

EFTA Surveillance Authority
Rue Belliard 35
B- 1040 Brussels
Belgium
registry@eftasurv.int

Date: 22.12.2015

New complaint and addition to the complaint: Norway has failed to comply with the Water Framework Directive

The complainants sent a letter to ESA 19.05.2015, claiming that Norway fails to comply with the Water Framework Directive, due to new permits for dumping mine tailings mixed with chemicals into Norwegian fjords, issued after the Norwegian acceptance of WFD, and for not taking steps in the new water management plans (2015 – 2021) to stop 6 ongoing dumping sites.

This letter adds the following two elements to the complaint:

1. New complaint: Norway fails to comply with the Water Framework Directive by issuing a new permit to dump mining tailings in Repparfjord.

08.12.2015: The Norwegian Environment Agency issued a permit to dump 1 – 2 million tonnes mining waste mixed with chemicals each year from the Nussir copper mine into Repparfjord in Finnmark. The tailings have high contents of toxic metals.

20.03.2014: The Ministry of Local Government and Modernisation accepted the zoning plan for establishing the Nussir mine, including the tailings deposition area in Repparfjord. This decision paved the ground for the dumping permit.

Our claim: The permits were given in violation of article 4.7 (new projects) and article 1 (purpose) of WFD. In addition it was given in violation of article 4.1 and 10.1, due to high concentrations of Nickel in the tailings, as Nickel is on the priority list of the Water Framework Directive.

2. New information concerning our complaint, 19.05.2015, that Norway fails to comply with the Water Framework Directive by issuing a permit to dump mining tailings in Førdefjorden.

- a. 01.12.2015: A Norwegian marine biology specialist released a report that strongly criticizes the EIA reports for serious underestimation of the harmful effects of suspended particles on marine life in Førdefjorden, and for underestimating how far the finest particles will spread.
- b. 07.12.2015: Researchers at the University of Bergen claim that the EIA reports for Førdefjorden do not take into account a rare, but dramatic sea current phenomena called “hydraulic jump” that would spread the fine tailings far out from the deposition area.

Complainants

Naturvernforbundet (Friends of the Earth Norway) Mariboegs gate 8 N-0183 OSLO Norway e-mail: naturvern@naturvernforbundet.no phone: +47 23 10 96 10 fax: +47 23 10 96 11	NGO Norwegian environmentalist organisation 22.000 members http://naturvernforbundet.no/?lang=en_GB
Natur og Ungdom (Nature and Youth) Postboks 4783 Sofienberg 0506 OSLO Norway e-mail: info@nu.no phone: +47 23 32 74 00 fax: +47 23 32 74 10	NGO Norwegian environmentalist youth organisation 7000 members http://nu.no/english/
Vevring og Førdefjorden miljøgruppe v/ Ole Erik Thingnes Vevring 6817 Naustdal Norway e-mail: post@fjordaksjonen.org phone: 970 85 962	NGO, local environment group for Førdefjorden and Vevring http://www.fjordaksjonen.org/
Friends of the Earth Europe Mundo-B Building Rue d'Edimbourg 26 1050 Bruxelles Belgium e-mail: magda.stockiewicz@foeeurope.org phone: +32 2 893 1000 fax: +32 2 893 1035	NGO, Environmental network with 30 national organizations. www.foeeurope.org
Norske Lakseelver (Norwegian Salmon Rivers) Postboks 9354 Grønland 0135 Oslo Norway e-mail: post@lakseelver.no phone: 22 05 48 70 / 450 21 637 fax: 22 17 17 87	National NGO for river owners. 7000 individual river owners http://www.lakseelver.no/Engelsk/main.htm

