close contact with the parties concerned in the work.

We request that a plan of progress be presented within 1 October 2017.

Yours faithfully,

Per W. Schive (by authority)  
Head of Department

Hanne Marie Øren  
Senior Adviser

*This document has been electronically approved, and therefore does not contain handwritten signatures.*

Copy to: The Ministry of Trade, Industry and Fisheries, the Norwegian Environment Agency