

Exploration and mining in Finland

Facing new challenges

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Ministry of Economic Affairs
and Employment of Finland

Government program 2015



- **Circular economy is essential, includes feed of primary raw materials to the loop**
- **Resource efficiency, make the most of side streams**
- **Cleantech solutions and energy transition need new raw materials**
- **Innovations – new raw materials utilised**
- **Research & skills >> new business**

Finland still has a good reputation



- **Fraser Institute ranking good for years, now a slight drop**
- **Geological potential is still there**
- **Transparent permitting procedures**
- **Streamlining of permitting has been done during recent years**
- **Authorities have put effort to co-operation, e-solutions and so on to improve customer experience**
- **Further development on digital solutions ongoing**

Means of government support



- **Capital investments and loans**
 - Finnvera
 - Finnish Metals Group (2018)
- **Skilled personnel**
 - tailored courses for company needs
 - Updating training, re-education
 - Mining sector R&D prioritised
- **Infrastructure**
 - financial support for example to transport infrastructure

Mining Act 621/2011



- **Renewal of mining legislation 2011**
- **Finnish chemicals and safety agency Tukes as mining authority**
- **Evaluation of the implementation of the Act is ongoing**
 - Objectives
 - Unforeseen effects
 - Technical amendments done earlier

Network of authorities in mining operations

tukes

 Centre for Economic Development,
Transport and the Environment

Environmental impact assessment EIA

Permit for industrial handling and storage of dangerous chemicals
Preparation of ore

Mining permit
Right to exploit mineral deposits

 Regional State
Administrative Agency

Permit to construct a mine dam
Granted by the AVI Agency
Supervised by the Kainuu ELY Centre

Production and storage of explosives

Mine safety permit
For excavation

Environmental permit
Granted by AVI Agency
Supervised by the ELY Centre


Mining waste
AVI
ELY Centre

Occupational safety

 MAANMITTAUSLAITOS
Proceedings establishing a mining area

 GOVERNMENT
Uranium extraction permit

MUNICIPALITY
Land-use planning
Building permit

 **STUK**
Permit for starting up a uranium extraction facility and its supervision

Radiation monitoring of mines and environment



New challenges

- **Social license to operate**
 - Formalizing has been suggested ... how?
- **Public acceptance**
 - Case by case, and day by day
- **What is in it for us - Finland?**
 - Minerals are non renewable "national wealth"
- **Benefits for the community**
 - Taxation benefits the whole country
- **Actions against permitted projects**
 - Public trust and respect for authority processes is deteriorating?

Parliament election on April 14th



- **Mining has been a hot topic in public debate since 2018**
- **CETA-treaty between EU and Canada ... investment protection mechanism**
- **Need to improve legislation now, as it will not be possible later?**

- **Local benefits of mining**
- **Requirement of mining tax:**
 - Some parties have even come with suggestion on the amount
- **Stricter regulation, environmental issues**
- **Closure costs and the future of the community**
- **No go –areas**
- **Royalty to the state/community/future generations/pay the damages caused/rehabilitate old mine sites**



What does the ministry do?

- **Research project 2019-2020 – how does mining benefit the community/region/state?**
- **The value of national geodata (collected from operators)**
- **Fitness check of legislation (not only Mining Act) is ongoing**
- **Soft law –alternatives**
- **Proper mapping of financial flows of mining industry in relevant countries vs. Finland – conclusions – eventual actions**
- **Realism: all but one party leader was pro mining tax in early January, not joint in the method though**
- **Requirement of renewal of Mining Act – but very few concrete issues regulated in the Act are mentioned**

National actions



- **State owned mining company since 2015**

- Terrafame Group – renamed Finnish Minerals Group in 2018
- aims to build leading ecosystem for Li-ion battery production in Europe
- owns, manages and develops companies, investment programs and RDI-projects related to Finnish Li-ion battery and mining cluster.
- long-term strategic owner of e.g. Terrafame Oy.

- **Batteries from Finland (2018-2020)**

- Business Finland leading the programme
- bring the Finnish battery industry together and act as a catalyst in the next years and the future



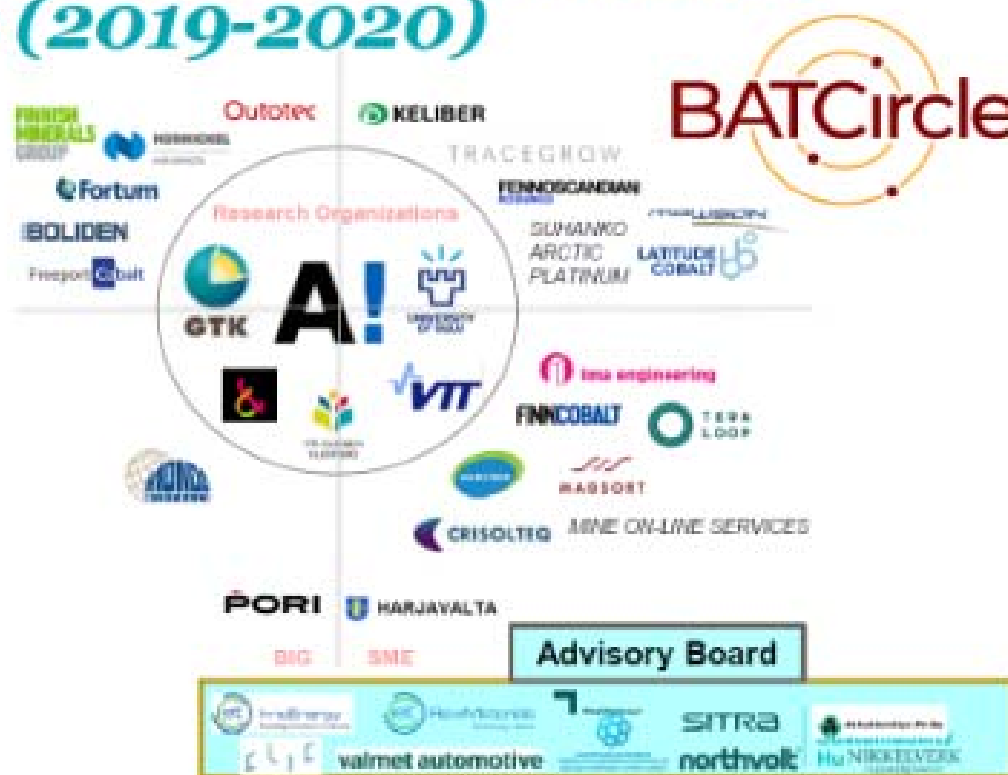
Finland-based Circular Ecosystem of Battery Metals (2019-2020)

Joint industry-academia project

- 8 large companies
- 14 SMEs
- 2 cities
- 4 universities
- 2 Research centers (GTK,VTT)
- 21 M€ budget

Key topics

- Sustainable primary resources
- Value addition in metal refining
- Battery recycling
- Precursors and active materials
- Circular business ecosystems





**Interesting times
... to be
continued!**