<p>Greenpeace Norge Pb. 33 Torshov 0412 Oslo Norway</p> <p>e-mail: info.no@greenpeace.org phone: + 47 22 20 51 01</p>	<p>NGO, Norwegian branch of Greenpeace 19.700 members and supporters</p> <p>http://www.greenpeace.org/norway/no/</p>
<p>WWF-Norge Postboks 6784 St. Olavs Plass 0130 Oslo Norway</p> <p>e-mail: wwf@wwf.no phone: 22 03 65 00 fax: 22 20 06 66</p>	<p>NGO, Norwegian branch of WWF</p> <p>http://www.wwf.no</p>
<p>Norges Jeger- og Fiskerforbund (Norwegian association of Hunters and Anglers) P.O.Box 94 NO-1378 NESBRU</p> <p>e-mail: njff@njff.no phone: +47 66 79 22 00 fax: +47 66 90 15 87</p>	<p>NGO Norwegian outdoors organization 120.000 members</p> <p>www.njff.no</p>
<p>SABIMA (The Norwegian Biodiversity Network) Pb 6784 St.Olavs plass 0130 Oslo Norway</p> <p>e-mail: christian.steel@sabima.no phone: +47 22 36 36 41 fax: +47 22 20 06 66</p>	<p>Umbrella NGO Organizes nine Norwegian biological associations with 20 000 members</p> <p>http://sabima.no/about-sabima</p>
<p>Framtiden I våre hender (Future in our hands) Fredensborgveien 24G 0177 Oslo Norway</p> <p>e-mail: post@framtiden.no phone: +47 22 03 31 50</p>	<p>Environmental NGO 25 000 members</p> <p>http://www.framtiden.no/english/</p>
<p>Den Norske Turistforening (The Norwegian Trekking Association) Youngstorget 1 0181 Oslo Norway</p>	<p>Norway's largest outdoor life organization 270,000 members</p> <p>http://english.turistforeningen.no/</p>

e-mail: info@turistforeningen.no phone: +47 4000 1868 fax: +47 22 42 64 27	
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Norges Kystfiskarlag	Union for Norwegian coastal fishermen
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Postboks 97 8380 Ramberg Norway	1000 members
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e-mail: post@norgeskystfiskarlag.no phone: +47 76 05 21 00 fax: + 47 76 05 21 01	http://www.norgeskystfiskarlag.no/
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Confidentiality

We authorise the EFTA Surveillance Authority to disclose our identities in its contacts with the authorities of Norway.

Detailed complaint

For a general and detailed discussion of why we claim that new permits to dump mining tailings into Norwegian fjords are given in violation of WFD, and for more information of the dumping permit in Førdefjorden, we refer to our letter to ESA of 19.05.2015.

In this new complaint letter we describe the new permit for dumping in Repparfjord and the newly released information concerning the permit to dump mining tailings in Førdefjorden.

Repparfjord

We want to draw your attention to some aspects of the permit for dumping mining waste in Repparfjord (permit granted 08.12.2015 and 20.03.2014).

To allow the ecological quality status for a water body to be lowered to less than «good», article 4.7 has some additional conditions to be assessed:

1. everything possible must be done to prevent reduced quality status
2. the benefits for society must be greater than the losses for society and environment
3. it is technically difficult/ impossible, or a disproportionately high cost to use other methods that are significantly better environmentally

Condition no. 2, losses and benefits:

As guidance for how to assess number 2, «the benefits for society must be greater than the losses for society and environment», there are developed guidance documents and a «policy document».

From these documents we have established this assessment table (page 14 in Enclosure 1), where we compare the assessment requirements of WFD with the Norwegian water regulations, which are much less specific:

	WFD	Norwegian Water regulations
Assessment of benefits	<ul style="list-style-type: none"> • “overriding public interest” or <ul style="list-style-type: none"> • benefits for the health • security for the population • magnitude of sustainable development 	<ul style="list-style-type: none"> • Benefits for society
Assessment of losses	Values mentioned in article 1 of WFD: <ul style="list-style-type: none"> • Loss of environmental qualities • Loss of society’s general gain by achieving good water standard Some examples of the losses stated in the Policy document ¹ : <ul style="list-style-type: none"> • health and biodiversity of the aquatic ecosystem • protection of human health, for example safe consumption of fish, shellfish and seafood • new jobs (e.g. in ecotourism, fisheries and nature conservation sector). • quality of life, through the value of surface waters (e.g. for visitors, tourists, water-sports users, conservationist) and its non-use value and all non-market benefits associated. 	<ul style="list-style-type: none"> • Loss of environmental quality

We claim that the Norwegian authorities have not properly assessed the disposal of mining waste, according to the assessment requirements of WFD, and give our comments on the assessments list from above.

The establishment of a copper mine combined with dumping of mining waste in the Repparfjord:

- cannot be classified as “overriding public interest”
- gives no «benefits for the health”
- gives no “security for the population”
- cannot be classified as “sustainable development”

“Benefits for the health”

Although copper is used in medical equipment, it is far from being a valid argument to declare that

¹ Policy summary and background document-environmental objectives, 2005.

the opening of a new copper mine can be classified as important for «benefits for health», especially not when it opens for a serious damage to a water body.

