

## THE PRECAUTIONARY CASE OF TALVIVAARA: A DEVELOPED LEGAL ORDER GONE ASTRAY

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### Abstract

This short case study takes a look at the Talvivaara case in Finland. Talvivaara is a nickel and zinc mine in Eastern Finland. The mine has had environmental challenges through its history. The latest problem – a toxic water leak in November 2012 – brought into view a dysfunction between the Mining Act and the Environmental Protection Act, the main statutes regulating mining in Finland. The case highlights the need for reform of the bifurcated administrative procedure. In particular consideration should be given to where best to site supervision of mining activities: regional or national level.

### Note

To some extent the story of Talvivaara is a story of how a regulatory system previously considered as solid can fail. The company in the limelight is Talvivaara Mining Comp. Plc, which exploits the largest known nickel sulfide resources in Europe. The Talvivaara mine has revealed some challenges in the legal and administrative system in Finland. The main problem is the dysfunctional relationship between the Mining Act and the Environmental Protection Act, especially in the choice of competent authorities under each statute.<sup>1</sup>

Talvivaara is a relatively new mine. It opened in 2007 after its feasibility study was accepted and it gained the environmental permits needed. It uses a novel technique called bioheap-leaching to extract nickel and zinc. In bioheap-leaching metal is leached from the ore with bacterial action.

When valuable ore has been found in the soil in Finland one part of the administrative proceedings is to gain permits and rights to the site under the Mining Act. These were previous-

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<sup>1</sup> The Mining Act (kaivoslaki, 621/2011) is not officially translated into English. The Finnish version can be found at <http://www.finlex.fi/fi/laki/ajantasa/2011/20110621> (accessed 14 February 2013). The Environmental Protection Act (ympäristönsuojelulaki, 86/2000) can be found in English at <http://www.finlex.fi/en/laki/kaannokset/2000/en20000086.pdf> (accessed 17 January 2013).

ly given by the Ministry of Employment and the Economy, but from July 2011 the authority to grant permits has been in the hands of the national Finnish Safety and Chemicals Agency (FSCA). In addition mining companies must apply for a permit under the Environmental Protection Act (and occasionally under other statutes such as the Water Act).<sup>2</sup> These permits are granted by Regional State Administrative Agencies (RSAs) and supervised by regional Centres for Economic Development, Transport and the Environment (CEDTE). There are 15 CEDTEs in Finland. Since Finland has population of 5.4 million and land area of some 385 000 km<sup>2</sup>, an individual CEDTE can have an extensive geographical area to supervise with rather limited resources regarding manpower.

The regulative aim in the Mining Act is to control the whole mining process from reservation and ore prospecting to mining itself – the focus is not directly on the environmental deterioration mining causes, but on the administration of mining as an economic activity causing certain harms. Environmental permits are not necessarily needed for the earlier phases of mining, but when it comes to the exploitation of the mining minerals a permit must be gained. There are, however, certain prohibitions – on soil contamination and groundwater pollution – that bind all operations, including the earliest stages of mining.<sup>3</sup>

The problems at the Talvivaara site started at an early stage. In 2010 waters in nearby lakes turned salty due to the runoff of waters rich in sulfates.<sup>4</sup> In November 2012 highly polluting water including uranium, nickel and other toxic metals leaked from the mine's gypsum waste pond to the surface waters around the mine and the soil below it. In March 2012 a worker died at the site, likely due to breathing hydrogen sulfide emissions. The danger posed by these emissions had been pointed out by employees, but no corrective measures had been taken.<sup>5</sup>

There have been various responses to these breaches from both government and civil society. In June 2012 Finnish MEP's Hassi and Pietikäinen initiated an EU Commission investigation into the mine, for non-compliance with the Mining Waste Directive (2006/21/EC). The

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<sup>2</sup> The Water Act (vesilaki, 587/2011) can be found in Finnish at <http://www.finlex.fi/fi/laki/ajantasa/2011/20110587>. The statute has not been officially translated into English, but the translation of the previous Water Act (264/1961) can be found at <http://www.finlex.fi/en/laki/kaannokset/1961/en19610264.pdf> (accessed 17 January 2013).

<sup>3</sup> These full prohibitions are part of the Environmental Protection Act, 7 and 8 §.

<sup>4</sup> The mine has caused pollution to waters as far as 100 kilometers from the mine. See, for example, the Official Comment of Stop Talvivaara Movement on the handling of issue PSAVI/58/04.08/2011 at <http://www.stoptalvivaara.org/fi/mielipide-psavi.html> (accessed 14 February 2013).

<sup>5</sup> Investigation information and report abstract can be found at <http://www.tukes.fi/en/Current-and-News/News/2Chemicals-and-gas/Accident-investigation-revealed-deficiencies-in-process-safety-management-of-Talvivaara-Sotkamo-Ltd/> (accessed 17 January 2013).

