

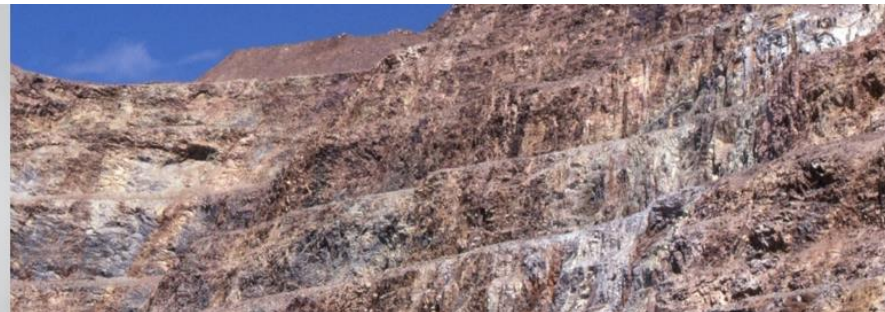


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UNFC Case Studies

Finland/Estland, Sweden and Norway
Nordkalk limestone & Forsand sand & gravel mines

Erika Ingvald, Geological Survey of Sweden



Application of UNFC to minerals and anthropogenic resources: Sustainable management of raw material resources, 26 August 2020

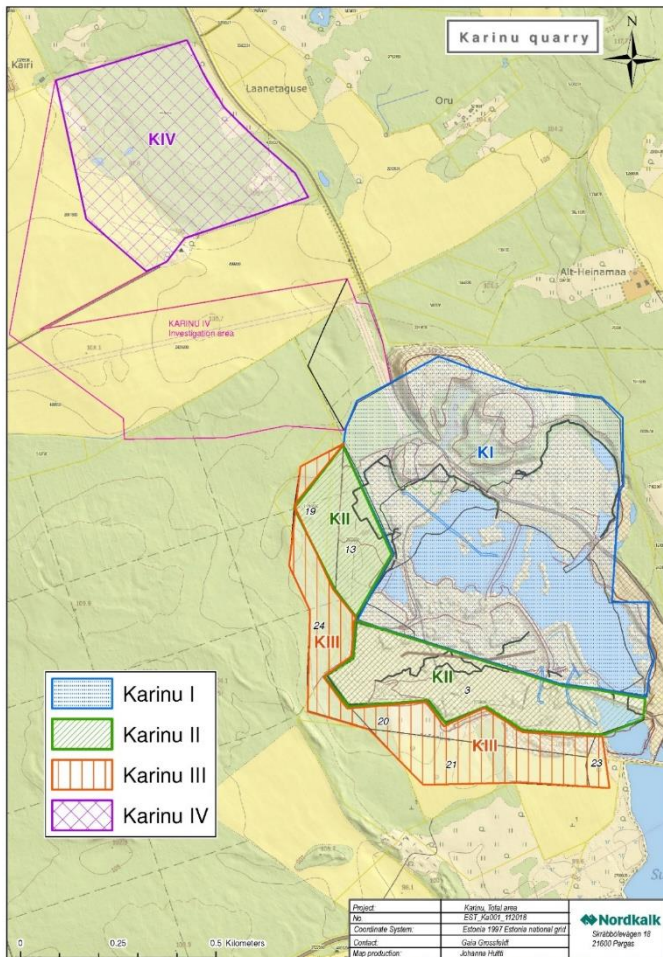
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The Karinu Project



Domain	Quality and volume (kT)	UNFC code	Coming actions
Karinu I	Good 90	E1F2G1+G2	
	High MgO 420	E1F2G1+G2	
	Unsold not assessed	E3F4	Historical production of fine material.
Karinu II	Good 220	E1F1G1+G2	
	High MgO 80	E1F2G1+G2	Extraction is in progress.
Karinu III	Good 1400	E1F1G1+G2	
	High MgO 350	E1F2G1+G2	Prepared for starting extraction.
Karinu IV	Good 1900	E2F2G1+G2	Preparation of the EIA and a permit application.
	High MgO 310	E2F2G1+G2	Technical design plan. More investigation in order to add the confidence level.
Karinu total	Good 3700		
	High MgO 1200		

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The Bunge Project



Year	Court verdict	UNFC E Category
2008	1st instance, application turned down	E3
2009	2 nd instance, partial permit granted	E2
2010	Supreme Court, sent back the case to the 1st instance	E2
2011	1th instance, turned down the permit	E3
2012	2 nd instance, granted the permit	E1
2013	Supreme Court, granted partial appeal, due to Natura 2000 evaluation. Case sent back to the 1 st instance	E2
2014	1 st instance, granted the permit. Case appealed.	E1
2015	2 nd instance trial put on hold due to new Natura 2000 proposal.	E2
2015	Swedish Government, Decision on a new Natura 2000 area.	E2
2018	2 nd instance, taking on the trial which was on hold since 2015. Did not grant the permit.	E3
2018	Supreme Court turned down an appeal. The 2018 verdict came into legal force.	E3