“Sustainable development”

We refer to Enclosure 1, on our assessment of “sustainable development” and the use of the fjords for dumping tailings.

“Protection of human health, for example safe consumption of fish, shellfish and seafood”

The National Institute of Nutrition and Seafood Research (NIFES) wrote a note together with the Institute of Marine Research, the Directorate of Fisheries and the Norwegian Food Safety Authority about submarine tailings disposal, where they warned against health risks:

“When the fjords are used as disposal areas, there is a risk of concentrating containments and process chemicals throughout the food chain.” ... “One example is the planned mine Nussir in Repparfjorden. These tailings contain amounts of copper (an average of 500 mg/kg) that far exceeds the limit for quality class V (very bad – our comment) for marine sediments (> 220 mg Cu/kg sediment, that gives acute toxic conditions) both for the Cu content of the waste (sediment) and what is leached into the pore water. Planned pollution at such levels should be totally unacceptable, both for the Norwegian Climate and Pollution Agency and other authorities.”²

(Translated from Norwegian by the complainants).

In addition we refer to NIFE’s letter about Fjørdefjorden. The institute is concerned that the planned dumping of mining waste in Fjørdefjorden could have impacts on the safe food from fish, shellfish and seafood in general. NIFES is especially concerned that Cadmium could leak out from the deposits and enter into the food chain, and of increased level of nano-sized TiO₂ particles in shellfish and crab.

The tailings from Nussir, to be dumped in Repparfjord have a strongly elevated content of Nickel, Chromium and Copper, and several types of nano-sized particles (SiO₂ etc) that are known to give similar problems as the TiO₂ particles planned to be dumped in Fjørdefjorden.

“Health and biodiversity of the aquatic system”

We refer to the chapter “The impact of submarine tailings disposal in a fjord” in Enclosure 1, that discusses the serious impacts on marine life. In the case of the tailings dumped into Repparfjord we also refer to the high contents of toxic metals.

“New jobs (e.g. in ecotourism, fisheries and nature conservation sector)”

Tourism, fisheries and aquaculture are important business sectors in Norway. They are dependent on clean water, healthy marine ecology and a good international reputation. The major business organisations in these sectors have protested strongly against permits for dumping mining waste in the fjords. Among these we find:

- The Enterprise Federation of Norway (Virke) organizes 19 000 businesses with 220 000 employees. <http://www.virke.no/omvirke/aboutvirke/Sider/default.aspx>

² Note to the Department of Fisheries and Cost, concerning the Mineral Strategy, from The National Institute of Nutrition and Seafood Research, the Institute of Marine Research, the Directorate of Fisheries and the Norwegian Food Safety Authority, 29.02.2012.

- The Norwegian Fishermen's Organization (Fiskarlaget)
<http://www.fiskarlaget.no/index.php/fiskarlaget-engelsk>
- Norwegian Seafood Federation (SjømatNorge) represents the interests of approximately 500 member companies. (<http://sjomatnorge.no/norwegian-seafood-federation/>)
- The Norwegian Hospitality Association (NHO reiseliv) has 2500 member businesses with a total of 55.000 employees. <http://www.nhoreiseliv.no/english>
- Norwegian Salmon Rivers (Norske lakseelver) represents 7000 individual river owners in a number of national committees and councils. (<http://www.lakseelver.no/Engelsk/main.htm>)

There is also a question of whether the government, according to both national and international law, has a legal right to allow a project that could deprive fishermen and local inhabitants of their traditional right to fish and use the fjord area. If the permit is not withdrawn, it could result in a series of court trials concerning fishing rights, negative influence on salmon in the local rivers etc.

The Sami parliament and Sami organisations have also protested strongly against the plans for the mine and the permit to dump tailings into Repparfjord, strongly interfering with traditional Sami fisheries and reindeer herding. The Sami people also have a special national and international status and rights as an indigenous people.

"The losses for Sami businesses as a result of the pollution are so large, compared to the benefits, and the disadvantages for Sami culture and society so extensive, that the Sami Parliament cannot see that there is a legal foundation for this application in the pollution law.³" (Translation from Norwegian by the complainants).

"Quality of life, through the value of surface waters (e.g. for visitors, tourists, water-sports users, conservationist) and its non-use value and all non-market benefits associated."