Finnish Nature Conservation Association also started administrative proceedings concerning the safety of the mine and its environmental impacts.<sup>6</sup> And after the gypsum waste pond leaked at November 2012 Talvivaara hit the national headlines for several weeks, causing petitions from the public to the Minister of the Environment and demonstrations in Helsinki.<sup>7</sup> Some of the problems arising from the mine operations have led the FSCA and the CEDTE and even the Radiation and Nuclear Safety Authority Finland to impose operation breaks.<sup>8</sup> These breaks usually lasted for a few days – the longest break, 17 days, took place after the gypsum waste pond leak at November 2012. On each occasion corrective measures required by the authority/authorities imposing the break had to be implemented and approved before the mine could reopen.

The case reveals the challenges inherent in the bifurcated administrative procedure. The right to proceed with the plans for a mine is granted at a national level, by a body with 16 officials in its mining unit which concentrates solely on mining, its permits and their surveillance. Given that there are in total only 52 mining operations in Finland, this body is relatively well resourced.<sup>9</sup> The FSCA has therefore been more able to respond to breaches of obligations by mining companies by imposing breaks in operation. The environmental permits by contrast are granted and supervised at regional level, in units consisting often of only a few civil servants responsible for the surveillance of all potentially polluting activities in their region. In Talvivaara's case, the regional CEDTE has only six officials in its supervision unit responsible for all the various types of environmental permits that may be granted to industry of any kind. It has therefore proved more difficult for these officials to monitor and enforce the conditions of any permits they grant. The inadequacy of the CEDTE's response to the Talvivaara case has been highlighted by civil movements and NGO's. Having noted that the CEDTE has not used all the legal tools available under the Environmental Protection Act, they have called for the FSCA to take action instead.<sup>10</sup>

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<sup>6</sup> During 2012, the organization started proceedings at two instances, with the CEDTE and with the RSAA of Northern Finland, which was responsible for granting the environmental permits in the first place. Details of these latter proceedings can be found (in Finnish) at <http://www.sll.fi/mita-me-teemme/kaivostoiminta/kainuun-piirin-vireillepano-pohjois-suomen-aluehallintovirastolle> (accessed 17 January 2013).

<sup>7</sup> The public activity has been organized by a movement called Stop Talvivaara, <http://www.stoptalvivaara.org/> (accessed 17 January 2013).

<sup>8</sup> The Radiation and Nuclear Safety Authority Finland is active in this case as the ore at the site includes uranium.

<sup>9</sup> Figure from the Ministry of Employment and Industry statistics for 2011, <http://www.tem.fi/index.phtml?l=en&s=2110> (accessed 17 January 2013).

<sup>10</sup> Chapter 13 of the Environmental Protection Act includes sections on supervision and administrative compulsion. The limited use made of administrative compulsion in this instance has been criticized. See, for example, Suomen Luonto, magazine of Finnish Nature Conservation Association at <http://suomenluonto.blogit.fi/kainuun-ely-keskuksen-ylijohtaja-on-lainamies-gtksta/> (accessed 14 Feb-

The difference in resources available in the two permitting processes is notable. Not only does this mean that the environmental agency struggles to ensure compliance under its permitting system, but there is a difference in the political power of the two government agencies. Mining is seen as an escape from the looming recession and the decline of formerly strong branches of industry in Finland – the President of Finland has called the mining industry ‘the new Nokia of Finland’. In his opinion the resources for permitting and supervision of mining operations are adequate and need not be strengthened.<sup>11</sup> In the face of this political pressure it may be difficult for officials of regional environmental agencies to take strong action to protect the environment against harm from mining operations. These problems may be exacerbated by the fact that the permitting process relies upon mining companies to produce their own impact assessments. Thus, while it is meant to embody a precautionary approach to mining, the ability of the permitting process to ensure this is constrained by the companies’ ability and willingness to provide accurate forecasts of their likely impact. Even the most willing of companies will find it difficult to predict all eventualities given the nature of mining operations and their reliance on the natural environment.

All of this points to the need to revise some parts of the regulation. The need for greater regulation of larger or novel mining enterprises points to the need for more resources to be available to the regulator. Given the cost of investing in regional regulatory bodies, it may be more appropriate to relocate the supervisory authority for large and novel mining companies to a new national level agency similar to the FSCA. This would facilitate the compilation of regulatory knowledge gained from the environmental impacts of mining and the lessons learned from the supervision of it. Meanwhile the Talvivaara case acts as a precautionary example to others of what not to emulate.

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ruary 2013) and at <http://suomenluonto.blogit.fi/ylijohdaja-vahvistaa-kaivosviranomaisen-tukes-voisilain-mukaan-keskeyttaa-talvivaaran-toiminnan/> (accessed 14 February 2013).

<sup>11</sup> News (in Finnish) in Kaleva, April 4<sup>th</sup> 2012, <http://www.kaleva.fi/uutiset/pohjois-suomi/niinisto-kaivosten-valvonta-on-riittavaa/573070/> (accessed 17 January 2013).