The UNFC F and G Categories were at an early stage concluded to be F2 and G1

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The Forsand Project

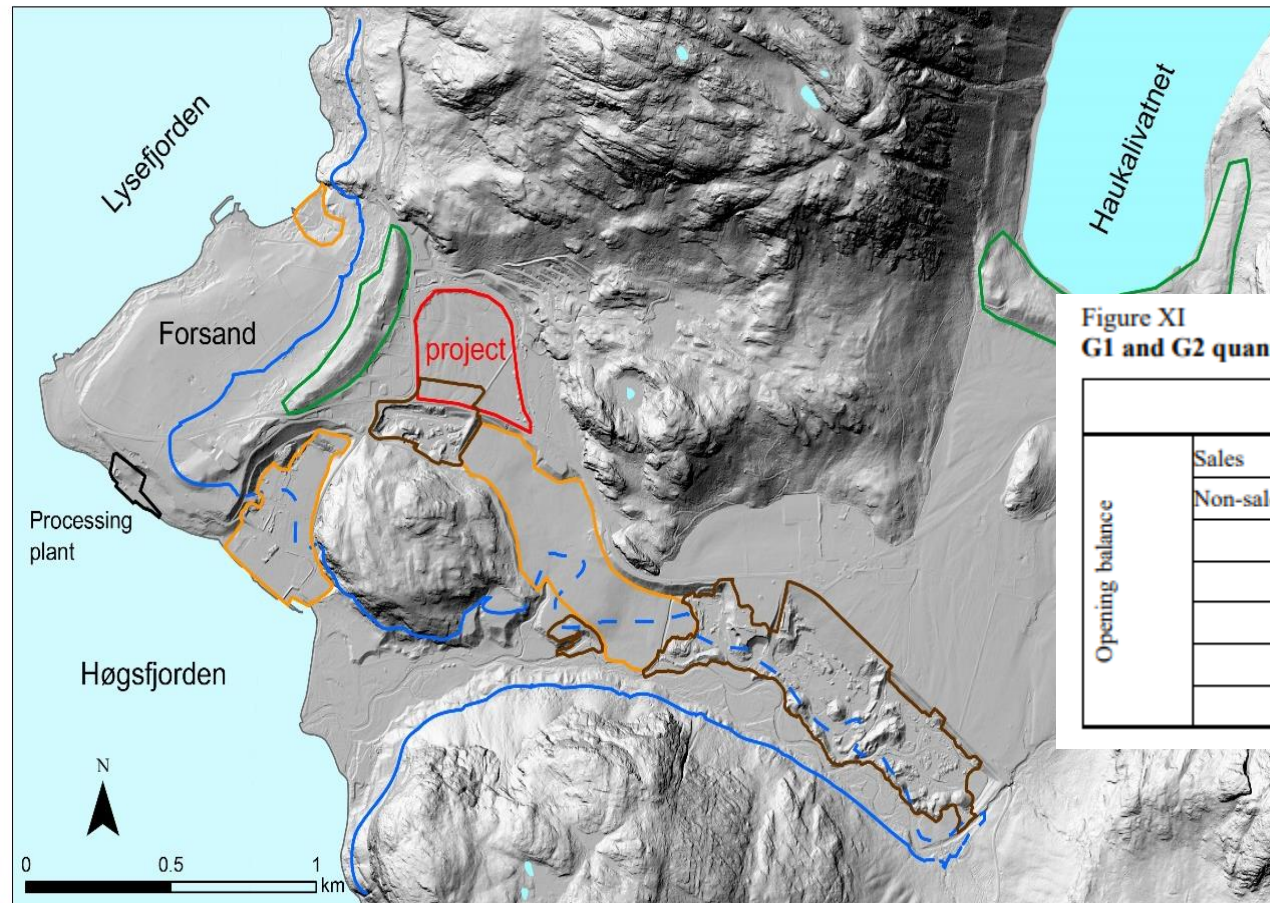


Figure XI
G1 and G2 quantities at the beginning of period 4 in million tons

			Fourth period 2020		G1	G2
Opening balance	Sales		0.29			
	Non-sales		0.03			
	E1.1F1.1	2G	1.92	1.54	0.38	
	E1.1F1.2	2G				
	E3.1F1.1	2G	0.09			
	E3.1F1.2	2G				
	E3.3F4	2G				

Thank you

Erika Ingvald

Head of Division

Geological Survey of Sweden

erika.ingvald@sgu.se



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