We refer to the broad protests from most Norwegian environment and leisure organisations, and a letter signed by 33 international environmental organisations: "Time to protect the Norwegian fjords and our common sea". See enclosure 2.

Condition no. 3, other methods which are significantly better environmentally

The copper mining project is based on dumping mine tailings directly into Repparfjord.

We find that alternative mining methods and alternative use of the tailings have not been assessed properly. We refer to a few examples of alternatives that have been assessed to a very limited extent or not at all. We also refer to ongoing work in the EU system to transform mining in a more environmentally friendly direction.

- Backfilling in the underground. Several technologies allow backfilling simultaneously with active mining, as the internationally commonly used method "cut and fill". A major part of the tailings would then be deposited underground. Underground mining also gives less waste rock material.

³ Minutes from the consultation meeting between the Sami Parliament and the Norwegian Environment Agency about the Nussir application, 13.05.2015

- Alternative use of the tailings. The mining company has a report showing many alternative uses of the tailings, but alternative uses are not a requirement in the mining permit.
- We refer to the ongoing work in EU concerning the “Strategic Implementation Plan for the European Innovation Partnership on Raw Materials” and several research programmes that are focusing on mining methods like “Invisible mine” and “zero waste mine”. This ongoing work focus on mining methods with smaller environmental footprint: *“shifting fully the conventional mining production processes from the surface to underground”⁴*.

High content of toxic metals in the tailings

Tilstand/ Metall	Bakgrunn	God	Moderat	Dårlig	Svært dårlig	Nussir avgang
Arsen	< 20	20-52	52-76	76 - 580	>580	< 0,2
Bly	<30	30 - 83	83 - 100	100 - 720	>720	1,67
Kadmium	<0.25	0.25 - 2.6	2.6 - 15	15 - 140	>140	< 0,1
Kvikksølv	<0.15	0.15 - 0.63	0.63 - 0.86	0.86 - 1.6	>1.	< 0,3 - 0,3
Kobber	<35	35 - 51	51 - 55	55 - 220	>220	>500<1000
Sink	<150	150 - 360	360 - 590	590 - 4500	>450	19-59
Krom	<70	70 - 560	560 - 5900	5900 - 59000	>59000	< 40 - 823
Nikkel	<30	30 - 46	46 - 120	120 - 840	>840	37-355

This table shows the standard classification table of polluted marine sediments, with the Nussir mine tailings to the far right⁵. The concentrations are given in mg/kg.

The columns are as follows: “Background”, “Good”, “Moderate”, “Bad”, “Very bad”, “Nussir tailings”. The table shows a high content of Nickel, a priority substance of WFD. The contents of Cu, and Cr are also very high, especially Cu.

New information concerning the dumping permit in Førdefjorden, issued 19.04.2015.

This new information demonstrates that it is very difficult to predict the negative effects of the tailings disposal in Førdefjorden. There are strong indications that there are rare and extremely strong sea current effects in Førdefjorden with dramatic effects on the sediments, currents that are difficult to detect during an ordinary EIA. New information about the modelling of how suspended particles spread (EIA), reveal that the smallest particles were omitted from the modelling, even when it is well known that they will spread much farther out than the larger particles.

The new information has dramatic effects when it comes to the assessment of how far the suspended particles will spread, and of the negative effects of these particles in the marine environment.

⁴ Working document for the Strategic implementation plan for the European innovation partnership, draft of 27/03/2013

⁵ Part of the EIA: Alternative use of tailings from Nussir and Ulveryggen, Bergfald Environment Consultants, 06.04.2011.

Underestimation of harmful effects from suspended particles, and wrong particle spread model.

01.12.2015: A Norwegian marine biology specialist released a report that strongly criticizes the EIA reports for serious underestimation of the harmful effects of suspended particles on marine life in Førdefjorden, and for underestimating how far the finest particles will spread.⁶

In the EIA, the consultants stated that a particle concentration of 50 mg/l could be regarded as the limit of negative influence on fish. The marine biology specialist dr. Phil. Agnar Ståle Kvellestad has written a well documented report, establishing that the limit of particle concentration should be set to 3 mg/l or below. Suspended particles make fish eggs and larvae sink to the bottom and to be destroyed. He also revealed that the simulation of how the particles spread in the fjord was done without taking into account the smallest particles, below 15 micrometers. As small particles, they will spread much further out in the fjord than larger particles, and therefore the simulation underestimates how far the particles will spread.

