

Administrative and financial implications

The proposals will apply to ships sailing in and out of the world heritage fjords, and to vessels sailing exclusively within the world heritage fjords. The proposal will entail changes and a need to adjust for the cruise industry and local industry players in the world heritage fjords. There are many considerations to balance. Some of the proposals are connected with tonnage limits, others are not. We have tried to weigh the considerations for reducing emissions to air and discharges to sea and the value of the world heritage status against the available cleaning technology for ships, as well as the consideration for industry players and tourism. The value of the various considerations was to a certain extent inevitably approximate. It is harder to estimate the value of a cleaner fjord and cleaner air than to calculate lost tourism income. The considerations must be weighed against each other, and a choice must be made.

In order to reach the goal of reducing the emissions to air and discharges to sea in the world heritage fjords we have proposed a number of measures, which we believe will collectively contribute to meeting this goal.

We propose that for ships of 400 gross tonnage and upwards or which are certified to carry more than 15 persons it is not allowed to discharge sewage in the world heritage fjords. The administrative and financial implications of the proposal for special rules for the discharge of sewage and grey water in the world heritage fjords are considered minor for the cruise ships, as most of these already have approved cleaning systems for sewage installed.

For smaller local vessels and ferries, the proposal will have financial consequences, as some of these have tanks for retaining sewage, whereas others do not. The vessels which up until now have been allowed to discharge sewage in the fjord 300 metres from nearest land, will now have to deliver sewage to land or go further out in the world heritage fjords to discharge it. We are proposing to set up an exemption possibility for these vessel, which will give them the possibility to adapt to the new requirements. The Norwegian Maritime Authority may upon written application up until 2024 grant a time-limited permission to discharge sewage in the world heritage fjords to ships running a regular service on a public contract and to ships offering an established fjord cruise service. We are proposing the possibility for exemption to ensure the industry time to adjust.

There will be a need to establish reception facilities ashore, which is the municipalities' responsibility. One alternative is to collect the sewage by a pump truck.

In section 10a second paragraph, we propose that for ships of 2500 gross tonnage and upwards certified to carry more than 100 persons, it is not allowed to discharge grey water in the world heritage fjords. The administrative and financial costs associated with the proposal are assumed to be small.

In new section 14b, we propose special rules regarding emission of sulphur oxides (SO_x) from ships in the world heritage fjords. The cruise ships are already equipped to satisfy the sulphur requirements, and smaller vessels in the world heritage fjords as well as Hurtigruten already use fuel oil with a sulphur content of maximum 0.10% by weight. It is therefore assumed that the proposal will have very limited financial and administrative consequences.

We propose a new section 14c with special rules regarding emission of nitrogen oxides (NO_x) from ships in the world heritage fjords. More specifically, we propose a gradual phase-in of requirements for maximum NO_x emissions. As Menon discusses in their report, there will be high costs related to stricter requirements for NO_x emissions. For companies, the consequences will be as follows, cf. the Menon report p. 44: *“However, companies with ships not satisfying the requirements nor expected to do so within the year in question, will face a choice whether to convert the ship, reemploy vessels within the fleet, visit another Norwegian fjord or to drop Norway as a cruise destination.*

[...]

In one of the interviews we have carried out, the conversion cost for converting to LNG technology (Tier III) was estimated to around 1 million NOK per megawatt, which in practice means investments of between 50 and 100 million NOK.

The proposed stricter requirements for NO_x emissions will also have socioeconomic consequences. Menon has estimated that the proposals will result in a loss of 250 million NOK over five years, divided between three destinations. Furthermore, Menon writes on p. 4: *“Dialogue with the cruise industry suggests that the investment costs related to adapting ships not currently satisfying the requirements are high, especially for adaptation to Tier III. The value of adapting to Tier II is also limited since the Tier III requirement will enter into force only five years later. Based on these assessments, and the fact that each of the cruise ships visits the world heritage fjords a limited amount of times per year, there is reason to believe that the requirements for max. NO_x emissions will have little triggering effect on NO_x reducing adaptations of the ships, which would not have taken place in the null alternative. This is supported by the fact that several industry players have commented that it is not very likely that they will invest in larger conversions of ships or engine to adapt to individual destinations. Based on this, we believe that the cruise companies’ likely response will be to partly reemploy vessels in their own fleet, partly visit other Norwegian fjords and partly redirect the cruise to a destination in another country.”*

Car ferries and smaller passenger vessels are expected to be “forced” to adapt to the requirements, among other things because they, to a larger degree than cruise ships, are bound to the fjords in question. The adaptation is expected to be carried out by earlier replacement of older vessels.

We expect that the measure will result in a percentage of the cruise ships choosing to no longer visit Norway and that there will thus be fewer cruise ship tourists visiting Norway. This loss is estimated at a current value of 250 million NOK. The preconditions forming the basis of the estimation are described in detail in the report. The loss may be reduced if a percentage of the lost cruise ship tourists choose to travel to Norway in other ways.

We also expect the cruise ship activity to Flåm and Geiranger to be reduced at the expense of increased activity in other Norwegian fjords. The destinations Olden/Loen, Skjolden and Åndalsnes, among others, are likely alternatives.

This distortion does not represent a socioeconomic loss, but an allocative effect of the measure.

Beyond lost tourism income, the measure will involve increased costs related to faster replacement of car ferries and smaller passenger vessels. The costs related to faster replacement of car ferries is expected to amount to 71 million NOK. The measure could also have negative implications for certain industry players.”

With regard to positive effects of NO_x reductions, Menon writes the following:

“The value of reduced overall NO_x emissions from cruise ships, car ferries and smaller passenger vessels in Norway is estimated to have an overall socioeconomic value of 71 million NOK. Faster replacement and renewal of car ferries and smaller passenger vessels will also lead to reduced emissions of CO₂ and lower operating costs. These effects are valued at 15 and 20 million NOK respectively. We do not expect that the measure will trigger faster renewal of cruise ships or to affect their overall emissions of CO₂.

Beyond this, it is expected that the measure will eliminate the number of days where the concentrations of NO_x and particle matter in the world heritage fjords are detrimental to health. We expect that the measure will have a positive health-related effect, mainly for at-risk permanent residents in the areas in question. However, it is uncertain whether the measure could cause negative health-related effects in other Norwegian fjords expected to see increased cruise tourism.

The measure is also expected to have a positive effect on the standing of Norwegian fjords as travel destination, but it is uncertain how large the effect will be.”

The proposed requirement for NO_x reduction is the most ambitious and demanding proposal. We believe that it is realistic and predictable for the industry to set the requirements for max. NO_x emissions as we have proposed. Overall, the benefits related to implementing the regulations will surmount the costs.