

## **ECN 275 – first lecture discussion (2): Environmental measures Oslo fjord**

Purpose of discussion exercise – demonstrate the importance and relevance some core issues in environmental policy from an economics perspective.

The Norwegian Environmental Directorate ([Miljødirektoratet](#)) published a plan for improved environmental conditions in the Oslo fjord ([Environmental measures for the Oslo fjord 1921-26](#)). It has identified three main problem areas for the current ecological state of the Oslo fjord:

1. Runoffs from agriculture, sewage and drainage, and industrial activity with excessive additions of the nutrients Nitrogen and Phosphorus, and various environmental toxins to the fjord.
2. Long term over fishing, which includes depletion of fish and shrimp stocks, and bottom trawling that damage life on the sea bottom.
3. Building in the coastal zone that limits public access from fjord based outdoor activities and increase the strains on the fjord's ecosystems.

In 2021 the government passed a five year plan for measures to improve conditions for the fjord's environmental state and fjord based outdoor recreation. The plan contains 63 technical measures for improving the fjord's ecological state, and 19 measures to improve our knowledge on the ecological conditions of the fjord and how these conditions can be improved. Scientists agree that nitrogen inflows pose a major threat to the fjord.

We are now entering the last year of the current five year plan, and little has happened except that some larger municipalities, like Oslo and Bærum, have implemented measures to reduce nitrogen contents in sewage. Most other municipalities have done little. Agriculture has yet not put in place any extensive measures to limit nitrogen runoffs. The municipalities and agricultural organizations both point to excessive costs of the suggested measures.

### **Questions for discussion**

1. How would you as economists principally address the nitrogen runoff issues? What kind of (economic) policies could be worth while to implement to reduce the negative impacts from nitrogen inflows to the fjord?
2. The plan points to over-fishing as a particular challenge. Last year a ban on fishing was implemented for parts of the Oslo fjord. Both recreational and professional fishing activities will be affected by these restrictions. Fishers criticize these restrictions for not addressing the core issue: Pollution to the fjord. What substance, if any, lies behind the fishers' opposition to the restrictions?
3. How do you view possible restrictions on fjord based recreational activities in a welfare economics context?