The conclusion is that the particle concentrations at some distance from the disposal tube will be larger than simulated in the EIA and in addition that the concentration limit for negative influence from the suspended particles are much lower than expressed in the EIA.

Underestimation of special sea current effects

07.12.2015: Researchers at the University of Bergen claim that the EIA reports for Førdefjorden do not take into account a rare, but dramatic sea current phenomena called “hydraulic jump” that would spread the fine tailings far out from the deposition area. The researchers have already done some measurements that indicate this effect in Førdefjorden.⁷ The article also has a video illustration in English of the Hydraulic jump effect.

The EIA is based on the assumption that the tailings dumping area is well limited by a shallow outer part in Førdefjorden, thereby stopping the particles from being spread out from the inner fjord and further out into the open sea from the deep inner fjord disposal area.

A “hydraulic jump” phenomena is contradicting this assumption, creating a current that effectively would spread the fine tailings far out from the disposal area. The researchers of the University of Bergen plan to start measurements to establish knowledge of the hydraulic jump phenomena in Førdefjorden in 2016.

Professor Tor Gammelsrød at the University of Bergen says that it is not the average current that is interesting, you must take into account the strongest occurring current when you want to predict the behaviour of the tailings.

⁶ “Planned submarine disposal of mining waste in the Førde Fjord of Norway - underestimation and under-communication of harmful effects of suspended industry-created particles on fish”, dr.phil. Agnar Ståle Kvellestad, 01.12.2015, Norwegian University of Life Sciences (NMBU) Faculty of Veterinary Medicine and Biosciences, Institute of Basic Sciences and Aquatic Medicine

⁷ <http://www.nrk.no/natur/ukjent-strom-kan-skape-problemer-1.12659552>

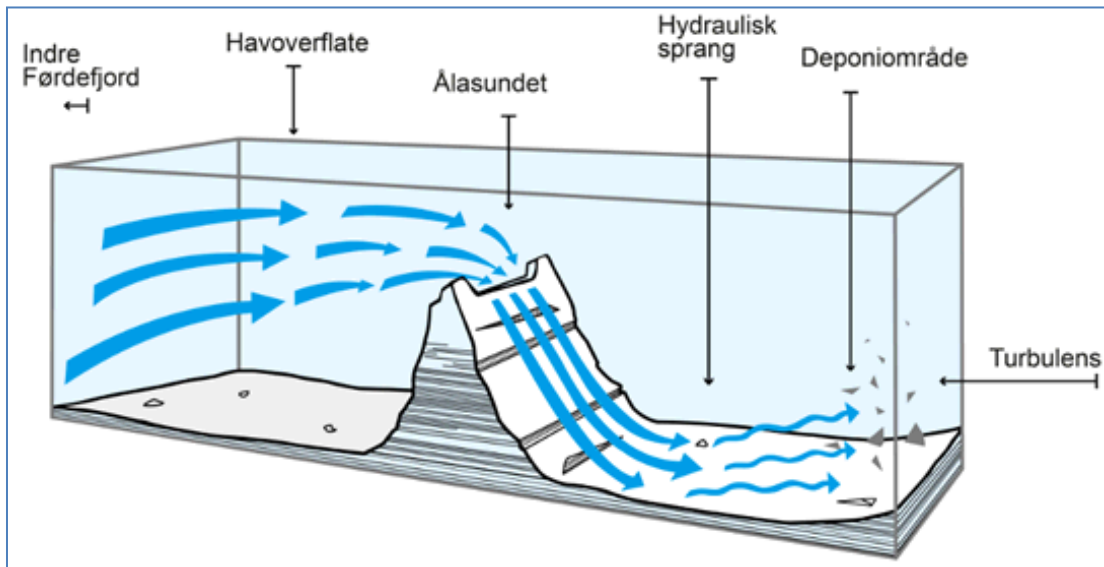


Illustration of the “hydraulic jump”. The disposal area is in the right hand side, being influenced by the extremely strong current in the “hydraulic jump”.

On behalf of the complainants



Lars Haltbrekken
Chair of Naturvernforbundet

Enclosures

1. Note: Submarine tailings disposals violates WFD-12-05-2015
2. Time to protect the Norwegian fjords and our common sea, an international petition
3. Planned submarine disposal of mining waste in the Førde Fjord of Norway - underestimation and undercommunication of harmful effects of suspended industry-created particles on fish”, dr.phil. Agnar Ståle Kvellestad, 01.12.2015