



Photo: Store norske leksikon

Photo: R.F. Wright

Theme 1: Climate mitigation and intensified forest management in Norway – to what extent are surface waters safeguarded by existing national and international regulations?

In 2015, the Norwegian government launched a series of measures to intensify forest management for mitigation of climate change: (1) afforestation on new areas, (2) densification of existing forests, and (3) forest nitrogen fertilisation. In this study we ask whether surface waters are sufficiently safeguarded when these measures are put into practice and investigate how and in which ways effects on surface waters are considered in their implementation.

We do this, firstly, by assessing how impacts on water are accounted for in existing national and international regulations for sustainable forestry and industrial standards. Secondly, we provide an overview of the impacts of forestry on water quality relevant to the three support schemes. Lastly, we assess the uncertainties that exist with regard to surface waters in the implementation of these measures.

Overall there is a challenge in separating the impacts of the climate mitigation measures in forestry from the impact of the forestry industry in general. It is also important to emphasise that the measures are not novel in the Norwegian context, but that

the facilitation of these measures and the new support schemes introduced suggest an intensification of the existing forest industry.

Some weaknesses in the present arrangement have been identified. While forest cooperatives have a strong role in making sure that the industry standard is adhered to, there are indications that existing arrangements for reporting and control are inadequate. For instance, there is a need for clarity on sanctions against forest owners, cooperatives and municipalities when regulations are not complied with.

We have found that several safeguards are in place to minimize the direct effects of forestry measures on water resources. These regulations and guidelines are however for the most part geared to safeguard water and environmental values at the point of initiation of these measures, for instance regarding which areas are suitable for intensification. There is however a large degree of uncertainty related to the longer-term impacts on water and environmental values of such intensification measures within forestry.

Reference: Sundnes F, Karlsson M, Platjouw FM, Clarke N, Kaste Ø, Valinia S. Climate mitigation and intensified forest management in Norway – to what extent are surface waters safeguarded? Manuscript in review.

Contact: Frode Sundnes (frs@niva.no)

SURFER – Surface waters: The overlooked factor in the forestry climate mitigation debate.